North Boeing Field/ Georgetown Steam Plant Site Remedial Investigation/Feasibility Study

Remedial Investigation/Feasibility Study Work Plan

VOLUME 1: TEXT, APPENDIX, TABLES

FINAL

Prepared for

DEPARTMENT OF ECOLOGY
State of Washington

Toxics Cleanup Program
Northwest Regional Office
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List of Acronyms

AM	anthropogenic media
AOC	area of concern
ARAR	Applicable or Relevant and Appropriate Requirement
ARI	Analytical Resources, Inc.
AST	above-ground storage tank
ATSDR	Agency for Toxic Substances and Disease Registry
BBP	butyl benzyl phthalate
BEHP	bis(2-ethylhexyl) phthalate
bgs	below ground surface
CB	catch basin
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CJM	concrete joint material
CLARC	Cleanup Levels and Risk Calculations
COPC	contaminant of potential concern
cPAH	carcinogenic polycyclic aromatic hydrocarbon
cVOC	chlorinated volatile organic compound
CSL	Cleanup Screening Level
CSM	conceptual site model
CUL	cleanup level
DCE	dichloroethylene/dichloroethene
DW	dry weight, or dewatering well
Ecology	Washington State Department of Ecology
EF	exceedance factor
EOF	emergency overflow
EYA	East Yard Area
FTA	Fuel Tank Area
FTC	Fire Training Center
GIS	Geographic Information System
gpm	gallons per minute
GPS	global positioning system
GTSP	Georgetown Steam Plant
GW	groundwater
HCID	Hydrocarbon Identification
HDPE	high density polyethylene
HH	human health
HHRA/TE	human health risk assessment and transport evaluation
HPAH	high molecular weight polycyclic aromatic hydrocarbon
IAFE	interim action fenceline excavation
IAL	interim action limit

ICP	inductively coupled plasma
ICP-AES	inductively coupled plasma atomic emission spectroscopy
ICP-MS	inductively coupled plasma mass spectrometry
IW	injection well
KC	King County
KCIA	King County International Airport
LAET	Lowest Apparent Effects Threshold
2LAET	Second Lowest Apparent Effects Threshold
LDW	Lower Duwamish Waterway
LLA	Low-Lying Area
LPAH	low molecular weight polycyclic aromatic hydrocarbon
LS	lift station
LTST	long-term stormwater treatment
MDL	method detection limit
MFF	Main Fuel Farm
mg/kg	milligrams per kilogram
MH	manhole or maintenance hole
MTCA	Model Toxics Control Act
MW	monitoring well
NAPL	Non-aqueous phase liquid
NBF	North Boeing Field
ND	non-detect
ng/kg	nanograms per kilogram
NGW	North Boeing Field groundwater well
NRWQC	National Recommended Water Quality Criteria
NTR	National Toxics Rule
NYA	North Yard Area
O&M	operations and maintenance
OC	organic carbon
OEM	other exterior materials
OWS	oil/water separator
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCE	perchloroethene/tetrachloroethylene/tetrachloroethene
PEL	Propulsion Engineering Laboratory
PID	photo-ionization detector
PLP	Potentially Liable Party
PQL	practical quantitation limit
PSEP	Puget Sound Estuary Program
PSL	Preliminary Screening Level
PVC	polyvinyl chloride
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington

RI/FS	remedial investigation/feasibility study
RISL	remedial investigation screening level
RL	reporting limit
SAIC	Science Applications International Corporation (now known as Leidos)
SCL	Seattle City Light
SD	storm drain
SDS	storm drain solids
SDW	storm drain water
SIM	selected ion monitoring
SL	screening level
SMS	Washington State Sediment Management Standards
SO	soil
SPU	Seattle Public Utilities
SQS	Sediment Quality Standard
STST	short-term stormwater treatment
SVOC	semivolatile organic compound
SWQS	Surface Water Quality Standards
SYA	South Yard Area
TCE	trichloroethylene/trichloroethene
TCDD	tetrachlorodibenzodioxin
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	toxic equivalent
TOC	total organic carbon
TPH	total petroleum hydrocarbons
TSCA	Toxic Substances Control Act
TW	temporary well
UBF or BF	underground tank Boeing Field
ug/L	micrograms per liter
UNK	unknown
USEPA	U.S. Environmental Protection Agency (or EPA)
UST	underground storage tank
VAH	volatile aromatic hydrocarbon
VI	vapor intrusion
VISL	vapor intrusion screening level
VOC	volatile organic compound
WAC	Washington Administrative Code
WQC	Water Quality Criteria

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1.0 Introduction

1.1 Purpose and Objectives

Pursuant to the Model Toxics Control Act (MTCA),[1] the Washington State Department of Ecology (Ecology) has signed Agreed Order DE 5685 with The Boeing Company (Boeing), King County, and the City of Seattle to facilitate remedial action at the North Boeing Field / Georgetown Steam Plant Site (referred to in this document as the NBF-GTSP Site, or the Site). The Agreed Order, effective August 14, 2008, describes the process by which Ecology will conduct a remedial investigation/feasibility study (RI/FS) and one or more interim actions, if appropriate, at the Site to protect human health and the environment (Appendix A). The three potentially liable parties (PLPs) and Ecology have agreed that Ecology will perform the RI/FS. As part of this effort, Ecology has requested Science Applications International Corporation (SAIC)[2] to prepare this RI/FS Work Plan and to conduct the RI/FS.

The U.S. Environmental Protection Agency (USEPA or EPA) is leading the effort to determine the most effective cleanup strategies for sediments in the nearby Lower Duwamish Waterway (LDW). Ecology is leading the effort to investigate adjacent and upland sources of contamination and to develop plans to control these sources that may impact the LDW. The NBF-GTSP Site constitutes part of this LDW upland cleanup. Ecology's source control efforts include 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 LDW cleanup has been undertaken. The NBF-GTSP Site RI/FS process is intended to identify sources of contamination to sediments in Slip 4 of the LDW Superfund site, in addition to conducting a cleanup of upland environmental media affected by Site contaminants. The RI/FS process, including development of this Work Plan, will be performed in accordance with MTCA.

According to MTCA, the purpose of an RI/FS is to collect, develop, and evaluate sufficient information regarding a site to select a cleanup action [WAC 173-340-350(1)]. The specific purpose of the remedial investigation is to collect data and information necessary to define the extent of contamination and to characterize the site. The specific purpose of the feasibility study is to develop and evaluate alternative cleanup actions [WAC 173-340-120(4)(a) and (b)].

Environmental investigations and cleanups at the NBF-GTSP Site have identified releases of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), metals, petroleum hydrocarbons, volatile organic compounds (VOCs), and/or semivolatile organic compounds (SVOCs) to soil, groundwater, stormwater, and other media at the Site. The RI will characterize the nature and extent of contamination in soil, groundwater, and exterior building materials at the Site and will identify sources of contaminants to stormwater. Stormwater from the NBF-GTSP Site discharges to Slip 4. PCBs, dioxins/furans, metals, PAHs, and phthalates have been detected at concentrations above the Washington State Sediment Management Standards (SMS) and other criteria in Slip 4 sediments and are identified as contaminants of potential concern.

[1] The MTCA Cleanup Regulation is included as Chapter 173-340 of the Washington Administrative Code (WAC).
[2] On September 30, 2013, a majority portion of SAIC changed its corporate name to Leidos. All references to SAIC within this document now refer to Leidos.

Slip 4 was identified as an Early Action Area for sediment cleanup as part of the LDW Superfund site RI/FS. Cleanup of contaminated sediments in Slip 4 was delayed because of potential recontamination that might result from releases of contaminants from the NBF-GTSP Site (Figure 1-1). Due to the long time frame associated with the RI/FS process, Ecology expedited RI/FS activities to support implementation of interim actions and to allow cleanup of Slip 4 sediments to proceed. Some portions of the RI were begun in advance of the Slip 4 cleanup. These activities included: stormwater sampling, development of a project chemical database and Geographic Information System (GIS) database, an infiltration and inflow study, and modeling of contaminant transport from stormwater to Slip 4 sediments. Selected sampling of soil, groundwater, stormwater, and building materials has recently been conducted at the NBF-GTSP Site. Available preliminary results from these and other relevant activities, available as of late 2012, have been incorporated into this RI/FS Work Plan.

Cleanup of sediments in Slip 4 was formally completed on February 7, 2012. Boeing also recently constructed a long-term stormwater treatment (LTST) system at NBF, which handles the majority of the Site's stormwater (see Section 4.2.2.7). This system became operational on October 28, 2011, and treated water is discharged to a storm drain leading to Slip 4. As treatment of much of the Site stormwater continues, this RI/FS will focus on source identification leading to future remediation, to improve the quality of stormwater that does not pass through the treatment system, and for the possible future termination of the stormwater treatment system. One of the main goals of this RI/FS and future remedial actions is to protect stormwater at the Site to allow it to eventually flow to Slip 4 without ongoing treatment (or with reduced treatment), and to protect the Slip during ongoing storm events. Another main goal is for remediation of soil and groundwater.

In addition, a number of other interim actions have been completed on the NBF and GTSP properties in recent years. Most notably, a large soil excavation recently took place on both sides of the fenceline separating these two properties. Currently, Boeing continues to operate the LTST system. Seattle City Light (SCL) has conducted the Slip 4 cleanup and ongoing monitoring. King County International Airport (KCIA) also is involved with investigations on the adjacent KCIA property. Boeing, SCL, and KCIA together participate in RI/FS project decision-making with Ecology.

1.2 Work Plan Organization

The Work Plan outlines the overall technical approach to the RI/FS, and includes the following elements:

- Responsibility and authority of all organizations and key personnel involved in conducting the RI/FS
- Description of the Site, including historical and current operations
- Preliminary conceptual site model
- Brief summary of existing contaminant information, potential sources, and data gaps for Site environmental media
- Analysis of applicable or relevant and appropriate requirements (ARARs)
- Determination of data quality objectives (DQOs)

- Development of RI screening levels and contaminants of concern
- Sampling implementation strategy for RI/FS activities, including phasing and prioritizing of activities
- Summary and evaluation of analytical and physical data for all media of concern
- Remedial investigation proposed activities
- Draft outline of final RI and FS reports, and approach for FS
- Proposed schedule, including a timeline for completion of all RI/FS deliverables

The Work Plan is organized into the following sections:

- Section 1 – Introduction
- Section 2 – Site Background
- Section 3 – Preliminary Site Conceptual Model
- Section 4 – Summary of Existing Information and Data Gaps
- Section 5 – Applicable or Relevant and Appropriate Requirements
- Section 6 – Remedial Investigation Approach
- Section 7 – Remedial Investigation Tasks
- Section 8 – Remedial Investigation Reporting
- Section 9 – Feasibility Study
- Section 10 – RI/FS Schedule
- Section 11 – References

1.3 Responsibilities

The following key organizations and individuals are responsible for the NBF-GTSP Site RI/FS process as regulators, PLPs, or investigators:

Ecology (Regulator):

- Mark Edens – Ecology Project Manager

Boeing (PLP/Investigator):

- Carl Bach – NBF Environmental Project Manager

City of Seattle (PLP/Investigator):

- Allison Crowley – SCL GTSP Environmental Project Manager

King County (PLP/Investigator):

- Peter Dumaliang –KCIA Environmental Project Manager

SAIC/Leidos (Investigator):

- Thomas Dubé – RI/FS Project Manager

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2.0 Site Background

2.1 Site Setting and Ownership

The NBF-GTSP Site consists of two distinct properties: the former GTSP property, currently leased to the Georgetown PowerPlant Museum, Inc. by the City of Seattle and supported by SCL, and the Boeing-owned and leased parcels known as North Boeing Field (Figure 1-1). In this Work Plan, the following location names will be used: the NBF-GTSP Site, in reference to the entire Site; the NBF property, in reference to the Boeing-owned and leased parcels; the GTSP property, in reference to the museum property; and the KCIA.

2.1.1 Georgetown Steam Plant

The GTSP property is located on a 2.6-acre parcel located near the intersection of Warsaw Avenue S and Ellis Avenue S, and near the northwest corner of KCIA (Figure 2-1). On the property is a 19,400-square foot decommissioned power plant, built in 1906. In 1978, the GTSP was listed on the National Register of Historic Places. In 1980, the facility was designated a National Historic Mechanical Engineering Landmark (ASME 1980). In 1984, it became a City of Seattle Landmark and a National Historic Landmark. Since 1987, the property has been operated as a historical museum.

The City of Seattle formerly owned and operated a portion of the current KCIA property that is located east of the present GTSP property, shown in Figure 2-2 as the area east of the tax parcel line and north of the former catch basins. The City of Seattle historically used this portion of the KCIA property as part of the steam plant operations. The former Georgetown Flume (see Section 2.3.2) extended from the GTSP power house, through the NBF leased property, to Slip 4 (Figure 2-3). The property surrounding the flume footprint continues to be owned by the City of Seattle.

Most of the property is covered by a grass lawn, except for the power house, water reservoir, sheds, and gravel driveway area (Figure 2-1). A concrete slab is also present on the north side of the power house, where the former Greely Substation was located (Figure 2-2). The museum is normally opened to visitors once per month, with access to most outdoor portions of the property. However, the museum is currently closed to visitors for maintenance purposes.

Recent soil excavation and regrading activity at the GTSP property has resulted in modifications to the surface of the property. The driveway was repaved and extended to the southern end of the power house. The railroad, which was previously located in the south yard area (SYA), is now relocated to the northeast side of the power house (Figure 2-1). The surface topography south of the power house was regraded significantly.

The GTSP property gently slopes to the south. Prior to excavation and regrading in 2011 to 2012, the topography dropped more steeply to the low-lying area (LLA), where a shallow ditch drained westward along the north side of the south fenceline. Previously, the LLA formed a broad swale along the southern portion of the property, which received runoff from the northern portion of the property and historically from KCIA and Boeing-leased property (Integral 2010b). In the current configuration, south of the power house are located three small depressions, which are up to 2.5 feet in depth. These depressions act as infiltration retention ponds. Runoff north and east of these depressions will be retained within the ponds, while runoff to the south and west of these ponds will continue toward the fenceline and may infiltrate the soil (Integral 2012).

2.1.2 North Boeing Field

The full NBF property comprises approximately 130 acres located between East Marginal Way S to the west and KCIA to the east. Ellis Avenue forms the northern border, and the NBF fire station and Federal Aviation Administration tower are located to the south. However, the portion of NBF that is included as part of the RI/FS Site extends only as far south as Tent Hangar 3-812, which marks the southern margin of the storm drain watershed for Slip 4. The area of the NBF portion of the Site is approximately 113 acres. In this report, the terms “NBF” or “NBF property” will refer to the RI/FS Site, not the full NBF facility. The LDW is located approximately 1,300 feet from the western boundary of NBF, and the head of Slip 4 is approximately 150 feet from the northwestern boundary (Figure 1-1).

The entire area within the NBF property is developed. Land use at NBF includes office and industrial buildings, aircraft parking, and related facilities (Figure 2-4). Automobile parking areas comprise approximately 28 percent of NBF; flightline positions and taxiways comprise about 33 percent of NBF (Boeing 2007). Less than one percent of the property is pervious, including landscaped areas next to some buildings.

There are approximately 80 buildings located on the NBF property. Boeing’s Propulsion Engineering Laboratory (PEL) area is located in the northern portion of NBF; Flight Test and Operations area is located in the central portion of the property; and the Tent Hangars are located in the southernmost portion of the property (Figure 2-4).

King County owns most of the land within NBF; Boeing leases approximately 95 acres from King County (out of the 113 acres) and owns the improvements it has constructed on the leased property. Boeing also leases a few acres of property from the City of Seattle where the former Georgetown Flume was located (Figure 2-3). Boeing owns the parcel containing Building 3-390 and an adjacent parcel used for parking, which comprises approximately 16 acres of the NBF property.

2.1.3 Adjacent Site Uses

A variety of property types surround the NBF-GTSP Site, although the major land use is industrial. KCIA borders the entire eastern boundary of the Site. The southern boundary of the Site is marked by a continuation of NBF that is not a portion of the Site. East Marginal Way S bounds the Site on the west and southwest. Boeing Plant 2 is present on the western side of East Marginal Way S, between the LDW and the Site. Slip 4 is located north of Plant 2, near the northwestern end of the Site, south of Building 7-27-1 (Figure 2-4).

Mixed commercial and industrial properties are located adjacent to the northern end of the Site between Ellis Avenue S and the Site boundary. The Washington Army National Guard complex, formerly occupied by the Washington Air National Guard, is located in this area. Commercial properties are present at the northwestern end of the Site between S Myrtle Street and E Marginal

Way S, and on the western and eastern sides of Ellis Avenue S. These commercial properties include a motel, a gasoline service station, a warehouse, and an auto services shop. Residential properties are also present near the northern end of the Site, on the western side of Ellis Avenue S and north of S Myrtle Street (Figure 2-4).

2.2 Site Environmental Setting

2.2.1 Hydrology

The NBF-GTSP Site is located in the central Puget Sound Lowland, a broad glacial drift plain that is dissected by a network of deep marine embayments and lakes. The Site is situated within the north-south trending Duwamish Valley on the Duwamish floodplain. The principal surface water drainage in the NBF-GTSP vicinity is the LDW, which is located approximately 1,300 feet southwest of the Site, beyond East Marginal Way S. The Duwamish River originates approximately 5 miles south of the Site where it merges with the Green River. From this point, the river flows northward, and the LDW eventually drains into Elliott Bay on Puget Sound.

The original tide flats and floodplain of the valley were filled during the late 1800s and early 1900s. The former river shoreline previously trended across the PEL area, the GTSP property, and the KCIA property. The meandering Duwamish River was straightened between 1913 and 1917 into a 4.5-mile long channel. In the process, 12.5 miles of old riverbed were abandoned. Some of the old meanders mark the locations of current side slips on the LDW, including Slip 4. The dredged sand was used to fill old channel and lowland areas, to raise them above sea level. More recent filling for land development has resulted in a surficial layer of fill throughout the area (Fabritz et al. 1998; Windward 2010).

2.2.2 Stormwater Conveyance

A network of stormwater catch basins, drains, manholes, and pipes collect and convey stormwater from the NBF-GTSP Site to the head of Slip 4 (Figure 2-5). One main outfall discharges stormwater (mostly treated) from NBF and the upstream KCIA into Slip 4. Stormwater from GTSP and other areas was previously discharged to Slip 4 via the former Georgetown Flume, until it was decommissioned in 2009 and replaced with a storm drain line. Most areas of NBF drain to one of four main lateral storm drain lines: the north, north-central, south-central, and south lateral. These lateral lines and a small drainage area near Building 3-380 are directed to a trunk line that passes through the King County lift station, where it is pumped and discharged via gravity feed toward Slip 4. At the LTST, Boeing currently treats approximately 68 percent (annual average) of all stormwater that is discharged from the KC lift station, preferentially treating the water from the north lateral drainage area (described in Sections 4.2.2.7 and 7.2). The lift station (Building 3-395) was constructed in 1941, and it prevents tidal backwash from flowing upstream into the storm drain system (Landau 1993a). Between the lift station and East Marginal Way S, the main storm drain line receives untreated stormwater from the NBF parking lot areas and finally discharges all water at the 60-inch KCIA SD#3/PS44 emergency overflow (EOF) outfall at Slip 4 (Figure 1-1).

The north, north-central, south-central, and south lateral lines at NBF also receive stormwater from the northern and central portions of KCIA, located upstream (east and northeast) of the

Boeing-leased property (Figure 2-6). However, since the LTST system began operating in 2011, stormwater in the north lateral that enters NBF from upstream is rerouted in a new bypass line to the KC lift station. In addition, KCIA receives stormwater from Airport Way, located upstream (east) of the county airport.

At the GTSP property, rainwater that does not land on the power house building mostly infiltrates into the ground. During high rainfall events when soils are saturated, some stormwater flows into catch basins located to the south and west at the adjacent NBF property. The power house rooftop drains to the Georgetown Flume replacement line (Figure 2-3). Some other areas along the replacement line in and near the northern NBF property also feed into this storm drain line (Section 2.3.2).

2.2.3 Geologic Setting

The Duwamish Valley was formerly a marine embayment that extended as far south as Auburn. About 5,700 years ago, an enormous mudflow emanated from Mount Rainier and filled the upper portion of this embayment. At that time, the White and Green Rivers both drained northward through the Duwamish Valley. Sediment carried by these rivers, and erosion of the extensive mudflow deposits, continued to fill in the embayment and shift the marine shoreline farther north. With time, silt, sand, and gravel eventually filled in the valley and created the modern river environment and floodplain. As the river continued to flood and migrate across the valley, sediments were reworked and ongoing river sedimentation took place from upstream (Fabritz et al. 1998).

The geologic units underlying the Duwamish Valley include bedrock, glacial deposits, marine deposits, and river/floodplain deposits. The Tertiary age bedrock (sandstone and siltstone) is exposed on the hillside east of the NBF-GTSP Site near Interstate 5, and in some bedrock knobs that were not covered by floodplain sediments in the South Park area southwest of the Site. The bedrock beneath the NBF-GTSP Site is probably a few hundred feet deep (Fabritz et al. 1998; Booth and Herman 1998).

Glacial deposits in the area predominately include those from the last glacial advance, referred to as the Vashon stage (about 15,000 years ago). The Duwamish Valley is bounded to the east and west by uplands covered by Vashon glacial till and outwash deposits. In the center of the valley northwest of NBF, the top of these Vashon glacial deposits are identified at a borehole depth of about 260 feet below ground surface (bgs) near the 1st Avenue South bridge (Yount et al. 1990). At Boeing Plant 2, located southwest of the Site, a number of deep boreholes have identified the top of the glacial units as ranging from 70 feet to more than 130 feet bgs (GeoMapNW 2009).

Overlying the glacial deposits in the valley are the former marine embayment sediments, which in turn are overlain by the river/floodplain deposits. In the area of Boeing Plant 2 and the west side of the NBF-GTSP Site, borehole data show that a silt-rich layer typically overlies the Vashon glacial deposits, including silt, clay, and sand with common shell fragments. The top of this layer of marine sediments ranges in depth from about 65 to 100 feet bgs. This layer grades upward into an alluvial deposit, which consists of a lower zone of fine sand with silt, or silty sand; above a depth of about 30 to 60 feet bgs is an upper alluvial zone consisting generally of fine to medium sand with minor silt or gravel. This is locally overlain by a thin layer of organicrich silt at approximately 10 feet bgs. Fill material consisting of sand, silt, and gravel occupies the upper 3 to 20 feet bgs (Landau 1990; Hart Crowser 1991; GeoMapNW 2009).

2.2.4 Hydrogeologic Setting

The following hydrogeologic summary of this area is based on a large number of environmental investigations conducted in the vicinity of the NBF-GTSP Site. Groundwater at and near the Site occurs at shallow depths within the recent alluvium and fill material, under unconfined conditions. Figure 2-7 presents a summary of groundwater depths and flow directions, based on historical results from a large number of wells, most of which have been decommissioned.

Groundwater studies for large areas across the NBF-GTSP Site indicate that the flow direction averages approximately toward the southwest, at relatively low hydraulic gradients of 0.001 to 0.003 foot per foot (e.g., Landau 1990). Near the northwestern area of NBF, in the vicinity of Buildings 7-27-1 and former Building 3-360, the flow is more southerly, toward Slip 4. Investigations in localized small areas at NBF (from a large number of studies) exhibit a wider range of flow directions and gradients, as expected, with directions varying from westward to southward and rarely northwestward. Figure 2-7 presents both regional flow directions (e.g., Landau 1990) and more localized variable directions from individual studies.

At the GTSP property and the adjacent offsite areas, groundwater flow is generally toward the south, but varying from south-southeast to southwest, at an average gradient of 0.004 foot per foot (Landau 1992; Integral 2010a; URS 2011). In general, the southerly flow direction at the GTSP area shifts downgradient toward the southwest in the adjacent PEL area, and continues downgradient across NBF and toward Boeing Plant 2 and Slip 4 (Landau 2011c). Groundwater flow on the southern portion of the Site appears to be toward the southwest, with the flow pattern converging toward Slip 4 (Figure 2-7).

Based on a large number of historical groundwater monitoring data and other site investigations at NBF-GTSP (primarily by SECOR and Landau), depth to the water table varies seasonally, ranging from 1.8 to 11.2 feet below the well casing for all onsite wells. Groundwater depth is evaluated to aid in relating to subsurface storm drain structures and to understand the potential for groundwater infiltration to the NBF storm drain system (see Section 7.1.1).

Figure 2-7 presents ranges of groundwater depths around individual wells or clusters of wells (stated as depth bgs), based on a number of reports spanning many years. Depths are shown instead of elevation contours because many historical reports included only a relative local elevation datum, and very few studies have evaluated comprehensive Site-wide groundwater gradients. The area of most uncertainty for groundwater levels at NBF-GTSP is along the concourses, particularly in the large Concourse B where few wells have been located. The following text summarizes groundwater depths at the Site.

The water table at the GTSP property is found at depths of 3 to 10 feet bgs, becoming generally shallower toward the south. The shallow groundwater depth of 3.0 feet was measured in former well GTSP-3. The water table on both sides of the GTSP southern fenceline is expected to be very shallow year-round. Most of the GTSP property upgradient of this fenceline has deeper groundwater.

In the entire PEL area, which is located largely within the north lateral drainage area, the water levels range from 2.3 to 9.3 feet bgs. The depth of 2.3 feet bgs at well NGW507, near the GTSP fenceline corner, is the shallowest measurement identified at the NBF-GTSP Site (Landau 2011c). The deepest water levels in the PEL area are found in the Green Hornet area, located west of Building 3-313.

Water levels on the NBF property generally become deeper in the downgradient direction toward East Marginal Way. The deepest water levels at the Site were identified in the Building 7-27-1 area (former Markov property) and near Building 3-801, with depths from approximately 10 to 11.5 feet bgs at these downgradient locations. This range of water levels is similar to that for three other downgradient wells across East Marginal Way at Boeing Plant 2 (Figure 2-7), ranging from 10.5 to 11.8 feet bgs. Between these downgradient areas and the PEL area is a zone of water depths ranging largely from 6.5 to 10.5 feet.

2.2.5 Ecological Setting

The area near the NBF-GTSP Site is highly industrialized and mostly paved or covered with structures, making this unsuitable habitat for most animals. The only unpaved areas include grassy portions on the west, south, and east sides of the GTSP property, and isolated plantings associated with NBF parking lots and office buildings. Birds and mammals that have adapted to urban environments may occasionally be observed in this area, including gulls, crows, sparrows, finches, swallows, and European starlings, as well as mice, rabbits, squirrels, and bats.

2.3 Site History and Current Operations

2.3.1 Georgetown Steam Plant

2.3.1.1 History

The GTSP power house was constructed by the Seattle Electric Company in 1906 on 16 acres of land along an oxbow of the Duwamish River. Historical features at the GTSP property are shown in Figure 2-2. The station’s purpose was to provide Seattle Electric with additional peak load capacity; much of its power went to operate the utility’s streetcars. In 1912, Puget Sound Power and Light Company purchased Seattle Electric Company; the northeastern portion of the property was sold to King County. Thereafter, use of the GTSP facility declined. In 1951, the City of Seattle Department of Lighting (now SCL), purchased the GTSP. In 1963, the northwestern portion of the original GTSP property was sold to King County. The plant’s last production run was in the winter of 1964. From 1971 to 1977, the GTSP was maintained on standby as part of a regional reserve for emergency situations (ASME 1980). The city permanently shut down the GTSP in 1977.

Fuel oil and coal were historically used to fire the boilers. Coal was brought onto the property by rail from the east. A coal conveyer was operating at the south end of the GTSP property where a large smokestack was located (Raven 1988). This area later became the Boeing smoke test area. Bunker C fuel oil was delivered to the GTSP in rail cars and stored in three 12,000-gallon steel underground storage tanks (USTs) near the south corner of the building. A 700-gallon diesel tank was located at the southwest corner of the GTSP. Fuel was also stored in a 150,000-gallon steel oil tank, located southwest of the power house. A concrete 800,000-gallon above-ground storage tank (AST) was located to the northeast of the building. This tank held Bunker C fuel oil until May of 1987 (SCL 1988). In 2011, an underground concrete tank and related structure, believed to be related to the coal conveyance system, were discovered along the eastern boundary of GTSP and the KCIA blast fence. Approximately 15 feet of the structure on the GTSP property was cleaned, partially removed, and filled with concrete. An estimated 24 feet of the tank remains east of the blast fence (URS 2012; Integral 2012).

Boiler feed water was replaced after several cycles in the system to remove unwanted materials, such as chemical additives, corrosion products, and scale minerals. These wastewaters were channeled into a ditch (referred to as the blowdown ditch) and discharged into the LLA near the southwest corner of the property (Figure 2-2). The LLA and ditch were not directly connected to the former Georgetown Flume, although there was an indirect connection. Overflow from the LLA ran into a storm drain to the south, which connected to the head of the flume (Raven 1988).

A drainage ditch was located along the southern boundary of the GTSP property. The ditch formerly conveyed runoff from the northern portion of KCIA, including the NBF Fire Training Center (FTC), and from the southeastern portion of the property to the LLA.

In 1961, the City of Seattle permitted Boeing to use the area east of the current GTSP property and on the current KCIA property for fire drill training (NBF-FTC). In 1963, King County purchased the northeastern portion of the GTSP property, which included the NBF-FTC, the 800,000-gallon concrete AST, a warehouse, and a machinery shop (Bridgewater Group 2000).

In 1967, the City of Seattle issued a temporary permit to Boeing to conduct fire training in an area approximately 50 feet southeast of the GTSP power house. Although there have been references specifying this area as the former Boeing Fire Training Pit, there is no indication that it was ever a pit. Aerial photographs show an airplane fuselage was present at the time in this location (Bridgewater Group 2000). The permit expired in 1974 (SEA 2004).

Some reports indicate that a transformer storage area may have been located near the southwest corner of the GTSP power house (AGI 1998a); however, no specific information to support this assertion was found. Log books of activities at GTSP indicate that used transformer oil was delivered to the GTSP between 1953 and 1965 (City of Seattle 1942–1965). City records indicate that 729 barrels of used transformer oil were delivered to the GTSP from 1972–1974 and 489 barrels of used transformer oil were delivered to the GTSP in 1980 (SCL 1976, 1985).

2.3.1.2 Current Operations

The Georgetown PowerPlant Museum currently operates at the GTSP property. It is usually open to the general public on one day per month but is currently shut down for a two-year period. Current features are depicted in Figure 2-1 and include the following:

- Power House: The former GTSP power house, located in the northern portion of the property, is divided into an ash room, boiler room, engine room, turbine room, and a series of galleries on five levels. A condenser pit is located beneath the power house. The west side of the power house is used to stage equipment, including a steel tank, pickup trucks, a cargo shipping container, and other equipment (Bridgewater Group 2000).

- Water Reservoir: A circular concrete water reservoir is located near the northwest corner of the power house. It formerly held cooling water for one of the plant's turbine generators (Bridgewater Group 2000).
- Railroad and Sheds: A scale model railroad is used by museum visitors (Figure 2-1). A small-gauge railroad that formerly gave rides to visitors was located in the southern portion of the property (shown on older aerial photos and figures in this report). Two small sheds are located near the east corner of the power house. The southeast shed is used to store cans of paint, paint thinner, grease, and oil (Bridgewater Group 2000).

2.3.2 Former Georgetown Flume

The former Georgetown Flume was a system of wood- and concrete-lined channels approximately 2,450 feet long (0.46 mile) that was constructed in the early 1900s to convey cooling water from the GTSP to the Duwamish River when the river was straightened for navigation and shifted away from the power house. Cooling water discharges from the condenser pit below the GTSP building ceased in the 1960s with the exception of annual test runs (SEA 2004). Stormwater was conveyed to the LDW via the flume until it was removed in 2009 (Figure 2-3). The flume drainage area was approximately 6 acres and included the GTSP building roof, adjacent City of Seattle right-of-ways and private property, and the northwestern portion of NBF. The former flume is on City of Seattle property, which is currently leased by Boeing and is part of the NBF property.

During the flume removal activities, the tunnel and condenser pit beneath the GTSP building were cleaned. The tunnel was filled with grout, but the condenser pit remains open inside the building (Herrera 2010). Additional information regarding historical environmental investigations of the flume and flume removal activities is provided in Section 4.1.2 and Section 7. The former flume was replaced with high-density polyethylene (HDPE) and polyvinyl chloride (PVC) storm drain piping that drains to Slip 4. This line now follows approximately the same route as the former flume, except for the first few hundred feet (Figure 2-1). The replacement line conveys stormwater from approximately nine identified inputs, from both on and off the Site, including the roof of the power house, as well as catch basins and other drains (including two bioswales) near Willow Street, Myrtle Street, and between the latter street and East Marginal Way. LDW tidewater and sediment are prevented from entering the new drain system by a tide valve installed in the storm drain piping (Herrera 2010).

2.3.3 North Boeing Field

2.3.3.1 History

Boeing operations have been in place at NBF since the 1940s; however, little information on historical operations prior to the 1970s was found. Numerous structures have been built and demolished over the years, making it difficult to track historical operations in any detail.

From 1941 to 1947, Boeing manufactured and tested B-17 and B-29 aircraft at Boeing Field (present day KCIA), which included the area now known as NBF. The War Assessments Administration took custody of Boeing Field in May 1947 and operated the runways, taxiways, two military camps, hangars (including current building 3-350 at NBF), bomb storage, and fire station until May 1948 when the General Services Administration conveyed the property to King County (DOD 1990). King County has leased the majority of NBF land to Boeing since 1948.

Beginning in 1953 and 1955, Boeing leased property from SCL, including areas adjacent to the Georgetown Flume. During 1954, Boeing began the construction of buildings in the leased area, including a fuel test laboratory.

In August 1984, USEPA identified NBF as a potential hazardous waste site based on sampling of storm drains conducted by the Municipality of Metropolitan Seattle (Metro) in 1982. Storm drains at NBF and in sediments from the Georgetown Flume, which crossed the NBF property, contained high levels of PCBs (USEPA 1984).

In August 1994, Ecology revised its Washington Ranking Method (WARM); as a result, the NBF property was given a rank of 5, which is the lowest priority category. This ranking resulted from the presence of petroleum hydrocarbons and arsenic measured in groundwater, and the potential that PCBs and lead remain in inaccessible site soils (Ecology 1994).

2.3.3.2 Current Operations

NBF is operated by the Boeing Commercial Airplane Group (BCAG) 737 Program (Boeing 2007). Boeing manages numerous research, testing, and manufacturing facilities on the property. Primary industrial activities at NBF include aircraft finishing and testing, research and development of Boeing military and commercial aircraft, and support services. Aircraft finishing activities involve wet sanding, cleaning, and painting of airplanes. Testing of airplane parts, both assembled and unassembled, occurs in many portions of the property. Testing procedures include: stress testing of parts, pressurized testing of hydraulic parts, jet fuel testing, testing of aircraft water distribution and wastewater collection systems, and fire suppression system testing (Boeing 2007). Research and development groups at NBF have separate specialized testing operations. Support operations include a wastewater treatment plant, which is used to treat process wastewaters and other treatable hazardous waste. Photographic chemicals are still used (whether or not a formal lab is operating), in addition to minor wood and metal working (Boeing 2010).

Outdoor manufacturing processes occurring at NBF consist of fueling and defueling aircraft, deicing at the wash stall (C-13), and engine preflight/avionics testing. Minor processes consist of cosmetic work such as touch-up painting, chemical cleaning, and interior work. Support operations for the industrial activities at NBF include loading and unloading of both hazardous and non-hazardous new materials and maintenance of hazardous waste and material accumulation areas, and operation of regenerative air-type street sweepers to maintain the flightline and other paved areas of NBF.

Fertilizers, herbicides, and insecticides are utilized at NBF (Boeing 2012a). Herbicides are applied for weed control to lawn areas, planting beds, and trees in lawn areas. Insecticides are applied to trees and shrubs in landscaped areas around buildings and adjacent to East Marginal Way S. A variety of chemicals may be used for these purposes by contractors hired by Boeing and current application frequency at NBF is unclear. Additional information on current operations at NBF is presented in the *Technical Memorandum: Operations & Maintenance Activities Review* (SAIC 2010b).

Two electrical substations, the Willow Street Substation and the former Ellis Substation, are located adjacent to the former Georgetown Flume on property that is owned by the City of Seattle and leased to Boeing. The Willow Street Substation is active and is located southwest of Building 3-324. The former Ellis Substation has been decommissioned; it was located west of Building 3-380 (Figure 2-3). Twelve concrete pads and the fencing associated with the Ellis substation were removed in 2009 during the Georgetown Flume removal activities (Herrera 2010).

3.0 Preliminary Conceptual Site Model

Environmental investigations performed at NBF and GTSP have shown that stormwater, storm drain solids, soil, groundwater, surface debris, and anthropogenic materials at the Site have become contaminated through the historical and current industrial activities performed at NBF and GTSP, and possibly by other industrial activities in the region. Other affected environmental media at the Site may include outdoor and indoor air. Historical and current industrial activities at the Site may have contributed, and may continue to contribute, contaminants to Slip 4 surface water and sediment.

The preliminary conceptual site model (CSM) provides a general summary of how the NBF-GTSP Site is suspected to have become contaminated. The CSM takes into account the historical and current uses and operations, including the LTST, as well as current physical and chemical data. An understanding of the contamination process is critical to ensuring that remedial investigations and actions are properly targeted at the points along the pathways between the contaminant sources and the ultimate potential receptors. The preliminary CSM will be refined using data collected and analyses completed as part of the RI. Figure 3-1 presents the preliminary CSM in a graphical format. This CSM includes contaminant sources, release mechanisms, transport mechanisms, affected environmental media, exposure pathways, and potential receptors. Although approximately two-thirds of stormwater reaching the KC lift station is treated for PCB removal, this does not appreciably affect the CSM. Monitoring of the LTST system is discussed in Section 4.2.2.7 and in Section 7.2.5.

3.1 Contaminants and Potential Sources

3.1.1 Contaminants of Potential Concern

The initial list of contaminants of potential concern (COPCs) for the NBF-GTSP Site were identified in the *North Boeing Field and Georgetown Steam Plant Supplemental Summary of Existing Information and Identification of Data Gaps Report* (SAIC 2009b) and the *Assessment of Infiltration and Inflow to North Boeing Field Storm Drain System* (SAIC 2011b). These reports identified COPCs by comparison of environmental analytical data to a limited number of widely accepted regulatory criteria used as screening levels (SLs). These COPCs were identified by utilizing existing Site data, with detections at concentrations exceeding initial SLs, or they were identified because chemicals were suspected to be present at the Site based on historical and current operations.

Initial COPCs Listed by Chemical Class

Chemical Class	COPC	Chemical Class	COPC
PCBs	Total PCBs	Phthalates	BEHP
Dioxins/Furans	Total Dioxins/Furans	Other SVOCs	Dibenzofuran
Metals	Antimony		Hexachlorobutadiene
	Arsenic		Phenol
	Cadmium	Petroleum Hydrocarbons	TPH-gasoline
	Chromium		TPH-diesel
	Copper		TPH-motor oil
	Lead		Jet fuel
	Manganese		Kerosene
	Mercury		TPH (combined)
	Selenium		Fuel oil
	Silver		Bunker C fuel
	Vanadium		Skydrol
	Zinc	VOCs	Benzene
PAHs	Acenaphthene		Bromodichloromethane
	Acenaphthylene		Chloroform
	Anthracene		Dibromochloromethane
	Benzo(a)anthracene		1,2-DCE
	Benzo(a)pyrene		Ethylbenzene
	Benzofluoranthenes		Methylene chloride
	Benzo(g,h,i)perylene		PCE
	Chrysene		TCE
	Dibenz(a,h)anthracene		Vinyl chloride
	Fluorene		Total Xylenes
	Fluoranthene		
	Indeno(1,2,3-cd)pyrene		
	2-Methylnaphthalene		
	Total LPAHs, HPAHs		
	Total cPAHs		

LPAHs – low molecular weight PAHs
HPAHs – high molecular weight PAHs
cPAHs – carcinogenic PAHs

BEHP – bis(2-ethylhexyl) phthalate
Skydrol – an aviation hydraulic fluid

The data used to compare to these initial SLs were derived from analytical results of samples collected at the Site, including the following media: soil, groundwater, grab storm drain solids, sediment trap solids, stormwater filtered suspended solids, stormwater, surface debris (loose material overlying pavement), concrete joint material (CJM), and other anthropogenic media (such as building materials) at the Site.[3] Sources of SLs used in the Supplemental Data Gaps Report and the Infiltration and Inflow Assessment Report (SAIC 2009b, 2011b) included the following:

[3] Although the term "building materials" is generally used to refer to any anthropogenic (manmade) materials, this Work Plan will use the term to include all materials that have been used to form the exterior of buildings or major structures. Other smaller structures (e.g., pipes, test equipment, bollards, fire hydrants), and any manmade materials on the ground (e.g., pavement, CJM, surface debris, paint) will herein be referred to as "surface materials." Altogether they are generally referred to as "anthropogenic media."

- Soil and groundwater samples: The lowest value for each chemical from MTCA Method A cleanup levels, Method B standard formula value cleanup levels (carcinogen and non-carcinogen), or Draft Slip 4 soil-to-sediment and groundwater-to-sediment SLs (SAIC 2006)
- Stormwater samples: The lowest value for each chemical from the National Recommended Water Quality Criteria (USEPA 2009a) or Water Quality Standards for surface waters of the State of Washington (WAC 173-201A)
- Storm drain solids (including filtered solids) and surface debris samples, as well as Slip 4 sediments: The lowest value from the Washington State SMS (WAC 173-204) or the 1994 Lowest Apparent Effects Threshold Values (Ecology 1996)

Note that Section 6 of this Work Plan evaluates a much broader list of criteria and utilizes currently available data to identify COPCs going forward in the RI. However, the initial identification presented as part of this preliminary CSM is based on historical information and limited criteria provided in the data gaps reports. Based on these limited SLs, the following preliminary COPCs were determined for the Site, regardless of media, as presented in these two Site reports (SAIC 2009b, 2011b).

In 2011, Ecology requested that a broader set of criteria be evaluated for use as SLs in the RI. As a result, the list of COPCs above is considered preliminary, and a more complete screening process with a refined list of RI COPCs is presented in Section 6 of this Work Plan. A detailed data evaluation using all available analytical results in Section 7 will utilize the new RI COPCs identified in Section 6.

3.1.2 Potential Contaminant Sources

General *onsite* sources of COPCs to environmental media at the Site include, but are not limited to, the following:

- Historical and current operations and activities at GTSP and NBF
- Materials and equipment used in historical and current operations, including storage tanks, vehicles, and aircrafts
- Building materials and components, such as window caulk and paint
- CJM, pavement, and surface debris

Examples of operations, activities, materials, and equipment that are included in the first three categories are provided on Table 3-1. Table 3-1 is not a comprehensive list of possible onsite COPC sources. Figure 3-1 also portrays categories of potential contaminant sources. Information regarding COPCs that are potentially present in materials and equipment used in operations, building materials and components, and surface materials is presented in Section 3.1 of the Infiltration and Inflow Assessment Report (SAIC 2011b).

Potential *offsite* sources that may have contributed to contamination of the Site include, but are not limited to, the following:

- Contaminated stormwater drainage and upgradient groundwater flowing to the Site
- Surface runoff from offsite sources, including the NBF-FTC and KCIA

- Atmospheric deposition
- Storage tanks and other stored materials at adjacent properties

3.2 Potential Release Mechanisms and Transport Routes

Chemical contaminants present in the source materials (e.g., CJM or building materials) are released to the environment through a variety of mechanisms, such as weathering and volatilization. The contaminants are transported to environmental media, such as groundwater or Slip 4 sediments (via the storm drain pathway). After the contaminants are present in environmental media, humans and other organisms may be exposed to the contamination (Figure 3-1). The following sections identify the potential release mechanisms and transport routes for COPCs at the NBF-GTSP Site.

3.2.1 Potential Release Mechanisms

Physical and chemical release mechanisms that potentially expose environmental media to COPCs are discussed below.

Physical Release Mechanisms:

- Weathering, Erosion, and Fragmentation – Weathering and erosion of materials located outdoors (such as building materials, CJM, pavement, and soil particles) occur through natural processes such as wind and rainfall, but also through industrial practices such as power-washing surfaces and ground surface sweeping. These mechanisms cause fragmentation and movement of material along the surface and release contaminants or contaminated particulates (i.e., dust) to the atmosphere.
- Wear and Aging – Wear and aging on vehicles, aircrafts, and equipment caused by normal operations may potentially release contaminants to the environment. For example, zinc and phthalates may be released to the ground surface through wear on vehicle tires, or copper may be released from brake pads. Cadmium coatings used on aircraft parts may flake or chip off through normal use and reach the ground surface.
- Liquid or Solid Releases (spills and leaks) – Liquid and solid spills may occur from operations inside buildings, various structures (e.g., transformers, hoses, ASTs) and vehicles/aircraft, potentially releasing contaminants to the ground (both paved and unpaved).

Chemical Release Mechanisms:

- Leaching – Contaminants may leach from materials and equipment used in operations, spilled materials, and building and surface materials; this may occur when these materials come into contact with rain, stormwater, or other liquid. Additionally, contaminants may leach from soil when in contact with groundwater or stormwater.

- Volatilization – Contaminants may volatilize from materials used in operations (such as fueling), from building materials and components (such as phthalates offgassing from plastics), or from CJM or contaminated soil and groundwater when exposed to the atmosphere. Volatilized contaminants may sorb to particulates in the atmosphere.

3.2.2 Transport Routes to Environmental Media

The following routes may transport contaminants that have been released from the possible COPC sources, identified in Section 3.1.2, to environmental media. Contaminants may follow one or more transport routes in this process. These transport routes may be primary and/or secondary routes.

- Atmospheric deposition including dry and wet deposition of atmospheric contaminants from onsite sources (e.g., vehicle and aircraft emissions) and offsite sources
- Surface runoff and overland flow
- Storm drain system conveyance, including inflow from improper connections (e.g., building floor drains), offsite connections, and base flow
- Infiltration and leaching of stormwater to the ground surface, soil, and groundwater
- Infiltration and leaching of contaminated soil or groundwater to the storm drain system and infiltration and leaching of contaminated stormwater in the storm drain system to soil or groundwater
- Soil and dust redistribution (i.e., regrading, erosion, dust generation, track-out)
- Groundwater migration and downgradient transport
- Groundwater and/or soil to soil vapor and intrusion to indoor air

Atmospheric deposition is a possible transport route of COPCs to the Site. For example, PCBs may be transported via this pathway and may exist in air as vapors, sorbed to particulates, or as aerosols. In particular, PCBs may volatilize from CJM, especially when heated by solar radiation (Chrostowski 2009a, 2009b). All other COPCs may also be transported via the airborne pathway. When atmospheric transport of contaminated material gives way to wet or dry deposition on the surface, the particulates may be washed into the storm drain system or infiltrate the ground surface.

Surface runoff and overland flow are possible transport routes of COPCs to the Site. Contaminated surface debris is entrained by stormwater and conveyed to the storm drain system at NBF through surface runoff transport. In this preliminary CSM, surface runoff includes surfaces such as rooftops at NBF because many buildings have roof drains that are plumbed to the storm drain systems. Contaminants deposited on rooftops through atmospheric deposition may be washed into the storm drain system. Surface runoff may occur in the event of a liquid spill, if the spill enters the storm drain system. At GTSP, overland flow of stormwater may redistribute contaminants that are present in surface soil through erosion and re-deposition of soil; however, this transport mechanism is likely insignificant.

Stormwater may infiltrate soil and groundwater beneath the Site in both the unpaved areas (such as the yard at GTSP) and paved areas through cracks, joints, and breaks in the asphalt or concrete surfaces. Infiltration of stormwater may introduce contaminants to soil and groundwater if the stormwater is contaminated or becomes the catalyst for contaminants in soil to leach to groundwater.

Stormwater, base flow water, and storm drain solids are conveyed through the storm drain system and ultimately discharge to Slip 4, although some of this water is treated for PCBs prior to discharging. Base flow may be composed of groundwater (where storm drain lines are below the water table), suspended solids, discharges from improper connections (e.g., floor drains) and offsite connections, and direct spills to the storm drain system.

Contaminated soil and groundwater may infiltrate the storm drain system through cracks, joints, and breaks in the storm drain structures. Soil would likely enter the storm drain system through large holes or via rapidly moving groundwater; therefore, a more likely scenario for contaminants in soil to reach the storm drain system includes groundwater leaching through the soil and then into the storm drain system.

As contaminated soil and groundwater may infiltrate the storm drain system, exfiltration from the storm drain system to soil and groundwater may also occur through cracks, joints, and breaks in storm drain structures. Due to stormwater and base flow conveyance through the storm drain system, contaminants that are exfiltrating from the storm drain system may have traveled downstream from the source.

Soil redistribution through construction activities, such as regrading or backfilling excavations, has occurred in the past at GTSP and NBF and may occur in the future. Dust may also be generated from construction or excavation activities. Employees may inadvertently track out contaminant-bearing dust from indoor areas to other areas of the Site. Dust may become entrained by wind or stormwater.

Upgradient, contaminated groundwater may enter the Site through groundwater migration. Groundwater migration may transport contaminants from upgradient areas to downgradient areas of the Site. Groundwater may reach offsite and eventually discharge to Slip 4 or to the LDW.

Volatile contaminants in soil and shallow groundwater may undergo vapor intrusion into buildings and mingle with indoor air.

3.3 Affected Environmental Media

Stormwater, storm drain solids, soil, groundwater, soil vapor, and air are the primary environmental media that may become contaminated at the Site. If contaminated, these media may act as secondary sources, become subject to release and transport mechanisms, and ultimately spread contaminants to new areas or cross between media (Figure 3-1). The table below indicates the COPCs that have been detected in each environmental medium. In addition, soil vapor and indoor air have not been sampled for contaminants at the Site.

Contaminants Detected in Affected Environmental Media

Environmental Media	Contaminants of Potential Concern							
	PCBs	Dioxins/ Furans	Metals	PAHs	Phthalates	Other SVOCs	Petroleum Hydro-carbons	VOCs
Soil	●	--	●	●	●	●	●	●
Groundwater & Base Flow	●	ND	●	●	●	●	●	●
Stormwater & Suspended Solids[1]	●	●	●	●	●	●	--	●
Storm Drain Solids	●	●	●	●	●	●	●	--
Surface Materials[2]	●	--	●	●	--	--	●	--
Slip 4 Sediment	●	●	●	●	●	●	--	--

[1] Stormwater was not analyzed for dioxins/furans; suspended solids were not analyzed for VOCs
[2] Ground surface materials including CJM, surface debris, and pavement
-- Not analyzed ND Non-detect for groundwater, and not analyzed in base flow

Although anthropogenic solid materials are not considered as an affected medium, they may also contain contaminants that might be released to the ground surface (surface debris), to the storm drain system, to soil, and to air. Anthropogenic materials generally do not constitute an "environmental" medium; however, they represent a potential source material for these other media, and they form the upgradient portion of some pathways shown in Figure 3-1, particularly the pathway that leads to the storm drain system. Thus, anthropogenic materials are included as distinct sampling media (see Section 7.3), although not as true environmental media.

3.4 Suspected Receptors and Exposure Media

The core of the site conceptual model is represented by a flow-diagram depicting the Site as it relates to exposure pathways and potential receptors. MTCA defines an *exposure pathway* as: "the path a hazardous substance takes or could take from a source to an exposed organism. An exposure pathway describes the mechanism by which an individual or population is exposed or has the potential to be exposed to hazardous substances at or originating from a site." An exposure pathway is complete if a chemical can travel from a source to a receptor and is available to that receptor via one or more exposure routes (USEPA 1989). Exposure pathways include ingestion, dermal contact, and inhalation.

In Figure 3-1, three general classifications of exposure pathways or their components are recognized:

Potentially complete exposure pathways are those routes that: (a) are likely to be currently transporting contaminants to or within a certain medium (such as inhalation of indoor air by workers), or (b) may transport contaminants in the future (such as incidental contact with soil and groundwater for future construction workers).

Potentially complete but insignificant exposure pathways are those that are likely to be currently transporting or may in the future transport contaminants to or within a certain medium; however, the resulting contaminant concentrations or the frequency of exposure would be insignificant to the health of human and ecological receptors.

Incomplete exposure pathways are those that are not possible at any time, based on physical evidence or site usage or the terrestrial ecological evaluation; this indicates that a component of the exposure pathway is missing (e.g., a human will not drink pooled stormwater at the Site). In some cases, additional information may be needed to confirm that future exposure along this pathway is not considered possible.

3.4.1 Human Receptors

GTSP is typically open to the public one day per month; however, the museum is currently closed for maintenance. The south yard was used as a scale model train operation area and a picnic area prior to the museum's temporary closing. The small model train was relocated to the east yard area in 2012 (Figure 2-1). Most of the NBF property is closed to the public. Construction, maintenance, or remediation activities may occur at either property. Offsite individuals may also be affected by contamination related to the Site, such as nearby residents or recreational/fishing users in Slip 4 (Figure 3-1).

The LDW RI/FS documents indicate that Slip 4 is not commonly used for recreational purposes. However, these reports show that netfishing potentially takes place throughout virtually all of the LDW, including Slip 4. The LDW FS report shows that tribal clamming also potentially takes place in intertidal portions of Slip 4 (AECOM 2012).

The LDW Human Health Risk Assessment document (Windward 2007) depicts a public access trail along the bank at the southern mouth of Slip 4, with a notation "muddy shoreline, difficult to access." The LDW FS report demonstrates that shoreline access to the Slip is considered either "difficult public access" or "restricted access," or is undesignated. Although the FS report shows that "assumed beach play" is not expected in Slip 4, a beach play area that includes picnicking, swimming, and a hand boat launch is located in the LDW immediately north of the mouth of the Slip (AECOM 2012).

Based on this information, the Slip is used primarily for industrial and fishing purposes and is infrequently used for recreational purposes where the receptor is in contact with the sediment; however, recreation may frequently take place just north of Slip 4. The main activities where humans may become exposed to sediment or water in the Slip are via fishing and clamming.

Current human receptors that could potentially be exposed to chemicals on or near the Site include:

- Onsite industrial workers (full-time, regular)
- Onsite construction workers (full-time, temporary)
- GTSP visitors
- Offsite industrial workers at nearby facilities (full-time, regular)
- Offsite residents
- Fishing and recreational users

3.4.2 Ecological Receptors

Ecological receptors include any living plant or animal, other than humans, that could be adversely affected by environmental contamination resulting from a release at or migration from the Site (Figure 3-1). The current ecological receptors that could potentially be exposed to chemicals on or from the Site include:

- Aquatic/marine biological receptors in or along Slip 4
- Any terrestrial biological receptors

3.4.3 Exposure Media and Pathways

Human and ecological receptors may be exposed to COPCs through the following exposure media:

- Outdoor and indoor air
- Stormwater and storm drain solids
- Soil
- Groundwater
- Surface solids and water on ground surface
- Slip 4 surface water and sediment

Note also that Slip 4 contaminated water and sediment may adversely affect marine organisms, which in turn may be consumed by humans. The potential exposure pathways and the preliminary classification in relation to each exposure media are described in the following sections. Potential transport/exposure scenarios are provided to illustrate how a human or ecological receptor may become exposed to contaminants at or downgradient from the Site. The pathway classification lists the maximum exposure condition between the various receptor categories (Figure 3-1).

3.4.3.1 Outdoor and Indoor Air

Outdoor air and indoor air as exposure media affect potential receptors via the inhalation exposure pathway. The exposure media become contaminated through a number of mechanisms, including soil or groundwater to vapor to outdoor/indoor air, and particulate transport. A summary of the potential exposure pathways for outdoor and indoor air at or near the Site is presented in the following table.

Potential Exposure Pathways for Outdoor and Indoor Air

Potential Air Exposure Pathway	Pathway Classification	Transport/Exposure Scenario
Inhalation – outdoor air	Potentially complete	Chemicals present in CJM, building materials, surface soil, pooled stormwater, and other sources may volatilize or be transported as particulates to outdoor air. This may take place during construction, maintenance, or excavation activities involving contaminated materials.
Inhalation – indoor air	Potentially complete	Chemicals present in soil, groundwater, or non-aqueous phase liquid (NAPL) may volatilize and intrude into buildings.

3.4.3.2 Stormwater and Storm Drain Solids

Stormwater and storm drain solids as exposure media affect potential receptors via the exposure pathways of incidental ingestion or dermal contact. A summary of the potential exposure pathways for stormwater and storm drain solids at or near the Site is presented in the following table.

Potential Exposure Pathways for Stormwater and Storm Drain Solids

Potential Storm Drain Exposure Pathway	Pathway Classification	Transport/Exposure Scenario
Incidental Ingestion/ Dermal Contact	Potentially complete for dermal contact; Insignificant for ingestion	Workers may encounter stormwater and storm drain solids in the NBF storm drain system during utility repair or construction activities. Treated water (downstream from LTST) is considered to be an incomplete pathway for dermal contact and ingestion.

3.4.3.3 Soil

Soil as an exposure medium affects potential receptors via exposure pathways of incidental ingestion and dermal contact. A summary of the potential exposure pathways for soil at the Site is presented in the following table.

Potential Exposure Pathways for Soil

Potential Soil Exposure Pathway	Pathway Classification	Transport/Exposure Scenario
Incidental Ingestion/ Dermal Contact	Potentially complete	Soil contamination has been identified near ground surface (less than 3 inches) and at depth (as deep as 40 feet bgs).[1] Because shallow contaminated soil is present, it may be incidentally encountered via contact or ingestion during site redevelopment, utility construction, by museum visitors, or by ecological receptors; current users are partially separated from contamination by pavement, grass, and fill/topsoil.

[1] Hart Crowser 1991

3.4.3.4 Groundwater

Groundwater as an exposure medium affects potential receptors via exposure pathways of potential drinking water ingestion or dermal contact, or via incidental ingestion or contact of groundwater while performing subsurface work. A summary of the potential exposure pathways for groundwater at or near the Site is presented in the following table.

Potential Exposure Pathways for Groundwater

Potential Groundwater Exposure Pathway	Pathway Classification	Transport/Exposure Scenario
Ingestion/ Dermal Contact – potable water	Potentially complete	Groundwater at the Site is not used as a current source of potable water. However, this remains a potential pathway until the groundwater has been demonstrated to be non-potable in accordance with WAC 173-340-720(2).
Incidental Ingestion/ Dermal Contact – subsurface water	Potentially complete for dermal contact; Insignificant for ingestion	Groundwater at the Site is as shallow as approximately 2 feet bgs. Because the water table may be encountered during redevelopment or utility construction or remediation activities, contaminated groundwater may be incidentally ingested or contacted.

3.4.3.5 Surface Solids and Water on Ground Surface

Surface solids and water on the ground surface as exposure media affect potential receptors via exposure pathways of incidental ingestion and dermal contact. A summary of the potential exposure pathways for surface solids and water on the ground surface at the Site is presented in the following table.

Potential Exposure Pathways for Surface Solids and Water on Ground Surface

Potential Groundwater Exposure Pathway	Pathway Classification	Transport/Exposure Scenario
Incidental Ingestion/ Dermal Contact – surface solids	Potentially complete	Contaminated surface solids may be encountered by Site workers or museum visitors via incidental ingestion or contact.
Dermal Contact – water on ground	Potentially complete but insignificant	Contaminated water on the ground surface may be contacted by Site workers or museum visitors.

3.4.3.6 Slip 4 Surface Water and Sediment

Slip 4 is the point of discharge and deposition for stormwater and solids passing through the NBF storm drain system. Treatment of stormwater at the KC lift station reduces the impact to potential receptors. Surface water and sediment in Slip 4 may constitute exposure media to humans and ecological organisms. The primary exposure pathways are incidental ingestion and dermal contact with water or sediment. In addition, fish or shellfish may become contaminated by water or sediment and then may be consumed by humans (see Section 3.4.1).

Note that a variety of sources discharge to Slip 4 and may contribute to contamination in the Slip and the adjacent LDW. The Georgetown Flume replacement line and the Interstate-5 storm drain line both discharge to Slip 4, in addition to stormwater discharges from other local properties. A summary of the potential exposure pathways for Slip 4 surface water and sediment is presented in the following table.

Potential Exposure Pathways for Slip 4 Surface Water and Sediment

Potential Slip 4 Exposure Pathway	Pathway Classification	Transport/Exposure Scenario
Incidental Ingestion/ Dermal Contact	Potentially complete	Recreational users, fishers/clammers, workers, and ecological receptors may come into contact with or ingest Slip 4 surface water and/or sediment. Humans may also consume marine receptors. Treated water (at/near the discharge point) is considered to be an insignificant pathway for dermal contact and ingestion.

4.0 Summary of Existing Information and Data Gaps

Section 4 includes a concise summary of available information on environmental investigations and identified data gaps for the NBF-GTSP Site. Two previous reports on data gaps at the NBF-GTSP Site have been produced (SAIC 2007, 2009b), which together form the bulk of information in this section of the Work Plan. More detailed information on history of investigations and results in specific areas of concern is included in Section 7, along with detailed maps of each area. Summary information on investigations and cleanups reported by late 2012 is included in Section 4, and this section thus serves as an update to the 2009 Supplemental Data Gaps report (SAIC 2009b).

A large number of environmental investigations have been conducted at the NBF-GTSP Site over the past few decades. Between 2010 and early 2012, numerous investigations took place, focusing particularly on the NBF PEL area and the southern portion of the GTSP property. Based on results from these investigations, areas of contamination have been further identified in soil and groundwater at GTSP and NBF, in storm drain solids and water at NBF, and in a variety of anthropogenic materials at the NBF property.

In this Work Plan, the primary focus is on two major categories of potentially contaminated media. These include soil/groundwater and stormwater/anthropogenic media. The various anthropogenic materials constitute potential sources to the storm drain system, which in turn also functions as a pathway to Slip 4. In Sections 4.1 and 4.2 below, applicable media are described according to the following categories:

- Soil and groundwater
- Storm drain system
- Anthropogenic media

Sources of preliminary COPCs associated with the GTSP property are identified in Section 4.1, and those associated with the NBF property are identified in Section 4.2. Figure 4-1 presents known historical sampling locations as of 2012 for soil and groundwater at the NBF-GTSP Site (and some offsite locations adjacent to GTSP). These include locations that are currently uploaded into the Ecology project database. Figure 2-7 identifies the monitoring wells and other groundwater sampling locations. Figure 4-2 presents a synoptic view of the NBF-GTSP Site with known locations of historical samples collected and analyzed for PCBs from the following four media groups: soil, groundwater, storm drain solids, and anthropogenic media (including CJM, concrete, and surface solids). Figure 4-3 presents the same view for sample results of total petroleum hydrocarbons (TPH), Figure 4-4 for SVOCs, Figure 4-5 for VOCs, and Figure 4-6 for metals.

In Section 4, initial screening levels (SLs) have been applied as described above in Section 3.1.1; a more rigorous criteria evaluation and screening will be applied in Section 6. Note that throughout Section 4, PCB concentrations always refer to total PCBs, unless stated otherwise. The following summary, by location and media, provides an overview of Site conditions.

4.1 Summary of Potential Sources of Contaminants at GTSP

Much of the information regarding investigations and cleanups prior to 2009 is summarized in the Supplemental Data Gaps Report (SAIC 2009b). This information is updated in the sections below. Section 7 provides additional detailed information, figures, and references on contamination at GTSP. Site features of GTSP are presented in Figures 2-1 and 2-2. Soil and groundwater sampling locations from investigations at and near the GTSP property are shown in Figure 4-1.

4.1.1 Soil and Groundwater

Low levels of PCBs have been detected in soil samples near the power house, fuel storage areas, and boiler blowdown ditch, in addition to detections in wipe and ash samples from the GTSP power house. Because city records indicate that used transformer oil was delivered to the GTSP property over a period of several years (SCL 1976, 1985), the GTSP cannot be ruled out as a potential source of sediment recontamination to Slip 4.

Contaminated soil has generally been encountered between ground surface and approximately 9 feet bgs. However, in some deeper soil borings in the former fuel tank area, petroleum hydrocarbon contamination has been observed as deep as 21 feet bgs. Soils containing significantly elevated concentrations of PCBs have been identified in the low-lying area. Contaminated groundwater has been identified in all wells at GTSP, although PCBs have been observed only in well GTSP-5 and in three temporary wells, which are all located in the southwest portion of the low-lying area. Trichloroethene (TCE) is present in upgradient well GTSP-1, and metals have been detected in all GTSP wells.

PCBs were identified in the former low-lying area (near the southwest corner of the property) at concentrations up to 91,000 mg/kg in 1985; this soil has since been removed. It is possible that the operations at the former Boeing Fire Training Center and ditch may have transported contaminated soil with water to this area, although PCB concentrations in soil (maximum of 2.7 mg/kg) at the former training center are insignificant compared to that in the former low-lying area. Soils in the former low-lying area were excavated from a 40- by 50-foot area to a depth of 3 to 4 feet in 1985 (see Section 7.1.3.4).

In November 2005, PCBs were detected in soils from gaps in the retaining wall along the fenceline between GTSP and NBF (Figures 4-7 and 4-8) at concentrations up to 2,400 mg/kg. A subsurface sample collected from behind the retaining wall in January 2006 contained 3,900 mg/kg. This area was subsequently excavated during the May 2006 interim action to reduce the potential for offsite migration of PCB-contaminated soils. PCBs remained in subsurface soil at concentrations up to 3,800 mg/kg, but these fenceline soils were excavated as part of the interim action during fall 2011 (see details in Sections 7.1.3.4 and 7.1.4.1).

Soil samples were collected from the low-lying area and fenceline areas in summer 2010. Data indicated that PCBs were detected in 65 of 137 soil samples at concentrations up to 530 mg/kg (Integral 2010b). The source of PCB contamination to this area has not been determined. These low-lying area soils were also excavated as part of the large interim action during summer/fall 2011.

Metals, PAHs, petroleum hydrocarbons, and VOCs were identified in soil and/or groundwater samples collected at the GTSP property at concentrations exceeding initial SLs, including MTCA cleanup levels (CULs) (Section 3.1.1). In addition, PCBs, mercury, PAHs, and other SVOCs were detected at concentrations exceeding the soil-to-sediment SLs. The preliminary COPCs in the following table exceeded these initial SLs for sample results from GTSP.

Chemicals in Exceedance of MTCA CULs or Soil-to-Sediment SLs at GTSP

Chemical Class	Chemical
PCBs	Total PCBs
Metals	Arsenic
	Cadmium
	Chromium
	Mercury
PAHs	Acenaphthene
	Benzo(a)anthracene
	Benzo(a)pyrene
	Chrysene
	Fluorene
	2-Methylnaphthalene
	Naphthalene
	Phenanthrene
	Pyrene
	Total cPAHs
Other SVOCs	Dibenzofuran
Petroleum Hydrocarbons	TPH-gasoline
	TPH-diesel
	TPH-motor oil
VOCs	TCE

4.1.1.1 Recent and Ongoing Investigations (2010–2012)

Extensive soil and groundwater sampling for PCBs has been conducted at the GTSP property; some sampling, particularly the 2010 investigation, has been conducted for other contaminants. Several chemicals have been detected in soil at concentrations above initial SLs, including arsenic, chromium, benzo(a)pyrene, PCBs, and TPH. In addition, PCBs and TCE have been detected above SLs in groundwater.

The City of Seattle has completed a number of activities to identify and mitigate PCB sources at the GTSP property as outlined in Table 4-1, which summarizes investigations and cleanup actions at the Site since 2009. In 2011, an extensive soil investigation and excavation were performed, providing additional data about remaining soil concentrations. Soil excavation was performed in the low-lying area and south yard area, in addition to soil removal in the fuel tank area (see Section 7.1). This interim action is expected to improve groundwater quality as a result of soil source removal; groundwater monitoring following excavation in this area has begun. The soil removal is discussed in an interim action completion report by Integral (2012).

Final data from the investigations and cleanup have been incorporated into the RI/FS Work Plan and considered in the proposed activities and recommendations.

4.1.1.2 Data Gaps Related to Soil and Groundwater at GTSP

The purpose of the RI is to collect data and information necessary to define the nature and extent of contamination and to characterize the Site. This involves determining the extent of contamination in soil, groundwater, stormwater, and other media at the Site, including identifying sources of contaminants. Part of the RI process is to evaluate data gaps in order to determine what information is needed to make investigative and remedial decisions. Data gaps related to these media at the GTSP property are identified below.

- Following the 2011 excavation, one data gap involves the need for sufficient groundwater monitoring data to determine if the source removal has affected groundwater quality.
- The lateral and vertical extent of PCBs and other contaminants is needed in less characterized areas at the GTSP property, including the northwestern and northeastern areas.
- A recent study conducted by Ecology analyzed dioxins/furans in surface soil of selected Seattle neighborhoods. Georgetown, located adjacent to the northern portion of the Site, was included in this study. The average and maximum dioxins/furans toxic equivalent (TEQ) concentrations from this study were identified in the Georgetown area samples (Ecology 2011a). Based on the presence of dioxins/furans in surface soil in the adjacent neighborhood, the presence of elevated concentrations of PCBs at GTSP (which may tend to correlate with concentrations of dioxins/furans), limited testing of dioxins/furans at GTSP and with elevated concentrations, and onsite areas that have been unpaved and undisturbed for an extended period of time, further characterization of dioxins/furans concentrations at the GTSP property is needed.

4.1.2 Georgetown Flume and Power House Building

Although the former flume was largely located off the current GTSP property, it will be briefly discussed here. A historical summary of the flume and the removal activity is included in Section 2.3.2, and additional investigative information is provided in pertinent portions of Sections 7.1 and 7.2. During several investigations between 1984 and 2006, the City of Seattle sampled storm drain solids in the flume, and identified PCBs, PAHs, metals, and petroleum constituents. One early cleanup activity took place in 1985. Environmental investigations performed in 2005 and 2006 characterized sediment/solids in the flume, and soil and groundwater near the flume. Solids samples indicated that concentrations of PCBs, PAHs, phenols, benzoic acid, BEHP, lead, mercury, and zinc exceeded the initial SLs, including the SMS Sediment Quality Standard (SQS) or the Contaminant Screening Level (CSL). PCBs and cPAHs were present in samples of creosote from the wooden flume. Soil and groundwater samples were collected beneath the flume, and no exceedances of MTCA Method A CULs for industrial land use were observed (Herrera 2007, 2010).

In 2009, the flume was subject to a remedial action to protect contaminants from reaching Slip 4. The tunnel that connected the GTSP to the flume contained approximately 25 to 30 cubic yards of PCB-contaminated solids. These solids were removed during the flume removal in 2009, and the tunnel was cleaned and backfilled. Approximately 2.75 tons of flume sediments and soil were removed under regulation of the Toxic Substances Control Act (TSCA) (Herrera 2010).

The roof drains from the GTSP power house building are connected via the flume replacement storm drain line, which discharges to Slip 4. Roof materials and roof drain effluent have not been evaluated as possible sources of COPCs. The drain leading away from the power house roof downspouts has not been sampled for storm drain solids. The roof of the GTSP building is scheduled for replacement in 2013; however, lack of data for downstream solids from the existing roof in the flume replacement line represents a data gap.

Data gaps related to building materials at GTSP include sampling and analysis of paint on the power house, which has not been evaluated as a possible source of COPCs that may affect other media.

4.2 Summary of Potential Sources of Contaminants at NBF

Much of the information regarding investigations and cleanups prior to 2009 is summarized in the Supplemental Data Gaps Report (SAIC 2009b). This information is updated in the sections below. Section 7 provides additional detailed information, figures, and references on contamination at NBF. General site features of NBF are presented in Figure 2-4.

4.2.1 Soil and Groundwater

Soil and groundwater sampling locations from investigations at the NBF property are shown in Figure 4-1. Numerous investigations and cleanups have been performed at NBF over many years (Table 4-1). This table includes both source control actions (or cleanups) and investigations at the Site since the Supplemental Data Gaps report was produced in 2009.

For purposes of discussing environmental investigations and cleanups of soil and groundwater, NBF was provisionally subdivided into three large areas based on zones previously defined by Boeing and historical features: the PEL area (northern portion of NBF), the Central area, and the Southern area (Figure 4-7; SAIC 2009b). Soil and groundwater investigations in these three large areas are summarized in the following sections. (Note that in Section 7.1 of this Work Plan, these zones have been modified and formal areas of concern have been defined.)

4.2.1.1 Propulsion Engineering Laboratory Area

The PEL area includes the buildings within and around the fuel test slab and extends east to the Green Hornet area (Figure 4-8). This area is north of Concourse A and also includes the NBF-GTSP fenceline area. Historical investigation areas that have been conducted in the PEL area are depicted in Figure 4-8. The Supplemental Data Gaps Report (SAIC 2009b) included soil and groundwater sampling results for chemicals with detected concentrations exceeding initial SLs as of 2009. Information from this and more recent PEL investigations (2010 to 2012) is summarized below and is presented in greater detail in Section 7.1.

In 2011, an extensive soil investigation and excavation was performed in the fenceline area, in collaboration with the City's efforts on the GTSP side of the fenceline. These activities provided additional data about remaining soil concentrations. Soil excavation was performed on the west and south sides of this fenceline (see Section 7.1). This interim action is expected to improve groundwater quality as a result of soil source removal; groundwater monitoring following excavation in this area has begun. The soil removal is discussed in an interim action completion report by Landau (2012f).

Final data from the investigations and cleanup have been incorporated into the RI/FS Work Plan and considered in the proposed activities and recommendations.

PCBs, metals, SVOCs (including PAHs and phthalates), petroleum hydrocarbons, and VOCs were detected in soil samples at concentrations exceeding the initial SLs, including MTCA CULs and/or the soil-to-sediment SLs. PCBs, petroleum hydrocarbons, and VOCs were identified in groundwater samples at concentrations exceeding the MTCA CULs and the groundwater-to-sediment SL (Section 3.1.1). The preliminary COPCs in the following table exceeded these initial SLs for sample results from the PEL area.

Chemicals in Exceedance of MTCA CULs or Soil/Groundwater-to-Sediment SLs at PEL Area, NBF

Chemical Class	Chemical
PCBs	Total PCBs
Metals	Arsenic
	Chromium
	Mercury
PAHs	Benzo(a)anthracene
	Benzo(a)pyrene
	Fluorene
	Naphthalene
	Total cPAHs
Phthalates	BEHP
Other SVOCs	Dibenzofuran
	Hexachlorobutadiene
	2-Methylnaphthalene
Petroleum Hydrocarbons	TPH-gasoline
	TPH-diesel
	Jet fuel
	Kerosene
VOCs	Benzene
	Methylene chloride
	TCE
	Total Xylenes

Preliminary COPC chemical classes observed in soil samples include PCBs, PAHs, VOCs, metals, and petroleum hydrocarbons. Contaminants in soil at the PEL area are generally observed between the soil surface and approximately 11 feet bgs.

Contaminants in groundwater have been observed in the PEL area in samples from monitoring wells or in grab groundwater samples. Until recently, the existing data were not sufficient to determine current conditions in the PEL area, considering its large acreage and the number of areas of investigation. Until January 2011, the only active groundwater monitoring wells in the PEL area included the wells associated with the Green Hornet area (wells NGW101 through NGW106) and the Building 3-353 area (GT-1114-2). Of these wells, only two were monitored and groundwater samples were analyzed for petroleum hydrocarbons only. In 2011 and 2012, Boeing installed 23 monitoring wells in scattered locations throughout the PEL area, seven of which are now abandoned. In total, seven active wells in the PEL area are monitored on a semi-annual basis. The area near the fenceline corner of the PEL area (and adjacent GTSP low-lying area) is being adequately monitored, due to a number of recently installed wells.

4.2.1.2 Central Area

The Central area of NBF encompasses Concourse A at the northern end and the Main Fuel Farm at the southern end. This area extends west to east from East Marginal Way S to Concourse C. Investigations that have been conducted in the Central area are shown in Figure 4-9. The Supplemental Data Gaps Report (SAIC 2009b) included soil and groundwater sampling results for chemicals with detected concentrations exceeding initial SLs as of 2009. Information from this and more recent investigations (2010 to 2012) is summarized below and is presented in greater detail in Section 7.1.

Metals, SVOCs (including PAHs and phthalates), PCBs, petroleum hydrocarbons, and VOCs were detected in samples collected in the Central area of NBF at concentrations above initial SLs, including MTCA CULs and the soil-to-sediment or groundwater-to-sediment SLs (Section 3.1.1). The preliminary COPCs in the following table exceeded these initial SLs for sample results from the Central area.

Chemicals in Exceedance of MTCA CULs or Soil/Groundwater-to-Sediment SLs at Central Area, NBF

<table>
<tr><th>Chemical Class</th><th>Chemical</th><th>Chemical Class</th><th>Chemical</th></tr>
<tr><td>PCBs</td><td>Total PCBs</td><td>Phthalates</td><td>BEHP</td></tr>
<tr><td rowspan="12">Metals</td><td>Antimony</td><td rowspan="2">Other SVOCs</td><td>2-Methylnaphthalene</td></tr>
<tr><td>Arsenic</td><td>Phenol</td></tr>
<tr><td>Cadmium</td><td rowspan="4">Petroleum Hydrocarbons</td><td>TPH-gasoline</td></tr>
<tr><td>Chromium</td><td>TPH-diesel</td></tr>
<tr><td>Copper</td><td>Jet fuel</td></tr>
<tr><td>Lead</td><td>Kerosene</td></tr>
<tr><td>Manganese</td><td rowspan="9">VOCs</td><td>Benzene</td></tr>
<tr><td>Mercury</td><td>Bromodichloromethane</td></tr>
<tr><td>Selenium</td><td>Chloroform</td></tr>
<tr><td>Silver</td><td>Dibromochloromethane</td></tr>
<tr><td>Vanadium</td><td>1,2-DCE</td></tr>
<tr><td>Zinc</td><td>Methylene chloride</td></tr>
<tr><td rowspan="7">PAHs</td><td>Acenaphthene</td><td>PCE</td></tr>
<tr><td>Benzo(a)anthracene</td><td>TCE</td></tr>
<tr><td>Benzo(a)pyrene</td><td>Vinyl chloride</td></tr>
<tr><td>Fluorene</td><td colspan="2" rowspan="4"></td></tr>
<tr><td>Naphthalene</td></tr>
<tr><td>Phenanthrene</td></tr>
<tr><td>Total cPAHs</td></tr>
</table>

The Central area comprises a large portion of NBF. Soil and groundwater investigations have been limited to three smaller areas within the Central area (Figure 4-9).

In the northern portion of the Central area (Buildings 3-390, 3-369, 3-380, 7-27-1, former Building 3-360, and Concourse A), contaminated soil is generally observed between 2 and 10 feet bgs. Preliminary COPC chemical classes observed in soil samples include PCBs, PAHs, VOCs, metals, and petroleum hydrocarbons. Preliminary COPC chemical classes observed in groundwater samples include VOCs, SVOCs, metals, and petroleum hydrocarbons. Active wells in this area are those associated with former Building 3-360 (wells NGW201 through NGW212) and Building 3-369. Wells associated with Building 3-369 are not currently monitored. Ten additional wells were installed in 2011 for purposes of bioremediation substrate injection in the former Building 3-360 area. Of the 3-360 wells, only five are currently monitored for limited VOCs.

In the Main Fuel Farm and the area of Buildings 3-800, 3-801, and 3-818, contaminated soil is generally encountered between 2 and 10 feet bgs. Preliminary COPC chemical classes observed in soil samples include PAHs, VOCs, metals, and petroleum hydrocarbons. Preliminary COPC chemical classes observed in groundwater samples include PAHs, phthalates, other SVOCs, VOCs, metals, and petroleum hydrocarbons. The active wells in this area are those associated with Building 3-800 (wells NGW301 through NGW311) and the Main Fuel Farm (wells NGW351 through NGW359). Three of the 3-800 wells are currently monitored and the groundwater samples are analyzed for PCE, TCE, cis-1,2-DCE, and vinyl chloride (all wells). Five of the Main Fuel Farm wells are currently monitored and all samples are analyzed for petroleum hydrocarbons; three of the wells are also analyzed for BTEX. Petroleum non-aqueous phase liquid (NAPL) has been observed in well NGW354.

Limited data are available in the flightline area, as very few soil and groundwater investigations have been performed in this area. VOCs and petroleum hydrocarbons have been detected in soil samples at concentrations exceeding initial SLs from approximately 1 to 6 feet bgs. VOCs, metals, phthalates, and petroleum hydrocarbons have been detected in groundwater samples at concentrations exceeding SLs. No groundwater monitoring wells are currently present in the flightline area.

4.2.1.3 Southern Area

The southern portion of NBF includes the area between the southern boundary of the Main Fuel Farm and the southern margin of the NBF Site. Investigations that have been conducted in the Southern area are shown in Figure 4-10. The Supplemental Data Gaps Report (SAIC 2009b) included soil and groundwater sampling results for chemicals with detected concentrations exceeding initial SLs as of 2009. Information from this report is summarized and is presented in greater detail in Section 7.1.

Metals and VOCs were detected in samples collected in the Southern area of NBF at concentrations above initial SLs, including MTCA CULs and the soil/groundwater-to-sediment SLs (Section 3.1.1). The preliminary COPCs in the following table exceeded these initial SLs for sample results from the Southern area.

Chemicals in Exceedance of MTCA CULs or Soil/Groundwater-to-Sediment SLs at Southern Area, NBF

Chemical Class	Chemical
Metals	Arsenic
	Mercury
VOCs	Benzene
	Methylene chloride

Metals and methylene chloride were identified in soil samples at 10 feet bgs. Benzene was identified in groundwater samples. No groundwater monitoring wells are currently present in this area.

4.2.1.4 Data Gaps Related to Soil and Groundwater at NBF

The 2007 and 2009 NBF-GTSP Data Gaps reports and the 2011 Assessment of Infiltration and Inflow to NBF Storm Drain System report included reviews of the numerous environmental investigations that have been conducted at NBF over the years. Many of these investigations were related to petroleum hydrocarbon and solvent releases associated with aircraft maintenance and delivery activities. During the last decade, environmental investigations have focused more on identifying PCB sources at NBF.

As stated above, the purpose of the RI is to collect data and information necessary to define the nature and extent of contamination and to further characterize the site. This includes identifying contamination in soil, groundwater, stormwater, and other media at the Site, including identifying potential sources of contaminants. Part of the RI process includes evaluating data gaps to determine what information is needed to make investigative and remedial decisions. NBF-wide data gaps related to soil and groundwater are identified below, which updates those outlined in the 2009 Data Gaps report.

NBF Property-Wide Data Gap: A comprehensive analysis of groundwater flow has not been conducted at the NBF-GTSP Site. While numerous localized groundwater investigations have been conducted, results are sometimes conflicting and no studies have attempted to define how groundwater interacts between areas of concern or in the downgradient direction, including in the vicinity of Slip 4. A broad hydrogeological evaluation has been conducted for the Duwamish Basin, but this only identified regional modeled flow patterns on a small scale (Fabritz et al. 1998; Booth and Herman 1998). Groundwater flow pathways have been well defined for the VOC plume emanating from the former Electronics Manufacturing Facility (EMF) on the KCIA property, and which crosses the southern margin of the NBF Site (CALIBRE 2010). However, detailed flow patterns, gradients, and upgradient/downgradient relationships for contamination at various specific areas of concern within the Site have not been determined.

A comprehensive groundwater assessment is needed, including the following:

- A compilation of existing information on groundwater depth, flow, and other well information (survey elevations, screened interval, and total depth); an initial effort at this compilation was begun during the Assessment of Infiltration and Inflow.

- The installation of new groundwater monitoring wells, in addition to those installed in the PEL area since 2011.
- At least two rounds of depth-to-groundwater measurements for available wells at NBF-GTSP and selected wells at downgradient Boeing Plant 2, including a high seasonal water round.
- A survey of top-of-casing elevations for any wells that have not been previously surveyed on a single datum.

This information would allow identification of groundwater flow patterns under seasonally varying conditions that could be used to assess infiltration to the storm drain system and the potential for contaminant transport via groundwater to onsite and offsite areas and to Slip 4. The assessment would also aid in the determination of upgradient offsite contributions to the Site aquifer.

To further identify the potential for infiltration to the storm drain system at the Site, additional focused groundwater monitoring and soil sampling is needed near or upgradient from those storm drain line locations identified as being in need of repair, submerged during high water-conditions, and/or with contaminated solids in nearby storm drain structures.

General PEL Area: Additional investigation is needed to fill data gaps by determining the vertical and lateral extent of PCBs, petroleum hydrocarbons, PAHs and other SVOCs, and VOCs. Some of these data gaps have been filled with Boeing's 2010–2011 investigations of soil and groundwater in the PEL area. Section 7.1.4 provides more comprehensive information regarding past and current remedial actions and investigations related to data gaps in the PEL area. Details of data gaps for specific locations in the PEL area are listed below.

NBF Fenceline Area: Following the 2011 excavation, an outstanding data gap involves the need for sufficient groundwater monitoring data to determine if the source removal has affected downgradient groundwater quality.

Building 3-323 Area: The extent of soil contamination to the north of this building has not been defined. The potential for vapor intrusion exists within Building 3-323 due to concentrations of VOCs in nearby soil and groundwater.

Building 3-302/3-322 Area: Some areas of significant soil PCB concentrations remain, despite excavation taking place; some areas of PCB contamination were left behind due to structural obstacles. The extent of remaining soil contamination has not been defined.

Buildings 3-333 and 3-335 Area: Recent and historical excavations near the north end of Building 3-335 have removed much of the PCB and petroleum hydrocarbon contamination in this area; however, additional contamination remains at depth and in other areas between the two buildings. Following the 2011 excavation in this area, an outstanding data gap involves the need for sufficient groundwater monitoring data to determine if the source removal has affected downgradient groundwater quality. Groundwater quality determination near a 1996 excavation west of the fuel test slab has not been evaluated. Recent sampling has identified a possible VOC groundwater plume in the area between Buildings 3-329 and

3-333. The extent of remnant petroleum and PCB contamination in soil south and southeast of the fuel test slab has not been defined. The potential for vapor intrusion also exists within nearby buildings due to concentrations of VOCs in nearby soil.

Building 3-324 Area: Historical excavations in the “F” and “G” slabs on the eastern side of Building 3-324 have left some remnant soil contamination, containing SVOCs and petroleum hydrocarbons. Contamination may extend between this area and the Building 3-333/3-335 area. Sampling is necessary both within and near the “G” slab and within the “F” slab to confirm the presence/absence or extent of remaining contamination. Also, groundwater sampling downgradient of the “F” slab needs to take place to determine if water quality has been affected. The potential for vapor intrusion exists within Building 3-324 due to concentrations of VOCs in nearby soil.

Building 3-315 Area: Historical transformers were present in the area of Building 3-315, but very limited soil sampling has taken place to confirm the presence/absence or extent of PCBs and other compounds.

Building 3-353 Area: Sampling near the northwest side of Building 3-353 has indicated soil contamination by PCBs and SVOCs. Additional soil sampling is necessary to confirm the presence/absence or extent of these compounds. The potential for vapor intrusion exists within Building 3-323 due to concentrations of VOCs in nearby soil.

Green Hornet Area: The extent of remaining contamination in soil surrounding the former excavations is not well defined in this area. Soil on the downgradient side of the excavation area shows significant exceedances in soil; additional soil and groundwater sampling is needed in this area to determine the nature and extent of downgradient contamination. The potential exists for vapor intrusion within adjacent buildings from VOCs in the Green Hornet area.

Former Buildings 3-360/3-361 and Building 3-365 Area: A current understanding of the extent of VOC contamination in this area is needed, and an assessment of the continued effectiveness of bioremediation activities using the recently installed injection wells. In addition, at least one upgradient well is necessary to identify if contamination is migrating onto the NBF property. The potential for vapor intrusion to adjacent buildings also needs to be evaluated.

Former Markov Property: No in-situ soil samples were collected from the 2002 excavation at the north end of the former Markov property (Landau 2002a); it is not known whether all contaminated soil was removed. PCBs, petroleum hydrocarbons, and VOCs are a potential concern in soil. In Section 7, this area is referred to as the Building 3-380 storm drain area (southern portion of area).

Buildings 3-369 and 3-380 Areas: Metals concentrations in groundwater samples collected in two monitoring events from 1989 to 1991 showed extremely high concentrations. Additional well installation and sampling is needed to confirm the presence or absence of these metals.

Concourse A: Elevated concentrations of PCBs, metals, TPH, BEHP, PAHs, and BTEX have been detected in soil and/or groundwater in the Concourse A area. Investigation is needed to characterize remaining levels of COPCs in soil and to determine whether leaching into groundwater has occurred.

Buildings 3-800, 3-801 Area: TPH concentrations from soil left in place during the 1992 assessment (SEACOR 1992f) between Buildings 3-800 and 3-801 exceeded initial SLs for TPH. Additional characterization is needed to confirm the presence/absence or extent of remaining soil contamination. Groundwater near the 3-801 building has shown elevated metals concentrations, and additional downgradient groundwater sampling is needed to confirm presence/absence. A current understanding of the extent of groundwater VOC contamination in the 3-800 area is needed, and an assessment of the continued effectiveness of bioremediation activities. In addition, at least one downgradient well in the center of the plume is necessary to determine extent and effectiveness. A potential for vapor intrusion also exists for both buildings due to VOCs in soil and groundwater.

Main Fuel Farm Area: Remnant soil contamination containing elevated concentrations of petroleum hydrocarbons and SVOCs needs to be evaluated in the areas of former excavations. In addition, downgradient groundwater is not characterized, and the extent of the groundwater plume is not defined.

Concourse B: At Concourse B, metals exceed initial SLs in groundwater, and wells no longer exist in this area. At least one well needs to be installed and monitored to determine the presence/absence of contamination. Also, in an area where PCBs were identified in soil along the north-central storm drain line, soil and groundwater sampling is necessary to confirm the presence/absence of contamination.

Southern Area: No area-specific data gaps related to soil and groundwater were identified for the Southern area of NBF; however, the property-wide data gap (see above) applies to this area and other areas.

4.2.2 Storm Drain System

This section presents an overview of the NBF storm drain system. The NBF storm drain system layout is presented in Figure 2-5. Further detailed information for each of the main drainage areas at NBF is presented in Section 7.2. Six stormwater drainage areas are located on or near the NBF property: the north lateral, north-central lateral, south-central lateral, south lateral, parking lot area, and the Building 3-380 area. These six drainage areas all discharge their stormwater and entrained solids through the EOF outfall at Slip 4.

The NBF storm drain system drains an area of approximately 110 acres of the NBF property, as tabulated below for each drainage area.

Surface Area for NBF Storm Drain System

NBF Storm Drain Line	Approximate Area (sq ft)	Area (acres)	Percent of Total
North lateral	759,700	17.4	15.8 %
North-central lateral	728,700	16.7	15.1 %
South-central lateral	736,500	16.9	15.3 %
South lateral	2,102,700	48.3	43.7 %
Bldg 3-380 area	193,200	4.4	4.0 %
Parking lot area (downstream of lift station)	294,600	6.8	6.1 %
Lift station junction area	1,700	0.04	0.04 %
Total stormwater drainage area	*4,817,100*	*110.6*	*100.0 %*

Storm drain system piping ranges in diameter from 8 to 48 inches (Boeing 2010), and the system contains more than 600 storm drain structures, including catch basins, manholes, trench drains, inlets, and oil/water separators. The catch basins and manholes are circular and/or rectangular structures of various sizes and ages, mostly constructed of concrete. Some of the older structures have wooden or clay floors. The total length of the system is estimated to be 7 to 8 miles, of which approximately 17 percent is greater than 24 inches in diameter (Landau 1993b). According to the May 2010 NBF Stormwater Pollution Prevention Plan (SWPPP), the storm drain system includes 16 oil/water separators, as well as channel drains and roof drains from numerous buildings. Less than one percent of the property is pervious, including landscaped areas next to some of the buildings (Boeing 2010).

For the following sections of this Work Plan, the NBF storm drain system is described according to the six drainage areas. A view of these drainage areas, along with designations for storm drain structure type and drainage lines, is included in Figure 4-11. In this figure, storm drain lines are labeled by an alphanumeric code. Letters are assigned according to drainage basin (e.g., NC for north-central lateral). The number 1 is assigned to the main line for each drainage area, and higher numbers designate tributary lines or subdrainages that feed into the main line.

Storm drain solids have been sampled in many structures at NBF. This includes grab samples and sediment trap samples from catch basins, manholes, and other structures. A brief overview of storm drain solids sampling is provided below for each of the six drainage areas. A detailed evaluation of analytical results is provided in Section 7.2.

The available analytical data for upstream contaminant contributions at KCIA are summarized in Section 7.2.2.9. Until recently, limited sediment trap and grab sample solids data existed for the upstream and offsite portions of the four main lateral lines. These data indicated that PCBs, PAHs, phthalates, lead, zinc, and copper in storm drain solids may be originating from KCIA, with highest exceedances for PAHs. Sampling took place during the 2011–2012 wet season to collect filtered suspended solids and whole water at the upstream portion of the north-central lateral, south-central lateral, and south lateral storm drain lines on the NBF property to help fill this data gap.

The following summary of data and data gaps is compiled by comparing storm drain solids sampling results to the initial SLs, based on criteria from the Washington State SMS, including the Lowest Apparent Effects Threshold (LAET) (Section 3.1.1). More rigorous criteria evaluation and RI screening will be applied to results in Section 6. It is recognized that storm drain solids are not properly considered river or marine “sediments,” but they are present within upstream tributaries to the LDW. This comparison of storm drain solids to SMS criteria is widely used in the Duwamish basin. Although treatment at the NBF LTST facility takes place for an average of 68 percent of stormwater passing through the KC lift station, stormwater continues to discharge to Slip 4, with about one-third of this water being untreated. This treatment measure does not affect the RI/FS evaluation of source materials at the Site.

4.2.2.1 North Lateral Drainage Area

The north lateral drainage area includes the PEL area and some adjacent areas (Figure 2-4). In general, the highest PCB concentrations detected in storm drain solids at NBF have been in the north lateral drainage area. Descriptions and data below are summarized from downstream to upstream, where the lateral enters the property from offsite. A detailed evaluation of storm drain media from the north lateral is presented in Section 7.2.2.2.

The north lateral main line (N1 in Figure 4-11) merges into the north-central lateral line at CB363A. N1 enters the NBF property near the GTSP, upstream of MH178; but upstream stormwater largely from KCIA has been diverted since October 2011 to the KC lift station, as part of the LTST construction (diverted from a manhole upstream of MH178). Eleven tributary subdrainages, identified as N2 through N12, are shown in Figure 4-11.

All of the COPCs for Site storm drain solids have been detected in samples from the north lateral drainage area at concentrations exceeding the SQS or LAET. In addition to the grab samples and sediment trap samples collected by Landau, SAIC collected filtered suspended solids samples in stormwater at several locations in the north lateral drainage area. PCBs, metals, and HPAH were detected at concentrations above the SQS/LAET in these samples. The table below summarizes COPC exceedances of the SQS/LAET in each subdrainage.

Chemicals in Exceedance of SQS/LAET by Subdrainage
North Lateral Drainage Area

Subdrainage	PCBs	Cadmium	Copper	Lead	Mercury	Zinc	HPAH	BEHP
N1 – Main Lateral Line	●	●	●	●	●	●	●	●
N2 – Drainage to CB363	●	●	--	--	--	●	NA	NA
N3 – Drainage to MH108	●	●	--	--	--	●	NA	NA
N4 – Drainage to MH112	●	●	●	--	●	●	NA	NA
N5 – Drainage to MH130A	●	●	--	--	●	●	●	NA
N6 – Drainage to MH130	●	●	●	--	●	●	NA	NA
N7 – Drainage to MH130-MH152 segment	●	●	●	●	●	●	●	NA
N8 – Drainage to MH152 (Fuel Test Area)	●	●	●	●	●	●	NA	NA
N9 – Drainage to MH158-MH163 segment	●	●	●	●	●	●	NA	NA

Chemicals in Exceedance of SQS/LAET by Subdrainage
North Lateral Drainage Area

Subdrainage	PCBs	Cadmium	Copper	Lead	Mercury	Zinc	HPAH	BEHP
N10 – Drainage to MH163-MH169 segment	●	●	--	●	●	●	--	●
N11 – Drainage to MH172	●	●	●	●	●	●	●	●
N12 – Drainage to MH178	●	●	--	--	●	●	NA	NA
Upstream of MH178 (KCIA)	●	NA	●	●	--	●	●	●

● Chemical detected above the SQS/LAET in one or more grab samples, sediment trap samples, or stormwater filtered suspended solids samples NA Not analyzed -- Not exceeding SQS/LAET

4.2.2.2 North-Central Lateral Drainage Area

The north-central lateral drainage area includes the Concourse A flightline and portions of the Concourse B flightline, plus the area around Building 3-313. Descriptions and data below are summarized from downstream to upstream, where the lateral enters the property from offsite. A detailed evaluation of storm drain media from the north-central lateral is presented in Section 7.2.2.3.

The north-central lateral main line (NC1 in Figure 4-11) intersects the Building 3-380 area storm drain line at MH422, just upstream of the KC lift station. MH422 includes drainage from the north lateral, north-central lateral, and Building 3-380 area. NC1 enters the NBF property from KCIA near UNKCB27. Five tributary subdrainages, identified as NC2 through NC6, are shown in Figure 4-11.

All of the COPCs for Site storm drain solids have been detected in one or more samples from the north-central lateral area at concentrations exceeding the SQS/LAET. In addition to the grab samples and sediment trap samples collected by Landau, SAIC collected filtered suspended solids samples in stormwater at one location (MH226) along NC1. PCBs, cadmium, copper, zinc, and HPAH were detected above the SQS in one or more of these samples. The table below summarizes COPC exceedances of the SQS/LAET in each subdrainage.

Chemicals in Exceedance of SQS/LAET by Subdrainage
North-Central Lateral Drainage Area

Subdrainage	PCBs	Cadmium	Copper	Lead	Mercury	Zinc	HPAH	BEHP
NC1 – Main Lateral Line	●	●	●	--	●	●	●	●
NC2 – Drainage to MH362	●	●	--	--	NA	●	NA	NA
NC3 – Drainage to MH422-MH221A segment	●	●	●	●	●	●	NA	NA
NC4 – Drainage to MH226	●	●	--	--	●	●	NA	NA
NC5 – Drainage to MH228	●	●	--	--	●	●	NA	NA
NC6 – Drainage to MH228-CB229A segment	●	●	--	●	●	●	NA	NA

● = Chemical detected above the SQS/LAET in one or more grab samples, sediment trap samples, or stormwater filtered suspended solids samples NA Not analyzed -- Not exceeding SQS/LAET

4.2.2.3 South-Central Lateral Drainage Area

The south-central lateral drainage area includes the area around the east side of Building 3-390 (Flight Test Hangar) plus portions of the Concourse B flightline area. Descriptions and data below are summarized from downstream to upstream, where the lateral enters the property from offsite. A detailed evaluation of storm drain media from the south-central lateral is presented in Section 7.2.2.4.

The south-central lateral main line (SC1 in Figure 4-11) intersects the other main NBF drainage lines at the KC lift station vault. SC1 enters the NBF property from KCIA near CB473. Six tributary subdrainages, identified as SC2 through SC8, are shown in Figure 4-11.

For storm drain solids data, PCBs, cadmium, copper, lead, zinc, HPAH, and BEHP have been detected in one or more samples from the south-central lateral area at concentrations exceeding the SQS/LAET. In addition to the grab samples and sediment trap samples collected by Landau, SAIC collected filtered suspended solids samples in stormwater at one location (MH369 in SC3) in the south-central lateral area. PCBs, cadmium, and zinc were detected above the SQS in one or more of these samples. The table below summarizes COPC exceedances of the SQS/LAET in each subdrainage.

Chemicals in Exceedance of SQS/LAET by Subdrainage
South-Central Lateral Drainage Area

Subdrainage	PCBs	Cadmium	Copper	Lead	Mercury	Zinc	HPAH	BEHP
SC1 – Main Lateral Line	●	●	--	●	--	●	●	●
SC2 – Drainage to MH-PRD	●	NA	NA	NA	NA	NA	NA	NA
SC3 – Drainage to MH368	●	●	--	--	--	●	--	NA
SC4 – Drainage to CB373	●	--	--	--	--	--	NA	NA
SC5 – Drainage to MH402	●	--	--	--	--	--	NA	NA
SC6 – Drainage to MH410	●	NA	NA	NA	NA	NA	NA	NA
SC7 – Drainage to MH414	●	●	●	--	--	●	NA	NA
SC8 – Drainage to MH461	●	--	●	--	--	●	NA	NA
SC9 – Drainage to MH864	●	●	●	●	--	●	NA	NA
SC10 – Drainage to MH19C	NA	NA	NA	NA	NA	NA	NA	NA

● = Chemical detected above the SQS/LAET in one or more grab samples, sediment trap samples, or stormwater filtered suspended solids samples NA Not analyzed -- Not exceeding SQS/LAET

4.2.2.4 South Lateral Drainage Area

The south lateral drainage area includes a large area in the southwestern portion of the Site, including portions of Concourse B, Concourse C, and areas around the tent hangars, the Building 3-800 area, the southern parking lot, and the west sides of Buildings 3-390 and 3-369. Descriptions and data below are summarized from downstream to upstream, where the south lateral enters the property from offsite. A detailed evaluation of storm drain media from the south lateral is presented in Section 7.2.2.5.

The south lateral main line (S1 in Figure 4-11) intersects the other main NBF drainage lines at the KC lift station vault. S1 enters the NBF property from KCIA near MH483A. Eight tributary subdrainages, identified as S2 through S9, are shown in Figure 4-11.

All storm drain COPCs for storm drain solids have been detected in at least one sample at concentrations exceeding the SQS/LAET in the south lateral. In addition to the grab samples and sediment trap sampling collected by Landau, SAIC collected filtered suspended solids samples in stormwater at one location, on S1 (MH356, where water backing up from the lift station may have impacted results). PCBs, cadmium, zinc, and HPAH were detected above the SQS/LAET in one or more of these samples. The table below summarizes COPC detections exceeding the SQS/LAET in each subdrainage.

Chemicals in Exceedance of SQS/LAET by Subdrainage
South Lateral Drainage Area

Subdrainage	PCBs	Cadmium	Copper	Lead	Mercury	Zinc	HPAH	BEHP
S1 – Main Lateral Line	●	●	●	--	●	●	●	●
S2 – Drainage to MH353	●	●	●	--	●	●	NA	●
S3 – Drainage to MH281	●	--	--	--	--	●	NA	NA
S4 – Drainage to MH271B	NA	NA	NA	NA	NA	NA	NA	NA
S5 – Drainage to MH266A	NA	NA	NA	NA	NA	NA	NA	NA
S6A and S6B – Drainage to MH263 and MH481A	●	●	●	●	●	●	●	●
S7 – Drainage to MH642	●	●	●	●	●	●	●	●
S8 – Drainage to MH482-MH492 segment	●	●	●	--	●	●	●	●
S9 – Drainage to MH281	NA	NA	NA	NA	NA	NA	NA	NA

● = Chemical detected above the SQS/LAET in one or more grab samples, sediment trap samples, or stormwater filtered suspended solids samples NA Not analyzed -- Not exceeding SQS/LAET

4.2.2.5 Building 3-380 Drainage Area

The Building 3-380 drainage area includes a small area in the northwestern portion of the NBF property around Building 3-380 (Paint Hangar). Most of this area formerly drained to Slip 4 through a separate outfall. Descriptions and data below are summarized from downstream to its upstream terminus. A detailed evaluation of storm drain media from the Building 3-380 drainage area is presented in Section 7.2.2.6.

The Building 3-380 storm drain line (B1 in Figure 4-11) intersects the north-central lateral at MH422, just upstream of the KC lift station. Three tributary subdrainages, identified as B2, B3, and B4, are shown in Figure 4-11.

For storm drain solids data, PCBs, cadmium, lead, zinc, and BEHP have been detected in one or more samples in the Building 3-380 drainage area at concentrations exceeding the SQS/LAET. In addition to the grab samples and sediment trap samples collected by Landau, SAIC collected filtered suspended solids samples in stormwater at one location (CB423) along B1. PCBs and zinc were detected above the SQS/LAET in one or more of these samples. The table below summarizes COPC exceedances of the SQS/LAET in each subdrainage.

Chemical Exceedances of SQS/LAET by Subdrainage
Building 3-380 Drainage Area

Subdrainage	PCBs	Cadmium	Copper	Lead	Mercury	Zinc	HPAH	BEHP
B1 – Main Drainage Line	●	●	--	●	--	●	--	●
B2 – Drainage to CB104	●	--	--	●	--	●	NA	NA
B3 – Drainage to MH105	●	●	--	●	--	●	NA	NA
B4 – Drainage to MH428	●	●	--	--	--	●	NA	NA

● = Chemical detected above the SQS/LAET in one or more grab samples, sediment trap samples, or stormwater filtered suspended solids samples NA Not analyzed -- Not exceeding SQS/LAET

4.2.2.6 Parking Lot Drainage Area

The parking lot drainage area includes the large parking lot on the northwestern portion of the NBF property and the area around Buildings 3-370 and 7-27-1. Descriptions and data below are summarized from downstream to its upstream terminus. A detailed evaluation of storm drain media from the parking lot drainage area is presented in Section 7.2.2.7.

The parking lot area storm drain line (PL1 in Figure 4-11) connects four tributary subdrainages in addition to the discharge line downstream of the KC lift station. Tributary line PL2 (Figure 4-11) intersects the discharge line downstream of the lift station at CB433. PL2, PL3, and PL4 each consist of long channel drains through the parking lot.

For storm drain solids data, PCBs, cadmium, lead, zinc, HPAH, and BEHP have been detected in one or more samples from the parking lot drainage area at concentrations above the SQS/LAET. In addition to the grab samples and sediment trap samples collected by Landau, SAIC collected filtered suspended solids samples in stormwater at one location (MH434) in the parking lot drainage area. This location experienced backflow from the lift station discharge at high tide, which likely compromised data quality (parking lot surface debris sampling was also performed to characterize source material in this area). For the storm drain samples in the parking lot area, PCBs and zinc were detected above the SQS/LAET in one or more of these samples. The table below summarizes COPC detections exceeding the SQS/LAET in each subdrainage.

Chemicals in Exceedance of SQS/LAET by Subdrainage
Parking Lot Drainage Area

Subdrainage	PCBs	Cadmium	Copper	Lead	Mercury	Zinc	HPAH	BEHP
PL1 – Main Drainage Line	●	●	--	●	--	●	NA	NA
PL2 – Channel Drains 283A and 436A	●	●	--	●	--	●	●	NA
PL3 – Channel Drain 434A	●	NA	NA	NA	NA	NA	NA	NA
PL4 – Channel Drain 435B	●	--	--	--	--	●	--	●

● = Chemical detected above the SQS/LAET in one or more grab samples, sediment trap samples, or stormwater filtered suspended solids samples NA Not analyzed -- Not exceeding SQS/LAET

4.2.2.7 Stormwater Treatment Facilities

In accordance with the Administrative Settlement Agreement and Order on Consent (ASAOC) with the USEPA, Boeing installed a short-term stormwater treatment (STST) facility in the area of the north lateral drainage basin. The temporary chitosan enhanced sand filtration system was designed to remove PCBs and other COPCs in stormwater from the portion of the north lateral drainage area with the historically highest concentrations of PCBs at the Site.

Installation of the STST facility incorporated new storm drain structures, MH130A, MH130B, and MH130C. The STST facility, which was operational from September 2010 to November 2011, was capable of treating approximately 485 gallons per minute (gpm) (USEPA 2010). Prior to decommissioning, the STST treated a total of approximately 35 million gallons of stormwater. Samples of stormwater treated in the system were consistently below the marine chronic water quality criterion (0.03 ug/L) for total PCBs and the criterion for turbidity (USEPA 2012).

The long-term stormwater treatment (LTST) facility was installed, as required by the ASAOC, at the KC lift station at NBF (USEPA 2010). A portion of stormwater from the north lateral, north-central lateral, south-central lateral, south lateral, and Building 3-380 drainage areas are treated by the LTST. Water from the north lateral is preferentially treated when flows are high and not all stormwater is capable of being treated. Stormwater from upstream of NBF in the north lateral main line is diverted and reenters on the downstream side of the lift station. Stormwater from the parking lot drainage area discharges downstream of the treatment system and is not treated.

The LTST, which is capable of treating up to 1,500 gpm, began operation on October 28, 2011. During the first year of operation, the system treated 68 percent of total stormwater reaching the lift station. As of June 30, 2013, the system had treated a total of 313 million gallons of stormwater. Sampling of effluent at the discharge point indicates the LTST is operating within ASAOC requirements. Whole water discharge concentrations at the lift station are regularly less than the marine water quality criterion target of 0.030 ug/L total PCBs, and in recent months values have been mostly non-detected at 0.005 ug/L (Section 7.2). Filtered solids have not been analyzed at this discharge location. The LTST is currently monitored on a monthly basis (USEPA 2012).

4.2.2.8 Data Gaps Related to NBF Storm Drain System

Sampling, evaluation, and replacement of the storm drain system have been ongoing activities at NBF. Recent results of video inspections of the storm drain system over large areas of the property indicate damaged lines and areas where groundwater and soil are infiltrating or potentially infiltrating the system. Assuming that portions of these damaged lines will not be replaced or repaired in the near future, sampling of soil and groundwater adjacent to known locations of infiltration and contaminated storm drain media is needed where soil or groundwater contamination is known or suspected. This is especially the case for groundwater sampling near or upgradient from those storm drain line segments identified as being submerged during high-water conditions (as identified in Section 7.1.1). Some of the wells installed in the PEL area within the last three years will serve this purpose.

The most significant recent data gap is the lack of data from upstream, offsite sources of inflow to the NBF storm drain system. Limited data from storm drain solids collected from structures at KCIA show exceedances of the SQS/LAET by PCBs, metals, and SVOCs. The extent to which upstream sources contribute to the presence of contaminants in the NBF storm drain system has only recently been evaluated; samples collected from upstream structures at NBF near the KCIA property boundary (2011/2012) partly fill this data gap, indicating the presence of certain contaminants entering the Site at these locations. Note that for "upstream" sampling structures on the south and south-central laterals at NBF, the majority of stormwater flow is from KCIA and a small component is from NBF. All of the water at the upstream north-central lateral is from KCIA. In addition, recent grab sampling of solids from storm drain structures has taken place at several locations at KCIA.

Storm drain solids sampling efforts at NBF between 2009 and 2012 have provided a substantial amount of data for evaluation, filling many previous data gaps. Anthropogenic materials or surface debris with known or potentially elevated concentrations of COPCs (Section 7.3) likely contribute to contamination reaching the storm drain system. This data gap can be filled by investigating storm drain structures located near these contaminated anthropogenic materials or surface debris, to determine if they can be sampled for solids. Additional storm drain structures without prior samples being collected should also be investigated.

In addition, a number of interim actions have taken place at NBF-GTSP since 2009 (Table 4-1). Where the most recent sampling of storm drain solids at a structure took place prior to the interim action, and where the sample was contaminated, resampling should take place to confirm the continued presence/absence of these substances. The relationship between results for anthropogenic materials, surface debris, and storm drain solids is discussed below in Sections 4.2.3 and 7.3.

Additional data gaps pertaining to the NBF storm drain system include the following:

- Interior building drain survey and documentation are incomplete and should be performed to fully demonstrate that no interior floor drains at NBF discharge to the storm drain system.
- Numerous tap connections identified in the video surveys may represent an unknown source of contamination to the storm drain system.
- Representative samples of solids of various grain sizes have not been evaluated to identify relationships between grain size and contamination.

4.2.3 Anthropogenic Media

4.2.3.1 Building Materials

Building materials, including paint, caulk, roofing materials, and downspout drainage, are potential sources of contaminants to the NBF storm drain system. However, these building materials have had fewer investigations conducted onsite than has CJM (see Section 4.2.3.2). Table 4-2 summarizes a number of onsite operations and components, historical and current, and the possible COPCs released at these operations. Figure 4-12 shows locations of potential historical PCB sources at NBF, mainly identifying the presence of former transformers.

In 2010, Boeing began conducting source evaluations related to building materials and other anthropogenic media (Table 4-1). These investigations leading to some interim actions are summarized below (see Recent and Ongoing Investigations). Section 7.3 provides detailed information regarding the results of sampling building materials at NBF.

Potential contaminant sources in building materials and components related to specific buildings or structures are described in detail for each drainage area in the Infiltration and Inflow Assessment Report (SAIC 2011b). In order to evaluate potential sources of PCBs in building materials at NBF, the age of NBF buildings was determined from historical Boeing maps and building lists and from King County parcel information. Structures built prior to 1985 were identified as potential PCB sources, and a list of these buildings was compiled. For non-PCB contaminants, SAIC reviewed chemical use information in reports from the Agency for Toxic Substances and Disease Registry (ATSDR) and evaluated this information with respect to the present-day building materials and components observed at NBF (ATSDR 1994-2008).

The following text summarizes the general occurrence of common building materials that are present at the NBF-GTSP Site, and which may represent potential sources of contaminants. Data gaps for building materials (caulk, paint, roof materials and downspouts, siding and other materials) are summarized below in the following sections.

Caulking Material

Caulk is used to create a seal between building walls and around doors, vents, and windows of NBF buildings. Recent studies from locations in the U.S. and Europe have identified building materials, particularly caulking material around windows and doors, as potential sources of PCBs to the environment. In these studies, PCB concentrations ranging as high as 550,000 mg/kg have been identified in caulking materials. Results of Toxic Characteristic Leaching Procedure (TCLP) testing demonstrated that PCBs are readily mobilized by water leaching the caulking material (SAIC 2011b).

In addition to PCBs, caulk may also be a source of lead, mercury, zinc, phthalates, and PAHs (Table 4-2). These contaminants may be present in caulk material currently used for door, vent, and window caulking at NBF. PCB-bearing caulk is more likely to be present on buildings constructed prior to 1985. The caulk that is used on buildings built or renovated after 1985 is not likely to be a source of PCBs; however, other contaminants may be present in this more recent caulk.

Paint

PCBs and metals have been detected in the exterior paints used at NBF. PCBs and lead were historically used to extend the life of the paint by increasing its durability. The use of lead-based paint was banned in 1977 for consumer products; however, it may continue to be used in industrial applications. Mercury was used as an anti-fungal agent and as pigment in exterior paints until this use was banned in 1991. Copper is currently used as an anti-fouling agent. Metals are typically used as pigments for paints (Table 4-2).

Paints are ubiquitous throughout NBF on buildings, tanks, piping and other structures, bollards, outdoor equipment, and roadways. Chipped and/or peeling paint has been observed on many of these structures and buildings. Older paint may contain mercury and may be a persistent source of PCBs and mercury even though the paint may be covered by newer paint. As the paint begins to chip, flake, and peel, layers of older paint may be contained in the chips or become exposed to further weathering. Newer paint that is chipping, flaking, or peeling may be a source of contamination that has the potential to enter the storm drain system.

According to Boeing staff, Boeing does not maintain painting records, and no information is available regarding when buildings were most recently painted or what type of paint was used (SAIC 2010b).

Rooftops and Downspouts

The majority of rooftops at NBF inspected in 2010 are primarily covered with a white membrane roofing material (Landau 2010d). The white roofing material was manufactured and installed after 1980 and is not considered a likely source of PCBs, although other materials on these roofs may contain PCBs. Older rooftops also are constructed of black (or dark gray) asphalt/tar, and some rooftops include painted or galvanized metal. The asphalt materials may be a source of PCBs (depending on date of construction), phthalates, and HPAHs. The metal roofing materials may be a source of zinc to the storm drain system via building downspouts, which are also made primarily of galvanized metal. The limited sampling data for rooftop materials and downspout solids and water suggest no significant distinction in contamination between the black and white roofs, with metals being the main concern (see Section 7.3). The rooftops and downspouts may also serve as a pathway for air-deposited contaminants to reach the storm drain system. Many downspouts at NBF are connected directly to the storm drain system. Some downspouts discharge to the ground surface and may be subsequently conveyed to storm drain structures. These downspouts appear to drain smaller rooftop areas, such as door awnings.

Approximately 12 percent of the impervious surface at NBF consists of rooftops. Air emissions from the Site, including paint hangars, paint booths, and shops in Building 3-818, or from offsite locations, may settle on rooftops and be conveyed by stormwater to the storm drain system (SAIC 2010b).

Building Siding

Building siding materials are known to be a significant source of lead, copper, cadmium, and zinc to urban runoff (SAIC 2011b). Metal siding and concrete walls are the primary building exteriors observed at NBF. These materials may represent a significant source of zinc, lead, and copper to the storm drain system. A few buildings have small areas of painted wood siding (e.g., Building 3-350 and 7-27-1), which may be a localized source of lead and copper to the storm drain system. Vinyl siding is present on Building 3-350, which may be a source of lead and copper to the storm drain system.

Plastics and Rubber

Plastics (including PVC) and rubber materials are present throughout NBF, particularly as building materials. Plastic and rubber materials are potential sources of cadmium, lead, zinc, and phthalates to the storm drain system, particularly when used on building exteriors (e.g., vinyl siding) and when stored or used outdoors (e.g., cable or wire covers). Rubber materials were observed on door seals/gaskets, a loading dock (Building 3-353), and on wheels attached to some structures (e.g., Building 3-342). Plastic and rubber materials are present on a variety of components and equipment such as tires, equipment cases and hoses, slats in chain link fences, signs, dumpster lids, and numerous other applications.

Recent and Ongoing Investigations (2010–2012)

From July 2010 to October 2011, Boeing collected paint samples from pipe bollards, siding, piping, outdoor equipment, containers, flood lights, cinder blocks, wood doors, ASTs, support beams, and various metal structures. Samples were collected in areas where paint was peeling or chipped. The majority of samples were collected in the PEL area.

Concentrations of PCBs in building materials were greatest in foam (15,800 mg/kg) and caulk (14,000 mg/kg) samples collected from Building 3-626. Other samples with significant levels of PCBs (up to 2,300 mg/kg) were collected from bollards near Buildings 3-323, 3-326, and 3-353. PCB concentrations for non-bollard paint samples ranged from non-detect to 250 mg/kg. Metals were detected at various concentrations in samples of building materials collected.

Subsequent to these investigations, Boeing removed paint from areas of sample locations with PCB concentrations greater than 50 mg/kg. Paint was also removed from locations with lower PCB concentrations where the paint was degraded. In 2010, paint was removed from the majority of bollards located in the north lateral drainage area at NBF (Landau 2010i). In October 2010, Boeing directed paint abatement activities for the support structures near CB187A and in the areas of the ASTs and Buildings 3-303, 3-310, 3-315, 3-323, 3-326, 3-350, 3-353, and 3-626. Foam and caulking with elevated PCB levels were also removed from Building 3-626. Boeing performed NBF-wide paint abatement activities during 2011 and 2012, with the exception of a section of painted Galbestos siding on the east side of Building 3-818. The Galbestos siding will be addressed in future plans to demolish the building (Landau 2013a), which is scheduled for early 2014.

In February 2012, Boeing collected six paint samples in the north lateral drainage area. PCB concentrations ranged from 4.1 to 250 mg/kg. A data report was not provided, and it is unclear where these samples were collected and if the paint at these locations has been removed.

Data Gaps Related to Building Materials

The evaluation of potential sources of environmental contaminants related to building materials is detailed in the Infiltration and Inflow Assessment Report (SAIC 2011b). Based on this assessment and the results of recent source evaluations conducted by Boeing, a large number of buildings and other structures constitute sources of contaminants that may impact the storm drain system at NBF and eventually reach Slip 4. These investigations and source removal interim actions were planned to continue through 2012.

In addition to sample results collected by Boeing, supplemental sampling of some of these building materials may be required. As described in Section 7.3.4, the decision to sample anthropogenic materials in the RI is based on a number of factors, including the types of material present, the age of construction or maintenance, adequacy of previous sampling and concentrations of those results, proximity to storm drain structures, and concentrations of samples from nearby storm drain solids and/or surface debris (or lack of sample results). A broader range of analytes should also be tested in building materials, including PAHs, phthalates, metals, and (on a fraction of samples excluding paint) dioxins/furans.

4.2.3.2 Concrete Joint Material

Concrete joint material has been identified as a potential source of PCBs to the NBF storm drain system. CJM is the most sampled surface material at the Site, due to its widespread presence and relatively high PCB content. Primary or residual CJM and associated concrete may represent a significant source of PCBs to the storm drain system and ultimately to Slip 4 sediments. A detailed evaluation of CJM at the NBF property is presented in Section 7.3.

Investigations of Concrete Joint Material

From 2000 to 2001, samples of CJM were collected from at least 92 locations throughout NBF. Testing of CJM for PCBs identified concentrations ranging from <1.0 to 79,000 mg/kg. Between 2001 and 2006, Boeing conducted the removal of CJM containing PCBs greater than 50 mg/kg (EPA TSCA action level), largely in the flightline concourse areas.

Five locations of newer CJM that had recently replaced the older PCB-containing caulk were sampled again in 2006. Analytical results indicated the new CJM contained PCBs ranging from <1.0 to 370 mg/kg (Bach 2007; Landau 2007a). It is believed that PCBs originating from the former highly contaminated CJM had previously migrated into portions of the adjacent concrete panels; more recent desorption of PCBs from this contaminated concrete into the new CJM accounted for the elevated concentrations. In addition, the City of Seattle sampled five locations of thin zones of remnant CJM at NBF in September 2008. PCB concentrations in these five samples ranged from 0.67 to 2,200 mg/kg (Exponent 2009; Integral 2009).

From 2007 to 2011, CJM was sampled at 299 locations, primarily in the flightline concourse areas. PCBs were detected in 205 samples, with concentrations ranging from <1.0 to 26,000 mg/kg. All CJM installed in the PEL area prior to 1980 was removed and replaced in 2010 (without samples collected), and CJM in flightline areas with concentrations greater than 50 mg/kg was removed and replaced in 2011. In July 2012, concrete panels and CJM were replaced in the Concourse B and C areas; 35 samples of CJM were collected and analyzed for PCBs, with concentrations ranging from <0.15 to 78 mg/kg.

In July 2009, four expert witness evaluations of sources to the storm drain system and Slip 4 were completed for Boeing and the City of Seattle (Chrostowski 2009a; Exponent 2009; Scott 2009; Werner 2009). All four of these reports identified caulk as a component of PCB contamination reaching the storm drain system, and three of the four reports concluded that caulk material was ultimately reaching Slip 4, in varying amounts. In addition, Boeing conducted a human health risk assessment and transport evaluation for PCBs in CJM in 2010. From the results of sampling CJM and nearby inlet filter solids within catch basins, it was determined that contaminated CJM likely contributes to PCBs in storm drain solids (Landau 2011b).

Data Gaps Related to Concrete Joint Material

The major areas where CJM has been removed/replaced since 2002 include large portions of Concourses A and B, the adjacent flightline areas, the PEL area, and areas on the northwest side of Building 3-390. According to Boeing reports, virtually all CJM within the removal outlines has been removed and replaced, regardless of concentration or field designation types (Landau 2007a, 2010g, 2011b).

The concern for recontamination of more recently installed CJM has resulted, in part, on the need to perform further removal actions (to 50 mg/kg PCBs). However, Ecology does not consider the TSCA action level of 50 mg/kg for removal of PCBs to be adequate to prevent Slip 4 recontamination, due to the potential transport of contaminated solid materials (including CJM) through the storm drain system to Slip 4.

Additional sampling at NBF is necessary to document that remaining CJM is not contaminated with PCBs and possibly other contaminants at unacceptable levels. These materials may constitute a continuing source of PCBs to the storm drain system. Sampling should take place in areas of CJM that have not been adequately characterized previously due to relatively low sampling density, and in areas with elevated concentrations in CJM and in nearby storm drain solids or surface debris.

4.2.3.3 Additional Outdoor Sources

In addition to sources described above for building materials and CJM, additional outdoor contaminant sources and pathways have been identified at NBF. These include pavement, surface debris (including pavement sweeper debris), liquid and solid releases from vehicles and aircraft or other mobile sources, and sources related to airborne deposition. Specifically, the following sources and pathways are included in this category:

- Asphalt, concrete, and surface debris in the area of north lateral drainage area
- Pavement sweeper surface debris
- Solid releases of contaminated materials from vehicles and aircraft
- Liquid releases (spills) of contaminated materials from vehicles and aircraft
- Contaminants in exhaust released from vehicles and aircraft
- Deposition of offsite airborne contaminants

These outdoor sources and pathways either are known to occur or to potentially occur at NBF. The following text briefly summarizes the known, suspected, or potential occurrences of these sources and pathways.

Pavement and Surface Debris

Surface materials, such as asphalt, concrete, or surface debris, may contribute to storm drain contamination, which may ultimately be transported to Slip 4. Recent sampling (2010) has provided additional data to the previously limited sampling of asphalt and loose surface debris conducted in the PEL area.

Boeing collected a total of 94 samples of asphalt, concrete, and surface debris, largely in the PEL. PCB concentrations ranged from <1.0 to 557 mg/kg. The most contaminated asphalt and surface debris samples were identified a short distance northeast of the west corner of Building 3-322. This area formerly drained to catch basin CB191 (now decommissioned), which had the highest concentration of PCBs in storm drain solids at the Site prior to disconnection of CB191 piping. PCBs in concrete were not detected (<1.0 mg/kg). Metals were detected in all samples. The maximum detected concentrations for metals are as follows: arsenic (80 mg/kg), cadmium (33.6 mg/kg), chromium (489 mg/kg), copper (618 mg/kg), lead (1,900 mg/kg), mercury (9.8 mg/kg), and zinc (9,190 mg/kg). With the exception of lead, maximum metals concentrations were detected in surface debris.

An excavation was subsequently conducted in the area of Building 3-322, to remove contaminated soil and overlying asphalt. In addition, much of the paved area near Buildings 3-302 and 3-322 was mechanically swept for surface debris.

Pavement Sweeper Debris

Surface debris regularly accumulates by a number of processes on the NBF flightline area, which is detrimental to aviation operations. As a result, Boeing conducts mechanical sweeping of pavement to remove surface debris. Regenerative street sweepers use forced air broom systems to dislodge debris from the surface. Debris is picked up by suction, and air is regenerated within the sweeper to prevent exhausting of air or particulate from the sweeper. It is assumed that sweeping removes a significant amount of surface debris from these paved areas, but also leaves some material behind. In 2011 to 2012, Boeing also conducted manual sweeping of debris in difficult access areas, such as near the blast fences. In general, the sweeper-collected material likely originated as fragments of CJM, concrete, asphalt, vehicle and aircraft debris (e.g., tire fragments, brake dust, fasteners), chipped paint, roof debris from downspouts, airborne deposition, soil debris, plant material, and other miscellaneous substances.

Analytical data suggest that CJM forms a significant proportion of sweeper waste, and therefore CJM appears to be eroding and is available for transport (Chrostowski 2009a). Landau (2011b) also concluded that CJM material was reaching storm drain structures. Measured concentrations of PCBs in sweeper waste have generally declined over the last several years in the sweeper debris samples. Six samples have been collected, with results ranging from 2.5 mg/kg PCBs in 2005, to 0.057 mg/kg in February 2013. However, these samples represent composites over a large area, which could significantly dilute individual results, and without records of which areas are being included in samples. Detected concentrations indicate that PCB-contaminated material is present on or in the paved surfaces that are being swept regularly by Boeing. Materials that remain behind on the surface, which are not removed during sweeping, are potentially capable of reaching the storm drain system; in some localized areas these surface materials may have significantly greater PCB concentrations than identified in these few composite sweeper samples.

Outdoor Mobile Sources

Potential solid releases from vehicles, aircraft, mechanical parts, and other equipment include the presence of metals and phthalates. Lead in lead-acid batteries in vehicles may also be released to the surface. During wear and weathering of vehicle and aircraft parts and other equipment at

NBF, including during brake usage and general tire wear, cadmium, copper, lead, zinc, and phthalates could be released to the surface at NBF in solid fine particulates or they could become airborne and settle at more distal locations at the Site.

Atmospheric Deposition

Another possible outdoor route of contaminant transport to the storm drain system at NBF is through the atmospheric deposition pathway. This transport process at NBF is less certain than other pathways discussed, in terms of the extent or significance in accumulating contaminants. PCBs may be transported via this pathway and may exist in air as vapors, sorbed to particulates, or as aerosols. In particular, PCBs may volatilize from CJM, especially when heated by solar radiation (Chrostowski 2009a). All other contaminants may also be transported via the airborne pathway. When atmospheric transport of contaminated material gives way to deposition on the surface, the particulates are then capable of being washed into the storm drain system. Whether this mode of transport is substantial enough to result in concentration levels of concern at NBF is not known.

A limited sampling study was performed at NBF in September 2000 to attempt to determine the significance of aerial deposition of PCBs (Landau 2000a). This study concluded that aerial deposition of PCBs at that time was not a substantial migration pathway. Whether this limited sampling is representative of PCB aerial deposition at NBF cannot be determined.

Data Gaps Related to Additional Outdoor Sources

Not all outdoor sources or pathways discussed above can be readily investigated or remediated, such as the airborne pathway. Others can be investigated and sampled to determine extent and source of contaminants, such as surface debris.

The use of surface debris is a direct sampling method to determine source locations for contaminated material that may eventually reach the storm drain system via inflow. Relatively few surface debris samples have been collected on the Site, and mostly in a small portion of the north lateral drainage area. Samples of surface debris should be collected in areas where results of nearby sample locations of storm drain solids have identified elevated concentrations of COPCs. Samples of surface debris should also be collected in areas where nearby samples of anthropogenic materials show elevated concentrations of COPCs.

In addition, samples of surface debris should be collected along the base of buildings or other large structures, such as tanks. This sampling would be done to determine if building materials (paint, caulking, roofing material, etc.) are being mobilized and transported along the ground surface toward the storm drain system. This sampling would take into account the presence of samples of nearby storm drain solids and their COPC concentrations. Sampling of surface debris in these locations would take place prior to any sampling of the building material or downspout material.

More regular sampling (by Boeing) should be performed of pavement sweeper debris and the debris should be analyzed for PCBs and other COPCs, such as metals and PAHs. This would serve as an overall indication of concentrations of surface material on pavement in the flightline and other swept areas. It would also indicate the concentrations of material that may be released due to incomplete capture or dispersal of debris by use of the sweeper machines, or possible releases to the storm drain system. However, because sweeper activities are primarily operations and maintenance functions, no further data gaps or recommendations are necessary in this Work Plan.

Data gaps for outdoor mobile sources would be the same as for surface solids and pavement sweeper debris. No additional sampling is useful to fill data gaps for these sources.

4.3 Summary of Contaminant Loading and Slip 4 Sediment Recontamination

The RI/FS will address the transport of NBF-GTSP stormwater and storm drain solids to Slip 4, including during the condition of LTST operation, and the potential to cause sediment recontamination following Slip 4 cleanup (completed in February 2012). To facilitate this process, prior to cleanup, Ecology evaluated potential modeling approaches that could estimate PCB contaminant loading and accumulation within sediments of Slip 4, and data collection needs were identified to parameterize and calibrate recontamination models (SAIC 2009a). Stormwater, filtered storm drain solids, and continuous flow measurements from the storm drain line upstream of the KCIA SD#3 outfall to Slip 4 were used as inputs to a one-dimensional fate and transport model. The goal of the model was to estimate the concentration of PCBs in Slip 4 sediment (after cleanup) under pre-LTST stormwater discharge conditions, and to estimate the maximum allowable concentration of PCBs in storm drain solids that will not cause recontamination of sediments to concentrations above cleanup levels. Twenty surface sediment samples were collected in Slip 4, and results were used to calibrate the sediment recontamination model (SAIC 2010d).

Modeling results indicated that, under pre-LTST conditions, surface sediment PCB concentrations were expected to attain a maximum concentration of 1.9 mg/kg (dry weight) within the upper (northeastern) 300 feet of Slip 4. Minimizing the potential to recontaminate Slip 4 sediments requires reducing PCB concentrations of both fine- and coarse-grained storm drain solids discharged from KCIA SD#3. The region of maximum Slip 4 PCB concentrations (100 to 300 feet from the head of the Slip) was primarily attributed to the settling of fine-grained solids. Although the majority of the PCB load in storm drain solids is associated with these fine-grained materials, coarse-grained materials may cause recontamination in close proximity to the head of Slip 4, unless controlled (SAIC 2010d).

In January 2011, Ecology estimated contaminant mass loading from each of the lateral drainage areas at NBF (SAIC and NewFields 2011). All loadings were calculated using Ecology's *Standard Operating Procedure for Calculating Pollutant Loads for Stormwater Discharges* as a guide (Ecology 2009a). The memorandum was intended to quantify total contaminant loadings from the NBF, GTSP, and KCIA properties, and the relative mass of contaminants from each of the lateral lines to Slip 4 (prior to LTST) via the KCIA SD#3/PS44 EOF outfall. Loadings were calculated separately for storm and base flow conditions.

The north lateral SD line was the largest source of PCB loading to the KC lift station. Base flow loading was a major constituent of PCB loading from the north lateral line. Mercury loading was also highest in the north lateral SD line. Loadings of HPAH, cadmium, copper, lead and zinc were all highest in the south lateral SD line, partly due to the large volume of flow from this line. For many of the COPCs, the sum of loadings from the individual lateral lines was greater than the total loading calculated at the lift station (LS431). For all chemicals, the smaller Building 3-380 drainage and the parking lot drainage were not major contributors to total loading.

In April 2011, Ecology expanded the Slip 4 recontamination modeling to include inputs from the I-5 storm drain outfall, and to evaluate additional COPCs, including cadmium, copper, lead, mercury, zinc, total HPAHs, BEHP, and dioxins/furans (SAIC 2011c). Flow-weighted annual mean concentrations in filtered stormwater solids were used as inputs to the model. Because filtered solids data were unavailable, sediment trap data were used to represent contaminant concentrations in I-5 storm drain solids. In addition, sediment trap data for BEHP were used, because no filtered solids BEHP data were available. Maximum Slip 4 surface sediment concentrations after Slip 4 cleanup under the modeled conditions (based on 2009/2010 stormwater sampling data and without stormwater treatment) were predicted to exceed the SMS cleanup criteria for cadmium, zinc, total HPAHs, PCBs, BEHP, and dioxins/furans.

In 2011, Boeing convened the North Boeing Field Stormwater Expert Panel, which also evaluated contaminant loading to Slip 4 and produced the following three technical memoranda:

- Alternative Interim Goal Approach and SAIC Slip 4 Sediment Recontamination Model Review; August 9, 2011 (Jones et al. 2011a)
- Alternative Interim Goal Recommendations for Protection of Slip 4 Sediment Recontamination; December 12, 2011 (Jones et al. 2011b)
- Amended Monitoring Approach Recommendations for North Boeing Field Long-Term Stormwater Treatment System; January 10, 2012 (Jones et al. 2012)

With the commencement of LTST operation in October 2011, approximately two-thirds of stormwater discharging from the KC lift station is now being treated. This significantly reduces the annual load of COPCs reaching Slip 4 from the lift station, although some contaminants will pass to the Slip during high-flow storm events representing about one-third of total annual flow. As stated above, LTST operation does not affect the ongoing RI/FS evaluation of source materials at the Site, stormwater continues to transport contaminated storm drain solids downstream, and a portion of this material continues to reach Slip 4.

One significant data gap in LTST system monitoring is the lack of filtered solids sampling at the discharge point on the downstream side of the lift station, particularly during high-flow events. Although stormwater (whole water) is monitored regularly for PCB concentrations, filtered solids is a more direct and sensitive method of measuring contaminant concentrations on solids that may settle in Slip 4 (see Section 7.2.6).

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5.0 Applicable or Relevant and Appropriate Requirements

This section summarizes potential Applicable or Relevant and Appropriate Requirements (ARARs) identified for the NBF-GTSP Site. For RI/FS and cleanup activities performed at the Site, MTCA stipulates that other regulatory requirements must be considered, and that cleanup standards must be "at least as stringent as all applicable state and federal laws" [WAC 173-340-700(6)(a)]. MTCA also states that "applicable state and federal laws may also impose certain technical and procedural requirements for performing cleanup actions." These requirements are similar to the ARAR approach of the federal Superfund law and are described in WAC 173-340-710. Remedial actions at sites under an agreed order may be exempt from the procedural requirements of certain laws, but they must still meet the substantive requirements of these laws.

5.1 Requirement Definitions

MTCA divides applicable state and federal laws into the following two categories. (1) *Legally applicable requirements* include those cleanup standards, standards of control, and other environmental protection requirements, criteria, or limitations adopted under state or federal law that specifically address a hazardous substance, cleanup action, location or other circumstance at the site [WAC 173-340-710(3)]. (2) *Relevant and appropriate requirements* include cleanup standards, standards of control, and other environmental requirements, criteria, or limitations established under state or federal law that, while not legally applicable to the hazardous substance, cleanup action, location, or other circumstance at a site, address problems or situations sufficiently similar to those encountered at the site that their use is well suited to the particular site [WAC 173-340-710(4)]. Per MTCA, the following criteria are evaluated to determine if other regulatory requirements are relevant and appropriate for a particular hazardous substance, remedial action, or site:

- Whether the purpose for which the statute or regulations under which the requirement was created is similar to the purpose of the cleanup action
- Whether the media regulated or affected by the requirement is similar to the media contaminated or affected at the site
- Whether the hazardous substance regulated by the requirement is similar to the hazardous substance found at the site
- Whether the entities or interests affected or protected by the requirement are similar to the entities or interests affected by the site
- Whether the actions or activities regulated by the requirement are similar to the cleanup action contemplated at the site
- Whether any variance, waiver, or exemption to the requirements are available for the circumstances of the site
- Whether the type of place regulated is similar to the site
- Whether the type and size of structure or site regulated is similar to the type and size of structure or site affected by the release or contemplated by the cleanup action, and

- Whether any consideration of use or potential use of affected resources in the requirement is similar to the use or potential use of the resources affected by the site or contemplated cleanup action

5.2 ARAR Categories

ARARs may be divided into the following broad categories: chemical-specific, action-specific, and location-specific. These three categories are defined below, and potential ARARs for the NBF-GTSP Site are presented in Tables 5-1 to 5-3, corresponding to each of the three categories. For consistency with other LDW projects, the following ARAR discussion and listing of specific ARARs are derived and modified from a number of RI reports and work plans written for sites along the LDW, originating with Weston (1993).

5.2.1 Chemical-Specific ARARs

Chemical-specific requirements set concentration limits or ranges in various types of environmental media. Such ARARs may set protective cleanup levels for the chemical of concern in the designated media. Chemical-specific ARARs may also indicate an appropriate level of discharge (these types of ARARs may also be considered action-specific). Chemical-specific requirements are health- or risk-based concentration limits, such as ambient water quality criteria. Table 5-1 presents a preliminary list of potential federal and state chemical-specific ARARs identified for the various media at the NBF-GTSP Site. These ARARs are based on current, publicly available information and do not reflect administrative discretion that may be exercised in the future by federal or state authorities.

5.2.2 Action-Specific ARARs

Action-specific ARARs are typically technology- or activity-based requirements or limitations on actions. These requirements are not triggered by the specific contaminants identified, but by activities related to management of these contaminants. Table 5-2 presents the potential action-specific ARARs for the various environmental media that have been identified for typical remedial actions at the NBF-GTSP Site. The final list of remedial actions will be developed during the feasibility study phase of the RI/FS. The list in Table 5-2 is necessarily long due to inclusion of a large number of potential ARARs because the site-specific remedial alternatives are not yet identified. In addition, general requirements such as the standards within the Occupational Safety and Health Administration (OSHA) Act of 1970 and the Noise Control Act of 1974 are excluded as action-specific ARARs because they must be adhered to under all circumstances, regardless of whether the activity conducted is related to a MTCA action.

5.2.3 Location-Specific ARARs

Location-specific ARARs are restrictions placed on either the conduct of activities performed in certain locations or the concentration of hazardous substances at that location or habitat. They may restrict or preclude certain remedial actions or may apply only to certain portions of the area of contamination. Potential location-specific ARARs for the NBF-GTSP Site are presented in Table 5-3.

6.0 Remedial Investigation Approach

This section of the Work Plan describes the approach for planning and data screening used to perform the RI activities, in order to effectively perform tasks of collecting and evaluating data needed to characterize Site media and develop remedial cleanup alternatives. Included in this section is an assessment of data quality objectives (DQOs) needed to identify the purpose, rationale, and uses of data collection. This section also presents a detailed evaluation of RI screening levels (SLs) used to identify the contaminants of potential concern (COPCs)[4] for the Site and generate analytical quality objectives, which primarily consist of required analytical methods, quantitation limits, and quality assurance measures. Additional analytical quality measures will be addressed in one or more task-specific Quality Assurance Project Plans (QAPPs) to be developed later in the RI process.

The preliminary conceptual site model (CSM), presented in Section 3, outlined the initial COPCs for the RI based on prior screening conducted in the Supplemental Data Gaps Report (SAIC 2009b). This CSM also included an evaluation of potential contaminant sources, release mechanisms, transport routes, affected media, exposure pathways, and receptors (Figure 3-1).

The Infiltration and Inflow Assessment Report (SAIC 2011b) considered COPCs that affected Slip 4 water and sediment via the storm drain system at NBF. This list of COPCs was limited because it focused on Slip 4 media and on pathways affecting sediment recontamination. This RI/FS Work Plan differs in that a broader spectrum of contaminants is being evaluated, and all media and pathways of concern are being considered whether or not Slip 4 is the ultimate exposure medium. In addition, a larger number of SLs and ARARs are being considered in this Work Plan than in the Supplemental Data Gaps Report or Infiltration and Inflow Assessment Report.

Section 5 of this Work Plan lists the applicable or relevant and appropriate requirements (ARARs) that have been identified as pertaining or potentially pertaining to the RI/FS for the NBF-GTSP Site. Ecology has developed a draft numerical listing of chemical-specific ARARs and Preliminary Screening Levels (PSLs) that pertain or may pertain to sites along the LDW, referred to as the *Draft LDW ARARs & PSLs* spreadsheet (version dated July 30, 2012; Ecology 2012b). At Ecology's direction, this extensive listing has been evaluated and pertinent criteria have been utilized in this Work Plan to develop remedial investigation SLs to be applied to the NBF-GTSP Site (Section 6.2). The resultant SLs for the RI/FS are generally more stringent than evaluated in previous Site documents, and the resultant COPCs are more inclusive than previous listings. Project-specific cleanup levels will be developed later in the RI/FS process (see Sections 8 and 9.1).

6.1 Data Quality Objectives

Ecology has not promulgated specific guidance on development or presentation of DQOs. The Agreed Order for the Site (Ecology 2008b) states that data quality objectives will include:

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[4] Some previous documents for the Site and Slip 4 have used the terms "chemicals of concern" or "chemicals of potential concern" (COPCs). In keeping with terminology in the Agreed Order for the Site, COPCs defined in this section and used in this Work Plan will be referred to as "contaminants of potential concern."

"Determination of the level of data quality needed for environmental sampling and testing and the contaminant detection limits that will be achievable and necessary to determine compliance with ARARs."

Based on this definition, and on discussions between PLPs and Ecology following review of the draft Work Plan, the discussion in this Work Plan will entail a modified, simplified version of the USEPA's seven-step DQO process (USEPA 2006). The DQO process is intended to assist site managers in planning data collection of the right type, quality, and quantity to support defensible site decisions. Depending on the site conditions, the investigative phase, and the regulatory regime, the DQO process is intended to be adapted to specific needs. The USEPA DQO process includes the following seven steps:

1. State the Problem
2. Identify the Goals of the Study
3. Identify Information Inputs
4. Define the Boundaries of the Study
5. Develop the Analytic Approach
6. Specify Performance or Acceptance Criteria
7. Develop the Plan for Obtaining Data

Identifying decisions, goals, inputs, and boundaries for a number of contaminated areas of concern, and for multiple contaminants, within a large overall site is difficult to specify, particularly when environmental data and other information for many of those areas is relatively old and of varying quality. As such, the following development of DQOs is somewhat generalized, with the recognition that specific planning and goals will be applied to each specific investigation area in order to focus efforts to obtain adequate data to characterize the Site, fill data gaps, and develop remedial alternatives. The rationale and objectives for data collection are included as an introduction for each investigation area in Section 7 of this Work Plan.

One major outcome of the DQO process is to aid in defining the level of analytical quality needed to perform the RI. This process involves evaluating and developing SLs for the RI, which is discussed in Section 6.2. The seven-step DQO process is included in Sections 6.1.1 to 6.1.7, and each step begins with a summary list of component activities from the DQO Process guidance document (USEPA 2006).

6.1.1 DQO Step 1: State the Problem

Components of DQO Step 1 include the following activities:

- Give a description of the problem
- Identify leader and members of the planning team and other resources
- Develop a conceptual model of the potential environmental hazard

The NBF-GTSP Site RI/FS process began with the signing of the Agreed Order in July 2008 (Ecology 2008b) and will continue through the final RI and FS reports. This process has involved completion of a large number of environmental investigative activities, interim actions, and subsequent reports. This RI/FS Work Plan marks a major step in bringing together this large body of recent and historical Site information, and determining what further actions are needed to be accomplished leading to appropriate remedial decision-making. Specifically, the purpose of this Work Plan is to evaluate previously collected data, summarize data gaps (both previously and newly identified), and define the plan to resolve the data gaps and evaluate data, in order to aid in remedial alternative selection.

The Agreed Order states the following about the NBF-GTSP Site: "Ecology has determined that a release or threatened release of hazardous substances at the Site requires remedial actions to protect human health and the environment. This Order sets forth the measures that need to be taken to perform a remedial investigation/feasibility study for the Site." The Order further describes the RI/FS: "The purpose of the Remedial Investigation (RI) is to determine the nature and extent of contamination on the site. An analysis of potential sources of contaminants into the storm water system on the site will be included as part of the investigation. Storm water from the site is an on-going source of contamination to sediments in Slip 4 of the Lower Duwamish Waterway that could cause a violation of sediment cleanup goals. The Feasibility Study (FS) will use the results of the RI to evaluate and select effective measures to prevent releases of contamination from the site, including any sources of contamination migrating from the site to the Lower Duwamish Waterway."

This RI/FS is being conducted under MTCA, and as such this regulation dictates the major purposes of the RI/FS process, as follows:

- The overall purpose of an RI/FS is to collect, develop, and evaluate sufficient information regarding a site to select a cleanup action [WAC 173-340-350(1)].
- The specific purpose of the remedial investigation is to collect data and information necessary to define the extent of contamination and to characterize the site. The specific purpose of the feasibility study is to develop and evaluate alternative cleanup actions [WAC 173-340-120(4)(a-b)].

The following text addresses the Step 1 DQO component activities. Based on the Agreed Order, the MTCA regulation, and the history of releases (identified or not) and environmental activity at the Site, the NBF-GTSP RI/FS will serve to fill data gaps during characterization of the Site, and to develop and evaluate remedial alternatives. The RI/FS will follow a path to effectively make decisions leading to the selection of remedial actions for selected Site areas. The project team leaders are listed in Section 1.3. Decisions for resources, constraints, and deadlines associated with planning, data collection, and assessment are made among the project team through document review, meetings, and other communication. The conceptual site model for the Site is developed in Section 3 and graphically depicted in Figure 3-1.

6.1.2 DQO Step 2: Identify the Goals of the Study

Components of DQO Step 2 include the following activities:

- Identify the principal study questions
- Consider alternative outcomes or actions that can occur
- Develop decision statements, state how data will be used in meeting objectives and solving the problem

The primary goals of the RI/FS for the Site are: to protect the stormwater pathway from contaminant sources; and to remediate areas with unacceptable levels of soil and groundwater contamination, including potential soil vapor intrusion. According to the Agreed Order: “Releases of PCBs, PAHs, SVOCs, and metals have been identified in suspended solids in storm water and deposited in storm water piping systems from the Site. Since stormwater from the Site discharges into Slip 4, there is the potential for suspended solids in stormwater from the Site to contaminate sediment in Slip 4.” Protection of the stormwater pathway, including anthropogenic material inputs, would possibly lead to termination or reduction of LTST treatment, so that Site stormwater could eventually flow directly to Slip 4.

Other onsite media (soil, groundwater, soil vapor) are known or suspected to be contaminated at various areas of concern. During the RI/FS, an evaluation is needed to determine which of these areas are in need of alternative development for remedial action, and which areas can be currently deemed as relatively uncontaminated and thus warranting no additional cleanup. Some areas will require only minimal further assessment such as physical measurements (e.g., water levels) or sampling a downgradient well to confirm that no further contaminant migration is taking place.

For all media, decision-making will largely depend on comparison of analytical results to screening levels or cleanup levels, in order to be protective of human health and the environment. Relatively conservative (protective) RI screening levels are developed below in Section 6.2, and cleanup levels will be developed during the RI phase.

Step 2 will identify and ask high-level decision or study questions that result in outcomes which are then evaluated. The NBF-GTSP RI/FS is a complex process with multiple sources, media, and pathways to consider, requiring a number of questions and outcomes. The following four sets of questions/outcomes/statements have been identified, although the content of the four is not mutually exclusive.

Study Question No. 1: Have all significant areas/sources/pathways of contamination impacting soil, groundwater, soil vapor, storm drain media, and anthropogenic media been identified?

Alternative Outcomes/Actions No. 1: Evaluate existing information to determine if data are sufficient to answer question; make determination that additional data collection is required; make determination that existing data are sufficient to move forward.

Decision Statement No. 1: Determine whether potential areas/sources/pathways related to environmental and anthropogenic media contamination have been identified. Determination of areas of concern will be based on previous data gaps reports, other available environmental documents, and evaluation of the full data set for pertinent media (performed in Work Plan Sections 4 and 7). Potential sources contributing to storm drain contamination will be evaluated. Data evaluation will compare chemical concentrations to protective screening levels, with evaluation decisions based on exceedance levels, number of exceeding locations in a local area, and number of contaminated media in area.

Decision Question No. 2: Are soil and groundwater contaminant plume boundaries defined sufficiently for developing remedial alternatives?

Alternative Outcomes/Actions No. 2: Evaluate existing analytical data to determine if these data are sufficient to answer question; make determination that additional data are required during RI to fill data gaps; or make determination that existing data are sufficient to move forward with FS decision-making.

Decision Statement No. 2: Determine whether it is necessary to fill data gaps by collecting representative samples of soil and groundwater (and soil vapor where potential vapor intrusion is a concern). Where deemed necessary, complete the characterization of nature and extent of contaminants in soil and groundwater, including pertinent analytes that were not assessed in previous investigations. For soil contamination, identify both vertical and lateral extent. For groundwater contamination, determine extent, particularly in the downgradient direction, and temporal trends in concentrations throughout the Site.

Decision Question No. 3: Is contamination in storm drain media defined sufficiently and recently enough, and are potential sources characterized to make decisions about impacts to the storm drain system?

Alternative Outcomes/Actions No. 3: Evaluate existing analytical data to determine if these data are sufficient to answer question; make determination that additional data are required during RI to fill data gaps; or make determination that existing data are sufficient to move forward with FS decision-making.

Decision Statement No. 3: Determine whether it is necessary to fill data gaps by collecting representative samples of storm drain media, surface debris, and (where deemed necessary) other anthropogenic media. Complete characterization of nature and distribution of contaminants in these Site media, including analytes that were not assessed in previous investigations. Determine potential onsite or offsite sources of COPCs. For solid media (storm drain solids, surface debris, and anthropogenic media), sample with a phased approach in an upgradient pathway direction, beginning with storm drain solids.

Decision Question No. 4: Overall for the Site, have all appropriate media and chemicals been sufficiently tested in areas of concern or in pathways leading to/through the storm drain system, using data of appropriate quality to meet RI screening levels, to determine if key potential exposure pathways identified in the CSM can be confirmed as complete or incomplete, and to proceed with remedial alternative selection for all areas of concern, including the possibility of eliminating areas requiring cleanup evaluation?

Alternative Outcomes/Actions No. 4: Evaluate analytical data to determine if Site data are sufficient to meet criteria and answer question; make determination that additional data are required during RI to meet criteria and answer question; or make determination that existing data are sufficient to move forward with FS decision-making.

Decision Statement No. 4: Determine where it is necessary to collect additional appropriate high-quality data (with specified quantitation limits) from environmental and anthropogenic media to meet specified criteria, to further define the potential exposure pathways in order to determine if further evaluation in the RI/FS is necessary.

The potential sources, pathways, and receptors of the CSM are identified in Section 3. Protective analytical criteria, which include RI screening levels determined by Ecology, and the corresponding appropriate quantitation limits, are defined in Section 6.2. The detailed data evaluation is conducted in Section 7, which includes definition of nature and extent, proposals to fill data gaps, and evaluation of key pathways.

6.1.3 DQO Step 3: Identify Information Inputs

Components of DQO Step 3 include the following activities:

- Identify types and sources of information needed to resolve decisions
- Identify the basis of information to guide or support choices in DQO process
- Select appropriate sampling and analysis methods

The data set used for the NBF-GTSP RI/FS is sizable, with analytical data and other information from environmental studies and other engineering reports extending back to the 1980s. The following information has been identified that will form inputs to the RI/FS process:

- Historical site information, including former site use activities, site plans and aerial photographs, storm drain system drawings and video survey results, and other information compiled in previous documents and within the GIS project database.
- Existing data in the project analytical Access database, including chemical and physical data (e.g., water levels) collected from the mid-1980s through 2012, and large amounts of data from recent interim actions and investigations performed by Boeing, SCL, and King County (at KCIA).
- Results from recent studies and compilations, including the following:
    - Supplemental Data Gaps Report
    - Infiltration and Inflow Assessment Report
    - Investigations of storm drain media, including whole water, filtered solids, and SD solids grab samples
    - Interim actions and related investigation reports performed by Boeing and SCL
    - Salinity study performed by Boeing, which determined that criteria pertaining to marine water, not freshwater, are applicable in Slip 4 (AMEC Geomatrix 2011).
- The CSM presented in Section 3 of this Work Plan.
- SLs selected for each medium based on pertinent ARARs/PSLs, background levels, and analytical quantitation limits. COPCs will be defined based on comparison of existing data in the project database to the selected SLs (Section 6.2).
- Analytical data and physical information collected as part of RI site characterization and other RI activities.

Most of the existing data in the project database will be used in the RI/FS process (see Step 4), in addition to newly collected RI data for Site media. The media to be sampled and for which resultant data will be added to the project database include soil, groundwater, soil vapor, storm drain water, storm drain solids, surface debris, and a variety of anthropogenic media, in addition to quality assurance/quality control (QA/QC) samples, such as equipment rinses. Specific sampling elements are outlined in Section 7 of this Work Plan and will be further defined in one or more future Sampling and Analysis Plans (SAPs). Data quality and analytical protocols will be further defined in one or more future QAPPs. The following discussion summarizes the analytical approach and methods in this RI.

Chemical analyses will be performed using the analytical protocols as listed in Table 6-1. Sample collection and analysis will follow standard USEPA, Ecology, and Puget Sound Estuary Program (PSEP) guidelines and protocols (USEPA 1986; Ecology 1995, 2007, 2008a; PSEP 1997a, 1997b, 1997c). Laboratory quality control parameters stated in USEPA, Ecology, and PSEP guidance will be adhered to for each COPC. Analyses will be performed at an Ecology-accredited laboratory (Analytical Resources, Inc. [ARI] in Tukwila, Washington). All chemical results gathered during this investigation will undergo independent data validation by EcoChem Inc. of Seattle, following USEPA guidance (USEPA 1994, 2008, 2009b, 2010a). Laboratory data deliverables must meet the minimum documentation needs to support the data validation. The level of data validation will be specified in the task-specific SAPs and QAPPs.

6.1.4 DQO Step 4: Define the Boundaries of the Study

Components of DQO Step 4 include the following activities:

- Define the target population of interest
- Determine the spatial and temporal boundaries and other practical constraints
- Define the scale of inference

The physical Site boundaries were initially defined by the Agreed Order (Ecology 2008b). The Site includes the entire GTSP property, much of the former flume corridor, and the portion of NBF that drains to Slip 4. According to the Agreed Order: "The Site, which is defined by the extent of contamination caused by the release of hazardous substances, includes land impacted by industrial practices at the Georgetown Steam Plant (GTSP) and North Boeing Field (NBF) properties…. Final site boundaries will be defined by the extent of contamination determined during the RI." The Site boundary may be expanded if it is determined that soil or groundwater contamination, or soil vapor intrusion potential, originating from the Site extends beyond the currently defined Site boundary.

The target population for the NBF-GTSP Site, in the broadest sense, includes the environmental media for the entire Site, including storm drain media (water and solids) and anthropogenic media that (if released) could migrate to the storm drain system. This is the entire population of interest that may be sampled and the data evaluated during the RI/FS. However, based on previous environmental Site work, including information in the two data gaps reports, the Site has been subdivided into areas of interest or concern, based on media type and past contaminant characterization or past activities that may have led to releases.

For soil, groundwater, and soil vapor, these contaminated or potentially contaminated areas are termed "areas of concern" (see Section 7.1.2). These areas cover most of the entire north end of the Site (GTSP and PEL area); but south of this, the areas of concern represent only a small fraction of the entire Site. These areas of concern are sharply defined, but depending on RI sampling results, the area boundaries may be expanded, potentially also to offsite locations. In some cases, groundwater monitoring wells (particularly downgradient wells) may need to be placed outside the defined area boundaries, and some monitoring wells that constitute a Site-wide groundwater network will be placed outside the formal areas of concern but onsite. Contaminated groundwater potentially extending downgradient of the Site boundary will be evaluated, if identified.[5] Investigations of soil will extend vertically until the maximum depth of contamination is defined.

These areas of concern have been defined without regard to buildings, pavement, structures, utilities, or other obstacles to investigations or remediation feasibility. However, RI sampling locations within these boundaries will be limited based on these obstacles. It is recognized that buildings and other non-mobile structures cannot feasibly or practically be moved for purposes of sampling, and often not for purposes of future remediation.

For storm drain media, the equivalent area of interest is simply the entire storm drain system on the Site, which is subdivided into six major stormwater drainage basins (Section 7.2). Some of the proximal upstream areas along lateral lines are also included in evaluation. Sample results for the LTST are included in the evaluation. The replacement flume storm drain line is not a focus of this investigation, although it will be sampled at its upstream location on the GTSP property. Depending on results, the areas of storm drain media sampling at the Site could be expanded into offsite locations. Sampling of the storm drain media will necessarily be limited to areas of reasonable access within the storm drain system.

For anthropogenic media, the area of interest is again the entire Site. Because anthropogenic materials are along the pathway leading to the storm drain system, the area of interest is similarly subdivided into the six major stormwater drainage basins. Sampling of anthropogenic media would potentially include any accessible exterior materials on buildings/structures or the ground surface that may potentially be released to the storm drain system. For surface debris, sampling could take place at any accessible Site location on or near the ground surface that would potentially drain to the storm drain system. The sampling approach for anthropogenic media and surface debris is described in Section 7.3.4.

Both historical and future RI samples will be utilized during this RI/FS. Due to the large size and variable quality and nature of the existing Site data in the project database, not all of these results are suitable for all uses. Data are of varying quality and age (differing methods, lack of validation, and some results are more than 25 years old), variable completeness/availability (some reports contain errors/omissions, do not provide full supporting information such as lab reports, may not describe the material sampled or depth, and may only include summary data tables), and variable results (multiple results such as field or lab duplicates that often are not explained, and many results are repeated in subsequent summary documents with differing results in some cases).

Consequently, not all existing data will be used in the RI/FS. The large size of the database and lack of complete analytical information for some studies preclude individual evaluation of data

[5] This does not include the groundwater VOC plume emanating from the former EMF on the KCIA property, which extends from upgradient of the Site (east of NBF) to downgradient of NBF and crosses under the southern boundary of the Site.

quality prior to use in the RI/FS. Thus, some screening activities and exclusion of data in the database will be made on a Site project scale, in addition to some targeted individual screening/exclusion of data, where necessary. For existing analytical data, the table below lists the temporal constraints and other exclusions pertaining to usage of sample results. It is expected that all future RI data will be used in the RI/FS evaluation, and for some media that change characteristics rapidly (such as stormwater, storm drain solids, and groundwater), the newer data will be used in lieu of older data.

Constraints on Use of Existing Data for RI/FS

Sampled Media	First Sample Date	Last Sample Date	Data Usage Notes
Soil	2/25/1986	11/2/2012	Available sample data used for 1986 to 2012; exclusions: waste or stockpile samples, B-qualified data*, TCLP data; removed soil location samples are included for some uses
Groundwater	3/19/1986	8/22/2012	Available sample data used for 1986 to 2012, but only evaluated for last three years of sampling at each well (in figures/text); exclusions: filtered or settled sample data, waste samples, B-qualified data*
Stormwater	10/17/2009	3/29/2012	Available sample data used for 2009 to 2012; exclusions: B-qualified data*
Storm Drain Solids	7/20/2004	8/9/2012	Available sample data used for 2004 to 2012, but storm drain structure/polygon results only use data from the most recent sample per location; exclusions: wet weight results, bedload and inlet filter samples, TCLP data, B-qualified data*
Paint	7/20/2010	2/27/2012	Available sample data used for 2000 to 2012; exclusions: wipe samples (paint chip only used); removed paint location samples are included for some uses
Roof Material	7/20/2010	7/30/2010	Available sample data used for 2000 to 2012; includes downspout solids
Other Exterior Material	7/20/2010	8/4/2010	Available sample data used for 2000 to 2012; removed exterior material location samples are included for some uses
CJM	11/6/2000	7/19/2012	Available sample data used for 2000 to 2012; removed CJM location samples are included for some uses
Pavement	8/28/2009	8/2/2010	Available sample data used for 2000 to 2012; removed pavement location samples are included for some uses
Surface Debris	7/15/2009	8/4/2010	Available sample data used for 2000 to 2012; removed surface debris location samples are included for some uses
Sweeper Debris	12/16/2005	2/28/2013	Available sample data used for 2000 to 2013; these large composite sample results are included only in text, not figures or tables

* Data with a B qualifier indicates the contaminant was also detected in the associated lab blank sample.
First and last sample dates correspond to the range for samples being used from the project database.
Locations of removed sample materials are identified as such in figures, numbered tables, and Appendix B.

For specific temporal limits on existing data, soil sample results are used back through 1986. Limited early sampling results for two years prior to 1986 (PCB testing) were analyzed with older analytical methods, and data in reports are not well documented. Sampling locations on these older report figures are also not well-constrained, so these older data are not used. For groundwater, only the last three years (36 months) of sampling data at any given monitoring well are evaluated in detail. Data from some older wells that have not been recently sampled, and may be abandoned, also will not be used if there are nearby wells that have newer sampling results and are representative of groundwater quality in that area. Sampling results from older wells without nearby newer groundwater data will continue to be utilized. Storm drain solids data are being utilized from 2004 through summer 2012, and most commonly only the most recent sampling results are being applied. Stormwater data are being utilized back through 2009. Anthropogenic media use all available data (excluding subsurface debris) for the years 2000 to 2012.

Removed material at sample locations for soil, paint, other exterior materials, and CJM are being used for some applications in this Work Plan. For completeness and to show where previous investigations and excavations/removals have been completed, removed material is listed in numbered data tables in Section 7 and in Appendix B (both with a removal indication) and shown as removed sample locations on figures.

The soil vapor pathway will be evaluated in this RI/FS (Sections 6.2.3 and 7.1), where data for volatile substances suggest that vapor intrusion may be a concern for certain existing buildings at or adjacent to the Site. Soil vapor is an environmental medium that has not been previously sampled at the Site.

The list of chemicals evaluated for definition of COPCs in this Work Plan is tabulated in Section 6.2. For soil and groundwater, a large number of analytes have been tested for in the set of existing data. For the storm drain pathways that lead to Slip 4 and the LDW, the list of COPCs is limited to those found in the LDW RI and FS documents, which include a total of approximately 56 chemicals (Windward 2010; AECOM 2012), as well as the Slip 4 COPCs. These 56 chemicals were then used as a starting point in the COPC screening process in Section 6.2. These LDW/Slip 4 COPCs pertain onsite to storm drain water, storm drain solids, surface debris, and anthropogenic media, although minor differences exist in the COPC list between these media. The LDW/Slip 4 COPCs also are utilized less directly for groundwater and soil screening, in considering downgradient pathways that involve the storm drain media and LDW.

The scale of inference (such as a decision unit) will vary greatly depending on the media of concern, the area of concern and specific location, the range and severity of contamination, and other factors. Focus will be given to hot spots that show significant exceedances of screening levels (e.g., greater than 25 times the SL), and especially focus on areas with multiple clustered samples showing exceedances. Number and placement of RI initial phase samples has been agreed upon between Ecology and PLPs since production of the draft Work Plan, using various qualitative factors (i.e., without a grid size or predetermined sampling density).

6.1.5 DQO Step 5: Develop the Analytic Approach

Components of DQO Step 5 include the following activities:

- Specify the population parameter for decision-making
- Choose an action level and a decision rule for it

As part of this Work Plan, RI screening levels were developed in Section 6.2 for all media, primarily based on Ecology's compilation of LDW preliminary screening levels and other criteria (Ecology 2012b). These RI screening levels are based on most stringent criteria, taking into account also background and quantitation limits, per MTCA. These RI screening levels are intended to be conservative, in order to identify potential areas of contamination for RI characterization purposes.

During the RI, cleanup levels will be developed for the sake of defining the nature and extent of contamination, and will be utilized for remedial alternative development in the FS. Because this is a MTCA-based RI/FS, the MTCA regulation will be followed in identifying cleanup levels for soil and groundwater and the relationship to any applicable state and federal laws (Section 5) or other criteria. Depending on available information, cleanup levels may be refined throughout the RI/FS process. Other regulations, including the Sediment Management Standards, will be used for storm drain solids, surface debris, and pertinent anthropogenic media.

In this Work Plan, the RI screening levels are used for comparison to Site data, to determine contamination using exceedance factors (multiples) of the RI screening levels. This approach of using multiples of the most stringent criteria allows all exceedances to be recognized, but also allows hot spots to be readily determined and presented (also see Section 6.1.6). After RI data are collected, the full data set (existing plus newly collected) will be compared to the preliminary cleanup levels, and presented in the RI report. Data will be used to outline locations exceeding these CULs, and to determine areas of remedial alternatives as necessary.

Comparison of analytical data to RI screening levels or cleanup levels will not be done based on a single population parameter (e.g., mean or 80th percentile) for an area of concern or plume. The data set in use for the Site represents a wide variety of locations, depths, ages, and sampling density within any area, including at a variety of locations both within plumes or hot spots and outside of these zones. Due to this variability and sampling, an approach of using a standard population parametric evaluation is too simplified and would not provide meaningful statistics to make decisions in almost all cases. The areas with a high sampling density within a hot spot have in most cases been largely removed during previous interim actions or are currently undergoing remedial treatment actions. Contamination of widely varying concentrations remaining onsite, in some cases in areas surrounding former interim actions, is not readily applicable to such parametric evaluation.

For the NBF-GTSP Site, the maximum concentration of COPCs at each area is more appropriate for comparative purposes, but other factors need to be taken into account, such as age of the sample data, the number of exceedances in that area/plume, the range of concentration or exceedance factors, the volume of in-situ contamination represented by the sample results, and the accessibility of the locations of probable remaining contamination.

Concentrations from samples collected in the initial phase of the RI (phasing discussed in Section 6.3) will be compared to the criteria levels and a determination made by the project team as to whether contamination remaining onsite in significant quantities warrants further investigation to characterize this material. If enough information exists for purposes of remedial decision-making, then no further sampling will take place in the subsequent phase. If additional characterization is needed for nature or extent definition (primarily for soil and groundwater), additional sampling will be proposed to close that data gap. For soil vapor, initial sampling results (two rounds per location) will be utilized to ascertain if vapor intrusion to indoor air is of potential concern. For sampling of storm drain solids, surface debris, and anthropogenic media, the up-pathway phasing approach is discussed in Section 7.3.4.

6.1.6 DQO Step 6: Specify Performance or Acceptance Criteria

Components of DQO Step 6 include the following activities:

- Specify the decision rule as a statistical hypothesis test, examine consequences of making incorrect decisions

The USEPA (2006) DQO guidance document recognizes that bias and error may affect sampling results and the decisions made from these data. The sources of error or variability in collected data originate from sampling error and measurement error. Sampling error may be caused by the inherent variability (spatially or temporally) of contaminants in the environment, the sample collection design, and the number of samples. Measurement error may be caused by imperfections in the measurement and analysis process, including during sample collection, handling, preparation, and analysis, as well as during data reduction, transmission, and storage. In general, sampling error is much larger than measurement error and needs to be considered in planning.

The particular application of the guidance for Step 6 depends on a number of factors such as the type of investigation, type of site, number of samples, and the question(s) being answered. A provided example is that of a particular hazardous site assessment, where the site would be assumed to be hazardous unless data can demonstrate otherwise. The consequences of retaining the assumption that the site is hazardous, when it actually is not, may be minor for this case. Specifying that only a moderate number of samples be collected from this site, analyzed using field screening analytical methods and only a limited number of confirmatory analyses, could be satisfactory. However, the converse scenario of assuming a location is not hazardous, when it actually is, could have adverse effects on human health and the environment (USEPA 2006).

Because a number of interim actions and other previous remedial actions have taken place at the NBF-GTSP Site, the strategy for sampling and evaluation is different than for a hazardous waste site that has little characterization and no prior remediation. In addition, the Site has a large number of physical obstacles to sampling (and remediation) that impede the ability to sample wherever contamination is known or suspected. As a result, RI sampling will be more limited, and in many cases will be focused on filling data gaps in areas surrounding previous remedial actions, such as near soil excavations or in storm drain structures following cleaning or other adjacent actions. Samples will be collected from soil and groundwater primarily in historically identified contaminated areas to assess current conditions, as necessary. Sampling of most media will also be focused in areas not addressed during interim actions, to fill data gaps.

Samples of potentially contaminated media will be collected at a sufficient density and quantity, and in a phased approach, so that a valid determination can be made as to the need for and extent of remedial actions. Between the draft and final versions of this Work Plan, discussions between Ecology and the PLPs resulted in significant modifications to the sampling design. In many cases, the number of samples was decreased. The resulting number, density, and locations of proposed samples do not readily lend themselves to statistical or probabilistic analysis and decision error evaluation.

Instead, direct comparisons will be made between sample result maximum values and agreed-upon cleanup/criteria levels, including an analysis of established background concentrations. Due to the recognition that large sample/measurement errors may exist in any environmental analytical data, strict adherence only to criteria level exceedances can sometimes lead to poor decision-making. Consequently, criteria exceedance factors will also be taken into account in the decision-making process. As a result, data evaluation will involve not only asking the question of whether the maximum concentration for any COPC in an area exceeds the selected criterion, but also asking what is the distribution of concentrations, what is the degree to which concentrations exceed their criteria, what is the total number of results that exceed in the area, and is a COPC present in other media (e.g., groundwater compared to soil). This approach focuses the evaluative process on determination of areas with relatively significant contamination (either in concentration or extent) that potentially require remediation. At this time, further definition of statistical planning related to acceptance criteria cannot be performed, although cleanup levels will be established during the RI. Thus, a broad approach will be taken in the RI regarding criteria exceedance comparisons, to assist in optimizing decision-making toward proper remedial alternative development and selection.

Specific performance and acceptance criteria for laboratory results of each sampled media will be identified through project SAPs/QAPPs that will be prepared for each RI phase and investigation. Independent data validation will determine whether laboratory calibration and other QA/QC requirements have been met to accept or qualify data for use in the RI. The tolerable limits for the data reported by the laboratory will be measured using standard factors of accuracy, precision, representativeness, completeness, and comparability. For this project, the completeness factor (the amount of data collected relative to that needed to assess the project's technical objectives) has been established at 95 percent.

Field and laboratory QC samples will be used to evaluate these standard factors for the analytical results. Field QC samples will be collected during sampling to quantitatively measure and ensure the quality of the sampling effort and the analytical data. Field QC samples include field duplicate samples and equipment rinse blanks. The calculated relative percent differences (RPDs) for field pairs will help determine the representativeness of the samples and the overall precision of the sample collection process.

6.1.7 DQO Step 7: Develop the Plan for Obtaining Data

Components of DQO Step 7 include the following activities:

- Compile all information and outputs from DQO Steps 1 to 6
- Use this information to identify alternative sampling and analysis designs that are appropriate for intended use
- Prepare a design that will yield data to best achieve performance/acceptance criteria

This RI/FS Work Plan, supplemented by future project SAPs/QAPPs, details the plan for obtaining data of the appropriate quality needed to complete the goals of the RI/FS according to the DQOs outlined above. The Site has been subdivided into manageable geographic units known as areas of concern for soil, groundwater, and soil vapor; and subdivided by stormwater drainage basins and subdrainages for storm drain media, surface debris, and anthropogenic media.

Sampling will take place to fill the significant data gaps listed in the Site data gaps reports and revised in this Work Plan using currently available information. For soil, groundwater, and soil vapor media, sampling has been focused in areas with known or suspected remaining contamination, and analyses are proposed to include those analytes known or likely present at the areas of concern, using PQLs that are set to meet the RI screening levels. For the storm drain system and anthropogenic media, sampling has been focused based on multiple factors, including sampling areas near historically identified contamination, areas with possible anthropogenic material contamination that may reach the storm drain system, areas without previous data for storm drain solids, and areas near recent interim actions. The full sampling approach is intended to aid in identification and delineation of contaminant zones, as well as to distinguish potential source areas and pathways leading to the storm drain system. The sampling proposed in the Work Plan has been reviewed and revised through meetings and other communication between Ecology and the PLPs. The RI will utilize a phased approach to collect representative sample data in order to ensure proper and efficient characterization of the Site, to refine analytical needs through time, to identify potential sources and pathways, and to define physical boundaries of areas that may require remedial actions (or no further action), based on comparison to cleanup/criteria levels. This phased approach is considered to be effective and cost-efficient.

Proposed analytical methods and related information are included in Table 6-1. Additional discussion about developing COPCs and analytical quantitation limits is included in Section 6.2. Discussion regarding approach for obtaining data, including phasing of sampling, is included in Section 6.3. The purpose, rationale, and approach for characterization in each area of concern are presented in the text and tables of Section 7. The specific plan for sampling, including sample numbers and analytes, is also presented in detail in Section 7.

6.2 Development of Screening Levels and COPCs

In order to screen chemicals and generate COPCs for this RI/FS Work Plan, the project database was queried for environmental data pertaining to the media of concern. Sample data included in the database were collected for a period extending from 1986 to 2012. Of all the sample records in the database, approximately 74 percent were collected since the year 2000.

A large percentage of sample results in the database that contain location coordinates and collection dates for specified media were used as the starting point to define COPCs. All duplicate sample results (field, lab, multiple methods, or reanalysis) were first resolved using the highest detected value or lowest non-detected value per chemical. The maximum detected value was used in these cases (instead of a calculated average value) in order to be more protective, and because the final result thus matches a concentration found in the original consultant or lab report.

Samples of contaminated material that have subsequently been removed, such as during soil excavation or CJM removal, were also included in the screening process. In determining COPCs, it is important to identify the chemicals or chemical groups that have been released and analyzed on the Site, regardless of the current status of removal activities. Recognizing that even if localized removals of material took place, those removals may not be fully complete, any replaced or backfill material may become recontaminated, and cleanups are an ongoing process (e.g., CJM removals). Most removals of contaminated materials have focused on petroleum hydrocarbons and PCBs, which would remain as COPCs even if these data were excluded. Consequently, both the removed and in-situ data were utilized in order to be more protective in identifying Site contaminants and to provide a more robust data set per media and chemical class.

The process by which SLs and COPCs were evaluated and developed is outlined as a flow chart in Figure 6-1 and is discussed in detail in Section 6.2.2. Sections 6.2.1 and 6.2.2 pertain to the media of soil, groundwater, stormwater, storm drain solids, surface debris, and a variety of anthropogenic materials. Soil vapor, as related to the pathway of potential vapor intrusion is handled separately and discussed in Section 6.2.3.

6.2.1 Screening Criteria

To compare sample concentrations to SLs, Ecology's LDW spreadsheet (Ecology 2012b) was utilized. The Ecology 2012 spreadsheet lists ARARs, MTCA PSLs (including MTCA CULs), background concentrations, quantitation limits, and other information pertaining to hazardous substances for a variety of media and under differing pathway evaluation conditions. The individual ARARs, PSLs, and background information that were applied to all media for the NBF-GTSP RI are listed in Table 6-2. Information in the Ecology 2012 spreadsheet incorporates a recent review of Ecology's Cleanup Levels and Risk Calculation (CLARC) online database (accession date of May 2013), pertaining to Method B standard formula values for soil, groundwater, and surface water. Also, instead of utilizing the quantitation limits (MDLs and PQLs) listed in the Ecology 2012 spreadsheet, actual MDLs and PQLs (or RLs) were obtained from ARI for up to two analytical options for each medium/method combination.

The CULs, ARARs, PSLs, and other information (together referred to as "criteria") listed in Table 6-2 are designated by alphanumeric codes applied for each medium in this Work Plan. For example, SO-1 is for soil and GW-1 is for groundwater. Storm drain water (SDW) includes both stormwater and base flow water, and sample results for this media will be compared to surface water criteria. Sample results for storm drain solids (SDS) and anthropogenic media materials will be compared to sediment criteria. The criteria listed in Table 6-2 represent a subset of the criteria listed in the Ecology 2012 spreadsheet. The following bulleted text generally explains which criteria from the Ecology 2012 spreadsheet were included or excluded in this RI screening process, with a brief rationale including how they pertain to the project and to MTCA.

General

- This complex Site with a large number of hazardous substances does not qualify under the definition of establishing CULs under MTCA Method A (WAC 173-340-704). CULs corresponding to Method A were not included, except for petroleum hydrocarbon ranges in soil and groundwater (which are included as table values in Method A, but not included as standard formula values in Method B).
- The Site also has not been designated as qualifying for cleanup under MTCA Method C; thus, Method C CULs were not included for any media. This RI/FS is utilizing CULs and procedures under Method B (WAC 173-340-705). MTCA recognizes that CULs more stringent than standard risk levels may be required based on site-specific conditions to

protect human health and the environment. In addition, MTCA requires addressing ARARs that may pertain to the Site, as well as background concentrations and laboratory considerations [WAC 173-340-700(6) and -707, -709, -710].

- Criteria without numeric values or equations in the Ecology 2012 spreadsheet or Ecology's CLARC database, or those requiring calculation using a model (e.g., the total petroleum hydrocarbon model) based on site-specific information, were not included in this screening process.
- For criteria where both carcinogenic and non-carcinogenic levels are available for a given hazardous substance, the lower value (typically carcinogenic) was included as the more protective value.
- For criteria specific to other investigations conducted in the vicinity of the Site along the LDW (e.g., Boeing Plant 2 or Terminal 117), these criteria were largely not applied in the screening process due to different physical/chemical conditions and pathways, different regulatory framework and approvals, different zoning, and/or different application of primary criteria. In many cases, a screening process (which included some of the criteria used in this Work Plan screening) was conducted in these other studies, but with different conditions and rationale. Only limited criteria or data from these other investigation reports were utilized in this Work Plan, mainly including the key risk drivers from the LDW RI/FS documents, LDW background data, and the Boeing Plant 2 surface water, fish consumption calculations.
- The screening levels from the California EPA Office of Environmental Health Hazard Assessment (OEHHA) were not included and are not considered MTCA ARARs in this RI.
- All "natural" background concentrations were included for all media, whether general or pertaining to the LDW, based on the Ecology 2012 spreadsheet.
- Where pathway evaluation indicates the potential for contaminants in environmental and/or anthropogenic media to impact Slip 4 and the LDW, the screening of chemicals was limited to those 56 COPCs identified in the LDW RI/FS documents (Windward 2010; AECOM 2012; and modified in discussions with Ecology). One additional chemical, di-n-octyl phthalate, was included for storm drain water because it was identified in Slip 4 and at the KC lift station.
- Individual PCB aroclors are evaluated but not considered as COPCs in this Work Plan; instead, total PCBs are considered as the representative COPC. Similarly, individual cPAH compounds are evaluated but not formalized as COPCs for soil and groundwater; instead the total cPAH toxic equivalent (TEQ) concentration for benzo(a)pyrene is considered. However, for evaluation of storm drain media, individual cPAHs will be considered because these are listed separately as COPCs for LDW and Slip 4 sediments.
- Recent Ecology guidance on PCE and TCE levels, based on revised toxicity information, was incorporated into criteria for soil, groundwater, and related pathways.

Soil

- Soil pathway evaluations included direct contact, soil-to-groundwater protection, soil-to-sediment protection (via groundwater or surface water transport), and soil-to-surface-water protection. Both vadose and saturated soil criteria were included, although the saturated criteria values are lower and will thus be applied in this general screening process, in order to remain conservatively protective.
- For soil-to-surface water protection, the marine/saltwater conditions were applied, both chronic and acute conditions were applied, and both aquatic life and human health consumption of organisms were applied. Human health consumption of water+organism was not applied because the LDW surface water is not considered potable.
- MTCA CULs specific to the terrestrial ecological evaluation were not included for soil screening.
- For the USEPA Regional Screening Levels (RSLs), residential and potable groundwater protection (risk-based) criteria were included only for chemicals where an equivalent MTCA Method B value was not available.
- GroundwaterGroundwater at and near the Site is currently considered potable, until demonstration of non-potable conditions is accepted [per WAC 173-340-720(2)].
- Drinking water maximum contaminant levels (MCLs) were included for both federal and state regulations, and the federal MCL goals (MCLGs) were included for non-carcinogenic (non-zero) values [WAC 173-340-720(4)(b)(i)]. Secondary MCLs were not included.
- The groundwater-to-sediment protection criteria were included. Direct surface water criteria were not applied to groundwater.

Storm Drain Water

- Because storm drain water from the Site discharges to Slip 4 of the LDW, surface water quality criteria were applied.
- A salinity survey conducted in LDW Slip 4 concluded that the Slip qualifies as a marine environment because all three of the daily maximum vertical average salinity measurement exceeded the marine criterion of 10 parts per thousand (AMEC Geomatrix 2011). Thus, for storm drain water, the surface water criteria for marine conditions (not freshwater) were applied. In addition, both chronic and acute conditions were applied, and both aquatic life and human health consumption of fish or other organisms were applied. Human health consumption of water/organism was not applied because the LDW surface water is not considered potable.
- For storm drain water, the NPDES surface water discharge criteria were included, based on the NPDES General Permit parameter benchmark values.
- The groundwater-to-sediment protection criteria using the SMS criteria were included as applying to surface water, but direct groundwater criteria were not applied. Criteria applying to consumption of surface water were not included.

- The TSCA waste water criterion for PCBs was not included because this pertains to decontamination of PCB remediation waste and not to stormwater.

Storm Drain Solids and Surface Debris

- Because surface debris may reach and be transported through the storm drain system at NBF, and storm drain solids may eventually discharge to Slip 4, marine sediment criteria were applied to these two categories of onsite solid materials. This is consistent with past investigations at NBF (SAIC 2007, 2009b, 2010d) and with source control investigations throughout the LDW watershed.
- Sediment criteria presented in the LDW final FS report (AECOM 2012) were applied, including preliminary remediation goals (risk-based threshold concentrations) for risk reduction of human direct contact, benthic organisms, and ecological (river otter) exposures for the key risk drivers (PCBs, arsenic, cPAHs, and dioxins/furans). The exposures for human seafood consumption were not included. Exposure scenario types included netfishing (LDW site-wide) and tribal clamming, but excluded beach play, which is minimal in Slip 4.
- For the other chemicals of concern, which include the ecological/benthic risk drivers, the SMS criteria (dry-weight, not carbon-normalized) were utilized, including the SQS/CSL and the LAET/2LAET values (Windward 2010; AECOM 2012).
- Puget Sound Dredge Disposal Analysis criteria are not utilized in developing screening levels.

Anthropogenic Media

- Because anthropogenic media materials have a potential to reach and be transported through the storm drain system at NBF, and resultant storm drain solids may eventually discharge to Slip 4, sediment criteria were applied to these anthropogenic materials.
- For anthropogenic media materials, the most stringent criteria or background value used for each chemical in storm drain solids and surface debris was multiplied by 10 for dilution effects from anthropogenic sources to downstream storm drains. This order-of-magnitude higher criteria value was utilized as an approximation of the downgradient pathway dilution effect and in recognition that laboratory quantitation limits for many anthropogenic materials are higher than for other media.

6.2.2 Screening Process and Identification of COPCs

The criteria listed in Table 6-2 were utilized in screening Site data for each medium of concern, in order to produce COPCs and develop remedial investigation SLs. Tables 6-3 through 6-10 present project database information for different media and compare (screen) these results to various criteria and to quantitation limits specific to ARI. A flow chart outlining the NBF-GTSP Site SL evaluation and development of COPCs is included as Figure 6-1.

The screening information tables (Tables 6-3 to 6-10) include the following information (left to right):

- A list of chemicals (hazardous substances) that have been analyzed in media throughout the Site and which are included in the project database, categorized by analytical class.
- Frequency of detections for each medium/chemical combination, listed as total numbers of detections per total numbers of analyses.
- The minimum and maximum values of detected concentrations.
- The minimum and maximum values of non-detected concentrations.
- Up to three representative SL criteria (out of a large number available in the Ecology 2012b spreadsheet) are presented for each table; these limited criteria are not necessarily the most stringent SLs, but are among the most commonly cited criteria such as Method B CULs or the SMS criteria.
- The "most stringent screening level" is the lowest value included in this full screening process, using all pertinent criteria for the medium and chemical of interest; the criteria value and reference for each are presented (references are linked to Table 6-2). Pathway evaluation is considered for soil and groundwater, resulting in two sets of most stringent SLs (downgradient pathway leaching or non-leaching for soil, and onsite groundwater or protection of LDW for groundwater, as described below). Unless stated otherwise, further screening in these tables uses the most stringent of these pairs of criteria.
- Where applicable, background concentrations are presented ("natural" or "LDW") for limited chemicals (from Ecology 2012b spreadsheet).
- One or two options for laboratory quantitation limits are presented, including the MDL and PQL; these project/lab-specific quantitation limits are used in lieu of the limits presented in Ecology's spreadsheet (Ecology 2012b). The quantitation limits in Option 2 provide generally lower-level limits than Option 1. The analytical option that was initially selected as part of this screening process is shown as bold values on the tables.
- The "RI Selected Screening Level" represents the result of an evaluative selection process that incorporates the most stringent SLs, the background concentrations, and the quantitation limits, as described below and outlined in Figure 6-1. This value is used to compare to project database analytical information. In this Work Plan, the RI selected screening levels will hereafter be referred to as the "RI screening levels" or RISLs. For soil (Table 6-3), two columns are listed, for non-leaching and for leaching/downgradient pathways.
- The concentration exceedances above the RISLs are presented for exceedances of both detected concentrations (using maximum value in database) and non-detected concentrations (using minimum value in database) for each chemical. The bullets within these two columns designate concentration exceedances of these chemicals. For soil, the bullets are determined relative to the minimum RISL values in the two columns.
- The COPC notes in the far right column indicate if the hazardous substance is considered to be a COPC in this Work Plan, along with some additional information.

The analytical data were extracted from the project database and summarized in order to aid in evaluating the overall range of concentrations, both detected and non-detected, and to provide a high-level comparison to the criteria in the Ecology 2012b spreadsheet. This process allows a relatively rapid screening to take place for a significant amount of data measured from a large number of environmental and anthropogenic media for the entire Site. In order to perform this screening to identify COPCs, some assumptions and mostly conservative measures were taken.

An example of a simplifying assumption involves inclusion of both vadose and saturated soil values in pathway evaluation criteria, so that the lower criteria value (saturated) would potentially be utilized as the final RISL. As the RI proceeds, additional location-specific and depth-specific evaluation may focus these criteria, as appropriate, on the pertinent contaminated soils.

For the soil screening process (Table 6-3), the downgradient pathway analysis, which generally begins with soil leaching, was taken into consideration. This table distinguishes the most stringent criteria that apply to leaching and downgradient pathways versus those that only consider in-situ exposures. Based on empirical information, the leaching/downgradient pathway criteria were only applied to chemicals that have been identified as COPCs in groundwater (Table 6-4) or storm drain water (Table 6-5) at the Site (and marked with a caret in Table 6-3). For other chemicals, the most stringent SLs for soil were the non-leaching criteria. Further evaluation of onsite areas for soil that may be prone to leaching or affecting the storm drain system is discussed in Section 7.1.2.

For the groundwater screening process, Table 6-4 distinguishes the most stringent criteria that apply to LDW downgradient pathways versus those that only consider local onsite exposures. Criteria for the “protection of LDW” were only applied to those chemicals that are considered as COPCs for the LDW and Slip 4 (and marked with an asterisk in Table 6-4). Otherwise, the most stringent SLs for groundwater were the onsite groundwater criteria.

RISLs are used in this Work Plan for the sake of screening chemicals early in the RI/FS process, for identification of COPCs by media, and for determining exceedances and exceedance factors for sample results in Section 7. During the RI and FS phases, cleanup levels will be developed and refined (Sections 8 and 9.1).

6.2.2.1 Screening Level Evaluation

The RISL for each medium/chemical was chosen by a three-step process.

- First, the most stringent SL was compared to the background level (if available), and the higher of these two values was chosen (referred to as the “initial SL” in Figure 6-1).
- Second, this initial SL was then compared to the laboratory PQLs for one or two analytical options. The choice of the two analytical options for quantitation limits depended on the overall number of PQLs in each chemical method class that could meet the initial SL. It is recognized that lower PQLs result in greater analytical cost, additional sample volume requirements, and greater difficulty in maintaining consistent low-concentration data quality. The following decision logic was applied to determine the preferred PQL (not illustrated in Figure 6-1).
    - In general, the least costly MDL/PQL option was selected as the preferred option, provided that the initial SLs in each chemical method class could be met.

  - If the initial SLs in each chemical method class could not be met, an alternative MDL/PQL option, where available, was chosen as the preferred option for all or some of the chemicals within the class.
  - For some highly toxic chemicals (e.g., PAHs, benzene, vinyl chloride), a lower-level analytical option was chosen compared to the remainder of this chemical class, in order to provide the lowest MDL/PQL result possible for these chemicals.
  - Not every initial selected SL can be captured by the lower MDL/PQL option. As such, the MDL/PQL option that best fits the chemical class as a whole was chosen, unless otherwise noted.

- Third, the initial SL was then compared to the preferred laboratory PQL.
  - In cases where the initial SL (most stringent or background) was greater than the preferred PQL, then the initial SL was considered to be the RISL [cf. WAC 173-340-700(6)(d)].
  - In cases where the initial SL was below the preferred PQL, then the lower value of either the preferred PQL or 10 times the MDL was considered to be the RISL [cf. WAC 173-340-707(2)(a)].

6.2.2.2 Identification of COPCs

To identify media-specific COPCs, a number of factors were considered. For storm drain media, surface debris, and anthropogenic media, chemicals of concern in the LDW and Slip 4 were considered COPCs in this Work Plan for cases where the chemicals had not been previously analyzed. LDW/Slip 4 chemicals of concern are noted in Tables 6-5 through 6-10 for storm drain and anthropogenic media (Figure 6-1).

For all other chemical/medium combinations, the RISLs were compared to the maximum detected concentrations and the minimum non-detected concentrations. The maximum concentration was used as a simple and rapid means to identify chemicals with one or more results exceeding the RISLs. Other parameters could have been applied, such as a 90th percentile concentration, but it is unlikely to have made a significant difference in the final outcome.

The comparison to the minimum non-detected concentration was used as a means to identify additional chemicals as COPCs in cases where the non-detected values were higher than RISLs. For cases where the minimum non-detected value was higher than the RISL, the presence of the chemical at the Site was evaluated for other media. The chemical was retained as a COPC if it was identified as a COPC for another medium. The minimum non-detected concentrations were used for this comparison with the assumption that they likely were more representative of the range of non-detected values; the more elevated non-detected values are usually the result of occasional interference or dilution, and these data are less numerous and less representative of the whole. In evaluating these cases of non-detected values, all the chemicals were determined to be not retained as COPCs. For the case of pesticides, no detections have been identified in sample analysis for soil, groundwater, and stormwater at the Site; thus this class is not retained.

The frequency of detection was another factor in selecting COPCs [WAC 173-340-703(2)(f)]. For a given medium/chemical combination, any chemical with a detection frequency less than

5 percent was not initially considered to be a COPC (USEPA 1989). However, due to the possibility of relatively high MDLs or PQLs applied in the past, the minimum non-detected concentration for the medium/chemical was compared to the RISL, as described above. Again, none of these cases were retained as COPCs.

The process of COPC evaluation and determination is outlined in Figure 6-1. The final listing of COPCs at this stage in the RI/FS process is presented in Table 6-11. The COPCs are presented by medium and chemical class. This generally conservative screening process has produced a large number of COPCs, which are summarized in Table 6-12.

6.2.3 Screening for Potential Soil Vapor Intrusion

As stated above, soil vapor contaminants related to potential vapor intrusion to indoor air are screened and handled differently than the other environmental and anthropogenic media. Ecology has developed draft guidance for means of addressing soil vapor and the potential for vapor intrusion (Ecology 2009b). This guidance document establishes a sequential tiered approach to conservatively identify areas for potential vapor intrusion into occupied structures. The early tier approach includes evaluating the following factors: volatile contaminant concentrations in groundwater and/or vadose soil and/or soil gas within 100 feet of regularly occupied buildings, locations of buildings that are presently or potentially regularly occupied, and the potential for future construction of buildings in areas with volatile contaminants in the subsurface. Soil vapor samples have not yet been collected at the Site.

Ecology has decided that for this RI/FS Work Plan, only existing buildings will be considered in this soil vapor intrusion screening evaluation. The vapor intrusion potential for future buildings will be considered at the time of design. In addition, Method B would be utilized in this vapor intrusion evaluation, recognizing that the exposure frequency (residential) for Method B is overly conservative for the NBF-GTSP Site. However, the shallow depth to groundwater throughout the Site (less than 15 feet bgs) adds a non-conservative component to the evaluation, per the guidance (Ecology 2009b). These two factors work in opposed directions, and Method B is thus considered a reasonable use in this case. The guidance document does not permit the use of soil concentrations as inputs to subsurface vapor intrusion models (such as the Johnson & Ettinger model) to calculate indoor air concentrations or resultant human health risk.

The Ecology guidance document utilizes vapor intrusion screening levels based on groundwater concentrations near the building of concern. In this Work Plan, these groundwater-based SLs are applied as an initial screening step to identify chemicals and areas or buildings of concern for vapor intrusion (evaluation is performed in Section 7.1). The guidance document does not specify screening levels for soil, but soil that is proximal to buildings and is contaminated with volatile constituents will require evaluation. In order to make a determination of vapor intrusion potential at the Site, groundwater and soil concentrations were evaluated within 100 feet of existing buildings (onsite or offsite). This evaluation in Section 7.1 is based on significant exceedances to identify areas with significant subsurface contamination that might cause concern for indoor air within regularly occupied buildings.

Vapor intrusion SLs based on groundwater concentrations were first modified from the Ecology guidance, using Equation 1 (Ecology 2009b), due to revisions in MTCA cleanup levels for indoor air. The following table summarizes the information used to calculate revised vapor intrusion SLs for the chemicals that are of concern for this pathway.

Calculation of Vapor Intrusion Screening Levels for Groundwater

Volatile Chemical	Method B Indoor Air Cleanup Level (ug/m^3)	Henry's Law Constant	Calculated Vapor Intrusion SL for Groundwater (ug/L)
Mercury	0.14	0.16	0.85
Benzene	0.32	0.13	2.4
Chloroform	0.11	0.091	1.2
Tetrachloroethene (PCE)	9.6	0.39	24
Trichloroethene (TCE)	0.37	0.24	1.6
Vinyl chloride	0.28	0.82	0.34

Factors involved in calculation of vapor intrusion SLs for groundwater:

- Method B cleanup levels for indoor air from the CLARC database (accessed April 2013)
- Henry's Law constant (unitless) adjusted to 13°C for average groundwater temperature in Washington State (per Ecology 2009b)
- Vapor attenuation factor of 0.001 (unitless, from Ecology 2009b), and unit conversion factor

Following collection of RI soil vapor samples, results will be compared to soil gas screening levels in the Ecology guidance document and/or modeled to calculate indoor air concentrations using the standard Johnson and Ettinger vapor intrusion model (USEPA 2004). Modeled results will be compared to MTCA Method B cleanup levels for indoor air. Subsequent evaluations will follow the tiered approach in Ecology's guidance document.

6.3 Prioritization and Phasing of Investigation Tasks

Due to the large areal extent of the NBF-GTSP Site and the large number of areas of concern and storm drainage areas for environmental contamination and potential sources, it is necessary to prioritize the RI process and phase the activities in order to most effectively achieve the goals of the RI/FS. During the 2009 to 2012 timeframe, the Site PLPs have performed a large number of environmental source-related activities, including interim actions (Table 4-1). Going forward, work that is specifically designated as part of the Site-wide RI/FS will need to be integrated with any PLP plans for interim actions and other types of environmental activities. The RI/FS is expected to run parallel to these activities being performed by the PLPs.

Considering the ongoing activities at the Site, which have been primarily focused on the NBF PEL area, the fenceline/GTSP area, stormwater treatment, and CJM removal, the RI/FS will take a Site-wide viewpoint in approaching and answering the questions and problems raised in DQO Steps 1 and 2 (Sections 6.1.1 and 6.1.2). Although the RI/FS process will likely evolve through time, due to changes in PLP activities and other events, including regulatory determinations, the RI/FS is expected to focus on the following Site aspects:

- A Site-wide evaluation of groundwater contamination and flow, which has not been previously performed. A number of individual investigations have been performed over the years, and some monitoring wells have either been abandoned or sampling has terminated prior to groundwater reaching cleanup levels or other criteria. Boeing continues to monitor groundwater quality on a biannual schedule. In mid-2013, Ecology and the PLPs discussed and began implementation of additional sampling and analysis that are required to comply with the needs of the RI. However, this Work Plan proposes additional locations where groundwater should be monitored (for both quality and flow information) but is not currently.

- An evaluation of the older identified areas of concern, which may have resulted in only partial removal of contaminated soil, but for which incomplete remediation and confirmation were performed. In addition, downgradient groundwater is not being fully evaluated and may be impacted.
- Identification and delineation of contaminant sources and pathways that impact the storm drain system, including anthropogenic sources. Sources and pathways will be addressed, leading to possible future remediation, to protect sediment and water quality in Slip 4 due to the possible future shut down or reduction of the long-term stormwater treatment system, as well as during ongoing large storm events that are only partially treated.
- An evaluation of areas of historical activities that may have resulted in the release of COPCs but which have not been previously investigated.

Section 7 of this RI/FS Work Plan divides the Site into smaller manageable geographic units for investigation purposes and possibly also for remedial alternative development. For anthropogenic and storm drain media, investigation units correspond to stormwater drainage areas and subdrainages because the storm drain system is the primary pathway of concern for those media. For soil and groundwater, areas of concern are defined based on areas of past investigations, source area distribution, groundwater flow direction, and site usage.

Site characterization work conducted in this RI will be performed in part using a phased approach. Timed phasing of work allows more economical operation and leads to greater flexibility in addressing and prioritizing areas of greater concern [WAC 173-340-350(7)(a)]. Phasing of activities allows the extent of contaminated areas to be characterized more efficiently. Because the project analytical laboratory (ARI) is proximal to the Site, and sample results can be obtained relatively rapidly, when necessary, this allows for fairly fast decision-making and phasing to take place, depending on priorities of cost, schedule, and available access. RI scoped sampling activities presented in Section 7 represent the initial primary phase of the RI activities. Depending on results of this primary phase, additional sampling may be recommended to further characterize areas of identified contamination or uncertainty. The sampling phase or phases subsequent to the primary phase cannot be scoped at this time, but it is expected to represent a fraction of the scope for the primary phase. Some of the sampling activities planned for the primary phase may instead be postponed for a future phase, depending on factors such as local access, sampling difficulties, findings from adjacent sampling, and schedule.

A phased approach will assist the process of site characterization and source delineation. In general, within each area of soil characterization, sampling will take place to fill gaps in existing data and will move approximately from areas suspected of highest remaining contamination and work outward. This step-out approach allows for better delineation and understanding of likely locations of most contaminated material, and it aids in prioritizing work around buildings and other structures.

For selected sampling of storm drain solids and surface debris, phased sampling will generally advance using an up-pathway approach, where applicable (and where sampleable volumes are available), beginning near locations with contaminated storm drain solids and/or surface debris, or near previously unsampled locations adjacent to contaminated anthropogenic sources. As explained in Section 7.3.4, the first phase of sampling for this overall storm drain pathway will involve sampling of storm drain solids and surface debris. Storm drain solids will be characterized to update sample data for key storm drain locations; based on a number of decision factors, the sampling will then move up-pathway to the surface debris, where necessary. In the second phase, based again on a number of factors, sampling will move up-pathway to anthropogenic materials, where necessary. This phased approach allows the up-pathway sampling process to be prioritized based on analytical results (or lack thereof), nearby remedial actions, proximity to anthropogenic materials, and other factors.

The analytical suite to be included in sampling events will be phased such that initial testing may include a larger set of COPC analytes at the necessary quantitation limits, followed by a decreasing number of analytes. This decision will be based on the analytical results of the initial sampling event and will be guided by the results summarized in the screening evaluation, above. The lower priority COPCs will be analyzed at a lower frequency and will be terminated early during RI sampling if continued analyses for a given medium identify no or low detections above RISLs (examples include phthalates, PAHs, and dioxins/furans). During subsequent sampling events, the analytical results will be evaluated in order to refine the analyte list and appropriately tailor it for different areas of the Site.

The ultimate goal of the RI approach is to identify or delineate Site source areas and efficiently collect enough information to provide for remedial alternative selection during the FS or for interim actions to properly take place. One of the major goals of contaminant source identification and removal or treatment is to eventually allow stormwater from the Site to flow to Slip 4 without ongoing treatment or with reduced treatment, and to protect the Slip during ongoing storm events when water is only partially treated.

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7.0 Remedial Investigation Tasks

This section of the Work Plan presents information on previously identified areas of concern and potential areas of concern, and makes recommendations for further investigation as part of the RI. This information is presented in more detail than that in Section 4, and it utilizes, as a starting point, the RISLs and COPCs generated in Section 6.

In this section and throughout the Work Plan, the primary focus is on two major categories of potentially contaminated media. These include soil/groundwater/soil vapor and stormwater/anthropogenic media. The various anthropogenic materials constitute potential sources to the storm drain system, which in turn also functions as a pathway to Slip 4. In order to evaluate past information and develop proposed RI activities, Section 7 has been divided into three major subsections that correspond to three general categories of sampling media and previous investigations:

- 7.1 – Soil, groundwater, and soil vapor
- 7.2 – Storm drain system
- 7.3 – Anthropogenic media

Section 7.1 discusses investigations and RI proposed activities for soil, groundwater, and soil vapor related to potential vapor intrusion. Section 7.2 discusses investigations and some proposed activities for storm drain media, including solids and water. Finally, Section 7.3 discusses the various anthropogenic materials that are capable of reaching the storm drain system, and ties the anthropogenic and storm drain media information together. Because these two categories of media are closely related along the storm drain pathway, this section proposes a phased sampling approach for both of them, based on following the up-pathway gradient from the storm drain system to the anthropogenic materials that may be released to this system.

Section 7 utilizes a large percentage of Site analytical information available in documents and databases up through 2012, with an emphasis on more recent data for media that change more rapidly through time, including storm drain media and groundwater. For storm drain solids, data are reviewed only back to 2004 and focus on the last sampling at each structure, and groundwater data are reviewed for the last three years of sampling at each well, although long-term trends are also considered. For soil, which is a more stable medium, virtually all available results since 1986 are evaluated (Section 6.1.4).

Information for recent and ongoing interim actions and investigations have been incorporated, as possible, into this section. The recent interim action activities include the fenceline excavation straddling the NBF-GTSP property boundary, the Building 3-333 excavation, storm drain cleaning and replacement, CJM removal, paint abatement activities, and bioremediation injections for chlorinated solvents in groundwater.

7.1 Soil, Groundwater, and Soil Vapor Investigations

Section 7.1 summarizes available information from investigations conducted at the NBF-GTSP Site, within localized areas of concern. However, the information on groundwater/soil infiltration to the storm drain system is better defined on a Site-wide or drainage area basis; this topic is thus included separately in Section 7.1.1, which provides physical information to be used in later sections. Section 7.1.2 introduces the approach applied to defining areas of concern for soil and groundwater contamination, as well as the potential for soil vapor intrusion, within five major areas of the NBF-GTSP Site. Contaminated or potentially contaminated locations within these five areas are included in Sections 7.1.3 to 7.1.7, which discuss COPC concentrations and exceedances above RISLs. Section 7.1.8 also discusses the Site-wide groundwater monitoring network. Finally, Section 7.1.9 provides a brief summary of RI scoped activities for soil and groundwater, including a summary table of proposed sample information and numbers.

7.1.1 Groundwater Infiltration to the Storm Drain System

A summary of the geologic and hydrogeologic setting for the area of the LDW and the Site is presented in Section 2.2.4. This section indicates that the water-table depth varies at the Site from 1.8 to 11.2 feet below the well casing. As a result, many of the lower portions of storm drain lines and structures at NBF are submerged by groundwater, at least during the wet season. Because the potential for infiltration to the storm drain system impacts the prioritization of groundwater and soil investigations in local areas, this information is included here, prior to discussing areas of concern for contamination of these two media.

Groundwater is known to infiltrate into the storm drain system at the Site and it likely forms the bulk of base flow water. Groundwater in this area contains relatively high amounts of iron; when this water reaches the NBF storm drain system, it is oxidized and acted upon by iron bacteria, producing iron-oxide-rich gelatinous material in the storm drain substrate. This infiltrating groundwater, sampled as baseflow water, is locally contaminated with COPC concentrations elevated above screening levels (Section 7.2). Although data are limited, filtered solids concentrations of PCBs and other COPCs in base flow water of at least the north lateral drainage area increase from upstream to downstream locations. This suggests that groundwater infiltration at NBF is carrying contamination to the storm drain system (SAIC 2012a, 2013).

Figure 2-7 (with Section 2) presents the historical groundwater depth and approximate flow direction for a large number of wells, most of which have been decommissioned. Figure 7.1-1 shows the locations of approximately 80 identified existing wells on the NBF-GTSP Site, which are assumed to be potentially available for monitoring during the RI.

As discussed in Sections 2.2.2 and 7.2, the storm drain system at NBF is divided into six main drainage basins: north lateral, north-central lateral, south-central lateral, south lateral, Building 3-380 area, and the parking lot drainage areas. Video survey inspections of most storm drain lines on the NBF property were performed in 2010 to identify areas with damaged lines or other concerns (Landau 2010f, 2011a). Figures 7.1-2 and 7.1-3 document locations where significant cracks, breaks, or other structural problems were noted by the field technicians. During the video surveys, groundwater and/or soil were observed to be infiltrating through openings into the NBF storm drain system in portions of all drainage basins except for the Building 3-380 drainage area. The majority of identified areas of infiltration were observed in the north lateral drainage area. For each storm drain segment identified in the video inspection reports, a detailed summary of the observations, including identified or suspected infiltration, are included as Table 7.1-1. This table and Figures 7.1-2 and 7.1-3 also delineate storm drain components that have been replaced or repaired between 2007 and 2010.

Many of the breaks, fractures, off-set joints, gaps, and other compromises in the storm drain lines and structures could allow groundwater and soil, which may be contaminated, to infiltrate into the NBF storm drain system (SAIC 2011b). Groundwater at the NBF-GTSP Site is expected to naturally flow slowly toward the LDW, while natural attenuation and other processes act upon any contaminants in the aquifer. However, if groundwater (or soil) infiltrates into the storm drain system, this material bypasses the aquifer pathway and is transported rapidly to Slip 4 and the LDW, recognizing that some of the contaminated material will be removed at the long-term stormwater treatment (LTST) system. Groundwater infiltration could potentially occur when a storm drain line is fully or partially submerged by the water table or other shallow groundwater. In order to determine if storm drain lines are expected to be below the water table at any time, historical measured groundwater elevations during high-water periods were compared to the inside bottom elevations of storm drain lines. Usable Site-wide groundwater elevation data (on a single datum) during high-water conditions are limited for this purpose.

Two sets of data collected during high water-table periods for the Site were evaluated and used to determine groundwater elevations for the submergence determination. One set is from a compilation by Landau (Landau 1990), including water level measurements taken each month for one year on a number of wells located across much of the Site and adjacent offsite, including wells no longer present. The measurement event with the highest elevation of water levels in the Landau report was January 1988, which was used in this analysis. A second set of similarly high-water data from March 1996 were also used to cover much of the Site (with no offsite wells), selected out of five monitoring reports produced by SECOR in 1996. The two sources involved mostly different wells, yet the resultant groundwater contour maps were similar where they overlapped. Using both sources of historical groundwater data, the water table elevations were contoured across the entire Site and surrounding areas (SAIC 2011b).

Figures 7.1-2 and 7.1-3 show locations of storm drain lines on the NBF property that would be partially or fully submerged at high groundwater levels. Specifically, if the identified high water-table elevation reaches the level at the bottom of a storm drain line (based on flow line or invert levels in structures), the line is considered to be potentially submerged at that location. Although some interpretation and approximation are involved, the evaluation of potential infiltration in the NBF storm drain lines is expected to be generally representative of actual high-water conditions at the Site. A listing of which storm drain lines are expected to lie below the water table during high water is included in Table 7.1-1. Those line segments that are submerged or partially submerged are shown in blue on this table.

In some locations, storm drain lines are clearly situated above the highest expected elevation of the water table, but groundwater is seen or suspected to be infiltrating based on the video survey (Table 7.1-1). It is uncertain where this infiltrating water may be derived from, but could be related to perched water, water following the storm drain bedding material, and/or leaking utilities. However, because monitoring wells are not anticipated to be capable of screening and capturing this shallow water above the water table, Section 7.1 does not focus on these locations and they are not represented in figures. The following sections for each drainage area summarize locations of potential infiltration based on submergence of storm drain lines and the video survey observations.

7.1.1.1 North Lateral Drainage Area

GTSP Property

Upstream of NBF, the north lateral main line trends along the northwestern margin of the GTSP property and extends upstream onto King County property (Figures 2-6 and 7.1-2). The main line is submerged beneath the water table in the vicinity of GTSP. In this area, the line contained multiple cracks along the length of the segment and many unknown tap connections (video inspection extended 325 feet upstream of the Buried MH). Suspected groundwater infiltration was identified as a slow “weeper” northwest of the powerhouse (Landau 2010f) (Figure 7.1-2).

Stormwater at the largely unpaved GTSP property permeates the ground surface and does not enter the storm drain system. The roof drainage discharges to the flume replacement storm drain line (Figure 2-1). This new storm drain line is approximately 3 to 6 feet bgs on the property, and it is not considered an infiltration concern.

NBF Property

The maximum depth of any NBF storm drain structure in the north lateral drainage area is 13.5 feet bgs, near the downstream end. The minimum bottom-pipe depth along the north lateral main line is 5.6 feet bgs. Storm drain tributaries (subdrainages) submerged at high water levels are shown in Figure 7.1-2 and listed in Table 7.1-1.

During the 2010 video inspection of the north lateral lines, it was indicated that several structures were in need of repair (Landau 2010f). Of the 107 segments inspected, cracks, fractures, breaks, or other defects were identified in 33 segments; two segments were constructed of vitrified clay (MH158 to MH152 and MH152 to MH130). Signs of soil and groundwater infiltration were confirmed in 10 segments within tributaries N4, N5, N7, N10, and N11. However, N4 and N5 are only marginally submerged by groundwater during high water-table conditions.

Signs of infiltration were observed throughout the majority of N4. Soil infiltration was confirmed in segments CB118A to CB114 and CB114 to MH112, and suspected from downstream of CB120 to CB118A.

In tributary N5, soil and groundwater infiltration was observed in segments CB142B to CB141 and CB141 to MH133D, respectively.

In tributary N7, groundwater infiltration was observed in the following segments: CB146 to UNKMH10, UNKCB23 to MH139, UNKMH9 to UNKCB23, and MH139 to MH138. N7 is submerged in groundwater during periods of high water-table elevation.

Groundwater infiltration was observed in one segment of tributary N10 (CB165 to a blind connection on N1).

In tributary N11, suspected groundwater infiltration was noted near CB193, MH193, and UNKCB19.

The video inspection report (Landau 2010f) identified a total of 83 tap connections in the north lateral storm drain, 27 of these were observed to be plugged or capped. Some of the 56 unplugged tap connections are likely to be active roof and utility drainage lines, and others may be plugged farther upstream. It is not known how many of the tap connections are currently active, and whether some of these may serve as a conduit for contaminated water to the north lateral storm drain.

Following the 2010 video inspection and discovery of compromised storm drain structures, Boeing replaced line segments between former CB184 and CB165B (N10) and from CB174A to CB174 (N11), because these shallow segments represented areas of potential soil and/or groundwater infiltration. Approximately 270 linear feet of storm drain line were replaced with 6-inch and 8-inch PVC, and three new catch basins were installed (Landau 2010j).

7.1.1.2 North-Central Lateral Drainage Area

The maximum depth of both storm drain structures and lines in this drainage area is 12 feet bgs at the downstream end. Storm drain tributaries (subdrainages) submerged at high water levels are shown in Figure 7.1-3 and listed in Table 7.1-1.

Boeing conducted the 2010 video inspection of the SD system in the north-central drainage area after jet cleaning of SD lines (Landau 2011a). Data containing results of the video inspection of portions of lines NC1, NC3, and NC4 were lost. Based on remaining data, signs of significant soil infiltration were confirmed in line NC4 (Vault258 to MH249). Soil samples have not been collected in this area, and groundwater would not impact stormwater because NC4 is never submerged at this location.

In addition, throughout this drainage area, five line segments indicated cracks, fractures, or separated joints but showed no signs of infiltration. Seven tap connections were identified in the north-central lateral storm drain, none of which were observed to be plugged or capped. It is not known how many of the tap connections are currently active, and whether some of these may serve as a conduit for contaminated water to the north-central lateral storm drain.

7.1.1.3 South-Central Lateral Drainage Area

The maximum depth of both storm drain structures and lines in this drainage area is more than 14 feet bgs near the downstream end, with a minimum line depth of 8.4 feet bgs. Storm drain tributaries (subdrainages) submerged at high water levels are shown in Figure 7.1-3 and listed in Table 7.1-1.

During the 2010 video inspection of the south-central drainage area (Landau 2011a), 9 of the 17 line segments inspected indicated signs of soil and/or groundwater infiltration; all were located in the main line (SC1), which is entirely submerged. A large portion of the length of SC1 indicated signs of infiltration, except on segment MH414 to MH413.

In addition, four tap connections were identified in this drainage area, none of which were observed to be plugged or capped. It is not known how many of the tap connections are currently active, and whether some of these may serve as a conduit for contaminated water to the south-central lateral storm drain.

7.1.1.4 South Lateral Drainage Area

The maximum depth of both storm drain structures and lines in this drainage area is 14.4 feet bgs near the downstream end, with a minimum line depth of 7.3 feet bgs. Storm drain tributaries (subdrainages) submerged at high water levels are shown in Figure 7.1-3 and listed in Table 7.1-1.

Eight line segments inspected during the 2010 video inspection of the south lateral drainage area indicated signs of soil or groundwater infiltration (Landau 2011a). Two of these eight segments (MH482 to MH481 and MH281 to MH353) are located in the main line (S1). Compromised segments occur in tributary S6B (MH1314 to UNKMH3 and CB503 to MH501).

In addition, cracks, fractures, or separations were identified in approximately one-third of the line segments inspected in this drainage area. A total of 31 tap connections were identified in this drainage area, and five of these were observed to be plugged or capped. It is not known how many of the tap connections are currently active, and whether some of these may serve as a conduit for contaminated water to the south lateral storm drain. In some areas where the storm drain system has been compromised, the system is submerged in groundwater.

7.1.1.5 Building 3-380 Drainage Area

The maximum depth of both storm drain structures and lines in the Building 3-380 drainage area is 12 feet bgs at the downstream end. The main lateral (B1) upstream to MH105 is submerged at high water levels (Figure 7.1-3, Table 7.1-1).

The 2010 video inspection of storm drain structures in the Building 3-380 drainage area confirmed that one storm drain line segment (CB109C to CB107A) contained minor cracks (Landau 2011a). This segment is shallow and is not submerged by groundwater. All storm drain lines and structures were observed to be free of visible signs of infiltration.

7.1.1.6 Parking Lot Drainage Area

The maximum depth of storm drain components in the parking lot drainage area is 18.2 feet bgs at the KC lift station vault. Only near the lift station is this drainage line submerged by groundwater. Storm drain structures and lines in the parking lot area near Building 3-370 and the tributary in the Building 7-27-1 area are quite shallow; therefore, most of this drainage area is not submerged and not subject to potential infiltration (Figure 7.1-3).

The floor of the lift station vault is submerged (on the outside) by approximately 9 feet of groundwater during high water stage, although the lift station discharge point is above the high water level. The water table in the vicinity of Slip 4 is likely influenced by tidal action and may rise significantly, possibly submerging this storm drain discharge line through much of its length (in addition to tidal flooding inside the line).

The 2010 video inspection of storm drain structures in the parking lot area reported cracks or fractures in the storm drain lines from PL2 (the end of the line segment to D436A) and from PL4 (the end of the line segment to D435B). Intruding roots were observed in a PL2 line segment (D283A to D436A). Although line segments leading to D435B and D436A are not subject to potential groundwater infiltration as discussed above, soil infiltration could occur from D283A to D436A.

7.1.2 Identification of Areas of Concern at Site

Detailed information regarding previously investigated areas identified as potential source areas at the NBF-GTSP Site is contained in the Supplemental Data Gaps Report (SAIC 2009b). Additional environmental information used in this section of the Work Plan is provided in reports completed and made available as of late 2012. Contaminants discussed in this section, and their associated RISLs, are those included in the list of COPCs in Section 6 of this Work Plan (summarized in Table 6-11).

For soil and groundwater investigation descriptions, the NBF-GTSP Site is divided into five major subdivisions or “sub-areas” (Figure 7.1-4), which were defined based on areas of past investigations, source area distribution, groundwater flow direction, and site usage. These sub-areas are distinct from the drainage areas identified for the storm drain and anthropogenic media, which primarily have transport pathways through the storm drain system. The five Site sub-areas for soil/groundwater include the GTSP property and four NBF areas: PEL area, North Flightline area, Central Flightline area, and South Flightline area (Sections 7.1.3 to 7.1.7).

These five Site sub-areas each contain a number of “areas of concern” (or AOCs) (Figure 7.1-4). These AOCs are based on findings of past environmental investigations and largely derived and modified from the synthesis included in the Supplemental Data Gaps Report (SAIC 2009b). The GTSP and PEL areas are each evaluated essentially over the full extent of each sub-area; however, the other three flightline sub-areas are only evaluated with regard to locally identified AOC.

In the sections below, a brief history of investigation is provided for each AOC, along with a review of historical sampling information. Analytical data from sampled media in these areas are compared to RISLs established in Section 6 and evaluated to determine if additional investigations are warranted at each location. Evaluation of historical data includes consideration of the sample age, proximity to receptors or pathways (including the storm drain system), depth, and the possible leaching of soil and the downgradient transport of groundwater.

Soil analytical data from each AOC utilize one of two sets of soil RISLs established in Section 6 (Table 6-3). The majority of AOCs were assigned the more stringent “leaching” set of soil RISLs based on the determination that contaminated soil within the area has the potential to migrate downgradient and possibly impact receptors. Migration may take place via leaching to groundwater and/or by reaching stormwater. Only 12 of the 36 AOCs were assigned the less stringent “non-leaching” set of soil RISLs, because soil leaching and downgradient transport within these areas are not of concern. To reach this conclusion, contaminant levels in soil were compared to contaminant levels in groundwater for each AOC. The leaching RISLs were applied to AOCs where a correlation was observed. The leaching RISLs were also applied where COPC-impacted soil or groundwater samples had the potential to infiltrate into nearby damaged storm drain lines and where these lines were submerged by the water table, at least seasonally (Section 7.1.1). A summary of the downgradient pathway evaluation for each AOC is provided in Table 7.1-2.

Available historical soil data included in the project database were used for comparison to RISLs, and detected exceedances are shown in the numbered tables throughout Section 7.1. Soil analytical data from sample locations where soil was subsequently excavated are included in the 7.1 numbered tables and Appendix B, with a notation indicating their removal; however, figures and summary tables embedded within the text (unnumbered tables) exclude these data derived from removed soil. In Section 7.1 figures, a black dot identifies a location (such as a soil boring) where soil sampling depths were completely removed through excavation. For most AOCs, the unnumbered summary tables present the maximum exceedances of each RISL for the entire AOC for each COPC analyzed in soil and groundwater samples. For each area and COPC, the maximum non-detected result was listed in cases where no detected exceedances were reported (nondetected exceedance factors greater than 1.0 are followed by an -N). Both the concentration and the corresponding exceedance factor (EF) of the RISL for each COPC are presented in these summary tables.

Groundwater analytical data evaluated in this section and shown on figures include only the results originating from the last three years of sampling at each well (most recent sampling date minus 36 months). This time interval was deemed to be appropriately representative of recent groundwater contaminant conditions for most locations, without extending too far back in time when conditions may have been significantly different due to groundwater transport, source removal, and chemical changes (such as resulting from bioattenuation). In some cases, the most recent groundwater sampling event at a given monitoring well was collected a number of years ago, such as for decommissioned wells. In areas with multiple wells, where more recent groundwater samples have been collected from some of these wells, the older data from nearby wells have not been included in the figures of Section 7.1. However, some locations only include older data, and these have been included in figures because they represent the only available groundwater information in that local area. Historical soil and groundwater analytical data that exceed the RISLs are included in Tables 7.1-3 through 7.1-12.

For both soil and groundwater, the figures present exceedances of RISLs based on maximum concentration per COPC at each location (e.g., boring or well). Exceedances above RISLs by chemical are shown for detected cases, and exceedances are listed with both concentration values and exceedance factors. Groundwater and soil exceedances are shown together on figures for each area, in order to evaluate the relationship between these environmental media. Total petroleum hydrocarbons (combined ranges) were not assigned RISLs; however, the EF was calculated using the diesel-range screening level of 2,000 mg/kg for soil and 500 ug/L for groundwater.

As a result of the large amount of sample data and RISL exceedances, it was necessary to highlight the major exceedances by EF, in order to focus additional attention on the more significant areas of contamination. This was accomplished by assigning colors in the figures and unnumbered summary tables to categorize the maximum level of exceedance factor at each location. The EFs are depicted by using a different color for defined interval ranges, created by lumping EF values into stepped categories known as “bins.” The selection of the bin intervals is arbitrary, but they were chosen based on the overall ranges of concentrations for soil and groundwater.

As shown in the table below, the various bin colors range from blue to red, corresponding to higher levels of EFs, increasing by a factor of 5 between colors. In Section 7.1, gray indicates cases where one or more non-detected (ND) results exceed the RISL; blue indicates cases where all results (detected or not) are below the RISL.

Exceedance Factor Color Ranges for Soil and Groundwater

EF Colors	EF Ranges
	ND > 1.0 (all results ND)
	≤ 1.0 (ND or detect)
	> 1.0 – 5.0
	> 5.0 – 25
	> 25 – 125
	> 125

To identify chemicals and areas of significant contamination in the figures and embedded tables for Section 7.1, orange highlight or orange text was applied for cases where the maximum EF for a COPC was greater than 25; similarly, red was applied where the maximum EF was greater than 125. Because petroleum hydrocarbon ranges only have a single applicable criterion (MTCA Method A), and significant exceedances of this criterion could result in the presence of residual saturation in soil or NAPL in groundwater, the Section 7.1 figures also show TPH as bold black text where the maximum EF was greater than 5.0. For further information on figure details, an unnumbered general figure legend is provided before Figure 7.1-1.

The following table summarizes the COPC RISL values for soil and groundwater at the Site.

RI Screening Levels for COPCs in Soil and Groundwater

Chemical Class	Chemical	Soil (mg/kg)*		Groundwater (ug/L)
		Non-Leaching	Leaching	
Polychlorinated Aromatic Compounds	Total PCBs	0.50	0.033	0.044
	Total Dioxins/Furans (TEQ)	11 ng/kg	11 ng/kg	--
Metals	Aluminum	--	--	16,000
	Antimony	--	--	6.0
	Arsenic	7.0	7.0	5.0
	Barium	16,000	83	2,000
	Beryllium	--	--	4.0
	Cadmium	70	1.0	2.6
	Chromium	120,000	120	100
	Copper	3,200	36	120
	Iron	--	--	11,000
	Lead	400	57	11
	Manganese	--	--	2,200
	Mercury	10	0.07	0.020
	Nickel	1,600	38	100
	Selenium	--	--	50
	Silver	400	0.30	1.5
	Thallium	--	--	0.50
	Vanadium	--	--	3.0
	Zinc	24,000	86	33

RI Screening Levels for COPCs in Soil and Groundwater

Chemical Class	Chemical	Soil (mg/kg)*		Groundwater (ug/L)
		Non-Leaching	Leaching	
Petroleum Hydrocarbons	Gasoline-Range Hydrocarbons^	30 or 100	30 or 100	800 or 1,000
	Diesel-Range Hydrocarbons	2,000	2,000	500
	Oil-Range Hydrocarbons	2,000	2,000	--
	Jet Fuel	2,000	2,000	500
SVOCs (Phthalates, PAHs)	Bis(2-ethylhexyl) phthalate	71	0.067	1.0
	Benzo(g,h,i)perylene	--	0.031	--
	Benzo(a)pyrene and Total cPAHs (TEQ)	0.14	0.0094	--
	Fluoranthene	3,200	0.16	--
	2-Methylnaphthalene	320	0.043	18
Volatile Aromatic Hydrocarbons (VAHs)	Benzene	18	0.0010	0.80
VOCs	1,1-Dichloroethene	--	--	7.0
	cis-1,2-Dichloroethene	160	0.0052	16
	1,2-Dichloroethene (mixtures)	720	0.023	72
	Tetrachloroethene (PCE)	480	0.0018	5.0
	Trichloroethene (TCE)	11.5	0.0015	4.0
	Vinyl chloride	--	--	0.20

* "Leaching" refers to downgradient pathway potential via groundwater or surface water. Dioxins/furans RISL is in ng/kg.
^ RISL applies lower value in locations where benzene has been detected in soil or groundwater.
-- Not a COPC

Note that throughout Section 7.1, concentrations of PCBs, dioxins/furans, and cPAHs always refer to total PCBs, total dioxins/furans, and total cPAHs, unless stated otherwise. Total dioxins/furans are expressed as a toxic equivalent (TEQ) concentration for 2,3,7,8-TCDD, using half the non-detect value. Similarly, total cPAHs are expressed as a benzo(a)pyrene TEQ concentration.

A location-specific approach was implemented for screening gasoline in soil and groundwater, per MTCA Method A. For groundwater, the lower gasoline-range RISL applies only if benzene was detected in that same well during the last three years of sampling (or if it was not analyzed). For soil, the lower gasoline-range RISL applies only if benzene was detected in that same sampling location (or if it was not analyzed).

At the beginning of the section for each AOC, a brief statement of the "Rationale for RI Approach" is presented. At the end of each section, a summary of the proposed "RI Scoped Activities" is presented, including a relative priority level. Implementation and schedule for these activities, including phasing and prioritization, will be outlined in detail in the RI SAP/QAPP document to be produced prior to initiation of field work.

The proposed locations for soil and groundwater sampling are presented on the contaminant figures in the following section. Locations are considered approximate and will depend on access, subsurface and surface obstructions, as well as ongoing facility activities and remediation. Identified utilities and other obstructions have generally been taken into account in initial placement of sampling locations within this Work Plan. Unless stated otherwise, soil boring depths are expected to continue to at least the depth of the water table, or to the base of contamination as identified in the field or previous investigations.

As described in Section 6.2.3, Ecology established draft vapor intrusion screening levels (VISLs) for groundwater, to address the concern for volatile constituents in soil and groundwater to intrude into buildings and pose an indoor air health risk to occupants (Ecology 2009b). In the sections below, groundwater and soil data are evaluated to determine the potential for vapor intrusion into buildings at the Site. Groundwater analytical results are screened against VISLs for sample locations within 100 feet of regularly occupied buildings. Soil analytical results were screened against RISLs for volatile constituents (VOCs including benzene, and TPH-gasoline) for sample locations within 100 feet of regularly occupied buildings. Vapor intrusion was identified as a concern for cases with significant exceedances of groundwater VISLs (EF>5) and/or volatile constituents in soil (EF >25). A detailed summary of vapor intrusion screening, with related soil and groundwater data, is presented in Table 7.1-13.

7.1.3 Areas of Concern at GTSP

The GTSP property is situated between the NBF PEL area, the KCIA, and King County maintenance facilities. The former GTSP property previously extended northeastward to what is now the KCIA property (Figure 2-2). For each AOC in this section (Figure 7.1-5), detected analytical results for all RISL exceedances are presented in Table 7.1-3 for soil and Table 7.1-4 for groundwater. Information in this section has been reviewed and summarized for the following potential source areas within the GTSP property:

- North Yard Area
- East Yard Area
- Fuel Tank Area
- South Yard Area and Low-Lying Area

7.1.3.1 North Yard Area

Rationale for RI Approach: Perform additional soil characterization in area of GTSP that has not been previously sampled. Sampling is necessary to confirm that this area is not contaminated by key COPCs.

The North Yard Area (NYA) of the GTSP property is located around the northern end of the powerhouse (Figure 7.1-6). The former Greely substation was located in this AOC, just north of the building (Figure 2-1).

During the 2002 Phase II ESA, six soil samples were collected in the NYA at depths between 0.5 and 1.5 feet bgs. The samples were analyzed for PCBs, which were not detected (Bridgewater Group 2002); however, the detection limits were above the RISL. One soil boring, OST-2, was advanced at the eastern property boundary. One sample was analyzed for petroleum hydrocarbons, which were not detected (Bridgewater Group 2002).

An investigation was conducted in 2008 to assess the potential for PCBs in soil and other media to impact Slip 4. Eleven soil samples were collected in the NYA at depths of 5 feet bgs or less (Figure 7.1-7a). PCBs were not detected in soil (Landau 2008a). Detection limits were below the RISLs.

In September 2011, Ecology published the results of an investigation on the soil concentrations of PAHs and dioxins/furans in several Seattle neighborhoods. Georgetown, the neighborhood adjacent to the northwest boundary of the NBF-GTSP Site, was included in the study. The maximum total dioxins/furans (TEQ) concentration in this study was detected in soil collected from the Georgetown area (115 nanograms per kilogram, ng/kg), while the mean concentration (36 ng/kg) was approximately 1.5 to 5 times greater than that of other Seattle neighborhoods (Ecology 2011a). Total dioxins/furans (TEQ) have been identified on the GTSP property at concentrations up to 141 ng/kg, in the South Yard Area (Section 7.1.3.4).

RI Scoped Activities

Chemical analyses of soil samples have been limited to PCBs and TPH. Most soil samples have been collected at shallow depths of 5 feet bgs or less. Although groundwater samples have not been collected at the NYA, samples have recently been collected on the adjacent KCIA property (Figure 7.1-7b), and one well in the adjacent East Yard Area has been sampled. Only minimal additional soil sampling is needed in this AOC to confirm the presence or absence of the RI COPCs.

One soil boring will be advanced to the depth of the water table in the southwestern portion of the NYA in an area where no samples have been previously collected. At least two soil samples will be collected from the boring for laboratory analysis (“at least” refers to the estimated number, but field conditions could warrant additional samples). One of these samples will be collected from near the surface and one deeper. Soil samples will be analyzed for PCBs and dioxins/furans.

Total dioxins/furans is a COPC for the Site and is included for soil analysis in the NYA. Sampling and testing for dioxins/furans at GTSP are included to determine if there are elevated dioxin concentrations near the surface in areas that have not been excavated, to protect visitors to the museum. Also, elevated dioxins/furans concentrations are found in the Georgetown neighborhood (generally west of GTSP) and in the South Yard Area (southeast of NYA); sampling in the north and East Yard Areas will aid to determine if these are just isolated locations or if they are part of a wider distribution.

The sampling location in the NYA is not directly related to the Greely substation. This location fills a spatial gap in the existing sampling array and is done for purposes of both PCBs and dioxins/furans analyses. Contaminated soils have been identified on three sides of the GTSP property, and areas on the northwest side of the power plant have not been sampled or excavated. In order to determine that these areas are uncontaminated, a minimum of one boring is required.

The proposed sampling location is shown on Figure 7.1-6. Analytical results will be compared to the RISLs to determine if additional investigations are needed in the NYA. The sampling activities in the NYA are considered medium priority for investigation due to the lack of specifically identified sources and some previous sampling data, but with unknown concentrations of dioxins/furans.

Summary of RI Scoped Activities
North Yard Area

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
Soil Boring	1	2	NA	Medium	PCBs, Dioxins/Furans

7.1.3.2 East Yard Area

Rationale for RI Approach: Perform additional soil characterization in area of GTSP that has not been previously sampled. Sampling is necessary to confirm that this AOC is not contaminated by key COPCs.

The GTSP East Yard Area (EYA) encompasses the area east of the powerhouse and adjacent to the KCIA property line (Figure 7.1-6).

During the 2002 Phase II ESA, one soil boring, OST-1, was advanced at the eastern boundary with KCIA. One sample was analyzed for petroleum hydrocarbons, which were not detected (Bridgewater Group 2002).

In 2006, one monitoring well, GTSP-1, was installed on the far eastern margin of the EYA (Figure 7.1-6). Eight soil samples were collected from the surface to 15 feet bgs. Soil samples collected at depths between the ground surface and 4 feet bgs contained cPAHs (Integral 2006c) at concentrations exceeding the RISLs. Groundwater from GTSP-1 was sampled from 2006 to 2007 and again in 2010. Historically, TCE has been detected at low concentrations (approximately 1 ug/L) in groundwater; however, TCE was not detected in the most recent sample collected.

Six soil borings, GTSP08-16 through GTSP08-21, were advanced in 2008 (Figure 7.1-7a). Soil samples were collected between 3 and 5 feet bgs from five borings, and between 0.5 and 2.5 feet bgs in one boring. The samples were analyzed for PCBs only, which were not detected (Landau 2008a). The detection limits were below the RISLs.

In 2010, three soil borings, EYASB01 through EYASB03 (Figure 7.1-6) were advanced around GTSP-1. Metals, PAHs (including cPAHs), TPH, BEHP, benzene, TCE, and dioxins/furans were detected in one or more of the soil samples (Integral Soil Data, 12/7/2010). Concentrations of arsenic and cPAHs exceed the RISLs in samples collected as deep as 5 feet bgs; however, deeper samples were not analyzed for all analytes.

In 2011, KCIA conducted an environmental investigation on the property east and upgradient of well GTSP-1, to determine the upgradient extent of the TCE contamination (Figure 7.1-7b) (URS 2011). The investigation focused on a former large, concrete oil-storage tank, the KCIA maintenance shop, and the former machinery shop, warehouse, and storage yard (Figure 2-2). Ten borings were advanced and three wells were installed in this area and sampled for VOCs, TPH, PAHs, and metals. Low levels of TCE (up to 2.0 ug/L in wells and 0.34 J ug/L in a boring) were identified in groundwater in the area generally upgradient (north-northeast) of GTSP-1. Investigation results indicate that the current and historical operations associated with the property are not sources of low-level TCE concentrations in the EYA and adjacent KCIA. Based on available information, the upgradient extent and source of this TCE at the KCIA remain unknown.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
East Yard Area

Chemical Class	Chemical	Soil (Non-Leaching)		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
Metals	Arsenic	8.0	1.1	NE	NE
PAHs	Benzo(a)pyrene	0.78	5.6	NC	NC
	Total cPAHs	1.0	7.3	NC	NC

EF Exceedance factor NE No exceedance NC Not a COPC
Concentrations of total cPAHs involve TEQ calculation using one-half the non-detection values

RI Scoped Activities

Most soil samples in the EYA have been collected at depths between the ground surface and 5 feet bgs. Chemical analyses performed for soil samples collected at or below the water table have been limited to VOCs and a small suite of SVOCs. Concentrations or detection limits of PAHs exceeded the RISLs in soil above the water table.

One soil boring will be advanced to at least the water table in the EYA, to fill data gaps in this location and based on analyses of previous sampling. The boring will be located near the area of identified exceedances near GTSP-1. At least two soil samples will be collected from the soil boring for laboratory analysis. Soil will be analyzed for PCBs, metals, SVOCs, VOCs, and dioxins/furans. The proposed sampling location is shown on Figure 7.1-6. Analytical results will be compared to the RISLs to determine if additional investigations are needed in the EYA.

Similar to the North Yard Area, the sampling location in the EYA fills a spatial gap in the existing sampling array and is done for purposes of both PCBs and dioxins/furans analyses. Contaminated soils have been identified on three sides of the GTSP property, and areas on the northeast side of the power plant have not been sampled or excavated. In order to determine that these areas are not contaminated, a minimum of one boring is required.

The EYA is considered low priority for investigation. Although the lateral and vertical extent of contamination in soil and groundwater has not been defined, identified COPC exceedances of RISLs are relatively low.

Summary of RI Scoped Activities
East Yard Area

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
Soil Boring	1	2	NA	Low	PCBs, SVOCs, VOCs, Metals, Dioxins/Furans

7.1.3.3 Fuel Tank Area

Rationale for RI Approach: Determine the effectiveness of interim action soil removal near the fuel tanks by evaluating groundwater impacts. Sampling of the new well is required to determine whether petroleum constituents remain in downgradient groundwater.

The Fuel Tank Area (FTA) is located between the powerhouse and the NBF PEL area (Figure 7.1-6). The FTA is the location of three former 12,000-gallon Bunker C oil USTs which were removed in 1989 (Figure 2-2). Currently, the FTA includes an electric transformer and transformer station.

In the fall of 2011, a major excavation was completed in the FTA, removing identified contaminated soil. The following text summarizes the history of findings related to contaminants.

Oil samples from the three 12,000-gallon USTs contained PCBs at concentrations ranging from 7 to 20 parts per million. Soil samples collected in the 1980s at depths ranging from 0 to 1.5 feet bgs and 10 to 10.5 feet bgs did not contain PCBs above the detection limit of 1 mg/kg (Laucks 1980, as cited in Bridgewater Group 2000; Shapiro & Raven 1984). In 2008, PCBs were detected at one soil boring location advanced near the former tank area from a depth of 2 to 4 feet bgs (Figure 7.1-7) (Landau 2008a).

PAHs, TPH, and diesel- and oil-range hydrocarbon concentrations in soil samples collected during the 1989 UST removal activities and the 2002 Phase II ESA exceed the RISLs. Impacted soil was removed at all but one location, FOU-1, due to its proximity to the GTSP powerhouse (Figure 7.1-7).

In summer 2010, five soil borings, one groundwater monitoring well, and three temporary groundwater monitoring wells were installed in the FTA. Gasoline-, diesel-, and oil-range hydrocarbons, benzene, and PAHs (including cPAHs) were detected in soil down to a maximum depth of 12.5 feet bgs at concentrations exceeding RISLs (GTSP 2010 Soil Data). Although petroleum product has been occasionally identified in the new well GTSP-6, most COPCs were not detected in groundwater samples collected from this well or the three temporary wells.

Due to the identified petroleum hydrocarbon contamination in the FTA, an interim action was performed within this area during fall 2011/winter 2012. The excavation within the FTA extended to a maximum depth of approximately 15 feet bgs. The GTSP powerhouse, electrical transformer pad, and the electrical transformer station limited the excavation horizontally. Where accessible, soils containing combined TPH greater than 3,000 mg/kg were removed. Gasoline-range, diesel-range and oil-range hydrocarbons, PAHs (including cPAHs), and PCBs remain at concentrations above the RISL along the GTSP building. Three monitoring wells in this area were abandoned; FTATW03 remains an active monitoring well.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Fuel Tank Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	0.113	3.4	NE	NE
Metals	Copper	131	3.6	NE	NE
Petroleum Hydrocarbons	Gasoline-Range HCID	290	**9.7**	NC	NC
	Diesel-Range	4,200	2.1	NE	NE
	Oil-Range	2,200	1.1	NC	NC
PAHs	Benzo(g,h,i)perylene	0.078	2.5	NC	NC
	Benzo(a)pyrene	0.38	**40**	NC	NC
	Fluoranthene	0.33	2.1	NC	NC
	2-Methylnaphthalene	3.0	**70**	NE	NE
	Total cPAHs	0.52	**56**	NC	NC

EF Exceedance factor NC Not a COPC NE No exceedance HCID Hydrocarbon identification

Current Remedial Actions

In the GTSP groundwater monitoring plan associated with the 2011-2012 interim action (Integral 2012), one well was proposed for sampling in this AOC. Monitoring well GTSP-8 was installed within the FTA near the powerhouse (Figure 7.1-6). At least one year of quarterly groundwater monitoring for petroleum hydrocarbons at GTSP-8 is planned to evaluate the long-term protectiveness of the 2011-2012 interim action excavation (Integral 2012).

RI Scoped Activities

Evaluation of data from the 2011-2012 interim action at GTSP resulted in the decision that no additional soil sampling is proposed at this time, because remaining contamination is well characterized. However, it is recognized that some COPCs remain at elevated concentrations in the FTA near the south corner of the powerhouse, because soil was left in place to maintain the structural integrity of the building. Groundwater monitoring at well GTSP-8 will take place to determine effectiveness of soil removal and any impact on groundwater quality.

Summary of RI Scoped Activities
Fuel Tank Area

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
Existing GW Well (GTSP-8)	1	NA	4	Medium	TPH

7.1.3.4 South Yard Area and Low-Lying Area

Rationale for RI Approach: Determine the effectiveness of the Fenceline Area interim action soil removal by evaluating groundwater impacts. Sampling of two existing wells is necessary to determine whether COPCs remain in downgradient groundwater.

The South Yard Area (SYA) and the Low-Lying Area (LLA) comprise the southern portion of the GTSP property (Figures 7.1-6, 7.1-8, and 7.1-9). Investigations in the SYA and LLA are often overlapping, and thus the two AOCs will be discussed together. A portion of these areas lies immediately along the fenceline with NBF, where numerous samples have been collected. Soil investigations have also taken place on the NBF side of the fenceline, and data from both immediate sides of the fenceline are discussed with the PEL area in Section 7.1.4.1.

The SYA historically included the NBF Smoke Test area, a hopper shed, a coal conveyor, two stacks, cooling water intake equipment, and a portion of the blowdown ditch. Prior to summer 2011, the SYA was largely covered in vegetation and featured a scale model railroad used by museum guests (Figures 7.1-6, 7.1-8, and 7.1-9) (Bridgewater Group 2002).

The LLA is located along the GTSP southern fenceline (Figures 7.1-8 and 7.1-9). This AOC is located along the former Duwamish River shoreline, which was filled with dredged material when the river was straightened (Section 2.2.1). The southwestern portion of the LLA has been referred to as the “pond” because run-off from the SYA and other upslope areas would pool in the LLA via a drainage ditch, which was located along the fenceline of the LLA (Figure 2-2) (SAIC 2009b). In addition, feedwater from the boiler room was transported via the blowdown ditch to the pond, and soot from the boilers was dumped in the vicinity of the LLA (METRO 1983). Overflow from the pond in the LLA was transported to the flume via nearby catch basins. The pond was filled in during March 1984 (Raven 1988).

In late 2011 and early 2012, a major excavation was completed in the SYA and LLA, removing identified contaminated soil. The following text summarizes the earlier history of findings related to contamination.

Four sampling events conducted in 1984 and 1985 confirmed the presence of PCB-contaminated soils in the SYA and LLA (Figure 7.1-10). Samples were collected at the surface and as deep as 10 feet bgs, with higher concentrations within the top 3 feet. Detected PCBs were primarily Aroclor 1242 and 1254, at concentrations up to 91,000 mg/kg (SCL 1984; Raven 1985).

A multi-phase cleanup in the LLA was conducted in October/November 1985 to remove PCB-contaminated soils. An area of approximately 40 by 50 feet was excavated to a depth of 3 to 4 feet, with a goal of removing soil containing over 10 mg/kg PCBs (Figure 7.1-10). Subsequent sampling of the excavated areas indicated that PCB concentrations were reduced to 11 mg/kg or less (which exceeds the RISL). Detected PCBs were primarily Aroclor 1254, except at the easternmost portion of the excavation where Aroclor 1248 was detected (AB Consulting, Inc. 1986). In 1992, soil samples collected from the drainage ditch area indicated the presence of PCBs (SAIC 2009b).

Fifteen soil samples from the SYA and LLA were collected at depths of 1.5 to 9.5 feet bgs during the 2002 Phase II ESA; PCBs and PAHs (including cPAHs) were detected in the samples. Nine metals were detected in soil samples associated with the former blowdown ditch (Bridgewater Group 2002).

A limited soil removal took place in 2006 along the GTSP side of the property line, north of the fence corner, to remove PCB-bearing source material. Approximately 47 cubic yards of soil were removed from behind the retaining wall (Integral 2006b).

A soil and groundwater investigation was performed in the SYA and LLA in 2010. Sixteen soil borings were advanced, groundwater samples were collected from existing wells, and four temporary monitoring wells were installed. Soil samples were collected at depths to 18.5 feet bgs. PCB concentrations above the RISL were detected in 47 percent of the samples collected. The highest PCB concentrations were observed in the soil samples collected from the southwest corner of the LLA at depths between the ground surface and 6.5 feet bgs. PCBs were also detected in groundwater samples collected from this area of the LLA. Total dioxins/furans were identified at a maximum TEQ concentration of 141 ng/kg at a depth of 3.5 feet bgs in the SYA at SYASB01 (soil at this location remains in place). Gasoline-range hydrocarbons were detected above the MTCA Method A cleanup level (CUL) in soil samples collected between 3.5 and 8 feet bgs in the southeast corner. In addition, metals, PAHs (including cPAHs), phenols, phthalates, other SVOCs, and VOCs were detected in soil (Integral 2010b).

The 2011/2012 interim action was conducted to remove PCBs and petroleum sources from the LLA and SYA, while simultaneously addressing other constituents. Excavation of soil in the LLA and SYA range from depths of approximately 0.5 to 9.5 feet bgs. The GTSP powerhouse, electrical transformer pad, and the electrical transformer station limited the excavation horizontally. Eight of the nine monitoring wells in this area were abandoned in order to complete the interim action (Integral 2012). In final confirmation soil samples collected during this interim action, total PCBs were detected exceeding the RISL at five locations in the LLA. Only one sample contained PCBs at an EF greater than 25 (orange).

A focused soil excavation was conducted in the SYA just south of the powerhouse to remove soil impacted by cPAHs at boring SYASB09. This excavation reached a depth of approximately 3.6 feet bgs. Elevated concentrations of total cPAHs remain in soil beyond the excavation limits. Total cPAHs were detected at 0.53 and 0.96 mg/kg (EFs of 57 and 100) in remaining soil at SYASB09 (Figure 7.1-6).

An underground concrete tank and associated structure believed to have been part of the coal conveyance system was discovered along the eastern boundary of GTSP and extending beyond the KCIA blast fence. The structure on the GTSP property was subsequently cleaned, removed to final grade level, and filled with concrete. Solids from inside the tank contained TPH at 915,000 mg/kg, HPAHs at 149 mg/kg, and PCBs at 9.7 mg/kg (Integral 2012). Confirmation soil samples were analyzed for PCBs, PAHs, and TPH, and results did not exceed soil RISLs. An estimated 24 feet of the tank remains east of the blast fence (URS 2012).

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
South Yard Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	0.52	16	NE	NE
Dioxins/Furans	Total Dioxins/Furans	141*	13	NC	NC
Metals	Arsenic	140	20	NE	NE
	Cadmium	3.9	3.9	NE	NE
	Copper	241	6.7	NE	NE
	Lead	186	3.3	NE	NE
	Mercury	3.3	**47**	NE	NE
	Nickel	236	6.2	NE	NE
	Zinc	615	7.2	NE	NE
Petroleum Hydrocarbons	Gasoline-Range	38	1.3	NE	NE
Phthalates	BEHP	0.77	11	1.7	1.7
PAHs	Benzo(g,h,i)perylene	0.44	14	NC	NC
	Benzo(a)pyrene	0.69	**73**	NC	NC
	Fluoranthene	1.3	8.1	NC	NC
	2-Methylnaphthalene	0.79	18	NE	NE
	Total cPAHs	0.96	**100**	NC	NC
VAHs	Benzene	0.016	16	NE	NE
VOCs	PCE	0.003	1.7	NE	NE

* Dioxins/furans (TEQ) result in ng/kg EF Exceedance factor NC Not a COPC NE No exceedance

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Low-Lying Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	5.2	**160**	4.3	**98**
Metals	Arsenic	17	2.4	NE	NE
	Cadmium	5.3	5.3	NE	NE
	Copper	109	3.0	NE	NE
	Mercury	1.38	20	NE	NE
	Zinc	234	2.7	NE	NE
Petroleum Hydrocarbons	Gasoline-Range	1,200	**40**	NE	NE
Phthalates	BEHP	0.21	3.1	NE	NE
PAHs	Benzo(g,h,i)perylene	0.086	2.8	NC	NC
	Benzo(a)pyrene	0.079	8.4	NC	NC
	2-Methylnaphthalene	0.19	4.4	NE	NE
	Total cPAHs	0.11	12	NC	NC
VAHs	Benzene	0.015 U	15-N	NE	NE
VOCs	cis-1,2-DCE	0.0089 U	1.7-N	NE	NE
	PCE	0.032 U	18-N	NE	NE
	TCE	0.041 U	27-N	NE	NE

EF Exceedance factor NC Not a COPC NE No exceedance U Non-detect
-N EF based on non-detect concentration

Current Remedial Actions

In the GTSP groundwater monitoring plan associated with the 2011-2012 interim action (Integral 2012), one well was proposed for sampling in this AOC. Monitoring well GTSP-7 was installed in the southwest corner of the LLA (Figure 7.1-8). At least one year of quarterly groundwater monitoring for PCBs at GTSP-7 is planned to evaluate the long-term protectiveness of the 2011-2012 interim action excavation (Integral 2012).

RI Scoped Activities

Evaluation of data from the 2011-2012 interim action at GTSP resulted in the decision that no additional soil sampling is proposed at this time, because remaining contamination is well characterized or is not readily accessible for further removal. PCBs, cPAHs, gasoline-range hydrocarbons, and mercury remain in soil at elevated levels in the SYA and LLA. Along the GTSP southern fenceline, EFs greater than 25 are observed for PCBs at depths up to 6 feet bgs. Carcinogenic PAHs throughout the SYA remain elevated (EF up to 100) in soil at and above 6 feet bgs. It is recognized that some of this contamination will remain at the Site, as the structural integrity of the powerhouse and blast fence prevents further excavation. Soil at SYA and LLA is well characterized; therefore, no additional soil sampling is proposed at this time.

Groundwater monitoring will take place to determine effectiveness of soil removal, using existing wells. New well, GTSP-7, is currently monitored for PCBs, and chlorinated VOCs will be added to the list of analytes. In addition, GTSP-2 will be added to the quarterly monitoring plan, to be analyzed for metals and SVOCs (Figure 7.1-9). These changes will help evaluate the long-term protectiveness of the 2011-2012 interim action excavation.

Summary of RI Scoped Activities
South Yard Area and Low-Lying Area

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
Existing GW Well (GTSP-2)	1	NA	4	Medium	Metals, SVOCs
Existing GW Well (GTSP-7)	1	NA	4	Medium	PCBs, cVOCs

cVOCs chlorinated VOCs

7.1.4 Areas of Concern in PEL Area of NBF

The PEL area encompasses the northernmost portion of NBF and extends south almost to the blast fence of Apron A. This area extends west to the property formerly occupied by the Washington National Guard. The PEL area is shown in Figure 7.1-11.

For each AOC in this section, detected analytical results for all RISL exceedances are presented in Table 7.1-5 for soil and Table 7.1-6 for groundwater. Information in this section has been reviewed and summarized for the following ten identified potential source areas within the PEL area:

- NBF Fenceline Area
- Building 3-323 Area
- Buildings 3-302 and 3-322 Area
- Former Building 3-304 Area
- Buildings 3-329, 3-333, and 3-335 Area
- Building 3-324 Area (former F&G facility)
- Willow Street Substation Area
- Buildings 3-315 and 3-626 Area
- Building 3-353 Area
- Building 3-354 Area
- Wind Tunnel Area
- Green Hornet Area

PEL area analytical results and historical site data are presented in Figures 7.1-12 through 7.1-47. A summary of RI proposed soil borings, monitoring wells, and soil vapor points in the entire PEL area is presented in Figure 7.1-48.

7.1.4.1 NBF Fenceline Area

Rationale for RI Approach: Determine the effectiveness of the fenceline interim action soil removal by evaluating groundwater impacts. Sampling of three existing wells is necessary to determine whether PCBs and chlorinated VOCs remain in downgradient groundwater, with VOCs potentially affecting vapor intrusion.

The NBF Fenceline Area includes those locations along the western and southern sides of the fenceline separating the NBF and GTSP properties, following the zone defined by Boeing (Landau 2010e).

The NBF Fenceline Area with sample RISL exceedances are depicted on three different figures: Figure 7.1-8 (northwestern portion), Figure 7.1-9 (northeastern), and Figure 7.1-12 (southern). Due to the large number of investigations in the NBF Fenceline Area, this section will be discussed by each investigation in the following subsections. Investigations along the GTSP side of the fenceline are discussed in Section 7.1.3.4.

In the fall of 2011, a major excavation was completed in the NBF Fenceline Area, removing identified contaminated soil. The following text summarizes the history of findings related to contaminants.

Tank UBF-27 Removal (1986)

A 3,000-gallon underground fuel oil storage tank (UBF-27) was located near the northwest corner of Building 3-326 (Figure 7.1-13). The tank was removed in 1986; a sample of fluid from the tank did not contain PCBs. Boeing collected soil samples during the tank excavation. A composite soil sample from the upper 4 feet indicated 40 mg/kg Aroclor 1248, and a sample from beneath the tank at a depth of 8 feet contained 13 mg/kg Aroclor 1248. Approximately 30 cubic yards of PCB-contaminated soil were removed to a depth of 12 feet bgs. Composite samples were collected after excavation at a depth of 12 feet at two locations: 3 feet from Seattle City Light (SCL) property (43 mg/kg Aroclor 1254), and 18 feet from SCL property (15 mg/kg Aroclor 1242/1254) (Boeing 1986a,b,c).

Tank UBF-25 Removal (1989)

In September 1989, Boeing removed UST UBF-25, a 500-gallon gasoline UST located east of Building 3-323 (Figure 7.1-14). The UST was in good condition, and petroleum constituents detected in soil from the excavation were all below MTCA CULs (Hart Crowser 1990b).

Dead Tree Investigation (1990)

Several small juniper trees planted along the NBF-GTSP border died shortly after they were planted in 1989, prompting an environmental investigation. Nine soil borings were advanced along the fenceline and a sample was collected from a nearby catch basin (Figure 7.1-14). Analytical results indicated the presence of TPH in soil at low concentrations that did not appear to contribute to tree death. TPH was detected at a concentration of 3,800 mg/kg in the catch basin sample. Runoff to the catch basin appeared to originate on the SCL property (GTI 1990c).

Oil/Water Separator UBF-55 and Tank UBF-27 Soil Investigation (1997)

This location, southeast of the GTSP fenceline corner, reportedly bordered an old SCL transformer storage area (Figure 7.1-13) (AGI 1998a). The area was formerly bounded by a gas meter and an air-gas dryer area, and is situated between Buildings 3-322, 3-332, and 3-326. SCL conducted a PCB cleanup in fall 1985 in this area, which only included soils on the GTSP side of the fenceline (Boeing 1986b).

In September 1997, AGI Technologies conducted an investigation for the oil/water separator designated as UBF-55 (Figure 7.1-13). This structure, currently identified as OWS-186, was located near the northeast corner of Building 3-322, adjacent to UBF-27, and near the GTSP Low-Lying Area. It is uncertain how long this 5,000-gallon capacity steel oil/water separator had been in place (AGI 1998a; Bach 2009a).

Subsurface soil samples were collected at 18 gridded locations (“P” samples) and analyzed for TPH, PCBs, VOCs, and/or SVOCs. Samples were typically collected from an upper shallow interval (1 to 1.5 feet thick) and a second interval (usually 2 feet thick) directly above the water table at 4 feet bgs (AGI 1998a). Only 4 of the 18 shallow samples were analyzed for PCBs, at locations closest to the oil/water separator. PCB concentrations ranged up to 1,540 mg/kg PCBs (AGI 1998a). The highest concentrations (172 to 1,540 mg/kg) were found at samples located immediately adjacent to UBF-55, at both depths. PCB concentrations above 10 mg/kg were also detected at sample locations closest to the gas meter and GTSP.

Maximum detected gasoline-, diesel-, and motor oil-range concentrations were 150, 1,900, and 550 mg/kg, respectively. Only one sample contained gasoline-range hydrocarbons at a concentration above the MTCA CUL. Four samples were analyzed for VOCs and SVOCs. Two VOCs and four SVOCs were detected (AGI 1998a). Concentrations of petroleum hydrocarbons were low enough that no cleanup actions were identified for these contaminants; however, oil/water separator UBF-55 was closed in place and was removed as part of the summer/fall 2011 remedial excavation on both sides of the NBF-GTSP fenceline.

Soil Investigation along NBF-GTSP Fenceline (2006)

In 2006, a number of soil samples were collected on both sides of the fenceline, very close to the fence along the property line (Figure 7.1-15). Soil samples on the NBF side of the fenceline ("S" samples) generally showed concentrations ranging from 0.7 to 63 mg/kg PCBs, except for sample location S-19 which contained 3,900 mg/kg PCBs (SCL 2006). An interim soil cleanup action was conducted by SCL in May 2006 to prevent PCB-contaminated soil on the GTSP property from migrating offsite. Samples collected at the base of the excavation ("IA" samples) indicated residual PCB contamination at concentrations ranging from 0.08 to 3,800 mg/kg. Approximately 47 cubic yards of PCB-contaminated soil were removed (Integral 2006b).

Soil Investigation during Storm Drain Re-Route (2006 - 2007)

In November 2006, a total of 15 soil samples were collected from 5 soil borings (SLR-1 through SLR-5) along the proposed storm drain reroute in the area between Buildings 3-326 and 3-332 (Figure 7.1-16) (Landau 2007b). PCBs were detected in 8 of the 15 samples, with a maximum of 260 mg/kg (detection limits were approximately equal to the RISL). Petroleum hydrocarbons, VOCs, and metals were sparsely detected at low concentrations in some samples.

In July 2007, during excavation for re-routing this storm drain line, a total of 30 soil samples (NBF-1 to NBF-15) were collected from 15 soil trench locations to a maximum depth of 5 feet (Figure 7.1-16) (Landau 2007d). PCBs were detected in 25 of the 30 samples, extending up to 2,680 mg/kg, with the highest concentration at NBF-15.

PCB Soil Investigation (2007)

As part of a PEL area PCB soil investigation, eight soil borings were drilled in the NBF Fenceline Area in March to April 2007 (Figure 7.1-17). PCBs were detected in six of the eight borings, with the highest PCB concentration of 17.6 mg/kg (EF 530) found in boring SB-30, located between the NBF-GTSP fenceline and Building 3-326.

Soil and Groundwater Investigation (2010)

From July to August 2010, a total of 37 soil borings were sampled along the NBF-GTSP Fenceline Area in an effort to characterize PCB and other COPC impacts in soil (Figure 7.1-18). In most locations, soil was continuously sampled to a maximum depth of 8 feet bgs, and to 15 feet bgs in well borings. All soil samples were analyzed for PCBs; selected samples were analyzed for metals, TPH, SVOCs, and/or VOCs (Landau 2010e). PCBs were detected in 66 of the 153 soil samples, with a maximum of 2,300 mg/kg. Significantly elevated concentrations (greater than 50 mg/kg) were identified in five borings to a depth of 10 feet bgs, located within 20 feet of the fenceline north and northwest of Building 3-326. PCB concentrations above the RISL were identified as deep as 15 feet bgs.

Monitoring wells NGW501 through NGW504 were installed in four of the borings in the general vicinity of the most contaminated area near the fenceline (Figure 7.1-18). Results are discussed in the following section for the 2011 investigation.

Soil and Groundwater Investigation (2010 - 2011)

Three additional wells, NGW505 through NGW507, were installed in January 2011, with soil sampling to 15 feet bgs (Figure 7.1-19) (Landau 2011c). Soil samples in the three borings were all analyzed for PCBs and TPH, and shallow samples for metals. PCBs were detected in 4 of the 24 soil samples, with a maximum of 0.79 mg/kg.

Groundwater samples were collected from wells NGW501 through NGW504 in August 2010, and from NGW505 through NGW507 in January 2011. PCBs were detected in samples from five of the seven wells, with concentrations up to 8.1 ug/L. BEHP also exceeded the RISL in NGW501. No other contaminants exceeded the RISLs.

Fenceline Interim Action Soil Cleanup (2011 - 2012)

Due to the widespread area of identified contamination, primarily concerning PCBs but also other COPCs, an interim action was performed within the NBF-GTSP Fenceline Area during fall 2011/winter 2012 in conjunction with the City of Seattle. Excavation activities involved the removal of soil containing PCBs greater than the Ecology-approved interim action level of 0.5 mg/kg (Landau 2012f). This section reports on cleanup activities performed by Boeing on the NBF portion of the Fenceline Area. Please see Section 7.1.3 for details on the cleanup activities on the GTSP portion of the Fenceline Area.

Approximately 1,420 cubic yards of soil and debris were removed during the 2011-2012 interim action soil excavation. Excavation limits reached depths between 2 and 6 feet bgs for most areas, with localized sections extending deeper to 10 feet bgs (Figure 7.1-20). The objective of the interim action was to remove PCB sources from the NBF-GTSP Fenceline Area while simultaneously addressing other constituents (Landau 2012f).

PCBs were detected in three remaining soil samples within the excavation boundary at concentrations greater than 25 times the RISL. Elevated PCBs ranged from 7.1 to 43 mg/kg (Figure 7.1-8). Mercury remains in soil within the excavation boundary at a concentration slightly above the RISL (EF 1.1). PCBs, cis-1,2-DCE, and TCE are elevated in soil samples outside of the excavation boundary.

The following table summarizes maximum concentrations and exceedances of RISLs for remaining soil and recent groundwater samples in the NBF Fenceline Area.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
NBF Fenceline Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	260	**7,900**	8.1	**180**
Metals	Arsenic	8.0	1.1	--	--
	Mercury	0.23	3.3	--	--
Phthalates	BEHP	NE	NE	7.9 J	7.9
PAHs	Benzo(g,h,i)perylene	0.19 U	6.1-N	NC	NC
	Benzo(a)pyrene	0.19 U	20-N	NC	NC
	Fluoranthene	0.19 U	1.2-N	NC	NC
	2-Methylnaphthalene	0.20	4.7	NE	NE
	Total cPAHs	0.049	5.2	NC	NC
VAHs	Benzene	0.0033	3.3	NE	NE
VOCs	cis-1,2-DCE	0.14	**27**	NE	NE
	PCE	0.0046	2.6	NE	NE
	TCE	0.12	**80**	NE	NE

-- Not analyzed EF Exceedance factor NC Not a COPC NE No exceedance
J Estimated value U Non-detect -N EF based on non-detect concentration

RI Scoped Activities

Evaluation of data from the 2011/2012 Fenceline Area interim action resulted in the decision that no additional soil sampling is proposed at this time, because remaining contamination is well characterized or is not readily accessible for further removal. In particular, PCBs remain in soil at elevated levels (EFs >125) in the vicinity of the former UBF-27 excavation at a depth of 12 feet bgs. Along the storm drain line from CB187A to CB182A (Figure 7.1-8), EFs greater than 25 for PCBs remain in soil shallow depths less than 5 feet bgs. It is recognized that some of this contamination will remain at the Site, as the structural integrity of NBF buildings and storm drain system prevents further excavation.

Electrical transformers were formerly located along or near Building 3-326, potentially carrying and releasing PCB fluid (Landau 2000b). Due to the recent interim action excavation, the number of existing samples in this area, and uncertainty regarding the specific location of these structures, no characterization for this potential source is planned at this location.

Currently, groundwater is monitored for PCBs on a semi-annual basis at three wells within the NBF Fenceline Area. Regular monitoring will continue at NGW521, NGW522, and NGW523, with an increase in frequency to a quarterly basis to determine the effectiveness of soil removal. The addition of chlorinated VOCs to laboratory analyses is recommended for vapor intrusion monitoring described in Section 7.1.4.2.

Summary of RI Scoped Activities
NBF Fenceline Area

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
Existing GW Wells	3	NA	4	High	PCBs, cVOCs

Existing wells include NGW521, NGW522, and NGW523. cVOCs chlorinated VOCs

7.1.4.2 Building 3-323 Area

Rationale for RI Approach: Define the extent of COPC contamination, particularly PCBs and PAHs, in soil and groundwater. Determine the potential for vapor intrusion into Building 3-323, based on soil and groundwater volatile contamination.

The Building 3-323 Area encompasses the northern corner of the PEL area, including Buildings 3-323, 3-324, and former Building 3-325. Soil, groundwater, and soil vapor sample locations in this AOC are shown in Figure 7.1-21.

Surplus test equipment which contained 30 gallons of PCB liquid was temporarily stored at an equipment boneyard near former Building 3-325. A 1985 investigation indicated that PCBs did not leak from the surplus equipment. Boeing records indicate that this piece of equipment was the only one of its kind at NBF and no fluid leaks from the equipment were observed.

Two borings were sampled north of the Building 3-323 Area in May 2004, and analyzed for PCBs and PAHs (Landau 2010c). One sample, OFS-1 at 2.5 feet bgs, identified total cPAHs at 3.7 mg/kg (EF 400).

An environmental investigation along the Georgetown Flume was conducted in 2006. Three soil samples in the Building 3-323 Area were collected and analyzed for PCBs, metals, PAHs, and petroleum hydrocarbons. PCBs were not detected. Carcinogenic PAHs and fluoranthene exceeded RISLs (max EF 15 and 1.3, respectively) in one of the three samples. Transformer oil was observed in two samples at concentrations of 8.1 and 6.6 mg/kg (Herrera 2007).

The flume was removed in 2009 as part of a remedial action to prevent the potential conveyance of contamination to Slip 4. Four confirmation soil samples were collected in the Building 3-323 Area and analyzed for PCBs, PAHs, and petroleum hydrocarbons. Total PCB, diesel-range hydrocarbon, and oil-range hydrocarbon concentrations were low, with exceedance factors ranging from 3 to 7 in soil sample FS2. Carcinogenic PAHs were elevated in one of the four samples (EF 43) (Herrera 2010).

In March and April 2007, a total of seven soil borings were drilled in the Building 3-323 Area (Figure 7.1-17) to investigate areas that may have been impacted by PCBs due to historical activities on the NBF property or adjacent GTSP property. PCBs were detected in samples from three of the seven boring locations, at the shallow depth of 1 to 2 feet bgs (PCB detection limits were approximately equal to the RISL). Detected concentrations ranged up to 1.02 mg/kg PCBs

(EF 31), which was identified in boring SB-17. The three soil borings are in the location of the storm drain line replacement near Building 3-323 (see below) (Landau 2007c).

During storm drain line replacement, one soil sample from each of six locations along the northwest side of Building 3-323 were collected, as shown in Figure 7.1-22 (Landau 2007d). In addition, two shallow groundwater samples were collected in the open excavation trench. PCBs were detected in four of the eight samples collected. PCB concentrations in soil within this area were identified up to 1.89 mg/kg (EF 57), highest in NBF-GB1 at 2 feet bgs (Figure 7.1-21). Petroleum hydrocarbons were also detected in some samples at concentrations below RISLs. One groundwater sample from the trench north of Building 3-323 contained 1.9 ug/L PCBs (EF 43).

A three-phased soil and groundwater investigation was conducted in the PEL area between September 2010 and January 2011 (Figure 7.1-19). During the investigation, 12 soil borings and 4 monitoring wells were advanced in the Building 3-323 Area. Soil samples were analyzed for PCBs, metals, TPH, SVOCs, and VOCs. In soil, PCBs were detected in 13 of the 69 samples collected, primarily at depths of 0 to 2 feet bgs. Only one sample contained PCBs over 1 mg/kg; the highest concentration of 9.2 mg/kg (EF 280) was detected in boring LAI-SB69 (Landau 2011c). PCBs were not detected in groundwater.

Concentrations of metals and PAHs exceeded RISLs in soil samples. Sample LAI-SB70, at Building 3-334, contained an elevated concentration of mercury at 1.04 mg/kg (EF 15). Groundwater samples were also analyzed for VOCs; detected concentrations did not exceed RISLs.

Volatile constituents in soil and groundwater at sample locations within 100 feet of buildings exceed soil RISLs and/or vapor intrusion screening levels (VISLs) for groundwater (Ecology 2009b). Vinyl chloride in groundwater samples west and northwest of Building 3-323 (DW-09 and DW-11) were detected in 2011 at 1.8 and 1.1 ug/L, respectively, corresponding to VISL EF values of 5.3 and 3.2. To the east of Buildings 3-323 and 3-334, at depths less than 4 feet bgs, cis-1,2-DCE and TCE in soil show significant RISL exceedances, at 0.14 and 0.12 mg/kg, respectively, corresponding to RISL EF values of 27 and 80 (Table 7.1-13).

In 2011, the upstream portion of the north lateral storm drain line was rerouted to the LTST system. In the process, three dewatering wells were installed and two stockpile soil samples were collected from the Building 3-323 Area (Figure 7.1-23). Groundwater samples were analyzed for PCBs, metals, TPH, and VOCs. Samples were non-detect for PCBs. Metals, diesel-range hydrocarbons, and VOCs were detected at low levels. Soil samples were analyzed for PCBs, metals, and TPH. Metals, diesel-range hydrocarbons, and oil-range hydrocarbons were detected at low levels (Landau 2012h).

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Building 3-323 Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	9.2	**280**	1.9	**43**
Metals	Copper	157	4.4	--	--
	Mercury	1.04	15	--	--
	Zinc	1,430	17	--	--
PAHs	Benzo(g,h,i)perylene	0.35	11	NC	NC
	Benzo(a)pyrene	2.6	**280**	NC	NC
	Fluoranthene	3.0	19	NC	NC
	2-Methylnaphthalene	23	**530**	--	--
	Total cPAHs	3.7	**400**	NC	NC
VAHs	Benzene	0.024 U	24-N	NE	NE
VOCs	PCE	0.5 U	280-N	NE	NE
	TCE	0.5 U	330-N	NE	NE
	Vinyl chloride	NC	NC	1.8	9.0

-- Not analyzed EF Exceedance factor NC Not a COPC NE No exceedance
J Estimated value U Non-detect -N EF based on non-detect concentration

RI Scoped Activities

The area on the north and northwest sides of Building 3-323 shows significant RISL exceedances. PCBs in at least five shallow (less than 3 feet bgs) soil samples have been measured at concentrations between 0.54 and 9.2 mg/kg. A nearby groundwater sample from a temporary trench also measured PCBs at 1.9 ug/L. Additional soil sampling in this vicinity is warranted because this area is near and upstream of CB173, which has contained elevated concentrations of PCBs, metals, and other COPCs in storm drain solids, with unknown sources. The storm drain lines in this area are also submerged under high water-table conditions.

An adjacent area about 100 feet north of CB173, closer to the fenceline, includes a shallow soil sample (OFS-1 to about 3 feet bgs) with a significantly elevated total cPAH concentration at 3.7 mg/kg, and 2-methylnaphthalene at 23 mg/kg. These areas on the north side of Building 3-323 will be sampled with six shallow borings, extending to approximately 5 feet bgs, and analyzed at two depths for PCBs, PAHs, and metals.

Soil vapor intrusion is a potential concern in the Building 3-323 Area, because concentrations of vinyl chloride, cis-1,2-DCE, and TCE in soil or groundwater exceed RISLs or VISLs at sample locations within 100 feet of buildings (Table 7.1-13). Due to the proximity of samples with elevated levels of VOCs to regularly occupied buildings, two soil vapor monitoring points will be installed near Building 3-323 as shown in Figure 7.1-21. Soil vapor samples will be collected and analyzed for VOCs (method TO-15) for two seasonal monitoring events. A soil sample will also be collected at the vapor point screen depth (approximately 5 feet) and analyzed for VOCs.

Nearby well NGW511 will be added to Boeing's groundwater monitoring plan, and groundwater analyzed for PCBs, TPH, SVOCs, and VOCs. Newly installed wells NGW521, NGW522 and NGW523 in the NBF Fenceline Area are currently sampled for PCBs. The addition of chlorinated VOCs to the analyses is recommended to further characterize vapor intrusion. The four wells should be monitored for four rounds of quarterly sampling. These are considered high priority to evaluate vapor intrusion potential for Building 3-323 and to determine the distribution of PCB-contaminated soils and groundwater in this area that also has relatively high PCB concentrations in storm drain solids.

No additional sampling related to the historical presence of PCB-bearing test equipment stored at former Building 3-325 is proposed. The test equipment was apparently in good condition and no leaks were reported prior to removing the equipment from NBF.

Summary of RI Scoped Activities
Building 3-323 Area

RI Scoped Activity	Total Number of Borings/ Wells/Points	Min Number of Soil Samples per Boring	Min Number of GW/Vapor Samples per Well/Point	Priority	Analyses
Soil Borings	6	2	NA	High	PCBs, PAHs, Metals
Existing Well (NGW511)	1	NA	4	High	PCBs, TPH, SVOCs, VOCs
Soil Vapor Points	2	1	2	High	VOCs

7.1.4.3 Buildings 3-302 and 3-322 Area

Rationale for RI Approach: Define the extent of PCB soil contamination, particularly PCBs. Additional sampling is necessary in previously unsampled area between former excavation margins, to confirm soil is not contaminated.

The area encompassing Buildings 3-302, 3-322, and former Building 3-301 is located in the northeastern portion of the PEL area (Figures 7.1-11 and 7.1-24).

Soil samples were collected from six locations, HA-1 through HA-6, around the perimeter of Building 3-301 in September 1994 (Figure 7.1-25). Prior to building demolition, concentrations of TPH (six locations) and PCBs (two locations) in soil were evaluated (SECOR 1994g). Soil borings were advanced to 3 feet bgs, the anticipated maximum depth required for excavation. TPH and PCBs were not detected in the soil samples; however, the detection limit for PCBs (0.071 mg/kg) exceeded the RISL.

One soil sample (SB08-22) in this AOC was collected during the 2008 Investigation of Potential PCB Sources to Slip 4 (Figure 7.1-26). Soil boring SB08-22 was advanced near the southern corner of Building 3-334, along the boundary with the Building 3-302/3-322 Area (Figure 7.1-24). PCBs were detected at 4.6 mg/kg (EF 140) at 1 to 2 feet bgs (Landau 2008a).

In 2009 and 2010, soil samples were collected from 83 locations (S01 through S83) in the area of Buildings 3-302, 3-322, and former Building 3-301 prior to and during a storm drain system cleanup, surface cleanup, and soil excavation event in 2010 (Figure 7.1-27) (Bach 2009b; Landau 2010a). Soil was sampled from the surface to depths of 2 to 3 feet bgs and analyzed only for PCBs. Samples were collected for purposes of determining removal of soil with PCB concentrations greater than 0.5 mg/kg, and for confirmation sampling. For all samples collected in this investigation, PCBs were detected in 145 of 150 samples (detection limits were approximately equal to the RISL). Concentrations for surface and near-surface soil samples (0 to 0.75 feet bgs) reached a maximum of 140 mg/kg PCBs (EF 4,200) at S24, while deeper soil samples reached only 9.4 mg/kg (EF 280) at S50 and included five non-detected results.

The excavation for this area (in conjunction with surface debris cleaning and asphalt removal and repaving) was limited vertically by the water table, with a maximum depth of 3 feet bgs in the large area between Buildings 3-302 and 3-322 (Figure 7.1-27, east to west from S52 to S81). Other areas were excavated only to 0.5 foot bgs. In the area south of Building 3-302, a layering of geofabric and activated carbon was installed at the bottom of the 3-foot deep excavation and covered by clean fill, to provide treatment of fluctuating groundwater (Landau 2010a).

In July and August 2010, a total of 28 soil samples from 7 soil borings (LAI-SB12, LAI-SB29 through LAI-SB34) (Figure 7.1-18) were advanced as part of the *Focused Soil Investigation* (Landau 2010e). Soil borings were sampled to 8 feet bgs, and all samples were analyzed for PCBs, while additional selected samples were analyzed for metals, TPH, and/or SVOCs. PCBs were detected in 9 of 28 samples, with a maximum of 5.3 mg/kg, highest at LAI-SB30. Metals concentrations were relatively low, with four metals exceeding the RISLs (see table below).

Based on the *Focused Soil Investigation* results, an excavation of PCB-impacted soils in combination with the replacement of a storm drain line was conducted during fall 2010 on the north side of Building 3-302. The excavation was extended below the water table at 4 feet bgs in an attempt to achieve a cleanup level of 0.5 mg/kg total PCBs, although three confirmatory samples indicated concentrations exceeded this level (Figure 7.1-28). A layering of geofabric and activated carbon was also installed at this location. Soil was further removed in the replacement of the storm drain line segment between CB184 and CB165 (Landau 2010j). This action also removed the identified shallow soil containing PCBs at 5.3 mg/kg.

During a PEL area-wide investigation from late 2010 to early 2011, six soil borings (“LAI-SB” locations) and two monitoring wells (NGW509, NGW510) were installed as shown in Figure 7.1-19 (Landau 2011c). Soil borings were sampled to a depth of 6 to 8 feet bgs, and well borings were sampled to 15 feet bgs. These soil and groundwater samples were analyzed for PCBs, TPH, SVOCs, and VOCs; soil was also analyzed for metals. PCBs were detected in 6 of 40 soil samples, with a maximum of 0.54 mg/kg. Metals concentrations were low, with mercury exceeding the RISL at a concentration of 0.43 mg/kg (see table below).

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Buildings 3-302 and 3-322 Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	33	**1,000**	NE	NE
Metals	Copper	38.8	1.1	--	--
	Lead	88	1.5	--	--
	Mercury	0.43	6.1	--	--
	Zinc	156	1.8	--	--

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Buildings 3-302 and 3-322 Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
Petroleum Hydrocarbons	Gasoline-Range	110	1.1	NE	NE
PAHs	Benzo(g,h,i)perylene	0.11 J	3.5	NC	NC
	Benzo(a)pyrene	0.22	23	NC	NC
	Fluoranthene	0.58	3.6	NC	NC
	2-Methylnaphthalene	0.18 U	4.2-N	--	--
	Total cPAHs	0.29	**31**	NC	NC
VAHs	Benzene	0.024 U	24-N	NE	NE

-- Not analyzed EF Exceedance factor NC Not a COPC NE No exceedance
U Non-detect -N EF based on non-detect concentration

RI Scoped Activities

This AOC has been well characterized for PCBs in shallow soil, and areas of contamination have been identified and soil removed to approximately 0.5 mg/kg total PCBs in most areas. However, some areas of significant PCB RISL exceedances remain (Figure 7.1-24, with orange or red EF designations). This includes a zone along the northwest side for Building 3-322, and the area near and north of former Building 3-303. In the latter area, two sample results ranging from 4.6 to 5.3 mg/kg PCBs (EF 140 to 160) are located in remaining soil; however, some of this soil may have been removed during the CB184 storm drain line replacement. Recognizing the relatively elevated concentrations of PCBs in this full AOC, the western portion of this area warrants further soil evaluation due to the lower density of sampling and to confirm that soil exceeding the interim action cleanup levels has been removed. Some metals have also exceeded RISLs, although not at significantly elevated EFs.

The storm drain line in this area is shallow and submerged (at high water); downstream (west) of CB165, the video survey noted multiple pipe fractures and suspected infiltration. The area north of former Building 3-303 contains too many subsurface utilities and obstacles, and cannot be safely sampled (or likely remediated), and some soil removal has already occurred along the storm drain segment near CB167; thus no samples will be collected in this AOC. In the general area east of NGW509, between two former excavations, two shallow soil borings are proposed to fill gaps in the previous sample array and to further sample near remnant PCB contamination (Figure 7.1-24). Two samples will be collected per boring for analysis for PCBs and metals. These are considered medium priority because an interim action removal has recently occurred in the vicinity and the bulk of contaminated soil has been removed.

Summary of RI Scoped Activities
Buildings 3-302 and 3-322 Area

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
Soil Borings	2	2	NA	Medium	PCBs, Metals

7.1.4.4 Former Building 3-304 Area

Rationale for RI Approach: Subsurface utilities and above-ground obstacles prevent further investigation. Remaining soil concentrations are low and no additional RI work is proposed at this time.

Former Building 3-304 was located southwest of the Building 3-302/3-322 Area (Figure 7.1-11 and 7.1-24). Soil in this AOC is not considered a leaching concern for downgradient pathways, and concentrations are therefore compared to less stringent RISLs (Table 6-11).

Between 2000 and 2001, a total of 15 soil samples ("S" and "SS-3304" samples) were collected as part of building pre-demolition and installation of a new utility corridor (Figures 7.1-29) (CDM 2000, 2001). These soil samples were also collected in response to discovery of an abandoned concrete structure at 4 feet bgs, which may have been an oil/water separator. A small soil excavation (10 feet by 15 feet) was performed in the north end of this AOC, to a maximum depth of 5 to 6 feet bgs (depicted in Figures 7.1-24 and 7.1-29). A sheen was observed on the groundwater during excavation of the structure, and soils in the area carried a fuel-like odor. Former Building 3-304 was demolished and a new subsurface utility corridor (trending north-south through center of area) was installed throughout the former building area.

Five soil samples (of the 15) were screened for hydrocarbon identification, and two final confirmation samples (S4 and S5) showed detections. These two samples, collected at about 5 feet bgs, were analyzed for PCBs, metals, TPH, VOCs, and SVOCs. COPCs detected above RISLs include PCBs, arsenic, and gasoline-range hydrocarbons. Concentrations were relatively low, except for gasoline-range hydrocarbons at 1,100 mg/kg (EF 37) at location S5 (Figure 7.1-24). One other soil sample also showed a low concentration of PCBs (EF 3.0) at SS-3304-1 (Figure 7.1-29).

In 2010, samples were collected at five soil borings ("LAI-SB" samples) throughout the Former Building 3-304 Area as part of the *Focused Soil Investigation* as shown in Figure 7.1-19 (Landau 2010e). PCBs were detected in 2 of 20 samples, with a maximum of only 0.036 mg/kg (detection limits were well below the RISL). Concentrations were all relatively low. Groundwater has not been sampled in this AOC.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Former Building 3-304 Area

Chemical Class	Chemical	Soil (Non-Leaching)		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	1.8	3.6	--	--
Metals	Arsenic	11	1.6	--	--
Petroleum Hydrocarbons	Gasoline-Range	1,10	**11**	--	--

-- Not analyzed EF Exceedance factor

RI Scoped Activities

Although an excavation for petroleum contamination was performed in 2001, significant concentrations may remain and this area has not been sampled since the collection of confirmation soil samples S4 and S5 for petroleum constituents. The storm drain line in this area is shallow and submerged (at high water); downstream of CB165, the video survey noted multiple pipe fractures and suspected infiltration. Therefore, additional sampling is warranted in the area surrounding the 2001 excavation. However, a number of subsurface utilities and above-ground structures in this location prevent sampling and would impede potential remediation. As a result, no samples are proposed in this AOC at this time.

7.1.4.5 Buildings 3-329, 3-333, and 3-335 Area

Rationale for RI Approach: Define the extent of significant remaining contamination by PCBs, TPH, and benzene in soil and groundwater between large areas of previous excavations near north end of Building 3-335. Identify downgradient groundwater impacts to determine effectiveness of soil removal. Define the extent of contamination by PCBs and TPH in soil and groundwater near previous sampling southeast and east of Building 3-335. Define the potential source and extent of low-level VOCs contamination identified in groundwater near Building 3-329. Determine the potential for vapor intrusion into the north end of Building 3-335 and east end of Building 3-333, based on soil volatile contamination.

The area of Building 3-329, Building 3-333 (former 3-318 and 3-319), Building 3-335 (former 3-321), and the Fuel Test Facility has been the focus of numerous past environmental investigations (Figures 7.1-11, 7.1-30, 7.1-31, and 7.1-32). The following sections summarize the various investigations and soil removal activities at this AOC.

Building 3-333 Pre-Construction Site Assessments (1994)

In August 1994, a total of 12 soil borings (HA-1 through HA-12), were advanced around Buildings 3-318, 3-319, 3-320, 3-287, and 3-321 to assess soil conditions within the proposed footprint of Building 3-333 (originally planned to cover a larger area) and a proposed utility corridor (utilidor) (Figure 7.1-33) (SECOR 1994d). Soil borings were advanced to the water table, approximately 6.5 feet bgs, and soil samples were analyzed for PCBs and TPH. PCBs were detected in 9 of the 12 borings, ranging from 0.1 to 400 mg/kg, highest in HA-11 (EF 12,000), located near Building 3-287 (adjacent to boring IA3-333-S04 in Figure 7.1-33). Gasoline-range hydrocarbons also ranged from 2,400 to 5,300 mg/kg (EF 80 to 180) and diesel-range from 150 to 3,900 mg/kg (EF <1.0 to 2.0), again highest in HA-11. Contaminated soil at HA-11 was excavated in 2011.

In November and December 1994, a total of 22 borings (SB-1 through SB-22) were drilled to 8.5 feet bgs (Figure 7.1-34) (SECOR 1995). Soil samples were analyzed for PCBs and TPH, and two samples were analyzed also for VOCs (SB-20 and SB-21). One monitoring well was installed at 15 feet bgs and sampled (MW-1, later labeled NGW151). Groundwater samples were collected in December 1994 and January 1995 and analyzed for TPH, BTEX, and PCBs.

In the Phase I construction area, which included Buildings 3-318/3-319 and the corridor immediately to the southeast, PCBs were analyzed in soil samples, with concentrations reaching up to 3 mg/kg, highest at SB-11 at 2 feet bgs (Figure 7.1-34). In the Phase II construction area, which included Buildings 3-320/3-287 and 3-321, gasoline- and diesel-range hydrocarbons in soil exceeded RISLs (MTCA Method A CULs) only in well boring MW-1 to at least 6 feet bgs; concentrations are elevated up to 12,000 mg/kg for gasoline-range and diesel-range hydrocarbons (using hydrocarbon identification, HCID, analytical method). PCBs in soil also were elevated, with concentrations up to 510 mg/kg at MW-1 (this well/boring was later renamed NGW151). Samples from six other borings in this area contained PCBs at 1.0 mg/kg or greater. Highest concentrations were found near MW-1 and along the northwest side of former Building 3-319 (SECOR 1995).

Oil/Water Separator Remedial Excavation (1996)

During preparations for Phase I construction of Building 3-333, Boeing conducted a remedial action at this area to remove a stormwater oil/water separator located at the southwest corner of the fuel test slab (Figure 7.1-34). In March 1996, approximately 200 cubic yards of soil were removed around the oil/water separator to a depth of approximately 5 feet, just below the water table (Boeing 1996).

A total of 18 soil samples (“S” samples) were collected (SECOR 1996a). Soils within the remediation area (collected from the sides of the excavation) contained gasoline-, and diesel-range hydrocarbons at concentrations up to 4,700 and 9,900 mg/kg (EFs 160 and 5.0), respectively (both in boring S-12). TPH-impacted soil at concentrations above MTCA Method A soil CULs remained in place along the north, south, and east sides of the excavation at the water table (SECOR 1996a). Five samples of stockpiled excavation soil were analyzed for PCBs, which were all detected at concentrations up to 1.6 mg/kg (SECOR 1996a; Boeing 1996). (Note that stockpile sample results do not have original coordinates and are not included in tables or figures in this Work Plan.)

Building 3-333 Phase I Construction Interim Remedial Actions (1996)

During Phase I construction in September 1996, PCB-contaminated soil was encountered in the excavation for the north wing of Building 3-333 (Figure 7.1-32) (Equipoise 1997). A total of 22 soil samples (3-333-1 through 3-333-22) were initially collected from the bottom of the excavation, typically to depths of 4.5 feet bgs, and PCBs were found at concentrations up to 84 mg/kg. The soil samples were also analyzed for VOCs, with relatively low detections except for TCE at 0.22 mg/kg (EF 150) in boring 3-333-19 at 4 feet bgs. A total of 17 additional soil samples (locations 3-333-23 through 3-333-31) were collected in the northern end of the excavation to better delineate PCB contamination, reaching as deep as 6.5 feet bgs. Additional deeper soil removal took place near location 3-333-23, locally extending to approximately 6.5 feet bgs. Based on sample descriptions, at least two locations (3-333-24 and 3-333-30) contain remnant PCB-impacted soil ranging from 0.75 to 10 mg/kg (EF up to 300). The lateral extent of contamination to the northwest of this area was not evaluated.

Building 3-333 (3-287 and 3-321) Phase II Construction Site Assessments (1997)

Prior to Phase II construction for the planned west wing of Building 3-333 in 1998 (Boeing 1998a), a supplemental investigation was conducted to define the extent of contamination at the location of former Buildings 3-287 and 3-321 (AGI 1997). Subsurface soil samples were collected from 29 locations (P1 through P29; Figure 7.1-31) and analyzed for TPH and PCBs. In general, the highest TPH and PCB concentrations were localized in the area between Buildings 3-287 and 3-321, in the vicinity of MW-1. Maximum TPH concentrations were 7,800 mg/kg and 7,900 mg/kg (EFs 260 and 4.0) for gasoline-range and diesel-range, respectively. The maximum PCB concentration of 1,600 mg/kg (EF 48,000) was detected in a boring (P16) located close to MW-1.

Excavation was conducted during August and September 1997, to remove soils between and partially including Buildings 3-287 and 3-321. This now corresponds to the area at the north end of Building 3-335 and the area northwest of the building (depicted in Figure 7.1-31). Removal targeted soils with concentrations exceeding MTCA Method A industrial CULs to the depth of the water table. A total of 62 characterization samples were analyzed for PCBs and 40 samples for TPH (AGI 1998b). In addition, 23 confirmation samples were analyzed for PCBs and 25 samples for TPH.

Confirmation sample results (after excavation) indicated that elevated PCB concentrations remained on the east wall (to 51 mg/kg) and on the bottom of the main excavation below the water table (up to 380 mg/kg, EF 12,000). Residual PCB concentrations in other locations are elevated up to a maximum of 6.3 mg/kg (bottom of excavation) and to 3.2 mg/kg (trough drain under Building 3-320) (AGI 1998b). Elevated TPH concentrations were found in these same locations: gasoline-range to 1,200 mg/kg and diesel-range to 4,300 mg/kg (EFs 40 and 2.2). MW-1 was abandoned in the excavation; no further action was taken.

Building 3-335 Soil Investigation and Removal (1998)

Contaminated soil was encountered during construction of Building 3-335 in 1998, and a site investigation was then performed. A total of 13 test pits were excavated in and around the footprint for Building 3-335 and toward Building 3-333 (Figure 7.1-35). Approximately 24 cubic yards of soil were excavated from the northeast portion of Building 3-335 and utility corridors between Buildings 3-333 and 3-335. Boeing excavated four additional test pits in the building footprint and collected soil samples. PCBs, three metals, and gasoline-range hydrocarbons were detected at levels above RISLs in these soil samples. PCB concentrations ranged from 0.25 to 7.7 mg/kg (AGI 1999).

PCB Soil Investigation (2007)

As part of a PEL area PCB soil investigation, several soil borings were drilled near Buildings 3-333 and 3-335 in March to April 2007 (Figure 7.1-17). The highest PCB concentration of 133 mg/kg (EF 4,000) was found in boring SB-36, located between the two buildings.

Soil and Catch Basin Investigation (2008)

In November 2008, two soil borings, NBF-SD31 and NBF-SD32 were advanced to the east of Building 3-333 (Figure 7.1-26). Two soil samples were collected from each boring. PCBs were not detected in the soil samples (Landau 2008b). A soil boring sample collected between Buildings 3-335 and 3-333 (SB08-36 at 5 to 6 feet bgs) identified PCBs at 270 mg/kg (EF 8,200) (Landau 2008a).

Soil and Groundwater Investigation (2010 to 2011)

As part of a PEL area-wide investigation, in September 2010, 11 soil borings (“LAI-SB” locations) were advanced to a depth of 8 feet bgs throughout the Buildings 3-329, 3-333, and 3-335 Area (Figures 7.1-31, 7.1-32, and 7.1-33). In January 2011, monitoring wells NGW513, NGW515, NGW517, and NGW518 were installed in this AOC (and NGW516 immediately adjacent), to a depth of 15 feet bgs (Figure 7.1-19). These soil and groundwater samples were analyzed for PCBs, TPH, SVOCs, and VOCs; soil was also analyzed for metals. PCBs were detected in 29 of 79 soil samples, with a maximum of 140 mg/kg PCBs (EF 4,200). The area most contaminated with PCBs is within the outline of soil removal conducted between Buildings 3-333 and 3-335. Samples from three borings within or on the south side of this excavation area (NGW516, NGW517, and LAI-SB60) contained benzene in soil at concentrations of 0.15 to 0.31 mg/kg (EF 150 to 310).

The PCB concentration in a January 2011 groundwater sample from NGW517 was 20.8 ug/L. This well is located in the middle of a PCB-contaminated soil zone. Because this new well yielded a turbid groundwater sample and may not have been developed properly, it was later redeveloped and resampled. The second groundwater sample, collected in March 2011, produced a significantly lower concentration of 0.76 ug/L PCBs (EF 17). This well is located near former well MW-1, and is in the middle of the area where Boeing performed an interim action excavation in fall 2011. Another well, NGW515, located near the fuel test slab area, contains PCBs at 0.34 ug/L (EF 7.8).

A few of these newly installed wells contain relatively low levels of VOCs. Most significant is NGW518, located southwest of Building 3-333. Concentrations for a sample collected in January 2011 include PCE at 5.8 ug/L (EF 1.2) and vinyl chloride at 0.70 ug/L (EF 3.5). A sample from a temporary dewatering well, DW-08 near Building 3-329, also detected PCE at 18 ug/L (EF 3.6) in 2011. The source of these chlorinated VOCs is unknown.

Building 3-333 Soil Excavation (2011)

The excavation of soil in the area southwest of Building 3-333 was conducted in October 2011 to remove accessible PCB-contaminated soil identified in historical samples and in the 2010–2011 PEL area-wide soil and groundwater investigation (Figure 7.1-36). The northern excavation was completed to approximately 8 feet bgs, and the southern excavation to approximately 8 to 9 feet bgs. Underground utilities prevented excavation past 4 feet bgs in some areas of both excavations (Landau 2012e).

Approximately 200 cubic yards of soil were removed from the two excavations. In general, low levels of PCBs remain in soil (0.032 to 0.095 mg/kg) at depths of 5 to 9 feet bgs. At abandoned well NGW517, PCBs are elevated up to 8.2 mg/kg (EF 250) in soil remaining at depths greater than 10 feet bgs. Further excavation in this area was not possible due to the depth of the water table and to proximity of the Building 3-335. Underground utilities also prevented further excavation of soil impacted by gasoline-range hydrocarbons at 490 mg/kg (EF 16) at location IA3-333-S19.

Outside of the 2011 excavation boundary, elevated levels of PCBs remain in soil beneath Buildings 3-333 and 3-335, at monitoring wells NGW515 and NGW516, and on the northeast side of Building 3-333. Maximum concentration is at the north end of Building 3-335 in boring P18 at 280 mg/kg (EF 8,500). Gasoline-range hydrocarbon concentrations are elevated in soil remaining beneath Building 3-335 (up to 7,800 mg/kg or EF 260, at P18) and between Buildings 3-333 and 3-335.

For vapor intrusion concerns, volatile constituents in soil at sample locations within 100 feet of buildings significantly exceed soil RISLs (Table 7.1-13). Beneath or within 100 feet of the northwestern end of Building 3-335 and the southeastern end of Building 3-333, at depths above and below the water table, gasoline-range hydrocarbons in soil show significant RISL exceedances, up to 7,800 mg/kg (EF 260). Benzene was also elevated up to 0.31 mg/kg (EF 310) in a soil sample at 4 feet bgs from LAI-SB60, which is located approximately 20 feet from the northwest corner of Building 3-335.

Shallow soil samples within the footprint of Building 3-333 were analyzed for VOCs, but not TPH. A TCE concentration of 0.22 mg/kg in soil sample 3-333-19, located beneath the northern end of the building, has a RISL EF of 150. Although groundwater sampled in 2011 from a nearby well (NGW513) detected vinyl chloride, soil at NGW513 was not analyzed for chlorinated VOCs.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Buildings 3-329, 3-333, and 3-335 Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	280	**8,500**	0.76	17
Metals	Barium	98.5	1.2	--	--
	Mercury	0.090	1.3	--	--
	Zinc	121	1.4	--	--
Petroleum Hydrocarbons	Gasoline-Range	7,800	**260**	1,500	1.5
	Diesel-Range	9,900	5.0	NE	NE
	Total Petroleum Hydrocarbons	14,000	**7.0**	--	--

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Buildings 3-329, 3-333, and 3-335 Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PAHs	Benzo(g,h,i)perylene	0.37 U	12-N	NC	NC
	Benzo(a)pyrene	0.063	6.7	NC	NC
	Fluoranthene	1.8 U	11-N	NC	NC
	2-Methylnaphthalene	0.081	1.9	--	--
	Total cPAHs	0.085	9.1	NC	NC
VAHs	Benzene	0.31	**310**	NE	NE
VOCs	cis-1,2-DCE	0.14 U	27-N	NE	NE
	PCE	0.01 U	5.6-N	18	3.6
	TCE	0.221	**150**	NE	NE
	Vinyl chloride	NC	NC	0.9	4.5

-- Not analyzed EF Exceedance factor NC Not a COPC NE No exceedance
U Non-detect -N EF based on non-detect concentration

RI Scoped Activities

Past investigations indicate the remaining presence of PCB and petroleum hydrocarbon-impacted soil under and near the northern end of Building 3-335, and extending toward the fuel test slab. The extent of this zone of contamination has largely been identified, although the area between the 2011 excavations and the former “G” slab (Figure 7.1-31) presents a spatial data gap. The storm drain line to the northeast of the Building 3-335 is submerged during periods of high water-table elevation. During the 2010–2011 storm drain line video inspection, infiltration was suspected in this section of the line (Figure 7.1-2). Further investigation is needed to delineate contaminants in soil to the northwest of the building and to characterize groundwater and soil between the area of the 1996 and 1997 excavations. Two soil borings will be advanced in this area, to a depth of approximately 8 feet, and one monitoring well will be installed in the eastern boring. Two samples are anticipated from each boring to be analyzed for PCBs, TPH, and VOCs. At least four groundwater samples will be collected from the new well and analyzed for PCBs, TPH, and VOCs. Care will be taken to place the borings between the storm drain lines and other utilities. This activity is considered medium priority, because nearby PCB-contaminated soil was largely removed during recent excavations.

Past investigations indicate the presence of moderately elevated PCBs in soil between the southeastern corner of Building 3-335 and the fuel test slab area. Maximum concentrations of PCBs in borings include 0.79 mg/kg (LAI-SB103 at 0 to 2 feet bgs) and 2.2 mg/kg (EF 67) (NGW515 at 2 to 4 feet bgs, and 1.4 mg/kg at 4 to 6 feet bgs). In groundwater at NGW515, PCBs have been measured at a concentration of 0.34 ug/L (EF 7.8). Furthermore, this location is adjacent to three storm drain segments that are submerged at high water levels, and video surveys reveal pipe problems and suspected infiltration in the main lateral downstream of this location. Thus, additional soil sampling in this area is warranted.

Characterization will include three soil borings to be advanced to approximately 8 feet bgs in the area between Building 3-335 and the south end of the fuel test slab. An estimated two samples will be collected from each boring and analyzed for PCBs, TPH, and VOCs. The existing well NGW515 will also be sampled for these analytes in addition to metals for four rounds of quarterly monitoring events. Soil sampling in this area is considered medium priority due to the moderately elevated PCB concentrations in soil and groundwater samples, and the proximity to submerged and/or damaged storm drain lines. Groundwater sampling of NGW514, NGW516, and NGW520 is part of the Site-wide groundwater investigation, which is considered high priority (Section 7.1.8).

The alleyway between the fuel test slab and Building 3-626 includes three sample locations with exceedances of gasoline-range hydrocarbons and PCBs in soil, as well as gasoline and vinyl chloride in groundwater. Two borings will be placed within this alley on either side of the existing sample locations, and sampled for an estimated two samples per boring, tested for TPH and PCBs.

Although significant contamination appears to remain in the area near the north end of Building 3-335, several soil excavations have previously taken place and further assessment or excavation is not practicable given the buildings, utilities, and other structures that are currently present. Also, a new building, 3-336, has recently been constructed immediately east of Building 3-335. Similarly, the area near the northeastern portion of Building 3-333 poses significant difficulty to subsurface access, and recent stockpile composite sampling for placement of the King County bypass line suggests that soil in this area is not contaminated. Thus, proposed characterization is limited in this area, but the historical data and some new RI data will allow the nature and extent of contamination to be identified in the RI report and evaluated in the FS.

In the area east of Building 3-329, low concentrations of chlorinated VOCs have been detected in groundwater wells (DW-08 and NGW518, both abandoned). An upgradient well along the fenceline and a downgradient well will be installed to determine the source and extent of VOC contamination. Groundwater will be analyzed for VOCs, and soil samples will be analyzed for VOCs and PCBs.

To address concerns for the potential of vapor intrusion at occupied buildings, three soil vapor monitoring points will be installed in this AOC. Two vapor monitoring points will be installed near Building 3-335, at the northwest and northeast corners of the building, based on elevated benzene and gasoline-range hydrocarbon concentrations in this area. The third soil vapor monitoring point will be installed east of Building 3-333 near NGW513, to evaluate the potential for TCE and other chlorinated VOCs to intrude the building. Proposed vapor point locations are presented in Figures 7.1-31 and 7.1-32. Soil vapor samples will be collected and analyzed for VOCs for two seasonal monitoring events. A soil sample will also be collected at the vapor point screen depth (approximately 5 feet) and analyzed for TPH and VOCs.

Summary of RI Scoped Activities
Buildings 3-329, 3-333, and 3-335 Area

RI Scoped Activity	Total Number of Borings/ Wells/Points	Min Number of Soil Samples per Boring	Min Number of GW/Vapor Samples per Well/Point	Priority	Analyses
Soil Borings	6	2	NA	Medium	PCBs, Metals, TPH, VOCs
New GW Wells	3	2	4	High	PCBs, TPH
Existing GW Wells	4	NA	4	High	PCBs, Metals, TPH, SVOCs, VOCs
Soil Vapor Points	3	1	2	High	TPH, VOCs (soil) VOCs (vapor)

Existing wells include NGW514, NGW515, NGW516, and NGW520.

7.1.4.6 Building 3-324 Area (Former F&G Facility)

Rationale for RI Approach: Confirm the presence or absence of COPCs in soil and groundwater near former excavations and near previous samples with elevated levels of COPCs. Determine the potential for vapor intrusion into the north end of Building 3-324, based on soil volatile contamination.

The former F&G Facility was located between Buildings 3-324 and 3-335, and overlapping with the former (Figures 7.1-11 and 7.1-37). Eight jet fuel USTs, identified as UBF-10 through UBF-17, were located at this facility. Underground storage tanks UBF-10 through UBF-13 were situated on the “F” slab at the south end of the facility (Figure 7.1-38); UBF-14 through UBF-17 were on the “G” slab at the north end of the facility (SEACOR 1994a). In 1994, the USTs were removed prior to construction of Building 3-324.

In 1985, hydrocarbon-contaminated soil adjacent to the USTs was encountered. Seven monitoring wells (FG-5 through FG-11) were installed around slabs F and G in 1986 (Figure 7.1-38). One soil sample was collected from each well boring for analysis. Soil samples collected from the borings were analyzed for TPH and jet fuel. Detections of TPH ranged from 46 to 500 mg/kg (below RISLs), and jet fuel was not detected. Jet fuel and TPH were detected in groundwater (Landau 1986b).

In 1991, two of four USTs at slab G (UBF-14 and UBF-15) failed a leak test. The tanks were emptied and groundwater in the vicinity was sampled; no contamination was detected (Boeing 1992c).

Wells FG-5 to FG-11 were monitored on a quarterly basis from 1991 to 1994. An additional monitoring well (FG-MW1) was installed downgradient of FG-11 in 1993. Historical groundwater data indicate concentrations of diesel-range hydrocarbons in wells FG-5 and FG-11 and jet fuel in wells FG-6 and FG-7 exceeded the RISLs. Jet fuel analysis was performed for samples collected during the initial groundwater sampling event only. The four most recent sampling events (July 1993 to April 1994) for FG-5 and FG-11 presented varying results for diesel-range hydrocarbons. Samples from FG-5 and FG-11 in 1993 indicated the highest historical levels of diesel-range hydrocarbons, at concentrations exceeding the RISLs. In 1994, diesel-range hydrocarbons were not detected or were below MTCA Method A CULs in both wells. The monitoring wells were abandoned in 1994 during UST removal and building construction activities.

In 1993, a site assessment investigation was performed prior to beginning construction of Building 3-324. A total of 29 soil samples were collected from 16 soil borings (SB1 through SB16), ranging from 4 to 9 feet in depth. Petroleum hydrocarbon-impacted soil was identified at three locations at depth: on the east side of the investigation area, between the “F” and “G” slabs, and on the south side of the “F” slab (south of UBF-13) (Figure 7.1-38). The majority of the contaminated soil was removed during UST removal activities in 1994.

In May/June 1994, the eight USTs and associated piping were removed (SECOR 1994e). A total of 44 soil samples were collected, including 37 samples from the excavation and 7 stockpile soil samples (Figure 7.1-38). Samples from the final excavation limits for both the “F” and “G” tank areas were analyzed for TPH; stockpile soil samples were also analyzed for BTEX and PCBs. Laboratory results indicated that PCBs were detected at elevated concentrations in four of the stockpile samples; benzene and TPH were either not detected or detected below the RISLs. Approximately 375 cubic yards of soil were excavated during the UST removal event. Ecology’s LUST database reports the release as cleaned up at this location in June 1995.

In 2006, an environment investigation was conducted along the Georgetown Flume. Three soil samples in the Building 3-324 Area were collected and analyzed for PCBs, PAHs, metals, and petroleum hydrocarbons. Soil sampling results indicated that selected PAHs were detected at elevated concentrations in two samples. PCBs, metals, and petroleum hydrocarbons were non-detect or detected below RISLs (Herrera 2007).

The flume was removed in 2009 as part of a remedial action to prevent the potential conveyance of contamination to Slip 4. Three soil samples were collected in the Building 3-324 Area and analyzed for PCBs, PAHs, and petroleum hydrocarbons. Only cPAHs were detected; concentrations were above the RISL at one sample (EF 14) (Herrera 2010). Soil along the former flume, include soil at locations from the 2006 and 2009 investigations were removed.

In 2010 and 2011, eight soil borings were advanced in the Building 3-324 Area (“LAI-SB” and “NGW” locations) (Figure 7.1-37). Boring LAI-SB58 was advanced near the former well FG-5, which was associated with the former F& G facility tanks. At LAI-SB59, total cPAHs were identified at 2.2 mg/kg (EF 240) at 4 feet bgs. At LAI-SB64, located at the former “G” slab within the excavation outline, cPAHs were identified at 0.52 mg/kg (EF 55) at 0 to 2 feet bgs. PCB concentrations exceeding the RISL were detected at 2, 4, and 6 feet bgs in boring LAI-SB58; at 0 feet bgs in boring NGW519; at 4 feet bgs in boring LAI-SB91; and at 0 feet bgs in boring LAI-SB92, with a maximum concentration of 0.28 mg/kg (EF 30). No analytes were detected in the groundwater sample collected from well NGW519 (Landau 2011c).

Benzene was identified in soil at two locations a short distance northeast of the “G” slab, within the Building 3-333/3-335 area (Section 7.1.4.4), at highly elevated concentrations. Soil sample locations, LAI-SB60 and NGW516, are located within 100 feet of northern corner of Building 3-324 and present a concern for soil vapor intrusion potential. Benzene was detected at 0.31 mg/kg (EF 310) at 4 to 6 feet bgs in LAI-SB60, and at 0.15 mg/kg (EF 150) 10 to 12 feet bgs in

NGW516. Benzene was non-detect in remaining samples within the Building 3-324 Area; however, the MDLs were greater than the RISL of 0.001 mg/kg. Low levels of gasoline-range hydrocarbons were detected at both sample locations. Depth to groundwater in the Building 3-324 Area ranges from 4 to 7 feet bgs.

Storm drain solids samples collected from catch basins around Building 3-324 contained concentrations of PCBs, cadmium, copper, and zinc. Storm drain lines around the building are situated above the high seasonal water table, with the exception of a portion of storm drain line N6. During the 2010 video inspection, no problems were noted in the section of the line within this AOC (Figure 7.1-2).

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Building 3-324 Area (Former F&G Facility)

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	1.03	**31**	NE	NE
Metals	Arsenic	29	4.1	--	--
	Cadmium	1.2	1.2	--	--
	Zinc	94	1.1	--	--
Petroleum Hydrocarbons	Gasoline-Range	120	1.2	NE	NE
	Diesel-Range	NE	NE	1,000 U	2.0-N
PAHs	Benzo(g,h,i)perylene	0.98	**32**	NC	NC
	Benzo(a)pyrene	1.7	**180**	NC	NC
	Fluoranthene	2.1	13	NC	NC
	2-Methylnaphthalene	0.3 UJ	7.0-N	--	--
	Total cPAHs	2.2	**240**	NC	NC
VAHs	Benzene	0.025 U	25-N	1 U	1.3-N

-- Not analyzed   EF Exceedance factor   NC Not a COPC   NE No exceedance
U Non-detect   -N EF based on non-detect concentration   J Estimated value

RI Scoped Activities

Recent soil samples collected in this AOC have contained concentrations of PCBs, PAHs, and gasoline-range hydrocarbons at concentrations exceeding the RISLs. Remnant contamination is mainly identified within and surrounding the former "G" slab tank area, including cPAHs, with benzene identified a short distance to the east. In groundwater, concentrations of TPH and benzene appear to have attenuated to concentrations below current MTCA CULs and RISLs. Groundwater samples collected in this area have not been analyzed for other COPCs.

To define the nature and extent of potential remnant contamination in this AOC, five soil borings will be advanced to at least the water table, and one monitoring well will be installed in one of these borings (Figure 7.1-37). All but one of these borings are located near the former "G" slab tank area, including one within the former tank basin, to fill spatial gaps in the existing sample locations and near recent samples identifying elevated COPCs in soil. One boring will be advanced within the former “F” slab tank basin, in an area where no previous samples have been collected, to confirm that contamination was adequately removed. One boring will be advanced northeast of the “G” slab in proximity to the recent interim action excavation at the adjacent Building 3-333/335 area. A minimum of two soil samples will be collected from each boring. The monitoring well will be installed downgradient of the former “G” slab tank basin and the related excavation.

Soil within 100 feet of Building 3-324 indicate elevated benzene concentrations (RISL EF 310). To evaluate the potential for soil vapor intrusion, one soil vapor monitoring point will be installed near the northeast corner of Building 3-324 as shown in Figure 7.1-37. Soil vapor samples will be collected and analyzed for VOCs for two seasonal monitoring events. A soil sample will also be collected at the vapor point screen depth (approximately 5 feet) and analyzed for VOCs and TPH.

Most storm drain lines in this AOC are not submerged by the water table. Concentrations in the 2010 soil samples were relatively low; therefore, completion of the investigation with regard to soil is a medium priority. Installation of the monitoring well will support the Site-wide groundwater investigation (Section 7.1.8), and completion of the well is a high priority. In addition, continued groundwater monitoring at well NGW519 is a high priority. Building 3-324 is an office building occupied by Boeing employees. Nearby concentrations of benzene are highly elevated; therefore, the installation of the soil vapor point for the monitoring of vapor intrusion is a high priority.

Summary of RI Scoped Activities
Building 3-324 Area (Former F&G Facility)

RI Scoped Activity	Total Number of Borings/ Wells/Points	Min Number of Soil Samples per Boring	Min Number of GW/Vapor Samples per Well/Point	Priority	Analyses
Soil Borings	4	2	NA	Medium	PCBs, PAHs, TPH, BTEX
New GW Well	1	2	4	High	PCBs, PAHs, Metals, TPH, VOCs
Existing GW Well (NGW519)	1	NA	4	High	PCBs, TPH, SVOCs, BTEX
Soil Vapor Point	1	1	2	High	TPH, VOCs (soil) VOCs (vapor)

7.1.4.7 Willow Street Substation Area

Rationale for RI Approach: Subsurface utilities and electrical hazard prevent further safe investigation at this time. No additional RI work is recommended until this area can be safely investigated and remediated.

The Willow Street Substation and adjacent Substation 87 are located at the southeast end of Willow Street. Boeing has used this general area since the 1950s (Figures 7.1-11 and 7.1-39). The two substations share a fenced enclosure. The original Willow Street Substation was built in

1965 and was located southwest of the present-day substation (Substation 87). One transformer, with a capacity of 7,600 gallons, was installed at the original substation. Samples of transformer oil collected in 1986 indicated the presence of PCBs at 7.9 to 15 ppm. In 1996, the original transformer was removed and replaced with two transformers, which are certified as less than 1 ppm PCB (Goldberg 2006; Herrera 2011).

A transformer that contained oil with PCBs was historically located at the North End-West Boeing Substation, which appears to be the current Substation No. 87. The former Transformer No. 88 had a volume of 177 gallons (Landau 2000b).

In conjunction with the Georgetown Flume characterization activities performed in 2006, 11 soil samples were collected at the current Willow Street substation (Figure 7.1-40). Samples were analyzed for PCBs, PAHs, and diesel-range hydrocarbons. PCB concentrations exceeded MTCA Method A CULs in soil samples collected along the north, south and west sides of transformer pad #1 (Herrera 2007, 2010).

Boeing collected eight soil samples from four borings (WSS08-01 through WSS08-04) around transformer pad #1 in 2008 as part of the 2008 investigation of Potential PCB Sources to Slip 4 (Figures 7.1-39 and 7.1-40). Samples were collected at depths of 1.0 to 1.4 and 1.4 to 1.8 feet bgs. PCB concentrations ranged from 0.39 to 68 mg/kg (to EF 136) in these samples, with the maximum value in WSS08-03 (Landau 2008a; Herrera 2011).

In December 2010, two remedial excavations were performed to remove soil with concentrations of PCBs above the TSCA limit of 50 mg/kg. A second excavation was performed in an attempt to remove soil with PCBs above the MTCA Method A CUL of 1 mg/kg (Figure 7.1-40). Due to the presence of a grounding grid below transformer pad #1, the depth of the excavation was limited to 2.75 feet bgs. Confirmation samples were collected from the sidewalls and bottom of each excavation. PCB concentrations remaining in soil are between 1.3 and 29 mg/kg (max EF 58), meeting the TSCA requirement, but exceeding the MTCA Method A CUL and RISL. Due to safety constraints, additional soil removal could not be performed (Herrera 2011).

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Willow Street Substation Area

Chemical Class	Chemical	Soil (Non-Leaching)		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	29	**58**	--	--

-- Not analyzed EF Exceedance factor

Current Remedial Activities

Elevated levels of PCBs remain in soil at the Willow Street Substation. The presence of underground utilities prevented further removal of PCB-impacted soil during the 2010 remedial excavations. Deactivation of Willow Street Substation, which provides service to Boeing, is required to determine the extent of contamination in the southwest portion of the substation and to remove remaining contamination (Herrera 2011). No further work will be scheduled until this location can be safely investigated and remediated (Edens 2011).

RI Scoped Activities

A previous investigation (Herrera 2011) indicated that PCB-contaminated soil remains near the transformer at the Willow Street Substation. Due to the electrical hazard of sampling near an active transformer, and the logistical difficulties of shutting down electrical flow from the substation to NBF, no activities are being proposed during the RI. In this AOC only, the FS will propose that further soil characterization and cleanup take place in one simultaneous activity, when electricity can be shut down to minimize impact to operations at NBF. Thus, no sampling locations are shown on Figure 7.1-39.

7.1.4.8 Buildings 3-315 and 3-626 Area

Rationale for RI Approach: Confirm the presence or absence of PCBs within soil in areas of historical electrical transformers.

The Buildings 3-315 and 3-626 Area also includes the area of Building 3-315, and areas between them (Figures 7.1-11 and 7.1-41).

In March and April 2007, two soil borings were drilled in the northern portion of this AOC (Figure 7.1-17) to investigate areas that may have been impacted by PCBs due to historical activities on the NBF property. PCBs were detected at a low concentration of 0.051 mg/kg (EF 1.5) in one sample at 1 to 2 feet bgs (Landau 2007c).

A three-phased soil and groundwater investigation was conducted in the PEL area between September 2010 and January 2011 (Figure 7.1-19). During the investigation, six soil borings were advanced in this AOC. Soil samples were analyzed for PCBs, metals, TPH, SVOCs, and benzene. In soil, PCBs were detected in 2 of the 24 samples collected, at depths of 0 to 2 feet bgs. Both samples contained PCBs below 1 mg/kg; the highest concentration of 0.29 mg/kg (EF 9) was detected in boring LAI-SB87. PAHs (including cPAHs) were detected in 14 samples, at depths of 0 to 6 feet bgs. The highest EF of 15 was detected in boring LAI-SB52 at a concentration of 0.14 for totals cPAHs. Metals exceeded the RISL at relatively low concentrations (Landau 2011c).

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Buildings 3-315 and 3-626 Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	0.29	8.8	--	--
Metals	Arsenic	9.0	1.3	--	--
	Copper	49	1.4	--	--
	Lead	68	1.2	--	--

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Buildings 3-315 and 3-626 Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PAHs	Benzo(g,h,i)perylene	0.079	2.5	NC	NC
	Benzo(a)pyrene	0.10	11	NC	NC
	Fluoranthene	0.33	2.1	NC	NC
	2-Methylnaphthalene	0.065	1.5	--	--
	Total cPAHs	0.14	15	NC	NC
VAHs	Benzene	0.024 U	24-N	--	--

-- Not analyzed EF Exceedance factor NC Not a COPC U Non-detect
-N EF based on non-detect concentration

RI Scoped Activities

Historical transformers or capacitors that potentially used and released PCB-bearing fluid were present near Building 3-315. Three borings are proposed around the southwest and northwest sides of the building. At least two soil samples will be collected from each boring for analysis of PCBs and PAHs. Proposed sampling locations related to these historical potential sources are shown on Figure 7.1-41. These are considered medium priority due to the potential for remnant PCBs.

One monitoring well will be installed near the east corner of Building 3-315. This well is a downgradient well associated with the Building 3-353 Area, in the following section (7.1.4.9).

Summary of RI Scoped Activities
Buildings 3-315 and 3-626 Area

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
Soil Borings	3	2	NA	Medium	PCBs, PAHs

7.1.4.9 Building 3-353 Area

Rationale for RI Approach: Confirm the extent of COPCs identified in previous soil samples north of building by sampling soil and groundwater. Install a downgradient well to determine groundwater quality and to form part of the Site-wide groundwater monitoring network. Determine the potential for vapor intrusion into the southeast end of Building 3-353, based on soil volatile contamination.

Building 3-353, the Inlet Development Facility, is part of this AOC that includes the area surrounding the building (Figures 7.1-11 and 7.1-42). Former USTs BF-4, BF-5, and BF-6 were located northwest of Building 3-353 (Figure 7.1-43). The tanks were historically used to provide fuel to an engine testing laboratory. Tank BF-4 was a 10,000-gallon UST and was used to store excess fuel prior to recycling. Tanks BF-5 and BF-6 were 5,000-gallon USTs and used to store

Jet A fuel and JP-4, respectively. Product piping connecting the UST complex to the former testing laboratory was installed in a 100-foot-long utility vault. The USTs were installed in 1986. The bottoms of the USTs rested at approximately 11.5 feet bgs and may have been in contact with groundwater (EFI Global 2006). In addition, PCB-bearing transformers and/or capacitors were historically located at Building 3-353 (Landau 2000b).

In 1989, a site assessment was performed prior to the construction of Building 3-353 (Figure 7.1-44). Five soil borings (SB-1 through SB-5) and three monitoring wells (GT-1114-1 through GT-1114-3) were installed between Buildings 3-315 and 3-368 in the proposed footprint of the building. TPH at concentrations below MTCA Method A CULs were present in soil between 2.5 and 10.5 feet bgs in all borings. PCBs were reported in one soil sample at a concentration of 2.9 mg/kg in SB-3 at 5.5 feet bgs (EF 88). Arsenic, barium, chromium, copper, and zinc were reported at concentrations exceeding the RISLs at 2.5 feet bgs in soil.

The monitoring wells were sampled in November 1989 and February 1990. TPH was not detected in the groundwater samples from either sampling event (GTI 1990a); the groundwater samples were not analyzed for PCBs or metals. Phthalates were detected in groundwater at concentrations up to 110 ug/L (EF 110) in GT-1114-3. The site assessment report identified two sample locations, 1A and 2A, but without explanation as to their purpose (Figure 7.1-44). Wells GT-1114-1 and GT-1114-3 have been abandoned, but well GT-1114-2 remains active.

In July 1990, a release of petroleum hydrocarbons occurred during excavation associated with construction of Building 3-353 (Boeing 1990b). Eight soil samples (KH706A, KH706B, and KH710A through KH710F) were collected from a utility trench for jet fuel lines located near an electrical transformer and an underground vault (Figure 7.1-44) (GTI 1990e). Results indicated TPH concentrations below MTCA Method A CULs in the walls and bottom of the excavation, and 350 mg/kg in a pile of soil excavated from the vault area. One sample was analyzed for BTEX compounds, which were not detected. None of the samples were analyzed for PCBs. Approximately 10 cubic yards of petroleum hydrocarbon-impacted soil were removed from the eastern side of the building footprint (Boeing 1990b).

The BF-4, BF-5, and BF-6 UST system was temporarily closed in late 2005 or early 2006. To extend the temporary closure status beyond 12 months, a site investigation was completed in October 2006, consisting of 11 soil borings (B-1 through B-11) around the USTs and utility vault. Groundwater was encountered between 8 and 10 feet bgs. Fourteen soil samples were analyzed for petroleum hydrocarbons (Figure 7.1-43). Oil- and diesel-range hydrocarbons were detected below RISLs (EFI Global 2006). These tanks were removed in 2008 (Bach 2009a); it is not known whether additional samples were collected at that time.

Two soil borings, SB-11 and SB-37, were advanced near Building 3-353 and former USTs BF-4, BF-5, and BF-6 in 2007 (Figure 7.1-42). Soil samples were analyzed for PCBs, which were not detected (Landau 2007c). Detection limits met the RISLs.

In 2010, seven soil borings (LAI-SB54, LA-SB55, LAI-SB94 through LAI-SB97, and LAI-SB107) were advanced in or near this AOC (Figure 7.1-42). Concentrations of PCBs, mercury, benzene, and PAHs exceeding the RISLs were present in soil. LAI-SB107 was the source of maximum benzene (EF 65) and cPAHs (EF 17) at this area. A groundwater sample was collected from well GT-1114-2; no COPCs were detected (Landau 2011c).

Soil and groundwater infiltration has been confirmed in storm drain lines N5 and N7 located south and north of Building 3-353, respectively. Line N7 is submerged by the water table at high water levels (Figure 7.1-2). PCBs, cadmium, and zinc have been detected in storm drain solids samples collected from this line. The other lines in this AOC are not submerged and have not been inspected. PCBs, mercury, cadmium, copper, and zinc have been detected in storm drain solids samples associated with these lines.

Soil boring LAI-SB98 in the adjacent Green Hornet Area is located within 100 feet of the Building 3-353 and is therefore considered for the evaluation of soil vapor intrusion. Volatile constituents, benzene and gasoline-range hydrocarbons, in soil samples from LAI-SB98 were detected with RISL EF values of 480 and 240, respectively. The 0-2 foot soil sample from LAI-SB107 also contained benzene at 0.065 mg/kg (EF 65).

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Building 3-353 Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	2.9	**88**	NE	NE
Metals	Arsenic	28	4.0	--	--
	Barium	340	4.1	--	--
	Chromium	560	4.7	--	--
	Copper	63	1.8	--	--
	Mercury	0.10	1.4	--	--
	Zinc	90	1.0	--	--
Phthalates	BEHP	0.2 U	3.0-N	110	**110**
PAHs	Benzo(g,h,i)perylene	0.058	1.9	NC	NC
	Benzo(a)pyrene	0.069	7.3	NC	NC
	Fluoranthene	0.47	2.9	NC	NC
	2-Methylnaphthalene	0.62 U	14-N	NE	NE
	Total cPAHs	0.16	17	NC	NC
VAHs	Benzene	0.065	**65**	5.0 U	6.3-N
VOCs	TCE	--	--	5.0 U	1.3-N
	Vinyl chloride	NC	NC	10 U	50-N

-- Not analyzed EF Exceedance factor NC Not a COPC NE No exceedance
U Non-detect -N EF based on non-detect concentration

RI Scoped Activities

PCB-contaminated soil appears to be limited to a depth of approximately 6 feet bgs in this AOC. Soil contaminated with mercury and PAHs extends to 8 feet bgs. Though analyses for benzene are limited, benzene appears to be elevated in shallow soil west of Building 3-353 and up to a depth of 8 feet bgs in a nearby sample east of Building 3-353. The lateral extent of contamination has not been well-defined, although most RISL exceedance factors are relatively low, as summarized above. The two exceedances with the highest EFs are PCBs in boring SB-3 and benzene in LAI-SB107. Based on historical groundwater monitoring data, it appears that contaminants in soil are not leaching to groundwater in significant quantities. One groundwater sample was collected in 2010.

To aid definition of the nature and extent of soil contamination in this AOC, one soil boring will be advanced northwest of the building, near borings SB-3 and LAI-SB107 (Figure 7.1-42). The soil boring is located to identify if contaminants in these former soil samplings extend to the area in front of the building. The boring will be advanced to at least 10 feet bgs. At least two samples will be collected from the boring for laboratory analysis.

Existing well, GT-1114-2, will be added to Boeing's groundwater monitoring plan. At least four quarterly groundwater samples will be collected from this well. The addition of this well will support the Site-wide groundwater investigation (Section 7.1.8) and is considered high priority. In addition, as a downgradient well to replace former well GT-1114-3, a new well will be installed southeast of Building 3-315. This new well will also form part of the Site-wide monitoring network.

Within 100 feet of Building 3-353, concentrations of benzene and gasoline-range hydrocarbons are highly elevated in soil from the 2010 boring, LAI-SB98 (Section 7.1.4.12, Green Hornet Area). The installation of one soil vapor point near the southeast corner of Building 3-353 will be used to evaluate soil vapor intrusion potential at this building (Figure 7.1-42). Soil vapor samples will be collected and analyzed for VOCs for two seasonal monitoring events. A soil sample will also be collected at the vapor point screen depth (approximately 4 to 5 feet) and analyzed for VOCs and TPH.

Due to infiltration in storm drain line N7 and possibly N5, PCB-contaminated storm drain solids, the historical use of PCB-bearing equipment, and low-level PCB-impacted soils, this is considered a medium priority area for soil sampling activities.

Summary of RI Scoped Activities
Building 3-353 Area

RI Scoped Activity	Total Number of Borings/ Wells/Points	Min Number of Soil Samples per Boring	Min Number of GW/Vapor Samples per Well/Point	Priority	Analyses
Soil Boring	1	2	NA	Medium	PCBs, PAHs, TPH, BTEX
New GW Well (Bldg 3-315 Area)	1	2	4	High	PCBs, Metals, TPH, SVOCs, BTEX
Existing GW Well (GT-1114-2)	1	NA	4	High	PCBs, Metals, TPH, SVOCs, BTEX
Soil Vapor Point	1	1	2	High	TPH, VOCs (soil) VOCs (vapor)

7.1.4.10 Building 3-354 Area

Rationale for RI Approach: Soil and groundwater contamination in the Building 3-354 Area does not appear to be of concern; therefore, no RI activities are proposed.

This AOC is located on the north side of the Apron A blast fence in the PEL area (Figures 7.1-11 and 7.1-42). Soil in this AOC is not considered a leaching concern for downgradient pathways, and concentrations are therefore compared to less stringent RISLs (Table 6-11).

A potential release was identified in 1991 during a pre-construction environmental exploration of a site for proposed Building 3-354 (Boeing 1991). In October 1991, eight soil borings, SB-1 through SB-8, were advanced to depths of 5.5 to 7 feet bgs (Figure 7.1-45). Samples were analyzed for TPH, VOCs, metals, and PCBs. Concentrations of TPH in samples from borings SB-3, SB-4, and SB-5, located around the perimeter of a concrete slab near the center of the proposed building, exceeded the 1991 MTCA Method A CULs. PCB and metals concentrations were below the RISLs, and VOCs were not detected (GTI 1991b).

The area around borings SB-3, SB-4, and SB-5 was subsequently excavated. Based on a sample of the excavated material, Boeing concluded that the earlier TPH results were inaccurately interpreted as a release, and were more likely the result of asphalt debris in the samples (Boeing 1992a).

RI Scoped Activities

In soil, COPCs were not detected in exceedance of RISLs in this AOC. COPCs in soil are not believed to pose a threat to downgradient pathways via leaching from soil to groundwater. As such, RI scoped activities are not proposed in this AOC at this time.

7.1.4.11 Wind Tunnel Area

Rationale for RI Approach: Soil and groundwater contamination in the Wind Tunnel Area does not appear to be of concern; therefore, no RI activities are proposed.

Former USTs BF-28 and BF-29 were located at the western end of the wind tunnel test facility (Figures 7.1-11 and 7.1-46). These 5,000-gallon tanks were reportedly used to store jet fuel. The USTs were abandoned and filled with sand prior to the mid-1960s. Soil in this AOC is not considered a leaching concern for downgradient pathways, and concentrations are therefore compared to less stringent RISLs (Table 6-11).

Soil samples collected in 1985 indicated the presence of petroleum hydrocarbons in soil adjacent to the USTs. In 1986, the USTs were removed from this location. During the removal activity, some evidence of floating hydrocarbons was observed on groundwater within the UST excavation. A recovery well (BF-28 well) was installed in the excavation (Figure 7.1-46). A groundwater sample collected from the well did not contain any floating product; the sample was analyzed for BTEX compounds, which were not detected. Landau then recommended decommissioning the recovery well (Landau 1986a). Additional information regarding this area of NBF was not available for review.

The pipelines associated with the former USTs at the adjacent Green Hornet Area (Section 7.1.4.9) extended to the Wind Tunnel Area. A remedial action was performed at the Green Hornet Area in 1993 (SEACOR 1994c). As part of the remedial action, trenches were excavated along two former pipelines, and two soil samples (AT1-1 and AT2-1) were collected within these trenches in the Wind Tunnel Area (Figure 7.1-47). The samples were analyzed for diesel-range hydrocarbons and BTEX. Diesel was detected at concentrations below the MTCA Method A CUL.

In 2010, five soil borings were advanced in the Wind Tunnel Area (Landau 2011c). Two borings, LAI-SB85 and LAI-SB86 were advanced in the area of former tanks BF-28 and BF-29, near the former recovery well (Figure 7.1-46). Groundwater was not encountered in these borings, which were terminated at 8 feet bgs. Boring LAI-SB47 was advanced to the south of the Wind Tunnel structure and boring LAI-SB99 and LAI-SB100 were advanced to the east of the Wind Tunnel. Soil samples were analyzed for PCBs, metals, TPH, SVOCs, and benzene. At LAI-SB100, dioxins/furans were analyzed in samples at 2 to 4 and 4 to 6 feet bgs. COPCs were non-detect or detected at or below RISLs.

PCBs, mercury, cadmium, copper, lead, and zinc have been detected in storm drain solids samples collected from this area. The storm drain lines are situated above the water table.

RI Scoped Activities

In soil, COPCs were not detected in exceedance of RISLs in the Wind Tunnel Area. COPCs in soil are not believed to pose a threat to down gradient pathways via leaching from soil to groundwater in this area. As such, RI activities are not proposed in this AOC at this time.

7.1.4.12 Green Hornet Area

Rationale for RI Approach: Define extent of petroleum-related contamination in soil beyond the former excavation boundaries, where confirmation samples and recent sampling indicate elevated concentrations of COPCs. Install a monitoring well downgradient of a contaminated soil location, and existing wells will also be sampled, to determine extent of groundwater plume.

The Green Hornet tank farm is located near Building 3-313 in the southeast portion of the PEL area (Figures 7.1-11 and 7.1-46). This was the location of three 12,000-gallon USTs (UBF-7, 8, and 9) in a tank basin associated with the Green Hornet Wind Tunnel Facility; these tanks were used to store Jet A fuel.

In 1985, shallow soil borings were advanced around the three USTs (UBF-7, UBF-8, and UBF-9) in the Green Hornet Area (Figure 7.1-47). Petroleum hydrocarbons were encountered near all three tanks. Four monitoring wells (GH-1 through GH-4) were installed around the tank pad in 1986. Soil and groundwater sample results indicated detectable concentrations of TPH. Jet fuel was detected in three of the four soil samples. Kerosene was detected in all four groundwater samples. Benzene was also reported in the groundwater sample from well GH-2 (Landau 1986d).

The tanks, which were installed in 1950, failed a leak test in early 1992 (Boeing 1992b) and the fuel levels were immediately lowered to below the suspected leak depth. In July 1992, Boeing notified Ecology of their intent to permanently close the tanks (Boeing 1992b); the tanks were to be replaced with a single AST (Boeing 1992c).

In 1993, the fueling station was decommissioned. A site investigation conducted during removal of the tanks found petroleum-impacted soil in samples from the southern and western sidewalls and floor of the excavation. Floating non-aqueous phase liquid (NAPL) was observed in well GH-4 (SEACOR 1994b). Following the completion of UST removal activities, wells GH-1 through GH-4 were decommissioned (SEACOR 1993d).

In September 1993, Boeing conducted an independent soil remedial action (Figure 7.1-47). Approximately 1,250 cubic yards of soil and a concrete oil/water separator were removed from the vicinity of the former Green Hornet tank farm (SEACOR 1994c). Soil samples collected from the sides of the excavation detected the following contaminants above RISLs: gasoline- and diesel-range hydrocarbons, PAHs (including cPAHs), and mercury. Sample location EX-DE2-8.5 and EX-SMW-4 contained 2-methylnaphthalene at EFs of 600 and 110, respectively. Location EX-SSE-4 contained cPAHs at an EF of 28. Location EX-DSE-8 contained BEHP at an EF of 55. Three samples were analyzed for PCBs, which were not detected, although the detection limits exceeded the RISLs. TPH-impacted shallow soil remained on the southeast and south sides of the excavation perimeter. In addition, impacted deeper soils (greater than 4 feet bgs) remained on the northeast, east, and west excavation perimeters (SEACOR 1994c). Petroleum-impacted soil was removed to the extent feasible; however, impacted soil was not removed if existing structures would have been compromised, or where soil impacts were apparently related to the fluctuation of hydrocarbon-impacted groundwater. A visible hydrocarbon sheen was observed on groundwater (at approximately 5 feet bgs), which accumulated in the excavation (SEACOR 1994b).

A supplemental site assessment was conducted in November and December 1993 (SEACOR 1994b). Six monitoring wells were installed (GH-MW1 through GH-MW6, currently identified as NGW101 through NGW106), and soil and groundwater samples were collected (Figure 7.1-47). Samples from borings GH-MW2 and GH-MW4 contained gasoline-range hydrocarbons at concentrations above the MTCA Method A soil CUL. In groundwater, well GH-MW4 contained gasoline-, diesel-, and oil-range hydrocarbons above the MTCA Method A CULs (SEACOR 1994b). Groundwater monitoring for diesel-range hydrocarbons continued until at least 1998 (Boeing 1998b); results indicated continuing detections of diesel-range in GH-MW4. Ecology's LUST database lists a release as "Reported Cleaned Up" in June 1995 at this location.

In 2010, five soil borings (LAI-SB48, LAI-SB49, LAI-SB68, LAI-SB98, and LAI-SB101) were advanced in the Green Hornet Area (Figures 7.1-19 and 7.1-46) (Landau 2011c). In LAI-SB98, concentrations of benzene were detected up to 0.48 mg/kg (EF 480) and gasoline-range hydrocarbons up to 7,300 mg/kg (EF 240).

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Green Hornet Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	0.101	3.1	NE	NE
Metals	Mercury	0.38	5.4	--	--
Petroleum Hydrocarbons	Gasoline-Range	7,300	**240**	NE	NE
	Diesel-Range	3,900	2.0	910	1.8
	Total Petroleum Hydrocarbons	3,600	1.8	--	--
	Jet Fuel	--	--	1,300	2.6
Phthalates	BEHP	3.7	**55**	--	--
PAHs	Benzo(g,h,i)perylene	0.19 UJ	6.1-N	NC	NC
	Benzo(a)pyrene	0.18	19	NC	NC
	Fluoranthene	0.63	3.9	NC	NC
	2-Methylnaphthalene	26	**600**	--	--
	Total cPAHs	0.26	**28**	NC	NC
VAHs	Benzene	0.48 J	**480**	--	--

-- Not analyzed EF Exceedance factor NC Not a COPC NE No exceedance
J Estimated value U Non-detect -N EF based on non-detect concentration

RI Scoped Activities

Concentrations of petroleum hydrocarbons, metals, benzene, and PAHs remain in soil within or near the limits of the excavation performed in 1993. During the 1993 remedial action, contaminated soil was not removed from the northeast, east, southeast, south, and west sides of the excavation perimeters due to the presence of buildings and structures or where soil impacts were apparently related to the fluctuation of hydrocarbon-impacted groundwater. Historical Buildings 3-297, 3-311, and 3-312 have since been removed. Reports documenting the removal of these buildings were not available for review; therefore, it is not known if contaminated soil was excavated during the building removal activities.

Soil samples from 2010 indicate that concentrations of gasoline-range hydrocarbons, benzene, and 2-methylnaphthalene significantly exceed the RISLs to the west of the Green Hornet tank basin area. Soil close to the tank basin area was not evaluated in 2010.

Eight soil borings will be advanced in the Green Hornet Area to define the lateral and vertical extent of COPCs in soil (Figure 7.1-46). A downgradient monitoring well will be installed in one of these borings. At least two soil samples will be collected from each boring; one of these samples will be collected near the water table depth.

The proposed monitoring well will be installed downgradient of contaminated boring LAI-SB98 and downgradient of the western portion of the tank basin area. Contaminated soil in this location is present above and below the water table. At least four groundwater monitoring events will be performed at the new and existing wells (NGW101 through NGW106) in the Green Hornet Area.

Summary of RI Scoped Activities
Green Hornet Area

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
Soil Borings	7	2	NA	Medium	PCBs, TPH, SVOCs, VOCs
New GW Well	1	2	4	High	SVOCs, TPH, BTEX
Existing GW Wells	6	NA	4	High	SVOCs, TPH, BTEX

Existing wells include NGW101, NGW102, NGW103, NGW104, NGW105, and NGW106.

A compilation of RI proposed soil borings, monitoring wells, and soil vapor points for the entire PEL area is presented in Figure 7.1-48.

7.1.5 Areas of Concern in North Flightline Area of NBF

The North Flightline area of NBF encompasses Concourse A at the northern end and Building 3-397 and extends south to the middle of Building 3-390 (Figure 7.1-49). For each AOC in this section, detected analytical results for all RISL exceedances are presented in Table 7.1-7 for soil and Table 7.1-8 for groundwater. Information in this section has been reviewed and summarized for the following potential source areas within the North Flightline area:

- Former Buildings 3-360 and 3-361 Area
- Building 3-380 Storm Drain Area
- Building 7-27-1 Area (Markov property)
- Building 3-380 Area
- Building 3-369 and Building 3-374 Areas
- Building 3-390 Area
- Concourse A Area

7.1.5.1 Former Buildings 3-360 and 3-361 Area

Rationale for RI Approach: Install an upgradient monitoring well to confirm the potential migration of chlorinated VOCs from an upgradient, offsite source to the NBF property. Continue to evaluate groundwater monitoring data to determine the long-term effect of bioremediation.

The former Buildings 3-360 and 3-361 Area is located between the Georgetown Flume corridor and Ellis Avenue (Figures 7.1-49 and 7.1-50). PCB-containing transformers or capacitors were historically located at Building 3-360. Storm drain lines are all situated above the water table depth.

From 1991 to 2002, 29 soil borings were advanced, 6 confirmatory soil samples were collected, and 12 monitoring wells were installed (Figures 7.1-50 and 7.1-51). Initial soil borings and wells were installed during a pre-construction site assessment. Remaining sample locations resulted from a remedial excavation and a soil and groundwater investigation (Landau 2002c).

Historical COPCs in this AOC were PCBs, metals, TPH, and VOCs (particularly cis-1,2-DCE and TCE). In 2002, an excavation removed approximately 165 cubic yards of soil from the northeast corner of former Building 3-360 (Figure 7.1-51). The excavation was limited laterally by the presence of utilities and vertically by the water table. In-situ soil sampling identified concentrations above RISLs for cis-1,2-DCE and TCE, and non-detected concentrations of benzene and PCE; however, only cis-1,2-DCE and TCE exceeded screening levels established for the investigations of 2002 (Landau 2002b). Maximum concentrations and EFs are listed in the table below.

In response to VOCs remaining in soil and groundwater, approximately 300 pounds of Regenesis Hydrogen Releasing Compound (HRC®) were introduced into excavated trenches (Landau 2002b). The highest concentrations of TCE were detected in groundwater less than 30 feet bgs; TCE in soil was detected at least as deep as 90 feet bgs. The presence of TCE breakdown products in soil and groundwater suggests the occurrence of reductive dechlorination of TCE (Landau 2002c). Comparison of the groundwater sample results shows a decrease in concentrations of TCE and an increase in cis-1,2-DCE and vinyl chloride, indicating that the HRC® was enhancing reductive dechlorination of TCE in groundwater in some monitoring wells. It was suggested that TCE was released in the area of CB122 and at an upgradient offsite location (Landau 2002c).

In conjunction with the Georgetown Flume characterization activities performed in 2006, six soil samples at location W3 (along the flume north of CB120B) were collected and analyzed for PCBs, metals, and PAHs. Metals were not detected. Total PCBs were measured in two samples, with concentrations of 110 and 180 mg/kg. Selected PAHs, including cPAHs, were elevated in three soil samples. The maximum concentration of cPAHs was 1,500 mg/kg (Herrera 2007). Soil at W3 was excavated as part of the Georgetown Flume removal in 2009 (Herrera 2010).

In 2011, stormwater from the upstream portion of the north lateral storm drain line was rerouted to the KC lift station and LTST facility. Two dewatering wells were installed along this portion of the reroute corridor, and two stockpile soil samples were collected from the former Buildings 3-360 and 3-361 Area (Figure 7.1-23). Groundwater samples were analyzed for PCBs, metals, TPH, and VOCs. Soil samples were analyzed for PCBs, metals, and TPH. Sample results were non-detect or below the RISL for all analytes (Landau 2012h).

PCB-bearing transformers or capacitors were historically located at the southeast corner of former Building 3-360 (Landau 2000b). Ecology (2012a) has summarized conditions at the upgradient offsite area formerly occupied by the Washington Air National Guard.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Former Buildings 3-360 and 3-361Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
Metals	Mercury	0.35	5.0	--	--
	Silver	2.9 U	9.7-N	--	--
VAHs	Benzene	0.05 U	50-N	--	--
VOCs	cis-1,2-DCE	0.50	**96**	86	5.4
	PCE	0.05 U	28-N	NE	NE
	TCE	5.4	**3,600**	64	16
	Vinyl chloride	NC	NC	7	**35**

-- Not analyzed EF Exceedance factor NC Not a COPC NE No exceedance
U Non-detect -N EF based on non-detect concentration

Current Remedial Actions

CALIBRE Systems, Inc. (CALIBRE) developed a work plan to conduct additional bioremediation in the area of former Building 3-360 in order to address concentrations of PCE, TCE, cis-1,2-DCE, and vinyl chloride (CALIBRE 2011). The work plan outlines the use of nine existing monitoring wells and installation of ten new wells for the purpose of two bioremediation substrate injections (Figure 7.1-50). The first injection, conducted in June 2011, utilized sucrose as a biostimulant to promote strong reducing conditions. The second injection, in December 2011, utilized a sodium lactate/vegetable oil mixture (lactoil), which produces longer-lasting reducing conditions (CALIBRE 2011). While natural attenuation is occurring in this area, bioremediation injections have accelerated the degradation process of these chlorinated VOCs. The median degradation half life of these chemicals is estimated to have decreased from 109 months to 20 months (CALIBRE 2012). Groundwater monitoring in February 2013 indicated an elevated concentration of vinyl chloride in NGW206 (2013 groundwater sample results are not included in this Work Plan).

RI Scoped Activities

The following proposed RI activities are based on an Ecology evaluation of data and current conditions (Ecology 2012a). Due to the potential for VOCs to be migrating from an offsite source at the adjacent property formerly leased by the Washington Air National Guard, one monitoring well will be installed at NBF along the northern fenceline. At least two soil samples will be collected from the boring. At least four groundwater monitoring events will be performed at the new well (Figure 7.1-50). Groundwater samples will be analyzed for VOCs. This is considered high priority due to the persistent presence of these chlorinated volatile compounds in groundwater, and the fact that these chemicals may be originating from offsite.

Because active remediation is ongoing at this AOC, no other recommendations are being made at this time, although Boeing groundwater monitoring data will continue to be evaluated to determine the long-term effect of bioremediation on VOC concentrations. This AOC is not considered for vapor intrusion concerns due to the distance of greater than 100 feet from contamination to occupied buildings.

Summary of RI Scoped Activities
Former Buildings 3-360 and 3-361Area

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
New GW Well	1	2	4	High	VOCs

7.1.5.2 Building 3-380 Storm Drain Area

Rationale for RI Approach: Confirm the presence or absence of PCBs within soil in areas of historical electrical transformers. Determine if petroleum-contaminated soil remains in southern portion of this AOC, based on elevated concentrations in limited data from a 2002 excavation.

The Building 3-380 Storm Drain Area is located near Buildings 3-350 and 3-380, on either side of the Myrtle Street entrance to NBF (Figures 7.1-49 and 7.1-52). This AOC includes the northern portion of the former Markov property (Section 7.1.5.2). Two transformers were associated with Building 3-350, one on the west side of the building and one at the northeast exterior.

Two environmental investigations were performed in 2008 to identify potential PCB sources to Slip 4. Soil samples were collected from 29 soil borings adjacent to a new storm drain line (Figure 7.1-53). PCBs were detected in 10 of 42 samples at depths of 0 to 2 and 2 to 4 feet bgs. All detections exceed the RISL for PCBs by a small margin (Landau 2008b).

During grading and paving activities in the southern portion of this AOC (previously referred to as the northern Markov Property), from December 2001 to February 2002, stained soils and a petroleum-like odor were encountered. Approximately 215 cubic yards of impacted soil were removed, and at least 50 cubic yards of this was heavily contaminated in an area west of well NGW254. Soil samples were collected only from stockpiled material, with resultant concentrations of TPH ranging from 163 to 16,500 mg/kg, and TCE ranging from 1.4 to 4.3 mg/kg (stockpile sample results are not included in tables or figures of this Work Plan). In-situ soil samples were not collected. This area has since been paved, and the excavation limits are not known (Landau 2002a).

The former Georgetown Flume was located along the western portion of the Building 3-380 Storm Drain Area, outside of the NBF fencing (Figure 7.1-52). PCBs, PAHs, and metals were detected above the RISLs in soil samples collected during flume investigations between 2006 and 2009. In particular, cPAHs were highly elevated with exceedance factors greater than 125 (red EF range). Contaminated soils were excavated during the removal of the flume in 2009. The history of the former Georgetown Flume is further described in Sections 2.3.2 and 4.1.2.

The former Ellis substation was located west of Building 3-380 near the Site boundary (Figure 7.1-52). In conjunction with the Georgetown Flume characterization activities performed in 2006, 12 soil samples were collected at the Ellis substation. Samples were analyzed for PCBs, PAHs, metals, hexavalent chromium, and diesel-range hydrocarbons. PCB concentrations exceeded MTCA Method A CULs in soil samples collected along the west side of the north equipment pad at the Ellis substation. Contaminated soil appeared to be sloughing into the flume (Herrera 2007, 2010).

During the Georgetown Flume removal activities in 2009, 12 concrete pads and the chain link fence associated with the substation were removed. Concrete samples were collected from the pads and tested for PCBs, which were not detected (Herrera 2010).

Dewatering wells were installed for trenching activities performed in July 2011 to support construction of the LTST. Dewatering wells DW-02, DW-03, and DW-04 are located in the Building 3-380 Storm Drain Area. Groundwater samples were analyzed for PCBs, TPH, benzene and VOCs. PCE and vinyl chloride were detected at low levels in DW-03 and DW-04.

From 1991 to 2007, four monitoring wells were installed, including one from the 1991 pre-construction environmental investigation at Building 7-27-1 (Section 7.1.5.4). The most recent sampling results range from 2001 to 2007, with dates varying by well. Elevated groundwater concentrations of TCE (up to 14 ug/L during the past three years of data) and 1,2-cis-DCE (up to 120 ug/L) are found in offsite well NGW208 (Figure 7.1-52). Concentrations of TCE have been declining since 1999, while DCE has been more stable. It is assumed that these detections are related to the VOC contamination in the upgradient Former Buildings 3-360/3-361 Area (Section 7.1.5.1).

Storm drain solids in the Building 3-380 Storm Drain Area have indicated elevated levels of PCBs and metals. Storm drain lines B3 and B4 were found to be in good condition in the 2010 video inspection (Figure 7.1-2, Table 7.1-1). These lines are not submerged and do not pose a risk of groundwater infiltration, although line N4 is damaged.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Building 3-380 Storm Drain Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	0.60	18	1 U	23-N
Metals	Arsenic	NE	NE	50 U	10-N
	Lead	NE	NE	20 U	1.8-N
	Mercury	0.1 U	1.4-N	0.1 U	5.0-N
	Silver	2.5 U	8.3-N	3 U	2.0-N
Petroleum Hydrocarbons	Diesel-Range HCID	NE	NE	630 U	1.3-N
VAHs	Benzene	0.056 U	56-N	1.0 U	1.3-N
VOCs	1,2-DCE (mixed isomers)	0.05 U	2.2-N	--	--
	PCE	0.05 U	28-N	6.4	1.3
	TCE	0.05 U	33-N	NE	NE
	Vinyl chloride	NC	NC	0.50	2.5

-- Not analyzed EF Exceedance factor NC Not a COPC NE No exceedance
U Non-detect -N EF based on non-detect concentration HCID Hydrocarbon identification

RI Scoped Activities

In the southern portion of this AOC, where the heavily petroleum-impacted soils were identified and at least partially removed, two borings will be advanced west of well NGW254 to aid in identifying the potential extent of remnant soil contamination. Borings will extend at least to the water table. At least two soil samples will be collected from each boring for laboratory analysis of PCBs, TPH, SVOCs, and VOCs. This is considered a low priority due to a previous removal of petroleum constituents.

In the area near Building 3-350 where PCB-bearing transformers or capacitors were historically located, two soil borings will be advanced, with at least two soil samples collected from each boring for analysis of PCBs and metals. This is considered medium priority due to the potential for PCB contaminated soil. Analytical results will be compared to the RISLs to determine if additional investigations are needed in this area. Proposed sampling locations are shown in Figure 7.1-52.

PCBs remain in onsite soil in this AOC at low concentrations, up to 0.6 mg/kg. Groundwater concentrations of COPCs in recent onsite samples have been largely non-detected; thus, no RI recommendations are made for the remaining portion of this AOC.

Summary of RI Scoped Activities
Building 3-380 Storm Drain Area

RI Scoped Activity	Number of Borings	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
Soil Borings (near 3-350)	2	2	NA	Medium	PCBs, Metals
Soil Borings (south area)	2	2	NA	Low	PCBs, TPH, SVOCs, VOCs

7.1.5.3 Building 7-27-1 Area (Markov Property)

Rationale for RI Approach: Confirm the presence or absence of COPCs in groundwater at downgradient existing wells.

This area of concern is bounded by a parking lot to the north, East Marginal Way S to the south, Occidental Avenue to the east, and a motel to the west (Figures 7.1-49 and 7.1-54). It consists of approximately 1.2 acres and encompasses Building 7-27-1 (also called 7-027-1) and former Buildings 7-27-2 and 7-27-3 (Figure 7.1-55). Soil in this area is not considered a leaching concern for downgradient pathways, and concentrations are therefore compared to less stringent RISLs (Table 6-11).

The paved area south of Building 7-27-1 is the location of former service station, Vic Markov Tire (SEACOR 1992a). In 1987, service station equipment was removed from the property by King County. No soil analyses were performed, and the area appeared to be free of contamination. The USTs reportedly contained leaded gasoline and aviation fuel (Landau 2002a). Boeing subleased a portion of the property from Markov between November 1986 and

1990, and then began leasing the property from King County in 1990 (Landau 2002a). Building 7-27-1 was utilized by Boeing to house an x-ray room and film developing equipment and was the site of a satellite hazardous-waste accumulation area and a flammable materials storage closet. A 1,000-gallon AST, used to temporarily store processing water and fluorescent dye, is located along the north side of Building 7-27-1. A drum storage shed is present at the western corner of the building, with a containment dike around the shed (Landau 2002a).

In 1991 and 1993, a pre-construction investigation and a supplemental site assessment were conducted (SAIC 2009b). A total of 26 soil samples and 8 groundwater samples were collected and analyzed for PCBs, metals, TPH, and/or VOCs (Figure 7.1-54) (SEACOR 1992a; 1993b). Soil sample collection depths ranged from 3 to 11 feet bgs. Soil analytical results did not exceed the applied RISLs. Groundwater analytical data indicated low-level exceedances of lead and gasoline-range hydrocarbons from the well now known as NGW252, and low-level TPH, TCE, and vinyl chloride exceedances from the well now known as NGW253.

The storage/parking area south of Building 7-27-1 was graded and paved in 2009 (Figure 7.1-56). Approximately 100 cubic yards of soil were excavated during regrading work, and stockpile soil samples were collected. Concentrations of TPH-motor oil (HCID method) and PCBs were detected below the RISLs. Boeing confirmed that these samples originated from within the paved bounds at the Markov property shown in Figure 7.1-56 (Bach 2009c, 2011). However, sample location coordinates were not made available to Ecology and therefore are depicted as a single approximate location (Figure 7.1-54).

The former Georgetown Flume ran along the grassy area west of Building 7-27-1, between the hotel and the NBF fencing. Soil samples collected during flume investigations in 2006 and 2009 were analyzed for PCBs, PAHs, and metals. Arsenic and PCBs were detected at low-level concentrations at one soil sampling location. These soils were excavated during the removal of the flume. The history of the former Georgetown Flume is further described in Sections 2.3.2 and 4.1.2.

Three monitoring wells were installed at the Building 7-27-1 area in 1991: NGW251, NGW252, and NGW253. PCBs, metals, TPH, and/or VOCs were analyzed in groundwater samples collected in 1991, 1993, and 2002. Lead, gasoline-range hydrocarbons, benzene, TCE, and vinyl chloride all exceeded the RISLs in NGW252 and NGW253 in 1991 and 1993. However, in 2002, only TCE exceeded the RISL in NGW253, and thus it only shows up as detected in the table below. No sampling has taken place since 2002.

Groundwater depth is approximately 10 to 11.5 feet bgs and flow is approximately toward the south. Cracks, breaks, or fractures were not observed in this area in the 2010 video inspections of the storm drain lines, which are not submerged below the water table. As such, infiltration into the NBF storm drain system from this area is not considered to be a concern.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Building 7-27-1 Area (Markov Property)

Chemical Class	Chemical	Soil (Non-Leaching)		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
VAHs	Benzene	NE	NE	1.0 U	1.3-N
VOCs	TCE	NE	NE	8.0	2.0
	Vinyl chloride	NC	NC	1.0 U	5.0-N

EF Exceedance factor NC Not a COPC NE No exceedance U Non-detect
-N EF based on non-detect concentration

RI Scoped Activities

Further investigation is recommended at the Building 7-27-1 Area to define the extent of PCBs, TPH, and VOCs in groundwater. Existing wells NGW252 and NGW253 will be sampled quarterly for a year, and analyzed for PCBs, chlorinated VOCs, and TPH. Sampling the two downgradient wells is part of the Site-wide monitoring network and is considered high priority.

Summary of RI Scoped Activities
Building 7-27-1 Area (Markov Property)

RI Scoped Activity	Total Number of Borings/ Wells	Minimum Number of Soil Samples per Boring	Minimum Number of GW Samples per Well	Priority	Analyses
Existing GW Wells	2	NA	4	High	PCBs, TPH, cVOCs

Existing wells include NGW252 and NGW253. cVOCs chlorinated VOCs

7.1.5.4 Building 3-380 Area

Rationale for RI Approach: Install upgradient and downgradient monitoring wells to confirm presence and extent of significant metals contamination previously identified in area wells. The new wells will also form part of the Site-wide groundwater monitoring network.

Building 3-380 is a paint hangar that was constructed between late 1990 and 1993 (Figures 7.1-49 and 7.1-57). The building replaced Buildings 3-370 through 3-373, which were demolished in late 1989 or early 1990 (GTI 1990b). Transformers were formerly located on an unpaved area next to Building 3-370.

Prior to construction of Building 3-380, two environmental assessments were performed in 1989 and 1990. Five monitoring wells (GT-1 through GT-5), 25 soil borings, and 10 test pits were advanced in the planned footprint of Building 3-380 (Figure 7.1-58). Two soil samples were collected from each of the 25 borings. Soil samples from the 10 test pits were field screened using a photo-ionizaton detector (PID), which suggested that VOCs were not present. Discrete soil samples were analyzed for TPH, SVOCs, and VOCs. Composite soil samples were analyzed for PCBs; four were also analyzed for metals. Benzo(a)pyrene exceeded the RISL in boring B-3, with total cPAH concentration at 0.85 mg/kg (EF 91). No other chemicals were detected above the RISLs (GTI 1989a, 1990b).

Groundwater samples were collected in these five wells in March 1989 and 1990 and analyzed (by GTEL Laboratories and ATI, respectively) for TPH, VOCs, SVOCs, and metals. Arsenic, chromium, copper and mercury concentrations in groundwater significantly exceeded the RISLs, with highest EF value at GT-4 EF 4,000 for arsenic). Detection limits for most metals exceeded the RISLs. VOCs, SVOCs, and TPH were not detected; however, the detection limits for BEHP and several VOCs exceeded the RISLs. Monitoring wells GT-2 through GT-5 were abandoned during the second environmental investigation. Boeing decommissioned well GT-1 prior to the construction of Building 3-380 (GTI 1989a, 1990b).

Storm drain lines N1, NC1, and B1, which are adjacent to the building on the north, east, and south, are below the water table; therefore, there is potential for groundwater to infiltrate the storm drain system. The current condition of most storm drain lines in this area has not been assessed (Figure 7.1-3). PCBs, cadmium, lead, zinc, HPAHs, and BEHP have been detected in storm drain solids samples collected in the Building 3-380 Area.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Building 3-380 Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
Metals	Antimony	NC	NC	10,000 U	1,700-N
	Arsenic	NE	NE	20,000	**4,000**
	Beryllium	NC	NC	10,000 U	2,500-N
	Cadmium	NE	NE	300 U	120-N
	Chromium	NE	NE	100,000	**1,000**
	Copper	NE	NE	60,000	**500**
	Lead	NE	NE	5,000 U	450-N
	Mercury	NE	NE	4.0	**200**
	Nickel	NE	NE	30,000 U	300-N
	Selenium	NC	NC	5,000 U	100-N
	Silver	4 U	13-N	20,000 U	13,000-N
	Thallium	NC	NC	5,000 U	10,000-N
	Zinc	NE	NE	60,000	**1,800**
Petroleum Hydrocarbons	Total Petroleum Hydrocarbons	NE	NE	1,000 U	2.0-N
Phthalates	BEHP	0.34 U	5.1-N	10 U	10-N
PAHs	Benzo(g,h,i)perylene	0.34 U	11-N	NC	NC
	Benzo(a)pyrene	0.77	**82**	NC	NC
	Fluoranthene	0.34 U	2.1-N	NC	NC
	2-Methylnaphthalene	0.34 U	7.9-N	--	--
	Total cPAHs	0.85	**91**	NC	NC

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Building 3-380 Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
VAHs	Benzene	0.25 U	250-N	5.0 U	6.3-N
VOCs	1,2-DCE (mixed isomers)	0.094 U	4.1-N	--	--
	PCE	0.25 U	140-N	6.4	1.3
	TCE	0.25 U	170-N	5.0 U	1.3-N
	Vinyl chloride	NC	NC	10 U	50-N

-- Not analyzed   EF Exceedance factor   NC Not a COPC   NE No exceedance
U Non-detect   -N EF based on non-detect concentration

RI Scoped Activities

Concentrations of COPCs detected in soil from the Building 3-380 Area are below the RISLs, with the exception of benzo(a)pyrene, which was detected above the RISL in a single sample. Additional sampling is not needed to define the nature and extent of PAHs or other COPCs in soil in the Building 3-380 Area.

Groundwater concentrations of arsenic, copper, mercury, and zinc exceeded the RISLs in samples from all five former wells in this AOC. The last groundwater monitoring event was performed in March 1990. Storm drain lines adjacent to the building are submerged below the water table and there is potential for groundwater, which may be contaminated with metals, to infiltrate the storm drain system.

Two monitoring wells will be installed in this AOC to determine if COPCs are present in groundwater at concentrations exceeding the RISLs, and to fill gaps in the present locations of the groundwater monitoring network (Figure 7.1-57). At least two soil samples will be collected from the well borings and analyzed for metals, PCBs, and SVOCs. Soil sampling is considered a low priority at this AOC. Four groundwater monitoring events will be performed at these wells. Groundwater samples will be analyzed for the same analytes as soil. Installation of the monitoring wells will support the Site-wide groundwater investigation (Section 7.1.8); therefore, completion of the wells is considered a high priority.

Summary of RI Scoped Activities
Building 3-380 Area

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
New GW Wells	2	2	4	Low (Soil) High (GW)	PCBs, Metals, SVOCs

7.1.5.5 Building 3-369 and Building 3-374 Areas

Rationale for RI Approach: Confirm presence and extent of significant metals contamination in groundwater previously identified in area wells on the downgradient half of the Building 3-369 Area.

Building 3-369 and adjacent Building 3-374 are located west of Building 3-390 (Figures 7.1-49 and 7.1-59). Building 3-369 was built in 1967 and is used as a paint hangar, which is equipped with a water wash paint system. Paint, wash water, and cleaning compounds accumulate in plenum sumps underlying the hangar floor (GTI 1989b). A wastewater treatment plant is included in this building. Former USTs UBF-22 and UBF-23 were located south of Building 3-374 (Figure 7.1-60). The 20,000-gallon USTs were used to store #6 fuel oil.

An environmental site assessment was performed in 1989 to determine if soil or groundwater contamination was present due to potentially leaking sumps. Three monitoring wells, GT88-1 through GT88-3, were installed around the perimeter of Building 3-369 (Figure 7.1-60). Groundwater samples were collected and analyzed for VOCs and metals (by GTEL Laboratories). Antimony, chromium, mercury, nickel, and thallium concentrations exceeded the RISLs, and in some cases with significant exceedances. Chemical concentrations for VOCs were below RISLs for all samples (GTI 1989b).

In 1991, a pre-construction environmental assessment was performed on the southwest side of Building 3-369 prior to UST installation (Figure 7.1-60). A groundwater sample was collected from GT88-1 and analyzed for metals (by Boeing Environmental Laboratory). Zinc concentrations exceeded the RISL. During installation of the 8,000-gallon UST, excavated soil was screened with a PID, which suggested that VOCs were not present; therefore, no laboratory analyses were performed. Approximately 150 cubic yards of soil were removed and hauled offsite (GTI 1991a).

Four monitoring wells, BF-OW22A through BF-022D, were installed on the western and eastern sides of former tanks UBF-22 and UBF-23 in June 1986 (Figure 7.1-60). The wells were decommissioned and well casings removed in November 1992 (SEACOR 1993a). Analytical data from soil and groundwater samples collected at these wells (if any) were not available for review.

During decommissioning and removal of UBF-22 and UBF-23, odor and soil staining indicating the potential presence of petroleum hydrocarbons were observed in the UST excavation (Figure 7.1-60). An investigation and corrective action were conducted, which included the removal of approximately 135 cubic yards of soil (Boeing 1995). Diesel-range hydrocarbons were detected below the MTCA Method A CUL in the excavated soil. Soil contamination did not extend to the water table, and a site assessment confirmed removal of all TPH-impacted soil (SECOR 1994h). None of the soil samples were analyzed for PCBs. The release was reported as cleaned up in January 1995, according to Ecology’s LUST database.

In 2012, six dewatering wells were installed around Building 3-370, for utility upgrade work. Groundwater samples were collected in August and analyzed for PCBs, metals, SVOCs, and VOCs. Only metals were detected (except for common laboratory contaminants). Well DW-1-370, which is included within this AOC, had the highest concentrations of the six wells for every metal. However, the maximum EF for metals in this well was 15 (for mercury), which is much lower than the levels identified in historical sampling at the Building 3-369 Area and Building 3-380 Area.

Storm drain lines S1, S2, and SC2, which are adjacent to the building to the south, southeast, and west, are deep and submerged below the water table (Figure 7.1-3). Signs of soil and groundwater infiltration were observed near MH378 in line S2 during the 2010 video inspection (Table 7.1-1). Concentrations of PCBs, mercury, cadmium, copper, lead, zinc, HPAHs, and BEHP have been detected in storm drain solids samples collected in the area of Buildings 3-369 and 3-374.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Building 3-369 and Building 3-374 Areas

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
Metals	Antimony	NC	NC	2,000	**330**
	Arsenic	--	--	30	6.0
	Beryllium	NC	NC	20 U	5.0-N
	Cadmium	--	--	110	**42**
	Chromium	--	--	1,600	16
	Copper	--	--	2,070	17
	Lead	--	--	1,560	**140**
	Mercury	--	--	2.0	**100**
	Nickel	--	--	1,260	13
	Selenium	NC	NC	1,000 U	20-N
	Silver	--	--	40	**27**
	Thallium	NC	NC	400	**800**
	Zinc	--	--	1,000	**30**
Phthalates	BEHP	--	--	3.0 U	3.0-N
VAHs	Benzene	--	--	5.0 U	6.3-N
VOCs	1,1-DCE	NC	NC	50 U	7.1-N
	PCE	--	--	50 U	10-N
	TCE	--	--	50 U	13-N
	Vinyl chloride	NC	NC	100 U	500-N

-- Not analyzed EF Exceedance factor NC Not a COPC U Non-detect
-N EF based on non-detect concentration

RI Scoped Activities

Groundwater in monitoring wells GT88-1 through GT88-3 was last sampled in 1991. Well GT88-3 has been abandoned, but GT88-1 and GT88-2 are still present onsite. Storm drain lines S1, S2, and SC2 are submerged below the water table, and there is potential for groundwater, which may still be contaminated with metals, to infiltrate the storm drain system. Concentrations of PCBs, mercury, cadmium, copper, lead, zinc, HPAHs and BEHP have been detected in storm drain solids samples collected in the area of Buildings 3-369 and 3-374.

Three existing monitoring wells will be sampled to determine if metals, PCBs and SVOCs are present in groundwater at concentrations exceeding the RISLs (Figure 7.1-59). At least four groundwater monitoring events will be performed at each well. Groundwater samples will be analyzed for PCBs, TPH, SVOCs, and metals during the first monitoring event. In subsequent events, wells will be sampled for metals and any additional analyte groups detected during the first monitoring event. Completion of RI activities in this AOC is a medium priority, due to the lack of known contaminants beyond metals, although characterization has been minimal.

Summary of RI Scoped Activities
Building 3-369 and Building 3-374 Areas

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
Existing GW Wells	3	NA	4	Medium	PCBs, TPH, SVOCs, Metals

Existing wells include GT88-1, GT88-2, and DW-1-370.

7.1.5.6 Building 3-390 Area

Rationale for RI Approach: Install a monitoring well as part of the Site-wide groundwater monitoring network. It will also serve as a downgradient well for two former fuel tank basins and an upgradient well for the Building 3-369 Area.

Building 3-390, the Flight Center structure, is the largest building at NBF (Figures 7.1-49 and 7.1-59). Former PCB-bearing transformers, Numbers 54 and 55, were historically located in the South and North Penthouses of Building 3-390. The volume of these transformers was 375 gallons (Landau 2000b).

In 1986, two fuel USTs were removed from the area north of Building 3-390 along a planned utilidor route. In March 1990, a site assessment was performed at the former UST area prior to trenching the utilidor. Five soil borings, B-1 through B-5, were advanced to depths between 8 and 13.5 feet bgs in the former UST area (Figure 7.1-61). Soil samples were collected from each boring and screened using a PID, which suggested that VOCs were not present. Four soil samples were submitted to a laboratory for hydrocarbon screening, which did not detect hydrocarbons (GTI 1990b).

A third UST, UBF-30, was removed from the area north of Building 3-390 in September 1989. The 120-gallon diesel UST was in good condition when removed. TPH concentrations in the excavation sidewall and bottom samples were below RISLs. Additional soil was removed from the excavation. TPH concentrations in the final sidewall and bottom samples ranged from non-detected to 380 mg/kg (Hart Crowser 1990b).

The deep storm drain lines north of Building 3-390 are submerged below the water table. During the 2010 and 2011 video inspections, cracks, fractures, and flowing water were observed in the storm drain lines (Table 7.1-1, Figure 7.1-3). PCBs were detected in a storm drain solids sample collected from CB370, immediately north of the Building 3-390 Area.

RI Scoped Activities

Soil and groundwater sampling related to the past use of PCB-bearing transformers and/or capacitors is not proposed in this area, because it appears that the equipment was installed inside the building.

One monitoring well will be installed in this AOC to form part of the Site wide groundwater monitoring network, and to serve as a downgradient well for two former fuel tank basins and an upgradient well for the Building 3-369 Area (Figure 7.1-59). Two soil samples will be collected from the well boring; soil sampling is considered low priority, but it supports the well installation activity. Soil and groundwater samples will be analyzed for petroleum hydrocarbons, metals, PCBs, SVOCs, and VOCs (VOCs in soil will only be analyzed if field indications suggest their presence). At least four groundwater samples will be collected from the well.

Summary of RI Scoped Activities
Building 3-390 Area

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
New GW Well	1	2	4	Low (Soil) High (GW)	PCBs, Metals, TPH, SVOCs, VOCs

7.1.5.7 Concourse A Area

Rationale for RI Approach: Confirm the presence of a number of COPCs in soil and groundwater in a large area along a utilidor, including areas with historical electrical transformers. Install two monitoring wells to determine groundwater quality, including downgradient of storm drain replacement soil contamination. The new wells will also form part of the Site-wide groundwater monitoring network, located downgradient of the PEL area.

Concourse A is located along the northern margin of the North Flightline area, parallel to the blast fence, between Building 3-350 and the KCIA property line (Figures 7.1-49 and 7.1-62). A utilidor trends along the northern side of the blast fence (Figure 7.1-63).

In June 1990, petroleum-impacted soil was encountered during a linear excavation for the utilidor of approximately 1,000 feet long and varying in depth from 6 to 8 feet (Figure 7.1-63). During the excavation for the utilidor, a French drain with wooden sides coated with tar and filled with gravel and sludge as well as a large concrete wall or foundation structure were encountered in the western half of the excavation. Tar, sludge, and soil samples were collected from the French drain and analyzed for TPH, PCBs, metals, and PAHs; water from the drain was collected and analyzed for TPH and PCBs. PCBs and metals were not detected in any of these samples. TPH was detected in a sample of tar at a concentration of 150,000 mg/kg. Low levels of PAHs were detected in soil. Multiple stockpiles of soil from the utilidor excavation were sampled and analyzed for PCBs, TPH, and/or BTEX (stockpile sample results are not included in this Work Plan). Diesel-range concentrations in soil exceeded the current MTCA Method A CUL, with a maximum of 3,000 mg/kg. PCBs and benzene were not detected (GTI 1990d). Confirmation samples were not collected from the utilidor excavation.

During facility upgrade activities in 1996, four soil borings, A2, A4, A5, and A6, were advanced in the proposed areas for oil/water separators on Concourse A (Figure 7.1-64). Soil and groundwater samples were collected from borings A5 and A6. Impenetrable subsurface concrete prevented sampling from borings A2 and A4. Gasoline-range (8,500 mg/kg, EF 280) and diesel-range hydrocarbons (3,900 mg/kg, EF 2.0), benzene (0.12 mg/kg, EF 120), and 2-methyl-naphthalene (8.9 mg/kg, EF 210) were present above RISLs in boring A5 (TPH were analyzed using HCID). In boring A6, TPH was reported below current MTCA Method A CULs and benzene was not detected. PCBs were not detected in either boring. TPH, VOCs, PAHs, phthalates, and metals were identified in the groundwater samples (SECOR 1996d). Metals, BEHP, and 2-methylnapthalene concentrations exceeded the RISLs, with very high EF values for vanadium and zinc (see table below).

In late 2008, Boeing repaired a portion of a storm drain line in Concourse A to the northeast of MH228 (Figure 7.1-62) and in Concourse B between MH248 and MH249 (see Section 7.1.6.6). In order to complete the repairs, excavations were performed. Composite samples collected from stockpiled soil (presumably excavated from both concourses) were analyzed for PCBs, metals, TPH, VOCs, and SVOCs. PCBs were detected at concentrations ranging from 2.2 to 7.5 mg/kg (EF to 230). Barium and silver were also detected above RISLs. VOCs and SVOCs were not detected, although method detection limits were elevated. Approximately 40 tons of soil were removed (Bach 2008a,b,c). Confirmation soil samples were not collected from the excavation at Concourse A.

The storm drain line that passes through the western end of the Concourse A Area is submerged below the water table. PCBs, cadmium, and zinc have been detected in the storm drain solids samples collected from MH112, which is downstream from the Concourse A Area. Multiple cracks and flow from a tap were reported in 2010 in the storm drain line that passes through the western side of the concourse (Table 7.1-1, Figure 7.1-2). Storm drain lines on the eastern side of this area are situated above the water table. PCBs, mercury, cadmium, and zinc have been detected in storm drain solids samples collected from the eastern side of this AOC.

A PCB-bearing transformer was historically present at the northeastern corner of Building 3-350 (Section 7.1.8.2), which is adjacent to the western side of the Concourse A Area. In addition, PCB-bearing transformers or capacitors were located at Buildings A-5, A-6, 3-125, and 3-126, which are adjacent to the eastern side of the Concourse A Area.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Concourse A Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	0.5 U	15-N	--	--
Metals	Aluminum	NC	NC	246,000	15
	Arsenic	--	--	80	16
	Beryllium	NC	NC	10	2.5
	Cadmium	--	--	10	3.8
	Chromium	--	--	500	5.0
	Copper	--	--	750	6.3
	Iron	NC	NC	252,000	23
	Lead	--	--	150	14
	Manganese	NC	NC	2,930	1.3
	Mercury	--	--	50 U	2,500-N
	Nickel	--	--	240	2.4
	Selenium	NC	NC	150	3.0
	Silver	--	--	10 U	6.7-N
	Thallium	NC	NC	50 U	100-N
	Vanadium	NC	NC	850	**280**
	Zinc	--	--	3,610	**110**
Petroleum Hydrocarbons	Gasoline-Range HCID	8,500	**280**	--	--
	Diesel-Range HCID	3,900	2.0	--	--
	Total Petroleum Hydrocarbons	NE	NE	2,000	4.0
Phthalates	BEHP	0.89	13	7.6	7.6
PAHs	Benzo(g,h,i)perylene	0.24 U	7.7-N	NC	NC
	Benzo(a)pyrene	0.24 U	26-N	NC	NC
	Fluoranthene	0.24 U	1.5-N	NC	NC
	2-Methylnaphthalene	8.9	**210**	56	3.1
	Total cPAHs	0.18 U	19-N	NC	NC
VAHs	Benzene	0.116	**120**	NE	NE

-- Not analyzed EF Exceedance factor NC Not a COPC NE No exceedance
U Non-detect -N EF based on non-detect concentration HCID Hydrocarbon identification

RI Scoped Activities

Concentrations of BEHP, PAHs, benzene, methylnaphthalene, and gasoline- and diesel-range hydrocarbons have been detected in soil in the Concourse A Area. During two excavations, for the utilidor installation and storm drain line replacement, stockpiled soil was sampled and found to contain concentrations of PCBs and other COPCs above RISLs. Confirmation samples were not collected in either excavation. Therefore, the extent of soil contamination is unknown. Metals are present in groundwater at concentrations significantly exceeding the RISLs. Groundwater has not been sampled since 1996.

It is recognized that the original locations of the soil making up the stockpile samples are uncertain, and that drilling through the thick concrete surface of the concourse is not preferred. In addition, it is unlikely that a soil excavation (or other active remediation) would be proposed below the concourse surface to address moderate-level scattered detections in soil, although TPH constituents and PCB concentrations from samples of a soil stockpile were significantly elevated (up to EF 210 and 230, respectively). However, for the feasibility study, in order to propose potentially leaving soil in place (containment below concrete), the approximate range of concentrations must be quantified, along with any impact to groundwater and stormwater. Thus, limited soil sampling will be proposed to assess the range in soil concentrations, and sample locations will be kept to a minimum on the concourse surface. In addition monitoring wells will be proposed to determine the impact to groundwater. A number of borings have been previously drilled in the concourse area, and RI activities will be similarly conducted so as to minimize interference with flightline operations.

A series of seven soil borings, including installation of two monitoring wells, will be advanced in this lengthy area to characterize soil along and near the utilidor, including near contamination identified at boring A5, along the storm drain line excavation area, and near locations of former transformers or capacitors. The addition of the two wells will fill gaps in the Site-wide groundwater monitoring network and will aid in determining if groundwater quality has been impacted in this area. This includes one well on the downgradient side of the utilidor area, near the N1 storm drain line, which is submerged below the water table. A second monitoring well will be installed near former temporary wells A5 and A6, near the storm drain excavation area. The spacing of borings takes into account the locations of these two borings, A5 and A6.

Soil borings will be advanced as close as feasible to the utilidor and storm drain line excavation. One soil boring will be advanced at the northeast corner of Building 3-350 (subsurface utilities preclude an additional boring), and two soil borings will be advanced near the Building A-5 general area to evaluate the potential for PCB contamination, related to historical transformers or capacitors, from reaching soil (Figure 7.1-62).

At least two soil samples will be collected from each boring. Soil samples will be analyzed for PCBs, TPH, SVOCs, and metals; VOCs will only be analyzed if field indications suggest their presence, including the possibility of gasoline-range hydrocarbons. Four groundwater monitoring events will be performed at the wells. Samples collected during the first groundwater monitoring event will be analyzed for PCBs, TPH, SVOCs, VOCs, and metals. Samples from subsequent events will be analyzed only for the classes of COPCs that were detected at concentrations exceeding the RISLs during the first groundwater monitoring event.

Completion of the soil boring and the well at the western end of Concourse A Area is a high priority because the storm drain line in this area is submerged at high water and due to the presence of PCBs in storm drain structures. Completion of the remaining soil borings, including those adjacent to the replaced storm drain line on the eastern side of the concourse is a medium priority due to the lack of submergence of storm drain lines and the moderate concentrations of contaminated soil, but with the potential for the presence of PCBs. Installation of the monitoring well on the eastern side of Concourse A will support the Site-wide groundwater investigation (Section 7.1.8) and is considered a high priority.

Summary of RI Scoped Activities
Concourse A Area

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
Soil Borings	5	2	NA	Medium to High	PCBs, Metals, TPH, SVOCs, VOCs
New GW Wells	2	2	4	High	PCBs, Metals, TPH, SVOCs, VOCs

7.1.6 Areas of Concern in Central Flightline Area of NBF

The Central Flightline area of NBF encompasses the area between the middle of Building 3-390 and Building 3-825 (Figure 7.1-65). For each AOC in this section, detected analytical results for all RISL exceedances are presented in Table 7.1-9 for soil and Table 7.1-10 for groundwater. Information in this section has been reviewed and summarized for the following potential source areas within the Central Flightline area:

- Buildings 3-800 and 3-801 Area
- Building 3-818 Area
- Main Fuel Farm Area
- Concourse C Area (Flightline Utility Corridor)
- Concourse B Areas
- Central Flightline Transformer Areas

7.1.6.1 Buildings 3-800 and 3-801 Area

Rationale for RI Approach: Determine the downgradient extent of the Building 3-800 VOC contamination and the long-term effect of bioremediation in this area, through groundwater monitoring and installation of one well in the downgradient center of the plume. Soil sampling is necessary to confirm the extent of elevated levels of TPH identified following the 1992 excavation between Buildings 3-800 and 3-801. A new downgradient well near Building 3-801 is needed to determine the impacts of this AOC on groundwater quality and to serve as part of the Site-wide groundwater monitoring network. Determine the potential for vapor intrusion into the north side of Building 3-800, based on soil and groundwater volatile contamination, and into the northeast side of Building 3-801, based on soil volatile contamination.

Building 3-800, the Flight Test and Delivery Center, is located immediately northeast of Building 3-801, the Flight Test Engineering Lab (Figures 7.1-65 and 7.1-66). Building 3-800 is planned to undergo renovation in early 2014. An electrical substation was situated adjacent to the northwest corner of the Building 3-801, and just west of a UST. The tank presumably contained fuel for a generator that supplied auxiliary power for the substation (SEACOR 1991a).

In 1989, prior to the construction of Building 3-800, a 2,000-gallon heating oil UST and an unknown 300-gallon UST were removed from the area that is now east of Building 3-801 (south of the overhead walkway near SB-4). Forty test pits and five monitoring wells were installed (Figure 7.1-67). Diesel-range hydrocarbon concentrations in soil exceeded MTCA CULs, which led to additional environmental investigations of the building site. This was followed by a soil excavation that spread out from the heating oil tank. During the excavation, an abandoned sewer line containing approximately 1 gallon of fuel product was discovered. The former sewer line was connected to an active sewer line north of the Building 3-800 construction site. Approximately 200 feet of the abandoned sewer line were removed from this area (Hart Crowser 1990a).

In February 1990, Boeing notified Ecology that they had discovered an underground concrete structure during construction of Building 3-800 (Boeing 1990a). This was located on the north side of the building, near the proposed soil vapor point (purple triangle) in Figure 7.1-66. Boeing records indicated that this was a septic tank, removed from service in 1955. Sludge and water inside the structure were found to contain low levels of metals, VOCs, and SVOCs. Six soil borings and nine monitoring wells were then installed (Figure 7.1-66). A limited excavation was conducted in 1990 due to concerns of undermining and damaging adjacent structures (SEACOR 1992g). Waste disposed in this septic tank appears to have been the sole source for the ongoing VOC plume between Buildings 3-800 and 3-390.

In 1991, Boeing installed 25 soil borings in the area around and east of Building 3-801 during the course of two pre-construction environmental investigations. In Figure 7.1-68, the right side of the drawing presents locations of these soil borings and four wells (showing the inaccurate future footprint of the building). Those borings that have soil samples not removed during excavation are shown on Figure 7.1-66.

Metals, petroleum hydrocarbons, TCE, and PCE were detected in soil and groundwater samples collected during the first pre-construction investigation for Building 3-801 (SAIC 2009b). TCE was identified in a soil sample at SB-15 at 0.4 mg/kg (EF 270). Results of groundwater samples collected during the second investigation indicated concentrations above CULs of antimony, arsenic, chromium, copper, and lead in MW-3 and MW-4 (SEACOR 1991c). Overall, the most elevated groundwater exceedance at this area included arsenic at MW-4 (EF 34) in July 1991. Arsenic was detected at a lower concentration in MW-4 (EF 1.3) during the September sampling event. In addition, soil samples from borings SB-1A through SB-4A indicated the presence of arsenic at low concentrations in all four borings, from an unknown source (SEACOR 1991c).

During March 1992, Boeing conducted an independent soil remedial action at the proposed Building 3-801 location (SEACOR 1992f). Petroleum-impacted soil was removed near the northeast portion of the proposed building footprint; a utility trench was excavated in May 1992 near an excavated heating oil tank. This was the same tank that was the source of the 3-800 excavation mentioned above, and these two excavations had a significant amount of overlap (Figure 7.1-66). A total of 53 excavation soil samples, 16 stockpile soil samples, and one test pit soil sample were collected. The left half of Figure 7.1-68 presents sample locations and TPH results within the limits of this excavation, prior to construction of Building 3-801 (note that the final footprint of Building 3-801 was moved farther away from 3-800). Petroleum-impacted soils remain along a portion of the eastern perimeter of the excavation, close to Building 3-800, at depths between 5.5 and 7.5 feet bgs, with TPH concentrations ranging from 410 to 26,000 mg/kg (SEACOR 1992f). These soils were not excavated due to the potential for compromising the integrity of existing structures at that time.

Over the course of the investigations at the Buildings 3-800, 3-801 Area, concentrations of metals, TPH, BEHP, PAHs, and VOCs in soil exceeded RISLs, while detection limits for PCBs and benzene exceeded RISLs. Concentrations of cPAHs in soil reach up to 0.84 mg/kg (EF 89) at MW-2 northwest of Building 3-800, and concentrations of TCE reach 0.40 mg/kg (EF 270) in boring SB-15 located north of Building 3-801. In groundwater, concentrations of metals, PCE, TCE, and vinyl chloride significantly exceed RISLs. Historically, the highest VOC concentrations and EFs have originated in wells northwest of the building (especially NGW307 and NGW308). Concentrations of VOCs in these and other wells in this area have reduced significantly since the mid-1990s.

The main storm drain line in the south lateral drainage area is submerged below the water table; this line trends through this area contamination by VOCs and PAHs. Other storm drain lines in the vicinity of these buildings are not submerged. Two local storm drain line segments were reported to be cracked or fractured; however, signs of infiltration were not reported (Figure 7.1-3).

Volatile constituents in soil and groundwater at sample locations within 100 feet of Buildings 3-800 and 3-801 exceed soil RISLs and/or vapor intrusion screening levels (VISLs) for groundwater (Ecology 2009b). Vinyl chloride in groundwater samples north of Building 3-800 (NGW301) were detected within the last three years of sampling at 4.9 ug/L, corresponding to a VISL EF value of 14 (Table 7.1-13). In the same general vicinity, in 1990s soil sampled at depths between 6 and 7 feet bgs, PCE, TCE, and cis-1,2-DCE showed significant RISL exceedances, at 0.28, 0.07, and 0.32 mg/kg, respectively, corresponding to RISL EF values of 160, 47, and 62. TCE in a soil sample northeast of Building 3-801 (SB-15) was detected at 0.40 mg/kg, with an elevated EF of 270. Thus, vapor intrusion potential is a concern for both buildings.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Buildings 3-800 and 3-801 Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	0.04 U	1.2-N	0.8 U	18-N
Metals	Antimony	NC	NC	57	9.5
	Arsenic	10	1.4	170	**34**
	Cadmium	2.1	2.1	--	--
	Copper	153	4.3	NE	NE
	Mercury	0.14	2.0	--	--
	Silver	0.6 U	2.0-N	--	--
	Zinc	175	2.0	65	2.0
Petroleum Hydrocarbons	Total Petroleum Hydrocarbons	17,000	**8.5**	2,000 U	4.0-N
Phthalates	BEHP	1 U	15-N	NE	NE

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Buildings 3-800 and 3-801 Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PAHs	Benzo(a)pyrene	0.77	**82**	NC	NC
	Benzo(g,h,i)perylene	1 U	32-N	NC	NC
	Fluoranthene	0.21	1.3	NC	NC
	2-Methylnaphthalene	0.1 U	2.3-N	NE	NE
	Total cPAHs	0.84	**89**	NC	NC
VAHs	Benzene	0.077 U	77-N	1.0 U	1.3-N
VOCs	cis-1,2-DCE	0.32	**62**	44	2.8
	1,2-DCE (mixed isomers)	0.13	5.7	NE	NE
	PCE	0.98	**540**	8.2	1.6
	TCE	0.40	**270**	NE	NE
	Vinyl chloride	NC	NC	22	**110**

-- Not analyzed EF Exceedance factor NC Not a COPC NE No exceedance
U Non-detect -N EF based on non-detect concentration

Current Remedial Actions

In 2011, CALIBRE developed a work plan designed to conduct additional bioremediation injections in the area of Building 3-800, in order to address groundwater concentrations of PCE, TCE, cis-1,2-DCE, and vinyl chloride (CALIBRE 2011). The work plan outlines the use of five existing shallow monitoring wells (NGW301, NGW303, NGW305, NGW307, and NGW308). As with past bioremediation, the substrate injection utilized sucrose as a biostimulant to promote reducing conditions. Substrate injections were conducted in April 2009, July 2010, and June 2011 (CALIBRE 2012). While natural attenuation is occurring in this area, bioremediation injections are intended to accelerate the degradation process of these chlorinated VOCs. The degradation half life of these chemicals in NGW301 is estimated to have decreased from 108 months to 16 months (CALIBRE 2012). Groundwater monitoring in February 2013 indicated elevated concentrations of cis-1,2-DCE, TCE, PCE, and vinyl chloride in NGW301 (however, 2013 groundwater sample results are not included in tables or figures in this Work Plan). Based on the concentration trends presented in the 2012 report, the long-term trends (18-20 years) are indicative of reductions of chlorinated VOCs, but the short-term trends during the last few years with bioremediation are not as definitive.

RI Scoped Activities

Significant levels of chlorinated VOCs and minor amounts of PAHs and metals likely remain in soil in the area north of Building 3-800 (between it and Building 3-390), and chlorinated VOCs remain at elevated concentrations in groundwater in this area. In order to further delineate the downgradient extent of this groundwater plume, one monitoring well will be installed. This well will be located northwest of Building 3-800, in the middle of the street, and downgradient of wells NGW301 and NGW302. This location is believed to be close to the center of the plume, more so than NGW301 and NGW309. This will aid in characterizing the downgradient margin of this VOC plume and help determine if the bioremediation is having a beneficial effect in reducing plume size, which may be a long-term process. During installation, soil will be sampled from at least two depths for VOCs and metals. For the RI, four quarterly groundwater monitoring events will be performed at this well, and samples will be analyzed for VOCs and metals. The proposed monitoring well location is presented in Figure 7.1-66.

All previously installed monitoring wells at the Building 3-801 area have been abandoned. One well (MW-4), from a July 1991 sample, showed significantly elevated concentrations of arsenic in groundwater. MW-4 was sampled again two months later, and arsenic was detected at a much lower level. One soil boring (SB-15) showed an elevated concentration of TCE. No samples have been collected at this area since 1991, but remaining contamination appears to be low to moderately elevated and scattered, partly located under the building, or closer to Building 3-800 for the case of petroleum hydrocarbons.

One downgradient monitoring well to the west of Building 3-801 is proposed to verify that contamination is not being transported from this area. This well will also form part of the Site-wide groundwater monitoring network. The approximate location of this downgradient well is shown on Figure 7.1-66. During installation, soil will be sampled from at least two depths for VOCs, SVOCs, and metals. For the RI, four groundwater monitoring events will be performed at this well, and samples will be analyzed for VOCs and metals. Although the soil sampling is low priority, the groundwater monitoring network is considered high priority. Because active remediation is ongoing at this AOC, Boeing groundwater monitoring data will continue to be evaluated to determine the long-term effect of bioremediation on VOC concentrations.

In addition, two soil borings will be advanced between the two buildings to evaluate and characterize any remaining TPH impacts in soil, as indicated by documentation of the 1992 remedial excavation (Figure 7.1-68). A minimum of two soil samples will be collected from each boring. Samples will be analyzed for TPH and VOCs. Soil sampling is considered low priority due to the limited or moderate contamination expected in these areas and because the storm drains are not submerged; however, installation of the downgradient well (above) is considered high priority as part of the Site-wide groundwater monitoring network.

Soil vapor intrusion is a potential concern in the Buildings 3-800, 3-801 Area, because concentrations of vinyl chloride, cis-1,2-DCE, PCE, and TCE in soil and/or groundwater significantly exceed RISLs and/or VISLs at sample locations within 100 feet of buildings (Table 7.1-13). Due to the proximity of samples with elevated levels of VOCs to buildings that are regularly occupied, two soil vapor monitoring points will be installed: one will be located north of Building 3-800 (near the former septic tank) and the other northeast of Building 3-801 (near TCE soil result) as shown in Figure 7.1-66. Soil vapor samples will be collected and analyzed for VOCs for two seasonal monitoring events. A soil sample will also be collected at the vapor point screen depth (approximately 5 feet) and analyzed for VOCs. In addition, existing wells NGW307 and NGW309 will be monitored for VOCs for two rounds of biannual sampling. These are considered high priority to evaluate vapor intrusion potential for Buildings 3-800 and 3-801.

Summary of RI Scoped Activities
Buildings 3-800 and 3-801 Area

RI Scoped Activity	Total Number of Borings/ Wells/Points	Min Number of Soil Samples per Boring	Min Number of GW/Vapor Samples per Well/Point	Priority	Analyses
Soil Borings	2	2	NA	Low	TPH, VOCs
New GW Wells	2	2	4	Low (Soil) High (GW)	Metals, SVOCs, VOCs
Existing GW Wells	2	NA	2	High	VOCs
Soil Vapor Points	2	1	2	High	VOCs

Existing wells include NGW307 and NGW309.

7.1.6.2 Building 3-818 Area

Rationale for RI Approach: Soil and groundwater contamination in the Building 3-818 Area does not appear to be of concern; therefore, no additional RI work is proposed at this time (for vapor point sampling, see Section 7.1.6.3).

The Building 3-818 Area is located south of Building 3-800 (Figures 7.1-65 and 7.1-69). In early 2014, Building 3-818 is planned to be demolished and replaced. In 1993, two monitoring wells, NBF-3-818-MW1 and NBF-3-818-MW2 were installed east of Building 3-818 to evaluate soil and groundwater conditions prior to the installation of an oil/water separator (Figure 7.1-70). Four soil and two groundwater samples were analyzed for TPH and BTEX. No chemicals were detected in the samples (SEACOR 1993c). Wells NBF-3-818-MW1 and NBF-3-818-MW2 were abandoned in October 1993 (SEACOR 1993f).

Storm drain lines S1 and S6A, which pass through this AOC, are mostly below the water table (Figure 7.1-3). During the 2010 video inspection, multiple cracks and continuously infiltrating gravel were noted in the S1 line, and multiple cracks and fractures were noted in the S7 line (Table 7.1-1). PCBs, mercury, cadmium, and zinc were detected in SD solids samples collected from the storm drain structures in the Building 3-818 Area.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Building 3-818 Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
VAHs	Benzene	--	--	1.0 U	1.3-N

-- Not analyzed or no exceedance; therefore EF is not provided   EF Exceedance factor
U Non-detect   -N EF based on non-detect concentration

RI Scoped Activities

One soil vapor monitoring point will be installed near the southeast corner of Building 3-818 (Figure 7.1-69). The basis for this recommendation is presented in Section 7.1.6.3, the Main Fuel Farm Area.

In soil and groundwater, COPCs were not detected in exceedance of RISLs in the Building 3-818 Area. COPCs in soil are not believed to pose a threat to down gradient pathways via leaching from soil to groundwater in this AOC. As such, additional RI activities are not proposed at this time.

7.1.6.3 Main Fuel Farm Area

Rationale for RI Approach: Define extent of petroleum-related contamination identified in soil remaining from previous excavations, where confirmation samples indicate elevated concentrations of COPCs. Install three downgradient monitoring wells and sample existing wells to determine extent of the groundwater plume. Determine the potential for vapor intrusion into the southeast end of Building 3-818, based mainly on groundwater volatile contamination.

The Main Fuel Farm Area (Figures 7.1-65 and 7.1-69) includes Building 3-822, two 30,000-gallon ASTs near the northwest area boundary, a concrete oil/water separator and a 6,000-gallon AST near the northeast area boundary, and a fuel island near the western portion of the area (SEACOR 1992d). Work on fuel tanks in this area is ongoing. The eastern margin of the fuel farm is bounded by a 20-foot high concrete blast wall (SECOR 1994f).

Three USTs (UBF-1, UBF-2, and UBF-3) were formerly located at the Main Fuel Farm; these 40,000-gallon steel tanks were used for jet fuel/kerosene storage (Landau 1986c). In December 1991, these three USTs failed a leak test. According to the ERT System report, petroleum product was seeping out of the concrete (Ecology 1991). NAPL was present in two monitoring wells, and approximately 4 gallons of NAPL were bailed from each well (SEACOR 1992b). In December 1992, UBF-1, UBF-2, and UBF-3 were decommissioned by excavation and removal (Figure 7.1-71).

Between 1986 and 1994, a total of 22 monitoring wells were installed in the Main Fuel Farm Area (Figure 7.1-71). Historically, groundwater samples were analyzed for petroleum hydrocarbons and BTEX. Nine of the wells remain active; wells NGW354, NGW355, NGW356, NGW357, and NGW358 are currently monitored on a biannual basis. Wells NGW351, NGW352, NGW353, and NGW359 have not been sampled since 2002, when concentrations had attenuated to nondetectable levels or concentrations below the MTCA Method A CUL. Concentrations of jet fuel, diesel-range hydrocarbons, and/or benzene have exceeded RISLs in samples collected between 2008 and 2011. From January 2010 to August 2011, the highest TPH concentrations were observed in well NGW354. NAPL was present in well NGW354 during the August 2011 groundwater monitoring event. Benzene was present in NGW354 with an exceedance of the RISL at a factor of 2,000 in 2013 (February 2013 sample results are not included in tables or figures in this Work Plan).

Nine soil borings were advanced in the Main Fuel Farm Area in March 1992. Soil samples were analyzed for TPH and BTEX. Depth to groundwater ranged from 6.9 to 8.7 feet. TPH was detected in five of the soil borings, and one sample exceeded the MTCA Method A CUL. BTEX was not detected in the soil samples (SEACOR 1992d).

Between July 1992, and October 1992, a NAPL extraction system was installed and operated by Boeing (SECOR 1994f). During this time, approximately 450 gallons of NAPL were recovered (SEACOR 1992e).

In December 1992, the USTs were decommissioned by excavation and removal. NAPL was observed overlying the groundwater during the decommissioning activities, which limited the extent of the excavation. Soil samples analyzed during UST removal indicated that diesel-range hydrocarbon concentrations above the MTCA Method A CUL were present at locations southwest of the oil/water separator, and along the northeastern side of the UST excavation, adjacent to the former location of tank UBF-1 (SEACOR 1993e) (Figure 7.1-71).

In June 1994, the concrete oil/water separator, located in the northeast portion of the investigation area, was removed as part of a subsurface site assessment and independent soil cleanup action conducted by Boeing (Figure 7.1-71). Due to structural concerns associated with the blast wall, the east wall of the oil/water separator was left in place. The average depth of the excavation was 9.5 feet. A total of 34 confirmation soil samples were collected from the excavation sidewalls, as well as 19 stockpile characterization samples, including concrete and soil stockpile samples. Samples were analyzed for TPH, and some samples were also analyzed for BTEX, PCBs, SVOCs, and TCLP metals. An estimated 3,700 cubic yards of soil were removed from the area. Results indicated that residual petroleum-hydrocarbon impacted soil is present at limited areas in shallow soil (less than 5.5 feet bgs) on the east side of the excavation, beneath the blast wall. In addition, residual impacted soils may remain beyond the lateral extent of the excavation in deeper soil (greater than 5.5 feet bgs) on the north, south, and east sidewalls. Impacted areas were generally within 1 foot above the observed depth to groundwater. Relatively high concentrations of PAHs (including cPAHs) were also detected in soil (SECOR 1994f).

Storm drain lines in the Main Fuel Farm Area are situated above the water table. These lines were not evaluated during the 2010 video inspection (Figure 7.1-3). PCBs, cadmium, zinc, and BEHP have been detected in storm drain solids samples collected from the area.

Monitoring results for well NGW354 suggest a potential for vapor intrusion concerns because it is located within 100 feet and upgradient of Building 3-818. Concentrations of benzene are elevated in groundwater samples from NGW354, with a maximum concentration of 270 ug/L during the last three years of sampling, corresponding to a VISL EF of 110. Gasoline-range hydrocarbon concentrations are also elevated in soil at the north end of this AOC.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Main Fuel Farm Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	1.2 U	36-N	--	--
Metals	Barium	2,400	**29**	--	--
Petroleum Hydrocarbons	Gasoline-Range	6,100	**200**	--	--
	Diesel-Range	14,000	**7.0**	200,000	**400**
	Jet Fuel	4,170	2.1	610,000	**1,200**
	Total Petroleum Hydrocarbons	26,000	**13**	--	--

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Main Fuel Farm Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
Phthalates	BEHP	0.78 U	12-N	--	--
PAHs	Benzo(g,h,i)perylene	0.87	**28**	NC	NC
	Benzo(a)pyrene	4.3	**460**	NC	NC
	Fluoranthene	22	**140**	NC	NC
	2-Methylnaphthalene	15 M	**350**	--	--
	Total cPAHs	6.2	**660**	NC	NC
VAHs	Benzene	0.0098	9.8	270	**340**
VOCs	cis-1,2-DCE	0.18 U	35-N	--	--
	PCE	0.18 U	100-N	--	--
	TCE	0.18 U	120-N	--	--

-- Not analyzed EF Exceedance factor NC Not a COPC U Non-detect
-N EF based on non-detect concentration M Estimated value with low spectral match

RI Scoped Activities

Elevated levels of benzene, diesel-range hydrocarbons, and jet fuel have been observed continuously in monitoring wells in the Main Fuel Farm Area. The downgradient boundary of the plume has not been defined. The presence of NAPL and elevated TPH concentrations in the groundwater wells indicate that residual saturation NAPL may remain in soil. Results from the 1994 remedial excavation indicated that residual petroleum-hydrocarbon and PAH impacted soil is present beneath the blast wall and at depth in the southern and northern portions of the excavation; contaminated soil may remain beyond the lateral extent of the excavation on the north, south, and east sidewalls (SECOR 1994f). The lateral and vertical extent of petroleum hydrocarbon contamination in soil and groundwater has not been well-defined in the Main Fuel Farm Area.

All existing monitoring wells (NGW351 through NGW359) in the Main Fuel Farm Area will be sampled prior to proceeding with new investigations. Groundwater samples will be analyzed for petroleum hydrocarbons and BTEX.

Following the initial round of groundwater monitoring, three soil borings and three monitoring wells will be installed to define the extent of contaminated soil and groundwater (Figure 7.1-69). Placement of the wells will be based in part on the results of the initial round of groundwater monitoring. A minimum of two soil samples will be collected from each boring; one of these samples will be collected near the depth of the water table. The soil and water samples will be analyzed for petroleum hydrocarbons, PAHs, and BTEX. A minimum of four groundwater monitoring events will be performed at the new and existing monitoring wells.

Measurable NAPL has been recently present in the monitoring wells at the Main Fuel Farm, the extent of the petroleum hydrocarbon plume in soil and groundwater has not been defined, and some contaminated soil was remaining following the 1994 remedial excavation; therefore, completion of RI activities in this AOC is a high priority.

Groundwater sampling within 100 feet of Building 3-818 indicate the presence of elevated concentrations of benzene and gasoline-range hydrocarbons. To evaluate the potential for soil vapor intrusion, one soil vapor monitoring point will be installed near the southeast corner of Building 3-818 as shown in Figure 7.1-69. Soil vapor samples will be collected and analyzed for VOCs for two seasonal monitoring events. A soil sample will also be collected at the vapor point screen depth (approximately 5 feet) and analyzed for TPH and VOCs.

Summary of RI Scoped Activities
Main Fuel Farm Area

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW/Vapor Samples per Well	Priority	Analyses
Soil Borings	3	2	NA	High	TPH, PAHs, BTEX
New GW Wells	3	2	4	High	TPH, PAHs, BTEX
Existing GW Wells	9	NA	4	High	TPH, PAHs, BTEX
Soil Vapor Point (Bldg 3-818 Area)	1	1	2	High	TPH, VOCs (soil) VOCs (vapor)

Existing wells include NGW351 through NGW359.

7.1.6.4 Concourse C Area (Flightline Utility Corridor)

Rationale for RI Approach: Soil and groundwater contamination in the Concourse C Area does not appear to be of concern; therefore, no additional RI activities are proposed at this time.

The flightline utility corridor near Concourse C is approximately 10 feet wide and contained a variety of subsurface utilities including a fire main, water line, foam water line, foam line, air line, refuel/defuel lines, and a 30-inch storm drain line (SEACOR 1992c). Two power stations, a water vault and an air/water vault, are also located along the corridor. The utility corridor is located east of the Main Fuel Farm (Figures 7.1-65 and 7.1-69). Storm drain lines in this AOC are situated mostly above the water table.

Prior to construction of the utilidor, two geotechnical soil borings were advanced in this AOC (B-1-90 and B-2-90). Diesel-range hydrocarbons were identified at 5,500 mg/kg in a sample composited from B-1-90 at 1 to 4 feet bgs, located near the northwest end of the utilidor area. PCE was detected in this sample at 0.0017 mg/kg (Dames & Moore 1990).

A Phase I soil assessment investigation was conducted at the utilidor location in 1991 (Figure 7.1-72). Eight soil borings, B-1 through B-8, were drilled to a depth of approximately 8.5 feet bgs; 31 samples were collected and analyzed for diesel-range hydrocarbons and VOCs (SEACOR 1991b). In addition, 21 hand auger borings (HA-1 through HA-21) were completed and 31 samples were collected and analyzed for diesel-range hydrocarbons (SEACOR 1992c).

Diesel-range hydrocarbons and several VOCs were detected in boring samples. Aside from chemicals attributable to laboratory contamination, benzene (0.17 mg/kg) was detected at 6 feet bgs in borings B-1 and B-2. Diesel-range hydrocarbons were detected in boring B-2 at 2,500 mg/kg and in one hand auger boring (HA-15) at 4,400 mg/kg (SEACOR 1992c).

Based on results of the Phase I investigation and field observations during removal of existing subsurface utilities and installation of the utilidor, all identified impacted soil was excavated along the Concourse C flightline during November 1991 through January 1992 (Boeing 1991; SEACOR 1992c). Soil was reported as being excavated to depths of 8 to 10 feet bgs; however, a total of 18 post-excavation confirmation samples from the pit floor were collected at bottom depths of only 4.5 to 6 feet bgs. Assuming soil was removed to depths of 8 to 10 feet across the excavation, all soil with COPC concentrations exceeding RISLs was removed through excavation activities. Diesel-range hydrocarbon concentrations in confirmation samples (SEACOR 1992c) were below the RISL.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Concourse C Area

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
Petroleum Hydrocarbons	Diesel-Range	5,500	2.8	--	--
VAHs	Benzene	0.63 U	630-N	--	--

-- Not analyzed EF Exceedance factor U Non-detect -N EF based on non-detect concentration

RI Scoped Activities

The excavation of soil in the Concourse C utilidor area has removed locations with identified exceedances of RISLs for COPCs. Downgradient groundwater has been monitored for many years at the Main Fuel Farm. Thus, no additional RI activities are proposed at this AOC.

7.1.6.5 Concourse B Areas

> ***Rationale for RI Approach:*** Install a monitoring well to determine groundwater quality downgradient of area with former elevated concentrations of COPCs. Confirm the presence or absence of PCBs and other COPCs in soil and groundwater in the concourse area where previous stockpile soil sampling results indicated contamination. The new wells will also form part of the Site-wide groundwater monitoring network.

Two distinct AOCs are defined in Concourse B (Figures 7.1-65): the Concourse B Area and the Concourse B Storm Drain Replacement Area (Figures 7.1-73 and 7.1-74).

In 1996, two soil borings were advanced in the central portion of Concourse B, upgradient of the Main Fuel Farm, to evaluate conditions for the installation of an oil/water separator (Figures 7.1-64 and 7.1-73). Temporary wells, B4 and B8, were installed in these borings. Soil and groundwater samples were analyzed for PCBs, TPH, SVOCs, and VOCs; groundwater samples were also analyzed for metals. COPCs were either not detected or were below RISLs in soil. BEHP, PCE, and metal COPCs for groundwater exceeded respective RISLs from B4 and B8. In groundwater sampled at B8, the combined TPH concentration measured 5,000 ug/L, mercury was 50 ug/L (EF 2,500), vanadium was 2,170 ug/L (EF 720), and zinc was 13,350 ug/L (EF 400).

Storm drain lines SC1, SC8, and S7 pass through this AOC. During the 2010 video inspection, cracks and fractures were observed in lines SC1 and S7, and base flow was observed in line SC1. Line SC1 is submerged below the water table (Table 7.1-1, Figure 7.1-3). Cadmium, copper, and zinc have been detected in storm drain solids samples collected in this area.

In late 2008, Boeing replaced a portion of the north-central storm drain line in Concourse B between MH248 and MH249 (Figure 7.1-74) as well as in Concourse A to the northeast of MH228 (Section 7.1.5.7). In order to complete the repairs, excavations were performed. Composite samples collected from stockpiled soil (presumably consisting of excavated soil from both Concourses A and B) were analyzed for PCBs, metals, TPH, VOCs, and SVOCs (stockpile sample results are not included in tables or figures in this Work Plan). PCBs were detected at concentrations ranging from to 2.2 to 7.5 mg/kg (EF to 230). VOCs and SVOCs were not detected, although detection limits were elevated. Approximately 40 tons of soil were removed (Bach 2008a,b,c). Confirmation soil samples were not collected from the excavation at Concourse B.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Concourse B Areas

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PCBs	Total PCBs	0.5 U	15-N	--	--
Metals	Aluminum	NC	NC	743,200	**46**
	Arsenic	--	--	200	**40**
	Barium	--	--	3,000	1.5
	Beryllium	NC	NC	20	5.0
	Cadmium	--	--	20	7.7
	Chromium	--	--	1,260	13
	Copper	--	--	2,080	17
	Iron	NC	NC	442,300	**40**
	Lead	--	--	460	**42**
	Manganese	NC	NC	8,240	3.7
	Mercury	--	--	50	**2,500**
	Nickel	--	--	790	7.9
	Selenium	NC	NC	370	7.4
	Silver	--	--	10 U	6.7-N
	Thallium	NC	NC	50 U	100-N
	Vanadium	NC	NC	2,170	**720**
	Zinc	--	--	13,350	**400**
Petroleum Hydrocarbons	Total Petroleum Hydrocarbons	NE	NE	5,000	**10**
Phthalates	BEHP	0.09 U	1.3-N	3.9	3.9

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Concourse B Areas

Chemical Class	Chemical	Soil		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
PAHs	Benzo(g,h,i)perylene	0.09 U	2.9-N	NC	NC
	Benzo(a)pyrene	0.09 U	9.6-N	NC	NC
	2-Methylnaphthalene	0.09 U	2.1-N	NE	NE
	Total cPAHs	0.5 U	15-N	NC	NC
VOCs	PCE	NE	NE	18	3.6
	TCE	NE	NE	51	13

-- Not analyzed EF Exceedance factor NC Not a COPC NE No exceedance
U Non-detect -N EF based on non-detect concentration

RI Scoped Activities

Metals and TPH are the COPCs in groundwater in this AOC that significantly exceed the RISLs. Groundwater has not been sampled since 1996. The submerged storm drain line (SC1) near former monitoring well B8 is downgradient of the well, and during the video survey was identified with pipe problems. During an excavation to replace a portion of the north-central storm drain line, stockpiled soil was sampled and found to contain concentrations of PCBs and silver above RISLs. Confirmation samples were not collected in the excavation. Therefore, the extent of soil and groundwater contamination is unknown.

Similar to the situation in Section 7.1.5.7 (Concourse A), it is recognized that the original locations of the soil making up the stockpile samples are uncertain, and that drilling through the thick concrete surface of the concourse is not preferred. In addition, it is unlikely that a soil excavation (or other active remediation) would be proposed below the concourse surface to address moderate-level scattered detections in soil, although PCB concentrations were significantly elevated (EF up to 230). However, for the feasibility study, in order to propose potentially leaving soil in place (containment below concrete), the approximate range of concentrations must be quantified, along with any impact to groundwater. Thus, limited soil sampling will be proposed to assess the range in soil concentrations, and sample locations will be kept to a minimum on the concourse surface.

In order to assess the groundwater quality under the concourse in an area where groundwater may infiltrate the storm drain system, one monitoring well will be installed upgradient of MH461, where the storm drain lines are submerged (Figure 7.1-73). This well will be installed at a distance from the storm drain line to prevent an effect on groundwater levels due to storm drain infiltration interactions. Another well will be installed along the excavation segment between MH248 and MH249 (Figure 7.1-74) to determine the impact to groundwater quality where PCBs are present, possibly with other COPCs. In the latter segment, one additional soil boring will be advanced in this lengthy area to characterize soil along the storm drain. The soil boring will be advanced approximately 10 feet outside the boundaries of the storm drain line excavation.

The addition of these two wells will fill gaps in the Site-wide groundwater monitoring network and will aid in determining if groundwater quality has been impacted under the concourse. At least two soil samples will be collected from each boring. Soil samples collected from the well boring near MH461 will be analyzed for PCBs, VOCs, SVOCs, and metals. Soil samples collected along the north-central storm drain line will be analyzed for PCBs and metals. Four groundwater monitoring events will be performed at each well. Samples collected during the first monitoring event will be analyzed for PCBs, VOCs, SVOCs, and metals. Samples from subsequent events will be analyzed only for the classes of COPCs that exceeded the RISLs during the first groundwater monitoring event.

Completion of the monitoring well near MH461 is a high priority because the storm drain line in this area is submerged at high water, and line SC1 is known to have breaks or other pipe problems, leading to potential infiltration. Completion of the soil borings adjacent to the replaced storm drain line is a medium priority due to the potential presence of PCB-contaminated soil, but in areas with lines situated above the water table. Installation of the monitoring wells will support the Site-wide groundwater investigation (Section 7.1.8).

Summary of RI Scoped Activities
Concourse B Areas

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
Soil Boring (MH248-MH249)	1	2	NA	Medium	PCBs, Metals
New GW Well (MH248-MH249)	1	2	4	Medium	PCBs, Metals, VOCs, SVOCs
New GW Well (MH461)	1	2	4	High	PCBs, Metals, VOCs, SVOCs

7.1.6.6 Central Flightline Transformer Areas

Rationale for RI Approach: Confirm presence or absence of PCBs contamination in soil within three separate areas with known former PCB-bearing transformers.

The Central Flightline Transformer Areas encompass locations of historical transformers near former Building 3-490, former Building 2-35, and Building 3-818 (Figures 7.1-65 and 7.1-75). PCB-bearing transformers, capacitors, and other equipment were historically used at NBF. Most of the PCB-bearing electrical equipment was owned by SCL and leased to NBF (Landau 2000b). Potential historical PCB sources are described below and the locations of these sources are identified on Figure 7.1-75. Soil contamination may be associated with these historical sources.

Thirty-six pole-mounted Boeing-owned capacitors, each containing 1.5 gallons of liquid PCBs, were historically located in the parking lot north of Building 3-825 and three SCL-owned capacitors, each containing 5 gallons of liquid PCBs, were present in the west parking lot south of former Building 2-35. In 1990, two SCL-owned transformers, P-840 and P-841, located east of former Building 2-35 were tested for PCBs; concentrations were 155,000 and 245,000 ug/L, respectively. A PCB-containing transformer or capacitor was historically located south of former Building 3-490 (Figure 7.1-75) (Landau 2000b).

Former Transformer No. 94/Vault 94 was historically located at the west exterior of Building 3-818. The volume of the transformer was 655 gallons. Little information is available for this transformer. A SCL-owned transformer, located southwest of Building 3-818, was also tested for PCBs, with a result of 213,000 ug/L (Landau 2000b). Vault 94 is now present in this location (Figure 7.1-75). The concrete pad appears to be heavily stained (SAIC 2011b).

RI Scoped Activities

Soil borings will be advanced in some areas where PCB-bearing transformers or capacitors were historically located. A minimum of two samples will be collected from each boring and will be analyzed for PCBs and metals.

Two soil borings will be advanced in the parking lot north of Building 3-825 and east of East Marginal Way S. Both borings will be advanced in the northern end of the parking lot, located to the south and east of former Building 2-35. Three soil borings will be advanced in the parking lot south of former Building 3-490.

Four soil borings will be advanced around the perimeter of Vault 94 to the west of Building 3-818, as shown on Figure 7.1-75. The concrete pad under the vault is heavily stained. Storm drain lines in these areas are situated above the water table, and PCB-contaminated soil, if present, is capped by pavement; therefore, soil sampling in this area is considered a medium priority.

Summary of RI Scoped Activities
Central Flightline Transformer Areas

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
Soil Borings	9	2	NA	Medium	PCBs, Metals

7.1.7 Areas of Concern in South Flightline Area of NBF

The South Flightline area of NBF extends from Building 3-825 at the north to the southern Site border (Figure 7.1-76). For each AOC in this section, detected analytical results for all RISL exceedances are presented in Table 7.1-11 for soil and Table 7.1-12 for groundwater. Information in this section has been reviewed and summarized for the following potential source areas within the South Flightline area:

- UBF-61 Area
- Former Buildings 3-830, 3-831, and 3-832 Area
- NBF-OWS-B11-MW1 Area
- Tent Hangar Area

7.1.7.1 UBF-61 Area

Rationale for RI Approach: Soil and groundwater contamination in the Concourse UBF-61 Area does not appear to be of concern; therefore, no additional RI activities are proposed at this time.

The UBF-61 Area is located west of the blast fence along a roadway (Figures 7.1-76 and 7.1-77). Soil in this AOC is not considered a leaching concern for downgradient pathways, and concentrations are therefore compared to less stringent RISLs (Table 6-11).

Excavated in 1989, former tank UBF-61 was a 3,000-gallon gasoline UST located west of former Building 3-470 (Hart Crowser 1990b). The 1989 excavation extended to a depth of approximately 8 feet bgs. A total of five confirmatory soil samples were collected from the sidewalls and bottom of the excavation pit and were analyzed for BTEX (Figure 7.1-78); benzene concentrations were low (0.008 mg/kg). The UST was in good condition at the time of removal.

Storm drain lines in this AOC are situated above the water table. The 2010 video inspection identified multiple cracks in the storm drain line (S3) in the UBF-61 Area (Table 7.1-1). A new tank, also identified as UBF-61, is currently located in this vicinity.

RI Scoped Activities

Soil samples collected at the limits of the 1989 excavation indicate no COPC exceedances of the RISLs. Therefore, no RI activities will be performed at this location.

7.1.7.2 Former Buildings 3-830, 3-831, and 3-832 Area

> ***Rationale for RI Approach:*** Install a well downgradient of the Buildings 3-830, 3-831, and 3-832 Area to serve as part of the Site-wide groundwater monitoring network. No additional RI activities are proposed at this time.

Former Buildings 3-830, 3-831, and 3-832 were located on what is now Concourse C (Figures 7.1-76 and 7.1-77). A power substation was located near the northwest side of Building 3-830 (Weston 1997). A summary of environmental assessment is depicted in Figure 7.1-78. Soil in this AOC is not considered a leaching concern for downgradient pathways, and concentrations are therefore compared to less stringent RISLs (Table 6-11).

Three monitoring wells were installed in this area north of Building 3-830 near UBF-60 (MW1, MW2, and MW-3) (Figure 7.1-78). These wells have since been abandoned.

Two USTs located southwest of former Building 3-830 were removed in May 1987, including a 2,000-gallon UST (UBF-24) used to store PS-200 oil and a 300-gallon UST (UBF-42) used to store heating oil. Diesel-range hydrocarbons were present in soil above 1991 MTCA Method A CULs (Weston 1997). Three borings, SB-83001 through SB-83003, were advanced around the former UBF-24/UBF-42 UST pit in 1997 (Figure 7.1-78). Six soil samples were analyzed for diesel-range hydrocarbons, which were reported in four samples at concentrations below the RISL.

In September 1989, Boeing removed UBF-40, a 110-gallon gasoline UST located north of former Building 3-831 (Figure 7.1-78). Concentrations of benzene below the RISL were detected in soil in the UST excavation (Hart Crowser 1990b).

UBF-60, a 5,000-gallon UST used to store wash water from equipment cleaning, was located north of former Building 3-830 and south of former Building 3-817 (Figure 7.1-78). Three monitoring wells (MW-1 through MW-3) and five soil borings (B-1, B-2, and SB8308 through

SB83010) were installed around the former UST. Eleven soil samples were analyzed for VOCs, six samples were analyzed for TPH, and two samples were analyzed for metals. Arsenic was detected at a concentration exceeding the RISL. Groundwater samples were collected from the wells in November 1989 and analyzed for VOCs (Hart Crowser 1990c). Benzene was detected at a concentration above the RISL in two groundwater samples. Vinyl chloride, TCE, and PCE were not detected, although the detection limits of vinyl chloride exceeded the RISL. In January 1990, the UST was abandoned-in-place by filling the tank with approximately 30 cubic yards of cement (Hart Crowser 1990c).

An environmental investigation was performed in 1997, prior to the demolition of Buildings 3-830, 3-831, and 3-832. Two hand auger borings, SB83004 and SB83005, were advanced near the former power substation located northwest of former Building 3-830 (Figure 7.1-78). Four soil samples were analyzed for PCBs, which were reported in two soil samples from SB83005 at concentrations up to 0.1 mg/kg (Weston 1997), below the RISL.

Three PCB-filled transformers were associated with former Buildings 3-830 and 3-831. Transformers Nos. 89 and 90 were at the southwest exterior of Building 3-830 and had volumes of 203 and 395 gallons, respectively (Landau 2000b). A power substation was located near the northwest corner of the building (Weston 1997). Former Building 3-831 was built prior to 1984 and demolished after 1997 (SAIC 2009b) and former Transformer No. 91 was located on the roof at the northwest corner of the building (Figure 7.1-77) (Landau 2000b). All storm drain lines in this AOC are situated above the water table.

Chemicals in Soil and Groundwater Exceeding RI Screening Levels
Former Buildings 3-830, 3-831, and 3-832 Area

Chemical Class	Chemical	Soil (Non-Leaching)		Groundwater	
		Max Result (mg/kg)	Max EF	Max Result (ug/L)	Max EF
Metals	Arsenic	19.6	2.8	--	--
VAHs	Benzene	NE	NE	2.4	3.0
VOCs	Vinyl chloride	NC	NC	3.0 U	15-N

-- Not analyzed EF Exceedance factor NC Not a COPC NE No exceedance
U Non-detect -N EF based on non-detect concentration

RI Scoped Activities

Low concentrations of arsenic exceeding the RISLs remain in soil, and low concentrations of benzene were detected in groundwater in the Former Buildings 3-830, 3-831, and 3-832 Area. Metals were not detected in the groundwater samples collected in this AOC, and benzene was not detected in soil samples. Storm drain lines in this area are not subject to groundwater infiltration.

One monitoring well will be installed downgradient of the former substation and USTs, as part of the Site-wide groundwater monitoring network (Figure 7.1-77). A minimum of two soil samples will be collected from each soil boring. For the RI, four quarterly groundwater monitoring events will be performed at the well. Soil and groundwater samples will be analyzed for PCBs and TPH. Since the storm drain lines in this AOC are situated above the water table, completion of this RI activity is considered a medium priority. However, completion of the well will support the Site-wide groundwater investigation (Section 7.1.8).

Summary of RI Scoped Activities
Former Buildings 3-830, 3-831, and 3-832 Area

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW Samples per Well	Priority	Analyses
New GW Well	1	2	4	Medium	PCBs, TPH

7.1.7.3 NBF-OWS-B11-MW1 Area

Rationale for RI Approach: Soil and groundwater contamination in the NBF-OWS-B11-MW1 Area does not appear to be of concern; therefore, no additional RI activities are proposed at this time.

As part of design for a planned oil/water separator within Concourse B11, one monitoring well, NBF-OWS-B11-MW1, was installed (area shown in Figure 7.1-76). During this installation, soil samples were not collected for laboratory analysis. The boring log indicated no signs of impact (odor, sheen, or PID readings). The monitoring well was later abandoned due to high groundwater turbidity. Results for the sole groundwater sample collected were not disclosed. The oil/water separator was never installed.

RI Scoped Activities

Because no signs of impact were identified during installation of former well NBF-OWS-B11-MW1, this area will not be considered further in this RI/FS Work Plan.

7.1.7.4 Tent Hangar Area

Rationale for RI Approach: Soil and groundwater contamination in the Tent Hangar Area does not appear to be of concern; therefore, no RI activities are proposed.

Boeing began construction of two fabric tent hangars, Buildings 3-811 and 3-812, near the southern end of the Site, in late 2008 (Figures 7.1-76 and 7.1-79). Excavations were performed to prepare the area for the tent hangar foundations and new utility lines. Approximately 25 soil stockpiles were generated during the excavation activities. Soil samples were collected from the stockpiles for waste characterization purposes. It was reported that all soil excavated and stockpiled during this construction met applicable MTCA standards and was cleared for reuse; however, analytical data were not available for review (Bach 2008a,c).

Because soil from site preparation activities reportedly met MTCA cleanup levels and was cleared for reuse, and no sources of contamination have been identified in this area, the Tent Hangar Area will not be considered further in this Work Plan. However, this AOC also includes six wells previously installed as part of the EMF downgradient plume investigation (Figure 7.1-80). This VOC plume is not being considered in this Work Plan, although these wells may be monitored for water levels as part of the RI.

7.1.8 Site-Wide Groundwater Investigations

Two aspects of groundwater sampling are represented on a Site-wide basis and are included in this section. These include the following: (1) proposed monitoring wells that are not location in or near specific AOCs, and (2) background groundwater sampling pertaining to the issue of potability for the shallow aquifer at the Site.

7.1.8.1 Site-Wide Groundwater Monitoring

Rationale for RI Approach: Install two upgradient wells and three downgradient wells along the Site boundary, to monitor groundwater quality entering and leaving the Site, and to monitor water levels and groundwater flow. These wells, together with other wells in/near AOCs, will serve as part of the Site-wide groundwater monitoring network.

As part of RI activities, a groundwater network will be utilized for monitoring and to determine flow and gradient across the NBF-GTSP Site. Some portions of the Site have a reasonably dense network of monitoring wells for such purpose, including GTSP, portions of the PEL area, the former Building 3-360 Area, the Building 3-800 Area, and the Main Fuel Farm. Other areas of the Site have few or no wells, such as the concourse areas, paint hangar areas, and the southern PEL area.

In order to create a more balanced network of wells beyond those already proposed above, five additional wells will be installed at selected locations to provide for groundwater monitoring and gradient/flow determination purposes. These new wells include two near the upgradient (eastern) boundary of the Site and three along the downgradient (western) boundary of the Site, to determine groundwater quality and flow direction at these margins of the Site. Figure 7.1-80 presents the locations of existing monitoring wells, those wells proposed in the AOCs in Sections 7.1.3 to 7.1.7, and the five additional wells added here for the Site-wide investigative purposes. Altogether, this network of monitoring wells is expected to provide coverage of the Site to understand how groundwater and potential contaminant plumes flow onto the Site, across the Site, and offsite. The Site-wide groundwater monitoring array adds a total of 25 proposed wells (including the five wells in this section) to the Site.

At least four groundwater monitoring events will be performed at the five newly installed wells, including sampling and water level measurements. In order to add data within the timeframe of an RI, the four events will be quarterly and thus extend over a start-to-end period of nine months. Groundwater samples from these wells will be analyzed for PCBs, metals, TPH, and SVOCs. Groundwater from all other monitoring wells will be analyzed for various COPCs, as outlined in text throughout Section 7. The number of proposed RI wells, and the chemicals to be analyzed in groundwater samples, are summarized in Table 7.1-14.

Summary of RI Scoped Activities
Site-Wide Groundwater Investigation

RI Scoped Activity	Total Number of Borings/ Wells	Min Number of Soil Samples per Boring	Min Number of GW/Vapor Samples per Well	Priority	Analyses
New GW Wells	5	TBD	4	High	PCBs, Metals, TPH, SVOCs

TBD – To be determined   Soil sampling during well installation will take place based on field indication of contamination.

7.1.8.2 Site Background Groundwater Investigation

Rationale for RI Approach: Either identify suitable existing wells or install a few upgradient wells to monitor background groundwater conditions for the shallow aquifer. Information will be used for determination of potable groundwater characteristics at the Site.

As part of the RI phase of work, the issue of potability for the Duwamish aquifer will be addressed, in part by evaluating the background concentrations of total dissolved solids and other parameters [WAC 173-340-720(2)]. This evaluation will depend on future decisions by Ecology, but may involve identifying or installing upgradient or cross-gradient monitoring wells that serve to define "background" concentrations for these parameters, in locations that do not appear to be adversely impacted by industrial activity related to the Site, to KCIA, or to other localized industrial operations in the Duwamish valley. This will include evaluating or installing a small number of wells to serve for aquifer background purposes. This assessment of background conditions for the shallow aquifer will assist in Ecology's decision as to whether the groundwater at these locations is suitable as a potential future source of drinking water, according to the MTCA regulation cited above.

7.1.9 Summary of Soil, Groundwater, and Soil Vapor Investigations

Areas of the NBF-GTSP Site requiring additional soil and groundwater assessment and soil vapor monitoring as part of this RI have been identified in Section 7. The evaluation as part of this RI/FS Work Plan was performed by consideration of historical information, and by comparison of available soil and groundwater data to screening levels for COPCs established in Section 6. This Work Plan recommends additional subsurface investigations within the GTSP property and the four sub-areas of NBF (PEL area, North Flightline, Central Flightline, and South Flightline areas). For the entire Site, a total of 90 soil borings are proposed (including borings for wells and vapor points), with 25 new groundwater monitoring wells and 10 soil vapor points. A total of 35 existing wells are also designated as important for sampling purposes for the RI/FS. Most or all of these existing wells have recently been added to the monitoring list by Boeing and SCL. A summary of currently proposed RI activities and sampling rationale is provided in Table 7.1-14. Table 7.1-13 also presents proposed sampling and rationale for vapor intrusion activities. Note that this primary phase of RI activities will likely be followed by one or more additional phases of RI activities, depending on findings from the first phase.

7.2 Storm Drain System Investigations

The storm drain system at NBF is described in the Supplemental Data Gaps Report (SAIC 2009b) and the Infiltration and Inflow Assessment Report (SAIC 2011b). Stormwater from NBF and the northern portion of KCIA is transported to the KCIA SD#3/PS44 EOF outfall at Slip 4 (Figure 2-4). Until construction of the long-term stormwater treatment (LTST) system in 2011, stormwater was conveyed from five drainage areas via lateral storm drain lines to the KC lift station vault; stormwater was pumped from this vault into the KCIA SD#3 main line and transported to the Slip 4 outfall. Stormwater drainage from a parking lot and small area near Building 7-27-1 enters the KCIA SD#3 main line downstream of the lift station (Figure 4-11).

The NBF stormwater drainage basin consists of approximately 110 acres of the NBF property, and approximately 171 acres of KCIA (Figure 2-6). Additional general information about the NBF storm drain system is provided in Section 4.2.2.

The six stormwater drainage areas (Figure 2-5) are:

- North lateral
- North-central lateral
- South-central lateral
- South lateral
- Building 3-380 area
- Parking lot area

In 2011, Boeing constructed the LTST system near the KC lift station to treat stormwater from the north lateral, which has historically represented the highest concentrations of PCBs in NBF storm drains. The LTST project included the following components:

- Stormwater is pumped from MH130A (Figure 7.2-4), which drains the upstream portion of the north lateral, to the LTST system for treatment. The MH130A pumping system has a design capacity of 500 gpm. The LTST is a chitosan-enhanced sand filtration (CESF) system that consists of (a) an above-ground settling/storage tank to remove coarse solids, (b) additional above-ground settling/storage tanks where a chitosan acetate solution is added to coagulate solids, and (c) a bank of sand filter units to remove the remaining coagulated solids. Additional details about the LTST system can be found in the *100% Design Report, Long-Term Stormwater Treatment* (Landau 2011d).
- Stormwater from the north lateral downstream of MH130A flows by gravity to the lift station vault. In addition, stormwater from the north-central lateral, south-central lateral, south lateral, and Building 3-380 area flows to this vault.
- Stormwater from the portion of the north lateral that is upstream of NBF was diverted around the Site via the KC bypass line (Figure 7.2-4), which discharges to the lift station vault; the bypass flow mixes with the NBF stormwater drainage (other than the stormwater that is pumped directly to the LTST) in the vault.

- The LTST has an overall capacity of 1,500 gpm; the remaining LTST capacity (after treatment of stormwater from the north lateral) is utilized by pumping stormwater from the lift station vault. The LTST system operates at full capacity whenever sufficient stormwater is present. The system was designed to treat all base flows from this vault. Additional treatment of low storm flows from this vault is provided if capacity is available.
- Storm flows from the upstream portion of the north lateral that are greater than the system design capacity are diverted to the lift station vault. Untreated flows from this vault are pumped to the KCIA SD#3 main line and transported directly to Slip 4.

An evaluation of the LTST performance during its first year of operation was prepared in March 2013 (*Annual Performance Evaluation Report, Long-Term Stormwater Treatment, 2011-2012*; Landau 2013b). This evaluation is discussed further in Section 7.2.5.

A separate storm drain line transports roof drainage from the GTSP to Slip 4. This storm drain was installed in 2009 to replace the former GTSP flume, and this new line contains a total of nine identified inputs from locations both onsite and offsite near the northern boundary of NBF (Section 2.3.2). No samples have been collected from the GTSP storm drain.

Contaminants in stormwater and storm drain solids may be transported offsite to Slip 4. These contaminants may enter the storm drain system through subsurface infiltration of contaminated soil or groundwater (Section 7.1) or through stormwater inflow from surface sources of contaminants (Section 7.3). This section describes the types of samples that have been collected to characterize contaminant concentrations in the NBF storm drain system, summarizes the currently available data on contaminant concentrations in stormwater and storm drain solids, and identifies additional data collection needed to adequately characterize this contaminant transport pathway and identify contaminant sources.

For some figures presented in Section 7.2 (and Section 7.3 for anthropogenic media), the ranges of contaminant concentrations are represented by use of exceedance factors (EFs), which correspond to multiples of the RI screening level values. The EFs are depicted on figures for selected COPCs by using a different color for defined interval ranges, created by lumping EF values into stepped categories known as "bins." The selection of the bin intervals is arbitrary, but they were chosen based on the overall ranges of concentrations for storm drain media as well as for anthropogenic media that form potential inflow sources to the storm drain system.

At the NBF-GTSP Site, the primary chemical classes of concern for storm drain and anthropogenic media include PCBs, metals, PAHs, and phthalates. The COPC concentrations and EFs for total PCBs extend over a significantly larger range of values than do metals. PAHs and phthalates typically tend to be intermediate between these two chemical classes. This condition appears to result from a greater intrinsic variability in concentrations of these organic chemicals in the environment, and from generally lower detection limits and RISLs than for most metals. Together, this produces a greater range of EF values for these organic chemicals compared to metals.

In order to compensate for the overall widespread ranges of concentrations in Site sample results, EF bin ranges are utilized in figures and applied to some tables. In Section 7.2, EF bin ranges increase by an order of five times (>1–5, >5–25, >25–125, >125–625, and >625). This configuration is utilized for tables listing storm drain solids and storm drain water in this section, and a similar approach is used for anthropogenic media and storm drain solids in Section 7.3. Note that throughout Section 7.2, concentrations of PCBs and cPAHs always refer to total PCBs and total cPAHs, unless stated otherwise. Note also that throughout Section 7.2, all storm drain solids sample concentrations are presented on a dry weight (DW) basis.

Exceedance Factor Color Ranges for Storm Drain Solids and Storm Drain Water

EF Colors	EF Ranges
	≤ 1.0
	> 1.0 – 5.0
	> 5.0 – 25
	> 25 – 125
	> 125
	> 625

7.2.1 Types of Storm Drain Samples Collected at NBF

Extensive sampling of solids from storm drain structures including catch basins, manhole access locations, oil/water separators, channel drains, and inlets throughout the NBF property has been conducted between 1984 and 2012. Storm drain sampling investigations that have been conducted at the Site are described in Section 4.2.2 and Table 4-1. Data from July 2004 through August 2012 have been included in the data evaluation in this Work Plan; data collected prior to 2004 are not believed to be relevant to current conditions (Section 6.1.4).

The data summary presented in this section is intended to identify contaminants of greatest concern in each drainage area; these data are used in Section 7.3 to focus the investigation and identification of potential contaminant sources. While a portion of the flow from the Site is currently treated by the LTST prior to discharge to Slip 4, not all stormwater flow is treated. In addition, this Work Plan does not assume that treatment will continue indefinitely. Therefore, performance of the LTST is not directly relevant to the summary of storm drain sampling data in this section. Performance monitoring data collected by Boeing in connection with testing and operation of the LTST system are discussed in Section 7.2.5.

Six types of storm drain samples have been collected at NBF since January 2004: grab samples of solids in storm drain pipes/structures, sediment trap samples, filtered suspended solids samples, centrifuged suspended solids samples, inlet filter solids samples, and composite whole water samples. Solids samples have been collected at a total of 319 locations and whole water samples at 23 locations, as listed in the table below (the various solids sample locations overlap with each other to total 319).

Number of Storm Drain Sampling Locations by Sample Type and Drainage Area

Sample Type/ Drainage area	Grab Solids	Sediment Trap	Filtered Solids	Inlet Filter Solids	Centrifuged Solids	Whole Water*
North Lateral	142	3	8	6	0	15
North-Central Lateral	50	3	3	9	0	2
South-Central Lateral	24	2	3	7	0	2
South Lateral	40	2	2	11	0	2
Building 3-380 Area	21	0	1	0	0	0
Parking Lot Area	13	0	1	0	0	0
Lift Station	1	0	2	0	1	2
TOTAL	300	10	20	33	1	23

* Includes 12 roof drain samples collected in the north lateral drainage area, and one grab sampling location.

Grab samples are collected by scooping solid material from the bottom of a catch basin or pipe. They are logistically easy and inexpensive to collect. They do not measure the dissolved contaminant load and tend to contain a smaller percentage of fine-grained particles (fine silt, clay) than stormwater, and therefore may underestimate chemical concentrations in stormwater. In addition, many structures do not retain solid material and therefore a grab sample cannot be collected. Solids collected using this method represent accumulation over the time period since the structure was last cleaned. During 2009 to 2010, Boeing sampled most of the storm drain structures at the NBF property that contained enough solid material to sample (see Section 4). Additional grab samples were collected by Boeing and SAIC in 2011 and 2012. A total of 300 structures have been sampled using this method.

Sediment traps consist of a sample bottle installed in a storm drain structure. Suspended solids in stormwater settle into the bottle over an extended period of time (four to six months). This type of sample integrates the particulate-associated chemical load over the sampling period, and is logistically simple to implement. Sediment traps do not measure dissolved load, require confined space entry to deploy, and require a long sampling period to collect an adequate volume of solids for analysis. They do not collect particles transported as bedload, and provide a less direct measurement of the overall stormwater chemical load. Sediment traps have been installed and sampled by Boeing and SPU at upstream and downstream locations in the north (T5 and T5A), north-central (T4 and T4A), south-central (T3 and T3A), and south laterals (T2 and T2A). With construction of the KC bypass line in 2011, the sediment trap upstream of the north lateral (T5A) was removed, and equivalent samples are currently being collected from the KC Wet Well location (T5A[2]). In addition, one sediment trap (T1) is located at MH422, which represents the combined flow from the north lateral, north-central lateral, Building 3-380 area, and KC bypass line.

Filtered suspended solids samples are collected on a flow-weighted or time-weighted basis during individual storm events or base flow sampling events. Filtered solids samples can be collected in locations where flow is not deep enough for sediment traps, are event-specific, and can be collected from multiple storm events and during base flow conditions to assess variability. Filtered solids samples do not measure dissolved load, require a power source, and sampling is relatively labor-intensive. The 5-micron filter bags used for sample collection allow some of the finer grained suspended solids to pass through; this is discussed further in Section 7.2.3. These polypropylene felt filter bags cannot be analyzed for phthalates or total organic carbon (TOC), because of interference from the filter bag material. The chemical analysis for PCBs and other organic chemicals requires special laboratory methods that involve digestion of the filter bag, and estimation of chemical concentrations based on the dry weight of the filter bag before sampling. Boeing (Landau Associates) conducted limited filter solids sampling during 2004 to 2007; SAIC and Landau conducted more extensive filtered solids sampling the 2009–2010, 2010–2011, and 2011–2012 seasons. Filtered solids samples have been collected at 20 locations at NBF, representing all six drainage areas.

Inlet filters were installed by Boeing at 25 structures in 2010 and numerous additional structures since that time. The inlet filters consist of a 180-micron filter fabric that is placed under the top grating of a catch basin. The inlet filters are intended to capture coarser material that would otherwise enter the storm drain system. They must remain in place for a month or more in order to collect enough solids for analysis. This sampling method is easy to deploy; however, it does not collect smaller-sized particles, which have been associated with higher contaminant concentrations. The inlet filter samples are therefore believed to underestimate chemical concentrations in stormwater. These sample data are not included in the data summaries presented in Section 7.2.2.

Centrifuged solids samples were collected by SAIC and Ecology during two storm events and one base flow event from the KC lift station vault in April/May 2011 to evaluate the efficiency of the filtered solids sampling units (SAIC 2012b). Centrifuged samples include the finer particles that have been associated with higher contaminant concentrations. The centrifuge is logistically complex and sampling is labor-intensive. Samples represent a single storm or base flow sampling event; sampling of multiple events allows assessment of sampling variability. Results are believed to more accurately represent contaminant concentrations in stormwater than the other solids sampling methods.

Whole water composite samples have been collected at 11 locations at NBF. Sample locations at the KC lift station include the lift station vault upstream of the stormwater pumps (LS431V) and a structure immediately downstream of the pumps (LS431).[6] In addition, whole water composite samples have been included at upstream and downstream locations in the north, north-central, south-central, and south lateral. Whole water composite samples provide a measure of dissolved load in addition to suspended load. Samples are composited on a flow-weighted basis to provide a representative sample of a single storm event or base flow sampling event. Samples for multiple storm events can be used to assess variability, and total suspended solids (TSS) measurements in whole water samples can be used to estimate contaminant loading. Sampling requires confined space entry to deploy flow sensors and suction lines, requires an onsite power source, and preferentially captures the fines portion of the particulate load. Analytical detection limits may not be adequate to detect chemicals present in stormwater at very low concentrations, particularly for hydrophobic chemicals, unless large volumes are collected.

[6] Additional whole water samples have been collected by Boeing as part of LTST performance monitoring; these are discussed in Section 7.2.5.

Three whole water grab samples have been collected at NBF to address specific issues at individual locations. Whole water grab samples represent a snapshot of chemical concentrations in stormwater at a given time and location. In addition, grab samples of water discharging from roof drains were collected at 12 locations in the north lateral. These samples represent stormwater that is flowing from building roofs onto the ground surface and eventually entering the storm drain system.

A comparison of sampling results at NBF by sample type is presented in Section 7.2.3.

7.2.2 Storm Drain Data Summary

A summary of analytical results and screening level exceedances for storm drain solids and storm drain water samples collected at NBF between 2004 and 2012 is presented in Tables 7.2-1 and 7.2-2, respectively. Tables 7.2-3 and 7.2-4 provide an overview of maximum RISL EFs in storm drain solids and water samples, by drainage area. In general, average EFs reflect area-wide concentrations, and are useful for identifying chemicals that may be of particular concern on a larger scale (e.g., Site-wide or drainage area-wide). Maximum EFs may reflect high concentrations in a specific location or set of locations, and are useful for identifying potentially significant contaminant sources.

Sampling results are discussed in the following sections for the NBF property as a whole, the KC lift station, each of the five drainage areas upstream of the lift station, and the parking lot drainage area downstream of the lift station.

7.2.2.1 Site-Wide Storm Drain Data

Metals, polychlorinated aromatic compounds, PAHs, phthalates, and other SVOCs have been detected in storm drain solids at NBF at concentrations above the RISLs. In general, PCBs, mercury, and cPAHs in storm drain solids, and cPAHs in storm drain water, had the highest screening level exceedances. A summary of storm drain sampling results is presented in Tables 7.2-1 (storm drain solids) and 7.2-2 (storm drain water). These tables list the following information for the entire NBF property: frequency of detection; minimum, maximum, and average detected concentrations; frequency of RISL exceedances; and maximum and average EFs.

In storm drain solids data, maximum EFs for total PCBs, mercury, total cPAHs, and benzo(a)-pyrene (Table 7.2-1) were all greater than 100 (i.e., the maximum EF is more than two orders of magnitude higher than the RISL). Average detected concentrations for many chemicals were also higher than the corresponding RISLs. Total PCBs, total cPAHs, benzo(a)pyrene, BEHP, and butyl benzyl phthalate (BBP) all had average RISL EFs greater than 5. Several other chemicals had average detected concentrations above the RISL; these include arsenic, cadmium, zinc, dioxins/furans TEQ, phenanthrene, all of the HPAH compounds, p-cresol (4-methylphenol), and phenol.

In storm drain water data,[7] total cPAHs, benzo(a)pyrene, and benzo(g,h,i)perylene all exceeded the RISL by more than a factor of 100 (Table 7.2-2). These same three chemicals also had average detected concentrations more than 10 times the RISL. In addition, arsenic, cadmium, copper, lead, zinc, BEHP, and di-n-octyl phthalate had an average detected concentration in water samples at concentrations above the RISL.

The highest concentrations of PCBs, in both solids and water, were generally found in the north lateral drainage area (Tables 7.2-3 and 7.2-4). Mercury concentrations in solids were also highest in the north lateral. PAH concentrations in solids were highest in the north-central and south lateral drainage areas; in water, they were highest in the north lateral. However, only six water samples have been collected and analyzed for PAHs in the north-central, south-central, and south lateral drainage areas; storm drain water in these areas is not well-characterized.

In an effort to trace potential sources of contamination to the storm drain system, Boeing has also conducted investigations of anthropogenic media at NBF, discussed in detail in Section 7.3.

Figures 7.2-1 through 7.2.-3 are maps showing EFs for PCBs, cPAHs, and mercury in storm drain solids at the NBF property. PCBs and cPAHs are presented because they represent contaminants with relatively high maximum and average EFs in all of the lateral storm drain lines at NBF. Mercury is presented because it has a very high maximum EF in the north lateral. Similar maps for other chemicals are provided in Section 7.3.

Chemicals with the highest EFs in storm drain samples, collected at NBF between 2004 and 2012, are discussed below.

<u>Total PCBs</u>. PCBs were detected in 752 of 761 storm drain solids samples (99 percent) and 57 of 79 water samples (72 percent) collected at NBF between 2004 and 2012. Total PCB concentrations in storm drain solids ranged from non-detect to 1,310 mg/kg, with an average concentration of 16 mg/kg. The average concentration exceeds the RISL (0.13 mg/kg) by a factor of 123; the maximum EF was 10,000. While concentrations in the north lateral drainage area are significantly higher than in other areas of the Site, PCB concentrations exceeded the RISL by at least a factor of 50 in all drainage areas except the Building 3-380 drainage area and the parking lot drainage area. In addition, the maximum and average PCB concentrations at the KC lift station were 3.3 mg/kg and 1.0 mg/kg, respectively, which represent EFs of 87 (maximum) and 26 (average). PCB concentrations in storm drain solids have decreased over time; temporal trends are discussed in Section 7.2.4. The most recent PCB concentrations in storm drain solids at NBF are shown in Figure 7.2-1.

[7] The storm drain water data discussed in this section includes samples collected as part of storm drain sampling programs conducted through March 2012 by SAIC and Landau. LTST system monitoring data are discussed separately in Section 7.2.5.

Exceedance Factors by Drainage Area – Total PCBs

Drainage Subbasin	Storm Drain Solids		Storm Drain Water	
	Maximum EF	Average EF	Maximum EF	Average EF
North Lateral (Upstream)	**10,000**	**192**	**74**	**10**
North Lateral (Downstream)	**6,200**	**185**		
North-Central Lateral	**3,200**	**92**	2.4	1.8
South-Central Lateral	**800**	**48**	1.5	1.1
South Lateral	**850**	**28**	2.4	1.9
Bldg 3-380 Area	**14**	3.1	--	--
Parking Lot Area	**16**	4.6	--	--
Lift Station	**25**	**7.7**	**17**	3.8

-- Not sampled

Mercury. Mercury was detected in 439 of 484 storm drain solids samples (91 percent) collected at NBF between 2004 and 2012. Unlike PCBs, however, mercury exceeded the RISL (0.41 mg/kg) in only 30 percent of samples in which mercury was detected. The maximum detected concentration was 173 mg/kg (which represents an EF of 420), while the average concentration was 1.9 mg/kg, representing an EF of only 4.6. This indicates that mercury in storm drain solids is more localized than PCBs. Significantly higher concentrations were detected in the north lateral drainage area upstream of MH130A (average detected concentration of 4.0 mg/kg) than in other areas of the Site (Table 7.2-5a). Mercury concentrations also exceeded the RISL in the south lateral (average detected concentration of 0.87 mg/kg) and the north-central lateral (average detected concentration of 0.52 mg/kg). The most recent mercury concentrations in storm drain solids at NBF are shown in Figure 7.2-3. Mercury was not identified as a COPC in storm drain water because it did not exceed the RISLs in any samples (see Section 6).

Exceedance Factors by Drainage Area – Mercury

Drainage Subbasin	Storm Drain Solids		Storm Drain Water	
	Maximum EF	Average EF	Maximum EF	Average EF
North Lateral (Upstream)	**420**	**9.8**	--	--
North Lateral (Downstream)	**12**	1.7		
North-Central Lateral	**20**	1.3	--	--
South-Central Lateral	<1	<1	--	--
South Lateral	**35**	2.1	--	--
Bldg 3-380 Area	<1	<1	--	--
Parking Lot Area	<1	<1	--	--
Lift Station	**14**	1	--	--

-- Not sampled

Total cPAHs. Carcinogenic PAHs were detected in 147 of 148 storm drain solids samples (over 99 percent) and in 63 of 66 storm drain water samples (95 percent) collected at NBF between 2004 and 2012. Most of the solids samples (96 percent) exceeded the RISL for total cPAHs (0.15 mg/kg). The maximum detected concentration of total cPAHs was 43 mg/kg, while the average was 4.0 mg/kg. These correspond to EFs of 280 and 27, respectively. The highest cPAH concentrations in solids were detected in the south and north-central lateral drainage areas, although the north lateral and south-central lateral also had relatively high EFs (Figure 7.2-2). In water, the highest cPAH EFs were in the north lateral, the south lateral, and at the KC lift station.

Exceedance Factors by Drainage Area – Total cPAHs

Drainage Subbasin	Storm Drain Solids		Storm Drain Water	
	Maximum EF	Average EF	Maximum EF	Average EF
North Lateral (Upstream)	**89**	**17**	**500**	**64**
North Lateral (Downstream)	**50**	**16**		
North-Central Lateral	**230**	**40**	**11**	**5.4**
South-Central Lateral	**44**	**11**	2.7	1.6
South Lateral	**280**	**58**	**74**	**44**
Bldg 3-380 Area	**7.1**	4.6	--	--
Parking Lot Area	**15**	**8.0**	--	--
Lift Station	**25**	**7.7**	**92**	**17**

-- Not sampled

The following sections discuss storm drain sampling results by drainage area. For each of the six drainage areas (north lateral, north-central lateral, south-central lateral, south lateral, Building 3-380, and parking lot) and the KC lift station, a series of tables is provided: a data summary table, a table showing maximum EFs by subdrainage area, and a table that presents all of the sample results by sampling location. In addition, a map of sample locations and a PCB exceedance factor diagram is provided for each drainage area except the lift station. The exceedance factor diagrams present PCB EFs for the most recent sample at each location and depict the spatial relationships between storm drain structures. In addition, an exceedance factor diagram is provided for mercury in the north lateral drainage area (upstream of MH130A).

7.2.2.2 North Lateral Drainage Area

Tables 7.2-5 and 7.2-6 present data summaries for storm drain solids and whole water samples, respectively, in the north lateral drainage area. These tables include all chemicals with an exceedance of the RISL in at least one sample.

Data for the storm drain solids samples have been subdivided into two groups: samples collected from structures upstream of MH130A (Table 7.2-5a) and samples collected from structures downstream of MH130A (Table 7.2-5b). This distinction was made to separate the area of the north lateral from which stormwater is currently pumped directly to the LTST system and treated prior to discharge (e.g., the upstream portion of the north lateral).

In solids samples collected upstream of MH130A (the area from which stormwater is pumped to the LTST), total PCBs, mercury, total cPAHs, benzo(a)pyrene, and zinc have been detected at concentrations more than 25 times the RISL (Table 7.2-5a). PCBs have been detected in 281 of 282 samples, with detected concentrations of 0.037 to 1,310 mg/kg. PCB concentrations exceeded the RISL in over 95 percent of storm drain solids samples collected in the upstream portion of the north lateral.

The average concentration of PCBs in the upstream portion of the north lateral drainage area also exceeded the RISL, by a factor of almost 200. In addition, mercury, benzo(a)pyrene, total cPAHs, BEHP, BBP, and p-cresol had average EFs greater than 5. Multiple samples have been collected from some storm drain structures on different dates. Average EFs using all samples are compared below to average EFs using only the most recent sample at each location, for those chemicals with an average EF greater than 5. This comparison provides a rough indication of whether concentrations in the north lateral are generally increasing or decreasing.

Average Exceedance Factors
North Lateral Upstream of MH130A

Chemical	All SD Solids Samples	Most Recent SD Solids Samples Only
Total PCBs	**192**	**68**
Total cPAHs	**17**	**17**
Benzo(a)pyrene	**13**	**16**
BBP	**8.7**	**13**
Mercury	**9.8**	**8.9**
p-Cresol	**5.7**	**8.8**
BEHP	**7.0**	**6.5**

The table above shows that the most recent PCB sample concentrations are, on average, lower than historical concentrations. For other chemicals, however, including only the most recent samples makes little difference. In some cases (benzo[a]pyrene, BBP, and p-cresol), the average EF using only the most recent sample at each location is slightly higher than the average EF calculated using all samples.

In solids samples collected downstream of MH130A, in the area where stormwater flows to the KC lift station vault, the maximum EF exceeded 25 for PCBs, cPAHs, benzo(a)pyrene, and BEHP (Table 7.2-5b). In addition, average detected concentrations of total PCBs, total cPAHs, and benzo(a)pyrene exceeded the RISL by more than a factor of 10.

Table 7.2-7 shows the maximum exceedance factors for solids samples collected during 2004 to 2012, by subdrainage area. Locations of the subdrainage areas and storm drain structures from which solids samples have been collected are presented in Figure 7.2-4.

PCB concentrations were highest in subdrainages N10 and N11, but exceeded the RISL by a factor of at least 5 in all subdrainages. Most metals have exceedances throughout the north lateral drainage basin. Exceptions include mercury, with highest concentrations in N9 and, to a lesser extent, in N5, N7, N10, and N11; and silver, which exceeded the RISL only in N10 and N8. Dioxins/furans have been analyzed in only four of the subdrainage areas; the highest concentrations were detected in N11 (EF 13). Samples have been analyzed for PAHs in only four of the subdrainages in the north lateral drainage area: N5, N7, N10, and N11. The highest exceedances were found in N5. Relatively few PAH exceedances were observed in N10 or N11. Phthalates and other SVOCs have been analyzed in only the north lateral main line (N1).

In the portion of the north lateral drainage area downstream of MH130A, in the area that does not flow directly to the LTST, concentrations of PCBs, cPAHs, and BEHP exceeded the RISL by more than a factor of 25 (Table 7.2-5b). PCBs have been detected in 82 of 83 samples, with detected concentrations of 0.042 to 800 mg/kg. PCB concentrations exceeded the RISL in over 95 percent of storm drain solids samples collected in the downstream portion of the north lateral.

The average concentration of PCBs in the downstream portion of the north lateral drainage area also exceeded the RISL, by a factor of about 185. In addition, benzo(a)pyrene, total cPAHs, BEHP, and BBP had average EFs greater than 5. Multiple samples have been collected from some storm drain structures on different dates. Average EFs using all samples are compared below to average EFs using only the most recent sample at each location, for those chemicals with an average EF greater than 5. This comparison provides a rough indication of whether concentrations are generally increasing or decreasing.

Average Exceedance Factors
North Lateral Downstream of MH130A

Chemical	All SD Solids Samples	Most Recent SD Solids Samples Only
Total PCBs	**185**	**5.2**
Total cPAHs	**16**	4.9
Benzo(a)pyrene	**11**	3.4
BBP	**9.4**	**8.2**
BEHP	**7.5**	**6.9**

The table above shows that the most recent PCB concentrations are significantly lower than historical concentrations. By using the most recent sample at each location, many samples used to calculate the average EF were collected after treatment of the north lateral upstream flow was implemented. Therefore, more highly contaminated stormwater from the north lateral upstream area is no longer passing through the downstream north lateral. Decreasing concentrations of PCBs may reflect this diversion of the more contaminated upstream flow. Average EFs for cPAHs and phthalates also appear to be decreasing in this area.

Figures 7.2-5 through 7.2-7 provide additional information on the distribution of RISL exceedances for PCBs and mercury in the north lateral drainage area. These figures show the following information for the most recent storm drain solids sample collected at each location (excluding inlet filter samples and samples reported as “wet weight”): EF, structure name, year of sample, type of sample, and subdrainage. The data are color-coded according to the bin ranges discussed in Section 7.2 above, and show the relationships between storm drain structures from upstream to downstream within the drainage area. Figures 7.2-5 and 7.2-7 show storm drain structures located upstream of MH130A. Stormwater at this location is piped directly to the LTST system at the KC lift station for treatment. Stormwater downstream of MH130A (shown in

Figure 7.2-6) continues flowing along the north lateral to MH363A, where it connects to the north-central lateral drainage area.

In water samples, metals (cadmium, copper, lead, zinc), PCBs, and PAHs (benzo[a]pyrene, benzo[g,h,i]perylene, and total cPAHs) were detected in at least one sample at a concentration more than a factor of 25 above the RISL (Table 7.2-6). The highest exceedances in whole water samples were observed for total cPAHs (EF 500), benzo(a)pyrene (EF 360), benzo(g,h,i)perylene (EF 270), and total PCBs (EF 74). In addition, maximum concentrations of PCBs and cadmium exceeded the RISL by more than 25. Average EFs for cPAHs and PCBs were greater than 5.

Tables 7.2-8 and 7.2-9 present analytical results for storm drain solids and water, respectively, for all chemicals that exceeded an RISL in at least one sample in the north lateral drainage area.

7.2.2.3 North-Central Lateral Drainage Area

Table 7.2-10 presents a data summary for storm drain solids samples in the north-central lateral drainage area. A data summary for water samples is shown in Table 7.2-11. These tables include all chemicals with an RISL exceedance in at least one sample.

In storm drain solids, metals (cadmium, mercury), PCBs, phenanthrene, HPAH compounds, total HPAHs, total cPAHs, and phthalates were detected in at least one sample at a concentration more than an order of magnitude above the RISL. The average detected concentration for these contaminants also exceeded the RISL. The highest maximum exceedances were observed for PCBs (EF 3,200), total cPAHs (EF 230), and benzo(a)pyrene (EF 150).

Storm drain water samples have been collected at only two locations in the north-central lateral drainage area. These locations represent the upstream and downstream points in the north-central lateral. PCBs did not exceed the RISL in the upstream samples; the maximum EF in the downstream samples was 2.4. Several PAHs exceeded the RISL by a factor of 5 or more; concentrations were slightly higher in the upstream water samples. Copper and zinc also slightly exceeded the RISLs, with slightly higher concentrations in the downstream samples.

Table 7.2-12 shows the maximum EFs for samples collected during 2004 to 2012, by subdrainage area. Locations of the subdrainage areas and storm drain structures from which solids samples have been collected are shown in Figure 7.2-8. PCB concentrations were highest in subdrainages NC6, NC3, and NC4, and in main line NC1 samples. The highest concentrations of mercury (EF 20) and arsenic (EF 9.6) were found in the north-central lateral main line. Dioxins/furans, PAHs, phthalates, and other SVOCs have been analyzed in samples from the main line only.

Multiple samples have been collected from some storm drain structures on different dates. Average EFs using all samples are compared below to average EFs using only the most recent sample at each location, for those chemicals with an average EF greater than 5. This comparison provides a rough indication of whether concentrations are generally increasing or decreasing.

Average Exceedance Factors
North-Central Lateral

Chemical	All SD Solids Samples	Most Recent SD Solids Samples Only
Total PCBs	**92**	**17**
Total cPAHs	**40**	**41**
Benzo(a)pyrene	**28**	**27**
Fluoranthene	**7.1**	**7.6**
Dibenz(a,h)anthracene	**7.0**	**6.1**
BBP	**7.0**	**7.1**
Benzo(g,h,i)perylene	**6.7**	**7.2**
Indeno(1,2,3-cd)pyrene	**6.0**	**7.3**
Total dioxins/furans	**5.2**	**5.2**
BEHP	**5.0**	**8.2**
Chrysene	4.6	**5.2**

The table above shows that the most recent PCB concentrations are, on average, somewhat lower than historical concentrations. For other chemicals, however, including only the most recent samples makes little difference.

Figure 7.2-9 provides additional information on the distribution of RISL exceedances for PCBs in the north-central lateral drainage area. The data are color-coded according to the bin ranges discussed in Section 7.2 above, and show the relationships between storm drain structures from upstream to downstream within the drainage area.

Tables 7.2-13 and 7.2-14 present analytical results for storm drain solids and water, respectively, for all chemicals that exceeded the RISL in at least one sample in the north-central lateral drainage area.

7.2.2.4 South-Central Lateral Drainage Area

Table 7.2-15 presents a data summary for storm drain solids samples in the south-central lateral drainage area. A data summary for water samples is provided in Table 7.2-16. These tables include all chemicals with an RISL exceedance in at least one sample.

In storm drain solids, PCBs and cPAHs were detected in at least one sample at a concentration more than an order of magnitude above the RISL. The average detected concentration for these contaminants also exceeded the RISL. The highest maximum exceedances were observed for PCBs (EF 800), total cPAHs (EF 44), and benzo(a)pyrene (EF 31).

Storm drain water samples have been collected at only two locations in the south-central lateral drainage area. These locations represent the upstream and downstream points in the south-central lateral. PCBs did not exceed the RISL in the upstream samples; the maximum EF in the downstream samples was 1.5. Concentrations of metals and PAHs were also slightly higher in the downstream water samples.

Table 7.2-17 shows the maximum exceedances for samples collected during 2004 to 2012, by subdrainage area. Locations of the subdrainage areas and storm drain structures from which solids samples have been collected are presented in Figure 7.2-10. PCB concentrations were highest in subdrainages SC7, SC3, and SC9. Dioxins/furans, PAHs, phthalates, and other SVOCs have been analyzed in samples from the main line and SC3 only.

Multiple samples have been collected from some storm drain structures on different dates. Average EFs using all samples are compared below to average EFs using only the most recent sample at each location, for those chemicals with an average EF greater than 5. This comparison provides a rough indication of whether concentrations are generally increasing or decreasing.

Average Exceedance Factors
South-Central Lateral

Chemical	All SD Solids Samples	Most Recent SD Solids Samples Only
Total PCBs	**48**	**8.7**
Total cPAHs	**11**	**7.2**
Benzo(a)pyrene	**7.3**	4.8
p-Cresol	3.6	**9.0**

The table above shows that the most recent PCB concentrations are, on average, lower than historical concentrations. Concentrations of cPAHs are also somewhat lower. The average concentrations of p-cresol are slightly higher when only the most recent sample data are included.

Figure 7.2-11 provides additional information on the distribution of RISL exceedances for PCBs in the south-central lateral drainage area. The data are color-coded according to the bin ranges discussed in Section 7.2 above, and show the relationships between storm drain structures from upstream to downstream within the drainage area. The data for certain chemicals, particularly PAHs, indicate some inputs from the upstream KCIA, as discussed further in Section 7.2.2.9.

Tables 7.2-18 and 7.2-19 present analytical results for storm drain solids and water, respectively, for all chemicals that exceeded an RISL in at least one sample in the south-central lateral drainage area.

7.2.2.5 South Lateral Drainage Area

Table 7.2-20 presents a data summary for storm drain solids samples collected in the south lateral drainage area. A data summary for water samples is shown in Table 7.2-21. These tables include all chemicals with an RISL exceedance in at least one sample.

In storm drain solids, metals (mercury, arsenic, chromium, cadmium), PCBs, phenanthrene, all HPAH compounds, total cPAHs, and phthalates (BEHP, BBP) were detected in at least one sample at a concentration more than an order of magnitude above the RISL. The average detected concentrations for these contaminants also exceeded the RISL. The highest exceedances were observed for PCBs (EF 850), total cPAHs (EF 280), benzo(a)pyrene (EF 190), other HPAH compounds (EF 13 to EF 59), BEHP (EF 37), mercury (EF 35), and BBP (EF 24).

Storm drain water samples have been collected at only two locations in the south lateral drainage area. These locations represent the upstream and downstream points in the south lateral. Concentrations of all chemicals were generally higher in the downstream water samples. EFs for total cPAHs, benzo(a)pyrene, and benzo(g,h,i)perylene exceeded the RISL by more than a factor of 25 in water samples.

Table 7.2-22 shows the maximum exceedances for samples collected during 2004 to 2012, by subdrainage area. Locations of the subdrainage areas and storm drain structures from which solids samples have been collected are presented in Figure 7.2-12. PCB concentrations were highest in subdrainages S7, S2, S8, S1 (main line), and S6A. RISL exceedances for metals were distributed throughout the south lateral drainage area, with the exception of mercury which had significantly higher concentrations in subdrainage S8. PAHs, phthalates, and other SVOCs generally were present in the south lateral main line at higher concentrations than in the subdrainages, but also had high relatively high EFs in subdrainage S8. No storm drain samples have been collected from S4, S5, or S9.

Multiple samples have been collected from some storm drain structures on different dates. Average EFs using all samples are compared below to average EFs using only the most recent sample at each location, for those chemicals with an average EF greater than 5. This comparison provides a rough indication of whether concentrations are generally increasing or decreasing.

Average Exceedance Factors
South Lateral

Chemical	All SD Solids Samples	Most Recent SD Solids Samples Only
Total PCBs	**28**	**15**
Total cPAHs	**58**	**66**
Benzo(a)pyrene	**39**	**44**
BEHP	**14**	**12**
BBP	**13**	**12**
Fluoranthene	**12**	**13**
Dibenz(a,h)anthracene	**9.1**	**14**
Indeno(1,2,3-cd)pyrene	**9.0**	**11**
Benzo(g,h,i)perylene	**7.9**	**9.0**
Chrysene	**7.9**	**8.5**
Total HPAH	**6.5**	**7.3**
Benzofluoranthenes	**5.6**	**6.2**
Phenanthrene	4.5	**5.5**
Total dioxins/furans	3.8	**5.5**

The table above shows that the most recent PCB concentrations are, on average, somewhat lower than historical concentrations. For other chemicals, however, including only the most recent samples makes little difference.

Figure 7.2-13 provides additional information on the distribution of RISL exceedances for PCBs in the south lateral drainage area. The data are color-coded according to the bin ranges discussed in Section 7.2 above, and show the relationships between storm drain structures from upstream to downstream within the drainage area. The data for certain chemicals, particularly PAHs, indicate some inputs from the upstream KCIA, as discussed further in Section 7.2.2.9.

Tables 7.2-23 and 7.2-24 present analytical results for all chemicals that exceeded an RISL in at least one sample in the south lateral drainage area.

7.2.2.6 Building 3-380 Drainage Area

Table 7.2-25 presents a data summary for storm drain solids samples in the Building 3-380 drainage area. No water samples have been collected in this drainage area. This table includes all chemicals with an RISL exceedance in at least one sample. PCBs and phthalates were detected in at least one sample at a concentration more than an order of magnitude above the RISL. The average detected concentration for these contaminants also exceeded the RISL. The highest exceedances were observed for PCBs (EF 14), BBP (EF 13), and BEHP (EF 12).

Table 7.2-26 shows the maximum exceedances for samples collected during 2004 to 2012, by subdrainage area. Locations of the subdrainage areas and storm drain structures from which storm drain solids samples have been collected are presented in Figure 7.2-14. PCB concentrations were highest in the main line (B1). Contaminant concentrations in this drainage area were generally lower than in the north, north-central, south-central, and south lateral drainage areas.

Figure 7.2-15 provides additional information on the distribution of RISL exceedances for PCBs in the Building 3-380 drainage area. The data are color-coded according to the bin ranges discussed in Section 7.2 above, and show the relationships between storm drain structures from upstream to downstream within the drainage area.

Table 7.2-27 presents analytical results for all chemicals that exceeded an RISL in at least one storm drain solids sample in the Building 3-380 drainage area.

7.2.2.7 Parking Lot Drainage Area

Table 7.2-28 presents a data summary for storm drain solids samples in the parking lot drainage area. No water samples have been collected in this drainage area. This table includes all chemicals with an RISL exceedance in at least one sample. Arsenic (EF 20), PCBs (EF 16), cPAHs (EF 15), and benzo(a)pyrene (EF 10) were detected in at least one sample at a concentration more than an order of magnitude above the RISL. The average detected concentration for these contaminants also exceeded the RISL.

Table 7.2-29 shows the maximum exceedances for samples collected during 2004 to 2012, by subdrainage area. Locations of the subdrainage areas and storm drain structures from which solids samples have been collected are presented in Figure 7.2-16. Concentrations of all chemicals were highest in subdrainage PL2. The parking lot drainage area main line (PL1) has been sampled for metals and PCBs only.

Due to backflow problems from water in the Slip 4 discharge line, samples of whole water and storm drain solids could not be collected near the parking lot channel drains. Surface debris samples were collected in 2010 near these drains that make up subdrainages PL3 and PL4. These were collected in lieu of filtered solids in this area to characterize materials that may enter the storm drain system via these structures. Results of surface debris sampling are provided in Section 7.3.

Figure 7.2-17 provides additional information on the distribution of RISL exceedances for PCBs in the parking lot drainage area. The data are color-coded according to the bin ranges discussed in Section 7.2 above, and show the relationships between storm drain structures from upstream to downstream within the drainage area.

Table 7.2-30 presents analytical results for all chemicals that exceeded an RISL in at least one sample in the parking lot drainage area.

7.2.2.8 King County Lift Station

Tables 7.2-31 and 7.2-32 present summaries of storm drain solids and stormwater data, respectively, collected at the KC lift station between 2004 and 2011. These tables include all chemicals with an RISL exceedance in at least one sample. Most of these samples were collected on the downstream side of the lift station; the tables include three filtered solids samples and three centrifuged solids samples collected from the lift station vault (upstream of the pumps).

In solids samples, PCBs (EF 25), cPAHs (EF 24), benzo(a)pyrene (EF 17), and mercury (EF 14) were detected in at least one sample at a concentration more than an order of magnitude above the RISL. The average detected concentrations for all but mercury also exceeded the RISL. This indicates that the high maximum EF for mercury, which exceeded the RISL in only 3 of 30 samples collected at the lift station, may have been an isolated occurrence.

In storm drain water samples, cadmium (EF 38), PCBs (EF 17), and cPAHs (EFs 61 to 92) had the highest RISL exceedances.

A comparison of average EFs using all data to average EFs using only the most recent storm drain solids samples at a given location is shown below for those chemicals with an average EF greater than 5. This comparison indicates that concentrations of PCBs and cPAHs appear to be declining.

Average Exceedance Factors
KC Lift Station (LS431)

Chemical	All SD Solids Samples	Most Recent SD Solids Samples Only
Total cPAHs	**10**	**5.1**
Total PCBs	**7.7**	2.8
Benzo(a)pyrene	**6.6**	3.4

Tables 7.2-33 and 7.2-34 present analytical results for storm drain solids and water, respectively, for all chemicals that exceeded an RISL in at least one sample at the KC lift station. Filtered solids samples have not been collected at the lift station since May 2011.

7.2.2.9 Upstream Contaminant Contributions from Offsite

Limited sampling from offsite areas upstream of the NBF storm drain system has been conducted. In June 2006, King County Industrial Waste Program staff collected grab samples of solids from eight oil/water separator stormwater vaults (Figure 7.2-18). In November 2009, solids grab samples were collected from catch basins upgradient of vaults 1541 (north lateral) and 1680 (south-central lateral). Sampling of storm drain solids at KCIA are planned during the first quarter of 2014. Currently available sample information is presented below:

Offsite Sampling Information for Storm Drain Solids

Sample Location	Lateral Line	Location Description	Date Sampled	Sample Type	Chemical Class
VLT1541	North	Vault 1541	6/8/2006 4/15/2011	Grab	PCBs, metals, PAHs, phthalates, TPH
CB1540	North	Upstream of vault 1541	11/20/2009	Grab	PCBs, metals, PAHs, phthalates
CB1077/CB1078	North	Upstream of vault 1541 (composite sample)	11/20/2009	Grab	PCBs, metals, PAHs, phthalates
CB1554 (WANG1550)	North	Upstream of vault 1541	4/15/2011	Grab	PCBs, metals
CB1580	North	Near KC Maintenance Facility soil pile	4/15/2011	Grab	PCBs
CB1581	North	Near KC Maintenance Facility soil pile	4/15/2011	Grab	PCBs
CB1079	North	Upstream of vault 1541	11/20/2009	Grab	PCBs, metals, PAHs, phthalates
CB1082 (CB46)	North	6518 Ellis Avenue S; upstream of vault 1541	12/22/2004	Grab	PCBs, metals, PAHs
VLT1640	North	Vault 1640	6/7/2006 4/15/2011	Grab	PCBs, metals, PAHs, phthalates, TPH
VLT1650	North-Central	Vault 1650	6/7/2006	Grab	PCBs, metals, PAHs, phthalates, TPH
VLT1657	North-Central	Vault 1657	6/7/2006	Grab	PCBs, metals, PAHs, phthalates, TPH
VLT1670	South-Central	Vault 1670 (b)	6/6/2006	Grab	PCBs, metals, PAHs, phthalates, TPH
VLT1680	South-Central	Vault 1680	6/6/2006	Grab	PCBs, metals, PAHs, phthalates, TPH
CB1140	South-Central	Upstream of vault 1680	11/20/2009	Grab	PCBs
CB1154	South-Central	Upstream of vault 1680	11/20/2009	Grab	PCBs

Offsite Sampling Information for Storm Drain Solids

Sample Location	Lateral Line	Location Description	Date Sampled	Sample Type	Chemical Class
VLT1756	South	Vault 1756	6/6/2006	Grab	PCBs, metals, PAHs, phthalates, TPH
VLT1757	South	Vault 1757 (a)	6/6/2006	Grab	PCBs

Except as noted, all vault samples collected from the final (outflow) chamber.
(a) Sample collected from middle chamber of the OWS vault.
(b) Sample collected from first (inflow) chamber of a two-chamber vault; insufficient sediment in outflow chamber.

Maximum detected concentrations and EFs are presented in Table 7.2-35. Maximum PCB concentrations ranged from 0.23 mg/kg upstream of the north lateral to 2.1 mg/kg upstream of the south-central lateral. Zinc and copper exceeded the RISLs by at least a factor of 5 upstream of the north lateral drainage area. The highest RISL exceedances were for total cPAHs (maximum EF of 433 upstream of the south lateral) and benzo(a)pyrene (maximum EF of 287 upstream of the south lateral). HPAH compounds exceeded RISLs in all drainage basins, as did phthalates. As these samples were collected from structures designed as best management practices to manage oil and storm drain solids, results are not necessarily representative of concentrations entering the NBF Site.

KCIA upstream exceedances were compared to the most recent NBF data from sediment trap and filtered solids samples located near the NBF-KCIA boundary (upstream end of NBF laterals), and at the downstream end of each lateral, nearest the KC lift station. Results are presented below for selected chemicals:

KCIA and NBF Storm Drain Solids Comparison

Drainage Basin	KCIA Upstream of NBF (Grab Sample)	NBF Upstream Sediment Trap*	NBF Upstream Filtered Solids**	NBF Downstream Sediment Trap	NBF Downstream Filtered Solids**
Maximum EFs – Total PCBs					
North Lateral	1.8	3.2	NS	27	NS
North-Central Lateral	5.5	2.0	1.9	11	15
South-Central Lateral	16	ND	<1	5.4	1.9
South Lateral	5.8	3.5	1.5	5.8	2.4
Maximum EFs – Total cPAHs					
North Lateral	293	36	NS	5.0	NS
North-Central Lateral	73	64	149	59	28
South-Central Lateral	253	17	2.4	11	1.8
South Lateral	433	280	82	120	29

KCIA and NBF Storm Drain Solids Comparison

Drainage Basin	KCIA Upstream of NBF (Grab Sample)	NBF Upstream Sediment Trap*	NBF Upstream Filtered Solids**	NBF Downstream Sediment Trap	NBF Downstream Filtered Solids**
Maximum EFs – Benzo(a)pyrene					
North Lateral	213	25	NS	3.4	NS
North-Central Lateral	48	43	98	33	20
South-Central Lateral	173	11	1.4	7.3	1.6
South Lateral	287	190	48	80	17
Maximum EFs – BEHP					
North Lateral	56	18	NS	6.0	NS
North-Central Lateral	25	6.2	NS	23	NS
South-Central Lateral	49	1.2	NS	4.4	NS
South Lateral	44	37	NS	28	NS

Excludes sample results reported as wet weight. NS Not sampled
* Most recent NBF north lateral upstream sample was collected from the KC wet well.
** Filtered solids samples are the average of 2011/2012 wet season samples for the north-central, south-central and south laterals. No filtered samples were collected at the north lateral upstream/downstream locations during this period.

These data indicate that some COPCs, particularly PAHs, may be entering the NBF storm drain system from offsite sources. These contaminants may be transported to the KC lift station and ultimately to Slip 4. Very little stormwater or storm drain solids data have been collected at KCIA. PCB concentrations in the north and north-central laterals are generally higher at the downstream sampling locations, indicating that NBF is the primary source of PCBs in these lateral lines.

7.2.3 Comparison of Storm Drain Sampling Results by Sample Type

As discussed above, several types of storm drain system samples have been collected at NBF, including grab samples, sediment trap samples, filtered suspended solids samples, inlet filter samples, centrifuged solids samples, and composite whole water samples. Each sampling method has its advantages and disadvantages, and all provide a somewhat different measure of contaminants in the storm drain system.

PCB sampling results were compared by sample collection method at locations where more than one sampling method has been employed at a given location within a 6-month time period. Where multiple samples were collected within a 6-month period, the closest sample dates were selected. Table 7.2-36 lists the samples used for this sample collection method comparison. In a few cases, a sample from the next downstream structure was used where co-located samples were not available; these were only used in locations where no major tributaries intervened between the two structures. These are listed below:

Selection of Adjacent Downstream Sample Locations

Drainage Area	Sample Location	Reason for Selection
North Lateral	MH108 CB363	Filtered solids samples collected at MH108 were compared to sediment trap samples from location CB363 (sediment trap T5), approximately 180 feet downstream.
North Lateral	MH108 CB108A CB363	Filtered solids samples collected at MH108 were compared to grab samples collected from CB108A, if available (approximately 80 feet downstream), or CB363 (approximately 180 feet downstream).
North-Central Lateral	MH221A MH226	Filtered solids samples collected at MH226 were compared to sediment trap samples from location MH221A (sediment trap T4), approximately 260 feet downstream.
South-Central Lateral	MH364 MH368	A sediment trap sample collected from MH364 (sediment trap T3) was compared to a grab sample from MH368, approximately 150 feet downstream.

Spearman's rank correlation coefficient was used to make comparisons between sampling methods. This statistical test is non-parametric, meaning that is not dependent on the distribution type of the underlying data. To calculate the Spearman's rank correlation coefficient (r_s), concentrations were sorted from largest to smallest and assigned a rank, beginning with 1 for the highest concentration. The correlation coefficient measures the correlation between the rankings. A higher value of r_s indicates that site-to-site concentration variability among paired independent measurements is closely linked. In other words, a high value of r_s between two sample types means that sample locations with higher contaminant concentrations based on one sample type also tend to have higher contaminant concentrations based on the other sample type. Spearman correlation coefficients for total PCBs in different types of samples are shown below.

Spearman Rank Correlation Coefficients Between Sample Collection Methods

	Grab Samples	Filtered Solids	Sediment Traps	Inlet Filters	Centrifuged Solids	Whole Water
Grab Samples		0.92	0.77	0.71	ND	ND
Filtered Solids	0.92		0.62	ND	0.50	0.48
Sediment Traps	0.77	0.62		ND	ND	ND
Inlet Filters	0.71	ND	ND		ND	ND
Centrifuged Solids	ND	0.50	ND	ND		ND
Whole Water	ND	0.48	ND	ND	ND	

ND No data available   Blue shading indicates a correlation at a confidence level of at least 95%

A perfect positive correlation corresponds to a Spearman correlation coefficient of 1.0 (e.g., for the grab sample/filtered solids data pairs, the highest concentration in a grab sample would correspond to the highest concentration in a filtered solids sample, the second highest concentration in a grab sample would correspond to the second highest concentration in a filtered solids sample, etc.).

This comparison shows that grab sample data are strongly correlated with filtered solids, sediment trap, and inlet filter data, at a 95% confidence level. Filtered solids are correlated to a lesser extent with whole water, sediment trap, and centrifuged solids data.

While the data may be correlated, the Spearman correlation coefficient says nothing about the magnitude of concentration differences between sample types. To evaluate this, ratios were calculated between sample types within each sample pair:

Comparison of PCB Concentrations Between Sample Collection Methods

Sample Type A	Sample Type B	No. of Sample Pairs	Ratio of Concentrations (Sample Type A / Sample Type B)	Median of Ratios	Geometric Mean of Ratios	Geometric Standard Deviation of Ratios
Grab Samples	Filtered Solids	12	0.14 to 13	0.64	0.77	3.5
Grab Samples	Inlet Filters	10	0.08 to 330	1.3	1.6	8.4
Grab Samples	Sediment Trap	16	0.01 to 27	1.1	1.2	8.0
Filtered Solids	Sediment Trap	8	0.10 to 8.4	1.4	1.1	2.6
Filtered Solids	Centrifuged Solids	3	0.14 to 0.82	0.48	0.38	2.5

While rank correlations between grab samples and filtered solids are high, there is large variability in PCB concentrations within these samples. PCB concentrations in grab samples were substantially lower than in filtered solids samples in 8 of the 12 sample pairs analyzed. PCB concentrations were generally somewhat higher in grab samples than in inlet filter (6 of 10 sample pairs) and sediment trap samples (8 of 16 sample pairs).

PCB concentrations in filtered solids samples were somewhat higher than in sediment trap samples (5 of 8 sample pairs), while PCB concentrations in filtered solids samples were substantially lower than in centrifuged solids samples (3 of 3 sample pairs). Standard deviations were relatively high for all sample comparison pairs.

This evaluation should be considered preliminary; it does not consider contaminants other than PCBs, and does not include evaluation of particle size distributions associated with the various sample types. A more thorough evaluation will be conducted as part of the RI report.

This evaluation of PCB data by sample collection method can be used to make recommendations about future sampling needs. In general, grab samples and sediment traps appear to be useful and cost-effective tools for source tracing. For purposes of this RI, grab samples are recommended in areas where anthropogenic media contain high concentrations of contaminants and for other conditions (see Section 7.3.4).

7.2.4 Storm Drain Concentration Temporal Trends

Thirteen rounds of sediment trap sampling have been conducted by SPU and Boeing since 2005; the most recent data available are for samples collected in April 2012. Sediment traps are installed at 10 locations including upstream and downstream locations at NBF’s north, north-central, south-central, and south lateral SD lines, and one location downstream of the combined north and north-central SD lines (near the KC lift station). Sediment trap locations are shown in Figures 7.2-4, 7.2-8, 7.2-10, and 7.2-12.

Figure 7.2-19 shows PCB concentrations in grab samples and sediment traps, by sample date, for all samples reported as dry weight. Concentrations have historically been much higher in the north lateral drainage area than in the north-central, south-central, and south lateral drainage areas. Sediment trap concentrations in the north lateral peaked in 2006, then dropped sharply in 2007/2008. Since July 2008, PCBs in the downstream north lateral sediment trap (T5) have consistently remained in the 2 to 4 mg/kg range.

In the north-central lateral, PCB concentrations in the downstream sediment trap (T4) have generally been in the 1 to 2 mg/kg range, with the most recent sample (April 2012) at 1.4 mg/kg. In the south-central lateral, sediment trap concentrations in the downstream sediment trap (T3) have ranged between 0.25 and 0.70 mg/kg since 2006. Similarly, the south lateral downstream sediment trap (T2) has ranged from 0.13 to 0.75 mg/kg, down from a high concentration of 1.5 mg/kg in March 2006.

While generally decreasing over time, PCB concentrations in all but sediment trap T3A (upstream sediment trap in the south-central lateral) remain at concentrations above the RISL (0.13 mg/kg). Sediment trap concentrations are summarized below.

PCB Concentrations in Sediment Traps at NBF

Sediment Trap Location	Range of PCB Concentrations (2005-2011) mg/kg DW	Most Recent PCB Concentration (April 2012) mg/kg DW
T1 (MH422; downstream end of north and north-central lateral SD)	0.68 – 420	0.62
T2 (MH356; downstream end of south lateral SD)	0.010 – 1.46	0.75
T2A (MH482; upstream end of south lateral SD)	<0.02 – 0.38*	0.18*
T3 (MH364; downstream end of south-central lateral SD)	0.026 – 1.81	0.70
T3A (MH19C; upstream end of south-central lateral SD)	<0.02 – 0.73*	<0.02*
T4 (MH221A; downstream end of north-central lateral SD)	0.24 – 2.8	1.4
T4A (CB229A; upstream end of north-central lateral SD)	<0.011 – 5.6	0.26
T5 (CB363; downstream end of north lateral SD)	2.1 – 800	3.6
T5A (MH178; upstream of NBF on the north lateral SD)**	0.086 – 0.67	0.41

* Most recent sample was collected in October 2009.
** In late 2011, this sample location was moved from MH178 to the KC Wet Well, in conjunction with construction of the KC bypass line; this new sampling location was labeled T5A(2).

Identified areas of pavement and surface debris with concentrations of total PCBs equal to or greater than 50 mg/kg were removed by Boeing in 2010. Of the pavement and surface debris that were not removed at sample locations, PCB concentrations range from 0.045 to 1.1 mg/kg in pavement, and 0.041 to 36 mg/kg in surface debris (Landau 2010a) (Section 7.3.3).

In addition to the regular mechanical sweeping, during the latter half of 2011 Boeing performed manual removal of surface debris accumulated in areas that could not be accessed by the sweeper trucks. This was primarily conducted in areas along the blast fences, but also in other areas where physical limitations prevented access by the sweeper trucks (Landau 2011j).

7.2.5 LTST Performance Evaluation

In March 2013, Landau (for Boeing) evaluated performance of the LTST performance during the first year of operations (Landau 2013b). Evaluation results are summarized below:

- During the period from November 1, 2011 through October 31, 2012, the LTST treated and discharged approximately 176 million gallons of water. This represents approximately 68 percent of total stormwater discharge from NBF to Slip 4.
- Approximately 82 million gallons of stormwater bypassed treatment at the LTST system and was directly discharged to Slip 4. During this first year of operation, 89 percent of north lateral stormwater at MH130A was treated. Approximately 1.15 million gallons bypassed the MH130A pump and flowed to the KC lift station vault.
- All water samples of the LTST system effluent were non-detect for PCBs. Influent PCB concentrations ranged from non-detect to 1.1 ug/L at MH130A, and from non-detect to 0.017 ug/L at the lift station vault. PCBs at LS431 have been non-detect except for one storm event in November 2011, which indicated a concentration of 0.025 ug/L.
- PCBs in filtered solids samples ranged from 0.39 to 11.66 mg/kg at MH130A, from 0.01 to 2.37 mg/kg in the lift station vault, and from 0.29 to 4.5 mg/kg in the LTST effluent.
- First-year performance of the system indicates compliance with the Flow-Weighted Average Annual Concentration (FWAAC) alternative interim goal approved by EPA (USEPA 2011). The recommended loading-based yearly average interim goal is 0.018 ug/L total PCBs in water.

In March 2013, Landau Associates (for Boeing) outlined the plans for LTST monitoring during the second year of operations (Landau 2013c). A draft performance evaluation report is scheduled to be submitted to EPA in December 2013.

No filtered solids samples have been collected at the lift station downstream of the LTST, as part of the LTST monitoring program.

7.2.6 Summary of Data Gaps

A large quantity of storm drain system data has been collected to date, as described in this section. With the construction of the LTST system, approximately two-thirds of the stormwater flow to the KC lift station is being treated before it is discharged to Slip 4.

A potentially significant data gap is the lack of filtered solids sampling as part of LTST system monitoring at the discharge point on the downstream side of the lift station. Although stormwater (whole water) is monitored regularly for PCB concentrations, filtered solids is a more direct and sensitive method of measuring solids that may settle into the sediments of Slip 4. Filtered solids should be sampled during times of high flow, when treatment bypass takes place.

Another significant data gap is the limited sample data from offsite upstream areas. Samples collected in stormwater vaults and other structures at KCIA have detected concentrations of PAHs, phthalates, PCBs, and metals. Some of these contaminants, particularly PAHs, may be entering the NBF storm drain system from offsite. According to KCIA representatives, a storm drain solids grab sampling program is planned for the first quarter of 2014. Data from this sampling program are needed to evaluate contaminant loads that may be transported to the NBF property from upstream areas of KCIA.

No samples have been collected from the GTSP flume replacement storm drain. Given that there are approximately nine inputs to this line, and that these inputs have not been clearly defined or characterized, the lack of data for storm drain solids in the GTSP replacement line is considered a data gap.

A phased sampling approach will be conducted to identify sources of the contaminants found in storm drain samples. This phased sampling approach is described in Section 7.3.4.

7.3 Anthropogenic Media Investigations

Inflow to the NBF storm drain system includes transport of contaminated materials from a number of potential sources. Transport mechanisms include surface runoff along the ground surface or on, in, or through buildings or other structures, and airborne transport. The airborne transport mechanism is not yet recognized as a documented significant pathway at NBF, and as such it is not specifically evaluated in this Work Plan. Short-term releases of contaminants to the storm drain system, such as liquid spills, are also not evaluated. It is recognized that potential offsite sources of contaminated anthropogenic (manmade) materials may affect the NBF storm drain system and Slip 4. However, offsite anthropogenic media sampling is beyond the scope of this Work Plan, and investigations within the NBF storm drain system indicate that some COPCs increase in concentration downstream across the Site (e.g., SAIC 2013). Only areas that drain to the onsite storm drain system are addressed in this section. Furthermore, the anthropogenic media investigations in the RI take into consideration that potential anthropogenic sources are being evaluated within the Site, despite the fact that approximately 68 percent of annual downstream storm drain water is being treated at the LTST.

Potential sources of contaminant inflow to the storm drain system are categorized into six anthropogenic material types in this Work Plan, including: paint, building roof materials, other building/structure exterior materials, CJM, pavement (asphalt or concrete), and surface debris overlying the pavement. The first three of these six are collectively referred to as "building materials." A detailed discussion of these anthropogenic inflow sources is included in the Infiltration and Inflow Assessment Report (SAIC 2011b).

A limited number of analytes have been tested for in anthropogenic materials. For example, CJM has been analyzed at NBF only for PCBs. However, other chemicals that are of concern in storm drain solids are also of concern in anthropogenic materials, even if not yet tested for. Note that throughout Section 7.3, PCB concentrations always refer to total PCBs, unless stated otherwise. Note also that in Section 7.3, all storm drain solids sample concentrations are presented on a dry weight basis.

Tables 6-7 to 6-10 summarize the minimum and maximum values for both detected and non-detected concentrations for onsite samples of anthropogenic materials. Table 7.3-1 provides further information on these media, and building materials are subdivided into the three categories of paint, roof materials, and other exterior materials. This table also lists the RISLs and maximum exceedance factors for anthropogenic media. More detailed information on sampling results and exceedance factors for all data that exceed RISLs for the six classes of anthropogenic media is included in Tables 7.3-2 through 7.3-7. Data utilized for anthropogenic media include all available and pertinent results in the project database, up to late 2012.

Section 7.3 of this Work Plan summarizes potential inflow sources and is divided into the following six main subsections.

- Section 7.3.1 consists of a brief evaluation of known or suspected contaminated building and structure materials at NBF, which are subdivided into the following three major material types: paint (on buildings or structures), roof materials (any rooftop materials excluding paint), and other exterior materials (all other building/structure siding, sealant, or miscellaneous materials not included as paint or roof materials). Sections 7.3.1 to 7.3.3 present figures that show sampling locations by media and include only PCB concentrations, because all samples have been analyzed for PCBs and this COPC is typically the primary driver for investigation and remediation activities.

- Section 7.3.2 consists of an evaluation of contaminated CJM, located between panels of concrete on the ground surface at NBF.
- Section 7.3.3 consists of an evaluation of contaminants within other ground surface materials at NBF, including pavement (asphalt and concrete) and loose surface debris overlying the pavement. This surface debris constitutes material that is potentially transported to the storm drain system and which originates from any of the above potential sources or other unidentified sources.
- Section 7.3.4 consists of a description of the up-pathway phased sampling approach being implemented in the RI for storm drain solids, surface debris, and anthropogenic media. The phased approach will be used to evaluate these media, in order to prioritize sampling on a pathways basis.
- Section 7.3.5 consists of a detailed evaluation of sampling data for all anthropogenic media, arranged geographically by each drainage area, with comparison of data results to nearby storm drain solids data. The overall evaluation of spatial relationships between various anthropogenic media and storm drain solids identifies sources potentially leading to ongoing contamination of the storm drain system. The figures within this section present all anthropogenic media samples combined, by COPC, for each drainage area.
- Section 7.3.6 consists of a summary of proposed RI activities for anthropogenic media and storm drain solids. As a result of the phased sampling approach presented in Section 7.3.4, a relatively large number of samples of storm drain solids and surface debris are proposed for the first phase; fewer samples will be collected of anthropogenic materials in the second phase because these locations will be focused based on the first phase results.

For describing severity of contamination, Section 7.3 applies both concentrations and exceedance factors, similar to Sections 7.1 and 7.2. However, Sections 7.3.1 to 7.3.3 focus more on concentrations for each media individually, whereas Section 7.3.5 focuses on exceedance factors (multiples of the RISLs) as a means to compare between media. The EF “bin” color ranges (blue to red) for the EF categories are generally similar to other sections, using a five-fold increasing factor. The beginning of Section 7.3.5 describes the EF range categories in detail.

7.3.1 Investigation of Contaminated Building Materials

Inflow of contaminants into the storm drain system may originate from a variety of building materials. As materials such as paint, roofing material, and caulk wear and breakdown over time, small fragments become dislodged from their point of origin and may be transported to and through the storm drain system. Building materials containing COPCs potentially contribute to contaminant loading in Slip 4 and the LDW. This section contains a review of building material COPCs at NBF, which include PCBs, metals, and selected phenols, phthalates, and PAHs (including cPAHs) (Table 7.3-1).

Historically, the north lateral drainage basin contains the most contaminated SD solids and stormwater. As such, source tracing has largely focused on this drainage area. The following subsections include discussions of three classes of building materials: paint, roof materials, and other exterior materials.

Note that wipe sample results are not included in this Work Plan. These sample results are presented in units of mass of contaminants per wipe, which are not amenable to comparison to criteria, and because wipe sample detections have been infrequent. For paint wipe samples, a number of paint chip samples have also been collected, which are included here. Note also that outdoor anthropogenic media sampling has been limited to the NBF property; no samples have been collected at the GTSP facility.

This Work Plan (draft and final) has been prepared simultaneous with a significant amount of interim action activities and monitoring taking place on many portions of the Site. With regard to anthropogenic media, in particular paint at NBF has been sampled and high-concentration areas have been removed during or after the preparation of this Work Plan. Available data were used to present results of anthropogenic material samples for both cases of where those materials are still in place and where they have been removed via interim action; removals are designated by a notation on the figures and tables. Some tables list the maximum concentrations for all samples, along with the highest concentrations for remaining (in-situ) sample material. Material removed during and after the preparation of this Work Plan will be considered when determining the final sampling locations for anthropogenic media for the RI.

7.3.1.1 Paint Investigations and Remediation

In an effort to evaluate the source of onsite contaminants potentially reaching the storm drain system and possibly impacting Slip 4, samples of paint and other anthropogenic media were collected as part of the following three major investigations: *2010 North Lateral Storm Drain System Evaluation of Potential Sources* (Landau 2010d), *2010 Planned Sampling to Indicate Presence of PCBs in Paint* (Landau 2010h), and *2011 Site-Wide Storm Drain System Evaluation of Potential Sources (Site-Wide Source Evaluation)* (Landau 2011f, 2012a, 2012b). Samples of paint chips were collected and analyzed for total PCBs and some also for metals. During these investigations, PCBs were detected in 108 of 174 paint chip samples analyzed, with a maximum concentration of 2,300 mg/kg (RISL is 1.3 mg/kg). In February 2012, Boeing also collected six paint samples in the north lateral drainage area; a report was not provided and little is known about these samples.

RISL exceedances and other data for all analyzed COPCs in paint samples are presented in Table 7.3-2. Sampling locations and concentrations of PCBs are presented in Figure 7.3-1. PCBs are included in this section of the Work Plan due to their significance in sampling and remediation at the Site; however, the other COPCs analyzed for paint (metals) are discussed in Section 7.3.5, with the other anthropogenic media. In Figure 7.3-1, a black dot inside the location symbol indicates that the paint at that sampling location has since been removed by Boeing during abatement activities.

From July to August 2010, paint was sampled from buildings and structures within the north lateral drainage area, including the PEL area and the northwestern portion of the flightline area

(Landau 2010d). Paint chips were collected at 77 locations and analyzed for total PCBs and metals (Figure 7.3-1). Results of paint chip sampling indicated that yellow paint on some bollards contained elevated concentrations of PCBs ranging from 46 to 2,300 mg/kg. Elevated PCBs were also detected in some paint chip samples from Building 3-322 at concentrations ranging from 160 to 250 mg/kg. The primary Aroclor detected for both types of sampling locations was Aroclor 1254, and to a lesser extent Aroclors 1248 and 1260. In general, paint samples contained a larger percent of Aroclor 1248 than seen in other materials onsite, particularly in the northern PEL area. The bollard samples that yielded the two highest PCB concentrations were collected west of Building 3-353 and on the southwest side of Building 3-326. Based on the results of PCB analyses, paint abatement was performed in October 2010 for the majority of bollards and support structures in the north lateral drainage area (Landau 2010i).

In October 2010, Boeing collected wipe samples of paint at three locations known to contain PCBs, to determine if the contaminant could be identified using this method. Results of wipe sampling confirmed the presence of PCBs in the three samples. In November 2010, Boeing proposed the use of wipe sampling in conjunction with paint chip sampling to expedite the identification of PCB-impacted paint for abatement activities (Landau 2010h).

Paint sampling resumed in April 2011 with the collection of wipe samples in the north lateral drainage area. In June, wipe sampling was followed by colocated paint chip sampling at the ten locations where PCBs were detected in wipe samples (Landau 2011f). PCBs were detected in nine of the colocated paint samples, at concentrations ranging from 7.2 to 480 mg/kg. In addition, paint samples were collected for 10 percent of wipe sample results that were non-detected for PCBs (eight samples). PCBs were non-detect in paint chips for six of the eight samples, with detection limits ranging from 0.74 to 0.80 mg/kg (Landau 2011f). Overall, wipe sampling methodology appears to be usable as an approximate indicator of PCB concentrations in paint where total PCBs are greater than TSCA regulations (50 mg/kg). However, for purposes of the RI and the protection of Slip 4 sediments and the LDW, this methodology of identifying PCBs in paint using wipe samples does not appear to be adequate.

Landau’s Site-Wide Source Evaluation included the sampling of paint in the other drainage areas (aside from the north lateral) in July (wipe samples) and August through December 2011 (colocated paint chip samples). Paint chip samples were collected from 42 locations and analyzed for PCBs and metals. Total PCBs were detected in 34 samples, with concentrations ranging from 0.92 to 2,200 mg/kg. The highest PCB concentrations were detected in gray paint chip samples from Building 3-818 (Landau 2011h, 2012a). Overall, paint chip samples contained a large percentage of Aroclor 1254, and to a lesser degree Aroclor 1260 and Aroclor 1248.

Paint chip and wipe sampling continued in October 2011 in an effort to characterize paint at the Wind Tunnel area and overhead utilities between the Wind Tunnel and Building 3-323. Paint chips representative of a variety of paint colors, types, and conditions were collected from 30 locations. Total PCBs were detected in 23 of the 30 locations, with concentrations ranging from 1.0 to 38 mg/kg. The three greatest concentrations were from paint chip samples collected at the Wind Tunnel area (Landau 2012b).

In August 2011, paint abatement began with the removal of paint from columns and cross-supports, rails, three fire hydrants, and ten post indicating valves (PIVs) in the north lateral drainage area. In addition, paint was removed from bollards, railings, fire hydrants, and PIVs in the remaining laterals. Abatement focused on paint with PCB concentrations of 50 mg/kg or greater and paint with lower concentrations of PCBs that was in poor condition (Landau 2012d). Boeing evaluated the potential remediation of PCBs in paint (and concrete) by using a dechlorination topical agent as an alternative to traditional paint removal by stripping. The pilot test began in October 2011, and testing locations coincided with paint samples collected from the large tanks near the southeast corner of Building 3-334 and from the siding of Building 3-322. Initial results indicated that PCB concentrations were reduced by this method, but not to optimal levels, and this process may be less effective than traditional paint stripping. This method has not been used further for paint abatement purposes.

Paint abatement continued in 2012 with a focus on Buildings 3-322, 3-818, and 3-374. Paint was removed from concrete foundations and exterior walls, metal doors, and door frames. Paint was also removed from bollards and PIVs near Buildings 3-818 and 3-390. A portion of PCB-impacted paint remains on the Galbestos siding of Building 3-818. This siding will be addressed in future plans to demolish the building (Landau 2013a), which is scheduled for early 2014.

Paint may form a significant contribution to the Site COPCs (especially PCBs) within storm drain solids and surface debris (SAIC 2011b). Boeing has been sampling and evaluating paint at the Site; however, based on documents and data received and reviewed to date, only structures in the north lateral drainage area and Building 3-818 in the south lateral drainage area have been sampled to any significant extent. A minimal number (34) of paint samples were collected in the other drainage areas. Although a modest amount of sampling and remediation of contaminated paint has taken place since 2010, these other areas have not been well characterized.

7.3.1.2 Roof Materials Investigations

Roof materials are defined in this Work Plan as any material (with the exception of paint) located on or above a roof top, or within or at the base of a downspout. Roof materials were sampled during the *2010 North Lateral Storm Drain Evaluation of Potential Sources* (Landau 2010d). Sampling was limited to the north lateral drainage area, where a total of 15 samples were collected and analyzed for total PCBs and metals. PCBs were detected in only three samples, located on the roofs of Building 3-350 (11.6 mg/kg) and Building 3-368 (0.92 mg/kg), and within the downspout of an open air structure near Building 3-322 (15 mg/kg). In general, buildings with white roofs demonstrated higher concentrations of PCBs than buildings with black roofs; Building 3-350 and Building 3-322 both have white roofs.

Low levels of metals were detected in six samples of roof materials from Buildings 3-315, 3-326, 3-350, and an open air structure near Building 3-322. In general, buildings with white roofs also demonstrated higher concentrations of metals than buildings with black roofs. Cadmium was detected at a concentration of 106 mg/kg in a caulk sample. Mercury was detected at a concentration of 14 mg/kg in the caulk sample that also contained an elevated concentration of PCBs (11.6 mg/kg). Arsenic, cadmium, chromium, lead, and zinc were also detected above respective RISLs in samples of black coating material found on roof tops of multiple buildings. Roof material sampling locations and concentrations of PCBs are presented in Figure 7.3-2. RISL exceedances for all analyzed COPCs of roof materials are presented in Table 7.3-3.

Sampling of downspout solids and water was conducted in 2010. Downspout solids analytical data indicated RISL exceedances for PCBs, mercury, and zinc. Mercury and zinc exceedances were low (EFs from 2.2 to 2.4), while the exceedance for PCBs was moderately elevated (EF 12). Downspout solids sampling data are presented in Table 7.3-3. Comparing downspout water analytical data to storm drain water RISLs indicated exceedances of arsenic, cadmium, copper, and zinc at moderately to significantly elevated levels (EFs from 5.1 to 49).

As roofing materials weather and erode, fragments may enter the storm drain system by way of roof drains or downspouts. Roofing materials (caulking in particular) have been shown to contain elevated levels of COPCs; however, the significance of roofing materials to contributing contaminants to storm drain solids is difficult to determine because many sample results had elevated detection limits and the dataset consisted of only 15 samples total. Many samples had detection limits of approximately 0.8 mg/kg, which apparently is a function of matrix difficulties and interference in the analytical process.

7.3.1.3 Other Exterior Materials Investigations and Remediation

Sampling of other exterior materials (including caulking) on building sides and other structures was conducted during the *2010 North Lateral Storm Drain Evaluation of Potential Sources* (Landau 2010d). A total of 20 material samples were collected in the north lateral drainage area. Samples of caulk were collected from 10 locations, and the remaining 10 samples of other exterior materials included piping accessories, foam, rubber, and concrete walls from buildings and other structures. All samples were analyzed for total PCBs and most for metals. In addition, 17 wipe samples from building siding and equipment surfaces were collected during this investigation. Exterior materials sampling locations and concentrations of PCBs, excluding wipe samples, are presented in Figure 7.3-2. RISL exceedances for all analyzed COPCs of other exterior materials are presented in Table 7.3-4.

PCBs were detected in four samples of other exterior materials from Buildings 3-315 and 3-326. Analytical data for two samples indicated highly elevated PCB concentrations (14,000 and 15,800 mg/kg). Both samples originated from Building 3-326; materials sampled consisted of window seal caulk and black foam squares at the base of the building. Material at these two locations was removed in November 2010 under TSCA regulation (Landau 2010k). Detected PCB concentrations for the remaining two samples were 1.1 and 9.8 mg/kg. PCBs were below reporting limits in all wipe samples.

Low levels of mercury and zinc were detected in five samples of other exterior materials on Buildings 3-315, 3-326, 3-626, and 3-368. The concentrations of mercury for these samples were 17 and 40.8 mg/kg (RISL is 4.1 mg/kg). Concentrations of zinc for these samples ranged from 8,600 to 21,100 mg/kg (RISL is 4,100 mg/kg). Sample material consisted of wrap/tape on piping, weather stripping, foam, and window seal caulk. The window seal caulk and foam were removed based on its PCB concentration as described above. In addition, mercury exceeded the RISL in a caulk sample collected from Building 3-368.

The sample of black foam squares from Building 3-326 was collected from the base of the building. The function of the foam squares was not described in the data report. PCBs were not detected in similar foam-like samples collected from Building 3-326. Though the material was identified on Building 3-326 only, it is not known which other buildings may contain this material.

Galbestos siding was identified on Buildings 3-626 and 3-818 while sampling peeling paint; Boeing recently sampled this material for PCB analysis. It is not known how much of this Galbestos has been removed (Landau 2013a), although Building 3-818 is scheduled for demolition in early 2014. An unidentified number of buildings at NBF were recently evaluated and determined not to have Galbestos siding (Boeing 2012b). It is unknown if this siding is present on other buildings at the NBF property. In 1998, the USEPA categorized Galbestos as a non-liquid PCB (Press 2007). In addition to PCBs, this material may represent a significant source of zinc, lead, and copper to the storm drain system.

7.3.2 Investigation of Contaminated Concrete Joint Material

CJM, also referred to as caulk, has been identified as a potential source of PCBs to the NBF storm drain system. Primary or residual CJM and adjacent contaminated concrete may represent a significant source of PCBs to the storm drain system and ultimately to Slip 4 and LDW sediments. Although caulk is known at other sites to contain polychlorinated terphenyls (PCTs), phthalates, PAHs, mercury, lead, and zinc (Chrostowski 2009a), these contaminants have never been analyzed for in NBF CJM samples.

A number of environmental investigations and removal/replacement of CJM have taken place at NBF, as summarized below. During these activities, PCBs in numerous CJM samples have been detected at concentrations exceeding the RISL (1.3 mg/kg total PCBs) or even the TSCA action level (50 mg/kg) in various portions of the Site. Sampling locations of CJM for all known locations, as well as concentrations of PCBs, are presented in Figure 7.3-3. In this figure, a black dot inside the location symbol indicates that CJM at that sampling location has since been removed by Boeing during CJM replacement. Table 7.3-5 presents sampling data for all PCB results that exceed the RISL.

In 2001, Boeing estimated that approximately 500 linear feet of concrete joints contained “primary” CJM with PCBs at concentrations greater than 50 mg/kg. Boeing also indicated that an additional 57,000 linear feet of concrete joints with “residual” CJM of the same type (i.e., containing PCBs above 50 mg/kg) were identified. Residual CJM consists of fragments of caulk material not removed during episodes of past maintenance or re-caulking activities.

In 2000 and 2001, Boeing and Landau Associates mapped the distribution of CJM types and collected samples for PCB analysis (Landau 2001). Samples were collected in November 2000, April 2001, and June–July 2001. Results showed PCB concentrations ranging from non-detected (approximately <0.8 mg/kg) up to 79,000 mg/kg. The principal PCB Aroclor found in these CJM samples was Aroclor 1254, and to a lesser extent Aroclor 1260, and rarely Aroclor 1248. The locations of higher concentrations were in the central flightline area (generally east of Building 3-800) and in the areas northwest and northeast of Building 3-390 (Figure 7.3-3).

Removal of PCB-containing CJM was then conducted in phases between 2002 and 2006, in the central and northern flightline areas, as follows (Landau 2007a):

- 2002 (August): 900 linear feet of primary CJM and some residual CJM
- 2003 (July to September): 16,225 linear feet of residual CJM
- 2004 (June to October): 30,500 linear feet of residual CJM
- 2005 (June to October): 36,650 linear feet of residual CJM, plus 4,000 linear feet of joint material used to fill cracks in the concrete
- 2006 (May): 1,450 linear feet of primary and residual CJM

Removal and replacement of caulk extended to a depth of approximately ¾ inch (Boeing 2001), below which is a joint backer rod. Altogether, an estimated 89,000 linear feet of CJM were removed and replaced at NBF between 2002 and 2006.

In December 2006, Boeing collected five samples of newer CJM that had recently replaced the former PCB-containing caulk at NBF. This new CJM contained PCBs at concentrations ranging from non-detect to 370 mg/kg (Bach 2007; Landau 2007a). Based on similar conditions investigated at the Boeing Everett facility, it was recognized that PCBs originating from the former highly contaminated CJM had previously migrated into portions of the concrete panels in the immediate area of the joints, and recent desorption of PCBs from this contaminated concrete into the new CJM had resulted in detections of PCBs (SAIC 2009b; Landau 2011b). The extent or severity of this problem is unknown and may be limited to areas of concrete previously contaminated with significant levels of PCBs in CJM; concentrations may depend on the timing of CJM replacement.

The City of Seattle (with Integral Consulting) sampled remnant CJM at NBF in September 2008. Samples were collected from five locations where thin zones of caulk remained on the margins of CJM seams due to previously incomplete caulk removal at those locations. These samples thus were not representative of the full seam width. PCB concentrations in these five samples ranged from 0.67 to 2,200 mg/kg (Exponent 2009; Integral 2009).

Between August and October 2010, CJM removal activities were conducted in and near the PEL area, largely within the north lateral drainage area. All CJM material was removed that had not been removed during the 2002 to 2006 CJM removal efforts, but excluding all concrete areas documented to have been installed after 1980. No CJM samples were collected prior to or after removal. Approximately 3,900 linear feet of CJM were removed from this area (Landau 2010g).

In 2010, additional sampling of CJM for PCB analysis was conducted by Landau for Boeing (Landau 2011b). A total of 131 CJM samples were collected throughout the NBF flightline area in September and October 2010. Concentrations were detected in 49 samples, with a maximum of 1,200 mg/kg PCBs. Two values above 50 mg/kg (730 and 1,200 mg/kg) were located in the east-central flightline area, to the east and northeast of Building 3-800. As part of this investigation, Landau also collected colocated samples of CJM and storm drain inlet filter solids, in order to compare PCB concentrations. A moderate correlation trend is apparent, suggesting that CJM may form at least a modest component of PCBs in storm drain solids, although other unidentified sources cannot be ruled out.

As a result of the two significant concentrations identified in the 2010 investigation, Landau collected 90 additional CJM samples in the northern half of the flightline area in May 2011. An additional 62 CJM samples were collected in the central flightline area in June and July 2011, in support of concrete pad replacement. Of these 152 total samples, PCBs were identified in 68 samples. Six of these samples contained concentrations greater than 50 mg/kg, with a maximum of 26,000 mg/kg PCBs (highest value in sample CJM-248 located east of Building 3-800). The next highest values were 2,300 and 130 mg/kg, located east of Building 3-380. The principal PCB Aroclor found in these CJM samples was Aroclor 1254, and to a lesser extent Aroclor 1260 (Landau 2011e, 2012c).

Based on 2010–2011 analytical results, as well as the 2006 and 2008 results, Boeing removed CJM in eight separate areas in August and September 2011 (shown in Figure 7.3-3). Seven areas were located in the central flightline area and one area was located east of Building 3-380. Each area contained one or more samples with PCB concentrations of at least 50 mg/kg. Five of these eight removal areas were located in areas where CJM had been previously removed. A total of approximately 5,725 linear feet of CJM were removed in 2011 (Landau 2011i).

Further removal of CJM took place in 2012 during concrete panel replacement. Removal occurred in five phases, in the concourse B and C areas, from near the southern end of Building 3-390 and extending southward beyond the southern Site boundary. Sampling and analysis for PCBs in CJM took place in July 2012, in conjunction with removal. Results for 35 samples ranged from <0.15 to 78 mg/kg PCBs (Landau 2012g).

The full areas where CJM has been removed and replaced since 2002 include large portions of Concourses A and B, the adjacent flightline areas, small portions of Concourse C, the PEL area, areas on the northwest side of Building 3-390, and near former Building 3-361. According to Boeing reports, virtually all CJM within these broad removal zones was removed and replaced, regardless of concentration or field designation types (Landau 2007a, 2010g, 2011b).

CJM removal at NBF has focused on the TSCA cleanup level of 50 mg/kg for total PCBs. Ecology does not consider the USEPA TSCA action level of 50 mg/kg for removal of PCBs to be adequate to prevent Slip 4 recontamination, due to the potential transport of contaminated solid materials (including CJM) through the storm drain system to Slip 4. The lowest reliably attainable reporting limit (which is essentially the same as the detection limit) for PCBs in caulk and some other building materials is approximately 0.8 mg/kg, due to preparation and matrix interference concerns (per ARI). However, for the 2012 samples, Lancaster Laboratories was able to attain less than 0.2 mg/kg. The PCB RISL for CJM and other building materials is 1.3 mg/kg.

All currently identified areas with CJM concentrations of total PCBs equal to or greater than 50 mg/kg have been removed at NBF. Of the CJM samples included in the project database, seven samples that range from 25 to 49 mg/kg PCBs are located in areas where CJM has not been removed since 2002; and 25 samples that range from 10 to 24 mg/kg are located in areas where CJM has not been removed. Numerous sample results for non-removed CJM also range between 1.3 and 10 mg/kg PCBs.

Samples of CJM (in non-removed areas) with concentrations in the lower ranges (1.3 to 10 mg/kg, and to a lesser extent 10 to 25 mg/kg) tend to occur in scattered locations over large areas at the Site. Sample results ranging from 25 to 49 tend to be more isolated and located near areas that historically have measured significant concentrations of PCBs (e.g., greater than 1,000 mg/kg). These include the concourse area north of the northern end of Building 3-390 and the area east of Building 3-350.

In this Work Plan, historical PCB concentrations in removed CJM were included because these locations may include caulk left behind in the removal process or may be an indicator of PCB recontamination due to the concrete desorption process. Thus, very high concentrations in the past may correspond to high concentrations currently.

In some areas where CJM was not replaced in 2010 to 2012 (Figure 7.3-3), sample concentrations in adjacent CJM segments are only modestly less than 50 mg/kg PCBs (such as 25 to 49 mg/kg). Given the variability of PCB results laterally, there may be nearby areas where CJM exceeds 50 mg/kg that have not been recently investigated. Furthermore, although the TSCA value of 50 mg/kg is a USEPA regulatory criterion, Ecology does not accept this as being protective of transport of contaminated CJM through the storm drain system and eventually to Slip 4. Areas of CJM that have been analyzed in the past with significant concentrations of PCBs (greater than 1,000 mg/kg) have the potential to contaminate adjacent concrete and resorb back into the newly replaced CJM. Some areas have concentrations measured in the range of 25 to 49 mg/kg, and subsequent resampling or removal has not occurred.

Although investigations at other sites in the country have shown that CJM contains COPCs beyond PCBs (Chrostowski 2009a), only PCBs have been tested in NBF caulk. A representative number of samples in areas of concern mentioned above (areas not recently replaced) have not been tested for these other analytes, including PAHs, phthalates, mercury, lead, and zinc.

7.3.3 Investigation of Contaminated Pavement and Surface Debris

Ground surface materials include pavement (asphalt or concrete) and surface debris overlying the pavement. Surface debris represents a mixture of eroded pavement, fragments of CJM, paint chips, other building material fragments, downspout solids, vehicle fragments, plant debris, and other miscellaneous materials deposited on the ground surface. Surface materials have been identified as potential sources of PCBs and metals to the NBF storm drain system and could impact Slip 4 sediments and the LDW. Pavement at NBF has also been found to contain PCBs only in local areas. Due to the non-homogeneous nature of surface debris, COPCs in surface debris are difficult to predict; however, this material may represent a source of PCBs, metals, cPAHs and other COPCs.

This section will focus on the history of surface materials investigations and remediation with regard to PCBs. Other COPCs (metals and cPAHs) are discussed as part of the multi-media evaluation in Section 7.3.5. Table 7.3-1 provides an analytical summary of COPCs in all anthropogenic media. Analytical data exceeding RISLs are presented in Tables 7.3-6 (pavement) and 7.3-7 (surface debris). Note that RISLs for surface debris are the same as those for storm drain solids, and which are one-tenth the values of those for other anthropogenic materials.

The majority of pavement and surface debris sampling has been conducted in the north lateral drainage area, and all samples were analyzed for PCBs and approximately half were analyzed for metals. Limited location-specific sampling of surface debris has been conducted in the parking lot drainage area, with samples also analyzed for cPAHs. Sampling locations and concentrations of PCBs are presented in Figure 7.3-4 (pavement) and Figure 7.3-5 (surface debris). In these figures, a black dot inside the location symbol indicates that material at that sampling location has since been removed by Boeing during excavation or repaving activities.

In 2009, Boeing conducted an investigation of storm drain solids sources that included sampling asphalt and surface debris near Building 3-322 (Bach 2009b). A total of 30 surface debris samples and 6 asphalt samples were collected for PCB analysis. PCBs were detected in all asphalt samples and 23 surface debris samples, with maximum detections of 380 and 557 mg/kg, respectively. The principal Aroclor found in these samples was Aroclor 1254, and to a lesser extent Aroclors 1260 and 1248.

Surface cleaning and asphalt replacement were conducted by Boeing in the spring of 2010 for locations identified in the 2009 investigation, under TSCA regulation (containing greater than 50 mg/kg PCBs) (Landau 2010a). Lateral limits of surface cleaning encompass much of the area surrounding Buildings 3-323, 3-334, 3-302, and 3-322. Asphalt removal was conducted in areas between and south of Buildings 3-302 and 3-322. Asphalt at all six sampling locations was removed.

Along with other media, 16 pavement and 23 surface debris samples were collected in the north lateral drainage area in the summer of 2010. Sample locations were based on PCB and metal concentrations in storm drain solids collected in March and April, in combination with visual inspection of pavement staining and the potential for surface debris to transport to the storm drain system (Landau 2010d). PCBs were detected in 10 pavement samples and 18 surface debris samples, with maximum PCB concentrations of 1.09 and 11.1 mg/kg, respectively. The principal Aroclor in these samples was Aroclor 1254. Sample locations and PCB concentrations are presented in Figures 7.3-4 and 7.3-5.

Identified areas of pavement and surface debris with concentrations of total PCBs greater than 50 mg/kg were removed by Boeing in 2010. For pavement and surface debris that were not removed at all onsite sample locations, PCB concentrations range from 0.045 to 1.09 mg/kg in pavement and 0.041 to 36 mg/kg in surface debris (Landau 2010a).

Additional surface debris samples were collected by SAIC near trench drains in the parking lot drainage area in July 2010. PCBs were detected in each of the six samples, with a maximum concentration of 0.34 mg/kg. The principal Aroclors in these samples were Aroclor 1260 and Aroclor 1254, and to a lesser degree Aroclor 1248. These samples are the only anthropogenic media onsite that have been analyzed for cPAHs, which were detected in all six samples.

Boeing conducts frequent mechanical sweeping (using regenerative air-type street sweepers) in the flightline area to remove surface debris from pavement. Sweeping activity in the plane stalls occurs when stalls are not occupied by aircraft. Scheduling is arranged so that each stall is typically swept at least once per week (Keller 2006a). Other areas of NBF that are not used by aircraft, including the PEL area, are swept irregularly, depending on need and access. Combined waste from this sweeping activity is sampled prior to disposal, approximately once every one to three years. However, these represent composite samples collected from a very large area. PCB analytical results from this mechanical sweeping are presented in the table below, to show the overall average concentrations of surface debris from the flightline areas, which is disposed at the sweeper decant station (Building 3-341) (Bach 2010a,b; Bach 2013).

PCB Analytical Data for Mechanical Sweeping Waste Analyses

Sample Date	Aroclor 1254 (mg/kg)	Aroclor 1260/1262 (mg/kg)	Total PCBs (mg/kg)
12/16/2005	2.5	< 0.31	2.5
3/28/2007	0.38	0.89	1.3
6/11/2008	0.38	0.23	0.61
6/24/2009	< 0.36	0.72	0.72
6/8/2010	< 0.46	< 0.46	< 0.46
2/28/2013	0.057	< 0.019	0.057

In addition to the regular mechanical sweeping, during the latter half of 2011, Boeing performed manual removal of surface debris accumulated in areas that could not be accessed by the sweeper trucks. This was primarily conducted in areas along the blast fences, but also in other areas where physical limitations prevented access by the sweeper trucks (Landau 2011j).

In conclusion, samples of surface debris should be collected in areas where storm drain solids sample results have identified relatively elevated concentrations of COPCs, and the sources are not well recognized. Use of surface debris will serve as source tracing in these locations, but will depend on the presence and sampleable amounts of debris at those locations. For problem areas with unknown sources, sample material should also be used for visual examination to aid in potentially determining material types and potential specific sources.

With a total of 27 pavement samples collected solely in the north lateral drainage area, data for this medium are limited. However, because contaminated pavement has been identified as a local concern and this material has been removed, pavement will not be a focus of further sampling investigation in this work plan.

7.3.4 Phased Sampling Approach for Storm Drain Solids and Anthropogenic Media

This section brings together information from Sections 7.2 and 7.3.1 to 7.3.4, and it introduces an up-pathway phased approach to sampling NBF storm drain solids and anthropogenic media. Storm drain media are described in detail in Section 7.2, but because the storm drain pathway and potential sources are related to anthropogenic media, the RI proposed sampling activities approach is being included in this section.

Storm drain solids and anthropogenic media (including surface debris) will be sampled using a phased approach in order to focus attention and prioritize sampling on a pathways basis. Sampling will start at the downgradient end of the transport pathway and move upgradient. This is accomplished by first sampling storm drain solids and surface debris (Phase I), followed by later selective sampling of other anthropogenic materials (Phase II). Because the number of Phase II samples depends on the results of Phase I, the number of anthropogenic media samples cannot be determined at this time, and sample numbers are not included in this Work Plan. The sampling process for these media will also include an initial field survey as part of Phase I.

7.3.4.1 Phase I Sampling: Storm Drain Solids and Surface Debris

Prior to finalizing the Sampling and Analysis Plan, a field survey will be conducted of the areas surrounding storm drain structures proposed for sampling, and adjacent buildings/structures, surface debris areas, and downspouts. The purpose is to identify likely pathway flow directions for local material transport to SD structures, identifying any obstacles (such as curbs or slopes) that would route material and stormwater runoff in a direction toward or away SD structures.

An up-pathway approach will be applied for inflow source evaluation with the initial focus on NBF storm drain solids and surface debris, to aid in determination if potential sources are located above ground. A flowchart of the sampling approach and rationale is shown in Figure 7.3-6a. Samples of storm drain solids (Phase I, Part 1) and surface debris (Phase I, Part 2) will be collected during the first field phase. Some surface debris samples will be archived, with analyses pending results of the storm drain solids sampling. Analyses performed for surface debris (and anthropogenic media) will be based on elevated levels of COPCs in nearby storm drain solids samples. Proposed sampling of storm drain solids and surface debris for Phase I is summarized in Tables 7.3-12 and 7.3-13.

Part 1: Storm Drain Solids Grab Sampling

Proposed storm drain solids sampling locations are based on a combination of three general conditions: proximity of the storm drain structure to recent interim actions, proximity of the storm drain structure to anthropogenic media with elevated levels of COPCs, and age of the most recent storm drain solids sampling event in the structure. Sample selection logic for storm drain solids grab sampling is further explained as Parts 1a, 1b, and 1c, and presented in Figure 7.3-6a.

Part 1a. Storm drain structures near recent interim action areas (since beginning of 2010) are identified for sampling to determine the potential effectiveness of the interim action, if:

- The structure is located in areas where recent interim actions potentially eliminated one or more possible sources of contamination, and
- COPCs in recent storm drain solids samples have elevated levels (EF >25, orange/red) prior to or during the interim action, and
- The structure has not been sampled since completion of the interim action.

Part 1b. Storm drain solids sampling is proposed at storm drain structures for areas not generally located near recent interim actions, if:

- The most recent storm drain solids sample is from 2004 to 2009, and
- COPCs in the most recent storm drain solids sample have elevated levels (EF >25), and

- The structure is near or downgradient of anthropogenic media samples with elevated levels of COPCs (EF >25); or
- The structure is near or downgradient of an area where anthropogenic media are present and potentially contaminated, but not adequately characterized.

If adequate sample material for storm drain solids is not available for all analytes, then additional surface debris or a downstream storm drain structure may be sampled instead for that area.

Part 1c. Storm drain solids sampling is proposed at storm drain structures for areas not located near recent interim actions, if:

- The most recent storm drain solids sample is from before 2004, and
- The storm drain structure is along a main lateral line at a tributary (selected locations); or
- COPCs are elevated (EF >25) in nearby anthropogenic media samples.

Part 2: Surface Debris Area Sampling

Surface debris sampling is proposed near selected storm drain structures and the base of certain buildings. The purpose of sampling surface debris in these areas is to evaluate the correlation of COPC levels in surface debris to that in storm drain solids samples, and in building materials to surface debris; this correlation will assist in source tracing of contamination. Sample selection logic for surface debris samples is further explained as Parts 2a and 2b (Figure 7.3-6a).

Part 2a. Proposed sampling in Phase I, Part 2a is associated with surface debris located in the vicinity of storm drain structures. Surface debris sampling is proposed in areas surrounding and leading to storm drain structures, if:

- Storm drain solids have been sampled since 2004, and
- COPC levels in the most recent storm drain solids sample are elevated (EF >25, orange/red, based on existing data or data obtained in Part 1 above), and
- The storm drain structure is located near or downgradient of areas with surface debris not adequately characterized; or
- Storm drain solids have not been sampled since 2004, and
- COPCs in nearby anthropogenic media, other than surface debris, have elevated levels (EF >25).

Many areas on the flightline are unlikely to contain sampleable amounts of surface debris, and sampleability will be determined in the field.

Part 2b. Recommended sampling in Phase I, Part 2b is associated with surface debris along the base of buildings or large structures (e.g., tanks), regardless of SD polygon areas. Surface debris sampling is proposed along the base of buildings and large structures constructed before or during 1985, if:

- The building or structure is near or upgradient of one or more storm drain structures with elevated levels (EF >25) of COPCs in the most recent storm drain solids sample (based on existing data since 2004 or data obtained in Part 1 above), and
- The storm drain structure is located near or downgradient of areas with surface debris not adequately characterized; or
- The storm drain structures near or downgradient of the building or structure have not been sampled since 2004, and
- The storm drain structure is located near or downgradient of areas with surface debris not adequately characterized, and
- COPCs are elevated (EF >25) in anthropogenic media samples on the building/structure (where adequately characterized), or anthropogenic media are not adequately characterized.

If adequate sample material for surface debris is not available for all analytes at buildings or structures or CJM areas, then anthropogenic media will be sampled instead for those areas (paint, caulk, CJM).

7.3.4.2 Phase II Sampling: Anthropogenic Media

Phase I and historical sample results for storm drain solids and surface debris will be evaluated in order to propose Phase II sampling of anthropogenic media materials, taking into consideration the existing anthropogenic media results. The logic for sample selection of anthropogenic media samples is explained below and presented in Figure 7.3-6b.

- Sampling of building materials from buildings or large structures is proposed in cases where nearby surface debris samples (historical or from Phase I, Part 2b) indicate elevated levels of COPCs (EF >25, orange/red), or have not been adequately characterized.[8]
- Sampling of roof material and/or downspout solids is proposed in cases where nearby or downgradient surface debris or storm drain solids samples contain elevated levels of COPCs (EF >25), or have not been adequately characterized.
- Sampling of CJM is proposed in areas where CJM is not adequately characterized for PCBs; or where PCB levels are elevated in CJM (excluding CJM installed since 2010 because this new CJM is assumed to be unaffected by potential resorption of PCBs from adjacent concrete, unlike older replacement CJM), and nearby or downgradient samples of surface debris or storm drain solids contain elevated levels of COPCs (not limited to PCBs, EF >25).
- Sampling of paint is proposed on selected small structures (identified in initial survey) that have not been adequately characterized and where nearby or downgradient surface debris or storm drain solids samples contain elevated levels of COPCs (EF >25).

[8] Inadequately characterized for this case includes areas where SD solids and/or surface debris were not present in amounts sufficient for sample collection (no data available), insufficient amounts were available to perform testing for all COPCs, or analytical data are older than 2004.

7.3.5 Evaluation of Contaminated Anthropogenic Materials and Relationship to Storm Drain Solids

Section 7.3.5 summarizes analytical data for anthropogenic material samples in each drainage area, to aid in understanding potential impacts of these various materials on the storm drain system. This evaluation utilizes recent results of storm drain solids samples, which serve to prioritize areas of the property that are of greater concern for inflow to the storm drain system. The information provided in Section 7.3.5, in combination with the phased sampling approach outlined in Section 7.3.4, leads to proposed phased RI activities that are presented at the end of the sections below for each drainage area.

The previous sections (7.3.1 to 7.3.3) reviewed the sampling locations and PCB concentration results for each separate category of anthropogenic medium. Section 7.3.5 instead summarizes all identified COPCs for all media combined, within each drainage area. Concentration results are presented also in terms of exceedance factor ranges, for each sample. Exceedance factors (EFs) are applied instead of concentrations in order to compare all media and COPCs on a generally similar basis with respect to RISLs. EFs are calculated by dividing the sample result concentration by the RISL. RISLs and EFs for anthropogenic materials are listed in Table 7.3-1 and full data are compiled in Appendix B.

The EF bin ranges are presented on figures as colored Thiessen polygons surrounding each storm drain structure. This is done to graphically depict the concentrations of storm drain solids in that vicinity. These polygons are used as representations of localized drainage areas around each storm drain structure, with the recognition that they are only approximations of the actual local drainage, and that some structures may have a very limited capture zone around them. To account for these assumptions, the upstream/downstream and adjacent polygons are also considered in the evaluation, by inspection of general contaminant distribution in figures, and this is incorporated into the RI proposed sampling locations.

Figures within Section 7.3.5 combine results of sampled anthropogenic media and storm drain solids (Figures 7.3-7 to 7.3-17) for the six drainage areas. Some of the contaminated anthropogenic materials have recently been removed in the vicinity of previously collected samples. Locations that are known to be removed as of late 2012 are identified by a black dot within sample symbols in Figures 7.3-7 to 7.3-17, and are listed as removed in numbered tables and Appendix B.

The analytical data utilized for storm drain solids include only the most recent result for any type of samples collected within a storm drain structure. This includes grab samples, sediment trap, and filtered solids samples collected between 2004 and late 2012, but does not include inlet filter solids samples.

At the Site, CJM samples have only been analyzed for PCBs to date. Dioxins/furans and SVOCs have not been analyzed in samples of anthropogenic media, with the exception of cPAHs. Carcinogenic PAHs have been analyzed in only a limited number of samples of surface debris.

Throughout Section 7.3.5, exceedance factor severity will be discussed by categorization into color bin ranges, as depicted in the table below. These colors range from blue to red, corresponding to higher categories of exceedance factors, increasing by a factor of 5 between each color. Gray indicates cases where the result was non-detect. Due to the large number of sampling locations and COPCs, and in order to prioritize areas of concern and investigations, this evaluation will focus on the higher colored EF ranges, particularly orange and red (greater than 25 EF and 125 EF, respectively), but with some attention also given to yellow exceedances (greater than 5 EF). The table cells in this section are colored by EF for yellow, orange, and red ranges. For some anthropogenic media samples, COPCs were not detected, but the maximum PQL exceeded the RISL for that location. On tables in this section, these EFs are flagged with "-N" to indicate that the COPC was not detected.

Exceedance Factor Color Ranges for Storm Drain Solids and Anthropogenic Media

EF Colors	EF Ranges
Gray	Non-detect
Blue	≤ 1.0
Green	> 1.0 – 5.0
Yellow	> 5.0 – 25
Orange	> 25 – 125
Red	> 125

Tables within this section combine results of anthropogenic media and storm drain solids for four of the six NBF drainage areas (Tables 7.3-8 to 7.3-11). Storm drain solid samples and anthropogenic media samples did not exceed an EF of 25 in the Building 3-380 drainage area and the Parking Lot drainage area; these two areas, therefore, do not have corresponding tables. The tables also identify which contaminated sample locations have since undergone CJM removal, paint abatement, or removal of other materials.

In addition, embedded within the text are two sets of unnumbered tables that briefly summarize the data presented in Tables 7.3-8 to 7.3-11. These embedded tables only include sample results for locations that have not undergone removal and therefore remain intact. These two sets of embedded tables for each drainage area are as follows: (1) The first table summarizes the maximum results for concentration and/or EF for each anthropogenic medium and COPC. (2) The second table summarizes two aspects of data: (a) sample locations with elevated COPC exceedances (greater than 25 EF, orange/red) for storm drain solids samples, along with the geographically "associated" (within SD polygon) anthropogenic media samples; and (b) locations where storm drain solids either have not been sampled or with samples having only a moderate EF between 5 and 25 (yellow), and which also have at least one "associated" anthropogenic media sample with an EF greater than 5 (yellow/orange/red). This combination of sample results is intended to provide focus on problem areas or areas lacking data for both storm drain solids and anthropogenic media.

Tables 7.3-12 and 7.3-13 include summary listings of locations and estimated numbers of RI samples to be collected of storm drain solids and surface debris. Figure 7.3-18 depicts RI proposed sampling locations of storm drain solids and surface debris. The following seven subsections describe the analytical results and proposed RI sampling for the seven stormwater drainage areas. For the NBF areas, these sections each first describe PCBs, followed by the other COPCs.

7.3.5.1 Georgetown Steam Plant Property

No known anthropogenic material samples have been collected from the exterior of the large GTSP powerhouse building. However, by comparison to other buildings at NBF and in the Lower Duwamish basin, as well as the storm drain COPCs, the GTSP building exterior (primarily paint) may contain contaminants that should be evaluated, including PCBs, metals, PAHs, and phthalates.

RI Scoped Activities

In order to characterize potential contaminants of exterior materials from the GTSP building, proposed activities for the RI include the collection of ten paint samples from the powerhouse building, with approximately two each from north and south sides, and three each from the large east and west sides. This should be distributed to include different types of paint, as determined based on a field evaluation. Sampling preference will be given to material that is degraded, peeling, or otherwise weathered and potentially becoming dislodged from the building. Analysis will include PCBs and metals for all samples, as well as SVOCs (PAHs, phthalates, phenols) for four samples (one on each side).

The rooftop of the powerhouse is scheduled for replacement in 2013. As such, roof materials that are mobile and potentially being conveyed directly to the storm drain system (the flume replacement line) via rooftop drain inlets are not considered to be further potential contaminant sources. Therefore, the sampling of roofing material and debris is not warranted at this time.

In addition, a single grab sample from the storm drain system downstream of the powerhouse will be collected, to characterize the overall storm drain solids being transported from the roof drains through the replacement flume storm drain line. This sample is planned to be collected at MH12, but the location depends on field access (Figure 7.3-18). The sample will be analyzed for PCBs, metals, SVOCs, and dioxins/furans.

7.3.5.2 North Lateral Drainage Area

Sample locations and analytical results (concentrations and EFs) for anthropogenic media and storm drain solids are presented in Figures 7.3-7 to 7.3-17. Results that exceed RISLs for anthropogenic media samples are presented in Tables 7.3-2 through 7.3-7. Table 7.3-8 presents concentration and EF data for both storm drain solids and anthropogenic media sampled in the north lateral drainage area. Storm drain solids from 84 percent of structures that constitute this drainage area have been sampled since 2004. In general, the highest PCBs and metals concentrations detected in storm drain solids at NBF have been in the north lateral storm drain structures (see Section 7.2.2).

In an effort to trace potential sources of contamination to the storm drain system, Boeing has conducted recent investigations of anthropogenic media in this area. Media sampled in the north lateral drainage area include building materials (122 paint, 15 roof materials, and 20 other exterior materials samples) and ground surface materials (20 CJM, 27 pavement, and 52 surface debris samples). Samples were analyzed for PCBs and in some cases also metals. The maximum concentration and EF for each COPC/media combination for the north lateral drainage area are summarized in the paired tables below, split out by anthropogenic medium. These data exclude removed sample materials.

Chemicals in Building Materials Exceeding RI Screening Levels
North Lateral Drainage Area (1 of 2)

Chemical	Paint Maximum Result		Roof Materials Maximum Result		Exterior Materials Maximum Result	
	Conc (mg/kg)	EF	Conc (mg/kg)	EF	Conc (mg/kg)	EF
Total PCBs	250	**190**	15	**12**	9.8	**7.5**
Arsenic	140	1.9	295	4.0	50 U	NE
Cadmium	219	4.3	106	2.1	12.1	NE
Chromium	23,300	**9.0**	307	NE	103	NE
Lead	69,800	**16**	1,350	NE	160	NE
Mercury	50	**12**	14	3.4	17	4.1
Zinc	222,000	**54**	9,190	2.2	13,900	3.4

Concentration and exceedance factor (EF) represent the maximum for each COPC and medium.
NE No exceedance of RI screening level Conc Concentration U Non-detect

Chemicals in Ground Surface Materials Exceeding RI Selected Screening Levels
North Lateral Drainage Area (2 of 2)

Chemical	CJM Maximum Result		Surface Debris Maximum Result	
	Conc (mg/kg)	EF	Conc (mg/kg)	EF
Total PCBs	49	**38**	36	**280**
Arsenic	--	--	80	**11**
Cadmium	--	--	33	**6.5**
Chromium	--	--	489	1.9
Copper	--	--	364	NE
Lead	--	--	819	1.8
Mercury	--	--	0.59	1.4
Silver	--	--	7 U	1.1-N
Zinc	--	--	2,780	**6.8**

Concentration and exceedance factor represent the maximum for each COPC and medium.
-- Not analyzed NE No exceedance of RI screening level Conc Concentration
U Non-detect -N EF based on non-detect concentration

The following text and tables focus on two combinations of data: (a) anthropogenic media samples in areas that have significantly elevated EFs (>25) for PCBs in associated storm drain solids samples, and (b) anthropogenic media samples that have elevated EFs for PCBs, and where samples of associated storm drain solids have not been collected or are only moderately elevated (>5-25).

PCBs

PCB results for anthropogenic media and storm drain solids samples, in terms of EF values, are presented for the north lateral area in Figures 7.3-7a and 7.3-7b and summarized in the table below. Former catch basins CB191, CB184, and CB184B were recently abandoned by Boeing. The material surrounding these structures and adjacent lines were removed, including pavement. Results for these abandoned structures are included for historical purposes, as they relate to potential sources.

Elevated PCB Exceedances in Storm Drain Solids Samples and Associated Anthropogenic Media Results North Lateral Drainage Area

SD Structure	Maximum EF for PCBs						
	SDS	Paint	Roof Materials	Other Exterior Materials	CJM	Pavement	Surface Debris
Anthropogenic Media in Areas with Significantly Elevated EFs (>25) in SD Solids							
CB147	**150**	4.4	4.2-N	NE	**R**		**24**
CB159	**130**	2.0					
CB173	**260**	4.1					
CB175	**30**						
CB179	**2,500**						**R**
CB185	**120**	**8.3**	1.2-N				**R**
CB187A	**58**	**22**	**12**				**R**
CB192	**62**	2.5		NE		**R**	
CB193	**610**	**9.2**				NE	**10**
CB193A	**46**	**190**	2.8-N				
CB194	**28**	4.3					**R**
CB363	**28**				1.1		
Former CB184	**85**						
Former CB184B	**75**						
Former CB191	**1,400**	**R**			**R**	**R**	**R**
MH130	**440**						
MH138	**28**			NE			
MH152	**28**						
MH166A	**140**	2.1					
MH169	**280**	NE					
MH172	**58**	NE					
MH179A	**28**						**R**
MH179B	**35**						
MH181A	**220**	4.9			1.5-N		**R**
MH187	**770**	**R**				**R**	**280**
MH193	**1,300**	1.8					

Elevated PCB Exceedances in Storm Drain Solids Samples and Associated Anthropogenic Media Results North Lateral Drainage Area

SD Structure	Maximum EF for PCBs						
	SDS	**Paint**	**Roof Materials**	**Other Exterior Materials**	**CJM**	**Pavement**	**Surface Debris**
OWS132	**48**						
OWS137	**38**	NE					
OWS612-2	**35**						
Elevated EFs in Anthropogenic Media in Areas with No SD Solids Samples or with Moderate EFs^							
CB113	**18**				**15**		
CB150	**8.4**	**23**	NE	NE		NE	NE
CB162	**22**			15-N			**85**
CB188A		NE	1.2-N	**7.5**			
UNKCB23		**43**					**5.7**
MH112		NE			**38**		
MH612B	**13**			**R**			**75**

Blank cell: Not sampled -N Maximum EF is non-detected **R** Removed material
NE No exceedance of RI Screening Level
^ This section is limited to locations where anthropogenic media results have an EF >5, and SD solids from the nearby SD structures either have not been sampled or have moderate EFs (5-25).

Exceedance factors were greater than 25 for PCBs in storm drain solids from 30 structures in the north lateral drainage area. Exceedance factors ranged between 28 and 2,500; the maximum was detected at 330 mg/kg at CB179. Associated anthropogenic media in the vicinity of CB179 have not been sampled, except for surface debris, which has been removed.

A number of storm drain solids sample locations in this table were associated with anthropogenic media samples having moderately elevated (EF >5) to significantly elevated (EF >25) values. The most notable exceedances in the above table include results for paint, CJM, and surface debris samples. Paint and surface debris samples associated with CB193A and MH187 contained significantly elevated PCB concentrations (EF 190 to 280). Storm drain solids samples for CB193A and MH187 also contained elevated PCB concentrations (EF 46 and 770, respectively). At the locations with EFs greater than 25 in anthropogenic media, two associated storm drain solids samples show moderate EF ranges (13 to 22) and two locations have not been sampled. Note that virtually all CJM that has been identified at greater than 50 mg/kg (EF 38) has been removed by Boeing. Paint has also recently been removed where identified greater than 50 mg/kg.

Based on the general pattern of sampling and EF distribution in the above table and on figures (including where contaminated material has been removed), the anthropogenic media exceedances show a moderate correlation to storm drain solids exceedances. In other words, higher EF ranges in anthropogenic media locations tend to show a rough proximity to higher EF ranges in storm drain solids locations; however, this considers also recently removed materials. This tendency suggests that these contaminated anthropogenic media may be (or may have been) impacting local storm drain structures via inflow.

Chemicals Other than PCBs

Analytical results for samples of anthropogenic media and storm drain solids samples, in terms of EF values for non-PCB chemicals, are presented in Figures 7.3-8 to 7.3-17 and summarized in the table below. Source tracing conducted by Boeing from 2010 to 2012 indicated that arsenic, cadmium, and copper were detected at low EF ranges (blue to yellow) in anthropogenic media collected in the north lateral drainage area. In storm drain solids samples, moderate EF exceedances (yellow) only occurred once for arsenic at CB147, and twice for cadmium at MH612B and CB193. Therefore, these COPCs are considered as a lower priority and are not discussed further in this section.

Elevated Exceedances for Chemicals Other than PCBs in SD Solids Samples and Associated Anthropogenic Media Results North Lateral Drainage Area

SD Structure	Medium	Maximum EF									
		Chromium		Lead		Mercury		Zinc		Butyl benzyl phthalate	
		SDS	AM	SDS	AM	SDS	AM	SDS	AM	SDS	AM
Anthropogenic Media in Areas with Significantly Elevated EFs (>25) in SD Solids											
CB185	Paint	NE	NE	NE	NE	**48**	4.4	3.6	2.5	--	--
CB194	Paint	1.4	**6.1**	NE	**14**	**31**	**R**	2.6	**54**	--	--
MH181A	Paint	NE	NE	NE	NE	**12**	**10**	4.5	NE	**25**	--
Elevated EFs in Anthropogenic Media in Areas with No SD Solids Samples or with Moderate EFs^											
CB117	Paint	NE	NE	NE	2.4	1.2	NE	**7.7**	**7.3**	--	--
CB147	Paint	2.4	NE	2.7	NE	**17**	**12**	**12**	1.4	--	--
	Surface Debris	2.4	NE	2.7	NE	**17**	NE	**12**	**6.8**	--	--
MH166A	Paint		NE		NE		4.1		**8.3**		--
MH169	Paint	--	**6.8**	--	**8.0**	NE	NE	--	3.4	--	--

SDS Storm drain solids AM Anthropogenic media -- Not analyzed **R** Removed
Blank cell: Not sampled NE No exceedance of RI Screening Level
^ This section is limited to locations where anthropogenic media results have an EF >5, and SD solids from the nearby SD structures either have not been sampled or have moderate EFs (5-25).

Anthropogenic media samples were collected in the polygon areas for all but one of the storm drain structures listed in the above table. Concentrations of chromium, lead, mercury, and/or zinc in paint and surface debris corresponded to elevated EFs ranging from 6.1 to 54 within these seven storm drain locations.

Storm drain solids results from these structures indicate concentrations of chromium and lead below or slightly above the RISLs. However, concentrations of mercury and/or zinc were elevated in storm drain solids from six of the seven sampled structures.

Where storm drain solids results were elevated for a metal COPC, EF ranges for anthropogenic media were low to moderate (green to yellow) or did not exceed the RISL (blue). In the CB194 area, a paint sample had an elevated level (EF 54) for zinc, while the associated storm drain solids sample had a low EF in the green range. Butyl benzyl phthalate was elevated (25 EF) in the most recent storm drain solids sample from MH181A; however, anthropogenic media have not been analyzed for this COPC.

For the source tracing sampling conducted by Boeing in 2010 and 2012, anthropogenic results correspond to yellow to orange EF ranges for cadmium, chromium, lead, mercury, and zinc for 20 samples of paint and 3 samples of surface debris. Of these 23 total sample locations, 20 locations correspond to nearby storm drain structures where solids sample data are available. EF ranges for solids samples were generally one to two color ranges (factors of 5) lower than their corresponding anthropogenic media samples. Storm drain solids results did not exceed the RISLs for chromium, mercury, and/or lead at nine locations where nearby anthropogenic media results showed elevated concentrations. Specific metals results are summarized below.

Chromium. Chromium results in paint samples had a maximum value of EF 14. Samples of paint were collected from bollards, piping materials, a shed roof, and other equipment (Figure 7.3-10) near numerous storm drain structures, 13 of which have not been sampled for solids. Storm drain solids contained low concentrations of chromium (EFs ≤5). In 2010, paint was removed from bollards in the north lateral drainage area, including the bollard with the sample containing the maximum EF of 14. Low levels of chromium were detected in surface debris with EFs less than 5.

Lead. For lead in anthropogenic media, the maximum EF was 16 from a paint chip sample. In the north lateral drainage area, EFs greater than 5 for lead were identified in 11 paint samples. Paint at four of these locations was abated. Paint samples were collected from bollards, building exterior materials, piping, and other equipment. Storm drain solids from structures nearest these samples contained lead at low concentrations (EFs ≤5). Storm drain solids at CB193 and MH169 have not been sampled.

Mercury. The maximum EF for mercury in anthropogenic media in the north lateral was 32, from a sample of paint that has since been removed. Approximately 67 percent of samples analyzed for mercury in anthropogenic media derived from paint samples. Samples were collected from exterior building materials, an AST, piping materials, and other equipment in the north lateral drainage area (Figure 7.3-13). Window seal caulk from one window of Building 3-326 was removed in 2010 based on results of a sample collected near CB188A. Mercury in storm drain solids from structures in the north lateral drainage area ranged from less than the RISL up to an EF of 350. Storm drain solids from seven structures had EFs greater than 25. A limited number of paint and surface debris samples were collected from five of these areas, with low concentrations (EFs ≤5). Storm drain solids from MH193 and CB188A, where elevated levels of mercury were observed in removed samples of paint and caulk, have not been analyzed.

Zinc. Eight samples of paint, three surface debris, and one of other exterior material were elevated for zinc (yellow and orange ranges), with a maximum EF of 54. Paint samples were collected from bollards, exterior building materials, and other equipment. The other exterior material samples included foam (Figure 7.3-15), which has subsequently been removed from Building 3-626. Storm drain solids samples from nearby structures contained low levels of zinc (green to yellow EF ranges). One storm drain structure, MH166A, near a paint sample with an elevated concentration, has not been sampled for SD solids.

Overall, sample results for chemicals other than PCBs in anthropogenic media (shown in tables and figures) suggest a moderately low correlation to storm drain solids in the north lateral drainage area. The metals of most concern to storm drain solids based on past sampling results are mercury and zinc.

Summary of RI Scoped Activities for North Lateral Drainage Area

A total of 25 storm drain structures are proposed for solids sampling and 47 locations are proposed for surface debris sampling within the north lateral drainage area during RI Phase I, Parts 1 and 2. Sampling information is listed in Tables 7.3-12 and 7.3-13 and depicted in Figure 7.3-18.

Although a number of buildings were sampled for anthropogenic materials by Boeing in 2010, the sampling density was relatively low, considering the concentrations of COPCs; a number of buildings and structures have not yet been sampled. Additional physical and analytical data from anthropogenic media may be required in order to evaluate the pathway and potential impact of contaminants between each medium. The locations and numbers of samples for buildings, structures, or ground materials in selected storm drain polygon areas will be based on results of the Phase I storm drain inflow source evaluation. Determination will also be based on historical sample results for storm drain solids and surface debris, and will take into consideration the existing anthropogenic media results and the current data evaluation.

All anthropogenic media samples will be analyzed for PCBs and metals. In addition, approximately one-third of these samples will be analyzed for SVOCs (PAHs, phthalates, phenols). In addition, approximately one-fifth of samples, excluding paint samples, will be analyzed for dioxins/furans. The need for continuation of the latter three chemical classes will be evaluated early in the RI process, on a media-specific basis; thus, the number of analyses for these COPCs is estimated.

7.3.5.3 North-Central Lateral Drainage Area

Sample locations and analytical results (concentrations and EFs) for anthropogenic media and storm drain solids are presented in Figures 7.3-7 to 7.3-17. Results that exceed RISLs for anthropogenic media samples are presented in Tables 7.3-2 through 7.3-7. Table 7.3-9 presents concentration and EF data for both storm drain solids and anthropogenic media sampled in the north-central lateral drainage area. Storm drain solids from 78 percent of structures in this drainage area have been sampled since 2004. Samples of storm drain solids contain concentrations of PCBs and cPAHs significantly exceeding RISLs (see Section 7.2.2).

In an effort to trace potential sources of contamination to the storm drain system, Boeing has conducted recent investigations of anthropogenic media. Media sampled in the north-central lateral drainage area include 12 paint samples, 88 CJM samples, and 1 surface debris sample, which were analyzed for PCBs and, in some cases, metals.

The maximum concentration and EFs for each COPC/media combination for the north-central lateral drainage area are summarized in the table below. These data exclude removed sample materials.

Chemicals in Anthropogenic Material Exceeding RI Screening Levels
North-Central Lateral Drainage Area

Chemical	CJM Maximum Result		Paint Maximum Result		Surface Debris Maximum Result	
	Conc (mg/kg)	EF	Conc (mg/kg)	EF	Conc (mg/kg)	EF
Total PCBs	45	**35**	38	**29**	0.66	**5.1**
Arsenic	--	--	100 U	1.4-N	6	NE
Cadmium	--	--	439	**8.6**	33.6	**6.6**
Chromium	--	--	23,100	**8.9**	90.9	NE
Copper	--	--	NC	NC	117	NE
Lead	--	--	122,000	**27**	137	NE
Mercury	--	--	1.5	NE	0.04	NE
Silver	--	--	NC	NC	0.3 U	NE
Zinc	--	--	17,400	4.2	1,030	2.5

Concentration and exceedance factor represent the maximum for each COPC and medium.
-- Not analyzed NE No exceedance of RI screening level Conc Concentration
U Non-detect -N Maximum EF is non-detected NC Not a COPC

The following text and tables focus on two combinations of data: (a) anthropogenic media samples in areas that have significantly elevated EFs (>25) for PCBs in associated storm drain solids samples, and (b) anthropogenic media samples that have elevated EFs for PCBs, and where samples of associated storm drain solids have not been collected or are only moderately elevated (>5-25).

PCBs

PCB results for anthropogenic media and storm drain solids samples, in terms of EF values, are presented in Figure 7.3-7 and summarized in the table below.

Exceedance factors were greater than 25 for PCBs in storm drain solids from nine structures in the north-central lateral drainage area. Exceedance factors ranged between 25 and 260; the maximum was detected at 34 mg/kg at MH247. CJM samples collected from the associated drainage areas contained PCB concentrations that did not exceed the RISL (blue EF); however, a much higher concentration was present in removed CJM in the MH247 polygon. CJM samples with PCB concentrations in the orange to red EF ranges (>25) have been removed and replaced. With the exception of the CB224 drainage area, anthropogenic media (including paint and surface debris) have not been sampled in the other eight drainage areas with highly elevated EFs in storm drain solids.

Anthropogenic media samples from three storm drain structure areas indicated PCB concentrations with EFs ranging from 5.9 to 35 for paint and CJM, as shown in the table above. Storm drain solids samples have been collected from only two of the associated structures, where PCB concentrations were in the yellow EF range (5.5 to 14).

Elevated PCB Exceedances in SD Solids Samples and Associated Anthropogenic Media Results North-Central Lateral Drainage Area

SD Structure	Maximum EF for PCBs			
	SDS	Paint	CJM	Surface Debris
Anthropogenic Media in Areas with Significantly Elevated EFs (>25) in SD Solids				
CB224	**48**	1.8	1.2	**5.1**
CB225	**28**		NE	
CB364A	**29**		1.9	
CB372A	**25**			
MH228D	**56**		1.5-N	
MH247	**260**		1.8	
MH249	**31**		NE	
UNKMH21	**58**		NE	
OWS226A	**87**		NE	
Elevated EFs in Anthropogenic Media in Areas with No SD Solids Samples or with Moderate EFs^				
CB227C			**35**	
CB255	**5.5**	**5.9**	2.3	
MH228	**14**	**28**		

Blank cell: Not sampled -N Maximum EF is non-detected NE No exceedance of RI Screening Level
^ This section is limited to locations where anthropogenic media results have an EF >5, and SD solids from the nearby SD structures either have not been sampled or have moderate EFs (5-25).

Because sampling data overall are somewhat limited and variable, results for PCBs in anthropogenic media (shown in tables and figures) do not currently suggest a noticeable correlation and impact to storm drain solids in the north-central lateral drainage area. Landau (2011b) suggested a general, weak correlation between PCB concentrations in CJM and adjacent inlet filter solids, based on targeted sampling in the flightline areas.

Chemicals Other than PCBs

Analytical results for anthropogenic media and storm drain solids samples, in terms of EF values for non-PCB chemicals, are presented in Figures 7.3-8 to 7.3-17 and summarized in the table below.

Of the storm drain solids sampled in the north-central lateral, an elevated EF (orange range) for total cPAHs was identified in five samples; however, anthropogenic media have not been sampled near those locations. Moderate levels of zinc were also found in two of the five storm drain solids samples. In anthropogenic media, EF ranges were elevated in paint for chromium (EF 8.9) and lead (EF 27) near MH228 in Concourse A, where storm drain solids have not been sampled.

Overall, sample results for chemicals other than PCBs in anthropogenic media and storm drain solids (shown in tables and figures) are too limited to suggest a correlation and impact to the storm drain system in the north-central lateral drainage area. Most of the anthropogenic material sampled in this area is CJM, which has only been analyzed for PCBs.

Elevated Exceedances for Chemicals Other than PCBs in Anthropogenic Media Samples and Associated SD Solids Results North-Central Lateral Drainage Area

SD Structure	Medium	Maximum EF							
		cPAHs		Chromium		Lead		Zinc	
		SDS	AM	SDS	AM	SDS	AM	SDS	AM
Anthropogenic Media in Areas with Significantly Elevated EFs (>25) in SD Solids									
CB229A		**64**		NE		NE		3.5	
UNKCB27		**86**		NE		1.6		2.7	
MH221A		**49**		--		NE		**6.0**	
MH226		**38**		NE		NE		**6.2**	
MH362		**25**		NE		NE		3.3	
Elevated EFs in Anthropogenic Media in Areas with No SD Solids Samples or with Moderate EFs^									
MH228	Paint	--	--	--	**8.9**	--	**27**	--	3.2

SDS Storm drain solids AM Anthropogenic media -- Not analyzed Blank cell: Not sampled
^ This section is limited to locations where anthropogenic media results have an EF >5, and SD solids from the nearby SD structures either have not been sampled or have moderate EFs (5-25).

Summary of RI Scoped Activities for North-Central Lateral Drainage Area

A total of 10 storm drain structures and 15 surface debris locations are proposed for sampling in the north-central lateral drainage area during RI Phase I, Parts 1 and 2. Sample information is listed in Tables 7.3-12 and 7.3-13 and depicted in Figure 7.3-18.

Boeing has collected a small number of paint samples and only one surface debris sample within the north-central lateral drainage area. CJM sampling has been fairly widespread; however, a few areas remain where few or no CJM samples have been collected. Additional physical and analytical data from anthropogenic media may be required in order to evaluate the pathway and potential impact of contaminants between each medium.

As described for the north lateral drainage area (Section 7.3.5.2), selective anthropogenic media materials sampling will be based on Phase I and historical sample results for storm drain solids and surface debris, and will take into consideration the existing anthropogenic media results and the current data evaluation.

7.3.5.4 South-Central Lateral Drainage Area

Sample locations and analytical results (concentrations and EFs) for anthropogenic media and storm drain solids are presented in Figures 7.3-7 to 7.3-17. Results that exceed RISLs for anthropogenic media samples are presented in Tables 7.3-2 through 7.3-7. Table 7.3-10 presents concentration and EF data for both storm drain solids and anthropogenic media sampled in the south-central lateral drainage area. Storm drain solids from approximately 56 percent of structures in this drainage area have been sampled since 2004. Samples of storm drain solids contain concentrations of PCBs significantly above RISLs (see Section 7.2.2).

In an effort to trace potential sources of contamination to the storm drain system, Boeing has conducted recent investigations of anthropogenic media. Media sampled in the south-central lateral drainage area include 7 paint samples and 111 CJM samples. Samples were analyzed for PCBs and, in some cases, metals.

The maximum concentrations and EFs for each COPC/media combination for the south-central lateral drainage area are summarized in the table below. These data exclude removed sample materials.

Chemicals in Anthropogenic Material Exceeding RI Selected Screening Levels
South-Central Lateral Drainage Area

Chemical	Paint Maximum Result		CJM Maximum Result	
	Conc (mg/kg)	EF	Conc (mg/kg)	EF
Total PCBs	16.1	**12**	43	**33**
Arsenic	50 U	NE	--	--
Cadmium	10	NE	--	--
Chromium	41,100	**16**	--	--
Lead	151,000	**34**	--	--
Mercury	3.8	NE	--	--
Zinc	30,200	**7.4**	--	--

Concentration and exceedance factor represent the maximum for each COPC and medium.
-- Not analyzed NE No exceedance of RI screening level
Conc Concentration U Non-detect

The following text and tables focus on two combinations of data: (a) anthropogenic media samples in areas that have significantly elevated EFs (>25) for PCBs in associated storm drain solids samples, or (b) anthropogenic media samples that have elevated EFs for PCBs, and where samples of associated storm drain solids have not been collected or are only moderately elevated (>5-25).

PCBs

PCB results for anthropogenic media and storm drain solids samples, in terms of EF values, are presented in Figure 7.3-7 and summarized in the table below.

Elevated PCB Exceedances in Anthropogenic Media Samples
and Associated SD Solids Results
South-Central Lateral Drainage Area

SD Structure	Maximum EF for PCBs	
	SDS	CJM
Anthropogenic Media in Areas with Elevated EFs (>25) in SD Solids		
CB416	**34**	**5.5**

An elevated PCB concentration (EF 34; or 4.4 mg/kg) was observed in storm drain solids from one structure, CB416, in the south-central lateral drainage area. CJM was the only anthropogenic material sampled in this polygon area; within the CB416 polygon area, with EFs for PCBs ranging from <1.0 to 5.5. However, much higher concentrations were present in removed CJM from an adjacent polygon.

Because sampling data overall are somewhat limited and variable, results for PCBs in anthropogenic media (shown in tables and figures) do not currently suggest a noticeable correlation and impact to storm drain solids in the south-central lateral drainage area. Landau (2011b) suggested a general, weak correlation between PCB concentrations in CJM and adjacent inlet filter solids, based on targeted sampling in the flightline areas.

Chemicals Other than PCBs

Analytical results for anthropogenic media (paint) and storm drain solids samples, in terms of EF values for non-PCB chemicals, are presented in Figures 7.3-8 to 7.3-17 and summarized in the table below. Seven paint samples were analyzed for metals. Storm drain solids analytical data for structures in the south-central lateral drainage area indicate only low EF ranges (blue to yellow).

Elevated Exceedances for Chemicals Other than PCBs in Anthropogenic Media Samples and Associated SD Solids Results South-Central Lateral Drainage Area

SD Structure	Medium	Maximum EF			
		Chromium		Lead	
		SDS	AM	SDS	AM
Elevated EFs in Anthropogenic Media in Areas with No SD Solids Samples or with Moderate EFs^					
CB371	Paint		**16**		**34**

SDS Storm drain solids AM Anthropogenic media Blank cell: Not sampled
^ This section is limited to locations where anthropogenic media results have an EF >5, and SD solids from the nearby SD structures either have not been sampled or have moderate EFs (5-25).

Chromium and lead were detected at elevated EF ranges (16 and 34) in paint in the south-central lateral drainage area. The table above summarizes maximum EFs for sample locations where at least one of the COPC metals contains elevated EF (>5) in anthropogenic media. Source tracing for the 2011 Site-Wide Source Evaluation indicated five samples of paint with yellow to orange EF ranges for chromium, lead, and/or zinc. These paint samples were collected near CB371 and MH368, from the northern exterior of Building 3-390 and nearby structures. All three metals were detected at concentrations below their respective RISL in SD solids from MH368. Storm drain solids from structure CB371 have not been sampled.

Overall, sample results for non-PCB chemicals in anthropogenic media and storm drain solids (shown in tables and figures) are too limited and variable to suggest a correlation and impact to the storm drain system in the south-central lateral drainage area. Most of the anthropogenic material sampled in this area is CJM, which has only been analyzed for PCBs.

Summary of RI Scoped Activities for South-Central Lateral Drainage Area

A total of four storm drain structures and three surface debris locations are proposed for sampling during RI Phase I, Parts 1 and 2. Sampling information is listed in Tables 7.3-12 and 7.3-13 and depicted in Figure 7.3-18.

Boeing has collected a small number of paint samples within the south-central lateral drainage area. CJM sampling has been fairly widespread; however, some localized areas remain where few or no CJM samples have been collected. Additional physical and analytical data from anthropogenic media may be required in order to evaluate the pathway and potential impact of contaminants between each medium.

As described for the north lateral drainage area (Section 7.3.5.2), selective anthropogenic media materials sampling will be based on Phase I and historical sample results for storm drain solids and surface debris, and will take into consideration the existing anthropogenic media results and the current data evaluation.

7.3.5.5 South Lateral Drainage Area

Sample locations and analytical results (concentrations and EFs) for anthropogenic media and storm drain solids are presented in Figures 7.3-7 to 7.3-17. Results that exceed RISLs for anthropogenic media samples are presented in Tables 7.3-2 through 7.3-7. Table 7.3-11 presents concentration and EF data for both storm drain solids and anthropogenic media sampled in the south lateral drainage area. Storm drain solids from only 18 percent of structures in this drainage area have been sampled since 2004. Samples of storm drain solids contain concentrations of PCBs, mercury, cPAHs, and other SVOCs significantly above RISLs (see Section 7.2).

In an effort to trace potential sources of contamination to the storm drain system, Boeing has conducted recent investigations of anthropogenic media. Media sampled in the south lateral drainage area include building materials (28 paint samples) and surface materials (178 CJM samples). These samples were analyzed for PCBs and, in some cases, metals.

The maximum concentrations and EFs for each COPC/media combination for the south-central lateral drainage area are summarized in the table below. These data exclude removed sample materials.

The maximum concentrations and EFs for each COPC/media combination for the south lateral drainage area are summarized in the table below. These data exclude removed sample materials.

Chemicals in Anthropogenic Material Exceeding RI Screening Levels
South Lateral Drainage Area

Chemical	Paint Maximum Result		CJM Maximum Result	
	Conc (mg/kg)	EF	Conc (mg/kg)	EF
Total PCBs	110	**85**	24	**18**
Arsenic	100 U	1.4-N	--	--
Cadmium	43	NE	--	--
Chromium	38,000	**15**	--	--
Lead	151,000	**34**	--	--
Mercury	62	**15**	--	--
Zinc	99,600	**24**	--	--

Concentration and exceedance factor (EF) represent the maximum for each COPC and medium.
-- Not analyzed NE No exceedance of RI screening level Conc Concentration
U Non-detect -N Maximum EF is non-detected

The following text and tables focus on two combinations of data: (a) anthropogenic media samples in areas that have significantly elevated EFs (>25) for PCBs in associated storm drain solids samples, and (b) anthropogenic media samples that have elevated EFs for PCBs, and where samples of associated storm drain solids have not been collected or are only moderately elevated (>5-25).

PCBs

PCB results for anthropogenic media and storm drain solids samples, in terms of EF values, are presented in Figure 7.3-7 and summarized in the table below.

Elevated PCB Exceedances in SD Solids Samples and Associated Anthropogenic Media Results South Lateral Drainage Area

SD Structure	Maximum EF for PCBs		
	SDS	**Paint**	**CJM**
Anthropogenic Media in Areas with Significantly Elevated EFs (>25) in SD Solids			
CB261	**180**		**18**
CB384	**28**		
OWS1-C	**47**		
OWS483B/C	**30**		
Elevated EFs in Anthropogenic Media in Areas with No SD Solids Samples or with Moderate EFs^			
CB277C		**9.9**	
CB352		**27**	

Blank cell: Not sampled
^ This section is limited to locations where anthropogenic media results have an EF >5, and SD solids from the nearby SD structures either have not been sampled or have moderate EFs (5-25).

Results of storm drain solids sampling in the south lateral area contained highly elevated PCB concentrations with EFs ranging between 28 and 180; the maximum was detected at 23 mg/kg at CB261. In these four storm drain polygons in the south lateral area, CJM was the only anthropogenic material sampled. Within the CB261 polygon area, PCB concentrations exceeded as high as the yellow EF range (18), although much higher concentrations were present in removed CJM.

Storm drain solids analytical data are not available for structures adjacent to the collection locations of most anthropogenic media samples in the south lateral drainage area. Of those storm drain structures without solids sample data, two anthropogenic media samples for paint contained PCBs with yellow to orange EFs (9.9 to 27), as shown in the table above.

Because sampling data overall are somewhat limited and variable, results for PCBs in anthropogenic media (shown in tables and figures) do not currently suggest a noticeable correlation and impact to storm drain solids in the south lateral drainage area. Landau (2011b) suggested a general, weak correlation between PCB concentrations in CJM and adjacent inlet filter solids, based on targeted sampling in the flightline areas.

Chemicals Other than PCBs

Analytical results for anthropogenic media (paint) and storm drain solids samples, in terms of EF values for non-PCB chemicals, are presented in Figures 7.3-8 to 7.3-15 and summarized in the paired tables below.

Elevated Exceedances for Chemicals Other than PCBs in Anthropogenic Media Samples and Associated SD Solids Results South Lateral Drainage Area (1 of 2)

SD Structure	Med-ium			Maximum EF									
		Lead		Mercury		Zinc		Chrysene		cPAHs		HPAHs	
		SDS	AM	SDS	AM	SDS	AM	SDS	AM	SDS	AM	SDS	AM
Anthropogenic Media in Areas with Significantly Elevated EFs (>25) in SD Solids													
CB261		NE		1.2		4.5		**5.6**		**35**		3.8	
MH356		NE		NE		3.6		**14**		**120**		**15**	
MH482		NE		NE		1.8		**27**		**150**		**19**	
MH492		NE		NE		2.6		**32**		**280**		**30**	
OWS483B/C		NE		3.0		**5.6**		**8.6**		**79**		**9.4**	
OWS483E/D		NE		**35**		**7.3**		--		--		--	
Elevated EFs in Anthropogenic Media in Areas with No SD Solids Samples or with Moderate EFs^													
CB308	Paint	NE		NE		**5.5**	**5.2**		--		--		--
CB352	Paint		**34**		NE		NE		--		--		--

SDS Storm drain solids AM Anthropogenic media -- Not analyzed Blank cell: Not sampled
^ This section is limited to locations where anthropogenic media results have an EF >5, and SD solids from the nearby SD structures either have not been sampled or have moderate EFs (5-25).

Elevated Exceedances for Chemicals Other than PCBs in Anthropogenic Media Samples and Associated SD Solids Results South Lateral Drainage Area (2 of 2)

SD Structure	Med-ium	Maximum EF									
		BEHP		Benzo(g,h,i) perylene		Dibenz(a,h) anthracene		Fluoranthene		Indeno(1,2,3-cd) pyrene	
		SDS	AM	SDS	AM	SDS	AM	SDS	AM	SDS	AM
Anthropogenic Media in Areas with Significantly Elevated EFs (>25) in SD Solids											
CB261		**20**		5.1-N		15-N		**8.2**		5.7-N	
MH356		**28**		**19**		**20**		**15**		**20**	
MH482		NE		**25**		**16**		**29**		**27**	
MH492		**37**		**36**		**43**		**59**		**43**	
OWS483B/C		**27**		3.9		**5.2**		**24**		4.8	

BEHP Bis(2-ethylhexyl) phthalate SDS Storm drain solids AM Anthropogenic media
-N Maximum EF is non-detected Blank cell: Not sampled

Results of storm drain solids sampling for metals in the south lateral area contained a significantly elevated mercury concentration (EF 35) for one storm drain structure, OWS483E/D. Results of storm drain solids sampling in the south lateral area also contained elevated levels of PAHs and phthalates, with EFs ranging from 5.2 to 280. Elevated levels of PAHs and phthalates (EFs ranging from 5.6 to 490) were observed in storm drain solids grab samples from locations upstream of the south lateral line. Anthropogenic media samples have not been collected from the associated polygon areas. Lead was identified at an elevated level of EF 34 in a paint sample collected from the south lateral drainage area, near Building 3-397; but the associated storm drain structure has not been sampled.

Source tracing for the 2011 Site-Wide Source Evaluation indicated 14 samples of paint with yellow to orange EF ranges for chromium, lead, mercury, and/or zinc. Of the 14 locations, only two correspond to storm drain structure polygon areas where storm drain solids data are available (CB308 and CB448). For results at CB308, there is a close correlation for EF range of zinc between SD solids and nearby paint data.

Overall, sample results for non-PCB chemicals in anthropogenic media and storm drain solids (shown in tables and figures) are too limited and variable to suggest a correlation and impact to the storm drain system in the south lateral drainage area. Storm drain solids sampling in this drainage area are limited for many structures. Much of the anthropogenic material sampled in this area is CJM, which has only been analyzed for PCBs.

Summary of RI Scoped Activities for South Lateral Drainage Area

A total of 15 storm drain structures and 31 surface debris locations are proposed for sampling in the south lateral drainage area during RI Phase I, Parts 1 and 2. Sample information is listed in Tables 7.3-12 and 7.3-13 and depicted in Figure 7.3-18.

Boeing has collected a small number of paint samples within the south lateral drainage area, mainly at Building 3-818. CJM sampling has been fairly widespread. Additional physical and analytical data from anthropogenic media may be required in order to evaluate the pathway and potential impact of contaminants between each medium.

As described for the north lateral drainage area (Section 7.3.5.2), selective anthropogenic media materials sampling will be based on Phase I and historical sample results for SD solids and surface debris, and will take into consideration the existing anthropogenic media results and the current data evaluation.

7.3.5.6 Building 3-380 Drainage Area

Sample locations and analytical results (concentrations and EFs) for anthropogenic media and storm drain solids are presented in Figures 7.3-7 to 7.3-17. Results that exceed RISLs for anthropogenic media samples are presented in Tables 7.3-2 through 7.3-7. Storm drain solids from all but one structure in this drainage area have been sampled. Samples of storm drain solids do not contain concentrations of PCBs and metals significantly above RISLs (see Section 7.2).

In an effort to trace potential sources of contamination to the storm drain system, Boeing has conducted recent investigations of anthropogenic media. Media sampled in the Building 3-380 drainage area is limited to four paint samples, which were analyzed for PCBs and metals.

The maximum concentrations and EFs for each COPC/media combination for the Building 3-380 drainage area are summarized in the table below. These data exclude removed paint material.

Chemicals in Anthropogenic Material Exceeding RI Screening Levels
Building 3-380 Drainage Area

Chemical	Paint Maximum Result	
	Conc (mg/kg)	EF
Total PCBs	4.6	3.5
Arsenic	100 U	1.4-N
Cadmium	11	NE
Chromium	17,000	**6.5**
Lead	35,600	**7.9**
Mercury	0.49	NE
Zinc	43,600	**11**

Concentration and exceedance factor (EF) represent the maximum for each COPC and medium.
NE No exceedance of RI screening level Conc Concentration
U Non-detect -N Maximum EF is non-detected

PCBs

PCB results for anthropogenic media and storm drain solids samples, in terms of EF values, are presented in Figure 7.3-7. The maximum PCB exceedance in storm drain solids in this area was observed at CB423, with an EF of 14. Anthropogenic media have not been sampled in the CB423 polygon area.

Sample results for PCBs in anthropogenic media and storm drain solids (shown in figures) are relatively low, suggesting that the Building 3-380 area is not a concern for impact from anthropogenic materials to the storm drain system.

Chemicals Other than PCBs

Analytical results for anthropogenic media (paint) and storm drain solids samples, in terms of EF values for non-PCB chemicals, are presented in Figures 7.3-8 to 7.3-17. A total of four paint samples were collected from this area. Chromium, lead, and zinc were detected at up to an EF range of yellow (6.5 to 11) for unremoved paint samples. Storm drain solids from two of the three corresponding structure drainages were analyzed for metals; detections were below respective RISLs.

Results of storm drain solids sampling in the Building 3-380 drainage area indicate low EF ranges (blue to yellow) for metals and SVOCs. The maximum EF range was 7.2 (yellow) for zinc in storm drain solids collected from MH105. The EF range was also yellow (7.1 to 13) for cPAHs, BBP, and BEHP in storm drain solids collected from MH105. Anthropogenic media samples have not been analyzed for SVOCs.

Overall, sample results for chemical other than PCBs in anthropogenic media and storm drain solids (shown in tables and figures) are too limited to suggest a correlation and impact to the storm drain system in the Building 3-380 drainage area.

Summary of RI Scoped Activities for Building 3-380 Drainage Area

No additional sampling of storm drain solids or surface debris is proposed for the Building 3-380 drainage area during RI Phase I, Parts 1 and 2.

Boeing has collected a small number of paint samples within the Building 3-380 drainage area. CJM is generally not present in this area. Additional physical and analytical data from storm drain solids and anthropogenic media are not required in this area.

7.3.5.7 Parking Lot Drainage Area

Sample locations and analytical results (concentrations and EFs) for anthropogenic media and storm drain solids are presented in Figures 7.3-7 to 7.3-17. Results that exceed RISLs for anthropogenic media sampled are presented in Tables 7.3-2 through 7.3-7. Storm drain solids from approximately 61 percent of structures in the parking lot drainage area have been sampled. Samples of storm drain solids did not contain concentrations of PCBs, metals, and cPAHs significantly above RISLs (see Section 7.2).

In an effort to trace potential sources of contamination to the storm drain system, Boeing has conducted recent investigations of anthropogenic media. Media sampled in the parking lot drainage area is limited to one paint sample (PCBs, metals) and two CJM samples. In addition, six surface debris samples have been collected by Ecology and analyzed for PCBs, metals, and cPAHs.

The maximum concentrations and EFs for each COPC/media combination for the parking lot drainage area are summarized in the table below.

Chemicals in Anthropogenic Material Exceeding RI Screening Levels
Parking Lot Drainage Area

Chemical	Paint Maximum Result		CJM Maximum Result		Surface Debris Maximum Result	
	Conc (mg/kg)	EF	Conc (mg/kg)	EF	Conc (mg/kg)	EF
Total PCBs	0.8 U	NE	3.1	2.4	0.34	2.6
Arsenic	50 U	NE	--	--	40	**5.5**
Cadmium	2.1	NE	--	--	3.4	NE
Chromium	10,900	4.2	--	--	137	NE
Copper	NC	NC	--	--	146	NE
Lead	42,300	**9.4**	--	--	427	NE
Mercury	0.13	NE	--	--	0.12	NE

Chemicals in Anthropogenic Material Exceeding RI Screening Levels
Parking Lot Drainage Area

Chemical	Paint Maximum Result		CJM Maximum Result		Surface Debris Maximum Result	
	Conc (mg/kg)	EF	Conc (mg/kg)	EF	Conc (mg/kg)	EF
Silver	NC	NC	--	--	0.7 U	NE
Zinc	1,030	NE	--	--	756	1.8
Acenaphthene	--	--	--	--	0.05 U	NE
Anthracene	--	--	--	--	0.05	NE
Benzo(a)anthracene	--	--	--	--	0.42	NE
Benzofluoranthenes	--	--	--	--	1.3	NE
Benzo(a)pyrene	--	--	--	--	0.54	3.6
Benzo(g,h,i)perylene	--	--	--	--	0.22	NE
Chrysene	--	--	--	--	0.68	NE
Dibenz(a,h)anthracene	--	--	--	--	0.055	NE
Dibenzofuran	--	--	--	--	0.05 U	NE
Fluoranthene	--	--	--	--	1.5	NE
Fluorene	--	--	--	--	0.05 U	NE
Indeno(1,2,3-cd)pyrene	--	--	--	--	0.22	NE
2-Methylnaphthalene	--	--	--	--	0.05 U	NE
Phenanthrene	--	--	--	--	0.72	NE
Pyrene	--	--	--	--	1.4	NE

Concentration and exceedance factor (EF) represent the maximum for each COPC and medium.
-- Not analyzed NE No exceedance of RI screening level Conc Concentration
U Non-detect NC Not a COPC

PCBs

PCB results for anthropogenic media and storm drain solids samples, in terms of EF values, are presented in Figure 7.3-7. The maximum PCB exceedance in storm drain solids in this area was observed at CB633, with an EF of 16. Anthropogenic media have not been sampled in the CB633 polygon area.

Sample results for PCBs in anthropogenic media and storm drain solids (shown in figures) are relatively low, suggesting that the parking lot drainage area is not a concern for impact from anthropogenic materials to the storm drain system.

Chemicals Other than PCBs

Analytical results for anthropogenic media and storm drain solids, in terms of EF values for non-PCB chemicals, are presented in Figures 7.3-8 to 7.3-17. Concentrations of metals in storm drain solids samples collected in the parking lot drainage area were generally low, although the exceedances for arsenic were moderate at CB434 (EF 20) and CB436 (EF 12). Anthropogenic media samples have not been collected from these two location drainage areas.

Carcinogenic PAHs were tested for in six surface debris samples collected next to the strip drains in the parking lots. Concentrations of cPAHs were uniformly low, in the green EF range (>1 to 5) as shown in Figure 7.3-16. Storm drain solids have been analyzed for cPAHs in only two locations in the parking lot area; one of those results exceeded the RISL (EF 15).

Overall, sample results for non-PCB chemicals in anthropogenic media and storm drain solids are relatively low, suggesting that the parking lot drainage area is not a concern for impact from anthropogenic materials to the storm drain system.

Summary of RI Scoped Activities for Parking Lot Drainage Area

One storm drain sample is proposed at the main line, downstream location CB433 during RI Phase I, Part 1 (Figure 7.3-18).

A small number of surface debris samples have been collected from the parking lot drainage area. CJM is generally not present in this area. Additional physical and analytical data from storm drain solids and anthropogenic media are unlikely to be required in order to evaluate the pathway and potential impact of contaminants between each medium. Due to the low concentrations and exceedances of RISLs, additional sampling of surface debris, CJM, and paint is not proposed in this area.

7.3.6 Summary of RI Scoped Activities

According to the rationale presented in Figure 7.3-6, a phased approach will be taken to determine the number and types of anthropogenic media samples. As explained in Section 7.3.4, sampling will start at the down-pathway end of the transport pathway (storm drain solids) and move up-pathway. This phased approach is divided into two sampling phases, and the first phase is split into two parts: Phase I, Part 1, includes sampling of storm drain solids; and Phase I, Part 2, involves sampling of surface debris. Phase II includes sampling of anthropogenic media, and the sampling locations and numbers cannot be determined until Phase I results are evaluated.

During Phase I, Part 1, a total of 56 storm drain structures will be sampled, as described in Table 7.3-12. During Phase I, Part 2, a total of 96 surface debris samples will be collected, as described in Table 7.3-13. Figure 7.3-18 depicts proposed sampling locations for storm drain solids and surface debris. A brief summary of proposed sampling locations for Phase I is provided in the table below.

Summary of Proposed Sampling for Storm Drain Solids and Surface Debris Phase I, Parts 1 & 2

Drainage Area	Approximate Number of Proposed Samples*	
	Storm Drain Solids	**Surface Debris**
GTSP	1	0
North Lateral	25	47
North-Central Lateral	10	15
South-Central Lateral	4	3
South Lateral	15	31
Building 3-380 SD Area	0	0
Parking Lot Drainage Area	1	0
Total Number of Proposed Samples	*56*	*96*
PCBs and Metals Analyses	*56*	*96*
SVOCs Analyses	*56*	*32*
Dioxins/Furans Analyses	*13*	*20*

* The number of proposed locations is approximate. Field conditions and the availability of sampleable material may reduce the number of samples collected. In addition, the number of surface debris sample locations may change based on Part 1 SDS results.

SVOCs – Includes PAHs, phthalates, and phenols

One storm drain structure will be sampled at GTSP to characterize the overall storm drain solids transported from the roof drains through the replacement flume storm drain line. In the north lateral drainage area, the majority of the structures were identified for sampling to determine whether recent interim actions have had an effect on COPC concentrations in storm drain solids. The lack of analytical data or recent data for storm drain solids triggered the identification of most sample locations for the remaining drainage areas. All samples will be analyzed for PCBs, metals, and SVOCs (PAHs, phthalates, phenols); and 13 samples will be analyzed for dioxins/furans (Table 7.3-12).

Surface debris sampling is largely based on areas with elevated storm drain solids and a lack of nearby surface debris characterization. Sampling is not proposed at GTSP, the Building 3-380 storm drain area, or the parking lot area. The total number of proposed sampling locations is subject to change based on the analytical results of storm drain solids from Phase I, Part 1. All samples will be analyzed for PCBs and metals, one-third of samples will be analyzed for SVOCs, and one-fifth of samples will be analyzed for dioxins/furans (Table 7.3-13).

Anthropogenic media samples will be collected during Phase II sampling. Phase II sampling and analysis will be determined after Phase I is completed and will be based on the Phase I sampling and analysis results, following the rationale presented in Figure 7.3-6. Anthropogenic media sampling will focus on areas where nearby storm drain solids and/or surface debris samples from Phase I sampling contained elevated COPCs or have not been adequately characterized, or the anthropogenic media have not been adequately characterized, as described in further detail in Section 7.3.4.2.

After the number of anthropogenic media samples is determined for Phase II, a summary document will be submitted to Ecology and the PLPs for approval or modification to proceed with Phase II sampling.

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8.0 Remedial Investigation Reporting

The NBF-GTSP Site RI/FS and associated documents, including this Work Plan, will be conducted and developed in accordance with the Model Toxics Control Act (WAC 173-340-350). The purpose of the RI is to collect data in order to characterize the Site, and to evaluate sufficient information regarding an area contaminated with hazardous substances. The information collected will be used to select and evaluate remedial alternatives during the FS, leading to one or more cleanup actions or interim actions.

Following RI field and analytical activities for the NBF-GTSP Site, an RI Report will be prepared to compile, evaluate, and present data leading to the feasibility study. The RI Report will include and expand upon portions of this RI/FS Work Plan that summarize information to date. The following outline is expected to be used within the RI Report.

- Section 1 – Introduction

  Includes general Site description/setting, historical operations, regulatory and investigative history, previous remedial actions, contaminants of potential concern
- Section 2 – RI Investigation Activities

  Includes summary of field and analytical activities performed during the RI
- Section 3 – Physical Setting of Site

  Includes Site geologic, hydrogeologic, and stormwater-related information, largely from data gathered during the RI and recent activities
- Section 4 – Nature and Extent of Contamination

  Includes developing cleanup levels for contaminants, data quality assessment, nature and extent of contaminants by media and area, and conceptual site model with pathways analysis

During the RI phase, cleanup levels will be developed and refined, for comparison of Site data to determine exceedances and the extent of contamination. This process involves evaluating background concentrations. Figures in the RI Report will present storm drain features, wells and borings, pertinent buildings and structures, and other sampling locations. Figures will also include maps depicting concentrations and/or exceedance factors for areas of the Site that have been investigated during the RI. Historical data and locations will be included where appropriate to define the type and extent of contamination. These figures will be compiled by media or groups of media (such as anthropogenic materials), and by contaminants or classes of chemicals, and where appropriate will show aspects of depth for soil. Water-table contour maps will also depict the groundwater flow pattern under varying seasonal conditions for the entire Site and for localized areas. Geologic cross-sections will be generated where necessary to depict zones of contamination or preferential flow.

Tables will be compiled to present key analytical and physical data, including historical data. Sampling results for removed soil will not be incorporated into tables or figures, although removed anthropogenic media samples may be included as necessary. Concentrations and/or exceedance factors for cleanup levels will be presented. Bulk data will be compiled in appendices, which may be distributed solely in electronic format.

Section 10 of this Work Plan presents the anticipated schedule for the various versions of the RI Report. These versions include a preliminary draft RI Report for Ecology review, a second preliminary draft RI Report for PLP review, a draft RI Report for public review and public meeting, a revised draft RI Report for Ecology review, a final draft RI Report for PLP review, and a final RI Report. Draft and final responsiveness summaries will also be prepared for Ecology and PLP review.

9.0 Feasibility Study

Following preparation of the RI Report, an FS Report will be prepared for the Site in accordance with the Model Toxics Control Act [WAC 173-340-350(8)]. The purpose of the FS is to develop and evaluate cleanup action alternatives to enable selection of one or more cleanup actions for the Site. The FS will be conducted by a sequence of: developing cleanup standards to be used for the Site, identifying and developing alternatives, initial screening of alternatives, and performing an evaluation of alternatives and selection of the preferred alternative (Ecology 2011b).

The following outline is expected to be used within the FS Report, and the main components of the FS process are described in the sections below. The FS process is graphically portrayed in Figure 9-1.

- Section 1 – Introduction and RI Summary
- Section 2 – Establishment of Cleanup Standards
- Section 3 – Development of Alternatives
- Section 4 – Screening of Alternatives
- Section 5 – Evaluation and Selection of Alternatives

9.1 Establishment of Cleanup Standards

In this RI/FS Work Plan, the *RI screening levels* have been applied, based on LDW preliminary screening levels and other criteria (Ecology 2012b). These RISLs are intended to be conservative (protective) in order to identify potential areas of contamination for RI characterization purposes. During the RI, *cleanup levels* will be developed for sake of defining nature and extent of contamination leading to alternative development in the FS. This process involves evaluating background concentrations [WAC 173-340-700(6) and -709]. Depending on available information, cleanup levels may be refined throughout the RI/FS process [WAC 173-340-350(9)(a)]. In the FS Report, *cleanup standards* will be established (WAC 173-340-700 to -760).

Cleanup standards in MTCA are defined for each hazardous substance present in each environmental medium and for each pathway through which humans and/or the environment may be exposed. Each cleanup standard will address the cleanup levels for hazardous substances, the appropriate point of compliance where these levels must be met, and other applicable regulatory requirements [WAC 173-340-700(3) and (4)]. Under MTCA, a point of compliance specific to each medium and exposure pathway must be established, and it marks the regulatory location (such as depth) where cleanup levels should be attained. Cleanup standards together with area-specific information constitute the remedial action goals.

A cleanup level is the concentration of a hazardous substance in a particular medium that is determined to be protective of human health and the environment under specified exposure conditions. Cleanup levels in combination with points of compliance (cleanup standards) typically define the area or volume of contaminated environmental media at a site that must be addressed by a cleanup action.

In addition to cleanup levels, MTCA allows development of remediation levels at sites where a combination of cleanup action components are used to achieve cleanup levels at the point of compliance or where the cleanup action involves containment of soil (WAC 173-340-355). Remediation levels are used to define the concentration of hazardous substances at which different cleanup action components will be used. In cases where contamination at the Site will be left in place, such as containment under buildings or concourses, remediation levels will be addressed, which by definition would exceed cleanup levels. For these cases, the cleanup action may be determined to comply with cleanup standards if the requirements of WAC 173-340-740(6)(f) are met, including protectiveness and the use of institutional controls.

9.2 Development of Alternatives

A "cleanup action alternative" is defined as one or more treatment technology, containment action, removal action, engineered control, institutional control, or other type of remedial action that, individually or in combination, achieves a cleanup action at a site (WAC 173-340-200). For the NBF-GTSP Site FS, an alternative component will be considered to address a specific media/exposure pathway. Based on the environmental media and the area requiring cleanup, alternatives will be developed from one or more components that address the presence of contaminants at the NBF-GTSP Site. This section of the FS Report will identify alternatives or components with a focus on the rationale for the actions that have been developed. The numerous historical cleanups and recent interim actions at the Site, including the ongoing LTST system for treatment of stormwater, will be summarized and incorporated into the FS Report.

A range of cleanup action alternatives will be developed by assembling appropriate cleanup components that take into account the characteristics and complexity of the Site. Each alternative will include components that are expected to be capable of attaining the cleanup standards established for a particular exposure pathway and contaminants, as identified in Section 9.1. Thus, preliminary screening of components will take place during alternative development, where it is clear that these technologies are not suitable for the conditions. MTCA defines expectations for the development of remedial alternatives (WAC 173-340-370), which represent the types of cleanup actions that would yield likely results of the remedy selection process (Section 9.4). Selection of a specific cleanup action component for detailed evaluation in the FS does not preclude later (post-FS) consideration of other similar components.

The alternatives developed for the NBF-GTSP Site will provide cleanup actions capable of protecting human health and the environment, as required by MTCA [WAC 173-340-360(2)]. This is accomplished with alternatives that are designed to eliminate, reduce, or otherwise control risks posed through each exposure pathway and migration route [WAC 173-340-350(8)(c)(i)]. For media with contaminants exceeding cleanup levels, identifying the exposure route rather than just the acceptable contaminant levels is important because protectiveness can be achieved by preventing exposures (e.g., by containment or institutional controls) as well as by active cleanup. Although MTCA strongly reflects a preference for permanent remedial actions, less permanent solutions may be accepted if controls are put into place to ensure that the solution is protective of human and ecological receptors.

MTCA requires that a feasibility study include at least one "permanent cleanup action alternative" that is used "to serve as a baseline against which other alternatives shall be evaluated for the purpose of determining whether the cleanup action selected is permanent to the maximum extent practicable” [WAC 173-340-350(8)(c)(ii)]. MTCA defines a permanent cleanup action to be one in which the cleanup standards can be met following the action, without any further action being required at the site, with the exception of the disposal of any treatment residue.

One difficulty in developing and analyzing alternatives at the NBF-GTSP Site is the large number and diversity of potential areas of concern or stormwater drainage subareas. The FS process works well for a single area or site, or a closely related set of areas within a site that have similar characteristics for remedial purposes. However, the large number of NBF-GTSP areas of concern with differing characteristics and environmental media potentially needing to be evaluated within the FS creates challenges in the evaluation process, particularly in developing alternatives and performing subsequent analysis (see Section 9.4). The FS process will likely require combining areas of concern into sets of areas based on media, location, contaminant types, and remedial needs. For example, the potential contaminated soil areas in the PEL area that may be amenable to excavation could be evaluated together to determine what is the most effective remedial alternative for the group. Therefore, the development and analysis of alternatives in the FS may be performed for groups of areas and not in a single combined step.

One of the underlying aspects in identifying the remedial alternatives for the NBF-GTSP Site is that removal or treatment of source material (e.g., contaminated soil or anthropogenic media) will eventually produce a beneficial effect on groundwater or stormwater quality. For example, alternatives may be developed that address only soil or that address both soil and groundwater directly. The more thoroughly the soil is remediated, the less a cleanup action will need to rely on active or passive groundwater remediation.

9.3 Screening of Alternatives

In this section of the FS Report, alternatives will be screened for their applicability in addressing Site contamination and achieving remedial objectives (meeting cleanup standards). The various alternatives or components will be screened to narrow the list of technologies and other measures that should be considered for detailed evaluation in the FS. MTCA provides for an initial screening step based on the ability of an alternative to meet the minimum MTCA requirements and also based on its technical feasibility. According to WAC 173-340-350(8)(b), a cleanup alternative or its components may be screened from further consideration if either of the following conditions applies.

- The cleanup action does not meet threshold requirements [WAC 173-340-360(2)(a)], including alternatives in which costs are clearly disproportionate; more specifically:
    - The alternative is not protective of human health and the environment, or
    - The alternative does not comply with the cleanup standards, or
    - The alternative does not comply with applicable state or federal laws, or
    - The alternative does not provide for compliance monitoring.
- The alternative or component is not technically feasible.

MTCA also requires that cleanup alternatives meeting threshold requirements also fulfill the following “other” requirements [WAC 173-340-360(2)(b)]:

- Use permanent solutions to the extent practicable,
- Provide for reasonable restoration time frames, and
- Consider public concerns.

Further screening will be performed to carry forward the most appropriate alternatives or components among those determined to meet the above requirements. This evaluation screens alternatives for which costs are clearly disproportionate or clearly do not meet the criteria of WAC 173-340-360(3) (see Section 9.4).

9.4 Evaluation and Selection of Alternatives

The alternatives developed in the NBF-GTSP Site FS are intended to eliminate risk by removing or destroying contaminants above cleanup level or remediation level concentrations in the media of concern. The FS will involve a comparison of alternatives utilizing a criteria-based evaluation process. MTCA requires that the restoration time frame for each cleanup alternative be evaluated for reasonableness using factors listed in WAC 173-340-360(4).

MTCA further requires the use of permanent solutions in which cleanup levels will be attained at a site without additional remedial actions; however, MTCA recognizes that costs of permanent solutions may be disproportionate to the benefits they provide. Disproportionate costs are defined in MTCA as cases where the incremental costs of an alternative over that of a lower cost alternative exceed the incremental degree of benefits provided by the higher cost alternative. In the case of disproportionate costs, MTCA allows selection of a lower cost alternative that "uses permanent solutions to the maximum extent practicable" [WAC 173-340-360(3)]. Lower cost alternatives are selected by conducting a disproportionate cost analysis, which compares the costs and benefits of remedial alternatives in the FS. This analysis also provides a framework for evaluating non-cost criteria of alternatives.

MTCA specifies several criteria for evaluation and comparison of alternatives when conducting the disproportionate cost analysis to determine whether a remedial action is permanent to the extent practicable. The analysis will involve an evaluation of each alternative relative to the specified criteria listed below [WAC 173-340-360(3)].

- Protectiveness
- Permanence
- Cost
- Long-term effectiveness
- Management of short-term risks
- Technical and administrative implementability
- Consideration of public concerns

The disproportionate cost analysis requires that the alternatives be ranked from most to least permanent and that the most permanent solution alternative serve as the baseline against which all other alternatives are evaluated. When the benefits of two or more alternatives are equal, the lower cost alternative will be selected as the preferred alternative.

Following the disproportionate cost analysis, a comparative evaluation of alternatives will summarize the main aspects (benefits and disadvantages) of each alternative. This last step will highlight the salient features of each alternative. This information will provide the rationale for selection of the preferred remedy [WAC 173-340-350(8)(c)(i)].

The NBF-GTSP Site FS Report will utilize a limited number of figures to depict the cleanup action alternatives proposed at each area of concern. A number of tables will be provided to summarize cleanup standards, development of cleanup alternatives, the screening process, and the analysis of alternatives.

Section 10 of this Work Plan presents the anticipated schedule for the various draft versions of the FS Report. These versions include a preliminary draft FS Report for Ecology review, a second preliminary draft FS Report for PLP review, a draft FS Report for public review and public meeting, a revised draft FS Report for Ecology review, a final draft FS Report for PLP review, and a final FS Report. Draft and final responsiveness summaries will also be prepared for Ecology and PLP review.

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10.0 RI/FS Schedule

The anticipated schedule for completion of the RI/FS deliverables or activities is tabulated below, based in part on the Agreed Order (Appendix A). The schedule dates are necessarily estimated and approximate, and many of these dates are dependent on the timing of previous events that may need to be adjusted. Some activities or deliverables may be modified or their order changed during the RI/FS process. The schedule for the Preliminary Draft RI Report may be revised depending on the phasing of tasks. The RI and FS Reports are currently scheduled to be produced as separate documents, but a decision may be made to combine them into a single report. For deliverables that are prepared by Ecology, Ecology may extend dates or otherwise modify this schedule at its discretion. Thus, the following schedule is considered to be preliminary and subject to modification.

Estimated Date	RI/FS Deliverable or Activity (with time interval for performing activity)
November 11, 2013	Final RI/FS Work Plan
January 13, 2014	Draft SAP/QAPP (60 days)
January 28, 2014	Review comments from Ecology for Draft SAP/QAPP (15 days)
February 12, 2014	Final Draft SAP/QAPP, Draft Cost Estimate for RI (15 days)
February 27, 2014	Review comments from PLPs for Draft SAP/QAPP (15 days)
March 14, 2014	Final SAP/QAPP/HSP, Final Cost Estimate and SOW for RI (15 days)
Mar to Dec 2014	*Remedial Investigation phase*
January 8, 2015	Preliminary Draft RI Report (300 days after Final SAP/QAPP/HSP)
February 7, 2015	Review comments from Ecology for Preliminary Draft RI Report (30 days)
March 10, 2015	Second Preliminary Draft RI Report (30 days)
April 9, 2015	Review comments from PLPs for Second Preliminary Draft RI Report (30 days)
May 9, 2015	Draft RI Report (30 days)
June 13, 2015	Public comment period for Draft RI Report (35 days)
July 13, 2015	Draft Responsiveness Summary and Revised Draft RI Report (30 days)
July 28, 2015	Review comments from Ecology for Revised Draft RI Report (15 days)
August 12, 2015	Final Draft Responsiveness Summary and Final Draft RI Report (15 days)
August 27, 2015	Review comments from PLPs for Final Draft RI Report (15 days)
September 11, 2015	Final Responsiveness Summary and Final RI Report (15 days)
Sep to Dec 2015	*Feasibility Study phase*
December 10, 2015	Preliminary Draft FS Report (90 days)
January 9, 2016	Review comments from Ecology for Preliminary Draft FS Report (30 days)
February 8, 2016	Second Preliminary Draft FS Report (30 days)
March 9, 2016	Review comments from PLPs for Second Preliminary Draft FS Report (30 days)
April 8, 2016	Draft FS Report and Draft SEPA Environmental Checklist (30 days)
May 13, 2016	Public comment period for Draft FS Report (35 days)
June 12, 2016	Draft Responsiveness Summary, Revised Draft FS Report, and Revised Draft SEPA Environmental Checklist (30 days)
June 27, 2016	Review comments from Ecology for above documents (15 days)
July 12, 2016	Final Draft Responsiveness Summary, Final Draft FS Report, and Final Draft SEPA Environmental Checklist (15 days)
July 27, 2016	Review comments from PLPs for above documents (15 days)
August 11, 2016	Final Responsiveness Summary, Final FS Report, and Final SEPA Environmental Checklist (15 days)

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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

In the Matter of Remedial Action by: **The Boeing Company, King County and the City of Seattle**	North Boeing Field/Georgetown Steam Plant AGREED ORDER No. DE 5685

TO: POTENTIALLY LIABLE PERSONS

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I. INTRODUCTION

The mutual objective of the State of Washington, Department of Ecology (Ecology) and the Boeing Company, King County and the City of Seattle under this Agreed Order (Order) is to facilitate Ecology-conducted remedial action at a facility where there has been a release or threatened release of hazardous substances. Under the terms of this Order, the Boeing Company, King County and the City of Seattle agree to grant Ecology access to property they respectively own and/or control, located at 7370 E. Marginal Way South and 6700-13th Avenue South in Seattle, King County, WA., for the purpose of completing a Remedial Investigation/Feasibility Study (RI/FS) and for conducting one or more interim actions, if appropriate, for the North Boeing Field/Georgetown Steam Plant Site (Site). The Boeing Company, King County, and the City of Seattle shall be given the first opportunity to perform any interim actions that may be required under this Order. If the PLPs are unable to perform interim actions required under this Order, Ecology may perform interim actions and bill the PLPs for all interim action costs. The Boeing Company, King County and the City of Seattle agree to make payments of remedial action costs for state-conducted remedial actions at the Site. Ecology intends to use the funds received from the PLPs to complete the RI/FS and any interim actions performed by Ecology for the Site. Ecology believes the actions required by this Order are in the public interest.

II. JURISDICTION

This Agreed Order is issued pursuant to the authority of the Model Toxics Control Act (MTCA), RCW 70.105D.050(1).

III. PARTIES BOUND

This Agreed Order shall apply to and be binding upon the Parties to this Order, their successors and assigns. The undersigned representative of each Party hereby certifies that he or she is fully authorized to enter into this Order and to execute and legally bind such Party to comply with the Order. The Boeing Company, King County and the City of Seattle agree to undertake all actions required by the terms and conditions of this Order. No change in ownership or corporate status shall alter the Boeing Company's, King County's and the City of Seattle's responsibility under this Order.

IV. DEFINITIONS

Unless otherwise specified herein, the definitions set forth in Chapter 70.105D RCW and Chapter 173-340 WAC shall control the meanings of the terms used in this Order.

A. Site: The Site is referred to as the North Boeing Field/Georgetown Steam Plant Site and is generally located at 7370 E. Marginal Way South and 6700-13th Avenue South in Seattle, King County, WA. The Site is defined by the extent of contamination caused by the release of hazardous substances at the Site. Based upon factors currently known to Ecology, the Site is more particularly described in Exhibit A to this Order, which includes a detailed Site diagram. The Site constitutes a Facility under RCW 70.105D.020(5).

B. Parties: Refers to the State of Washington, Department of Ecology (Ecology) the Boeing Company, King County and the City of Seattle.

C. Potentially Liable Persons (PLPs): Refers to the Boeing Company, King County and the City of Seattle.

D. Agreed Order or Order: Refers to this Order and each of the exhibits to the Order. All exhibits are integral and enforceable parts of this Order. The terms "Agreed Order" or "Order" shall include all exhibits to the Order.

V. FINDINGS OF FACT

Ecology makes the following findings of fact, without any express or implied admissions of such facts by the PLPs:

A. The Site, which is defined by the extent of contamination caused by the release of hazardous substances, includes land impacted by industrial practices at the Georgetown Steam Plant (GTSP) and North Boeing Field (NBF) properties which are located northeast and east of Slip 4, respectively, and approximately 4 miles south of downtown Seattle. The approximate Site boundaries are shown in Exhibit A. Slip 4 is part of the Lower Duwamish Waterway (LDW) Superfund site. The GTSP is located near the intersection of Warsaw and Ellis Avenue South near the northwest corner of King County International Airport (KCIA). The GTSP property contains an old powerhouse that currently houses the Georgetown Powerplant Museum. A condenser pit beneath the powerhouse is connected to an underground concrete tunnel that discharges into a flume (the GTSP flume). The GTSP flume extends for approximately 0.4 mile from the powerhouse into the head of Slip 4. The City of Seattle owns the 7.29-acre property that contains the powerhouse and property adjacent to the GTSP flume.

King County owns most of the land within NBF, which is bounded to the northwest by Ellis Avenue South, the southeast by the southern end of the Boeing Company's flight line and taxi ways, the northeast by the eastern edge of the Boeing Company's flight line and taxi ways, and the southwest by East Marginal Way South. The Boeing Company leases about 117 acres of NBF property from King County and owns the improvements it has constructed on the leased property. The Boeing Company also leases a few acres on either side of the GTSP flume from the City of Seattle and owns the parcel containing Building 3-390 (King County parcel number 2924049106) and an adjacent parcel used for parking (King County parcel number 2924049066). The Boeing Company manages numerous research, testing, and manufacturing facilities on the property. A network of stormwater catch basins, drains, and pipes collect and convey stormwater from NBF to the head of Slip 4.

B. The Site has been the subject of numerous environmental investigations and cleanups beginning in the early 1980s. These investigations and cleanups are summarized in the following report:

North Boeing Field and Georgetown Steam Plant Summary of Existing Information and Identification of Data Gaps, dated February 2007 by Science Applications International Corporation (SAIC).

More detailed information on individual investigations and cleanups is available in the references listed in this report.

C. Environmental investigations and cleanups revealed releases of polychlorinated biphenyls (PCBs), petroleum hydrocarbons, polynuclear aromatic hydrocarbons (PAHs), antimony, arsenic, cadmium, chromium, copper, lead, mercury, and zinc to soil; petroleum hydrocarbons, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), antimony, arsenic, chromium, and lead to groundwater; and PCBs, PAHs, SVOCs, arsenic, copper, lead, mercury, and zinc to suspended solids in stormwater.

D. The U.S. Environmental Protection Agency (EPA) added the LDW to the federal Superfund list on September 13, 2001. EPA has entered into a Memorandum of Understanding with Ecology under which Ecology has been designated the Lead Agency to implement efforts to investigate and control sources of contamination to LDW sediments. PCBs and SVOCs have been identified as contaminants of concern in Slip 4 sediments, and Slip 4 has been identified as an early action area for sediment remediation. Releases of PCBs, PAHs, SVOCs, and metals have been identified in suspended solids in storm water and deposited in storm water piping systems from the Site. Since stormwater from the Site discharges into Slip 4, there is the potential for suspended solids in stormwater from the Site to contaminate sediment in Slip 4. Cleanup of sediment in Slip 4 has been delayed because of potential recontamination of sediment in Slip 4 that might result from contaminant releases from the Site.

E. On the basis of the facts set forth herein, Ecology has determined that a release or threatened release of hazardous substances at the Site requires remedial actions to protect human health and the environment. This Order sets forth the measures that need to be taken to perform a remedial investigation/feasibility study for the Site.

F. Ecology and the PLPs have determined that it is in the best interests of the Parties for Ecology to perform the RI/FS for the Site. The PLPs have agreed to reimburse Ecology for the costs of performing the RI/FS in accordance with Exhibit D of this Order.

VI. ECOLOGY DETERMINATIONS

A. The PLPs are “owners or operators as defined in RCW 70.105D.020(17) of a “facility” as defined in RCW 70.105D.020(5) because the PLPs owned or operated facilities on property at which, and from which, hazardous substances were released into the environment during the PLPs’ ownership or operations.

B. Based upon all factors known to Ecology, a “release” or “threatened release” of “hazardous substance(s)” as defined in RCW 70.105D.020(25) and RCW 70.105D.020(10), respectively, has occurred at the Site.

C. Based upon credible evidence, Ecology issued a PLP status letter to each PLP dated March 9, 2007, pursuant to RCW 70.105D.040, -.020(21) and WAC 173-340-500. After providing for notice and opportunity for comment, reviewing any comments submitted, and concluding that credible evidence supported a finding of potential liability, Ecology issued determinations that The Boeing Company, King County, and the City of Seattle are PLPs under RCW 70.105D.040 and notified each PLP of this determination by letter dated April 20, 2007.

D. Pursuant to RCW 70.105D.030(1) and .050(1), Ecology may require the PLPs to investigate or conduct other remedial actions with respect to any release or threatened release of hazardous substances, whenever it believes such action to be in the public interest. Ecology is also authorized under MTCA to conduct remedial actions and require access for that purpose. RCW 70.105D.030 (1) (a), (b). Based on the foregoing facts, Ecology believes the remedial actions required by this Order are in the public interest.

E. Under WAC 173-340-430, an interim action is a remedial action that is technically necessary to reduce a threat to human health or the environment by eliminating or substantially reducing one or more pathways for exposure to a hazardous substance, that corrects a problem that may become substantially worse or cost substantially more to address if the remedial action is delayed, or that is needed to provide for completion of a site hazard assessment, remedial investigation/feasibility study or design of a cleanup action. Cleanup of contaminated sediment in Slip 4 has been delayed because of the potential for sediment recontamination as a result of contaminant releases from the Site. Investigation of the Site may reveal sources of contamination to Slip 4 that if addressed promptly will allow Slip 4 remediation to proceed. The need to reduce or eliminate sources of contamination to Slip 4 or imminent threats to human health or the environment might warrant an interim action consistent with WAC 173-340-430. The PLPs shall be given the first opportunity to perform any interim actions that may be required under this Order. Interim actions performed by the PLPs shall be in conformance with WAC 173-340-430. If the PLPs are unable to perform interim actions required under this Order, Ecology may perform interim actions and bill the PLPs for all interim action costs in accordance with Exhibit D of this Order. Such interim actions may be conducted under an amendment to Exhibit B (Scope of Work) for this Order

VII. WORK TO BE PERFORMED

Based on the Findings of Fact and Ecology Determinations, it is hereby ordered that PLPs take the following remedial actions at the Site and that these actions be conducted in accordance with Chapter 173-340 WAC unless otherwise specifically provided for herein:

A. Access

Each of the PLPs shall provide access to Ecology, any authorized representative of Ecology, and any party or entity directed or authorized by Ecology, to all property at the Site that the PLP either owns, controls, or has access rights to at all reasonable times, so that Ecology can perform any remedial actions that Ecology deems necessary for conducting or monitoring the RI/FS or interim action work at the Site. Ecology or any Ecology authorized representative shall have the full authority to enter and freely move about all property at the Site that the PLPs either own, control, or have access rights to at all reasonable times for the purposes of, *inter alia*: conducting such tests or collecting such samples as Ecology may deem necessary; using a camera, sound recording, or other documentary type equipment to record work performed for purposes of the RI/FS, and any other activity necessary to conduct the RI/FS or any interim actions under WAC 173-340-430 and Section VI E. of this Order. The PLPs shall make all reasonable efforts to secure access rights for those properties within the Site not owned or controlled by the PLPs where remedial investigations will be performed pursuant to this Order.

Ecology or any Ecology authorized representative shall give reasonable notice to any PLP before entering any Site property owned or controlled by that PLP or to which that PLP has access rights unless an emergency prevents such notice. All persons who access the Site pursuant to this Section shall comply with any applicable Health and Safety Plan(s), appropriate PLP access and security procedures, and applicable FAA requirements. Ecology employees and their representatives shall not be required to sign any liability release or waiver as a condition of Site property access. Any required activities that could potentially interrupt airport operations must be performed to minimize impact to airport operations. Any required activities within the Runway Safety Areas must be scheduled with the Airport a minimum of 14 days prior to the proposed work.

Each PLP's Project Coordinator or other representative may accompany Ecology's representative(s) at all times at property owned or operated by that PLP. If property is owned or operated by more than one PLP, then each PLP who is an owner, lessee, or operator may have its Project Coordinator or other representative accompany Ecology's representative. Any photography, video or audio recording of any activities at property owned or operated by The Boeing Company may be reviewed by The Boeing Company, to enable The Boeing Company to make a claim of business confidentiality related to any such photographs or recordings. In the event Ecology receives a public disclosure request for information related to this Site, The Boeing Company agrees not to assert any business confidentiality claim with regard to any geologic, hydrologic or analytical data.

PLPs shall provide information to Ecology and any Ecology authorized representatives regarding the nature and location of all utilities, including but not limited to buried utilities, in areas of the site where RI/FS activities will be conducted. If requested by Ecology, PLPs shall assign staff with relevant training and knowledge of utilities to escort Ecology staff and any Ecology authorized representatives when they enter the Site to conduct RI/FS or interim action related activities. PLPs shall indemnify, and save and hold the State of Washington, its employees, and agents harmless from any and all claims or causes of action for death or injuries to persons or for loss or damage to property arising from disturbing, damaging or otherwise coming in contact with utilities on the Site. However, PLPs shall not indemnify the State of Washington nor save nor hold its employees and agents harmless from any claims or causes of action arising out of the negligent acts or omissions of the State of Washington, or the employees or agents of the State, resulting from disturbing, damaging or otherwise coming in contact with utilities on the Site.

VIII. TERMS AND CONDITIONS OF ORDER

A. Public Notices

RCW 70.105D.030(2)(a) requires that, at a minimum, this Order be subject to concurrent public notice. Ecology shall be responsible for providing such public notice and reserves the right to modify or withdraw any provisions of this Order should public comment disclose facts or considerations which indicate to Ecology that the Order is inadequate or improper in any respect.

B. Remedial Action Costs

For work performed by Ecology's contractor on the RI/FS or interim actions for the Site, the PLPs shall make payments to Ecology in accordance with the North Boeing Field/Georgetown Steam Plant Site Receivable Agreement attached hereto as Exhibit D and incorporated herein. The payments provided pursuant to that agreement will constitute payment of remedial action costs for state-conducted remedial action at the Site, including but not limited to a remedial investigation and feasibility study, and interim actions Ecology deems necessary or appropriate for Ecology to perform under WAC 173-340-430.

For work other than that performed by Ecology's contractor on the RI/FS or interim actions for the Site, the PLPs shall pay to Ecology costs incurred by Ecology pursuant to this Order and consistent with WAC 173-340-550(2). These costs shall include work performed by

Ecology or its contractors for, or on, the Site under Chapter 70.105D RCW, including remedial actions and Order preparation, negotiation, oversight, and administration. These costs shall include work performed both prior to and subsequent to the issuance of the Order. Costs for work prior to issuance of the Order began to accrue on August 1, 2007. The PLPs shall pay the required amount within ninety (90) days of receiving from Ecology an itemized statement of costs that includes a summary of costs incurred, an identification of involved staff, and the amount of time spent by involved staff members on the project. A general statement of work performed will be provided upon request. Itemized statements shall be prepared quarterly. Pursuant to WAC 173-340-550(4), failure to pay Ecology's costs within ninety (90) days of receipt of the itemized statement of costs will result in interest charges at the rate of twelve percent (12%) per annum, compounded monthly.

C. Implementation of Remedial Action

Except where necessary to abate an emergency situation, PLPs shall not perform any remedial actions at the Site unless Ecology concurs, in writing, with such additional remedial actions.

D. Designated Project Coordinators

The project coordinator for Ecology is:

Mark H. Edens
Washington State Department of Ecology
Northwest Regional Office
Toxics Cleanup Program
3190 – 160th Avenue S.E.
Bellevue, WA 98008-5452
Telephone: 425-649-7070

The project coordinators for the PLPs are:

Peter Dumaliang
King County International Airport
7277 Perimeter Road S.
Seattle, WA 98112
Telephone: 206-296-7597

Tom Meyer
City of Seattle/City Light Department
P.O. Box 34023
Seattle, WA 98124
Telephone: 206-386-9168

Carl Bach
The Boeing Company
P.O. Box 3707, M/C 1W-12
Seattle WA 98124-2207
Telephone: 206-898-0438

The Ecology project coordinator will be Ecology's designated representative for the Site. To the maximum extent possible, communications between Ecology and the PLPs, and all communications, including reports and other documents, concerning the activities performed pursuant to the terms and conditions of this Order shall be directed through the project coordinator(s).

Ecology and PLPs may change their respective project coordinator, but must provide ten (10) days advance written notification of the change to the other parties.

E. Public Participation

A public participation plan is required for this Site. Ecology has developed a public participation plan in conjunction with the PLPs, which is included as Exhibit C. Exhibit C is incorporated by reference and is an integral and enforceable part of this Order.

Ecology shall maintain the responsibility for public participation at the Site. However, the PLPs shall cooperate with Ecology, and shall:

1. Notify Ecology's project coordinator five business days prior to any of the following scheduled activities: the issuance of press releases; distribution of fact sheets; performance of other outreach activities; meetings with the interested public and/or local governments. Likewise, Ecology shall notify PLPs five business days prior to the issuance of press releases and fact sheets, and before meetings with the interested public and local governments. When a PLP or Ecology conducts or participates in an unscheduled public involvement activity such as those described above, the PLP or Ecology shall provide the other

Parties with notice of such activities within five business days following the unscheduled activity. For all scheduled press releases, fact sheets, meetings, and other outreach efforts by the PLPs that do not receive prior Ecology approval, the PLPs shall clearly indicate to its audience that the press release, fact sheet, meeting, or other outreach effort was not sponsored or endorsed by Ecology;

2. When requested by Ecology, participate in public presentations on the progress of the remedial action at the Site. Participation may be through attendance at public meetings to assist in answering questions, or as a presenter;

3. When requested by Ecology, arrange and/or continue information repositories to be located at the following locations:

a. South Park Library
8604 Eight Ave S. Cloverdale St.
Seattle, WA 98108

b. Ecology's Northwest Regional Office
3190 – 160th Avenue S.E.
Bellevue, WA 98008-5452

At a minimum, copies of all public notices, fact sheets, and press releases; all quality assured monitoring data; remedial action plans and reports; supplemental remedial planning documents; and all other similar documents relating to performance of the remedial action required by this Order shall be promptly placed in these repositories.

F. Retention of Records

During the pendency of this Order and for ten (10) years from the date of completion of work performed pursuant to this Order, PLPs shall preserve all records, reports, documents, and underlying data in its possession relevant to the implementation of this Order. Upon request of Ecology, PLPs shall make all records consistent with Chapter 42.56 RCW available to Ecology and allow access for review within a reasonable time. In the event Ecology receives a public disclosure request for information related to this Site, Ecology agrees to notify the Boeing

Company in order to allow the Boeing Company to oppose release of records pursuant to RCW 42.56.540. The Boeing Company agrees not to assert any business confidentiality claim with regard to any geologic, hydrologic or analytical data.

G. Resolution of Disputes

1. In the event a dispute arises regarding access to the Site by Ecology or its authorized representatives or other decisions by Ecology, the Parties shall utilize the dispute resolution procedure set forth below.

a. Upon receipt of the Ecology project coordinator's decision regarding a Site access dispute or other Ecology decision, PLPs have fourteen (14) days within which to notify Ecology's project coordinator in writing of its objection to the decision.

i. The PLPs shall include in the written objection sufficient detail to allow Ecology to evaluate the merits of the dispute.

ii. Such detail shall include the specific Ecology determination regarding Site access or other Ecology decision in dispute and shall include specific argument(s) documenting the basis for invoking the dispute resolution procedure.

iii. Clarification of Ecology directions or determinations shall not be managed through the dispute resolution procedure. The Ecology project coordinator will make such clarifications in a manner and time they deem appropriate to expedite to the maximum extent practicable the work performed under this order.

b. The Parties' project coordinators shall then confer in an effort to resolve the dispute. If the project coordinators cannot resolve the dispute within fourteen (14) days, Ecology's project coordinator shall issue a written decision.

c. PLPs may then request Ecology management review of the decision. This request shall be submitted in writing to the Northwest Region Toxics Cleanup Section

Manager within seven (7) days of receipt of Ecology's project coordinator's written decision.

d. The Section Manager shall conduct a review of the dispute and shall endeavor to issue a written decision regarding the dispute within sixty (60) days of PLP's request for review. The Section Manager's decision shall be Ecology's final decision on the disputed matter.

2. The Parties agree to only utilize the dispute resolution process in good faith and agree to expedite, to the extent possible, the dispute resolution process whenever it is used.

H. Comment and Review by PLPs and Ecology

1. Ecology shall provide copies of the following documents to the PLPs for review and comment:

Supplemental Data Gaps Report

Remedial Investigation Work Plan

Remedial Investigation Work Plan Amendments

Remedial Investigation Report

Feasibility Study Report

Interim Action Recommendations, Plans, Reports, or Memoranda

Additional documents may be provided for review at Ecology's discretion.

PLPs may submit comments on documents submitted to them for review and comment no later than 30 days after receiving the documents from Ecology. The time limits for document review may be extended by written permission from Ecology. Ecology will consider the PLPs' timely submitted comments, and may incorporate them into the documents or make changes to the documents based on them as deemed appropriate by Ecology.

2. For interim actions performed by the PLPs, the PLPs shall submit a draft interim action report to Ecology in accordance with WAC 173-340-430(7). Ecology shall provide the

PLPs with comments on the interim action report no later than 30 days after receiving the document from the PLPs. The time limits for interim action report review may be extended or decreased by mutual agreement between Ecology and the PLPs. The PLPs shall address Ecology's review comments, prepare a final interim action report, and submit the final interim action report to Ecology for approval. Plans or reports for interim action construction shall be submitted to Ecology for review and approval in accordance with WAC 173-300-400.

I. Amendment of Order

This Order may be formally amended only by the written consent of both Ecology and the PLPs. If the amendment to the Order represents a substantial change, Ecology will provide additional public notice and opportunity to comment. At Ecology's discretion amendments to Exhibit B (Scope of Work) of this Order for interim actions may not be considered a substantial change to this Order by Ecology if generally such interim actions have been identified as potential interim actions in Exhibit B prior to the Amendment. Ecology may elect to discontinue performance of the RI/FS or interim actions at any time and instead have the PLPs carry out, or complete carrying out, under a new scope of work, the RI/FS or interim action(s). In that event, Ecology shall provide 30 days advance written notice to PLPs of its intention to discontinue its performance of the RI/FS and require the PLPs to carry out or complete the RI/FS or any interim actions.

J. Endangerment

Nothing in this Order shall limit the authority of Ecology, its employees, agents, or contractors to take or require appropriate action in the event of an emergency.

K. Reservation of Rights

This Order is not a settlement under Chapter 70.105D RCW. Ecology's signature on this Order in no way constitutes a covenant not to sue or a compromise of any Ecology rights or authority. In addition, Ecology will not take additional enforcement actions against PLPs regarding remedial actions required by this Order, provided PLPs comply with this Order. Ecology reserves its rights under Chapter 70.105D RCW, including the right to require remedial actions at the Site should it deem such actions necessary to protect human health and the environment, and to issue orders requiring such remedial actions. Ecology also reserves all rights regarding the injury to, destruction of, or loss of natural resources resulting from the release or threatened release of hazardous substances at the Site.

L. Transfer of Interest in Property

No voluntary conveyance or relinquishment of title, easement, leasehold, or other interest in any portion of the Site shall be consummated by any of the PLPs without provision for continued implementation of all requirements of this Order and implementation of any remedial actions found to be necessary as a result of this Order.

Prior to any PLP's transfer of any interest in all or any portion of the Site, and during the effective period of this Order, all PLPs shall serve a copy of this Order upon any prospective purchaser, lessee, transferee, assignee, or other successor in said interest; and, at least thirty (30) days prior to any transfer, a PLP shall notify Ecology of said transfer. Upon transfer of any interest, a PLP shall restrict uses and activities to those consistent with this Order and notify all transferees of the restrictions on the use of the property.

M. Indemnification

PLPs agree to indemnify and save and hold the State of Washington, its employees, and agents harmless from any and all claims or causes of action for death or injuries to persons or for loss or damage to property arising or resulting from entry into and implementation of this Order, or from Ecology's or its agents' entry onto the Site and performance of tasks necessary to complete the RI/FS for the site. However, PLPs shall not indemnify the State of Washington nor save nor hold its employees and agents harmless from any claims or causes of action arising out of the negligent acts or omissions of the State of Washington, or the employees or agents of the State, in entering into or implementing this Order.

IX. SATISFACTION OF ORDER

The provisions of this Order shall be deemed satisfied upon PLP's receipt of written notification from Ecology that Ecology has completed the RI/FS and any required interim action(s), the PLPs have made final payments of invoiced amounts as required by the North Boeing Field/Georgetown Steam Plant Receivable Agreement, and access for the purposes of performing the RI/FS is no longer required.

X. ENFORCEMENT

Pursuant to RCW 70.105D.050, this Order may be enforced as follows:

A. The Attorney General may bring an action to enforce this Order in a state or federal court.

B. The Attorney General may seek, by filing an action, if necessary, to recover amounts spent by Ecology for remedial actions and orders related to the Site.

C. In the event PLPs refuse, without sufficient cause, to comply with any term of this Order, PLPs will be liable for:

1. Up to three (3) times the amount of any costs incurred by the State of Washington as a result of its refusal to comply; and

2. Civil penalties of up to $25,000 per day for each day it refuses to comply.

D. This Order is not appealable to the Washington Pollution Control Hearings Board. This Order may be reviewed only as provided under RCW 70.105D.060.

Effective date of this Order: AUGUST 14, 2008

The Boeing Company

Steven Shestag
EHS Remediation Director
The Boeing Company
P.O. Box 3707, M/C 055-T487
Seattle, WA 98124-2207
Telephone: 818-466-8822

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY

Robert Warren, P.Hg., MBA
Regional Section Manager
Toxics Cleanup Program
Northwest Regional Office
3190 – 160th Avenue S.E.
Bellevue, WA 98008-5452
Telephone: 425-649-7054

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The City of Seattle

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Mayor
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EXHIBIT A – North Boeing Field-Georgetown Steam Plant Agreed Order – Site Diagram

EXHIBIT B
SCOPE OF WORK AND SCHEDULE
North Boeing Field/Georgetown Steam Plant RI/FS

SCOPE OF WORK

PURPOSE

The purpose of this RI/FS Scope of Work (SOW) for the North Boeing Field/Georgetown Steam Plant Site (the Site) is to describe the work to be carried out by the parties to the Agreed Order (AO) entered into by the Department of Ecology (Ecology) and the city of Seattle, King County, and The Boeing Company (the PLPs). The AO provides that Ecology may perform the RI/FS. The PLPs will be given the first opportunity to perform any interim actions that may be required under the AO. If the PLPs are unable to perform interim actions required under the AO, Ecology may perform interim actions and bill the PLPs for all interim action costs. The RI/FS is intended to provide sufficient data, analysis, and evaluations to enable Ecology to select a cleanup alternative for the Site. The SOW is divided into five major tasks. Tasks 1, 2, 3, & 5 may be completed by Ecology's contractor. Task 4, Potential Interim Actions will be performed by the PLPs unless they are unable to perform interim actions. If the PLPs are unable to perform interim actions, Ecology or Ecology's contractor may perform interim actions. The five SOW tasks are as follows:

Task 1. Progress Reports
Task 2. Supplemental Summary of Existing Information and Data Gaps Report and RI/FS Project Plans
Task 3. Remedial Investigation
Task 4. Potential Interim Actions
Task 5. Feasibility Study and SEPA Compliance

This SOW assumes that separate RI and FS reports will be prepared and submitted for public review. Ecology may direct the preparation of a combined RI/FS report, if project staff resources and schedules allow for preparation of a combined report.

TASK 1. PROGRESS REPORTS

As long as Ecology is conducting the RI/FS it shall require that its contractor(s) submit progress reports to it monthly for the duration of the RI/FS project. Ecology will request that its contractor submit progress reports to the Ecology project coordinator by the 15th of the month following the reporting month. If this day is a weekend or holiday, the progress report will be submitted to Ecology on the next business day. At a minimum, progress reports should contain the following information regarding the preceding reporting period:

- A description of the actions which have been taken to comply with the AO and SOW during the previous reporting period.

- An estimate of the percentage of RI/FS work completed to date.
- Summaries of sampling and testing reports and other data reports received.
- Summaries of deviations from approved work plans, including schedule changes.
- Summaries of contacts with representatives of the local community, public interest groups, press, and federal, state, or tribal governments.
- Summaries of problems or anticipated problems in meeting the schedule or objectives set forth in the SOW and Work Plan.
- Summaries of solutions developed and implemented or planned to address any actual or anticipated problems or delays.
- Changes in key personnel.
- A description of work planned for the next reporting period.

TASK 2. SUPPLEMENTAL SUMMARY OF EXISTING INFORMATION AND DATA GAPS REPORT AND RI/FS PROJECT PLANS

Task 2.1 Supplemental Summary of Existing Information and Data Gaps Report

Science Applications International Corporation (SAIC) prepared a *Summary of Existing Information and Identification of Data Gaps* report for the Site in February 2007 (Data Gaps Report). This report included information and data through mid-September 2006. Current information will be needed to determine the data gaps that need to be addressed during the RI/FS. Within sixty (60) days of signing the AO, the PLPs shall provide additional information that was not included in the Data Gaps Report. This information shall include historical or recent Site environmental monitoring data that were not included in the Data Gaps Report; a description of any past and present buildings, structures (including utility and storm drain lines) and areas on the Site that were not described in the Data Gaps Report including drawings, maps of their locations, descriptions of the activities that occurred at these locations including hazardous substances that might have been used, and potential releases of hazardous substances that might have occurred; a description of any historical or recent remedial actions taken at the Site that were not described in the Data Gaps Report; and a description of any future investigations or cleanups that have been planned for the Site.

A *Supplemental Summary of Existing Information and Identification of Data Gaps* report (Supplemental Data Gaps Report) may be prepared by the Ecology contractor, which should provide the following information:

- Historical or recent Site environmental monitoring data that was not included in the Data Gaps Report.
- A description of any past and present buildings, structures, and areas on the Site that were not described in the Data Gaps Report including maps of their locations, descriptions of the activities that occurred at these locations, including hazardous substances that might have been used, and potential releases of hazardous substances that might have occurred.

- A description of any historical or recent remedial actions taken at the Site that were not described in the Data Gaps Report.
- A description of any future investigations or cleanups that have been planned for the Site.
- Data gaps related to the objectives of the RI/FS based on available Site-related information

The purpose of the supplemental information described above and information in the February 2007 Data Gaps Report is to prepare a list of data gaps that need to be addressed as part of the RI and to identify contaminants of concern (COCs) for various Site locations and media. Ten (10) copies of the draft Supplemental Data Gaps Report are to be prepared and submitted to Ecology for review and comment. After Ecology's comments on the draft report are addressed, ten (10) copies of the final draft report are to be prepared and submitted to Ecology for distribution to the PLPs for review and comment. After the PLPs' comments on the final draft report are addressed, ten (10) copies of the final report are to be prepared and submitted to Ecology for distribution. Draft, final draft and final deliverables shall also be provided electronically in Word/Excel and Adobe .pdf formats. Historical data reviewed and/or summarized during this task will not be uploaded to Ecology's Environmental Information Management (EIM) database.

Task 2.2 RI/FS Project Plans

Task 2.2.1. RI/FS Work Plan

To plan and manage the RI/FS, the project tasks and management strategies may be summarized in an RI/FS Work Plan (Work Plan) that will be developed and submitted to Ecology and the PLPs for review in accordance with this SOW. The Work Plan is to specify and describe all tasks to be accomplished to complete an RI/FS that meets the requirements of WAC 173-340-350 in accordance with the AO and this SOW. The Work Plan is to outline the overall technical approach, and should include, at a minimum, the following elements:

- Preliminary conceptual Site model.
- Summary of results of Data Gaps Report and Supplemental Data Gaps Report.
- Overall description of RI/FS activities.
- Project management strategy for implementing and reporting on RI/FS activities, including phasing of activities.
- Responsibility and authority of all organizations and key personnel involved in conducting the RI/FS.
- Description of individual RI/FS tasks, subtasks and interim and final deliverables.
- A plan for prioritizing the RI to prioritize investigations that focus on existing or potential contaminant releases that might recontaminate Slip 4.
- Draft outline of final RI and FS reports, including types of data evaluation, figures, and tables that will be included.

- Proposed schedule, including a timeline for completion of all RI/FS tasks, subtasks, and interim and final deliverables, including but not limited to the deliverables listed in this SOW. The objectives and anticipated content of any deliverable not listed in this SOW will also be provided.

The Work Plan is not to be implemented until approved by Ecology. Once approved by Ecology, the Work Plan may be implemented according to the schedule contained in this SOW or any schedules contained or revised in the Work Plan that are approved by Ecology. RI/FS subtasks may be developed to address the data gaps identified in the Data Gaps Report and the Supplemental Data Gaps Report prepared as Task 2.1 of this SOW. RI/FS tasks and subtasks may be developed to include, as appropriate, the following:

- Development of a conceptual Site model – Identification of potential contaminant sources, types and concentrations of hazardous substances, potentially contaminated media, and actual and potential exposure pathways and receptors.
- Analysis of applicable or relevant and appropriate requirements (ARARs) – Identification of MTCA cleanup levels, maximum contaminant levels, Sediment Management Standards, and other regulatory limits for Site COCs and other regulatory requirements for the Site.
- Determination of data quality objectives – Determination of the level of data quality needed for environmental sampling and testing and the contaminant detection limits that will be achievable and necessary to determine compliance with ARARs.
- Analysis and investigation of documented areas of contamination – Analysis of Site areas identified in the Data Gaps Report or Supplemental Data Gaps Report where environmental investigations or cleanups have been conducted, and plans for subsurface soil and groundwater investigations of Site areas that have residual contamination exceeding ARARs or that have the potential to contaminate Site stormwater.
- Investigation of suspected areas of contamination – Plans for subsurface soil and groundwater investigations of Site areas that are suspected to be contaminated on the basis of information in the February 2007 Data Gaps Report or the Supplemental Data Gaps Report prepared for Task 2.1 of this SOW.
- Analysis and investigation of stormwater system – Plans for sampling and testing of Site stormwater and sediments to trace sources of contaminants into the stormwater system; analysis of stormwater system historical maps and recent inspections to identify abandoned or damaged piping or structures that might be allowing contaminants to enter into the system; plans for subsurface soil and groundwater sampling and testing of areas that are suspected to be sources of contaminants into the stormwater system.
- Analysis and investigation of contaminated joint sealant material – Analysis of contaminated joint sealant sampling and testing, removal, and replacement; analysis of replacement joint sealant that has become recontaminated to determine the mechanism for recontamination; plans for sampling and testing concrete associated with contaminated joint sealant; analysis of airport sweeping data to evaluate impacts of joint sealant removal and replacement on contaminant

concentrations; plans for sampling and testing remaining contaminated joint sealant and associated concrete for leachability and weathering to determine if these materials might continue to be a source of stormwater contamination.

- Analysis and investigation of building coatings, caulk, and roofing materials – Analysis of coatings, caulk, and roofing materials on buildings and structures on the Site to determine if these materials contain contaminants that might be released to stormwater; plans for sampling and testing these materials for the presence of contaminants and for the potential release of these contaminants to stormwater.
- Other field investigations, as appropriate.
- Phasing of RI tasks to prioritize investigations that focus on existing or potential contaminant releases that might recontaminate Slip 4.
- Data evaluation.
- Terrestrial ecological evaluation.
- RI Report.
- Remedial alternatives development and screening.
- Detailed analysis of alternatives.
- FS Report.

Ten (10) copies of the draft RI/FS work plan are to be prepared and submitted to Ecology for review and comment. After Ecology's comments on the draft work plan are addressed, ten (10) copies of the final draft work plan are to be prepared and submitted to Ecology for distribution to the PLPs for review and comment. After the PLPs' comments on the final draft work plan are addressed, ten (10) copies of the final work plan are to be prepared and submitted to Ecology for distribution. Draft, final draft, and final work plan deliverables shall also be provided electronically in Word/Excel and Adobe .pdf formats.

Task 2.2.2 Other Project Plans

Pursuant to WAC 173-340-350(7)(c)(iv), a Sampling and Analysis Plan (SAP) and a Quality Assurance Project Plan (QAPP) is to be prepared and submitted for review by Ecology and the PLPs. A Health and Safety Plan (HSP) may also be prepared and submitted but will not be subject to Ecology or PLP review.

Sampling and Analysis Plan

A SAP for RI sampling and analysis activities is to be prepared in accordance with WAC 173-340-820. The purpose of the SAP is to describe the sample collection, handling, and analysis procedures to be used in the RI sampling program, such that the information obtained will meet the data needs identified in the Work Plan. The SAP should describe the sampling objectives and the rationale for the sampling approach. A detailed description of sampling tasks may then be provided, including specification for sample identifiers; the type, number, and location of samples to be collected; contingency measures if samples cannot be collected or if insufficient sample volumes are obtained: the analyses to be performed; descriptions of sampling equipment and collection methods to be used; and descriptions of sample documentation and sample containers, collection, preservation and handling.

Quality Assurance Project Plan

A QAPP for RI sampling and analysis activities is to be prepared. The QAPP will identify and describe measures that will be taken during the performance of all sampling and analysis tasks to ensure the fulfillment of data quality objectives. Data quality objectives will reflect the criteria or threshold values used for remedial decisions. The QAPP will include the following elements:

- A brief project description, referencing the Work Plan and/or SAP for details.
- Project personnel and QA responsibilities.
- Quality assurance objectives, including precision, accuracy, and level of data validation.
- Field QA measures, including sample acceptability criteria, field QA samples, and calibration of field instruments, referencing the SAP for a discussion of decontamination procedures and sample custody and handling.

An Ecology accredited laboratory, accredited for the specific analyses to be performed under this AO, will be used. If an unaccredited lab is proposed to be used, the results of recent performance audits and systems audits will be provided to Ecology prior to use of the lab.

Health and Safety Plan

An HSP for RI activities is to be prepared in accordance with WAC 173-340-810. The HSP must be consistent with the requirements of the Washington Industrial Safety and Health Act of 1973, chapter 49.17 RCW, including any updates or amendments. The HSP should identify specific monitoring and management responsibilities and activities to ensure the protection of human health during the conduct of activities associated with the RI.

Ten (10) copies of the draft SAP and draft QAPP are to be prepared and submitted to Ecology for review and comment. After Ecology's comments on the draft SAP and QAPP are addressed, ten (10) copies of the final draft SAP and final draft QAPP are to be prepared and submitted to Ecology for distribution to the PLPs for review and comment. After the PLPs' comments are addressed, ten (10) copies of the final SAP and final QAPP are to be prepared and submitted to Ecology for distribution together with ten (10) copies of the final HSP. Draft, draft final, and final SAP and QAPP shall also be provided electronically in Word/Excel and Adobe .pdf formats.

TASK 3. REMEDIAL INVESTIGATION

An RI that meets the requirements of WAC 173-340-350(7) is to be conducted according to the Work Plan as approved by Ecology. The RI will determine the nature and extent of contamination exceeding MTCA cleanup levels, maximum contaminant levels, Sediment Management Standards, and other regulatory requirements, and will provide sufficient data and information for Ecology to select a final remedy for the Site. The RI will be phased to prioritize investigations that focus on existing or potential contaminant releases that might recontaminate Slip 4. The RI will include, as appropriate, the following elements:

- Subsurface sampling and testing of soil and groundwater in Site areas with confirmed or suspected soil or groundwater contamination that exceeds ARARs or has the potential to contaminate stormwater.
- Identification and location of abandoned or damaged stormwater piping, abandoned piping conduits, subsurface debris, and structures that might be pathways for contamination of stormwater.
- Sampling and testing of stormwater and sediments before and after system cleaning to locate sources of contaminants into the stormwater system.
- Sampling and testing of joint sealant material for the presence of contaminants and for susceptibility to weathering and leaching; sampling and testing of concrete associated with contaminated joint sealant to evaluate potential contamination because of leaching of contaminants from joint sealant material and, if needed, for susceptibility to weathering and leaching; sampling and testing of exposed surfaces in areas where joint sealant has been removed to evaluate residual contamination and susceptibility to weathering and leaching.
- Sampling and testing of solids from airport sweeping.
- Sampling and testing of coatings, caulk, and roofing materials on buildings and structures for the presence of contaminants and for the potential release of contaminants to stormwater.
- Preparation and submittal of interim data reports and updates as new Site data and information become available.

Ecology will be informed of changes to the Work Plan and other project plans and of issues and problems as they develop during the RI. Ecology and the PLPs may verbally agree to minor changes to the work to be performed without formally amending the AO. Minor changes will be documented in writing by Ecology. Major changes to the work, as determined by Ecology, will be addressed in accordance with Section VIII.I of the AO.

The results of the Site investigation are to be compiled into an RI report. Ten (10) copies of the preliminary draft RI report are to be prepared and submitted to Ecology for review and comment. After Ecology's comments on the preliminary draft report are addressed, ten (10) copies of a second preliminary draft RI report are to be prepared and submitted to Ecology for distribution to the PLPs for review and comment. After the PLPs' comments on the second preliminary draft report are addressed, ten (10) copies of a draft RI report are to be prepared and submitted to Ecology for distribution and public comment. Preliminary draft and draft deliverables shall also be provided electronically in Word/Excel and Adobe .pdf formats.

The draft RI report is to be presented at one public meeting or hearing. After the public comment period is completed, a draft responsiveness summary is to be prepared that addresses public comments and a revised draft RI report is to be prepared. Ten (10) copies of the draft responsiveness summary and revised draft RI report are to be prepared and submitted to Ecology for review and comment. After Ecology's comments are addressed, ten (10) copies of a final draft responsiveness summary and final draft RI report are to be prepared and submitted to Ecology for distribution to the PLPs for review and comment. After the PLPs' comments are addressed, ten copies of the final responsiveness summary and final RI report are to be prepared and submitted to Ecology for distribution. Revised draft, final draft, and final deliverables shall also be provided electronically in Word/Excel and Adobe .pdf formats. In addition, RI-generated analytical data will be uploaded to Ecology's Environmental Information Management (EIM) database.

TASK 4. POTENTIAL INTERIM ACTIONS

Remedial actions implemented prior to completion of the RI/FS will be considered interim actions, will be implemented in accordance with WAC 173-340-430 and the AO, and will be designed in a manner that will not foreclose reasonable alternatives for any final cleanup action that may be required.

If an interim action is identified by Ecology that needs to be implemented prior to completion of the RI/FS, the PLPs will be given the first opportunity to perform the interim action. If the PLPs are unable to perform identified interim actions, Ecology may perform interim actions and bill the PLPs for all interim action costs.

Interim action work plans and reports will be prepared and submitted for review in accordance with the AO. Upon successful completion of the work, an Interim Action Report will be prepared as a separate deliverable. Interim action deliverables shall be submitted in hard copy and provided electronically in Word/Excel and Adobe .pdf formats.

The scope of the interim actions may include, but not be limited to, typical source control or containment elements such as:

- Soil removal.
- Groundwater remediation
- Repair, slip lining, replacement, or closure of stormwater piping or other structures such as
  conduit, vaults, catch basins, etc.
- Performance and/or confirmation sampling
- Removal of joint sealant material
- Removal of contaminated building or other structural material
- Construction of an interim or final treatment facility

TASK 5. FEASIBILITY STUDY AND SEPA COMPLIANCE

Task 5.1 Feasibility Study

The information obtained in the RI is to be used to conduct an FS that meets the requirements of WAC 173-340-350(8) according to the Work Plan as approved by Ecology. The FS is to include the following elements:

- Determination of cleanup standards and applicable laws.
- Identification and screening of cleanup technologies.
- Basis for assembly of cleanup action alternatives.
- Description of cleanup alternatives.
- Comparative evaluation of cleanup alternatives in accordance with WAC 173-340-360.

The results of these analyses are to be compiled into an FS report. Ten (10) copies of the preliminary draft FS report are to be prepared and submitted to Ecology for review and comment. After Ecology's comments on the preliminary draft report are addressed, ten (10) copies of a second preliminary draft FS report are to be prepared and submitted to Ecology for distribution to the PLPs. After Ecology's comments on the second preliminary draft FS report are addressed, ten (10) copies of a draft FS report are to be prepared and submitted to Ecology for distribution and public comment. Preliminary draft and draft deliverables shall also be provided electronically in Word/Excel and Adobe.pdf formats.

The draft FS report and SEPA evaluation are to be presented at one public meeting or hearing, in conjunction with the SEPA evaluation (see Task 4.2 below). After the public comment period is completed, a draft responsiveness summary is to be prepared to address public comments and a preliminary draft final FS report is to be prepared. Ten (10) copies of the draft responsiveness summary and preliminary draft final FS report are to be prepared and submitted to Ecology for review and comment. After Ecology's comments are addressed, ten (10) copies of the draft final responsiveness summary and draft final FS report are to be prepared and submitted to Ecology for distribution to the PLPs for review and comment. After the PLPs' comments are addressed, ten (10) copies of the final responsiveness summary and final FS report are to be prepared and submitted to Ecology for distribution. Preliminary draft, draft and final deliverables shall also be provided electronically in Word/Excel and Adobe .pdf formats.

Task 5.2 SEPA Compliance

The RI/FS must comply with the State Environmental Policy Act (SEPA) Rules including preparation and circulation of an environmental checklist, making a threshold determination, and issuing a determination of nonsignificance (DNS) or determination of significance (DS). If it is necessary to issue a DS, draft and final environmental impact statements must be prepared under a separate Scope of Work to be prepared by Ecology. SEPA public involvement requirements must be coordinated with MTCA public involvement requirements whenever possible, such that public comment periods and meetings or hearings can be held concurrently.

The SEPA evaluations are to be presented at one public meeting or hearing in conjunction with the draft FS report (see Task 4.1 above) and any additional presentations at separate meetings or hearings that might be required for SEPA compliance. Preliminary draft, draft, revised draft, final draft, and final environmental checklists are to be prepared and submitted concurrently with the deliverables described in Task 4.1.

SCHEDULE

A general schedule for deliverables for this SOW is presented below. If a deliverable is due on a weekend or holiday, the deliverable will be submitted on the next business day. For deliverables that may be prepared by Ecology, Ecology may extend dates or otherwise modify this schedule at its discretion. The schedule for the preliminary draft RI report may be revised depending on the phasing of tasks as described in the work plan, A more detailed project schedule will be prepared as part of Task 2.2.1.

RI/FS Deliverables	**Completion Times**
Task 1. Progress Reports	15^{th} of every month beginning the first full month after execution of the work order with Ecology's contractor
Task 2.1 Draft Supplemental Summary of Existing Information and Data Gaps Report	60 calendar days after receiving supplemental Site information from PLPs
Task 2.1 Final Draft Supplemental Summary of Existing Information and Data Gaps Report	15 calendar days after receiving review comments from Ecology
Task 2.1 Final Supplemental Summary of Existing Information and Data Gaps Report	15 calendar days after receiving review comments from the PLPs
Task 2.2.1 Draft RI/FS Work Plan	120 calendar days after completing the final Supplemental Data Gaps Report
Task 2.2.1 Final Draft RI/FS Work Plan	30 calendar days after receiving review comments from Ecology
Task 2.2.1 Final RI/FS Work Plan	30 calendar days after receiving review comments from the PLPs
Task 2.2.2 Draft SAP and QAPP	60 calendar days after completing the final RI/FS Work Plan
Task 2.2.2 Final Draft SAP and QAPP	15 calendar days after receiving review comments from Ecology
Task 2.2.2 Final SAP, QAPP, and HSP	15 calendar days after receiving review comments from the PLPs

Task 3 Preliminary Draft RI Report	300 calendar days after completing the final SAP and QAPP and HSP
Task 3 Second Preliminary Draft RI Report	30 calendar days after receiving review comments from Ecology
Task 3 Draft RI Report	30 calendar days after receiving review comments from the PLPs
Task 3 Draft Responsiveness Summary and Revised Draft RI Report	30 calendar days after completion of the public comment period
Task 3 Final Draft Responsiveness Summary and Final Draft RI Report	15 calendar days after receiving review comments from Ecology
Task 3 Final Responsiveness Summary and Final RI Report	15 calendar days after receiving review comments from the PLPs
Task 4. Interim Action Work Plans and Reports	To be determined by Ecology
Task 4. Final Interim Action Report	To be determined by Ecology
Task 5 Preliminary Draft FS Report and Draft Environmental Checklist	90 calendar days after completion of the RI Report
Task 5 Second Preliminary Draft FS Report and Revised Draft Environmental Checklist	30 calendar days after receiving review comments from Ecology
Task 5 Draft FS Report and Draft Environmental Checklist	30 calendar days after receiving review comments from the PLPs
Task 5 Draft Responsiveness Summary, Revised Draft FS Report, and Revised Draft Environmental Checklist	30 calendar days after completion of the public comment period
Task 5 Final Draft Responsiveness Summary, Final Draft FS Report, and Final Draft Environmental Checklist	15 calendar days after receiving review comments from Ecology
Task 5 Final Responsiveness Summary, Final FS Report, and Final Environmental Checklist	15 calendar days after receiving review comments from the PLPs

WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

EXHIBIT C

PUBLIC PARTICIPATION PLAN

NORTH BOEING FIELD/GEORGETOWN STEAM PLANT SITE

SEATTLE, WASHINGTON

Prepared by
Washington State Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008-5452

July 2008

Table of Contents

Introduction

The Washington State Department of Ecology (Ecology) prepared this Public Participation Plan (Plan) according to the Model Toxics Control Act (MTCA). This plan is designed to promote meaningful community involvement during the Remedial Investigation/Feasibility Study at the North Boeing Field/Georgetown Steam Plant properties located at 7370 East E. Marginal Way South and 6700 13th Avenue South in Seattle, Washington. This plan outlines and describes the tools Ecology will use to inform the public about site activities, and it identifies opportunities for the community to become involved in this process.

Ecology and the Boeing Company, the city of Seattle, and King County have negotiated a legal agreement called an Agreed Order to conduct a Remedial Investigation/Feasibility Study at the site. The purpose of the Remedial Investigation (RI) is to determine the nature and extent of contamination on the site. An analysis of potential sources of contaminants into the stormwater system on the site will be included as part of the investigation. Stormwater from the site is an on-going source of contamination to sediments in Slip 4 of the Lower Duwamish Waterway that could cause a violation of sediment cleanup goals. The Feasibility Study (FS) will use the results of the RI to evaluate and select effective measures to prevent releases of contamination from the site, including any sources of contamination migrating from the site to the Lower Duwamish Waterway.

Cleanup actions might be identified during the RI that will eliminate or minimize current releases of contamination to Lower Duwamish Waterway sediments or that are necessary to prevent an imminent threat to human health or the environment. Ecology will consider implementing such cleanup actions as interim actions under the existing Agreed Order.

Location and Site Background

The North Boeing Field/Georgetown Steam Plant properties are located at 7370 East E. Marginal Way South and 6700 13th Avenue South in Seattle, Washington on the east site of the Lower Duwamish Waterway. The Site is bordered to the northwest by Ellis Avenue South, the southwest by East Marginal Way South, and the east by King County International Airport (See figure on page 7 for the approximate site boundaries). Final site boundaries will be defined by the extent of contamination determined during the RI.

Site Background

The Site includes the Georgetown Steam Plant (GTSP) and North Boeing Field (NBF) properties. The GTSP is located near the intersection of Warsaw and Ellis Avenue South near the northwest corner of King County International Airport. The GTSP property contains an old powerhouse that currently houses the Georgetown Power plant Museum. A condenser pit beneath the powerhouse is connected to an underground concrete tunnel that discharges into a flume (the GTSP flume). The GTSP flume extends for about 0.4 mile from the powerhouse into the head of Slip 4. The city of Seattle owns the 7.29-acre property that contains the powerhouse and property adjacent to the GTSP flume.

King County owns most of the land within NBF, which is bounded to the northwest by Ellis Avenue South, the southeast by the southern end of the Boeing Company's flight line and taxi ways, the northeast by the eastern edge of the Boeing Company's flight line and taxi ways, and the southwest by East Marginal Way South. The Boeing Company leases about 117 acres of NBF property from King County and owns the improvements it has constructed on the leased property. The Boeing Company also leases a few acres on either side of the GTSP flume from the City of Seattle and owns land containing one of their buildings and a parcel used for parking. The Boeing Company manages numerous research, testing, and manufacturing facilities on the property. A network of stormwater catch basins, drains, and pipes collect and convey stormwater from NBF to the head of Slip 4.

The GTSP was built by the Seattle Electric Company in 1906 to provide power during periods of high use. Use of the GTSP decreased after 1912 after Puget Power bought it. When built, the GTSP was next to the Duwamish River. Around 1916 the river was straightened to form the Duwamish Waterway. A 0.4 mile flume was built to carry cooling water to Slip 4. In 1951, the city of Seattle bought the GTSP from Puget Power and still owns the 7.29-acre property that contains the powerhouse and property next to the flume. The city of Seattle operated the GTSP on stand-by until they decommissioned it in 1973.

Boeing has operated at NBF since the 1940s for aircraft and aerospace manufacturing, maintenance, and research. Yet few records are available on site operations before the 1970s. Currently Boeing owns about 80 buildings on NBF. NBF's complicated storm drain system includes over 400 catch basins and 400 manholes, up to 16 oil water separators and lift stations, parking lot ditches, and roof drains. The system is connected with seven to eight miles of piping that ranges from four to 48 inches in diameter. Storm water from the GTSP flume and from NBF flows into Slip 4, which is part of the Lower Duwamish Waterway (LDW) Superfund site.

Contaminants of Concern

Contamination at the site is due to industrial operation and maintenance. A general list of contaminants of concern includes the following:

- Polychlorinated biphenyls (PCBs)
- Total petroleum hydrocarbons (TPH)
- Polynuclear aromatic hydrocarbons (PAHs)
- Volatile organic compounds (VOCs)
- Semi-volatile organic compounds (SVOCs)
- Metals

There have been numerous environmental investigations and cleanups at the site. These investigations and cleanups have detected concentrations of polychlorinated biphenyls (PCBs), total petroleum hydrocarbons (TPH), polynuclear aromatic hydrocarbons (PAHs), antimony, arsenic, cadmium, chromium, copper, lead, mercury, and zinc in soil exceeding the applicable cleanup levels in various areas of the site. Concentrations of TPH, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), antimony, arsenic, chromium, and lead have also been detected in groundwater at the site exceeding applicable cleanup levels. PCBs, PAHs, SVOCs, arsenic, copper, lead, mercury, and zinc have been detected in sediment collected from the storm water drainage systems. PCBs and SVOCs have been identified as contaminants of concern in Slip 4 sediments. The potential for sediment recontamination from site storm water has delayed cleanup of sediments in Slip 4.

Current Activity

The proposed actions to be conducted under the Agreed Order include the following:

- Review and summarize site history and existing environmental data.

- Identify data gaps.
- Investigate the site and fill data gaps.
- Analyze potential pathways of ongoing contamination to the Lower Duwamish Waterway sediments.
- Analyze feasible alternatives for source control and overall site cleanup.

Site Map: North Boeing Field-Georgetown Steam Plant Site

Community Profile

For decades much of the land adjacent to the Lower Duwamish Waterway has been industrialized. Current commercial and industrial operations include cargo handling and storage, marine construction, boat manufacturing, marina operations, concrete manufacturing, paper and metals fabrication, food processing, metal forging and airplane parts manufacturing.

Although the Lower Duwamish Waterway is viewed mainly as an industrial corridor, two residential neighborhoods border the banks of the river: South Park and Georgetown. The South Park neighborhood is located on the western shore of the Duwamish Waterway, and the Georgetown neighborhood is located on the eastern shore of the Duwamish Waterway. The residents of the communities are well known for their commitment to neighborhood issues. This includes the ongoing site cleanups along the Lower Duwamish Waterway. A description of these communities is provided below.

South Park Community Description

The South Park neighborhood is located in South Seattle, on the west bank of the Duwamish River. The first residents of South Park were Native Americans of the Duwamish tribe who lived on the shores of the Duwamish River for thousands of years. This area was once a small farming town composed of Italian and Japanese farmers who supplied fresh produce to Seattle's Pike Place Market. South Park became part of the city of Seattle in 1907.

By 1920 the Duwamish River was straightened out into a straight, deep channel that would accept ocean-going ships and barges. This change in the Duwamish greatly impacted South Park. The curving meanders had been straightened, which made it easier for industry to develop along the banks of the waterway.

In the mid 1960s, South Park was rezoned as industrial. Over 4,000 people complained and the city of Seattle changed the zoning to low-density residential. The city of Seattle built the South Park community center in 1989 which remains a vital resource within the community.

The South Park community center offers a wide variety of free and low cost programs and special events. Special events include free breakfasts and family events. The community center provides before and after-school programs and school break camps for students. They also offer adult classes ranging from yoga to technology to English classes.

The Seattle Public Library opened the new South Park branch at 8604 Eighth Avenue South (at Cloverdale Street) in September 2006. This new branch is 5,019 square feet and has the capacity to hold 18,700 books and materials (about one-third of the collection is Spanish-language, including bilingual children's materials and Spanish Language fiction and non-fiction). The library also has bilingual staff on hand to answer questions and to help patrons.

The South Park neighborhood is comprised of about 3,717 people of various ethnicities: 37% Hispanic, 34% white, 14% Asian, 7 % Black, 5% multiracial, 2% American Indian, 1% Native Hawaiian/Pacific Islander. The average age is 31 years old and the average income is $20,917 (based on records from 2005). A variety of retail and service businesses are located along 14th Avenue South. Data from the Seattle Office of Economic Development lists the primary categories of employment in South Park as wholesale trade, transportation and utilities; construction/resources; manufacturing;. and services.

Georgetown Community Description

The Georgetown neighborhood is located in South Seattle, on the east bank of the Duwamish River across the river from the South Park community. Georgetown is Seattle's oldest neighborhood, settled by Luther Collins in 1851. It was incorporated as the city of Georgetown from 1904-1910.

According to records from 2005, just over 1,100 people live in Georgetown. The largest local employers in Georgetown are in the arts, entertainment, and recreation industries. The Georgetown community council is very active.

The Duwamish River Cleanup Coalition

The Duwamish River Cleanup Coalition (DRCC) is an advisory group that works with the South Park and Georgetown neighborhoods. The DRCC has a goal of a Duwamish River cleanup that is accepted by and benefits the community and is protective of fish, wildlife and human health.

DRCC was formed by an alliance of community, environmental and small business groups affected by pollution and cleanup plans in the Duwamish River. The members include: Community Coalition for Environmental Justice, The Duwamish Tribe, The Green-Duwamish Watershed Alliance, The Environmental Coalition of South Seattle, Georgetown Community Council, People for Puget Sound, Puget Soundkeeper Alliance, Washington Toxics Coalition, and Waste Action Project.

DRCC is a formal "community advisory group" recognized by EPA and representing the interests of the community toward the cleanup work along the Lower Duwamish Waterway. DRCC receives public participation grant funding from Ecology. They also receive technical assistance grants from EPA for technical advisors to review all Lower Duwamish Superfund cleanup related studies and plans. They are involved in all aspects of the proposed Superfund cleanup and related MTCA cleanups. DRCC is working with Ecology to ensure that the cleanup and source control measures meet community standards.

Key Community Concerns and Issues

Ecology and EPA conducted interviews with community members, environmental organizations, and community organizations in October 2002 for the Lower Duwamish Waterway Site Community Involvement Plan. The North Boeing Field/Georgetown Steam Plant site is located within the larger Lower Duwamish Waterway Site. Ecology conducted an abbreviated version community interviews in 2006 and determined that the concerns raised in 2002 were still pertinent. Ecology also met with the community in June 2007 to discuss the site and source control for Slip 4. Many of the same concerns were discussed at the meeting in 2007.

There is clear interest in this cleanup process. The following is representative of significant concerns and issues expressed during the community interviews. Ecology will work to respond to community concerns throughout the cleanup process and through coordination with EPA, other organizations, such as state and local health agencies, and the community advisory group that has been established for the site.

- **Health:** One person interviewed was confident that health risks will be addressed, but others are concerned that living close to the Duwamish Waterway could affect their health. People expressed concern about consumption of all bottom fish and parts of other fish, as well as contamination from chemicals, bacteria and viruses. There is concern about exposure to contaminated sediments through contact at public access parks, employment at industries on the waterway, restoration work, and other cleanup work. Some said that there should be limited access to the river if there is a health risk. At the 2007 meeting, some in the community were concerned about the potential for contaminated dust, soils, water, and sediments moving from the site into the Georgetown neighborhood. The community is also concerned about exposure to contaminants as contaminated soils are trucked through the community.

- **Wildlife:** Not everyone interviewed believes that wildlife is being affected by contamination, but most expressed concern for fish and wildlife. Sea lions, salmon, bottomfish, crabs, mussels, clams, opossums, squirrels, ducks and other birds were mentioned, as well as concern about the disappearance of herons and for herons on Kellogg Island in the Duwamish Waterway.

- **Domestic Animals:** There is concern about dogs eating garbage from the river and horses being on a greenbelt above the river.

- **River and Groundwater Contamination:** There is concern that the river is dying and that it contains contaminants, including PCBs and mercury. There is concern about the effect of septic systems near the river; sewer overflows; surface water runoff, including oil, antifreeze and fertilizers; unreported spills and illegal dumping; and pumping of waste into the river or groundwater. There is concern that permits for discharges to the river are not being enforced or will be revised to be less strict. There is concern that sources of PCBs are not being addressed.

- **Economics**: Some people interviewed are concerned about contamination lowering property values. Others are concerned that businesses will leave the area due to the designation of the Lower Duwamish Waterway as a Superfund site.

- **Cleanup:** Some people are concerned that South Park and the businesses on the water will be affected by cleanup activities, such as increased truck or barge traffic and potential accidents. There are concerns about the costs of damages to natural resources and the possibility that parties responsible for contamination will do some early cleanup activities but nothing more.

- **Information:** Several people expressed concern about a lack of warning signs for fishermen and recreational users and suggested that such signs should be installed. People are concerned about whether adequate information reaches the Spanish-speaking and other non-English-speaking communities and whether the average person and immigrants understand the risks.

- **Image:** While some people described the Duwamish Waterway neighborhood as an industrial area, others are concerned that it is perceived as a dumping ground. At the 2007 meeting, residents were concerned that many of the businesses in the area that were inspected were not following regulatory requirements and needed corrective action.

Additional public concerns may be identified over the course of the cleanup through: public comment periods; further community interviews; surveys; meetings; and other contacts with individuals, community groups, or organizations.

Ecology will work to respond to community concerns through the cleanup process and will coordinate with other regulatory agencies and property owners as necessary.

Public Participation Activities and Responsibilities

The purpose of this Public Participation Plan is to promote public understanding and participation in the MTCA activities planned for this site. This section of the plan addresses how Ecology will share information and receive public comments and community input on the site activities.

Public Involvement Activities

Ecology uses a variety of activities to facilitate public participation in the investigation and cleanup of MTCA sites. Ecology will implement input provided by community residents, businesses, and other stakeholders whenever possible.

The following is a list of the public involvement activities that Ecology will use, their purposes, and descriptions of when and how they will be used during this site source control investigation.

Formal Public Comment Periods

Comment periods are the primary method Ecology uses to get feedback from the public on proposed cleanup decisions. Comment periods usually last 30 days and are required at key points during the investigation and cleanup process before final decisions are made.

During a comment period, the public can comment in writing. Verbal comments are taken if a public hearing is held. After formal comment periods, Ecology reviews all comments received and may respond in a document called a Responsiveness Summary.

Ecology will consider the need for changes or revisions based on input from the public. If significant changes are made, then a second comment period may be held. If no significant changes are made, then the draft document(s) will be finalized.

Additional public comment periods will be held for any potential draft Remedial Investigation/Feasibility Studies (RI/FS), for any potential draft cleanup action plans that are developed for the site, and for any future legal agreements regarding this site.

Public Meetings and Hearings

Public meetings will be held at key points during the RI/FS. Ecology also may offer public meetings for actions expected to be of particular interest to the community. These meetings will be held at locations convenient to the community.

Information Repositories

Information repositories are places where the public may read and review site information, including documents that are the subject of public comment.

Ecology has established two repositories for the North Boeing Field/Georgetown Steam Plant remedial investigation/feasibility study project.

- Washington State Department of Ecology, 3190 160th Avenue SE, Bellevue, WA 98008, (425) 649-7190. Please call for an appointment.
- South Park Library, 8604 Eight Ave S. at Cloverdale St. Seattle, WA

Site information also will be posted on Ecology's web site at:

http://www.ecy.wa.gov/programs/tcp/sites/lower_duwamish/sites/nBoeingGeorgeTnStmPlant/nBoeingGeorgetown.htm

Site Register

Ecology's Toxics Cleanup Program uses its bimonthly *Site Register* to announce all of its public meetings and comment periods, as well as many other activities. To receive the *Site Register* in electronic or hard copy format, contact Linda Thompson at (360) 407-6069 or by e-mail at Ltho461@ecy.wa.gov. It is also available on Ecology's web site at http://www.ecy.wa.gov/programs/tcp/pub_inv/pub_inv2.html

Mailing List

Ecology has compiled a mailing list for the site. The list includes individuals, groups, public agencies, elected officials, private businesses, business associations, potentially affected parties, and other known interested parties. The list will be maintained at Ecology's Northwest Regional Office and will be updated as needed.

To have your address added or deleted from this mailing list, please contact the Ecology's public involvement coordinator **Molly Morris at (425) 649-7135 or** momo461@ecy.wa.gov.

Fact Sheets

Ecology will mail fact sheets to persons, businesses, and organizations interested in the North Boeing Field/Georgetown Steam Plant RI/FS to inform them of public meetings and comment opportunities and important site activities. Ecology also may mail fact sheets about the progress of site activities.

Newspaper Display Ads

Ecology will place ads in the *Seattle Times* and *Seattle Post Intelligencer,* to announce public comment periods and public meetings or hearings for the site.

Enhanced Public Participation

Ecology will work with EPA and stakeholders according to the enhanced public participation efforts that occur for the Lower Duwamish Waterway Superfund site. Ecology site managers and community involvement coordinators may participate in community meetings and events as needed. Ecology will coordinate with DRCC throughout the public involvement process. This may include such activities as coordination for public meetings and sharing drafts of documents with DRCC for review, as appropriate.

Public Participation Plan Update

This public participation plan may be updated as the project proceeds. If an update is necessary, the revised plan will be submitted to the public for comment.

Points of Contact

If you have questions or need more information about this plan or the North Boeing Field/Georgetown Steam Plant site, please contact the following:

Mark Edens, Site Manager
Washington State Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008
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E-mail: momo461@ecy.wa.gov

Glossary

Agreed Order: A legal document issued by Ecology which formalizes an agreement between the department and potentially liable persons (PLPs) for cleanup actions needed at a site. Orders are subject to public comment. If an order is substantially changed, an additional comment period may occur.

Antimony: Antimony is a silvery-white metal that is found in the earth's crust. Antimony isn't used alone because it breaks easily, but when mixed into alloys, it is used in lead storage batteries, solder, sheet and pipe metal, bearings, castings, and pewter. Antimony oxide is added to textiles and plastics to prevent them from catching fire. It is also used in paints, ceramics, and fireworks, and as enamels for plastics, metal, and glass. Breathing high levels for a long time can irritate your eyes and lungs and can cause heart and lung problems, stomach pain, diarrhea, vomiting, and stomach ulcers. Ingesting large doses of antimony can cause vomiting.

Arsenic: A metallic element that forms a number of poisonous compounds, arsenic is found in nature at low levels mostly in compounds with oxygen, chlorine, and sulfur.

Cadmium: A metallic element whose salts are toxic and cause cancer.

Chromium: Chromium is a naturally occurring element found in rocks, animals, plants, soil, and in volcanic dust and gases. Chromium (III) is an essential nutrient that helps the body use sugar, protein, and fat. Chromium (VI) at high levels can damage the nose and can cause cancer. Ingesting large amounts of chromium (VI) can cause stomach upsets and ulcers, convulsions, kidney and liver damage, and even death.

Cleanup: Actions taken to deal with a release, or threatened release of hazardous substances that could affect public health and/or the environment. The term "cleanup" is often used broadly to describe various response actions or phases of remedial responses such as the remedial investigation/feasibility study.

Comment Period: A time period during which the public can review and comment on various documents and proposed actions. For example, a comment period may be provided to allow community members to review and comment on proposed cleanup action alternatives and proposed plans.

Copper: A ductile, malleable, reddish-brown metallic element that is an excellent conductor of heat and electricity and is widely used for electrical wiring, water piping, and corrosion-resistant parts, either pure or in alloys such as brass and bronze. Copper is toxic in its unbound form.

Contaminant: Any hazardous substance that does not occur naturally or occurs at greater than natural background levels

Feasibility Study: A study to evaluate alternative cleanup actions for a site. A comment period on the draft report is required. Ecology selects the preferred alternative after reviewing those documents.

Groundwater: Water found beneath the earth's surface that fills pores between materials such as sand, soil, or gravel. In some aquifers, ground water occurs in sufficient quantities that it can be used for drinking water, irrigation and other purposes.

Hazardous Substance: Any material that poses a threat to public health and/or the environment. Typical hazardous substances are materials that are toxic, corrosive, ignitable, explosive, or chemically reactive.

Information Repository: A file containing current information, technical reports, and reference documents available for public review. The information repository is usually located in a public building that is convenient for local residents such as a public school, city hall, or library.

Lead: A bluish-white soft malleable ductile plastic but inelastic heavy metallic element found mostly in combination and used especially in pipes, cable sheaths, batteries, solder, and shields against radioactivity. Lead may cause irreversible neurological damage as well as renal disease, cardiovascular effects, and reproductive toxicity.

Mercury: A silvery-white poisonous metallic element, liquid at room temperature and used in thermometers, barometers, vapor lamps, and batteries and in the preparation of chemical pesticides. Mercury damages the central nervous system, endocrine system, kidneys, and other organs, and adversely affects the mouth, gums, and teeth.

Model Toxics Control Act (MTCA): Legislation passed by citizens of the State of Washington through an initiative in 1988. Its purpose is to identify, investigate, and clean up facilities where hazardous substances have been released. It defines the role of Ecology and encourages public involvement in the decision making process. MTCA regulations are administered by the Washington State Department of Ecology.

PAH (Polynuclear Aromatic Hydrocarbons): PAHs are a group of chemicals that are formed during the incomplete burning of coal, oil, gas, wood, garbage, or other organic substances, such as tobacco and charbroiled meat. There are more than 100 different PAHs.

PCBs (polychlorinated biphenyls): A group of toxic, persistent chemicals. Due to their non-flammability, chemical stability, high boiling point and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications including transformers and capacitators for insulating purposes, and in gas pipeline systems as a lubricant. PCBs are a serious threat to public health because they have been proven to cause cancer in animals. In 1977 they were made illegal to produce, yet large amounts still remain in the environment.

Potentially Liable Person: Any individual(s) or company(s) potentially responsible for, or contributing to, the contamination problems at a site. Whenever possible, Ecology requires these PLPs, through administrative and legal actions, to clean up sites.

Public Participation Plan: A plan prepared under the authority of WAC 173-340-600 to encourage coordinated and effective public involvement tailored to the public's needs at a particular site.

Remedial Investigation: A study to define the extent of problems at a site. A comment period on the draft report is required.

Remedial Investigation/Feasibility Study: Two distinct but related studies. They are usually performed at the same time, and together referred to as the "RI/FS." They are intended to:

-Gather the data necessary to determine the type and extent of contamination;
-Establish criteria for cleaning up the site;
-Identify and screen cleanup alternatives for remedial action; and
-Analyze in detail the technology and costs of the alternatives.

Responsiveness Summary: A summary of oral and/or written public comments received by Ecology during a comment period on key documents, and Ecology's responses to those comments. The responsiveness summary is especially valuable during the Cleanup Action Plan phase at a site when it highlights community concerns.

Site: Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, vessel, or aircraft; or any site or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located.

Site Register: Publication issued every two weeks of major activities conducted statewide related to the study and cleanup of hazardous waste sites under the Model Toxics Control Act. To receive this publication, please call (360) 407-7200.

Superfund: The federal government's program to clean up the nation's uncontrolled hazardous waste sites.

SVOCs (semi-volatile organic compounds): This group includes a variety of chemicals that have boiling points higher than water and that may become a gas at temperatures above room temperature. Most of these substances are used as industrial chemicals. They include phenols, polynuclear aromatic hydrocarbons (PAHs), and phthalates. Sites where these potentially toxic chemicals may be found include burn pits, chemical manufacturing plants and disposal areas, electroplating/metal finishing shops, firefighting training areas, hangars/aircraft maintenance areas, solvent degreasing areas, vehicle maintenance areas, and wood preserving pits. These compounds generally evaporate slowly at room temperature. Their water solubility and environmental persistence is highly variable, and they are commonly found as contaminants in soil and water.

TPHs (total petroleum hydrocarbons): Describes a large family of several hundred chemical compounds that originally come from crude oil. Crude oil is used to make petroleum products, which can contaminate the environment. TPH is a mixture of chemicals, but they are all made mainly from hydrogen and carbon, called hydrocarbons. Scientists divide TPH into groups of petroleum hydrocarbons that act alike in soil or water. These groups are called petroleum hydrocarbon fractions. Each fraction contains many individual chemicals.

Toxicity: The degree to which a substance at a particular concentration is capable of causing harm to living organisms, including people, plants and animals.

VOCs (volatile organic compounds): include a variety of chemicals that become a gas at room temperature. Most such substances are industrial chemicals and solvents. They include light alcohols, acetone, trichloroethylene, perchloroethylene, dichloroethylene, benzene, vinyl chloride, toluene, and methylene chloride. These potentially toxic chemicals are used as solvents, degreasers, paints, thinners, and fuels. Because of their volatile nature, they readily evaporate into the air, increasing the potential exposure to humans. Due to their low water solubility, environmental persistence, and widespread industrial use, they are commonly found in soil and water.

Zinc: Zinc is a metallic chemical element; it has a white color with a bluish tinge. It has a high resistance to atmospheric corrosion. A major use is as a protective coating for iron and steel sheet and wire. Excess zinc in the body interferes with the metabolism of other minerals in the body.

EXHIBIT D

North Boeing Field/Georgetown Steam Plant Site

RECEIVABLE AGREEMENT

Between

State of Washington, Department of Ecology

And

The Boeing Company, King County and the City of Seattle

THIS AGREEMENT is made and entered into by and between the DEPARTMENT OF ECOLOGY, hereinafter referred to as Ecology, and THE BOEING COMPANY, KING COUNTY, and THE CITY OF SEATTLE, hereinafter referred to as the Potentially Liable Parties (PLPs).

IT IS THE PURPOSE OF THIS AGREEMENT to have the PLPs provide funding, as required by Agreed Order No. DE 5685 (the AO), for Ecology to pay its contractor(s) to undertake the remedial investigation and feasibility study (RI/FS) and any necessary interim actions that the PLPs are unable to perform at the North Boeing Field/Georgetown Steam Plant Model Toxics Control Act remedial action site (hereinafter, the Site).

THEREFORE, IT IS MUTUALLY AGREED THAT: Ecology shall endeavor to conduct an RI/FS for, and any necessary interim actions that the PLPs are unable to perform at, the Site, through the services of a contractor or contractors. As Ecology incurs costs of paying contractors to carry out the RI/FS and any interim actions performed by Ecology, Ecology shall submit invoices to the PLPs for the costs incurred by Ecology. The PLPs shall pay to Ecology the amount presented in Ecology's invoices within thirty (30) days of receipt of the invoices.

I. PERIOD OF PERFORMANCE

Subject to its other provisions, the period of performance of this Agreement shall commence on the effective date of the AO, and be completed when the AO is satisfied in accordance with Section IX of the AO, unless terminated sooner or extended as provided herein.

II. PAYMENT

Ecology has estimated that the cost of the RI/FS will not exceed two million five hundred thousand dollars ($2,500,000).

Ecology shall send invoices to Accounts Payable, King County International Airport, 7277 Perimeter Road South, Seattle, WA 98108; Mr. Steven Tochko Environmental Remediation Manager, The Boeing Company, P.O. Box 3707, M/C 6Y-94, Seattle, WA 98124-2207; Jennie Goldberg, Seattle City Light, Environmental Affairs, P.O. Box 34023, Seattle, WA 98124-4023; and Judith Noble, Corporate Policy and Performance, Seattle Public Utilities, P.O. Box 34018, Seattle, WA 98124-4018.

Payment to Ecology for completed work shall be made by warrant or account transfer by the PLPs within **thirty (30)** days of receipt of the invoices. Payments shall be sent to DEPARTMENT OF ECOLOGY CASHIERING UNIT, PO BOX 47611, OLYMPIA, WA 98504-7611. Upon expiration of the Agreement, any claim for payment not already made shall be submitted within sixty (60) days after the expiration date or the end of the fiscal year, whichever is earlier.

III. RECORDS MAINTENANCE

Ecology and its contractors shall each maintain books, records, documents and other evidence which sufficiently and properly reflect all direct and indirect costs expended by Ecology's contractors in the performance of the services described herein. These records shall be subject to inspection, review or audit by personnel of the other parties to this agreement, other personnel duly authorized by any party, the Office of the State Auditor, and federal officials so authorized by law. All books, records, documents, and other material relevant to this Agreement will be retained for six years after expiration and the Office of the State Auditor, federal auditors, and any persons duly authorized by the parties shall have full access and the right to examine any of these materials during this period.

Records and other documents concerning the implementation of this Agreement, in any medium, furnished by one party to this agreement to another party, will remain the property of the furnishing party, unless otherwise agreed. Records received by Ecology concerning the implementation of this Agreement shall become public records pursuant to the Public Records Act, chapter 42.56 RCW, and will be retained in compliance with Ecology's record retention policy. The receiving party will not disclose or make available under the Public Records Act records received from other parties to this Agreement to any third Parties without first giving notice to the furnishing party and providing reasonable security procedures and protections to assure that confidential or proprietary records and documents provided by the other party are not erroneously disclosed to third parties.

IV. AGREEMENT ALTERATIONS AND AMENDMENTS

This agreement may be amended by mutual agreement of the parties. Such amendments shall not be binding unless they are in writing and signed by personnel authorized to bind each of the parties.

V. TERMINATION

Any party may terminate this Agreement upon 30 days prior written notification to the other parties. If this Agreement is so terminated, the parties shall be liable only for performance rendered or costs incurred in accordance with the terms of this Agreement prior to the effective date of termination.

VI. TERMINATION FOR CAUSE

If for any cause, the PLPs or Ecology do not fulfill in a timely and proper manner their obligations under this Agreement, or if the PLPs or Ecology violate any of these terms and conditions, the PLPs or Ecology will give the other parties written notice of such failure or violation. The party responsible for the failure or violation will be given the opportunity to correct the violation or failure within 15 working days. If the failure or violation is not corrected by that party, the Agreement may be terminated immediately by written notice of Ecology to the PLPs or the PLPs to Ecology.

VII. DISPUTES

In the event a dispute arises under this agreement, the Parties shall utilize the dispute resolution procedure set forth below.

Upon receipt of the Ecology project coordinator's written decision regarding a reimbursement issue, PLPs have fourteen (14) days within which to notify Ecology's project coordinator in writing of its objection to the decision. The PLPs shall include in the written objection sufficient detail to allow Ecology to evaluate the merits of the dispute, and shall copy all parties to this Agreement on the written objection. Such detail shall include the specific Ecology determination regarding reimbursement and shall include specific argument(s) documenting the basis for invoking the dispute resolution procedure. Clarification of Ecology directions or determinations regarding reimbursement shall not be managed through the dispute resolution procedure. The Ecology project coordinator will make such clarifications in a manner and time Ecology deems appropriate to expedite to the maximum extent practicable the work performed under Agreed Order No. DE 5685.

The Parties' project coordinators shall then confer in an effort to resolve the dispute. If the project coordinators cannot resolve the dispute within fourteen (14) days, Ecology's project coordinator shall issue a written decision.

PLPs may then request Ecology management review of the decision. This request shall be submitted in writing to the Northwest Region Toxics Cleanup Section Manager within seven (7) days of receipt of Ecology's project coordinator's written decision.

The Section Manager shall conduct a review of the dispute and shall endeavor to issue a written decision regarding the dispute within sixty (60) days of PLP's request for review. The Section Manager's decision shall be Ecology's final decision on the disputed matter.

The Parties agree to only utilize the dispute resolution process in good faith and agree to expedite, to the extent possible, the dispute resolution process whenever it is used. Nothing in this section shall be construed to prohibit the parties from exercising their right to terminate this Agreement for convenience.

VIII. GOVERNANCE

This Agreement is entered into pursuant to and under the authority granted by the laws of the State of Washington and any applicable federal laws. The provisions of this agreement shall be construed to conform to those laws.

In the event of an inconsistency in the terms of this Agreement or between its terms and any applicable statute or rule, the inconsistency shall be resolved by giving precedence in the following order:

a. Applicable state and federal statutes and rules;

b. Any other provisions of the agreement, including materials incorporated by reference.

All parties hereby agree and consent to the exclusive jurisdiction of the courts of the state of

Washington and that the venue of any action brought hereunder shall be King County, Washington.

IX. HOLD HARMLESS AND INDEMNIFICATION

Ecology and the PLPs agree, to the extent permitted by law, to defend, protect, save and hold harmless the other parties, their officers, agents, and employees from any and all claims, costs, damages, and expenses suffered due to that party's own negligent actions or those of its officers, officials, employees and/or agents in the performance of this Agreement.

X. WAIVER

A failure by any of the parties to exercise their rights under this Agreement shall not preclude that party from subsequent exercise of such rights and shall not constitute a waiver of any other rights under this Agreement unless stated to be such in a writing signed by an authorized representative of the party and attached to the original Agreement.

XI. SEVERABILITY

If any provision of this Agreement or any provision of any document incorporated by reference shall be held invalid, such invalidity shall not affect the other provisions of this Agreement which can be given effect without the invalid provision if such remainder conforms to the requirements of applicable law and the fundamental purpose of this Agreement, and to this end the provisions of this Agreement are declared to be severable.

XII. ALL WRITINGS CONTAINED HEREIN

This Agreement contains all the terms and conditions agreed upon by the parties concerning the subject matter of this agreement.

XIII. CONTRACT MANAGEMENT

The contract manager for each of the parties shall be responsible for and shall be the contact person for all communications and billings regarding the performance of this Agreement. The Contract Manager for Ecology is:

Mr. Mark H. Edens
Washington State Department of Ecology
Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98008-5452
(425) 649-7070

The Contract Managers for the PLPs are:

Mr. Steven Tochko
Environmental Remediation Manager
The Boeing Company
P.O. Box 3707
M/C 6Y-94
Seattle, WA 98124-2207

Martin Baker
Strategic Advisor
Seattle Public Utilities
700 Fifth Avenue
Seattle, WA 98124

Mr. Robert Burke, Airport Director
King County International Airport
7277 Perimeter Road South
Seattle, WA 98108

North Boeing Field/Georgetown Steam Plant Site
Receivable Agreement
July 3, 2008

IN WITNESS WHEREOF, the parties have executed this Agreement.

The Boeing Company

Steven Shestag
EHS Remediation Director
The Boeing Company
P.O. Box 3707, M/C 055-T487
Seattle, WA 98124-2207
Telephone: 818-466-8822

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY

Polly Zehm
Deputy Director
Washington State Dept. of Ecology
300 Desmond Drive
Lacey, WA 98504-7600
Telephone: 360-407-7011

King County

Ron Sims
King County Executive
701 Fifth Avenue, Suite 3210
Seattle, WA 98104
Telephone: 206-296-4040

The City of Seattle

Greg Nickels
Mayor
City Hall
600 Fourth Avenue, 7th Floor
Seattle, WA 98124
Telephone: 206-684-4000

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Table 3-1
Partial List of Possible Sources of COPCs at NBF-GTSP Site

Potential COPC Sources	GTSP		NBF	
	Historical	Current	Historical	Current
Operations and Activities at GTSP and NBF				
Coal conveyance system	●			
Condenser solids and cooling water discharges to the former flume	●		●	
Boiler feed wastewater discharges to the low-lying area	●			
Receipt of transformer oil deliveries from approximately 1953 to 1980	●			
Stockpiling and grading of contaminated fill materials from offsite sources at the GTSP property	●			
Aircraft finishing, including wet sanding, cleaning and painting			●	●
Aircraft testing, including testing of hydraulic and other parts, jet fuel testing, aircraft water distribution testing, wastewater collection systems testing, and fire suppression systems testing			●	●
Fueling and defueling aircraft			●	●
Deicing and equipment washing at wash stall (C-13)			●	●
Photographic and x-ray laboratories			●	●
Metal and wood-working shops			●	●
Operation of a wastewater treatment plant			●	●
Handling of hazardous and non-hazardous new materials and waste	●		●	●
Materials and Equipment Used in Operations				
USTs, ASTs, and utility lines	●	●	●	●
Contaminant-bearing materials in vehicles and aircraft (e.g., brakes, tires, batteries)	●	●	●	●
Fertilizer, herbicides, and insecticides	●	●	●	●
PCB-filled transformers			●	
Building Materials and Components				
Concrete joint material (CJM)				●
Paint		●		●
Door and window caulk		●		●

Table 4-1
Source Control Actions and Investigations at NBF-GTSP Site Since 2009

Location	Date	Activity	Description
Recently Completed Source Control Activities			
GTSP	Feb – Sep 2009	Removal/Replacement of Georgetown Flume	The City of Seattle completed removal and replacement of the Georgetown Flume in September 2009 (Herrera 2010). Specific activities included removal of sediment/water in the flume, removal of PCB and cPAH contaminated soil immediately surrounding the flume, and replacement of the flume with a new storm drain pipe and bioswales. This new line provides stormwater conveyance for the GTSP power house roof and small areas of NBF and along the flume corridor.
NBF	May – Sep 2009	Storm Drain Investigation and Cleanout	Based on results of storm drain structure sampling throughout NBF, Boeing conducted cleanout of selected manhole, catch basin, and oil/water separator structures (SAIC 2011d).
NBF-GTSP	Aug 2009	Supplemental Data Gaps Report	Ecology compiled sampling data and other new information obtained since publication of the original Data Gaps Report in April 2007 in a comprehensive Supplemental Summary of Existing Information and Identification of Data Gaps Report (SAIC 2009b).
NBF	Oct 2009 – Feb 2010	Preliminary Stormwater Sampling	Ecology conducted sampling of whole water and filtered suspended solids during five storm events at two locations: the King County lift station (LS431), and a north lateral manhole (MH108) (SAIC 2010a).
NBF	Mar – Apr 2010	Surface Cleaning, Storm Drain Structure Cleaning, and Soil Removal	Boeing conducted pressure cleaning of surface areas around Buildings 3-323, 3-302, and 3-322 to remove residual PCBs from surface debris. In addition, Boeing removed asphalt and underlying soil along the north side of Building 3-322 and on the west side of Building 3-302. Catch basin filters were installed in storm drain structures in the vicinity of these buildings. Seven catch basins with PCB concentrations in solids greater than 50 mg/kg were cleaned (Landau 2010a).
NBF	Mar – Apr 2010	Storm Drain Structure Grouting	Boeing identified 13 catch basin and/or manhole locations with observed (or potential for) groundwater infiltration. These were sealed with polyurethane grout (SAIC 2011d).
NBF	Mar – May 2010	Storm Drain Structure Sampling	Boeing collected samples from all storm drain structures (containing sufficient material to sample) in the north lateral drainage area for metals and PCB analyses. In addition, Boeing collected samples from storm drain structures in the north-central lateral drainage area and from selected storm drain structures in the south and south-central lateral drainage areas (Landau 2010b).
NBF	Mar – Jun 2010	Expanded Stormwater Sampling	Ecology collected whole water and filtered solids samples during five additional storm events and two base flow events at the LS431 and MH108 locations. In addition, Ecology collected filtered solids samples from the north-central, south-central, and south lateral storm drain lines, as well as the Building 3-380 and parking lot drainage areas and from six additional locations in the north lateral drainage area during three storm events and one base flow event (SAIC 2011a).

Table 4-1
Source Control Actions and Investigations at NBF-GTSP Site Since 2009

Location	Date	Activity	Description
NBF	Apr – Jul 2010	Infiltration and Inflow Assessment	Ecology prepared a draft assessment of potential sources and pathways for infiltration of contaminated soil/groundwater and inflow of contaminated surface runoff to the storm drain system at NBF. The final report was submitted in February 2011 (SAIC 2011b).
Slip 4	May – Sep 2010	Slip 4 Sediment Recontamination Modeling	Ecology collected surface sediment samples in Slip 4 and filtered stormwater solids for particle size fractionation in support of sediment recontamination modeling. The model was calibrated using site-specific data, and the maximum allowable concentration of PCBs in storm drain solids that will not cause recontamination of sediments was estimated (SAIC 2010e).
NBF	May – Jul 2010	Storm Drain Structure and Line Cleaning	Boeing completed jet cleaning of storm drain structures and lines in the north lateral; jet cleaning of structures and lines in the other storm drain lateral drainage areas was performed from August to December 2010 (Landau 2010f).
GTSP	Jun – Aug 2010	Soil and Groundwater Sampling at GTSP	The City of Seattle conducted soil and groundwater sampling to support an interim action at the GTSP property (Integral 2010c).
NBF	Jul – Oct 2010	Source Evaluation, North Lateral Storm Drain Area	Boeing conducted a source evaluation in the north lateral drainage area to identify potential contaminant sources in areas where PCBs and metals in storm drain structures were detected at concentrations above screening levels. Sampling included paint from building and equipment surfaces, caulk from windows or door jams, surface debris, concrete, asphalt, and roofing materials (Landau 2010d).
NBF	Jul – Oct 2010	Focused Soil Investigation – PEL Area	Boeing conducted a focused soil investigation in the PEL area. Sampling was conducted to provide additional characterization of PCBs in soil in the area southeast and southwest of the GTSP property (fenceline area) and in the area near Building 3-302 where Boeing planned to replace a storm drain line (Landau 2010e).
NBF	Jul – Oct 2010	Concrete Joint Material Removal in the PEL Area	Boeing removed approximately 3,900 linear feet of CJM in the PEL area; no samples were collected (Landau 2010g).
NBF	Aug – Dec 2010	Storm Drain Cleaning and Video-Inspection	Boeing conducted a video inspection of the north, north-central, south, south-central, Building 3-380, and parking lot drainage areas following jet cleaning of structures and lines to confirm that cleaning had adequately removed solids and debris, and to inspect for cracks, fractures, or breaks that could allow soil intrusion or groundwater infiltration. Video inspection of lines indicated the need for storm drain repairs (Landau 2011a).
NBF	Sep – Oct 2010	Removal and Replacement of Storm Drain Lines	Boeing removed and replaced storm drain lines in the vicinity of Building 3-302 in the north lateral drainage area (Landau 2010j).

Table 4-1
Source Control Actions and Investigations at NBF-GTSP Site Since 2009

Location	Date	Activity	Description
NBF	Sep – Dec 2010	Human Health Risk Assessment and Transport Evaluation for PCBs in CJM	Boeing conducted an HHRA/TE investigation to evaluate risks associated with onsite exposure to PCB-containing CJM at NBF and to assess the potential for the migration or transport of PCBs in CJM to Slip 4. Boeing collected samples of CJM, inlet filter solids, indoor air, and wipe samples of ground surfaces. It was determined that PCB-containing CJM is not a risk to human health; however, PCB-containing CJM does appear to contribute to PCBs in storm drain solids (Landau 2011b).
NBF	Sep 2010 – Jan 2011	Soil and Groundwater Investigation in the PEL Area	Boeing advanced 61 soil borings and installed 19 groundwater monitoring wells within the PEL area. Sampling was conducted to provide additional characterization of PCBs and other potential contaminants where further excavations may be needed (Landau 2011c).
NBF	Sep 2010 – Nov 2011	Short-Term Stormwater Treatment (STST) System	Boeing installed the STST in the north lateral drainage area designed to remove PCBs and other contaminants in stormwater from a portion of the north lateral. The STST treated 35 million gallons of stormwater (Landau 2011h).
NBF	Oct 2010	Paint Abatement Activities in PEL Area	Boeing performed paint abatement for structures in the PEL area found to contain PCBs greater than 50 mg/kg. Paint was removed from 14 yellow bollards and one equipment support structure (Landau 2010i).
NBF	Nov 2010	Building Material Removal from Building 3-626	Boeing removed foam and caulk from Building 3-626 containing PCBs up to 15,800 mg/kg (Landau 2010k).
NBF	Nov 2010 – May 2011	Stormwater Sampling	Ecology collected whole water and/or filtered solids samples during nine storm events and three base flow events at the following locations: LS431, MH108, CB173, and MH178. In addition, Ecology collected centrifuge solid samples at LS431 during two storm events and one base flow event (SAIC 2012).
NBF	Apr 2011	Paint Sampling in the North Lateral Drainage Area	Boeing conducted wipe and paint chip sampling from structures in the north lateral drainage area. PCBs were detected in 10 of 84 wipe samples and 12 of 18 paint chip samples collected (Landau 2011f). Data were evaluated for the purpose of paint abatement.
NBF-GTSP	May 2011	Pre-Confirmation Soil Sampling	Pre-confirmation soil sampling was completed by Boeing and SPU in an effort to characterize the horizontal and vertical limits of contamination prior to the interim action excavation at the NBF-GTSP fenceline area (Integral 2012; Landau 2012g).
NBF	May & July 2011	Concrete Joint Material Sampling	To supplement data in the 2010 HHRA/TE, Boeing collected 152 samples of CJM within the flightline area, in part during concrete pad replacement. The supplemental data were used to further evaluate the potential for PCBs in CJM to impact storm drain solids and to better define the geographic extent of PCB-impacted CJM. Analytical results supported the findings in the HHRA/TE (Landau 2012d).
NBF	Jul – Aug 2011	Storm Drain Solids Sampling	Boeing collected storm drain solid samples from MH108B and other catch basins to evaluate PCB sources in the north lateral drainage area. Additional storm drain structures were sampled prior to inspection for leaks in the line (Landau 2011g).

Table 4-1
Source Control Actions and Investigations at NBF-GTSP Site Since 2009

Location	Date	Activity	Description
NBF	Summer 2011	Bioremediation Substrate Injections near Buildings 3-360 and 3-800	Boeing conducted bioremediation injections to address VOC groundwater plumes present near former Building 3-360 and Building 3-800. A final report has not been provided.
NBF-GTSP	July 2011 – Spring 2012	NBF-GTSP Fenceline Excavation	The City of Seattle and Boeing performed a joint interim action along the NBF-GTSP fenceline. An excavation was conducted in order to remove PCB-contaminated soils and improve groundwater and stormwater quality in an effort to prevent the potential recontamination of Slip 4 sediments (Integral 2012; Landau 2012g).
NBF	Summer – Fall 2011	Surface Debris Removal	Surface debris in areas inaccessible by mechanical sweepers, such as beneath blast fences and sheds, were swept manually. The areas near Buildings 3-332 and 3-350 were included in the manual removal of surface debris (Landau 2011h).
NBF	Jul – Dec 2011	Site-Wide Source Evaluation	Boeing conducted a site-wide investigation for PCBs in paint. PCBs were detected in 15 of 110 wipe samples and 15 of 25 paint chip samples collected throughout NBF (Landau 2012b). Data were evaluated for the purpose of paint abatement.
NBF	Aug – Sep 2011	Concrete Joint Material Removal	Based on results of CJM sampling for the 2010 HHRA/TE, Boeing removed CJM containing PCBs greater than 50 mg/kg in the areas of Concourse B and northwest of Building 3-390. Approximately 5,725 linear feet of CJM were removed (Landau 2011i).
NBF	Sep 2011	Storm Drain Cleaning and Video-Inspection	A small portion of the south-central storm drain line north of Building 3-390 was cleaned and video inspected for cracks, breaks, and to determine location. This storm drain line segment was not included in the 2010 Storm Drain Line Cleaning and Video-Inspection (Landau 2011j).
NBF	Sep 2011 – May 2012	Stormwater Sampling	Ecology collected whole water and/or filtered solids samples during six storm events. Upstream/downstream locations were sampled in the north-central, south-central, and south lateral drainages; filtered solids and grab samples were collected in the north lateral (SAIC 2013).
NBF	Oct 2011	Paint Sampling near Wind Tunnel and Building 3-332	Boeing collected paint chip samples from the Wind Tunnel and overhead utilities of Building 3-332. PCBs were detected in 10 of 13 samples from the Wind Tunnel and 13 of 17 samples from Building 3-332. Data were evaluated for the purpose of paint abatement (Landau 2012c).
NBF	Oct 2011	Soil Excavation near Buildings 3-333 and 3-335	Boeing excavated soil in the area between Buildings 3-333 and 3-335 in an effort to remove soil containing PCBs greater than 0.5 mg/kg. Approximately 200 cubic yards of soil were removed (Landau 2012f).
NBF	Oct 2011 – Present	Long-Term Stormwater Treatment (LTST) System	Boeing installed the LTST at the KC lift station (LS431). The LTST is designed to remove PCBs and other contaminants in stormwater from the north, north-central, south, and south-central laterals, and the Building 3-380 drainage area. The upstream north lateral stormwater is now diverted around the lift station; downstream north lateral water is routed for preferential treatment (Landau 2011h).

Table 4-1
Source Control Actions and Investigations at NBF-GTSP Site Since 2009

Location	Date	Activity	Description
NBF	2011	Site-Wide Paint Abatement	Boeing performed paint abatement activities for paint found to contain PCBs greater than 50 mg/kg during 2011 paint sampling events. PCB-impacted paint was removed from hydrants, post indicating valves, bollards, railings, engine compartment tanks, large air tanks, support beams, and louvers (Landau 2012e).
NBF	February 2012	Paint Sampling	Boeing collected six paint chip samples and 14 wipe samples and analyzed them for PCBs. PCBs were detected in all six of the paint chip samples at concentrations ranging from 4.1 to 250 mg/kg. A report was not submitted; therefore, sample locations and removal status are unknown.
NBF	July 2012	CJM Sampling and Removal	PCB-impacted CJM was removed from the flightline in Concourses B and C. In conjunction with removal, 35 samples were collected and analyzed for PCBs (Landau 2012h).
NBF	2012	Paint Abatement at Buildings 3-322, 3-374, 3-390, and 3-818	Boeing performed paint abatement activities for paint containing greater than 50 mg/kg PCBs during 2011 and 2012 sampling events. PCB-impacted paint was removed from the foundations of Buildings 3-374 and 3-818; concrete pillars and doors/frames of Building 3-818; and concrete surfaces, metal doors, and a roof vent of Building 3-322. Paint was also removed from post indicating valves and bollards near Buildings 3-818 and 3-390 (Landau 2013).
NBF	2012	Storm Drain Line Cleaning	A segment of the north lateral storm drain line along the fenceline area as well as the north lateral main line were jet cleaned in an effort to remove any debris that may have entered the storm drain system during the NBF-GTSP Fenceline excavation (Landau 2013).
Source Control Activities Currently in Progress			
NBF-GTSP	1984 – Present	Storm Drain Solids Sampling	Boeing and SPU collect storm drain solid samples periodically and continuing as an ongoing task. Samples collected in 1984–2000, 2004–2006, 2009–present.
NBF-GTSP	1990s – Present	Routine Groundwater Monitoring	In the 1990s, Boeing and SPU collected groundwater samples for selected groundwater wells on a quarterly basis. Monitoring frequency was reduced to a semi-annual basis within the last ten years. Groundwater sampling will continue, and an increase in monitoring frequency at selected wells and inclusion of additional wells are recommended in this Work Plan.
NBF	Summer 2011 – Present	Monitoring of Bioremediation Injection Wells near Buildings 3-360 and 3-800	Boeing conducted bioremediation substrate injections to address VOC groundwater contamination near former Building 3-360 and near Building 3-800 in 2011. Monitoring is ongoing.
NBF	Oct 2011 – Present	Long-Term Stormwater Treatment (LTST) System	Boeing began operating the LTST at the KC lift station in October 2011. Influent and effluent stormwater from the LTST is monitored on a regular basis (Landau 2011h).

Table 4-2
Possible Uses of COPCs at NBF-GTSP Site

Potential Source/Application	PCBs	Cadmium	Copper	Lead	Mercury	Zinc	PAHs	BEHP
Building and Surface Materials/Components								
Air conditioning			●					
Air compressor oils	●							
Asphalt	●						●	
Boilers					●			
Cable/wire coverings	●			●				●
Caulk, grout, sealant	●			●	●		●	●
Cement, concrete	●			●				●
Electrical materials/equipment and electronics	●	●	●	●	●			●
Flame/fire retardants	●			●				
Floor tiles								●
Fluorescent lights					●			
Glass, ceramics, enamels, glazes	●	●		●				
Heat transfer system fluids	●							
Paints/pigments (copper and mercury have been used as anti-fouling agents)	●	● orange, green, red, yellow	● green, blue, purple	● black, red, yellow, white	● red	● white		
Plastics, plasticizers, stabilizers, PVC	●	●		●				●
Plumbing/welding/soldering fluxes			●	●		●		
Protective coatings	●	●		●		●		●
Rubber - door seams, tires						●		●
Storage tanks				●				
Wood preservatives - utility poles, building lumber, wood foundations	●		●			●		
Aircraft and Vehicles								
Aircraft parts and protective coatings		●				●		
Aviation fuel				●		●	●	
Brake pads/linings		●	●			●		●
Die castings (aviation parts)	●							
Engine exhaust							●	
Hydraulic fluids, lubricants	●	●				●		
Serpentine belts								●
Materials Potentially Used in Operations								
Adhesives	●				●	●		●
Batteries, battery cart		●		●	●	●		
Chemical-resistant linings				●				
Fungicides, pesticides, insectides, herbicides (lead used historically)	●	●	●	●	●			●
Noise-control materials				●				
Process vessels				●				
Radiation equipment shielding				●				
Rain gear								●
Solar cells		●						
Miscellaneous								
Coal/petroleum-fueled electrical generating facilities	●				● coal	● coal		
Natural gas lines	●				●			

PCBs = polychlorinated biphenyls

PAHs = polycyclic aromatic hydrocarbons

BEHP = bis(2-ethylhexyl) phthalate
PVC = polyvinyl chloride

Table 5-1
Potential Chemical-Specific ARARs, NBF-GTSP Site

Requirement, Standard, Criteria, or Limitation	Citation	Description/Comments
Federal		
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization (SARA)	42 USC 103	Cleanup standards, standards of control and other substantive requirements, criteria or limitations promulgated under Federal environmental or State environmental or facility site laws that directly and fully address a hazardous substance, pollutant, contaminant, action being taken, or location, or other circumstances found at a CERCLA site.
National Oil & Hazardous Substances Pollution Contingency Plan (NCP)	40 CFR 300	Implements CERCLA and provides the organizational structure and procedures for responding to releases of hazardous substances, pollutants, and contaminants.
Resource Conservation and Recovery Act (RCRA) (42 USCA 7401-7642) (40 CFR 260-280)	Criteria for Identifying the Characteristics of Hazardous Waste and for Listing Hazardous Waste (40 CFR 261.24.10-11, Subpart B)	Meets listing or characteristic definitions (includes threshold levels for Toxic Characteristic Leaching Procedure). Lists and characteristics for identifying hazardous wastes. Using appropriate analytical methods or knowledge of the source of contamination, determination should be made whether wastes contain hazardous waste characteristic; certain requirements for management of hazardous wastes may be applicable or relevant and appropriate.
Clean Air Act (CAA) (42 USC 7401 et seq.; 40 CFR 50-69)	Sec.109; 40 CFR 50	Site located in nonattainment area for National Ambient Air Quality Standards. National primary and secondary ambient air quality standards. Not anticipated as ARAR; in general, emissions from Site not expected to qualify as significant source.
Toxic Substances Control Act (TSCA) (40 CFR 761)	40 CFR 761.61	Because PCBs are a COC at this site, regulations pertaining to PCB remediation waste apply. Cleanup levels may be determined based on expected exposure and proximity to sensitive environments. High occupancy areas may be required to meet lower remediation levels. Soils with PCB concentrations greater than 50 milligrams per kilogram (mg/kg) need to be handled per TSCA. Soils with PCB concentrations less than 50 mg/kg might need to be handled per TSCA on a case-by-case basis as determined by USEPA.
Water Pollution Control Act/ Clean Water Act (CWA) (33 USCA 1251-1376; 40 CFR 100-149)	40 CFR 131	Ambient water quality criteria for the protection of aquatic organisms and human health. Narrative and quantitative limitations for surface water protection. Management of stormwater discharge to Slip 4. Anticipated as relevant and appropriate to control releases that create concentrations of concern.
EPA Regional Screening Levels (RSLs)	EPA Regional Screening Table User's Guide (November 2012)	Chemical-specific concentrations for individual contaminants in air, drinking water, and soil. Used to determine whether levels of contaminants found at the Site may warrant further investigation or cleanup. Formerly referred to as Preliminary Remedial Goals (PRGs) by EPA Region 9.
Safe Drinking Water Act (40 CFR 141)	Federal MCLs 40 CFR 141.61	National Primary Drinking Water Regulations are standards that protect public water systems by limiting the levels of contaminants in drinking water. Maximum Contaminant Levels (MCLs) and Maximum Contaminant Level Goals (MCLGs, non-carcinogenic) could be ARAR for groundwater if it is determined to be a source of public drinking water or if the aquifer is classified as potable.
National Recommended Water Quality Criteria (NRWQC)	Pursuant to Section 304(a) of the CWA	Water quality criteria for the protection of aquatic life and human health in surface water. MTCA regulations specifically identify the 1999 NRWQC as an ARAR at MTCA sites, the 2002 NRWQC are potentially relevant and appropriate under MTCA.

Table 5-1
Potential Chemical-Specific ARARs, NBF-GTSP Site

Requirement, Standard, Criteria, or Limitation	Citation	Description/Comments
State		
Model Toxics Control Act (MTCA) (WAC 173-340)	WAC 173-340, including Sections 720, 730, 740-749, 750	Any hazardous waste site being investigated or cleaned up in Washington under Ecology. Requirements for establishing numeric or risk-based standards and selecting cleanup actions. Applicable for cleanup of soil, groundwater, surface water, and indoor air.
Washington State Clean Air Act (WAC 173-400)	General Requirements for Air Pollution Sources WAC 173-400	Establishes feasible and attainable standards and rules applicable to control of air contaminant emissions. State implementation of ambient air quality standards. Potential ARAR for investigative or remedial actions that produce emissions to air.
Puget Sound Clean Air Agency (PSCAA) ambient and emission standards.	PSCAA Regulations I and III	Secures and maintains safe levels of air quality. Potential ARAR for investigative or remedial actions, including fugitive dust emissions.
Washington Dangerous Waste Regulations (WAC 173-303)	WAC 173-303	Meets listing or characteristic definitions, or concentrations exceed defined threshold criteria. State criteria for dangerous waste, which are broader than federal criteria. The appropriate waste designation for state-listed or characteristic waste should be made in order to determine the applicability or relevance and appropriateness of state requirements for the management of dangerous waste.
Washington State Public Water Supplies (WAC 246-290)	State Department of Health WAC 246-290-310	Public drinking water supply. Includes Maximum Contaminant Levels (MCLs) for drinking water. MCLs could be a potential ARAR for groundwater if it is determined to be a localized source of public drinking water or if the aquifer is classified as potable.
Washington Sediment Management Standards (SMS) (WAC 173-204)	WAC 173-204	Numerical and narrative criteria for sediment quality standards (SQS), cleanup screening levels (CSL), and minimum cleanup levels. Applicable to site due to contaminant discharges to LDW. Anticipated as relevant and appropriate to control releases that create concentrations of concern in the sediment.

CFR = Code of Federal Regulations
RCW = Revised Code of Washington
USC (or USCA) = United States Code (Annotated)
WAC = Washington Administrative Code

Table 5-2
Potential Action-Specific ARARs, NBF-GTSP Site

Action	Requirements	Prerequisite	Citation	Comments
General Investigation/Remediation Activities				
General investigation and remediation	CERCLA	Any hazardous waste site being investigated or cleaned up under the Superfund National Priorities List	CERCLA, as amended by the SARA (42 USC 103)	42 USC Section 9621 states that a cleanup shall require, at completion, a level or standard of control for contaminants which at least attain standards set by ARARs. On-site actions must attain Federal standards, requirements, criteria, limitations or more stringent State standards determined to be legally applicable or relevant and appropriate to the circumstances at a given site. Applicable Federal and State ARARs are listed in Tables 5-1, 5-2, and 5-3.
	MTCA	Any hazardous waste site being investigated or cleaned up under MTCA	WAC 173-340, Chapter 70.105D RCW	Sets strict cleanup standards to ensure that the quality of hazardous waste site cleanup and protection of human health and the environment are not compromised and establishes the rules that allow cleanup under MTCA to be tailored to individual sites.
Interim actions	MTCA	Any hazardous waste site being investigated or cleaned up under MTCA	WAC 173-340-430	Interim actions are technically necessary to reduce a threat to human health or the environment by eliminating or substantially reducing one or more pathways for exposure to a hazardous substance at a facility. Interim actions may achieve cleanup standards for a portion of a site, provide partial cleanup, or provide information on how to achieve cleanup to set standards.
Water well construction	Requirements for installation and maintenance of monitoring or remediation wells	Necessary for construction of all resource protection wells	Minimum Standards for Construction and Maintenance of Wells (RCW 18.104; WAC 173-160)	Applicable for installation and maintenance of monitoring wells and remediation wells.
Source control; Ecology construction stormwater general permit	Requirements for protecting sediment and surface water quality	Ongoing sources of chemicals to LDW	State Water Pollution Control Act (RCW 90.48); CWA (40 CFR 100-149); SMS (WAC 173-204); MTCA (WAC 173-340)	Applicable to chemical sources that create concentrations of concern in LDW. Requirements are implemented differently depending on whether discharges are subject to NPDES permits (see below). NPDES may be required for discharges related to ongoing remedial action. Construction stormwater permit applies to construction activities that affect 1 acre or more.
Discharge to POTW (Publicly-Owned Treatment Works)	Contaminated water must be permitted and pretreated to certain limits prior to discharge	Nonhazardous waste	National Pretreatment Standards (40 CFR 403); Metro District Wastewater Discharge Ordinance	Discharges to POTW subject to permitting and pre-treatment standards per King County wastewater treatment requirements; would be applicable to excavation dewatering.

Table 5-2
Potential Action-Specific ARARs, NBF-GTSP Site

Action	Requirements	Prerequisite	Citation	Comments
Discharge to surface waters	Point-source standards for discharges into surface water bodies	Point-source discharge or site runoff directed to surface water body when the discharges are subject to an National Pollutant Discharge Elimination System (NPDES) Permit	NPDES (40 CFR 122, 125); State Discharge Permit Program, NPDES Program (WAC 173-216, -220)	Anticipated to be applicable to some discharges related to remediation. Construction stormwater requirements to be satisfied for handling of soil by development of SWPPP.
	Federal criteria for water quality to protect human health and aquatic life	Discharges to surface water bodies	Federal Water Quality Criteria (40 CFR 131)	Requires attainment of water quality criteria where relevant and appropriate to circumstances of the release. Requirements are implemented differently depending on whether discharges are subject to NPDES permits. Anticipated to be relevant and appropriate for remedial measures involving this activity.
	State WQS for Surface Water	Discharges to surface water bodies	WAC-173-201A	State implementation of federal requirement to develop water quality control plan. Narrative and quantitative limitations for surface water and groundwater protection, based upon beneficial uses. Anticipated to be as relevant and appropriate.
	Requirement for use of all known available and reasonable technologies for treating wastewater prior to discharge to waters of the state	Industrial sources	State Water Pollution Control Act (RCW 90.48), Water Resources Act (RCW 90.54)	Anticipated to be applicable to remedial technologies involving discharges to surface or groundwater.
Air stripping	Meet ambient air quality requirements for significant sources	Site located in nonattainment area for National Ambient Air Quality Standards; treatment unit would be major source	National Ambient Air Quality Standards (40 CFR 50)	Possible ARAR if technology is used, but not anticipated to qualify as major source.
Granular-activated carbon treatment	Meet design and operating standards for treatment and storage units	Treatment and storage of RCRA hazardous waste	40 CFR 264, Subpart I-Containers 40 CFR 264, Subpart J-Tanks 40 CFR 264, Subpart X-Misc. units	Anticipated to be relevant and appropriate if technology is implemented.
Treatment, storage, or disposal of hazardous wastes	Disposal of contaminated soil or debris is subject to land disposal prohibitions or treatment standards	Dangerous or hazardous waste	40 CFR 268 Federal Land Disposal Restrictions; WAC 173-303-140, -141 Land Disposal Restrictions	May be an ARAR if placement of hazardous or dangerous waste occurs during remediation.

Table 5-2
Potential Action-Specific ARARs, NBF-GTSP Site

Action	Requirements	Prerequisite	Citation	Comments
Storage or disposal of solid wastes	Requirements for solid waste management	Solid waste (nonhazardous)	Solid Waste Disposal (Act 42 USC Sec. 3251-3259, 6901-6991) as administered under 40 CFR 257, 258; Solid Waste Handling Standards (WAC 173-304, -350)	Potentially an ARAR for nonhazardous waste generated during remedial activities
Transportation of Hazardous Materials	Hazardous materials transportation regulations	Required if hazardous materials are transported off-site	Hazardous Materials Regulations (49 USC 5101-5127; 49 CFR 171 to 180)	Applies to any hazardous materials transported off-site as part of remedial actions.
Air Emissions				
Air emissions	National Primary and Secondary Ambient Air Quality Standards	Emissions from a "major" source	Clean Air Act (Sec. 109, 40 CFR 50)	Emissions from site not expected to qualify as major source unless activities will result in emissions of >100 tons/year or of a specified air contaminant.
	Regional ambient air quality standards	Emission of regulated air contaminant	PSCAA Regulation I	Not anticipated as an ARAR
	National Emissions Standards for Hazardous Air Pollutants (NESHAPs)	Industrial emissions	Clean Air Act, NESHAPs (40 CFR 61); State Emission Standards for Hazardous Air Pollutants (WAC 173-400-075)	Emission standards may need to be converted to area source standards for use at site, if determined to be relevant and appropriate to releases of hazardous air pollutants from remedial actions.
	New Source Pretreatment Standards	New source of hazardous air pollutants	40 CFR 60	Potentially applicable to releases from remedial actions.
	Controls for New Sources of Toxic Air Pollutants	Emission of any Class A or Class B toxic air pollutant (identified in WAC 173-460-150 through -160) into ambient air	WAC 173-460	Potentially applicable to releases from remedial actions.
	Regional Emission Standards for Toxic Air Pollutants	Source of toxic air contaminant requires a notice of construction	PSCAA Regulation III	Potentially applicable depending upon remedial technology used.

Table 5-2
Potential Action-Specific ARARs, NBF-GTSP Site

Action	Requirements	Prerequisite	Citation	Comments
Soil/Fill Remediation				
General remediation of hazardous waste	RCRA hazardous waste management requirements	RCRA hazardous waste management in treatment, storage, or disposal facility (TSDF)	RCRA as amended by the Hazardous and Solid Waste Amendments (HSWA) (42 USCA 6901 et seq.)]; 40 CFR 264 for permitted TSDFs	Need to determine waste designation for investigation derived waste (IDW) and remediation waste. In general, RCRA requirements are anticipated to be applicable or relevant and appropriate depending upon designation of waste, if generated.
	State hazardous waste management requirements	Management of wastes that pass criteria for Washington hazardous waste as specified in WAC 173-303-070	General Facility Standards (WAC 173-303-280 to -395)	In general, state hazardous waste requirements are broader and more stringent than federal requirements; anticipated to be relevant and appropriate.
Remediation of PCB-contaminated waste	Regulations pertain to PCB remediation waste	PCBs as chemical of concern	TSCA (40 CFR 761.61)	Cleanup levels may be determined based on expected exposure and proximity to sensitive environments. PCB-contaminated waste materials will need to be managed and disposed in accordance with TSCA requirements.
Surface impoundments	Requirements for containment system, emergency repair, contingency plans, design, etc.	New RCRA surface impoundment	Federal: 40 CFR 264.220 et seq.; State: WAC 173-303-650	Not anticipated to be relevant and appropriate unless this technology is used during remediation.
Waste piles	Requirements for non-containerized solid, non-flowing material	RCRA hazardous waste stored in pile; State dangerous waste stored in pile	Federal: 40 CFR 264.254 et seq.; State: WAC 173-303-660	Potentially relevant and appropriate if employed during investigation or remediation.
Land treatment	Operating, monitoring, and closure requirements; hazardous chemicals must be degraded, transformed, or immobilized within the treatment zone; treatment efficiency must be demonstrated, design criteria must be met, monitoring must be established, and control fugitive and odor emissions.	RCRA hazardous waste treatment in land farming unit	40 CFR 264, Subpart M	May be an ARAR if technology is selected for remediation.
Chemical, physical, and biological treatment	Operating, monitoring, and closure requirements	RCRA hazardous waste	Federal: 40 CFR 264; State: WAC 173-303	Potentially applicable if hazardous or state dangerous wastes are treated using any of these methods. Otherwise, anticipated to be relevant and appropriate for the treatment of nonhazardous waste.

Table 5-2
Potential Action-Specific ARARs, NBF-GTSP Site

Action	Requirements	Prerequisite	Citation	Comments
Incineration	Requirements include monitoring and analysis of waste feed and residuals, and disposal of treatment residuals.	RCRA hazardous waste; State dangerous waste	Federal: 40 CFR 264.340 et seq.; State: WAC 173-303-670	Anticipated to be relevant and appropriate should this technology be implemented. Onsite operations would need to meet substantive requirements of the operating permit. State requirements would be applicable for non-RCRA hazardous wastes.
	Performance standards for incinerators	Incinerator with charging rates of more than 45 metric tons per day	Federal: CAA 42 USCA 7401-7642; State: WAC 173-303-670; PSCAA emission and ambient standards	Anticipated to be relevant and appropriate if this technology is employed.
Thermal treatment (other than incineration)	Operating, monitoring, and closure requirements	Treatment using technologies other than controlled flame combustion	Federal: 40 CFR 265, Subpart P; State: WAC 173-303-680	Potentially applicable if wastes are treated using this method. Otherwise, anticipated to be relevant and appropriate for wastes sufficiently similar to hazardous or dangerous waste.
Excavation and disposal of hazardous wastes	Disposal of contaminated soil or debris is subject to land disposal prohibitions of treatment standards	RCRA hazardous waste State dangerous waste	Federal: 40 CFR 268, federal land disposal restrictions; State: Land Disposal Restrictions (WAC 173-303-140, -141)	May be ARAR if placement of hazardous or dangerous waste occurs during remediation.
Excavation and disposal of solid wastes	Requirements for solid waste management	Solid waste (nonhazardous)	Federal: Solid Waste Disposal Act (42 USC Sec. 325103259, 6901-6991), as administered under 40 CFR 257, 258 State: Solid Waste Handling Standards (WAC 173-350)	Potentially applicable to the disposal of nonhazardous waste generated during remedial activities.
Treatment of non-RCRA hazardous or state dangerous wastes	Treatment requirements for non-RCRA hazardous waste or state dangerous waste	Non-RCRA hazardous waste Non-RCRA state-only dangerous waste	Federal: 40 CFR 257, 258, 761; State: WAC 173-303-141	Standards for non-RCRA hazardous or non-RCRA state dangerous waste, including PCB waste, incinerator treatment residuals, etc. Anticipated to be applicable to non-RCRA hazardous and dangerous wastes, or relevant and appropriate to sufficiently similar wastes.

CFR = Code of Federal Regulations
RCW = Revised Code of Washington
USC (or USCA) = United States Code (Annotated)
WAC = Washington Administrative Code

Table 5-3
Potential Location-Specific ARARs, NBF-GTSP Site

Location/Activity	Requirements	Prerequisite	Citation	Comments
Evaluation of environmental impacts/ grading activities	Jurisdiction through City of Seattle for State Environmental Policy Act (SEPA) Checklist.	Activities such as excavation require submittal of a SEPA Checklist	SEPA Rules; RCW 43.21C; WAC 197-11; Seattle Municipal Code (SMC, Title 22.804)	SEPA Checklist required for certain construction activities, including excavation work and drainage.
Actions within floodplain	Actions must be performed so as to avoid adverse impacts, minimize potential harm, restore and preserve natural and beneficial values of the floodplain.	Actions that will occur in a floodplain (i.e., lowlands) and relatively flat areas adjoining inland and coastal waters and other flood-prone areas	Executive Order 11988, Protection of Floodplains (40 CFR 6, Appendix A)	Could be applicable to remedial actions taken at site (note: the NBF-GTSP Site is outside the 100-year floodplain, but this ARAR is not-specific to a 100-year floodplain).
Critical habitat upon which endangered or threatened species depend	Actions must be performed so as to conserve endangered or threatened species, including consultation with the Department of the Interior and National Marine Fisheries Service.	Determination of endangered or threatened species and the essential fish habitat on which they depend	Endangered Species Act of 1973 (16 USC 1531 et seq.; 50 CFR Part 200, 50 CFR Part 402) Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act (50 CFR 600)	LDW is used as a salmon migratory route, and it is possible that other endangered or threatened species visit the NBF-GTSP Site.
Habitat for fish, plants, or birds subject to State of Washington Department of Fish and Wildlife (WDFW) oversight	Prohibits water pollution with any substance deleterious to fish, plant life, or bird life.	Discharges of chemicals to LDW or other areas with wildlife	US Fish and Wildlife Coordination Act. 16 USC 661-667e	LDW is used as a salmon migratory route and provides habitat for other species of fish and wildlife. Certain plants and birds may find habitat at the NBF-GTSP Site. Requirements are implemented differently depending on whether discharges are subject to NPDES permits.
Historic sites or structures	Alternatives must be evaluated to avoid, minimize, or mitigate the impact on historic sites or structures.	Activities that could disturb historical sites or structures	National Historic Preservation Act (16 USC 470f; 36 CFR Parts 60, 63, and 800)	Applicable to the GTSP structure, which is a National Historic Landmark; activities must be conducted to minimize impact to the GTSP property.

CFR = Code of Federal Regulations
RCW = Revised Code of Washington
USC = United States Code
WAC = Washington Administrative Code

Table 6-1
Analytical Methods and Sampling Requirements

Chemical Class	Analytical Method	Sample Container	Preservation	Holding Time
Solid Samples (soil, storm drain solids, surface debris, anthropogenic media)				
Dioxins/Furans	EPA 1613B	Glass jar	Freeze (-20°C)	1 year to extract, 40 days to analyze
PCB Aroclors	EPA 8082	Glass jar	Cool (0-6°C)	14 days to extract, 40 days to analyze (1 year to extract if frozen)
SVOCs (including phthalates and PAHs)	EPA 8270D or EPA 8270D-SIM			
VOCs	EPA 8260C	40-mL VOA vial with Teflon septa	Sodium bisulfate or methanol; cool (0-6°C)	14 days
Mercury	EPA 7471A	Glass jar	Cool (0-6°C)	28 days (6 months if frozen)
Other metals	EPA 6010C/200.8			6 months (2 years if frozen)
Total organic carbon	Plumb (1981)			14 days (6 months if frozen)
Total solids	EPA 160.3			
Grain size	PSEP (1986)	Glass or HDPE jar	Cool (0-6°C)	6 months
Aqueous Samples (stormwater, base flow water, groundwater)				
Dioxins/Furans	EPA 1613B	Glass amber bottles	Cool (0-6°C)	1 year to extract, 40 days to analyze
VOCs	EPA 8260C	40-mL VOA vial with Teflon septa	HCl; cool (0-6°C)	14 days
PCB Aroclors	EPA 8082	Glass amber bottles	Cool (0-6°C)	7 days to extract, 40 days to analyze
SVOCs (including phthalates and PAHs)	EPA 8270D or EPA 8270D-SIM	Glass amber bottles	Cool (0-6°C)	7 days to extract, 40 days to analyze
Metals (including mercury)	EPA 6010C/200.8/7470A	HDPE bottle	Nitric acid	28 days for mercury, 6 months for other metals
Vapor Samples (soil vapor)				
VOCs	EPA TO-15	1-L Summa canister	Ambient	30 days

HCl = hydrochloric acid
HDPE = high-density polyethylene
PSEP = Puget Sound Estuary Program
SIM = selected ion monitoring
VOA = volatile organic analyses

Table 6-2
Criteria Used as Screening Levels for NBF-GTSP Media

Criteria Type and Designation	Description and Reference for ARARs, PSLs and Background
	SOIL (Table 6-3)
Soil Method A:	
SO-1	Method A, Unrestricted Land Use - HH, WAC 173-340-740(2)(b)(iii), CLARC Database, Table 740-1 (Method A used only for TPH ranges)
Soil Method B:	
SO-2	Direct Contact, Method B - HH, Carcinogen, WAC 173-340-740(3)(b)(iii)(B)(II), CLARC Database, Eq. 740-2
SO-3	Direct Contact, Method B - HH, Non-carcinogen, WAC 173-340-740(3)(b)(iii)(B)(I), CLARC Database, Eq. 740-1
Soil Pathway Evaluation:	
SO-4	Method B - HH Groundwater Protection - Non-carcinogen, WAC 173-340-740(3)(b)(iii)(A), Eq. 747-1, 747-2, Vadose Soil
SO-5	Method B - HH Groundwater Protection - Non-carcinogen, WAC 173-340-740(3)(b)(iii)(A), Eq. 747-1, 747-2, Saturated Soil
SO-6	Method B - HH Groundwater Protection - Carcinogen, WAC 173-340-740(3)(b)(iii)(A), Eq. 747-1, 747-2, Vadose Soil
SO-7	Method B - HH Groundwater Protection - Carcinogen, WAC 173-340-740(3)(b)(iii)(A), Eq. 747-1, 747-2, Saturated Soil
SO-8	Soil to Sediment Protection, Ecology CSL, WAC 173-340-740(1)(d), Eq. 747-1, 747-2, Vadose Soil
SO-9	Soil to Sediment Protection, Ecology SQS, WAC 173-340-740(1)(d), Eq. 747-1, 747-2, Vadose Soil
SO-10	Soil to Sediment Protection, Ecology CSL, WAC 173-340-740(1)(d), Eq. 747-1, 747-2, Saturated Soil
SO-11	Soil to Sediment Protection, Ecology SQS, WAC 173-340-740(1)(d), Eq. 747-1, 747-2, Saturated Soil
SO-12	Soil to Surface Water Protection, Aquatic Life, SWQS:RCW 90.48; WAC 173-201A-240 per MTCA, WAC 173-340-730(2)(b)(i)(A), Marine - Acute, Vadose Soil
SO-13	Soil to Surface Water Protection, Aquatic Life, SWQS:RCW 90.48; WAC 173-201A-240 per MTCA, WAC 173-340-730(2)(b)(i)(A), Marine - Acute, Saturated Soil
SO-14	Soil to Surface Water Protection, Aquatic Life, SWQS:RCW 90.48; WAC 173-201A-240 per MTCA, WAC 173-340-730(2)(b)(i)(A), Marine - Chronic, Vadose Soil
SO-15	Soil to Surface Water Protection, Aquatic Life, SWQS:RCW 90.48; WAC 173-201A-240 per MTCA, WAC 173-340-730(2)(b)(i)(A), Marine - Chronic, Saturated Soil
SO-16	Soil to Surface Water Protection, WAC 173-340-740(1)(d), NRWQC, Saltwater - Acute, Eq. 747-1, 747-2, Vadose Soil
SO-17	Soil to Surface Water Protection, WAC 173-340-740(1)(d), NRWQC, Saltwater - Acute, Eq. 747-1, 747-2, Saturated Soil
SO-18	Soil to Surface Water Protection, WAC 173-340-740(1)(d), NRWQC, Saltwater - Chronic, Eq. 747-1, 747-2, Vadose Soil
SO-19	Soil to Surface Water Protection, WAC 173-340-740(1)(d), NRWQC, Saltwater - Chronic, Eq. 747-1, 747-2, Saturated Soil
SO-20	Soil to Surface Water Protection, WAC 173-340-740(1)(d), NRWQC, HH-Consumption Organisms, Eq. 747-1, 747-2, Vadose Soil
SO-21	Soil to Surface Water Protection, WAC 173-340-740(1)(d), NRWQC, HH-Consumption Organisms, Eq. 747-1, 747-2, Saturated Soil
SO-22	Soil to Surface Water Protection, Aquatic Life, Marine/Acute, NTR - 40 CFR 131.36, Vadose Soil
SO-23	Soil to Surface Water Protection, Aquatic Life, Marine/Acute, NTR - 40 CFR 131.36, Saturated Soil
SO-24	Soil to Surface Water Protection, Aquatic Life, Marine/Chronic, NTR - 40 CFR 131.36, Vadose Soil
SO-25	Soil to Surface Water Protection, Aquatic Life, Marine/Chronic, NTR - 40 CFR 131.36, Saturated Soil
Soil Potential ARARs:	
SO-26	CERCLA, EPA Regional Screening Level (RSL; May, 2010), Residential [used only where no MTCA-B value listed in Ecology 2012b]
SO-27	CERCLA - National Oil & Hazardous Substances Pollution Contingency Plan (NCP) - 40 CFR 300, Preliminary Remediation/Cleanup Goals (PRGs, 2007)
SO-28	Toxics Substances Control Act (TSCA), 40 CFR 761.61
SO-29	CERCLA, EPA Regional Screening Level (RSL, May 2010), Groundwater Protection (Risk Based) [used only where no MTCA-B value listed in Ecology 2012b]
Background:	
SO-30	Natural Background Levels, WAC 173-340-700(6)

Table 6-2
Criteria Used as Screening Levels for NBF-GTSP Media

Criteria Type and Designation	Description and Reference for ARARs, PSLs and Background
	GROUNDWATER (Table 6-4)
Groundwater Method A:	
GW-1	Method A - HH, Potable (Table 720-1), WAC 173-340-720(3)(b)(i) (Method A used only for TPH ranges)
Groundwater Method B:	
GW-2	Method B - HH, Potable ARARs, WAC 173-340-720(4)(b)(i), Safe Drinking Water Standards - MCLs
GW-3	Method B - HH, Potable ARARs, WAC 173-340-720(4)(b)(i), Safe Drinking Water Standards - MCLGs (only non-carcinogen non-zero goals)
GW-4	Method B - HH, Potable ARARs, WAC 173-340-720(4)(b)(i), State Department of Health Standards - MCLs
GW-5	Method B - HH, Non-carcinogenic/Potable, WAC 173-340-720(4)(b)(iii)(A), CLARC Database
GW-6	Method B - HH, Carcinogen/Potable, WAC 173-340-720(4)(b)(iii)(B), CLARC Database
Groundwater Pathway Evaluation:	
GW-7	Groundwater to Sediment Protection, Ecology CSL, WAC 173-340-720(1)(c)
GW-8	Groundwater to Sediment Protection, Ecology SQS, WAC 173-340-720(1)(c)
Background:	
GW-9	Natural Background Levels, WAC 173-340-700(6)
	STORM DRAIN WATER (Based on Surface Water, Table 6-5)
Surface Water Method B:	
SDW-1	Method B - HH, Non-carcinogen, Fish Consumption, WAC 173-340-730(3)(b)(iii)(A), Eq. 730-1, CLARC Database
SDW-2	Method B - HH, Non-carcinogen, Fish Consumption, WAC 173-340-730(3)(c), Eq. 730-1, Mod - Tribal Adult
SDW-3	Method B - HH, Non-carcinogen, Fish Consumption, WAC 173-340-730(3)(c), Eq. 730-1, Mod - Tribal Child
SDW-4	Method B - HH, Carcinogen, Fish Consumption, WAC 173-340-730(3)(b)(iii)(B), Eq. 730-2, CLARC Database
SDW-5	Method B - HH, Carcinogen, Fish Consumption, WAC 173-340-730(3)(b)(iii)(B), Eq. 730-2, Mod - Tribal Adult
SDW-6	Method B - HH, Carcinogen, Fish Consumption, WAC 173-340-730(3)(b)(iii)(B), Eq. 730-2, Mod - Tribal Child
SDW-7	Method B - HH, Petroleum Mixtures, WAC 173-340-730(3)(b)(iii)(c) (using Method A for groundwater for TPH ranges only)
Surface Water Required ARARs:	
SDW-8	Aquatic Life, SWQS:RCW 90.48; WAC 173-201A-240 per MTCA, WAC 173-340-730(2)(b)(i)(A), Marine - Acute
SDW-9	Aquatic Life, SWQS:RCW 90.48; WAC 173-201A-240 per MTCA, WAC 173-340-730(2)(b)(i)(A), Marine - Chronic
SDW-10	HH - Consumption; Organism Only (Marine), CWA §304, NRWQC
SDW-11	Aquatic Life, Marine/Acute, CWA §304, NRWQC
SDW-12	Aquatic Life, Marine/Chronic, CWA §304, NRWQC
SDW-13	Aquatic Life, Marine/Acute, NTR - 40 CFR 131.36
SDW-14	Aquatic Life, Marine/Chronic, NTR - 40 CFR 131.36
SDW-15	HH - Marine Water, Organism Consumption Only, NTR - 40 CFR 131.36 [WAC 173-201A-040(5)], HH - 10^{-6} Carcinogen Risk

Table 6-2
Criteria Used as Screening Levels for NBF-GTSP Media

Criteria Type and Designation	Description and Reference for ARARs, PSLs and Background
Surface Water Potential ARARs:	
SDW-16	Surface Water Discharge (NPDES), 40 CFR 122,125/ RCW 90.48; WAC 173-216, -220, -122
SDW-17	Groundwater to Sediment Protection, Ecology CSL, WAC 173-340-730(1)(d)
SDW-18	Groundwater to Sediment Protection, Ecology SQS, WAC 173-340-730(1)(d)
SDW-19	HH - Adult, Non-Carcinogen, Tribal Fish Consumption w/o Salmon, EPA RCRA R10 (using MTCA Eq. 730-1)
SDW-20	HH - Child, Non-Carcinogen, Tribal Fish Consumption w/o Salmon, EPA RCRA R10 (using MTCA Eq. 730-1)
SDW-21	HH - Adult, Carcinogen, Tribal Fish Consumption w/o Salmon, EPA RCRA R10 (using MTCA Eq. 730-2)
SDW-22	HH - Child, Carcinogen, Tribal Fish Consumption w/o Salmon, EPA RCRA R10 (using MTCA Eq. 730-2)
Background:	
SDW-23	Natural Background Levels, WAC 173-340-700(6) (using Terminal 117 EE/CA background values and upstream Green River data, LDW RI Report, 2010)
STORM DRAIN SOLIDS, SURFACE DEBRIS and ANTHROPOGENIC MEDIA* (Based on Sediments, Tables 6-6 to 6-10)	
Sediment Required ARARs (Marine Waters):	
SDS-1	SMS, SQS, WAC 173-340-760 (for chemicals listed with dry weight values, not OC-normalized)
SDS-2	SMS, CSL, WAC 173-340-760 (for chemicals listed with dry weight values, not OC-normalized)
Sediment Apparent Effect Thresholds (Marine Waters):	
SDS-3	SMS, LAET, WAC 173-340-760 (dry weight values, primarily from LDW RI Report, 2010)
SDS-4	SMS, 2LAET, WAC 173-340-760 (dry weight values, primarily from LDW RI Report, 2010)
Sediment Potential ARARs:	
SDS-5	CERCLA/MTCA, HH Risk Based Threshold Concentrations, 40 CFR 160, LDW (clamming exposure, LDW FS Report, 2012)
SDS-6	CERCLA/MTCA, HH Risk Based Threshold Concentrations, 40 CFR 160, LDW (site-wide/netfishing exposure, LDW FS Report, 2012)
Background:	
SDS-7	Natural Background Levels, WAC 173-340-700(6), LDW (LDW FS Report, 2012; and other LDW studies)

* Anthropogenic media apply the SD solids criteria, but RISLs are based on 10x the SDS RISLs, to allow for an order of magnitude dilution downgradient along the pathway to the storm drain.
Note: ARARs, PSLs, background levels, and acronyms are derived from Ecology (2012b) spreadsheet; criteria designations (e.g., SO-1) were developed specific to this Work Plan.
ARAR = Applicable or Relevant and Appropriate Requirement
HH = human health
NTR = National Toxics Rule
PSL = Preliminary Screening Level
SWQS = Surface Water Quality Standards
Other acronyms are identified in text or in Table 5-1.

Table 6-3
Soil Screening Information

Chemical	Frequency of Detection	Detected Concentration Min	Detected Concentration Max	Non-Detected Concentration Min	Non-Detected Concentration Max	Representative Screening Levels: Method B Direct Contact (SO-2/3)[1]	Representative Screening Levels: Method B GW-Protect (SO-4/6) Vadose	Representative Screening Levels: Method B GW-Protect (SO-5/7) Saturated	Most Stringent Screening Level: Without Downgradient Pathways (Non-Leaching) Criteria Value	Without Downgradient Pathways (Non-Leaching) Criteria Reference	With Downgradient Pathways (via GW or SDW) Criteria Value	With Downgradient Pathways (via GW or SDW) Criteria Reference	Soil Background Level (SO-30)	ARI Option 1 MDL	ARI Option 1 PQL	ARI Option 2 MDL	ARI Option 2 PQL	RI Selected Screening Level (Non-Leaching)	RI Selected Screening Level^ (Leaching)	Concentration Exceeds RISL[2] Max Detected	Concentration Exceeds RISL[2] Min Non-Detected	COPC Notes
Polychlorinated Aromatic Compounds																						
PCB Aroclors (mg/kg)																						
Aroclor 1016	3 / 1599	0.054	2.4	1.0E-04	910	5.6	0.60	0.030	5.6	SO-3	8.2E-04 ^	SO-25	--	0.024	0.10	**0.011**	**0.033**	5.6	0.033	●		See Total PCBs
Aroclor 1016/1242	0 / 33	--	--	0.019	8.8	--	--	--	--	--	--	--	--	0.024	0.10	**0.011**	**0.033**	--	--			
Aroclor 1221	1 / 1510	0.042	0.042	1.0E-04	910	--	--	--	0.14	SO-26	6.9E-05	SO-29	--	0.024	0.10	**0.011**	**0.033**	0.14	--			
Aroclor 1232	0 / 1512	--	--	1.0E-04	910	--	--	--	0.14	SO-26	6.9E-05	SO-29	--	0.024	0.10	**0.011**	**0.033**	0.14	--			
Aroclor 1242	20 / 1637	0.018	69	1.0E-04	910	--	--	--	0.22	SO-26	2.2E-05 ^	SO-25	--	0.030	0.10	**0.011**	**0.033**	0.22	0.033	●		See Total PCBs
Aroclor 1242/1254	1 / 1	15	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Aroclor 1248	146 / 1669	0.032	2,300	1.0E-04	910	--	--	--	0.22	SO-26	0.0013 ^	SO-25	--	0.030	0.10	**0.014**	**0.033**	0.22	0.033	●		See Total PCBs
Aroclor 1254	666 / 1689	0.0089	4,150	1.0E-04	710	0.50	0.067	0.0033	0.50	SO-2	0.0023 ^	SO-25	--	0.030	0.10	**0.014**	**0.033**	0.50	0.033	●		See Total PCBs
Aroclor 1260	294 / 1665	3.0E-04	9.5	1.0E-04	910	0.50	0.18	0.0091	0.50	SO-2	0.0062 ^	SO-25	--	0.030	0.10	**0.014**	**0.033**	0.50	0.033	●		See Total PCBs
Aroclor 1260/1262	0 / 5	--	--	0.019	0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Aroclor 1262	5 / 191	0.013	0.048	0.0013	35	--	--	--	--	--	--	--	--	0.030	0.10	**0.014**	**0.033**	--	--			
Aroclor 1268	0 / 186	--	--	0.0013	35	--	--	--	--	--	--	--	--	0.030	0.10	**0.014**	**0.033**	--	--			
Total PCBs	789 / 1742	3.0E-04	4,150	1.0E-04	88	0.50	0.040	0.0020	0.50	SO-2	2.9E-06 ^	SO-21	--	--	0.10	--	**0.033**	0.50	0.033	●		COPC
Dioxins/Furans (ng/kg)																						
2,3,7,8-TCDD	4 / 20	0.122	1.52	0.0267	0.145	11	1.7	0.085	11	SO-2	7.5E-04	SO-2	5.2	**0.34**	**1.0**	--	--	11	--			
Total Dioxins/Furans[3]	20 / 20	0.0806	141	--	--	11	1.7	0.085	11	SO-2	7.5E-04	SO-2	5.2	--	**1.0**	--	--	11	--	●		COPC
Metals (mg/kg)														ICP-AES (EPA 6010)		ICP-MS (EPA 200.8)						
Aluminum	10 / 10	5,860	18,000	--	--	80,000	64	4.6	80,000	SO-3	4.6 ^	SO-5	--	**2.4**	**5.0**	20	20	80,000	5.0	●		Major ion, not COPC
Antimony	0/21	--	--	2.3	40	32	5.4	0.27	32	SO-3	0.27 ^	SO-5	5	**0.41**	**5.0**	0.011	0.2	32	5.0			
Arsenic	127 / 359	0.5	140	0.05	10	0.67	2.9	0.15	0.67	SO-2	0.0017 ^	SO-7	7	**0.31**	**5.0**	0.17	0.5	7.0	7.0	●		COPC
Barium	26 / 29	19.7	2,400	0.5	0.5	16,000	1,600	83	16,000	SO-3	83 ^	SO-5	--	**0.13**	**0.3**	0.062	0.5	16,000	83	●		COPC
Beryllium	11 / 33	0.21	1.4	0.094	0.8	160	63	3.2	160	SO-3	3.2 ^	SO-5	--	**0.02**	**0.1**	0.018	0.2	160	3.2			
Cadmium	156 / 378	0.021	12	0.01	1.0	--	0.36	0.018	70	SO-26	0.018 ^	SO-5	1	**0.02**	**0.2**	0.016	0.2	70	1.0	●		COPC
Calcium	10 / 10	2,841	11,950	--	--	--	--	--	--	--	--	--	--	**0.83**	**5.0**	50	50	--	--			Major ion
Chromium	374 / 378	6.1	560	0.1	4.0	120,000	2,000	100	120,000	SO-3	100 ^	SO-5	120	**0.26**	**0.5**	0.15	0.5	120,000	120	●		COPC
Chromium, hexavalent	3 / 39	0.135	0.857	0.114	0.246	240	18	0.93	240	SO-3	0.93	SO-5	--	**0.26**	**0.5**	0.15	0.5	240	--			
Cobalt	5 / 5	4.9	8.0	--	--	--	--	--	23	SO-26	0.21	SO-29	--	--	**0.3**	--	--	23	--			
Copper	325 / 326	5.3	2,610	4.0	4.0	3,200	53	2.7	3,200	SO-3	0.053 ^	SO-23/25	36	**0.04**	**0.2**	0.096	0.5	3,200	36	●		COPC
Iron	10 / 10	8,300	18,000	--	--	56,000	45	3.2	56,000	SO-3	3.2 ^	SO-5	--	**1.3**	**5.0**	20	20	56,000	5.0	●		Major ion, not COPC
Lead	279 / 351	0.98	2,830	0.1	5.0	--	2,200	110	400	SO-26	57 ^	SO-11	17	**0.18**	**2.0**	0.30	1.0	400	57	●		COPC
Magnesium	10 / 10	1,700	4,200	--	--	--	--	--	--	--	--	--	--	**0.63**	**5.0**	20	20	--	--			Major ion
Manganese	1 / 1	569	569	--	--	11,000	2,900	140	11,000	SO-3	0.029 ^	SO-21	--	--	**0.1**	--	--	11,000	0.10	●		Major ion, not COPC
Mercury	212 / 375	0.0049	5.7	3.0E-04	0.5	--	0.020	0.0010	10	SO-26	0.0010 ^	SO-5	0.07	**0.002**	**0.025**	--	--	10	0.070	●		COPC
Molybdenum	1 / 5	17	17	0.088	0.11	400	0.16	0.011	400	SO-3	0.011	SO-5	--	--	**0.5**	--	--	400	--			
Nickel	137 / 138	3.0	2,330	4.0	4.0	1,600	130	6.5	1,600	SO-3	0.54 ^	SO-15/19/25	38	**0.86**	**1.0**	0.21	0.5	1,600	38	●		COPC
Selenium	5 / 45	0.1	0.9	0.005	10	400	5.2	0.26	400	SO-3	0.26 ^	SO-5	--	**0.59**	**5.0**	0.46	2.0	400	5.0			
Silver	6 / 50	0.02	0.5	0.01	4.0	400	0.26	0.013	400	SO-3	0.013 ^	SO-5	--	**0.04**	**0.3**	0.007	0.2	400	0.30	●		COPC
Sodium	5 / 5	1,006	1,062	--	--	--	--	--	--	--	--	--	--	**15**	**50**	100	100	--	--			Major ion
Thallium	0 / 26	--	--	0.05	27	--	0.71	0.036	0.78	SO-26	0.034 ^	SO-21	--	**0.25**	**5.0**	0.006	0.2	5.0	5.0			
Tin	17 / 90	1.0	79	0.18	1.2	48,000	38	2.8	48,000	SO-3	2.8	SO-5	--	**0.19**	**1.0**	--	--	48,000	--			
Titanium	1 / 1	1,620	1,620	--	--	--	--	--	--	--	--	--	--	--	**0.5**	--	--	--	--			Major ion
Zinc	300 / 303	10	4,330	4.0	1,410	24,000	41	2.1	24,000	SO-3	2.1 ^	SO-5	86	**0.37**	**1.0**	1.9	4.0	24,000	86	●		COPC
Pesticides (mg/kg)																						
Aldrin	0 / 11	--	--	2.0E-04	0.002	0.059	0.0049	2.4E-04	0.059	SO-2	2.4E-06	SO-21	--	**0.00043**	**0.0017**	--	--	0.059	--			
alpha-BHC	0 / 11	--	--	1.6E-04	0.002	0.16	5.5E-04	2.9E-05	0.16	SO-2	1.0E-05	SO-21	--	**0.00044**	**0.0017**	--	--	0.16	--			
beta-BHC	0 / 11	--	--	2.9E-04	0.003	0.56	0.0023	1.2E-04	0.56	SO-2	4.1E-05	SO-21	--	**0.00085**	**0.0017**	--	--	0.56	--			
delta-BHC	0 / 10	--	--	2.8E-04	0.0028	--	--	--	--	--	--	--	--	**0.00068**	**0.0017**	--	--	--	--			
cis-Chlordane	0 / 11	--	--	2.6E-04	0.003	--	--	--	--	--	--	--	--	**0.00034**	**0.0017**	--	--	--	--			
trans-Chlordane	0 / 11	--	--	2.4E-04	0.003	--	--	--	--	--	--	--	--	**0.00099**	**0.0017**	--	--	--	--			
Chlordane	0 / 11	--	--	2.4E-04	0.003	2.9	0.26	0.013	2.9	SO-2	4.2E-05	SO-21	--	**0.00099**	**0.0017**	--	--	2.9	--			

Table 6-3
Soil Screening Information

Chemical	Frequency of Detection	Detected Concentration Min	Detected Concentration Max	Non-Detected Concentration Min	Non-Detected Concentration Max	Representative Screening Levels: Method B Direct Contact (SO-2/3) [1]	Representative Screening Levels: Method B GW-Protect (SO-4/6) Vadose	Representative Screening Levels: Method B GW-Protect (SO-5/7) Saturated	Most Stringent Screening Level: Without Downgradient Pathways (Non-Leaching) Criteria Value	Without Downgradient Pathways (Non-Leaching) Criteria Reference	Most Stringent Screening Level: With Downgradient Pathways (via GW or SDW) Criteria Value	With Downgradient Pathways (via GW or SDW) Criteria Reference	Soil Background Level (SO-30)	ARI Option 1 MDL	ARI Option 1 PQL	ARI Option 2 MDL	ARI Option 2 PQL	RI Selected Screening Level (Non-Leaching)	RI Selected Screening Level^ (Leaching)	Concentration Exceeds RISL [2] Max Detected	Concentration Exceeds RISL [2] Min Non-Detected	COPC Notes
4,4'-DDD	0 / 11	--	--	5.3E-04	0.0053	4.2	0.34	0.017	4.2	SO-2	1.4E-05	SO-21	--	**0.00069**	**0.0033**	--	--	4.2	--			
4,4'-DDE	0 / 11	--	--	5.2E-04	0.0053	2.9	0.45	0.022	2.9	SO-2	1.9E-05	SO-21	--	**0.00069**	**0.0033**	--	--	2.9	--			
4,4'-DDT	0 / 11	--	--	5.3E-04	0.0053	2.9	3.5	0.17	2.9	SO-2	1.5E-04	SO-21	--	**0.00059**	**0.0033**	--	--	2.9	--			
Dieldrin	0 / 11	--	--	5.2E-04	0.0053	0.063	0.0051	2.6E-04	0.063	SO-2	1.4E-06	SO-21	--	**0.00066**	**0.0033**	--	--	0.063	--			
Endosulfan I	0 / 11	--	--	2.5E-04	0.0025	480	4.3	0.22	480	SO-3	2.0E-05	SO-19/25	--	**0.00037**	**0.0017**	--	--	480	--			
Endosulfan II	0 / 11	--	--	5.2E-04	0.0052	480	4.3	0.22	480	SO-3	2.0E-05	SO-19/25	--	**0.00064**	**0.0033**	--	--	480	--			
Endosulfan sulfate	0 / 11	--	--	7.8E-04	0.008	480	4.3	0.22	480	SO-3	2.0E-05	SO-19/25	--	**0.00078**	**0.0033**	--	--	480	--			
Endrin	0 / 11	--	--	4.8E-04	0.0048	24	0.44	0.022	24	SO-3	2.5E-05	SO-19/25	--	**0.00056**	**0.0033**	--	--	24	--			
Endrin aldehyde	0 / 10	--	--	8.9E-04	0.009	--	1.1	0.053	18	SO-26	2.5E-05	SO-19/25	--	**0.00057**	**0.0033**	--	--	18	--			
Endrin ketone	0 / 11	--	--	6.1E-04	0.0062	--	--	--	--	--	--	--	--	**0.00068**	**0.0033**	--	--	--	--			
Heptachlor	0 / 11	--	--	2.0E-04	0.002	0.22	0.0037	1.9E-04	0.22	SO-2	7.8E-07	SO-21	--	**0.00062**	**0.0017**	--	--	0.22	--			
Heptachlor epoxide	0 / 11	--	--	2.6E-04	0.0027	0.11	0.0083	4.2E-04	0.11	SO-2	3.3E-06	SO-21	--	**0.00050**	**0.0017**	--	--	0.11	--			
Lindane (gamma-BHC)	0 / 11	--	--	1.6E-04	0.003	24	6.2E-06	3.3E-07	24	SO-3	3.3E-07	SO-7	--	**0.00037**	**0.0017**	--	--	24	--			
Methoxychlor	0 / 11	--	--	0.0033	0.033	--	--	--	310	SO-26	1.5	SO-29	--	**0.0026**	**0.017**	--	--	310	--			
Toxaphene	0 / 11	--	--	0.15	1.6	0.91	--	--	0.91	SO-2	5.7E-08	SO-19/25	--	**0.17**	**0.17**	--	--	0.91	--			
Petroleum Hydrocarbons (mg/kg)																						
Gasoline Range Hydrocarbons	154 / 721	0.013	7,800	0.0056	40	30 or 100	--	--	30 or 100	SO-1	30 or 100 ^	SO-1	--	**2.4**	**5.0**	--	--	30 or 100	30 or 100	●		COPC
Diesel Range Hydrocarbons	477 / 956	2.6	15,000	0.0052	2,600	2,000	--	--	2,000	SO-1	2,000 ^	SO-1	--	**0.74**	**5.0**	--	--	2,000	2,000	●		COPC
Oil Range Hydrocarbons	454 / 785	6.6	35,690	0.01	120	2,000	--	--	2,000	SO-1	2,000	SO-1	--	**1.3**	**10**	--	--	2,000	--	●		COPC
Jet Fuel (applied to diesel range)	17 / 24	10	7,140	6.4	10	2,000	--	--	2,000	SO-1	2,000 ^	SO-1	--	**3.2**	**10**	--	--	2,000	2,000	●		COPC
Semivolatile Organic Compounds																						
Phenols (mg/kg)														EPA 8270D (Soil)		EPA 8270D (PSEP)						
2,6-Bis(1,1-dimethylethyl) phenol	0 / 27	--	--	0.063	0.066				--	--	--	--	--	--	--	--	--	--	--			
2-Chlorophenol	0 / 262	--	--	0.0046	1.0	400	--	--	400	SO-3	--	--	--	0.014	0.067	**0.0048**	**0.02**	400	--			
4-Chloro-3-methylphenol	0 / 262	--	--	0.014	1.6	--	--	--	--	--	--	--	--	0.12	0.33	**0.015**	**0.1**	--	--			
2,4-Dichlorophenol	0 / 262	--	--	0.0020	3.7	240	--	--	240	SO-3	--	--	--	0.075	0.33	**0.018**	**0.1**	240	--			
2,4-Dimethylphenol	0 / 262	--	--	0.0076	7.5	1,600	0.037	0.0020	1,600	SO-3	0.0020	SO-5/10/11	--	0.016	0.067	**0.0080**	**0.02**	1,600	--			
4,6-Dinitro-2-methylphenol	0 / 262	--	--	0.039	7.8	--	--	--	--	--	--	--	--	0.12	0.67	**0.041**	**0.2**	--	--			
2,4-Dinitrophenol	0 / 262	--	--	0.047	7.8	160	--	--	160	SO-3	--	--	--	0.077	0.67	**0.050**	**0.2**	160	--			
o-Cresol (2-Methylphenol)	0 / 262	--	--	0.0051	1.6	4,000	0.041	0.0027	4,000	SO-3	0.0027	SO-5	--	0.023	0.067	**0.0053**	**0.02**	4,000	--			
p-Cresol (4-Methylphenol)	0 / 262	--	--	0.0046	1.0	400	0.16	0.011	400	SO-3	0.011	SO-5	--	0.022	0.067	**0.0048**	**0.02**	400	--			
2-Nitrophenol	0 / 262	--	--	0.0090	5.0	--	--	--	--	--	--	--	--	0.063	0.067	**0.0095**	**0.02**	--	--			
4-Nitrophenol	0 / 262	--	--	0.027	9.5	--	--	--	--	--	--	--	--	0.048	0.33	**0.028**	**0.1**	--	--			
Pentachlorophenol	1 / 262	0.038	0.038	0.026	5.2	2.5	0.36	0.018	2.5	SO-2	8.0E-04	SO-7	--	0.096	0.33	**0.027**	**0.1**	2.5	--			
Phenol	21 / 262	0.015	0.035	0.0036	1.6	24,000	0.34	0.024	24,000	SO-3	0.024	SO-5	--	0.016	0.067	**0.0038**	**0.02**	24,000	--			
2,4,5-Trichlorophenol	0 / 262	--	--	0.020	5.2	8,000	--	--	8,000	SO-3	--	--	--	0.15	0.33	**0.021**	**0.1**	8,000	--			
2,4,6-Trichlorophenol	0 / 262	--	--	0.011	3.9	80	0.14	0.0074	80	SO-3	0.0035	SO-21	--	0.14	0.33	**0.011**	**0.1**	80	--			
Phthalates (mg/kg)														EPA 8270D (Soil)		EPA 8270D (PSEP)						
Bis(2-ethylhexyl) phthalate	56 / 267	0.011	4.4	0.0083	1.0	71	3.3	0.17	71	SO-2	0.047 ^	SO-11	--	**0.024**	**0.067**	0.0087	0.02	71	0.067	●		COPC
Butyl benzyl phthalate	1 / 267	0.061	0.061	0.0039	1.0	530	0.19	0.0096	530	SO-2	0.0051	SO-11	--	**0.025**	**0.067**	0.0041	0.02	530	--			
Dibutyl phthalate	14 / 254	0.013	0.078	0.0044	1.0	8,000	1.5	0.081	8,000	SO-3	0.081	SO-5	--	**0.033**	**0.067**	0.0047	0.02	8,000	--			
Diethyl phthalate	13 / 267	0.010	0.044	0.0036	1.0	64,000	85	5.4	64,000	SO-3	0.20	SO-11	--	**0.021**	**0.067**	0.0038	0.02	64,000	--			
Dimethyl phthalate	8 / 267	0.015	0.058	0.0035	1.0	--	--	--	--	--	0.094	SO-11	--	**0.027**	**0.067**	0.0037	0.02	--	--			
Di-n-octyl phthalate	2 / 267	0.013	0.25	0.0050	1.0	--	0.035	0.0019	730	SO-26	0.0019 ^	SO-5	--	**0.019**	**0.067**	0.0052	0.02	730	0.067	●		<5% detections, not COPC
Polycyclic Aromatic Hydrocarbons (mg/kg)														EPA 8270D (PSEP)		EPA 8270D-SIM						
Acenaphthene	47 / 645	0.0033	13	0.0014	1.8	4,800	0.33	0.017	4,800	SO-3	0.017	SO-5/11	--	0.0033	0.02	**0.0021**	**0.005**	4,800	--			
Acenaphthylene	35 / 645	0.0052	0.23	0.0013	1.8	--	1.4	0.069	--	--	0.069	SO-5/11	--	0.0030	0.02	**0.0011**	**0.005**	--	--			
Anthracene	75 / 645	0.0038	49	0.0013	1.8	24,000	4.5	0.23	24,000	SO-3	0.22	SO-11	--	0.0044	0.02	**0.00086**	**0.005**	24,000	--			
Benzo(a)anthracene	152 / 643	0.0032	230	0.0020	1.8	1.4	1.0	0.051	1.4	SO-2	0.0077	SO-21	--	0.0046	0.02	**0.0014**	**0.005**	1.4	--	●		See Total cPAHs
Benzo(b)fluoranthene	123 / 345	0.0038	170	0.0047	1.4	1.4	1.9	0.096	1.4	SO-2	0.014	SO-21	--	--	--	**0.0019**	**0.005**	1.4	--	●		See Total cPAHs
Benzo(k)fluoranthene	122 / 345	0.0044	170	0.0054	1.4	14	4.6	0.23	14	SO-2	0.014	SO-21	--	--	--	**0.0019**	**0.005**	14	--	●		See Total cPAHs
Total Benzofluoranthenes	163 / 638	0.0060	340	0.0046	1.8	--	--	--	--	--	--	--	--	0.0057	0.02	**0.0019**	**0.005**	--	--			See Total cPAHs

Table 6-3
Soil Screening Information

Chemical	Frequency of Detection	Detected Concentration Min	Detected Concentration Max	Non-Detected Concentration Min	Non-Detected Concentration Max	Representative Screening Levels: Method B Direct Contact (SO-2/3)[1]	Method B GW-Protect (SO-4/6) Vadose	Method B GW-Protect (SO-5/7) Saturated	Most Stringent Screening Level: Without Downgradient Pathways (Non-Leaching) Criteria Value	Criteria Reference	With Downgradient Pathways (via GW or SDW) Criteria Value	Criteria Reference	Soil Background Level (SO-30)	ARI Option 1 MDL	ARI Option 1 PQL	ARI Option 2 MDL	ARI Option 2 PQL	RI Selected Screening Level (Non-Leaching)	RI Selected Screening Level^ (Leaching)	Concentration Exceeds RISL[2]: Max Detected	Min Non-Detected	COPC Notes
Benzo(g,h,i)perylene	108 / 645	0.0044	120	0.0019	1.8	--	0.64	0.032	--	--	0.031 ^	SO-11	--	0.0048	0.02	**0.00091**	**0.005**	--	0.031	●		COPC
Benzo(a)pyrene	144 / 643	0.0038	210	0.0021	1.8	0.14	0.19	0.0094	0.14	SO-2	0.0094 ^	SO-7	--	0.0051	0.02	**0.00094**	**0.005**	0.14	0.0094	●		COPC (individual & cPAHs)
Chrysene	177 / 643	0.0060	220	0.0016	1.8	140	2.2	0.11	140	SO-2	0.0043	SO-21	--	0.0058	0.02	**0.0017**	**0.005**	140	--	●		See Total cPAHs
Dibenz(a,h)anthracene	64 / 643	0.0068	44	0.0021	1.8	0.14	0.52	0.026	0.14	SO-2	0.012	SO-11	--	0.0045	0.02	**0.0013**	**0.005**	0.14	--	●		See Total cPAHs
Dibenzofuran	81 / 617	0.0039	5.2	0.0015	1.8	80	0.30	0.015	80	SO-3	0.015	SO-5/11	--	0.0032	0.02	**0.0014**	**0.005**	80	--			
Fluoranthene	201 / 645	0.0095	440	0.0013	1.8	3,200	3.2	0.16	3,200	SO-3	0.16 ^	SO-5/11	--	0.0044	0.02	**0.0018**	**0.005**	3,200	0.16	●		COPC
Fluorene	59 / 645	0.0036	13	0.0013	1.8	3,200	0.47	0.024	3,200	SO-3	0.024	SO-5/11	--	0.0036	0.02	**0.0013**	**0.005**	3,200	--			
Indeno(1,2,3-cd)pyrene	98 / 643	0.0050	120	0.0016	1.8	1.4	0.70	0.035	1.4	SO-2	0.034	SO-11	--	0.0051	0.02	**0.0020**	**0.005**	1.4	--	●		See Total cPAHs
1-Methylnaphthalene	75 / 535	0.0048	9.4	0.0012	1.8	35	--	--	35	SO-2	0.0012	SO-29	--	0.0027	0.02	**0.0017**	**0.005**	35	--			
2-Methylnaphthalene	106 / 639	0.0037	26	0.0019	1.8	320	1.1	0.059	320	SO-3	0.043 ^	SO-11	--	0.0030	0.02	**0.0014**	**0.005**	320	0.043	●		COPC
Naphthalene	76 / 677	0.0043	14	1.0E-04	1.8	1,600	2.2	0.11	1,600	SO-3	0.11	SO-5/11	--	0.0027	0.02	**0.0017**	**0.005**	1,600	--			
Phenanthrene	186 / 645	0.0038	280	0.0013	1.8	--	2.0	0.10	--	--	0.10	SO-5/11	--	0.0036	0.02	**0.0016**	**0.005**	--	--			
Pyrene	203 / 644	0.0037	380	0.0013	1.8	2,400	19	0.98	2,400	SO-3	0.98	SO-5/11	--	0.0048	0.02	**0.0011**	**0.005**	2,400	--			
Total cPAHs[4]	204 / 664	6.0E-04	290	0.0016	1.3	0.14	0.19	0.0094	0.14	SO-2	0.0094 ^	SO-7	--	--	0.02	--	**0.005**	0.14	0.0094	●		COPC
Other SVOCs (mg/kg)														EPA 8270D (Soil)		EPA 8270D (PSEP)						
Aniline	0 / 46	--	--	0.063	1.0	--	--	--	--	--	--	--	--	0.022	0.067	**0.0018**	**0.02**	--	--			
Azobenzene	0 / 20	--	--	0.063	0.066	9.1	--	--	9.1	SO-2	--	--	--	0.028	0.067	**0.0032**	**0.02**	9.1	--			
Benzidine	0 / 19	--	--	1.7	10	240	--	--	240	SO-2	--	--	--	0.21	0.67	**0.20**	**0.2**	240	--			
Benzoic acid	8 / 262	0.042	1.4	0.041	7.8	320,000	8.8	0.63	320,000	SO-3	0.63	SO-5	--	0.25	0.67	**0.043**	**0.2**	320,000	--			
Benzyl alcohol	0 / 267	--	--	0.019	3.9	8,000	0.78	0.054	8,000	SO-3	0.054	SO-5	--	0.087	0.33	**0.046**	**0.1**	8,000	--			
4-Bromophenyl phenyl ether	0 / 267	--	--	0.0036	1.0	--	--	--	--	--	--	--	--	0.019	0.067	**0.0038**	**0.02**	--	--			
Butyldiphenylphosphate	0 / 48	--	--	0.0054	0.066	--	--	--	--	--	--	--	--	0.045	0.067	**0.0057**	**0.02**	--	--			
Carbazole	21 / 241	0.010	20	0.0023	0.78	--	--	--	--	--	--	--	--	0.015	0.067	**0.0024**	**0.02**	--	--			
4-Chloroaniline	0 / 267	--	--	0.023	8.5	--	--	--	--	--	--	--	--	0.10	0.33	**0.024**	**0.1**	--	--			
Bis(2-chloroethoxy) methane	0 / 267	--	--	0.0023	2.7	--	--	--	--	--	--	--	--	0.017	0.067	**0.0024**	**0.02**	--	--			
Bis(2-chloroethyl) ether	0 / 267	--	--	0.0051	1.6	0.91	--	--	0.91	SO-2	--	--	--	0.017	0.067	**0.0053**	**0.02**	0.91	--			
Bis(2-chloro-1-methylethyl) ether	0 / 241	--	--	0.0028	0.78	14	--	--	14	SO-2	--	--	--	0.019	0.067	**0.0030**	**0.02**	14	--			
2-Chloronaphthalene	0 / 267	--	--	0.0028	1.0	--	--	--	--	--	--	--	--	0.021	0.067	**0.0029**	**0.02**	--	--			
4-Chlorophenyl-phenylether	0 / 267	--	--	0.0028	1.0	--	--	--	--	--	--	--	--	0.021	0.067	**0.0030**	**0.02**	--	--			
Dibutylphenylphosphate	3 / 48	0.019	0.072	0.0047	0.066	--	--	--	--	--	--	--	--	0.015	0.067	**0.0024**	**0.02**	--	--			
1,2-Dichlorobenzene	0 / 335	--	--	5.0E-05	1.0	7,200	0.067	0.0038	7,200	SO-3	0.0038	SO-5/10/11	--	0.018	0.067	**0.0030**	**0.02**	7,200	--			
1,3-Dichlorobenzene	0 / 335	--	--	1.4E-04	1.0	--	--	--	--	--	0.28	SO-21	--	0.016	0.067	**0.0027**	**0.02**	--	--			
1,4-Dichlorobenzene	0 / 335	--	--	2.6E-04	1.0	--	0.091	0.0051	2.4	SO-26	5.10E-03	SO-5	--	0.016	0.067	**0.0027**	**0.02**	2.4	--			
3,3'-Dichlorobenzidine	0 / 266	--	--	0.052	5.2	2.2	--	--	2.2	SO-2	--	--	--	0.089	0.33	**0.054**	**0.1**	2.2	--			
2,4-Dinitrotoluene	0 / 267	--	--	0.018	3.9	160	--	--	160	SO-3	--	--	--	0.096	0.33	**0.019**	**0.1**	160	--			
2,6-Dinitrotoluene	0 / 267	--	--	0.014	3.9	8.0	--	--	8.0	SO-3	--	--	--	0.096	0.33	**0.015**	**0.1**	8.0	--			
Hexachlorobenzene	0 / 267	--	--	5.6E-04	1.0	0.63	0.070	0.0037	0.63	SO-2	1.1E-06	SO-21	--	0.019	0.067	**0.0034**	**0.02**	0.63	--			
Hexachlorobutadiene	1 / 299	1.6	1.6	2.1E-04	1.6	13	0.097	0.0013	13	SO-2	0.0013	SO-5	--	0.019	0.067	**0.0029**	**0.02**	13	--			
Hexachlorocyclopentadiene	0 / 267	--	--	0.012	3.9	480	--	--	480	SO-3	--	--	--	0.062	0.33	**0.012**	**0.1**	480	--			
Hexachloroethane	0 / 267	--	--	0.0046	1.6	71	--	--	71	SO-2	--	--	--	0.019	0.067	**0.0049**	**0.02**	71	--			
Isophorone	4 / 267	0.035	5.3	0.0025	22	1,100	--	--	1,100	SO-2	0.023	SO-29	--	0.013	0.067	**0.0027**	**0.02**	1,100	--			
2-Methoxynaphthalene	0 / 6	--	--	0.17	1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
2-Nitroaniline	0 / 267	--	--	0.018	5.2	800	--	--	800	SO-3	--	--	--	0.12	0.33	**0.019**	**0.1**	800	--			
3-Nitroaniline	0 / 267	--	--	0.024	5.2	--	--	--	--	--	--	--	--	0.10	0.33	**0.025**	**0.1**	--	--			
4-Nitroaniline	0 / 267	--	--	0.022	5.2	--	--	--	--	--	--	--	--	0.10	0.33	**0.023**	**0.1**	--	--			
Nitrobenzene	0 / 267	--	--	0.0036	27	160	--	--	160	SO-3	--	--	--	0.026	0.067	**0.0038**	**0.02**	160	--			
n-Nitrosodimethylamine	0 / 46	--	--	0.17	1.0	0.020	--	--	0.020	SO-2	--	--	--	0.084	0.33	**0.014**	**0.1**	0.020	--		●	No detections, not COPC
n-Nitrosodiphenylamine	0 / 267	--	--	0.019	1.0	200	0.25	0.013	200	SO-2	0.012	SO-10/11	--	0.067	0.067	**0.013**	**0.02**	200	--			
n-Nitrosodi-n-propylamine	0 / 267	--	--	0.0027	1.6	0.14	--	--	0.14	SO-2	--	--	--	0.021	0.067	**0.0028**	**0.02**	0.14	--			
Phosphoric acid tributyl ester	10 / 48	0.012	0.54	0.0054	0.066	--	--	--	--	--	--	--	--	0.018	0.067	**0.0056**	**0.02**	--	--			
Pyridine	0 / 27	--	--	0.32	0.33	80	--	--	80	SO-3	--	--	--	0.10	0.33	**0.017**	**0.1**	80	--			
Retene	13 / 27	0.034	0.65	0.13	0.13	--	--	--	--	--	--	--	--	0.029	0.067	**0.0046**	**0.02**	--	--			
1,2,4-Trichlorobenzene	0 / 299	--	--	2.9E-04	1.6	35	0.0061	4.0E-04	35	SO-2	4.0E-04	SO-7	--	0.016	0.067	**0.0038**	**0.02**	35	--			
Triphenyl phosphate	0 / 48	--	--	0.0059	0.066	--	--	--	--	--	--	--	--	0.025	0.067	**0.0062**	**0.02**	--	--			

Table 6-3
Soil Screening Information

Chemical	Frequency of Detection	Detected Concentration		Non-Detected Concentration		Representative Screening Levels			Most Stringent Screening Level				Soil Background Level (SO-30)	ARI Option 1		ARI Option 2		RI Selected Screening Level (Non-Leaching)	RI Selected Screening Level^ (Leaching)	Concentration Exceeds RISL [2]		COPC Notes
									Without Downgradient Pathways (Non-Leaching)		With Downgradient Pathways (via GW or SDW)											
		Min	Max	Min	Max	Method B Direct Contact (SO-2/3) [1]	Method B GW-Protect (SO-4/6) Vadose	Method B GW-Protect (SO-5/7) Saturated	Criteria Value	Criteria Reference	Criteria Value	Criteria Reference		MDL	PQL	MDL	PQL			Max Detected	Min Non-Detected	
Volatile Aromatic Hydrocarbons (mg/kg)														Medium Level		Low Level						
Benzene	24 / 631	8.0E-04	0.48	2.0E-04	1.4	18	0.0062	3.6E-04	18	SO-2	3.6E-04 ^	SO-7	--	0.18	0.5	**0.00030**	**0.001**	18	0.0010	●		COPC
Ethylbenzene	38 / 631	0.0022	5.8	1.0E-04	1.4	8,000	10	0.56	8,000	SO-3	0.56	SO-5	--	**0.23**	**0.5**	0.00020	0.001	8,000	--			
Toluene	54 / 631	6.0E-04	4.1	2.0E-04	1.4	6,400	6.2	0.35	6,400	SO-3	0.35	SO-5	--	**0.46**	**0.5**	0.00015	0.001	6,400	--			
m-Xylene	1 / 26	3.61	3.61	2.0E-04	2.0E-04	16,000	21	1.2	16,000	SO-3	1.2	SO-5	--	--	--	--	--	16,000	--			
m,p-Xylene	38 / 434	0.0015	1.6	3.1E-04	0.42	16,000	21	1.2	16,000	SO-3	1.2	SO-5	--	**0.55**	**0.5**	0.00039	0.001	16,000	--			
o-Xylene	133 / 459	0.0026	50	2.0E-04	0.33	16,000	21	1.2	16,000	SO-3	1.2	SO-5	--	**0.28**	**0.5**	0.00022	0.001	16,000	--			
Total Xylenes	174 / 640	6.0E-04	50	2.0E-04	2.9	16,000	21	1.2	16,000	SO-3	1.2	SO-5	--	**0.55**	**0.5**	0.00039	0.001	16,000	--			
Volatile Organic Compounds (mg/kg)														Medium Level		Low Level						
Acetone	60 / 185	0.0047	1.5	0.0036	7.1	72,000	29	2.1	72,000	SO-3	2.1	SO-5	--	2.3	2.5	**0.00048**	**0.005**	72,000	--			
Acrolein	0 / 72	--	--	0.0012	16	40	--	--	40	SO-3	--	--	--	1.5	25	**0.0038**	**0.05**	40	--			
Acrylonitrile	0 / 72	--	--	3.6E-04	1.6	1.9	--	--	1.9	SO-2	--	--	--	0.19	2.5	**0.0010**	**0.005**	1.9	--			
Bromobenzene	0 / 72	--	--	1.8E-04	0.32	--	--	--	--	--	--	--	--	0.17	0.5	**0.00015**	**0.001**	--	--			
Bromochloromethane	0 / 72	--	--	2.6E-04	0.39	--	--	--	--	--	--	--	--	0.24	0.5	**0.00032**	**0.001**	--	--			
Bromoethane	0 / 67	--	--	5.6E-04	0.83	--	--	--	--	--	--	--	--	0.15	1.0	**0.00044**	**0.002**	--	--			
Bromoform	0 / 218	--	--	5.3E-04	1.4	130	--	--	130	SO-2	--	--	--	0.27	0.5	**0.00030**	**0.001**	130	--			
Bromomethane	2 / 192	0.0013	0.0014	4.3E-04	4.3	110	--	--	110	SO-3	--	--	--	0.51	0.5	**0.00019**	**0.001**	110	--			
2-Butoxyethanol	0 / 4	--	--	0.005	0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
n-Butylbenzene	2 / 72	1.5	3.1	2.5E-04	0.052	--	--	--	--	--	--	--	--	0.45	0.5	**0.00026**	**0.001**	--	--			
sec-Butylbenzene	4 / 72	0.0016	2.2	1.9E-04	0.052	--	--	--	--	--	--	--	--	0.38	0.5	**0.00024**	**0.001**	--	--			
tert-Butylbenzene	0 / 72	--	--	1.2E-04	0.32	--	--	--	--	--	--	--	--	0.35	0.5	**0.00031**	**0.001**	--	--			
Carbon disulfide	17 / 188	8.0E-04	0.0038	3.8E-04	2.9	8,000	--	--	8,000	SO-3	--	--	--	0.16	0.5	**0.00056**	**0.001**	8,000	--			
Carbon tetrachloride	0 / 218	--	--	4.3E-04	1.4	14	0.0072	3.4E-04	14	SO-2	2.1E-04	SO-7	--	0.25	0.5	**0.00021**	**0.001**	14	--			
CFC-11 (Trichlorofluoromethane)	1 / 184	0.003	0.003	4.1E-04	1.4	24,000	--	--	24,000	SO-3	--	--	--	0.19	0.5	**0.00027**	**0.001**	24,000	--			
CFC-12 (Dichlorodifluoromethane)	0 / 34	--	--	3.9E-04	0.58	16,000	--	--	16,000	SO-3	--	--	--	0.31	0.5	**0.00021**	**0.001**	16,000	--			
CFC-113 (Trichlorotrifluoroethane)	7 / 171	0.0021	3.5	4.1E-04	7.1	1,000,000	--	--	1,000,000	SO-3	--	--	--	0.24	1.0	**0.00029**	**0.002**	1,000,000	--			
Chlorobenzene	1 / 218	0.001	0.001	1.1E-04	1.4	1,600	0.96	0.055	1,600	SO-3	0.055	SO-5	--	0.24	0.5	**0.00022**	**0.001**	1,600	--			
Chlorodibromomethane	0 / 218	--	--	3.2E-04	1.4	--	--	--	--	--	--	--	--	0.25	0.5	**0.00027**	**0.001**	--	--			
Chloroethane	0 / 218	--	--	4.7E-04	4.3	--	110	6.5	15,000	SO-26	6.5	SO-5	--	0.31	0.5	**0.00046**	**0.001**	15,000	--			
2-Chloroethyl vinyl ether	1 / 156	0.0052	0.0052	4.9E-04	1.6	--	--	--	--	--	--	--	--	0.84	2.5	**0.00028**	**0.005**	--	--			
Chloroform	7 / 223	4.0E-04	0.0036	3.7E-04	1.4	800	0.40	0.026	800	SO-3	0.026	SO-5	--	0.19	0.5	**0.00023**	**0.001**	800	--			
Chloromethane (Methyl chloride)	0 / 191	--	--	1.0E-04	7.1	--	0.93	0.057	120	SO-26	0.057	SO-5	--	0.25	0.5	**0.00026**	**0.001**	120	--			
3-Chloro-1-Propene	0 / 5	--	--	0.041	0.052	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
2-Chlorotoluene	0 / 72	--	--	2.7E-04	0.4	--	--	--	--	--	--	--	--	0.35	0.5	**0.00030**	**0.001**	--	--			
4-Chlorotoluene	0 / 72	--	--	7.0E-05	0.32	--	--	--	--	--	--	--	--	0.40	0.5	**0.00028**	**0.001**	--	--			
Cumene (Isopropylbenzene)	1 / 72	0.33	0.33	1.9E-04	0.28	8,000	--	--	8,000	SO-3	--	--	--	0.30	0.5	**0.00023**	**0.001**	8,000	--			
1,2-Dibromo-3-chloropropane	0 / 72	--	--	6.5E-04	1.6	1.3	--	--	1.3	SO-2	--	--	--	0.81	2.5	**0.00059**	**0.005**	1.3	--			
Dibromomethane	0 / 72	--	--	2.9E-04	0.43	--	--	--	--	--	--	--	--	0.37	0.5	**0.00015**	**0.001**	--	--			
Dichlorobromomethane	0 / 218	--	--	5.2E-04	1.4	--	--	--	--	--	--	--	--	0.24	0.5	**0.00025**	**0.001**	--	--			
trans-1,4-Dichloro-2-butene	0 / 67	--	--	3.1E-04	1.6	--	--	--	--	--	--	--	--	0.00	2.5	**0.00044**	**0.005**	--	--			
1,1-Dichloroethane	0 / 223	--	--	1.4E-04	1.4	16,000	8.2	0.51	16,000	SO-3	0.51	SO-5	--	0.23	0.5	**0.00020**	**0.001**	16,000	--			
1,2-Dichloroethane (EDC)	0 / 218	--	--	3.8E-04	1.4	11	0.0050	3.3E-04	11	SO-2	1.6E-04	SO-7	--	0.19	0.5	**0.00019**	**0.001**	11	--			
1,1-Dichloroethene	0 / 218	--	--	2.0E-04	2.9	4,000	0.046	0.0023	4,000	SO-3	0.0023 ^	SO-5	--	0.26	0.5	**0.00034**	**0.001**	4,000	0.0023			
cis-1,2-Dichloroethene	15 / 164	0.001	0.70	1.2E-04	5.0	160	0.080	0.0052	160	SO-3	0.0052 ^	SO-5	--	0.23	0.5	**0.00024**	**0.001**	160	0.0052	●		COPC
trans-1,2-Dichloroethene	1 / 166	0.024	0.024	2.2E-04	1.4	1,600	0.54	0.032	1,600	SO-3	0.032	SO-5	--	0.24	0.5	**0.00027**	**0.001**	1,600	--			
1,2-Dichloroethene (mixed isomers)	2 / 52	0.0082	0.13	9.0E-04	0.094	720	0.36	0.023	720	SO-3	0.023 ^	SO-5	--	--	--	**0.00027**	**0.001**	720	0.023	●		COPC, also see cis-isomer
1,2-Dichloropropane	0 / 218	--	--	3.9E-04	1.4	--	--	--	--	--	--	--	--	0.26	0.5	**0.00016**	**0.001**	--	--			
1,3-Dichloropropane	0 / 72	--	--	1.3E-04	0.32	--	--	--	--	--	--	--	--	0.33	0.5	**0.00021**	**0.001**	--	--			
2,2-Dichloropropane	0 / 72	--	--	1.6E-04	0.32	--	--	--	--	--	--	--	--	0.39	0.5	**0.00029**	**0.001**	--	--			
1,1-Dichloropropene	0 / 72	--	--	1.8E-04	0.32	--	--	--	--	--	--	--	--	0.35	0.5	**0.00031**	**0.001**	--	--			
cis-1,3-Dichloropropene	0 / 217	--	--	2.1E-04	1.4	10	--	--	10	SO-2	--	--	--	0.27	0.5	**0.00023**	**0.001**	10	--			
trans-1,3-Dichloropropene	0 / 218	--	--	2.0E-04	1.4	10	--	--	10	SO-2	--	--	--	0.28	0.5	**0.00022**	**0.001**	10	--			
1,4-Dioxane	0 / 27	--	--	0.063	0.066	--	--	--	--	--	--	--	--	--	--	**0.0024**	**0.02**	--	--			
Ethyl Ether	0 / 5	--	--	0.041	0.052	16,000	--	--	16,000	SO-3	--	--	--	--	--	--	--	16,000	--			
Ethylene dibromide (EDB)	0 / 98	--	--	1.9E-04	0.32	0.50	--	--	0.50	SO-2	--	--	--	0.29	0.5	**0.00018**	**0.001**	0.50	--			

Table 6-3
Soil Screening Information

Chemical	Frequency of Detection	Detected Concentration		Non-Detected Concentration		Representative Screening Levels			Most Stringent Screening Level				Soil Background Level (SO-30)	ARI Option 1		ARI Option 2		RI Selected Screening Level (Non-Leaching)	RI Selected Screening Level^ (Leaching)	Concentration Exceeds RISL [2]		COPC Notes
		Min	Max	Min	Max	Method B Direct Contact (SO-2/3) [1]	Method B GW-Protect (SO-4/6) Vadose	Method B GW-Protect (SO-5/7) Saturated	Without Downgradient Pathways (Non-Leaching) Criteria Value	Without Downgradient Pathways (Non-Leaching) Criteria Reference	With Downgradient Pathways (via GW or SDW) Criteria Value	With Downgradient Pathways (via GW or SDW) Criteria Reference		MDL	PQL	MDL	PQL			Max Detected	Min Non-Detected	
2-Hexanone	0 / 213	--	--	8.9E-04	5.7	--	--	--	--	--	--	--	--	0.27	2.5	**0.00044**	**0.005**	--	--			
p-Isopropyltoluene	3 / 72	0.0011	1.8	1.5E-04	0.052	--	--	--	--	--	--	--	--	0.38	0.5	**0.00024**	**0.001**	--	--			
Methyl ethyl ketone (MEK)	35 / 219	0.0015	0.076	0.0011	11	48,000	--	--	48,000	SO-3	1.4	SO-5	--	1.1	2.5	**0.00051**	**0.005**	48,000	--			
Methyl iodide	0 / 67	--	--	3.3E-04	0.49	--	--	--	--	--	--	--	--	0.29	0.5	**0.00022**	**0.001**	--	--			
Methyl isobutyl ketone (MIBK)	1 / 214	0.036	0.036	0.001	2.9	6,400	--	--	6,400	SO-3	0.18	SO-5	--	2.1	2.5	**0.00042**	**0.005**	6,400	--			
Methyl tert-butyl ether (MTBE)	0 / 30	--	--	1.8E-04	12	--	--	--	--	--	--	--	--	0.31	0.5	**0.00023**	**0.001**	--	--			
Methylene chloride	9 / 175	7.0E-04	0.0073	7.6E-04	1.1	130	0.024	0.0016	130	SO-2	0.0016	SO-7	--	0.36	1.0	**0.00064**	**0.002**	130	--			
2-Pentanone	0 / 20	--	--	0.005	0.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
n-Propylbenzene	2 / 72	0.94	1.8	1.6E-04	0.052	--	--	--	--	--	--	--	--	0.32	0.5	**0.00027**	**0.001**	--	--			
Styrene	1 / 214	0.0081	0.0081	2.5E-04	1.4	16,000	1.5	0.080	16,000	SO-3	0.080	SO-5	--	0.31	0.5	**0.00014**	**0.001**	16,000	--			
1,1,1,2-Tetrachloroethane	0 / 98	--	--	1.8E-04	0.32	38	--	--	38	SO-2	--	--	--	0.37	0.5	**0.00023**	**0.001**	38	--			
1,1,2,2-Tetrachloroethane	0 / 223	--	--	2.4E-04	1.4	5.0	--	--	5.0	SO-2	--	--	--	0.27	0.5	**0.00025**	**0.001**	5.0	--			
Tetrachloroethene (PCE)	20 / 239	0.0014	0.98	4.3E-04	1.4	480	0.053	0.0028	480	SO-2/3	0.0018 ^	SO-21	--	0.23	0.5	**0.00026**	**0.001**	480	0.0018	●		COPC
1,2,3-Trichlorobenzene	0 / 72	--	--	1.9E-04	1.6	--	--	--	--	--	--	--	--	0.61	2.5	**0.00031**	**0.005**	--	--			
1,1,1-Trichloroethane	9 / 223	0.0013	0.153	1.3E-04	1.4	160,000	1.2	0.067	160,000	SO-3	0.067	SO-5	--	0.15	0.5	**0.00023**	**0.001**	160,000	--			
1,1,2-Trichloroethane	0 / 218	--	--	2.7E-04	1.4	18	0.0054	3.5E-04	18	SO-2	2.7E-04	SO-7	--	0.23	0.5	**0.00029**	**0.001**	18	--			
Trichloroethene (TCE)	22 / 239	6.0E-04	5.4	5.5E-04	5.0	11.5	0.026	0.0015	11.5	SO-2	0.0015 ^	SO-7	--	0.17	0.5	**0.00021**	**0.001**	11.5	0.0015	●		COPC
Trichlorofluoroethane	0 / 2	--	--	0.012	0.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
1,2,3-Trichloropropane	0 / 72	--	--	5.2E-04	0.78	0.033	--	--	0.033	SO-2	--	--	--	2.7	1.0	**0.00052**	**0.002**	0.033	--			
1,2,4-Trimethylbenzene	5 / 72	0.0023	6.3	1.3E-04	0.052	--	--	--	--	--	--	--	--	0.30	0.5	**0.00023**	**0.001**	--	--			
1,3,5-Trimethylbenzene	2 / 72	0.014	1.4	1.8E-04	0.26	800	1.5	0.079	800	SO-3	0.079	SO-5	--	0.36	0.5	**0.00025**	**0.001**	800	--			
Vinyl acetate	0 / 165	--	--	3.5E-04	2.5	--	--	--	--	--	--	--	--	0.24	2.5	**0.00038**	**0.005**	--	--			
Vinyl chloride	7 / 218	0.0016	0.12	1.7E-04	4.3	0.67	0.0013	6.1E-05	0.67	SO-2	6.1E-05 ^	SO-7	--	0.25	0.5	**0.00024**	**0.001**	0.67	0.0010	●		<5% detections, not COPC

ARI = Analytical Resources, Inc.
GW = Groundwater
ICP-AES = Inductively Coupled Plasma - Atomic Emission Spectrometry
ICP-MS = Inductively Coupled Plasma - Mass Spectrometry
MDL = Method Detection Limit
PSEP = Puget Sound Estuary Program
PQL = Practical Quantitation Limit
RISL = RI Selected Screening Level
SIM = Selected Ion Monitoring
SDW = Storm Drain Water
SO = Soil (for criteria in Table 6-2)
-- = Non-detected, not applicable, or not available

1. Petroleum Hydrocarbon screening levels in this column are from criterion SO-1 (MTCA Method A).
2. The RISL used to determine bulleted cells is based on the minimum of the two RI Selected Screening Levels (non-leaching or leaching).
3. Total Dioxins/Furans are expressed as a 2,3,7,8-TCDD toxic equivalent (TEQ) concentration (ng/kg), using half the non-detect value.
4. Total cPAHs are expressed as a benzo(a)pyrene TEQ concentration (mg/kg), using half the non-detect value. Total cPAH criteria values for SO-2, SO-6, and SO-7 are based on the most stringent of the seven individual cPAH compounds.
^ = Leaching criteria (for downgradient pathways) are applied only to these chemicals that are identified as COPCs in groundwater or storm drain water.

Bold values indicate selected laboratory analytical method (preferred PQLs and MDLs).
Refer to Table 6-2 for definitions of criteria (Ecology 2012b) used as screening levels for NBF-GTSP media.

Table 6-4
Groundwater Screening Information

Chemicals	Frequency of Detection	Detected Concentration		Non-Detected Concentration		Representative Screening Levels		Most Stringent Screening Levels				Groundwater Background Level (GW-9)	ARI Option 1		ARI Option 2		RI Selected Screening Level	Concentration Exceeds RISL		COPC Notes
								Onsite Groundwater		Protection of LDW [2]										
		Min	Max	Min	Max	Method B Potable GW (GW-5/6) [1]	Federal and State MCLs (GW-2/4)	Criteria Value	Criteria Ref.	Criteria Value	Criteria Ref.		MDL	PQL	MDL	PQL		Max Detected	Min Non-Detected	
Polychlorinated Aromatic Compounds																				
PCB Aroclors (ug/L)																				
Aroclor 1016	2 / 99	0.23	4.3	0.0026	50	1.1	--	1.1	GW-5	0.44	GW-8	--	0.122	1.0	**0.005**	**0.01**	0.44	●		See Total PCBs
Aroclor 1016/1242	0 / 9	--	--	0.60	1.0	--	--	--	--	--	--	--	0.122	1.0	**0.005**	**0.01**	--			
Aroclor 1221	0 / 93	--	--	0.0032	2.0	--	--	--	--	--	--	--	0.122	1.0	**0.005**	**0.01**	--			
Aroclor 1232	0 / 93	--	--	0.0032	2.0	--	--	--	--	--	--	--	0.122	1.0	**0.005**	**0.01**	--			
Aroclor 1242	6 / 99	0.022	0.94	0.0032	50	--	--	--	--	--	--	--	0.079	1.0	**0.005**	**0.01**	--			
Aroclor 1248	9 / 108	0.072	11	0.0032	180	--	--	--	--	--	--	--	0.079	1.0	**0.005**	**0.01**	--			
Aroclor 1254	14 / 107	0.01	840	0.0032	5.0	0.044	--	0.044	GW-6	0.16	GW-8	--	0.079	1.0	**0.005**	**0.01**	0.044	●		See Total PCBs
Aroclor 1260	2 / 108	0.044	0.76	0.0032	85	0.044	--	0.044	GW-6	0.058	GW-8	--	0.079	1.0	**0.005**	**0.01**	0.044	●		See Total PCBs
Aroclor 1262	0 / 31	--	--	0.0032	1.0	--	--	--	--	--	--	--	0.079	1.0	**0.005**	**0.01**	--			
Aroclor 1268	0 / 13	--	--	0.0032	1.0	--	--	--	--	--	--	--	0.079	1.0	**0.005**	**0.01**	--			
Total PCBs*	28 / 109	0.012	840	0.0026	1.0	0.044	0.50	0.044	GW-6	0.27	GW-8	--	--	1.0	--	**0.01**	0.044	●		COPC
Dioxins/Furans (pg/L)																				
2,3,7,8-TCDD*	0 / 5	--	--	0.744	10,000,000	0.58	0.030	0.030	GW-2/4	--	--	--	**3.7**	**10**	--	--	10			
Total Dioxins/Furans* [3]	0 / 5	--	--	0.916	5,000,000	0.58	0.030	0.030	GW-2/4	--	--	--	--	**10**	--	--	10			
Metals (ug/L)													ICP-AES (EPA 6010B)		ICP-MS (EPA 200.8)					
Aluminum	4 / 4	165,200	743,200	--	--	16,000	--	16,000	GW-5	--	--	--	14.8	50	**1.70**	**20**	16,000	●		COPC
Antimony	7 / 30	0.4	2,000	0.2	10,000	6.4	6.0	6.0	GW-2/3/4	--	--	--	6.28	50	**0.008**	**0.2**	6.0	●		COPC
Arsenic*	191 / 300	0.5	20,000	1.0	5,000	0.058	10	0.058	GW-6	29	GW-8	5	7.21	50	**0.164**	**0.5**	5.0	●		COPC
Barium	4 / 4	670	3,000	--	--	3,200	2,000	2,000	GW-2/3/4	--	--	--	1.98	3.0	**0.024**	**0.5**	2,000	●		COPC
Beryllium	11 / 34	0.2	20	0.2	10,000	32	4.0	4.0	GW-2/3/4	--	--	--	0.24	1.0	**0.027**	**0.2**	4.0	●		COPC
Bismuth	4 / 4	150	470	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Cadmium*	61 / 302	0.002	110	0.002	300	16	5.0	5.0	GW-2/3/4	2.6	GW-8	--	0.31	2.0	**0.022**	**0.2**	2.6	●		COPC
Calcium	11 / 11	36,300	237,200	--	--	--	--	--	--	--	--	--	5.88	50.0	**3.70**	**50**	--			Major ion
Chromium*	167 / 307	4.0	100,000	0.005	100	24,000	100	100	GW-2/3/4	310	GW-8	--	3.29	5.0	**0.125**	**0.5**	100	●		COPC
Chromium, hexavalent	0 / 16	--	--	3.0	11	48	100	48	GW-5	--	--	--	--	--	--	--	48			
Cobalt	4 / 4	90	400	--	--	--	--	--	--	--	--	--	0.51	3.0	**0.007**	**0.2**	--			
Copper*	39 / 51	0.7	60,000	0.23	20,000	640	1,300	640	GW-5	120	GW-7/8	--	1.13	2.0	**0.246**	**0.5**	120	●		COPC
Iron	5 / 5	61,300	442,300	--	--	11,000	--	11,000	GW-5	--	--	--	7.15	50	**3.81**	**20**	11,000	●		COPC
Lead*	174 / 302	1.0	1,560	0.2	5,000	--	15	15	GW-2/4	11	GW-8	--	1.92	20	**0.205**	**1.0**	11	●		COPC
Magnesium	11 / 11	3,080	66,630	--	--	--	--	--	--	--	--	--	10.8	50	**0.142**	**20**	--			Major ion
Manganese	5 / 5	968	8,240	--	--	2,200	--	2,200	GW-5	--	--	--	0.85	1.0	**0.02**	**0.5**	2,200	●		COPC
Mercury*	40 / 301	0.1	50	0.0001	500	--	2.0	2.0	GW-2/3/4	0.0052	GW-8	--	0.0089	0.1	**0.0037**	**0.02**	0.020	●		COPC
Nickel*	28 / 43	0.9	1,260	10	30,000	320	100	100	GW-4	--	--	--	5.0	10	**0.183**	**0.5**	100	●		COPC
Potassium	1 / 1	9,300	9,300	--	--	--	--	--	--	--	--	--	69.1	500	**1.91**	**20**	--			Major ion
Selenium	7 / 32	0.5	370	0.5	5,000	80	50	50	GW-2/3/4	--	--	--	6.1	50	**0.207**	**2.0**	50	●		COPC
Silver*	5 / 34	0.3	40	0.2	20,000	80	--	80	GW-5	1.5	GW-7/8	--	0.55	3.0	**0.009**	**0.2**	1.5	●		COPC
Sodium	5 / 5	28,500	167,300	--	--	--	--	--	--	--	--	--	159	500	**3.93**	**100**	--			Major ion
Thallium	4 / 32	0.4	400	0.2	5,000	--	2.0	0.50	GW-3	--	--	--	5.2	50	**0.003**	**0.2**	0.50	●		COPC
Tin	1 / 7	30	30	1.8	1.8	9,600	--	9,600	GW-5	--	--	--	1.82	10	--	--	9,600			
Vanadium	7 / 8	3.0	2,170	2.0	2.0	1.1	--	1.1	GW-5	--	--	--	0.3	3.0	**0.61**	**3.0**	3.0	●		COPC
Zinc*	33 / 48	5.0	60,000	0.81	10,000	4,800	--	4,800	GW-5	33	GW-8	--	3.94	10	**0.814**	**4.0**	33	●		COPC
Pesticides (ug/L)																				
Aldrin	0 / 12	--	--	0.01	0.1	0.0026	--	0.0026	GW-6	--	--	--	0.010	0.05	**0.0012**	**0.005**	0.0050		●	Not a COPC (see footnotes)
alpha-BHC*	0 / 12	--	--	0.0085	0.1	0.014	--	0.014	GW-6	--	--	--	0.0085	0.05	**0.00076**	**0.005**	0.014			
beta-BHC*	0 / 12	--	--	0.0098	0.1	0.049	--	0.049	GW-6	--	--	--	0.0098	0.05	**0.0013**	**0.005**	0.049			
delta-BHC	0 / 12	--	--	0.0087	0.1	--	--	--	--	--	--	--	0.0087	0.05	**0.0014**	**0.005**	--			
cis-Chlordane	0 / 8	--	--	0.0082	0.06	--	--	--	--	--	--	--	0.0082	0.05	**0.00058**	**0.005**	--			
trans-Chlordane	0 / 8	--	--	0.0082	0.06	--	--	--	--	--	--	--	0.0082	0.05	**0.00064**	**0.005**	--			
Chlordane*	0 / 12	--	--	0.0082	0.1	0.25	2.0	0.25	GW-6	--	--	--	0.0082	0.05	**0.00064**	**0.005**	0.25			
4,4'-DDD	0 / 12	--	--	0.019	0.12	0.36	--	0.36	GW-6	--	--	--	0.019	0.1	**0.0017**	**0.01**	0.36			
4,4'-DDE	0 / 12	--	--	0.018	0.1	0.26	--	0.26	GW-6	--	--	--	0.018	0.1	**0.0015**	**0.01**	0.26			
4,4'-DDT	0 / 12	--	--	0.017	0.1	0.26	--	0.26	GW-6	--	--	--	0.017	0.1	**0.0015**	**0.01**	0.26			

Table 6-4
Groundwater Screening Information

Chemicals	Frequency of Detection	Detected Concentration		Non-Detected Concentration		Representative Screening Levels		Most Stringent Screening Levels				Groundwater Background Level (GW-9)	ARI Option 1		ARI Option 2		RI Selected Screening Level	Concentration Exceeds RISL		COPC Notes
								Onsite Groundwater		Protection of LDW[2]										
		Min	Max	Min	Max	Method B Potable GW (GW-5/6)[1]	Federal and State MCLs (GW-2/4)	Criteria Value	Criteria Ref.	Criteria Value	Criteria Ref.		MDL	PQL	MDL	PQL		Max Detected	Min Non-Detected	
Dieldrin*	0 / 12	--	--	0.017	0.1	0.0055	--	0.0055	GW-6	--	--	--	0.017	0.1	**0.0013**	**0.01**	0.010		●	Not a COPC (see footnotes)
Endosulfan I	0 / 12	--	--	0.0089	0.1	96	--	96	GW-5	--	--	--	0.0089	0.05	**0.00067**	**0.005**	96			
Endosulfan II	0 / 12	--	--	0.014	0.1	96	--	96	GW-5	--	--	--	0.014	0.1	**0.0018**	**0.01**	96			
Endosulfan sulfate	0 / 12	--	--	0.024	0.18	96	--	96	GW-5	--	--	--	0.024	0.1	**0.0024**	**0.01**	96			
Endrin	0 / 12	--	--	0.017	0.1	4.8	2.0	2.0	GW-2/3/4	--	--	--	0.017	0.1	**0.0015**	**0.01**	2.0			
Endrin aldehyde	0 / 7	--	--	0.016	0.1	4.8	--	4.8	GW-5	--	--	--	0.016	0.1	**0.0018**	**0.01**	4.8			
Endrin ketone	0 / 8	--	--	0.015	0.12	--	--	--	--	--	--	--	0.015	0.1	**0.0017**	**0.01**	--			
Heptachlor*	0 / 12	--	--	0.011	0.1	0.019	0.40	0.019	GW-6	--	--	--	0.011	0.05	**0.0013**	**0.005**	0.019			
Heptachlor epoxide*	0 / 12	--	--	0.0079	0.1	0.0048	0.20	0.0048	GW-6	--	--	--	0.0079	0.05	**0.00056**	**0.005**	0.0050		●	Not a COPC (see footnotes)
Lindane (gamma-BHC)*	0 / 12	--	--	0.016	0.1	4.8	0.20	0.20	GW-2/3/4	--	--	--	0.016	0.05	**0.0017**	**0.005**	0.20			
Methoxychlor	0 / 12	--	--	0.074	0.16	80	40	40	GW-2/4	--	--	--	0.074	0.5	**0.0048**	**0.05**	40			
Toxaphene	0 / 12	--	--	0.22	4.5	0.080	3.0	0.080	GW-6	--	--	--	0.22	5.0	**0.21**	**0.5**	0.50			
Petroleum Hydrocarbons (ug/L)																				
Gasoline Range Hydrocarbons	16 / 98	250	3,200	60	3,000	800	--	800	GW-1	--	--	--	**15**	**30**	--	--	800	●		COPC
Diesel Range Hydrocarbons	259 / 816	40	250,000	10	3,000	500	--	500	GW-1	--	--	--	**16**	**100**	--	--	500	●		COPC
Oil Range Hydrocarbons	6 / 165	220	1,500	50	250,000	500	--	500	GW-1	--	--	--	**49**	**200**	--	--	500	●		<5% detections, not COPC
Jet Fuel (applied to diesel range)	123 / 186	180	610,000	95	960	500	--	500	GW-1	--	--	--	**79**	**500**	--	--	500	●		COPC
Semivolatile Organic Compounds																				
Phenols (ug/L)													EPA 8270D		EPA 8270D-SIM					
2,6-Bis(1,1-dimethylethyl) phenol	0 / 10	--	--	1.0	1.0	--	--	--	--	--	--	--	--	--	--	--	--			
2-Chlorophenol	0 / 56	--	--	0.53	10	--	--	--	--	--	--	--	**0.53**	**1.0**	--	--	--			
4-Chloro-3-methylphenol	0 / 56	--	--	2.0	10	--	--	--	--	--	--	--	**2.4**	**5.0**	--	--	--			
2,4-Dichlorophenol	0 / 56	--	--	2.6	10	24	--	24	GW-5	--	--	--	**2.6**	**5.0**	--	--	24			
2,4-Dimethylphenol*	0 / 56	--	--	0.36	10	160	--	160	GW-5	2.0	GW-7/8	--	**0.36**	**1.0**	--	--	2.0			
4,6-Dinitro-2-methylphenol	0 / 56	--	--	3.1	50	--	--	--	--	--	--	--	**3.1**	**10**	--	--	--			
2,4-Dinitrophenol	0 / 56	--	--	3.5	50	--	--	--	--	--	--	--	**3.5**	**10**	--	--	--			
o-Cresol (2-Methylphenol)	0 / 56	--	--	0.53	10	400	--	400	GW-5	--	--	--	**0.53**	**1.0**	--	--	400			
p-Cresol (4-Methylphenol)*	1 / 53	0.50	0.50	0.52	10	40	--	40	GW-5	77	GW-7/8	--	**0.52**	**1.0**	--	--	40			
2-Nitrophenol	0 / 56	--	--	2.0	10	--	--	--	--	--	--	--	**2.0**	**5.0**	--	--	--			
4-Nitrophenol	0 / 56	--	--	2.6	50	--	--	--	--	--	--	--	**2.6**	**5.0**	--	--	--			
Pentachlorophenol*	0 / 56	--	--	0.2	50	0.22	1.0	0.22	GW-6	5.3	GW-8	--	**2.4**	**5.0**	--	--	5.0			
Phenol*	2 / 60	0.40	320	0.52	10	2,400	--	2,400	GW-5	78	GW-8	--	**0.52**	**1.0**	--	--	78	●		<5% detections, not COPC
2,4,5-Trichlorophenol	0 / 56	--	--	2.2	50	800	--	800	GW-5	--	--	--	**2.2**	**5.0**	--	--	800			
2,4,6-Trichlorophenol	0 / 56	--	--	0.5	10	4.0	--	4.0	GW-6	--	--	--	**2.4**	**5.0**	--	--	5.0			
Phthalates (ug/L)																				
Bis(2-ethylhexyl) phthalate*	13 / 61	0.40	110	1.0	10	6.3	6.0	6.0	GW-2/4	0.28	GW-8	--	**0.51**	**1.0**	--	--	1.0	●		COPC
Butyl benzyl phthalate*	0 / 61	--	--	0.56	10	46	--	46	GW-6	0.52	GW-8	--	**0.56**	**1.0**	--	--	1.0			
Dibutyl phthalate	6 / 61	0.50	1.8	0.54	10	1,600	--	1,600	GW-5	--	--	--	**0.54**	**1.0**	--	--	1,600			
Diethyl phthalate	3 / 57	1.0	2.0	0.58	10	13,000	--	13,000	GW-5	--	--	--	**0.58**	**1.0**	--	--	13,000			
Dimethyl phthalate*	1 / 61	1.9	1.9	0.53	10	--	--	--	--	140	GW-7/8	--	**0.53**	**1.0**	--	--	140			
Di-n-octyl phthalate*	0 / 61	--	--	0.51	10	--	--	--	--	0.30	GW-8	--	**0.51**	**1.0**	--	--	1.0			
Polycyclic Aromatic Hydrocarbons (ug/L)													EPA 8270D		EPA 8270D-SIM					
Acenaphthene*	5 / 75	0.025	1.5	0.01	10	960	--	960	GW-5	2.6	GW-8	--	0.55	1.0	**0.007**	**0.01**	2.6			
Acenaphthylene	0 / 75	--	--	0.01	10	--	--	--	--	11	GW-7/8	--	0.48	1.0	**0.001**	**0.01**	11			
Anthracene*	0 / 75	--	--	0.01	10	4,800	--	4,800	GW-5	11	GW-8	--	0.53	1.0	**0.003**	**0.01**	11			
Benzo(a)anthracene*	1 / 72	0.18	0.18	0.01	10	0.12	--	0.12	GW-6	0.26	GW-8	--	0.52	1.0	**0.003**	**0.01**	0.12	●		<5% detections, not COPC
Benzo(b)fluoranthene*	0 / 59	--	--	0.01	10	0.12	--	0.12	GW-6	0.29	GW-8	--	0.58	1.0	**0.005**	**0.02**	0.12			
Benzo(k)fluoranthene*	0 / 59	--	--	0.01	10	1.2	--	1.2	GW-6	0.29	GW-8	--	0.58	1.0	**0.005**	**0.02**	0.29			
Total Benzofluoranthenes*	0 / 66	--	--	0.01	10	--	--	--	--	0.29	GW-8	--	0.58	1.0	**0.005**	**0.02**	--			
Benzo(g,h,i)perylene*	0 / 75	--	--	0.01	10	--	--	--	--	0.012	GW-8	--	0.55	1.0	**0.005**	**0.01**	0.012			
Benzo(a)pyrene*	0 / 72	--	--	0.01	10	0.012	0.20	0.012	GW-6	0.13	GW-8	--	0.48	1.0	**0.005**	**0.01**	0.012			
Chrysene*	0 / 72	--	--	0.01	10	12	--	12	GW-6	0.47	GW-8	--	0.55	1.0	**0.004**	**0.01**	0.47			

Table 6-4
Groundwater Screening Information

Chemicals	Frequency of Detection	Detected Concentration Min	Detected Concentration Max	Non-Detected Concentration Min	Non-Detected Concentration Max	Representative Screening Levels: Method B Potable GW (GW-5/6) [1]	Representative Screening Levels: Federal and State MCLs (GW-2/4)	Most Stringent Screening Levels: Onsite Groundwater Criteria Value	Onsite Groundwater Criteria Ref.	Protection of LDW [2] Criteria Value	Protection of LDW [2] Criteria Ref.	Groundwater Background Level (GW-9)	ARI Option 1 MDL	ARI Option 1 PQL	ARI Option 2 MDL	ARI Option 2 PQL	RI Selected Screening Level	Concentration Exceeds RISL: Max Detected	Concentration Exceeds RISL: Min Non-Detected	COPC Notes
Dibenz(a,h)anthracene*	0 / 68	--	--	0.006	10	0.012	--	0.012	GW-6	0.0046	GW-8	--	0.48	1.0	**0.002**	**0.01**	0.010			
Dibenzofuran*	2 / 75	0.11	1.8	0.01	10	16	--	16	GW-5	1.3	GW-8	--	0.48	1.0	**0.006**	**0.01**	1.3	●		<5% detections, not COPC
Fluoranthene*	2 / 75	0.18	0.50	0.01	10	640	--	640	GW-5	2.3	GW-8	--	0.52	1.0	**0.009**	**0.01**	2.3			
Fluorene*	5 / 75	0.011	1.7	0.01	10	640	--	640	GW-5	2.0	GW-8	--	0.56	1.0	**0.006**	**0.01**	2.0			
Indeno(1,2,3-cd)pyrene*	0 / 72	--	--	0.01	10	0.12	--	0.12	GW-6	0.013	GW-8	--	0.49	1.0	**0.003**	**0.01**	0.013			
1-Methylnaphthalene	3 / 39	0.42	1.0	0.01	1.0	--	--	--	--	--	--	--	0.48	1.0	**0.004**	**0.01**	--			
2-Methylnaphthalene*	4 / 75	0.012	56	0.01	10	32	--	32	GW-5	18	GW-8	--	0.48	1.0	**0.007**	**0.01**	18	●		COPC
Naphthalene*	12 / 242	0.010	13	0.01	15	160	--	160	GW-5	54	GW-8	--	0.52	1.0	**0.008**	**0.01**	54			
Phenanthrene*	1 / 75	0.54	0.54	0.01	10	--	--	--	--	4.8	GW-8	--	0.56	1.0	**0.019**	**0.01**	4.8			
Pyrene*	1 / 75	0.50	0.50	0.01	10	480	--	480	GW-5	14	GW-8	--	0.55	1.0	**0.009**	**0.01**	14			
Total cPAHs* [4]	1 / 83	0.089	0.089	0.005	7.6	0.012	0.20	0.012	GW-6	0.0046	GW-8	--	--	1.0	--	**0.01**	0.010	●		<5% detections, not COPC
Other SVOCs (ug/L)																				
Aniline	0 / 22	--	--	1.0	10	56	--	56	GW-5	--	--	--	**0.26**	**1.0**	--	--	56			
Azobenzene	0 / 10	--	--	0.1	1.0	0.80	--	0.80	GW-6	--	--	--	--	--	--	--	0.80			
Benzidine	0 / 25	--	--	5.0	100	3.8E-04	--	3.8E-04	GW-6	--	--	--	**3.2**	**10**	--	--	10			
Benzoic acid*	2 / 56	20	26	5.1	50	64,000	--	64,000	GW-5	2,200	GW-7/8	--	**5.1**	**10**	--	--	2,200			
Benzyl alcohol*	2 / 56	0.4	0.8	2.0	10	800	--	800	GW-5	180	GW-8	--	**2.0**	**5.0**	--	--	180			
4-Bromophenyl phenyl ether	0 / 57	--	--	0.42	10	--	--	--	--	--	--	--	**0.42**	**1.0**	--	--	--			
Butyldiphenylphosphate	0 / 23	--	--	0.52	2.0	--	--	--	--	--	--	--	**0.52**	**1.0**	--	--	--			
Carbazole*	0 / 37	--	--	0.31	1.0	--	--	--	--	--	--	--	**0.31**	**1.0**	--	--	--			
4-Chloroaniline	0 / 57	--	--	2.6	10	0.22	--	0.22	GW-6	--	--	--	**2.6**	**5.0**	--	--	5.0			
Bis(2-chloroethoxy) methane	0 / 57	--	--	0.56	10	--	--	--	--	--	--	--	**0.57**	**1.0**	--	--	--			
Bis(2-chloroethyl) ether	0 / 60	--	--	0.1	10	--	--	--	--	--	--	--	**0.58**	**1.0**	--	--	--			
Bis(2-chloro-1-methylethyl) ether	0 / 42	--	--	0.62	10	0.63	--	0.63	GW-6	--	--	--	**0.62**	**1.0**	--	--	1.0			
2-Chloronaphthalene	0 / 57	--	--	0.48	10	640	--	640	GW-5	--	--	--	**0.51**	**1.0**	--	--	640			
4-Chlorophenyl-phenylether	0 / 57	--	--	0.45	10	--	--	--	--	--	--	--	**0.45**	**1.0**	--	--	--			
Dibutylphenylphosphate	1 / 23	4.1	4.1	0.48	2.0	--	--	--	--	--	--	--	**0.48**	**1.0**	--	--	--			
1,2-Dichlorobenzene*	0 / 257	--	--	0.06	50	720	600	600	GW-2/3/4	5.2	GW-7/8	--	**0.40**	**1.0**	--	--	5.2			
1,3-Dichlorobenzene	0 / 257	--	--	0.04	50	--	--	--	--	--	--	--	**0.41**	**1.0**	--	--	--			
1,4-Dichlorobenzene*	0 / 257	--	--	0.06	50	--	75	75	GW-2/3/4	7.1	GW-8	--	**0.42**	**1.0**	--	--	7.1			
3,3'-Dichlorobenzidine	0 / 57	--	--	0.5	50	--	--	--	--	--	--	--	**1.5**	**5.0**	--	--	--			
2,4-Dinitrotoluene	0 / 57	--	--	2.5	10	32	--	32	GW-5	--	--	--	**2.5**	**5.0**	--	--	32			
2,6-Dinitrotoluene	0 / 57	--	--	2.4	10	16	--	16	GW-5	--	--	--	**2.4**	**5.0**	--	--	16			
1,4-Dioxane	0 / 10	--	--	1.0	1.0	--	--	--	--	--	--	--	--	--	--	--	--			
Hexachlorobenzene*	0 / 57	--	--	0.01	10	0.055	1.0	0.055	GW-6	0.11	GW-8	--	**0.47**	**1.0**	--	--	1.0			
Hexachlorobutadiene	0 / 234	--	--	0.012	15	0.56	--	0.56	GW-6	--	--	--	**0.35**	**1.0**	--	--	1.0			
Hexachlorocyclopentadiene	0 / 57	--	--	1.2	10	48	50	48	GW-5	--	--	--	**1.2**	**5.0**	--	--	48			
Hexachloroethane	0 / 57	--	--	0.35	10	3.1	--	3.1	GW-6	--	--	--	**0.39**	**1.0**	--	--	3.1			
Isophorone	0 / 57	--	--	0.48	10	46	--	46	GW-6	--	--	--	**0.48**	**1.0**	--	--	46			
2-Nitroaniline	0 / 57	--	--	2.6	50	160	--	160	GW-5	--	--	--	**2.6**	**5.0**	--	--	160			
3-Nitroaniline	0 / 57	--	--	2.3	50	--	--	--	--	--	--	--	**2.3**	**5.0**	--	--	--			
4-Nitroaniline	0 / 57	--	--	2.2	50	--	--	--	--	--	--	--	**2.2**	**5.0**	--	--	--			
Nitrobenzene	0 / 57	--	--	0.58	10	16	--	16	GW-5	--	--	--	**0.58**	**1.0**	--	--	16			
n-Nitrosodimethylamine	0 / 18	--	--	0.5	10	8.6E-04	--	8.6E-04	GW-6	--	--	--	**2.6**	**5.0**	--	--	5.0			
n-Nitrosodiphenylamine*	0 / 57	--	--	0.46	10	--	--	--	--	2.0	GW-8	--	**0.50**	**1.0**	--	--	2.0			
n-Nitrosodi-n-propylamine	0 / 57	--	--	0.56	10	--	--	--	--	--	--	--	**0.56**	**1.0**	--	--	--			
Phosphoric acid tributyl ester	6 / 23	2.4	26	0.54	1.0	--	--	--	--	--	--	--	--	--	--	--	--			
Pyridine	0 / 10	--	--	5.0	5.0	8.0	--	8.0	GW-5	--	--	--	--	--	--	--	8.0			
Retene	0 / 10	--	--	1.0	1.0	--	--	--	--	--	--	--	--	--	--	--	--			
1,2,4-Trichlorobenzene*	0 / 234	--	--	0.1	15	1.5	70	1.5	GW-6	1.1	GW-8	--	**0.48**	**1.0**	--	--	1.1			
Triphenyl phosphate	0 / 23	--	--	0.52	5.0	--	--	--	--	--	--	--	**0.52**	**1.0**	--	--	--			

Table 6-4
Groundwater Screening Information

Chemicals	Frequency of Detection	Detected Concentration Min	Detected Concentration Max	Non-Detected Concentration Min	Non-Detected Concentration Max	Representative Screening Levels: Method B Potable GW (GW-5/6)[1]	Representative Screening Levels: Federal and State MCLs (GW-2/4)	Most Stringent Screening Levels: Onsite Groundwater Criteria Value	Onsite Groundwater Criteria Ref.	Protection of LDW[2] Criteria Value	Protection of LDW[2] Criteria Ref.	Groundwater Background Level (GW-9)	ARI Option 1 MDL	ARI Option 1 PQL	ARI Option 2 MDL	ARI Option 2 PQL	RI Selected Screening Level	Concentration Exceeds RISL: Max Detected	Concentration Exceeds RISL: Min Non-Detected	COPC Notes
Volatile Aromatic Hydrocarbons (ug/L)																				
Benzene	103 / 1167	0.2	270	0.06	500	0.80	5.0	0.80	GW-6	--	--	--	0.25	1.0	**0.056**	**0.2**	0.80	●		COPC
Ethylbenzene	100 / 1161	0.2	240	0.09	50	800	700	700	GW-2/3/4	--	--	--	**0.18**	**1.0**	0.094	0.2	700			
Toluene	44 / 1172	0.2	9.0	0.06	50	640	1,000	640	GW-5	--	--	--	**0.18**	**1.0**	0.056	0.2	640			
m,p-Xylene	79 / 804	0.4	920	0.14	590	1,600	--	1,600	GW-5	--	--	--	**0.36**	**2.0**	0.14	0.4	1,600			
o-Xylene	42 / 805	0.2	39	0.06	10	1,600	--	1,600	GW-5	--	--	--	**0.22**	**1.0**	0.057	0.2	1,600			
Total Xylenes	111 / 1155	0.4	932	0.06	50	1,600	10,000	1,600	GW-5	--	--	--	**0.36**	**2.0**	0.14	0.4	1,600			
Volatile Organic Compounds (ug/L)																				
Acetone	57 / 677	1.2	81	0.72	100	7,200	--	7,200	GW-5	--	--	--	**2.95**	**10**	0.72	5.0	7,200			
Acrolein	0 / 210	--	--	0.29	150	4.0	--	4.0	GW-5	--	--	--	**1.91**	**10**	0.29	5.0	10			
Acrylonitrile	0 / 210	--	--	0.18	100	0.081	--	0.081	GW-6	--	--	--	**0.50**	**5.0**	0.19	1.0	5.0			
Bromobenzene	0 / 206	--	--	0.05	6.0	--	--	--	--	--	--	--	**0.24**	**1.0**	0.051	0.2	--			
Bromochloromethane	0 / 206	--	--	0.07	6.0	--	--	--	--	--	--	--	**0.20**	**1.0**	0.067	0.2	--			
Bromoethane	0 / 206	--	--	0.09	6.0	--	--	--	--	--	--	--	**0.42**	**2.0**	0.090	0.2	--			
Bromoform	0 / 683	--	--	0.07	50	5.5	80	5.5	GW-6	--	--	--	**0.29**	**1.0**	0.070	0.2	5.5			
Bromomethane	0 / 679	--	--	0.04	100	--	--	--	--	--	--	--	**0.43**	**1.0**	0.043	1.0	--			
n-Butylbenzene	3 / 206	0.7	4.8	0.11	6.0	--	--	--	--	--	--	--	**0.37**	**1.0**	0.11	0.2	--			
sec-Butylbenzene	3 / 206	1.1	8.0	0.08	6.0	--	--	--	--	--	--	--	**0.13**	**1.0**	0.077	0.2	--			
tert-Butylbenzene	2 / 206	0.8	1.2	0.06	6.0	--	--	--	--	--	--	--	**0.40**	**1.0**	0.061	0.2	--			
Carbon disulfide	53 / 680	0.2	8.0	0.09	50	800	--	800	GW-5	--	--	--	**0.18**	**1.0**	0.087	0.2	800			
Carbon tetrachloride	1 / 683	0.2	0.2	0.08	50	0.63	5.0	0.63	GW-6	--	--	--	**0.23**	**1.0**	0.075	0.2	1.0			
CFC-11 (Trichlorofluoromethane)	0 / 656	--	--	0.09	50	2,400	--	2,400	GW-5	--	--	--	**0.18**	**1.0**	0.092	0.2	2,400			
CFC-12 (Dichlorodifluoromethane)	0 / 25	--	--	0.08	5.0	--	--	--	--	--	--	--	**0.25**	**1.0**	0.084	0.2	--			
CFC-113 (Trichlorotrifluoroethane)	5 / 638	2.3	23	0.11	6.0	240,000	--	240,000	GW-5	--	--	--	**0.18**	**2.0**	0.11	0.2	240,000			
Chlorobenzene	0 / 679	--	--	0.04	50	160	100	100	GW-2/3/4	--	--	--	**0.15**	**1.0**	0.042	0.2	100			
Chlorodibromomethane	1 / 683	1.0	1.0	0.09	50	0.52	80	0.52	GW-6	--	--	--	**0.23**	**1.0**	0.090	0.2	1.0			
Chloroethane	2 / 679	2.2	2.4	0.15	100	--	--	--	--	--	--	--	**0.19**	**1.0**	0.15	0.2	--			
2-Chloroethyl vinyl ether	0 / 636	--	--	0.09	100	--	--	--	--	--	--	--	**0.22**	**5.0**	0.086	1.0	--			
Chloroform	34 / 691	0.2	23	0.08	50	80	80	80	GW-5	--	--	--	**0.19**	**1.0**	0.081	0.2	80			
Chloromethane (Methyl chloride)	16 / 679	0.2	0.5	0.1	100	--	--	--	--	--	--	--	**0.13**	**1.0**	0.10	0.5	--			
2-Chlorotoluene	0 / 206	--	--	0.04	6.0	--	--	--	--	--	--	--	**0.15**	**1.0**	0.042	0.2	--			
4-Chlorotoluene	0 / 206	--	--	0.07	6.0	--	--	--	--	--	--	--	**0.21**	**1.0**	0.073	0.2	--			
Cumene (Isopropylbenzene)	3 / 206	0.7	7.5	0.06	6.0	800	--	800	GW-5	--	--	--	**0.30**	**1.0**	0.062	0.2	800			
1,2-Dibromo-3-chloropropane	0 / 206	--	--	0.21	30	0.055	0.20	0.055	GW-6	--	--	--	**0.44**	**5.0**	0.21	0.5	4.4			
Dibromomethane	0 / 206	--	--	0.08	6.0	--	--	--	--	--	--	--	**0.29**	**1.0**	0.081	0.2	--			
Dichlorobromomethane	4 / 683	0.2	1.6	0.05	50	0.71	80	0.71	GW-6	--	--	--	**0.19**	**1.0**	0.053	0.2	1.0	●		<5% detections, not COPC
trans-1,4-Dichloro-2-butene	0 / 206	--	--	0.24	30	--	--	--	--	--	--	--	**0.86**	**5.0**	0.24	1.0	--			
1,1-Dichloroethane	14 / 686	0.2	2.2	0.05	50	1,600	--	1,600	GW-5	--	--	--	**0.21**	**1.0**	0.053	0.2	1,600			
1,2-Dichloroethane (EDC)	0 / 683	--	--	0.08	50	0.48	5.0	0.48	GW-6	--	--	--	**0.24**	**1.0**	0.075	0.2	1.0			
1,1-Dichloroethene	42 / 678	0.058	25	0.005	50	400	7.0	7.0	GW-2/3/4	--	--	--	**0.31**	**1.0**	0.091	0.2	7.0	●		COPC
cis-1,2-Dichloroethene	428 / 780	0.2	440	0.1	100	16	70	16	GW-5	--	--	--	**0.10**	**1.0**	0.10	0.2	16	●		COPC
trans-1,2-Dichloroethene	53 / 659	0.2	4.6	0.001	50	160	100	100	GW-2/3/4	--	--	--	**0.20**	**1.0**	0.085	0.2	100			
1,2-Dichloroethene (mixed isomers)	5 / 26	2.0	380	1.0	5.0	72	--	72	GW-5	--	--	--	**0.20**	**1.0**	0.10	0.20	72	●		COPC (also see cis isomer)
1,2-Dichloropropane	1 / 683	0.3	0.3	0.09	50	--	5.0	5.0	GW-2/4	--	--	--	**0.23**	**1.0**	0.093	0.2	5.0			
1,3-Dichloropropane	0 / 206	--	--	0.02	6.0	--	--	--	--	--	--	--	**0.17**	**5.0**	0.020	0.2	--			
2,2-Dichloropropane	0 / 206	--	--	0.08	6.0	--	--	--	--	--	--	--	**0.10**	**1.0**	0.083	0.2	--			
1,1-Dichloropropene	0 / 206	--	--	0.09	6.0	--	--	--	--	--	--	--	**0.27**	**1.0**	0.092	0.2	--			
cis-1,3-Dichloropropene	0 / 679	--	--	0.06	50	0.44	--	0.44	GW-6	--	--	--	**0.23**	**1.0**	0.058	0.2	1.0			
trans-1,3-Dichloropropene	0 / 679	--	--	0.06	50	0.44	--	0.44	GW-6	--	--	--	**0.20**	**1.0**	0.059	0.2	1.0			
Ethane	2 / 20	5.7	8.7	1.2	500	--	--	--	--	--	--	--	--	--	--	--	--			
Ethylene	0 / 28	--	--	1.1	500	--	--	--	--	--	--	--	--	--	--	--	--			
Ethylene dibromide (EDB)	0 / 206	--	--	0.08	6.0	0.022	0.050	0.022	GW-6	--	--	--	**0.18**	**1.0**	0.075	0.2	1.0			
2-Hexanone	0 / 678	--	--	0.31	50	--	--	--	--	--	--	--	**0.93**	**5.0**	0.31	5.0	--			
p-Isopropyltoluene	1 / 206	0.5	0.5	0.08	6.0	--	--	--	--	--	--	--	**0.35**	**1.0**	0.075	0.2	--			

Table 6-4
Groundwater Screening Information

Chemicals	Frequency of Detection	Detected Concentration Min	Detected Concentration Max	Non-Detected Concentration Min	Non-Detected Concentration Max	Representative Screening Levels: Method B Potable GW (GW-5/6) [1]	Representative Screening Levels: Federal and State MCLs (GW-2/4)	Most Stringent Screening Levels: Onsite Groundwater Criteria Value	Most Stringent Screening Levels: Onsite Groundwater Criteria Ref.	Most Stringent Screening Levels: Protection of LDW [2] Criteria Value	Most Stringent Screening Levels: Protection of LDW [2] Criteria Ref.	Groundwater Background Level (GW-9)	ARI Option 1 MDL	ARI Option 1 PQL	ARI Option 2 MDL	ARI Option 2 PQL	RI Selected Screening Level	Concentration Exceeds RISL: Max Detected	Concentration Exceeds RISL: Min Non-Detected	COPC Notes
Methane	19 / 20	103	24,000	0.7	0.7	--	--	--	--	--	--	--	--	--	--	--	--			
Methyl ethyl ketone (MEK)	5 / 686	5.9	21	0.81	100	4,800	--	4,800	GW-5	--	--	--	**1.96**	**5.0**	0.81	5.0	4,800			
Methyl iodide	0 / 206	--	--	0.04	6.0	--	--	--	--	--	--	--	**0.26**	**1.0**	0.040	1.0	--			
Methyl isobutyl ketone (MIBK)	0 / 678	--	--	0.38	50	640	--	640	GW-5	--	--	--	**0.37**	**5.0**	0.38	5.0	640			
Methyl tert-butyl ether (MTBE)	0 / 29	--	--	0.05	0.2	--	--	--	--	--	--	--	**0.16**	**1.0**	0.046	0.5	--			
Methylene chloride	9 / 663	0.9	31	0.3	50	5.8	5.0	5.0	GW-2/4	--	--	--	**0.19**	**2.0**	0.39	0.5	5.0	●		<5% detections, not COPC
n-Propylbenzene	3 / 206	1.1	7.4	0.08	6.0	800	--	800	GW-5	--	--	--	**0.12**	**1.0**	0.081	0.2	800			
Styrene	0 / 678	--	--	0.07	50	1,600	100	100	GW-2/3/4	--	--	--	**0.12**	**1.0**	0.066	0.2	100			
1,1,1,2-Tetrachloroethane	0 / 206	--	--	0.07	6.0	1.7	--	1.7	GW-6	--	--	--	**0.29**	**1.0**	0.068	0.2	1.7			
1,1,2,2-Tetrachloroethane	0 / 682	--	--	0.07	50	0.22	--	0.22	GW-6	--	--	--	**0.14**	**1.0**	0.067	0.2	1.0			
Tetrachloroethene (PCE)	244 / 758	0.012	410	0.004	50	21	5.0	5.0	GW-2/4	--	--	--	**0.09**	**1.0**	0.088	0.2	5.0	●		COPC
1,2,3-Trichlorobenzene	0 / 206	--	--	0.09	15	--	--	--	--	--	--	--	**0.32**	**5.0**	0.087	0.5	--			
1,1,1-Trichloroethane	9 / 686	0.7	12	0.09	50	16,000	200	200	GW-2/3/4	--	--	--	**0.18**	**1.0**	0.089	0.2	200			
1,1,2-Trichloroethane	1 / 682	0.2	0.2	0.04	50	0.77	5.0	0.77	GW-6	--	--	--	**0.26**	**1.0**	0.035	0.2	1.0			
Trichloroethene (TCE)	444 / 826	0.044	1,300	0.02	270	4.0	5.0	4.0	GW-5	--	--	--	**0.29**	**1.0**	0.076	0.2	4.0	●		COPC
1,2,3-Trichloropropane	0 / 206	--	--	0.23	15	0.0015	--	0.0015	GW-6	--	--	--	**0.54**	**2.0**	0.23	0.5	2.0			
1,2,3-Trimethylbenzene	1 / 1	3,000	3,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
1,2,4-Trimethylbenzene	2 / 206	0.3	0.5	0.06	6.0	--	--	--	--	--	--	--	**0.15**	**1.0**	0.058	0.2	--			
1,3,5-Trimethylbenzene	0 / 206	--	--	0.06	6.0	80	--	80	GW-5	--	--	--	**0.14**	**1.0**	0.063	0.2	80			
Vinyl acetate	0 / 678	--	--	0.07	50	--	--	--	--	--	--	--	**0.22**	**5.0**	0.068	1.0	--			
Vinyl chloride	339 / 980	0.001	270	0.002	100	0.029	2.0	0.029	GW-6	--	--	--	0.25	1.0	**0.075**	**0.2**	0.20	●		COPC

ARI = Analytical Resources, Inc.
GW = Groundwater (for criteria in Table 6-2)
ICP-AES = Inductively Coupled Plasma - Atomic Emission Spectrometry
ICP-MS = Inductively Coupled Plasma - Mass Spectrometry
MDL = Method Detection Limit
PQL = Practical Quantitation Limit
RISL = RI Selected Screening Level
SIM = Selected Ion Monitoring
-- = Non-detected, not applicable, or not available

1. Petroleum Hydrocarbon screening levels in this column are from criterion GW-1 (MTCA Method A).
2. Criteria for the "Protection of LDW" were only applied to those chemicals that are considered COPCs in the LDW and Slip 4, as indicated by asterisk on chemical (see below); arsenic value calculated from SDS RISL instead of SQS.
3. Total Dioxins/Furans are expressed as a 2,3,7,8-TCDD toxic equivalent (TEQ) concentration (pg/L), using half the non-detect values.
4. Total cPAHs are expressed as a benzo(a)pyrene TEQ concentration (mg/kg), using half the non-detect values. Total cPAH criteria values for GW-6 and GW-8 are based on the most stringent of the seven individual cPAH compounds.

* Chemicals adapted from LDW COPC lists in the LDW RI/FS reports (Windward 2010; AECOM 2012). Di-n-octyl phthalate is also retained as a Slip 4 COPC due to its presence at LS431 and Slip 4.
Pesticides have not been detected in samples from any NBF-GTSP media and are not recognized as chemicals used to any significant extent at the Site; therefore, pesticides will not be considered as COPCs.
Bold values indicate selected laboratory analytical method (preferred PQLs and MDLs).
Refer to Table 6-2 for definitions of criteria (Ecology 2012b) used as screening levels for NBF-GTSP media.

Table 6-5
Storm Drain Water Screening Information

Chemical	Frequency of Detection	Detected Concentration		Non-Detected Concentration		Representative Screening Levels		Most Stringent Screening Level		Surface Water Background Level	ARI Option 1		ARI Option 2		RI Selected Screening Level	Concentration Exceeds RISL		COPC Notes
		Min	Max	Min	Max	Surface Water Method B Tribal Fish Consumption (SDW-2 to 6)	GW/SW to Sediment Protection (SDW-18)	Criteria Value	Criteria Reference	LDW and Green River (SDW-23)	MDL	PQL	MDL	PQL		Max Detected	Min Non-Detected	
Polychlorinated Aromatic Compounds																		
PCB Aroclors (ug/L)																		
Aroclor 1016	0 / 76	--	--	0.01	3.0	4.2E-04	0.44	4.2E-04	SDW-5	0.0015	0.122	1.0	**0.005**	**0.01**	0.010			
Aroclor 1221	0 / 76	--	--	0.01	3.0	--	--	2.3E-05	SDW-21	0.0015	0.122	1.0	**0.005**	**0.01**	0.010			
Aroclor 1232	0 / 76	--	--	0.01	3.0	--	--	0.030	SDW-14	0.0015	0.122	1.0	**0.005**	**0.01**	0.030			
Aroclor 1242	2 / 76	0.008	47	0.01	0.02	--	--	2.3E-05	SDW-21	0.0015	0.122	1.0	**0.005**	**0.01**	0.010	●		<5% detections; see Total PCBs
Aroclor 1248	6 / 76	0.014	0.075	0.01	3.0	--	0.27	2.3E-05	SDW-21	0.0015	0.079	1.0	**0.005**	**0.01**	0.010	●		See Total PCBs
Aroclor 1254	52 / 76	0.006	0.18	0.01	3.0	1.5E-05	0.16	5.5E-06	SDW-21	0.0015	0.079	1.0	**0.005**	**0.01**	0.010	●		See Total PCBs
Aroclor 1260	19 / 76	0.007	0.056	0.01	3.0	--	0.058	2.3E-05	SDW-21	0.0015	0.079	1.0	**0.005**	**0.01**	0.010	●		See Total PCBs
Aroclor 1262	0 / 4	--	--	0.01	0.01	--	--	--	--	--	0.079	1.0	**0.005**	**0.01**	--			
Aroclor 1268	0 / 4	--	--	0.01	0.01	--	--	--	--	--	0.079	1.0	**0.005**	**0.01**	--			
Total PCBs*	53 / 76	0.006	47	0.01	0.01	1.5E-05	0.27	1.5E-05	SDW-5	0.0015	--	1.0	--	**0.01**	0.010	●		COPC
Metals (ug/L)																		
Arsenic*	124 / 137	0.2	9.8	0.2	50	0.014	--	0.0054	SDW-21	0.87	7.21	50	**0.164**	**0.5**	0.87	●		COPC
Cadmium*	75 / 137	0.1	15.9	0.1	0.2	6.0	2.6	0.43	SDW-20	--	0.31	2.0	**0.022**	**0.2**	0.43	●		COPC
Calcium	68 / 68	1,220	38,800	--	--		--	--	--	--	5.88	50	**3.698**	**50**	--			
Chromium*	69 / 137	0.5	10.6	0.5	5.0		310	310	SDW-18	--	3.29	5.0	**0.125**	**0.5**	310			
Copper*	133 / 137	0.9	94.3	0.4	5.0	430	120	2.4	SDW-13/14	--	1.13	2.0	**0.246**	**0.5**	2.4	●		COPC
Lead*	91 / 137	0.1	236	0.1	20	--	11	8.1	SDW-9/12/14	--	1.92	20.0	**0.205**	**1.0**	8.1	●		COPC
Magnesium	68 / 68	150	11,700	--	--	--	--	--	--	--	10.81	50	**0.142**	**20**	--			
Mercury*	2 / 137	0.1	0.1	0.02	20,000	--	0.0052	0.0052	SDW-18	--	0.0089	0.1	**0.0037**	**0.02**	0.020	●		<5% detections, not COPC
Nickel*	112 / 124	0.5	11.7	0.5	0.5	160	--	8.2	SDW-9/12/14	--	5.0	10	**0.183**	**0.5**	8.2	●		COPC
Selenium	3 / 124	0.5	5.1	0.5	2.0	400	--	15	SDW-20	--	6.1	50	**0.207**	**2.0**	15			
Silver*	3 / 137	0.2	12	0.04	0.2	3,900	1.5	1.5	SDW-17/18	--	0.55	3.0	**0.009**	**0.2**	1.5	●		<5% detections, not COPC
Zinc*	136 / 137	6.0	1,590	4.0	4.0	2,500	33	33	SDW-18	--	3.94	10.0	**0.814**	**4.0**	33	●		COPC
Pesticides (ug/L)																		
Aldrin*	0 / 4	--	--	0.05	0.05	1.2E-05	--	1.2E-05	SDW-5	--	**0.010**	**0.05**	0.0012	0.005	0.050			
alpha-BHC*	0 / 4	--	--	0.05	0.05	0.0012	--	0.0012	SDW-5	--	**0.0085**	**0.05**	0.00076	0.005	0.050			
beta-BHC*	0 / 4	--	--	0.05	0.05	0.0039	--	0.0039	SDW-5	--	**0.0098**	**0.05**	0.0013	0.005	0.050			
delta-BHC	0 / 4	--	--	0.05	0.05	--	--	--	--	--	**0.0087**	**0.05**	0.0014	0.005	--			
cis-Chlordane	0 / 4	--	--	0.05	0.05	1.9E-04	--	1.9E-04	SDW-5	--	**0.0082**	**0.05**	0.00058	0.005	0.050			
trans-Chlordane	0 / 4	--	--	0.05	0.05	1.9E-04	--	1.9E-04	SDW-5	--	**0.0082**	**0.05**	0.00064	0.005	0.050			
Chlordane*	0 / 4	--	--	0.05	0.05	--	--	--	--	--	--	--	--	--	--			
4,4'-DDD	0 / 4	--	--	0.1	0.1	7.1E-05	--	7.1E-05	SDW-5	--	**0.019**	**0.1**	0.0017	0.01	0.10			
4,4'-DDE	0 / 4	--	--	0.1	0.1	5.0E-05	--	5.0E-05	SDW-5	--	**0.018**	**0.1**	0.0015	0.01	0.10			
4,4'-DDT	0 / 4	--	--	0.1	0.1	5.0E-05	--	5.0E-05	SDW-5	--	**0.017**	**0.1**	0.0015	0.01	0.10			
Total DDTs*	0 / 4	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--	--			
Dieldrin*	0 / 4	--	--	0.1	0.1	1.2E-05	--	1.2E-05	SDW-5	--	**0.017**	**0.1**	0.0013	0.01	0.10			
Endosulfan I	0 / 4	--	--	0.05	0.05	8.6	--	0.0087	SDW-9/12/14	--	**0.0089**	**0.05**	0.00067	0.005	0.050			
Endosulfan II	0 / 4	--	--	0.1	0.1	8.6	--	0.0087	SDW-9/12/14	--	**0.014**	**0.1**	0.0018	0.01	0.10			
Endosulfan sulfate	0 / 4	--	--	0.1	0.1	8.6	--	0.0087	SDW-9/12	--	**0.024**	**0.1**	0.0024	0.01	0.10			
Endrin	0 / 4	--	--	0.1	0.1	0.029	--	0.0023	SDW-9/12/14	--	**0.017**	**0.1**	0.0015	0.01	0.10			
Endrin aldehyde	0 / 4	--	--	0.1	0.1	0.029	--	0.0023	SDW-9/12	--	**0.016**	**0.1**	0.0018	0.01	0.10			
Endrin ketone	0 / 4	--	--	0.1	0.1	--	--	--	--	--	**0.015**	**0.1**	0.0017	0.01	--			
Heptachlor*	0 / 4	--	--	0.05	0.05	1.8E-05	--	1.8E-05	SDW-5	--	**0.011**	**0.05**	0.0013	0.005	0.050			
Heptachlor epoxide*	0 / 4	--	--	0.05	0.05	9.0E-06	--	9.0E-06	SDW-5	--	**0.0079**	**0.05**	0.00056	0.005	0.050			
Lindane (gamma-BHC)*	0 / 4	--	--	0.05	0.05	0.89	--	0.063	SDW-15	--	**0.016**	**0.05**	0.0017	0.005	0.063			
Methoxychlor	0 / 4	--	--	0.5	0.5	--	--	--	--	--	**0.074**	**0.5**	0.0048	0.05	--			
Toxaphene	0 / 4	--	--	5.0	5.0	6.4E-05	--	6.4E-05	SDW-5	--	**0.22**	**5.0**	--	--	2.2		●	Not a COPC (see notes)

Table 6-5
Storm Drain Water Screening Information

Chemical	Frequency of Detection	Detected Concentration		Non-Detected Concentration		Representative Screening Levels		Most Stringent Screening Level		Surface Water Background Level	ARI Option 1		ARI Option 2		RI Selected Screening Level	Concentration Exceeds RISL		COPC Notes
		Min	Max	Min	Max	Surface Water Method B Tribal Fish Consumption (SDW-2 to 6)	GW/SW to Sediment Protection (SDW-18)	Criteria Value	Criteria Reference	LDW and Green River (SDW-23)	MDL	PQL	MDL	PQL		Max Detected	Min Non-Detected	
Semivolatile Organic Compounds																		
Phenols (ug/L)											EPA 8270D		EPA 8270D-SIM					
2,4-Dimethylphenol*	0 / 61	--	--	1.0	1.0	82	2.0	2.0	SDW-17/18	--	**0.36**	**1.0**	--	--	2.0			
o-Cresol (2-Methylphenol)	0 / 61	--	--	1.0	1.0	3,100	7.1	7.1	SDW-17/18	--	**0.53**	**1.0**	--	--	7.1			
p-Cresol (4-Methylphenol)*	0 / 61	--	--	1.0	1.0	--	77	77	SDW-17/18	--	**0.52**	**1.0**	--	--	77			
Pentachlorophenol*	0 / 61	--	--	5.0	5.0	0.21	5.3	0.21	SDW-5	--	2.4	5.0	**0.15**	**0.50**	0.50		●	<5% detections, not COPC
Phenol*	12 / 61	0.80	7.4	1.0	1.0	83,000	78	78	SDW-18	--	**0.52**	**1.0**	--	--	78			
Phthalates (ug/L)																		
Bis(2-ethylhexyl) phthalate*	9 / 58	0.80	3.2	1.0	4.4	0.50	0.28	0.28	SDW-18	1.4	**0.51**	**1.0**	--	--	1.4	●		COPC
Butyl benzyl phthalate*	0 / 61	--	--	1.0	1.0	1.2	0.52	0.41	SDW-21	--	**0.56**	**1.0**	--	--	1.0			
Dibutyl phthalate	2 / 61	1.1	1.3	1.0	1.0	430	150	47	SDW-20	--	**0.54**	**1.0**	--	--	47			
Diethyl phthalate	1 / 61	1.3	1.3	1.0	1.0	4,200	480	480	SDW-18	--	**0.58**	**1.0**	--	--	480			
Dimethyl phthalate*	0 / 61	--	--	1.0	1.0	--	140	140	SDW-18	--	**0.53**	**1.0**	--	--	140			
Di-n-octyl phthalate*	5 / 61	0.90	2.1	1.0	1.0	--	0.30	0.30	SDW-18	--	**0.51**	**1.0**	--	--	1.0	●		COPC (Slip 4 COPC)
Polycyclic Aromatic Hydrocarbons (ug/L)											EPA 8270D		EPA 8270D-SIM					
Acenaphthene*	32 / 61	0.0073	0.34	0.01	0.03	96	2.6	2.6	SDW-18	--	0.55	1.0	**0.007**	**0.01**	2.6			
Acenaphthylene	7 / 61	0.0050	0.021	0.01	0.1	--	11	11	SDW-17/18	--	0.48	1.0	**0.001**	**0.01**	11			
Anthracene*	23 / 61	0.0068	0.74	0.01	0.011	3,900	11	11	SDW-18	--	0.53	1.0	**0.003**	**0.01**	11			
Benzo(a)anthracene*	48 / 62	0.0067	2.7	0.01	0.011	0.042	0.26	2.6E-04	SDW-21	0.0032	0.52	1.0	**0.003**	**0.01**	0.010	●		See Total cPAHs
Benzo(b)fluoranthene*	18 / 22	0.012	1.3	0.01	1.0	0.042	0.29	1.2E-04	SDW-21	0.0032	0.58	1.0	**0.005**	**0.02**	0.020	●		See Total cPAHs
Benzo(k)fluoranthene*	18 / 22	0.012	1.3	0.01	1.0	0.042	0.29	1.3E-04	SDW-21	--	0.58	1.0	**0.005**	**0.02**	0.020	●		See Total cPAHs
Total Benzofluoranthenes*	55 / 64	0.017	7.5	0.01	1.0	--	0.29	--	--	--	0.58	1.0	**0.005**	**0.02**	--			See Total cPAHs
Benzo(g,h,i)perylene*	52 / 62	0.0055	3.2	0.01	0.042	--	0.012	0.012	SDW-18	--	0.55	1.0	**0.005**	**0.01**	0.012	●		COPC
Benzo(a)pyrene*	52 / 62	0.0059	3.6	0.01	0.036	0.0042	0.13	1.5E-05	SDW-21	0.0032	0.48	1.0	**0.005**	**0.01**	0.010	●		COPC (individual & Total cPAHs)
Chrysene*	58 / 62	0.010	4.3	0.011	0.025	0.42	0.47	0.0026	SDW-21	0.0032	0.55	1.0	**0.004**	**0.01**	0.010	●	●	See Total cPAHs
Dibenz(a,h)anthracene*	36 / 62	0.0056	1.1	0.01	0.011	0.042	0.0046	6.3E-05	SDW-21	0.0032	0.48	1.0	**0.002**	**0.01**	0.010	●		See Total cPAHs
Dibenzofuran*	26 / 62	0.0056	0.20	0.01	0.03	--	1.3	1.3	SDW-18	--	0.48	1.0	**0.006**	**0.01**	1.3			
Fluoranthene*	61 / 62	0.021	9.0	0.011	0.011	13	2.3	2.3	SDW-18	--	0.52	1.0	**0.009**	**0.01**	2.3	●		COPC
Fluorene*	30 / 61	0.0051	0.34	0.01	0.03	520	2.0	2.0	SDW-18	--	0.56	1.0	**0.006**	**0.01**	2.0			
Indeno(1,2,3-cd)pyrene*	50 / 62	0.0088	2.7	0.01	0.037	0.0042	0.013	5.2E-05	SDW-21	0.0032	0.49	1.0	**0.003**	**0.01**	0.010	●		See Total cPAHs
1-Methylnaphthalene	46 / 62	0.0042	0.28	0.0037	0.1	--	--	--	--	--	0.48	1.0	**0.004**	**0.01**	--			
2-Methylnaphthalene*	51 / 62	0.0050	0.37	0.01	0.1	--	18	18	SDW-18	--	0.48	1.0	**0.007**	**0.01**	18			
Naphthalene*	48 / 61	0.0064	0.27	0.02	1.0	740	54	54	SDW-18	--	0.52	1.0	**0.008**	**0.01**	54			
Phenanthrene*	61 / 62	0.012	4.4	0.011	0.011	--	4.8	4.8	SDW-18	--	0.56	1.0	**0.019**	**0.01**	4.8			
Pyrene*	55 / 62	0.017	6.6	0.011	0.054	9.8	14	9.8	SDW-3/20	--	0.55	1.0	**0.009**	**0.01**	9.8			
Total cPAHs* [1]	61 / 62	0.0071	5.0	0.0078	0.0078	0.0042	0.0046	1.5E-05	SDW-21	0.0032	--	1.0	--	**0.01**	0.010	●		COPC
Other SVOCs (ug/L)										--								
Benzoic acid*	0 / 61	--	--	10	10	--	2,200	2,200	SDW-17/18	--	**5.1**	**10**	--	--	2,200			
Benzyl alcohol*	0 / 61	--	--	5.0	5.0	--	180	180	SDW-18	--	**2.0**	**5.0**	--	--	180			
1,2-Dichlorobenzene*	0 / 62	--	--	0.2	1.0	630	5.2	5.2	SDW-18	--	**0.40**	**1.0**	--	--	5.2			
1,3-Dichlorobenzene	0 / 48	--	--	0.2	1.0	--	--	960	SDW-10	--	**0.41**	**1.0**	--	--	960			
1,4-Dichlorobenzene*	0 / 62	--	--	0.2	1.0	--	7.1	7.1	SDW-18	--	**0.42**	**1.0**	--	--	7.1			
Hexachlorobenzene*	0 / 61	--	--	0.05	1.0	6.6E-05	0.11	6.6E-05	SDW-5	--	**0.47**	**1.0**	--	--	1.0			
Hexachlorobutadiene	0 / 62	--	--	0.05	1.0	4.2	3.9	3.9	SDW-18	--	**0.35**	**1.0**	--	--	3.9			
Hexachloroethane	0 / 28	--	--	1.0	1.0	--	--	--	--	--	**0.39**	**1.0**	--	--	--			
N-Nitrosodiphenylamine*	0 / 61	--	--	1.0	5.0	1.4	2.0	1.4	SDW-5	--	**0.50**	**1.0**	--	--	1.4			
1,2,4-Trichlorobenzene*	0 / 62	--	--	0.5	1.0	0.28	1.1	0.28	SDW-5	--	**0.48**	**1.0**	--	--	1.0			

Table 6-5
Storm Drain Water Screening Information

Chemical	Frequency of Detection	Detected Concentration		Non-Detected Concentration		Representative Screening Levels		Most Stringent Screening Level		Surface Water Background Level	ARI Option 1		ARI Option 2		RI Selected Screening Level	Concentration Exceeds RISL		COPC Notes
		Min	Max	Min	Max	Surface Water Method B Tribal Fish Consumption (SDW-2 to 6)	GW/SW to Sediment Protection (SDW-18)	Criteria Value	Criteria Reference	LDW and Green River (SDW-23)	MDL	PQL	MDL	PQL		Max Detected	Min Non-Detected	
Volatile Aromatic Hydrocarbons (ug/L)																		
Benzene	0 / 20	--	--	0.2	0.2	3.2	--	2.0	SDW-21	--	**0.25**	**1.0**	0.056	0.2	2.0			
Ethylbenzene	0 / 20	--	--	0.2	0.2	2.2	--	2.2	SDW-5	--	**0.18**	**1.0**	0.094	0.2	2.2			
Toluene	0 / 20	--	--	0.2	0.2	2,900	--	1,300	SDW-20	--	**0.18**	**1.0**	0.056	0.2	1,300			
m,p-Xylene	0 / 20	--	--	0.4	0.4	1,600	--	1,600	SDW-3/20	--	**0.36**	**2.0**	0.14	0.4	1,600			
o-Xylene	0 / 20	--	--	0.2	0.2	1,600	--	1,600	SDW-3/20	--	**0.22**	**1.0**	0.057	0.2	1,600			
Total Xylenes	0 / 20	--	--	0.2	0.2	1,600	--	1,600	SDW-3/20	--	**0.36**	**2.0**	0.14	0.4	1,600			
Volatile Organic Compounds (ug/L)																		
Acetone	17 / 20	5.1	1,600	5.0	5.0	110,000	--	110,000	SDW-3/20	--	**2.95**	**10**	0.72	5.0	110,000			
Acrolein	0 / 20	--	--	5.0	5.0	--	--	--	--	--	**1.91**	**10**	0.29	5.0	--			
Acrylonitrile	0 / 20	--	--	1.0	1.0	--	--	--	--	--	**0.50**	**5.0**	0.19	1.0	--			
Bromobenzene	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.24**	**1.0**	0.051	0.2	--			
Bromochloromethane	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.20**	**1.0**	0.067	0.2	--			
Bromoethane	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.42**	**2.0**	0.090	0.2	--			
Bromoform	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.29**	**1.0**	0.070	0.2	--			
Bromomethane	0 / 20	--	--	0.5	0.5	--	--	--	--	--	**0.43**	**1.0**	0.043	1.0	--			
n-Butylbenzene	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.37**	**1.0**	0.11	0.2	--			
sec-Butylbenzene	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.13**	**1.0**	0.077	0.2	--			
tert-Butylbenzene	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.40**	**1.0**	0.061	0.2	--			
Carbon disulfide	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.18**	**1.0**	0.087	0.2	--			
Carbon tetrachloride	0 / 20	--	--	0.2	0.2	0.70	--	0.25	SDW-21	--	**0.23**	**1.0**	0.075	0.2	1.0			
CFC-11 (Trichlorofluoromethane)	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.18**	**1.0**	0.092	0.2	--			
CFC-113 (Trichlorotrifluoroethane)	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.18**	**2.0**	0.11	0.2	--			
Chlorobenzene	0 / 20	--	--	0.2	0.2	270	--	270	SDW-3/20	--	**0.15**	**1.0**	0.042	0.2	270			
Chlorodibromomethane	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.23**	**1.0**	0.090	0.2	--			
Chloroethane	0 / 20	--	--	0.2	0.2	--	--	34	SDW-15	--	**0.19**	**1.0**	0.15	0.2	34			
2-Chloroethyl vinyl ether	0 / 20	--	--	1.0	1.0	--	--	--	--	--	**0.22**	**5.0**	0.086	1.0	--			
Chloroform	1 / 20	0.3	0.3	0.2	0.2	7.9	--	4.3	SDW-21	--	**0.19**	**1.0**	0.081	0.2	4.3			
Chloromethane (Methyl chloride)	1 / 20	0.6	0.6	0.5	0.5	19	--	19	SDW-5	--	**0.13**	**1.0**	0.10	0.5	19			
2-Chlorotoluene	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.15**	**1.0**	0.042	0.2	--			
4-Chlorotoluene	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.21**	**1.0**	0.073	0.2	--			
Cumene (Isopropylbenzene)	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.30**	**1.0**	0.062	0.2	--			
1,2-Dibromo-3-chloropropane	0 / 20	--	--	0.5	0.5	--	--	--	--	--	**0.44**	**5.0**	0.21	0.5	--			
Dibromomethane	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.29**	**1.0**	0.081	0.2	--			
Dichlorobromomethane	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.19**	**1.0**	0.053	0.2	--			
trans-1,4-Dichloro-2-butene	0 / 20	--	--	1.0	1.0	--	--	--	--	--	**0.86**	**5.0**	0.24	1.0	--			
1,1-Dichloroethane	0 / 20	--	--	0.2	0.2	33	--	33	SDW-5	--	**0.21**	**1.0**	0.053	0.2	33			
1,2-Dichloroethane (EDC)	0 / 20	--	--	0.2	0.2	8.4	--	3.6	SDW-21	--	**0.24**	**1.0**	0.075	0.2	3.6			
1,1-Dichloroethene	0 / 20	--	--	0.2	0.2	3,500	--	3.2	SDW-15	--	**0.31**	**1.0**	0.091	0.2	3.2			
cis-1,2-Dichloroethene	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.10**	**1.0**	0.10	0.2	--			
trans-1,2-Dichloroethene	0 / 20	--	--	0.2	0.2	--	--	4,800	SDW-3	--	**0.20**	**1.0**	0.085	0.2	4,800			
1,2-Dichloropropane	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.23**	**1.0**	0.093	0.2	--			
1,3-Dichloropropane	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.17**	**5.0**	0.020	0.2	--			
2,2-Dichloropropane	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.10**	**1.0**	0.083	0.2	--			
1,1-Dichloropropene	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.27**	**1.0**	0.092	0.2	--			
cis-1,3-Dichloropropene	0 / 20	--	--	0.2	0.2	--	--	34	SDW-4	--	**0.23**	**1.0**	0.058	0.2	34			
trans-1,3-Dichloropropene	0 / 20	--	--	0.2	0.2	--	--	34	SDW-4	--	**0.20**	**1.0**	0.059	0.2	34			

Table 6-5
Storm Drain Water Screening Information

Chemical	Frequency of Detection	Detected Concentration		Non-Detected Concentration		Representative Screening Levels		Most Stringent Screening Level		Surface Water Background Level	ARI Option 1		ARI Option 2		RI Selected Screening Level	Concentration Exceeds RISL		COPC Notes
		Min	Max	Min	Max	Surface Water Method B Tribal Fish Consumption (SDW-2 to 6)	GW/SW to Sediment Protection (SDW-18)	Criteria Value	Criteria Reference	LDW and Green River (SDW-23)	MDL	PQL	MDL	PQL		Max Detected	Min Non-Detected	
Ethylene dibromide (EDB)	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.18**	**1.0**	0.075	0.2	--			
2-Hexanone	0 / 20	--	--	5.0	5.0	--	--	--	--	--	**0.93**	**5.0**	0.31	5.0	--			
p-Isopropyltoluene	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.35**	**1.0**	0.075	0.2	--			
Methyl ethyl ketone (MEK)	20 / 22	6.0	130	5.0	5.0	73,000	--	73,000	SDW-3/20	--	**1.96**	**5.0**	0.81	5.0	73,000			
Methyl iodide	0 / 20	--	--	1.0	1.0	--	--	--	--	--	**0.26**	**1.0**	0.040	1.0	--			
Methyl isobutyl ketone (MIBK)	0 / 20	--	--	5.0	5.0	--	--	--	--	--	**0.37**	**5.0**	0.38	5.0	--			
Methylene chloride	19 / 20	0.80	5.2	0.5	0.5	140	--	61	SDW-21	--	**0.19**	**2.0**	0.39	0.5	61			
n-Propylbenzene	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.12**	**1.0**	0.081	0.2	--			
Styrene	2 / 20	0.20	0.50	0.2	0.2	--	--	--	--	--	**0.12**	**1.0**	0.066	0.2	--			
1,1,1,2-Tetrachloroethane	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.29**	**1.0**	0.068	0.2	--			
1,1,2,2-Tetrachloroethane	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.14**	**1.0**	0.067	0.2	--			
Tetrachloroethene (PCE)	0 / 20	--	--	0.2	0.2	0.055	--	0.021	SDW-21	--	0.09	1.0	**0.088**	**0.2**	0.20			
1,2,3-Trichlorobenzene	0 / 20	--	--	0.5	0.5	--	--	--	--	--	**0.32**	**5.0**	0.087	0.5	--			
1,1,1-Trichloroethane	0 / 20	--	--	0.2	0.2	140,000	--	46,000	SDW-20	--	**0.18**	**1.0**	0.089	0.2	46,000			
1,1,2-Trichloroethane	0 / 20	--	--	0.2	0.2	3.6	--	2.3	SDW-21	--	**0.26**	**1.0**	0.035	0.2	2.3			
Trichloroethene (TCE)	0 / 20	--	--	0.2	0.2	0.94	--	0.74	SDW-21	--	0.29	1.0	**0.076**	**0.2**	0.74			
1,2,3-Trichloropropane	0 / 20	--	--	0.5	0.5	--	--	--	--	--	**0.54**	**2.0**	0.23	0.5	--			
1,2,4-Trimethylbenzene	0 / 20	--	--	0.2	0.2	--	--	--	--	--	**0.15**	**1.0**	0.058	0.2	--			
1,3,5-Trimethylbenzene	0 / 20	--	--	0.2	0.2	45	--	45	SDW-3/20	--	**0.14**	**1.0**	0.063	0.2	45			
Vinyl acetate	0 / 20	--	--	1.0	1.0	--	--	--	--	--	**0.22**	**5.0**	0.068	1.0	--			
Vinyl chloride	0 / 20	--	--	0.2	0.2	0.52	--	0.52	SDW-5	--	0.25	1.0	**0.075**	**0.2**	0.52			

ARI = Analytical Resources, Inc.
GW/SW = Groundwater / Surface Water
MDL = Method Detection Limit
PQL = Practical Quantitation Limit
RISL = RI Selected Screening Level
SDW = Storm Drain Water (for criteria in Table 6-2)
SIM = Selected Ion Monitoring
-- = Non-detected, not applicable, or not available

1. Total cPAHs are expressed as a benzo(a)pyrene TEQ concentration (mg/kg), using half the non-detect value. Total cPAH criteria values for SDW-5, SDW-18, and SDW-21 are based on the most stringent of the seven individual cPAH compounds.

* Chemicals adapted from LDW COPC lists in the LDW RI/FS reports (Windward 2010; AECOM 2012). Di-n-octyl phthalate is also retained as an NBF-GTSP COPC due to its presence at LS431 and Slip 4.
Pesticides have not been detected in samples from any NBF-GTSP media and are not recognized as chemicals used to any significant extent at the Site. Therefore, pesticides will not be considered as COPCs.
Bold values indicate selected laboratory analytical method (preferred PQLs and MDLs).
Refer to Table 6-2 for definitions of ARARs and preliminary screening levels (Ecology 2012b) used as screening levels for NBF-GTSP media.

Table 6-6
Storm Drain Solids Screening Information

Chemical	Frequency of Detection	Detected Concentration		Non-Detected Concentration		Representative Screening Levels		Most Stringent Screening Level		Sediment Background Level (SDS-7)	ARI Option 1		ARI Option 2		RI Selected Screening Level	Concentration Exceeds RISL		COPC Notes
		Min	Max	Min	Max	SQS / LAET (SDS-1/3)	CSL / 2LAET (SDS-2/4)	Criteria Value	Criteria Reference		MDL	PQL	MDL	PQL		Max Detected	Min Non-Detected	
Polychlorinated Aromatic Compounds																		
PCB Aroclors (mg/kg)																		
Aroclor 1016	0 / 819	--	--	0.004	140	--	--	--	--	--	**0.0010**	**0.02**	0.0010	0.004	--			
Aroclor 1016/1242	6 / 195	0.075	7.4	0.01	100	--	--	--	--	--	**0.0010**	**0.02**	0.0010	0.004	--			
Aroclor 1221	0 / 880	--	--	0.004	140	--	--	--	--	--	**0.0010**	**0.02**	0.0010	0.004	--			
Aroclor 1232	0 / 979	--	--	0.004	270	--	--	--	--	--	**0.0010**	**0.02**	0.0010	0.004	--			
Aroclor 1242	21 / 819	0.130	570	0.004	140	--	--	--	--	--	**0.0014**	**0.02**	0.0014	0.004	--			
Aroclor 1248	158 / 1015	0.026	470	0.0052	660	--	--	--	--	--	**0.0014**	**0.02**	0.0014	0.004	--			
Aroclor 1254	978 / 1018	0.0062	930	0.0053	15	--	--	--	--	--	**0.0014**	**0.02**	0.0014	0.004	--			
Aroclor 1260	761 / 1015	0.0083	310	0.0053	140	--	--	--	--	--	**0.0014**	**0.02**	0.0014	0.004	--			
Aroclor 1262	2 / 173	0.190	0.22	0.01	8.66	--	--	--	--	--	**0.0014**	**0.02**	0.0014	0.004	--			
Aroclor 1310	0 / 1	--	--	0.063	0.063	--	--	--	--	--	--	--	--	--	--			
Aroclor 1321	0 / 1	--	--	0.063	0.063	--	--	--	--	--	--	--	--	--	--			
Aroclor 1337	0 / 1	--	--	0.094	0.094	--	--	--	--	--	--	--	--	--	--			
Aroclor 1343	1 / 1	0.24	0.24	--	--	--	--	--	--	--	--	--	--	--	--			
Aroclor 1349	1 / 1	0.42	0.42	--	--	--	--	--	--	--	--	--	--	--	--			
Total PCBs*	1011 / 1031	0.015	1,310	0.0053	15	0.13	1.0	0.13	SDS-3	0.002	--	**0.02**	--	0.004	0.13	●		COPC
Dioxins/Furans (ng/kg)																		
2,3,7,8-TCDD*	26 / 37	0.138	6.64	0.282	5.21	--	--	13	SDS-5	--	**0.34**	**1.0**	--	--	13			
Total Dioxins/Furans* [1]	47 / 47	2.07	170	--	--	--	--	13	SDS-5	2	--	**1.0**	--	--	13	●		COPC
Metals (mg/kg)											ICP-AES (EPA 6010B)		ICP-MS (EPA 200.8)					
Arsenic*	279 / 457	3.53	150	6.0	160	57	93	1.3	SDS-5	7.3	**0.31**	**5.0**	0.17	0.5	7.3	●		COPC
Cadmium*	381 / 385	0.5	110	3.0	7.0	5.1	6.7	5.1	SDS-1	0.40	**0.02**	**0.2**	0.016	0.2	5.1	●		COPC
Chromium*	385 / 385	11.7	3,140	--	--	260	270	260	SDS-1	36	**0.26**	**0.5**	0.15	0.5	260	●		COPC
Copper*	457 / 457	12	3,270	--	--	390	390	390	SDS-1/2	25	**0.04**	**0.2**	0.096	0.5	390	●		COPC
Lead*	451 / 457	8.0	2,780	20	70	450	530	450	SDS-1	11	**0.18**	**2.0**	0.30	1.0	450	●		COPC
Mercury*	433 / 473	0.021	305	0.02	0.7	0.41	0.59	0.41	SDS-1	0.10	**0.002**	**0.025**	--	--	0.41	●		COPC
Nickel	1 / 1	49	49	--	--	--	--	370	SDS-4	37	**0.86**	**1.0**	0.21	0.5	370			
Selenium	0 / 1	--	--	20	20	--	--	--	--	0.58	**0.59**	**5.0**	0.46	2.0	--			
Silver*	115 / 385	0.141	160	0.122	10	6.1	6.1	6.1	SDS-1/2	--	**0.04**	**0.3**	0.007	0.2	6.1	●		COPC
Zinc*	457 / 457	69	22,900	--	--	410	960	410	SDS-1	60	**0.37**	**1.0**	1.9	4.0	410	●		COPC
Petroleum Hydrocarbons (mg/kg)																		
Diesel Range Hydrocarbons	53 / 53	40	3,900	--	--	--	--	--	--	--	**0.74**	**5.0**	--	--	--			
Oil Range Hydrocarbons	53 / 53	76	12,000	--	--	--	--	--	--	--	**1.3**	**10**	--	--	--			
Semivolatile Organic Compounds																		
Phenols (mg/kg)																		
2-Chlorophenol	0 / 41	--	--	0.058	4.6	--	--	--	--	--	**0.014**	**0.067**	0.0048	0.02	--			
4-Chloro-3-methylphenol	0 / 41	--	--	0.29	23	--	--	--	--	--	**0.12**	**0.33**	0.015	0.1	--			
2,4-Dichlorophenol	0 / 41	--	--	0.29	23	--	--	--	--	--	**0.075**	**0.33**	0.018	0.1	--			
2,4-Dimethylphenol*	3 / 77	0.21	0.66	0.058	4.6	0.029	0.029	0.029	SDS-1/2	--	**0.016**	**0.067**	0.0080	0.02	0.067	●		<5% detections, not COPC
4,6-Dinitro-2-methylphenol	0 / 41	--	--	0.58	46	--	--	--	--	--	**0.12**	**0.67**	0.041	0.2	--			
2,4-Dinitrophenol	0 / 41	--	--	0.58	46	--	--	--	--	--	**0.077**	**0.67**	0.050	0.2	--			
o-Cresol (2-Methylphenol)	2 / 75	0.14	1.1	0.058	4.6	0.063	0.063	0.063	SDS-1/2	--	**0.023**	**0.067**	0.0053	0.02	0.067	●		<5% detections, not COPC
p-Cresol (4-Methylphenol)*	34 / 75	0.1	15	0.058	9.4	0.67	0.67	0.67	SDS-1/2	--	**0.022**	**0.067**	0.0048	0.02	0.67	●		COPC

Table 6-6
Storm Drain Solids Screening Information

Chemical	Frequency of Detection	Detected Concentration		Non-Detected Concentration		Representative Screening Levels		Most Stringent Screening Level		Sediment Background Level (SDS-7)	ARI Option 1		ARI Option 2		RI Selected Screening Level	Concentration Exceeds RISL		COPC Notes
		Min	Max	Min	Max	SQS / LAET (SDS-1/3)	CSL / 2LAET (SDS-2/4)	Criteria Value	Criteria Reference		MDL	PQL	MDL	PQL		Max Detected	Min Non-Detected	
2-Nitrophenol	0 / 41	--	--	0.06	23	--	--	--	--	--	**0.063**	**0.067**	0.0095	0.02	--			
4-Nitrophenol	0 / 41	--	--	0.29	23	--	--	--	--	--	**0.048**	**0.33**	0.028	0.1	--			
Pentachlorophenol*	0 / 75	--	--	0.29	23	0.36	0.69	0.36	SDS-1	--	**0.096**	**0.33**	0.027	0.1	0.36			
Phenol*	18 / 76	0.062	1.9	0.058	4.6	0.42	1.2	0.42	SDS-1	--	**0.016**	**0.067**	0.0038	0.02	0.42	●		COPC
2,4,5-Trichlorophenol	1 / 41	0.79	0.79	0.29	23	--	--	--	--	--	**0.15**	**0.33**	0.021	0.1	--			
2,4,6-Trichlorophenol	0 / 41	--	--	0.29	23	--	--	--	--	--	**0.14**	**0.33**	0.011	0.1	--			
Phthalates (mg/kg)																		
Bis(2-ethylhexyl) phthalate*	77 / 77	0.27	42	--	--	1.3	1.9	1.3	SDS-3	--	**0.024**	**0.067**	0.0087	0.02	1.3	●		COPC
Butyl benzyl phthalate*	38 / 77	0.086	1.7	0.058	5.6	0.063	0.90	0.063	SDS-3	--	**0.025**	**0.067**	0.0041	0.02	0.067	●		COPC
Dibutyl phthalate	31 / 70	0.12	8.1	0.058	4.6	1.4	5.1	1.4	SDS-3	--	**0.033**	**0.067**	0.0047	0.02	1.4	●		Not LDW COPC, not COPC
Diethyl phthalate	0 / 75	--	--	0.058	4.6	0.20	1.2	0.20	SDS-3	--	**0.021**	**0.067**	0.0038	0.02	0.20			
Dimethyl phthalate*	2 / 75	0.33	0.38	0.058	4.6	0.071	0.16	0.071	SDS-3	--	**0.027**	**0.067**	0.0037	0.02	0.071	●		<5% detections, not COPC
Di-n-octyl phthalate	64 / 75	0.069	38	0.06	4.6	6.2	--	6.2	SDS-3	--	**0.019**	**0.067**	0.0052	0.02	6.2	●		Not LDW COPC, not COPC
Polycyclic Aromatic Hydrocarbons (mg/kg)																		
Acenaphthene*	47 / 145	0.015	2.5	0.0093	4.6	0.50	0.73	0.50	SDS-3	--	**0.016**	**0.067**	0.0033	0.02	0.50	●		COPC
Acenaphthylene	13 / 145	0.0072	0.38	0.0046	4.6	1.3	1.3	1.3	SDS-3/4	--	**0.021**	**0.067**	0.0030	0.02	1.3			
Anthracene*	76 / 145	0.009	2.6	0.013	4.6	0.96	4.4	0.96	SDS-3	--	**0.020**	**0.067**	0.0044	0.02	0.96	●		COPC
Benzo(a)anthracene*	127 / 143	0.022	11	0.064	4.6	1.3	1.6	1.3	SDS-3	--	**0.019**	**0.067**	0.0046	0.02	1.3	●		COPC (individual & Total cPAHs)
Benzo(b)fluoranthene*	88 / 89	0.073	26	0.41	0.41	--	--	--	--	--	**0.033**	**0.067**	0.0057	0.02	--			see Total Benzofluoranthenes
Benzo(k)fluoranthene*	88 / 89	0.073	17	0.41	0.41	--	--	--	--	--	**0.033**	**0.067**	0.0057	0.02	--			see Total Benzofluoranthenes
Total Benzofluoranthenes*	142 / 144	0.052	66	0.41	1.4	3.2	3.6	3.2	SDS-3	--	**0.033**	**0.067**	0.0057	0.02	3.2	●		COPC (individual & Total cPAHs)
Benzo(g,h,i)perylene*	125 / 135	0.041	29	0.064	4.6	0.67	0.72	0.67	SDS-3	--	**0.026**	**0.067**	0.0048	0.02	0.67	●		COPC
Benzo(a)pyrene*	133 / 143	0.040	23	0.074	2.7	1.6	3.0	0.15	SDS-5	0.009	**0.021**	**0.067**	0.0051	0.02	0.15	●		COPC (individual & Total cPAHs)
Chrysene*	143 / 144	0.059	38	1.4	1.4	1.4	2.8	1.4	SDS-3	--	**0.021**	**0.067**	0.0058	0.02	1.4	●		COPC (individual & Total cPAHs)
Dibenz(a,h)anthracene*	83 / 143	0.015	7.2	0.011	4.6	0.23	0.54	0.23	SDS-3	--	**0.025**	**0.067**	0.0045	0.02	0.23	●		COPC (individual & Total cPAHs)
Dibenzofuran*	61 / 144	0.011	1.8	0.011	4.6	0.54	0.70	0.54	SDS-3	--	**0.018**	**0.067**	0.0032	0.02	0.54	●		COPC
Fluoranthene*	142 / 144	0.14	66	0.074	1.4	1.7	2.5	1.7	SDS-3	--	**0.042**	**0.067**	0.0044	0.02	1.7	●		COPC
Fluorene*	65 / 145	0.009	3.1	0.013	4.6	0.54	1.0	0.54	SDS-3	--	**0.016**	**0.067**	0.0036	0.02	0.54	●		COPC
Indeno(1,2,3-cd)pyrene*	128 / 144	0.048	24	0.064	4.6	0.60	0.69	0.60	SDS-3	--	**0.027**	**0.067**	0.0051	0.02	0.60	●		COPC (individual & Total cPAH)
1-Methylnaphthalene	21 / 104	0.016	4.2	0.021	2.7	--	--	--	--	--	**0.029**	**0.067**	0.0027	0.02	--			
2-Methylnaphthalene*	50 / 144	0.023	4.0	0.058	4.6	0.67	1.4	0.67	SDS-3	--	**0.024**	**0.067**	0.0030	0.02	0.67	●		COPC
Naphthalene*	47 / 145	0.013	0.67	0.058	4.6	2.1	2.4	2.1	SDS-3	--	**0.015**	**0.067**	0.0027	0.02	2.1			
Phenanthrene*	140 / 146	0.084	24	0.064	1.4	1.5	5.4	1.5	SDS-3	--	**0.020**	**0.067**	0.0036	0.02	1.5	●		COPC
Pyrene*	145 / 146	0.044	39	1.4	1.4	2.6	3.3	2.6	SDS-3	--	**0.047**	**0.067**	0.0048	0.02	2.6	●		COPC
Total LPAHs*	145 / 151	0.099	28	0.064	1.4	5.2	13	5.2	SDS-3	--	--	**0.067**	--	0.02	5.2	●		COPC
Total HPAHs*	150 / 151	0.20	300	1.4	1.4	12	17	12	SDS-3	--	--	**0.067**	--	0.02	12	●		COPC
Total cPAHs* [2]	144 / 145	0.054	34	0.99	0.99	--	--	0.15	SDS-5	0.009	--	**0.067**	--	0.02	0.15	●	●	COPC

Table 6-6
Storm Drain Solids Screening Information

Chemical	Frequency of Detection	Detected Concentration		Non-Detected Concentration		Representative Screening Levels		Most Stringent Screening Level		Sediment Background Level (SDS-7)	ARI Option 1		ARI Option 2		RI Selected Screening Level	Concentration Exceeds RISL		COPC Notes
		Min	Max	Min	Max	SQS / LAET (SDS-1/3)	CSL / 2LAET (SDS-2/4)	Criteria Value	Criteria Reference		MDL	PQL	MDL	PQL		Max Detected	Min Non-Detected	
Other SVOCs (mg/kg)																		
Benzoic acid*	4 / 75	0.39	3.7	0.58	46	0.65	0.65	0.65	SDS-1/2	--	0.25	0.67	**0.043**	**0.2**	0.65	●		<5% detections, not COPC
Benzyl alcohol*	3 / 75	0.083	0.45	0.058	23	0.057	0.073	0.057	SDS-1	--	0.087	0.33	**0.046**	**0.1**	0.10	●		<5% detections, not COPC
4-Bromophenyl phenyl ether	0 / 41	--	--	0.058	4.6	--	--	--	--	--	0.019	0.067	**0.0038**	**0.02**	--			
Carbazole*	24 / 41	0.068	3.9	0.058	4.6	--	--	--	--	--	0.015	0.067	**0.0024**	**0.02**	--			
4-Chloroaniline	1 / 41	0.83	0.83	0.29	23	--	--	--	--	--	0.10	0.33	**0.024**	**0.1**	--			
Bis(2-chloroethoxy) methane	0 / 41	--	--	0.058	4.6	--	--	--	--	--	0.017	0.067	**0.0024**	**0.02**	--			
Bis(2-chloroethyl) ether	1 / 41	0.38	0.38	0.058	4.6	--	--	--	--	--	0.017	0.067	**0.0053**	**0.02**	--			
Bis(2-chloro-1-methylethyl) ether	0 / 41	--	--	0.058	4.6	--	--	--	--	--	0.019	0.067	**0.0030**	**0.02**	--			
2-Chloronaphthalene	0 / 41	--	--	0.058	4.6	--	--	--	--	--	0.021	0.067	**0.0029**	**0.02**	--			
4-Chlorophenyl-phenylether	0 / 41	--	--	0.058	4.6	--	--	--	--	--	0.021	0.067	**0.0030**	**0.02**	--			
1,2-Dichlorobenzene*	0 / 75	--	--	0.058	4.6	0.035	0.050	0.035	SDS-3	--	0.018	0.067	**0.0030**	**0.02**	0.035		●	No detections, not COPC
1,3-Dichlorobenzene	0 / 75	--	--	0.058	4.6	--	--	--	--	--	0.016	0.067	**0.0027**	**0.02**	--			
1,4-Dichlorobenzene*	0 / 75	--	--	0.058	4.6	0.11	0.12	0.11	SDS-3	--	0.016	0.067	**0.0027**	**0.02**	0.11			
3,3'-Dichlorobenzidine	0 / 41	--	--	0.29	23	--	--	--	--	--	0.089	0.33	**0.054**	**0.1**	--			
2,4-Dinitrotoluene	0 / 41	--	--	0.29	23	--	--	--	--	--	0.096	0.33	**0.019**	**0.1**	--			
2,6-Dinitrotoluene	0 / 41	--	--	0.29	23	--	--	--	--	--	0.096	0.33	**0.015**	**0.1**	--			
Hexachlorobenzene*	0 / 75	--	--	0.058	4.6	0.022	0.070	0.022	SDS-3	--	0.019	0.067	**0.0034**	**0.02**	0.022		●	No detections, not COPC
Hexachlorobutadiene	0 / 75	--	--	0.037	6.4	0.011	0.12	0.011	SDS-3	--	0.019	0.067	**0.0029**	**0.02**	0.020		●	No detections, not COPC
Hexachlorocyclopentadiene	0 / 41	--	--	0.29	23	--	--	--	--	--	0.062	0.33	**0.012**	**0.1**	--			
Hexachloroethane	0 / 75	--	--	0.058	4.6	--	--	--	--	--	0.019	0.067	**0.0049**	**0.02**	--			
Isophorone	0 / 41	--	--	0.058	4.6	--	--	--	--	--	0.013	0.067	**0.0027**	**0.02**	--			
2-Nitroaniline	0 / 41	--	--	0.29	23	--	--	--	--	--	0.12	0.33	**0.019**	**0.1**	--			
3-Nitroaniline	0 / 41	--	--	0.29	23	--	--	--	--	--	0.10	0.33	**0.025**	**0.1**	--			
4-Nitroaniline	0 / 41	--	--	0.18	23	--	--	--	--	--	0.10	0.33	**0.023**	**0.1**	--			
Nitrobenzene	0 / 41	--	--	0.058	4.6	--	--	--	--	--	0.026	0.067	**0.0038**	**0.02**	--			
n-Nitrosodiphenylamine*	1 / 75	0.34	0.34	0.058	4.6	0.028	0.040	0.028	SDS-3	--	0.067	0.067	**0.013**	**0.02**	0.028	●	●	No detections, not COPC
n-Nitrosodi-n-propylamine	0 / 41	--	--	0.074	23	--	--	--	--	--	0.021	0.067	**0.0028**	**0.02**	--			
1,2,4-Trichlorobenzene*	0 / 75	--	--	0.058	4.6	0.031	0.051	0.031	SDS-3	--	0.016	0.067	**0.0038**	**0.02**	0.031		●	No detections, not COPC

ARI = Analytical Resources, Inc.
CSL = Cleanup Screening Level
ICP-AES = Inductively Coupled Plasma - Atomic Emission Spectrometry
ICP-MS = Inductively Coupled Plasma - Mass Spectrometry
LAET = Lowest Apparent Effects Threshold
2LAET = Second Lowest Apparent Effects Threshold
MDL = Method Detection Limit
PQL = Practical Quantitation Limit
RISL = RI Selected Screening Level
SDS = Storm Drain Solids (for criteria in Table 6-2)
SQS = Sediment Quality Standard
-- = Non-detected, not applicable, or not available

1. Total Dioxins/Furans are expressed as a 2,3,7,8-TCDD toxic equivalent (TEQ) concentration (ng/kg), using half the non-detect value.
2. Total cPAHs are expressed as a benzo(a)pyrene TEQ concentration (mg/kg), using half the non-detect value.

* Chemicals adapted from LDW COPC lists in the LDW RI/FS reports (Windward 2010; AECOM 2012).
All concentrations and criteria values are expressed as dry weight.
Bold values indicate selected laboratory analytical method (preferred PQLs and MDLs).
Refer to Table 6-2 for definitions of criteria (Ecology 2012b) used as screening levels for NBF-GTSP media.

Table 6-7
Concrete Joint Material Screening Information

Chemical	Frequency of Detection	Detected Concentration Min	Detected Concentration Max	Non-Detected Concentration Min	Non-Detected Concentration Max	Representative Screening Levels SQS / LAET (SDS-1/3)	Representative Screening Levels CSL / 2LAET (SDS-2/4)	Most Stringent SDS Screening Level SDS Criteria Value	Most Stringent SDS Screening Level Criteria Reference	Sediment Background Level (SDS-7)	ARI MDL	ARI PQL	RI Selected Screening Level (10x SDS RISL)	Concentration Exceeds RISL Max Detected	Concentration Exceeds RISL Min Non-Detected	COPC Notes
Polychlorinated Aromatic Compounds																
PCB Aroclors (mg/kg)																
Aroclor 1016	0 / 425	--	--	0.15	2,000	--	--	--	--	--	**0.8**	**0.8**	--			
Aroclor 1221	0 / 425	--	--	0.15	4,000	--	--	--	--	--	**0.8**	**0.8**	--			
Aroclor 1232	0 / 425	--	--	0.15	2,000	--	--	--	--	--	**0.8**	**0.8**	--			
Aroclor 1242	0 / 430	--	--	0.15	2,000	--	--	--	--	--	**0.8**	**0.8**	--			
Aroclor 1248	2 / 430	7.1	54	0.15	7,900	--	--	--	--	--	**0.8**	**0.8**	--			
Aroclor 1254	207 / 433	0.17	62,000	0.025	270	--	--	--	--	--	**0.8**	**0.8**	--			
Aroclor 1260	84 / 432	0.17	19,000	0.15	3,200	--	--	--	--	--	**0.8**	**0.8**	--			
Total PCBs	213 / 433	0.17	79,000	0.15	20	0.13	1.0	0.13	SDS-3	0.002	--	**0.8**	1.3	●		COPC
Dioxins/Furans (ng/kg)																
Total Dioxins/Furans [1]	--	--	--	--	--	--	--	13	SDS-5	2	--	**1.0**	130			COPC, based on SDS list
Metals (mg/kg)																
Arsenic	--	--	--	--	--	57	93	1.3	SDS-5	7.3	**5.0**	**5.0**	73			COPC, based on SDS list
Cadmium	--	--	--	--	--	5.1	6.7	5.1	SDS-1	0.40	**0.2**	**0.2**	51			COPC, based on SDS list
Chromium	--	--	--	--	--	260	270	260	SDS-1	36	**0.5**	**0.5**	2,600			COPC, based on SDS list
Copper	--	--	--	--	--	390	390	390	SDS-1/2	25	**0.2**	**0.2**	3,900			COPC, based on SDS list
Lead	--	--	--	--	--	450	530	450	SDS-1	11	**2.0**	**2.0**	4,500			COPC, based on SDS list
Mercury	--	--	--	--	--	0.41	0.59	0.41	SDS-1	0.10	**0.0021**	**0.025**	4.1			COPC, based on SDS list
Silver	--	--	--	--	--	6.1	6.1	6.1	SDS-1/2	--	**0.3**	**0.3**	61			COPC, based on SDS list
Zinc	--	--	--	--	--	410	960	410	SDS-1	60	**1.0**	**1.0**	4,100			COPC, based on SDS list
Semivolatile Organic Compounds																
Phenols (mg/kg)											EPA 8270 (Soil/Sediment)					
p-Cresol (4-Methylphenol)	--	--	--	--	--	0.67	0.67	0.67	SDS-1/2	--	**0.022**	**0.067**	6.7			COPC, based on SDS list
Phenol	--	--	--	--	--	0.42	1.2	0.42	SDS-1	--	**0.016**	**0.067**	4.2			COPC, based on SDS list
Phthalates (mg/kg)											EPA 8270 (Soil/Sediment)					
Bis(2-ethylhexyl) phthalate	--	--	--	--	--	1.3	1.9	1.3	SDS-3	--	**0.024**	**0.067**	13			COPC, based on SDS list
Butyl benzyl phthalate	--	--	--	--	--	0.063	0.90	0.063	SDS-3	--	**0.025**	**0.067**	0.67			COPC, based on SDS list
Polycyclic Aromatic Hydrocarbons (mg/kg)											EPA 8270 (Soil/Sediment)					
Acenaphthene	--	--	--	--	--	0.50	0.73	0.50	SDS-3	--	**0.016**	**0.067**	5.0			COPC, based on SDS list
Anthracene	--	--	--	--	--	0.96	4.4	0.96	SDS-3	--	**0.020**	**0.067**	9.6			COPC, based on SDS list
Benzo(a)anthracene	--	--	--	--	--	1.3	1.6	1.3	SDS-3	--	**0.019**	**0.067**	13			COPC, based on SDS list
Total Benzofluoranthenes	--	--	--	--	--	3.2	3.6	3.2	SDS-3	--	**0.033**	**0.067**	32			COPC, based on SDS list
Benzo(g,h,i)perylene	--	--	--	--	--	0.67	0.72	0.67	SDS-3	--	**0.026**	**0.067**	6.7			COPC, based on SDS list
Benzo(a)pyrene	--	--	--	--	--	1.6	3.0	0.15	SDS-5	0.009	**0.021**	**0.067**	1.5			COPC, based on SDS list
Chrysene	--	--	--	--	--	1.4	2.8	1.4	SDS-3	--	**0.021**	**0.067**	14			COPC, based on SDS list
Dibenz(a,h)anthracene	--	--	--	--	--	0.23	0.54	0.23	SDS-3	--	**0.025**	**0.067**	2.3			COPC, based on SDS list
Dibenzofuran	--	--	--	--	--	0.54	0.70	0.54	SDS-3	--	**0.018**	**0.067**	5.4			COPC, based on SDS list
Fluoranthene	--	--	--	--	--	1.7	2.5	1.7	SDS-3	--	**0.042**	**0.067**	17			COPC, based on SDS list
Fluorene	--	--	--	--	--	0.54	1.0	0.54	SDS-3	--	**0.016**	**0.067**	5.4			COPC, based on SDS list
Indeno(1,2,3-cd)pyrene	--	--	--	--	--	0.60	0.69	0.60	SDS-3	--	**0.027**	**0.067**	6.0			COPC, based on SDS list
2-Methylnaphthalene	--	--	--	--	--	0.67	1.4	0.67	SDS-3	--	**0.024**	**0.067**	6.7			COPC, based on SDS list
Phenanthrene	--	--	--	--	--	1.5	5.4	1.5	SDS-3	--	**0.020**	**0.067**	15			COPC, based on SDS list
Pyrene	--	--	--	--	--	2.6	3.3	2.6	SDS-3	--	**0.047**	**0.067**	26			COPC, based on SDS list
Total LPAHs	--	--	--	--	--	5.2	13	5.2	SDS-3	--	--	**0.067**	52			COPC, based on SDS list
Total HPAHs	--	--	--	--	--	12	17	12	SDS-3	--	--	**0.067**	120			COPC, based on SDS list
Total cPAHs [2]	--	--	--	--	--	--	--	0.15	SDS-5	0.009	--	**0.067**	1.5			COPC, based on SDS list

CSL = Cleanup Screening Level
LAET = Lowest Apparent Effects Threshold
2LAET = Second Lowest Apparent Effects Threshold
ARI = Analytical Resources, Inc.
MDL = Method Detection Limit

PQL = Practical Quantitation Limit
RISL = RI Selected Screening Level
SDS = Storm Drain Solids (for criteria in Table 6-2)
SQS = Sediment Quality Standard
-- = Non-detected, not applicable, or not available

1. Total Dioxins/Furans are expressed as a 2,3,7,8-TCDD toxic equivalent (TEQ) concentration (ng/kg), using half the non-detect value.
2. Total cPAHs are expressed as a benzo(a)pyrene TEQ concentration (mg/kg), using half the non-detect value.
All concentrations and criteria values are expressed as dry weight; bold values indicate selected laboratory analytical method (preferred PQLs and MDLs).
Although CJM has only been analyzed for PCBs, screening levels were established for COPCs based on storm drain solids for the purpose of future analyses.
Aside from PCBs, MDLs and PQLs from ARI should be considered target limits and may not be attainable, as they are based on soil and sediment studies, not unconventional matrices.
Refer to Table 6-2 for definitions of criteria (Ecology 2012b) used as screening levels for NBF-GTSP media.

Table 6-8
Surface Debris Screening Information

Chemical	Frequency of Detection	Detected Concentration		Non-Detected Concentration		Representative Screening Levels		Most Stringent SDS Screening Level		Sediment Background Level (SDS-7)	ARI MDL	ARI PQL	RI Selected Screening Level	Concentration Exceeds RISL		COPC Notes
		Min	Max	Min	Max	SQS / LAET (SDS-1/3)	CSL / 2LAET (SDS-2/4)	Criteria Value	Criteria Reference					Max Detected	Min Non-Detected	
Polychlorinated Aromatic Compounds																
PCB Aroclors (mg/kg)																
Aroclor 1016	0 / 62	--	--	0.019	22	0.13	--	--	--	--	**0.0020**	**0.033**	--			
Aroclor 1016/1242	2 / 3	0.049	0.31	0.019	0.019	0.13	--	--	--	--	**0.0020**	**0.033**	--			
Aroclor 1221	2 / 65	0.049	0.31	0.019	22	0.13	--	--	--	--	**0.0020**	**0.033**	--			
Aroclor 1232	2 / 65	0.049	0.31	0.019	22	0.13	--	--	--	--	**0.0020**	**0.033**	--			
Aroclor 1242	1 / 62	47	47	0.019	22	0.13	--	--	--	--	**0.0025**	**0.033**	--			
Aroclor 1248	9 / 65	0.026	0.80	0.019	22	0.13	--	--	--	--	**0.0025**	**0.033**	--			
Aroclor 1254	55 / 65	0.041	510	0.03	0.79	0.13	--	--	--	--	**0.0025**	**0.033**	--			
Aroclor 1260	45 / 62	0.048	8.1	0.03	22	0.13	--	--	--	--	**0.0025**	**0.033**	--			
Aroclor 1260/1262	2 / 3	0.31	0.89	0.019	0.019	0.13	--	--	--	--	**0.0025**	**0.033**	--			
Aroclor 1268	2 / 3	0.049	0.31	0.019	0.019	0.13	--	--	--	--	**0.0025**	**0.033**	--			
Total PCBs	56 / 65	0.041	557	0.03	0.79	0.13	1.0	0.13	SDS-3	0.002	--	**0.033**	0.13	●		COPC
Dioxins/Furans (ng/kg)																
Total Dioxins/Furans [1]	--	--	--	--	--	--	--	13	SDS-5	2	--	**1.0**	13			COPC, based on SDS list
Metals (mg/kg)																
Arsenic	12 / 29	5.0	80	5.0	120	57	93	1.3	SDS-5	7.3	**0.31**	**5.0**	7.3	●		COPC
Cadmium	28 / 29	0.6	33.6	1.0	1.0	5.1	6.7	5.1	SDS-1	0.40	**0.02**	**0.2**	5.1	●		COPC
Chromium	29 / 29	20.1	489	--	--	260	270	260	SDS-1	36	**0.26**	**0.5**	260	●		COPC
Copper	28 / 28	24	398	--	--	390	390	390	SDS-1/2	25	**0.04**	**0.2**	390	●		COPC
Lead	28 / 29	7.0	2,700	50	50	450	530	450	SDS-1	11	**0.18**	**2.0**	450	●		COPC
Mercury	27 / 29	0.03	0.67	0.02	0.02	0.41	0.59	0.41	SDS-1	0.10	**0.002**	**0.025**	0.41	●		COPC
Silver	2 / 29	1.1	1.7	0.3	7.0	6.1	6.1	6.1	SDS-1/2	--	**0.04**	**0.3**	6.1			COPC, based on SDS list
Zinc	29 / 29	103	5,150	--	--	410	960	410	SDS-1	60	**0.37**	**1.0**	410	●		COPC
Semivolatile Organic Compounds																
Phenols (mg/kg)											EPA 8270 (Soil/Sediment)					
p-Cresol (4-Methylphenol)	--	--	--	--	--	0.67	0.67	0.67	SDS-1/2	--	**0.022**	**0.067**	0.67			COPC, based on SDS list
Phenol	--	--	--	--	--	0.42	1.2	0.42	SDS-1	--	**0.016**	**0.067**	0.42			COPC, based on SDS list
Phthalates (mg/kg)											EPA 8270 (Soil/Sediment)					
Bis(2-ethylhexyl) phthalate	--	--	--	--	--	1.3	1.9	1.3	SDS-3		**0.024**	**0.067**	1.3			COPC, based on SDS list
Butyl benzyl phthalate	--	--	--	--	--	0.063	0.90	0.063	SDS-3		**0.025**	**0.067**	0.067			COPC, based on SDS list
Polycyclic Aromatic Hydrocarbons (mg/kg)											EPA 8270 (Soil/Sediment)					
Acenaphthene	0 / 6	--	--	0.023	0.05	0.50	0.73	0.50	SDS-3	--	**0.016**	**0.067**	0.50			COPC, based on SDS list
Acenaphthylene	0 / 6	--	--	0.023	0.05	1.3	1.3	1.3	SDS-3/4	--	**0.021**	**0.067**	1.3			
Anthracene	1 / 6	0.05	0.05	0.023	0.046	0.96	4.4	0.96	SDS-3	--	**0.020**	**0.067**	0.96			COPC, based on SDS list
Benzo(a)anthracene	6 / 6	0.064	0.42	--	--	1.3	1.6	1.3	SDS-3	--	**0.019**	**0.067**	1.3			COPC, based on SDS list
Total Benzofluoranthenes	6 / 6	0.21	1.3	--	--	3.2	3.6	3.2	SDS-3	--	**0.033**	**0.067**	3.2			COPC, based on SDS list
Benzo(g,h,i)perylene	6 / 6	0.064	0.22	--	--	0.67	0.72	0.67	SDS-3	--	**0.026**	**0.067**	0.67			COPC, based on SDS list
Benzo(a)pyrene	6 / 6	0.087	0.54	--	--	1.6	3.0	0.15	SDS-5	0.009	**0.021**	**0.067**	0.15	●		COPC (also see Total cPAHs)
Chrysene	6 / 6	0.12	0.68	--	--	1.4	2.8	1.4	SDS-3	--	**0.021**	**0.067**	1.4			COPC, based on SDS list
Dibenz(a,h)anthracene	1 / 6	0.055	0.055	0.023	0.046	0.23	0.54	0.23	SDS-3	--	**0.025**	**0.067**	0.23			COPC, based on SDS list
Dibenzofuran	0 / 6	--	--	0.023	0.05	0.54	0.70	0.54	SDS-3	--	**0.018**	**0.067**	0.54			COPC, based on SDS list
Fluoranthene	6 / 6	0.23	1.5	--	--	1.7	2.5	1.7	SDS-3	--	**0.042**	**0.067**	1.7			COPC, based on SDS list
Fluorene	0 / 6	--	--	0.023	0.05	0.54	1.0	0.54	SDS-3	--	**0.016**	**0.067**	0.54			COPC, based on SDS list
Indeno(1,2,3-cd)pyrene	6 / 6	0.048	0.22	--	--	0.60	0.69	0.60	SDS-3	--	**0.027**	**0.067**	0.60			COPC, based on SDS list
1-Methylnaphthalene	0 / 6	--	--	0.023	0.05	--	--	--	--	--	**0.029**	**0.067**	--			
2-Methylnaphthalene	0 / 6	--	--	0.023	0.05	0.67	1.4	0.67	SDS-3	--	**0.024**	**0.067**	0.67			COPC, based on SDS list
Naphthalene	0 / 6	--	--	0.023	0.05	2.1	--	2.1	SDS-3	--	**0.015**	**0.067**	2.1			
Phenanthrene	6 / 6	0.12	0.72	--	--	1.5	5.4	1.5	SDS-3	--	**0.020**	**0.067**	1.5			COPC, based on SDS list
Pyrene	6 / 6	0.2	1.4	--	--	2.6	3.3	2.6	SDS-3	--	**0.047**	**0.067**	2.6			COPC, based on SDS list
Total LPAHs	6 / 6	0.12	0.77	--	--	5.2	13	5.2	SDS-3	--	--	**0.067**	5.2			COPC, based on SDS list
Total HPAHs	6 / 6	1.0	6.3	--	--	12	17	12	SDS-3	--	--	**0.067**	12			COPC, based on SDS list
Total cPAHs [2]	6 / 6	0.12	0.75	--	--	--	--	0.15	SDS-5	0.009	--	**0.067**	0.15	●		COPC

ARI = Analytical Resources, Inc.
CSL = Cleanup Screening Level
LAET = Lowest Apparent Effects Threshold
2LAET = Second Lowest Apparent Effects Threshold
MDL = Method Detection Limit

PQL = Practical Quantitation Limit
RISL = RI Selected Screening Level
SDS = Storm Drain Solids (for criteria in Table 6-2)
SQS = Sediment Quality Standard
-- = Non-detected, not applicable, or not available

1. Total Dioxins/Furans are expressed as a 2,3,7,8-TCDD toxic equivalent (TEQ) concentration (ng/kg), using half the non-detect value.
2. Total cPAHs are expressed as a benzo(a)pyrene TEQ concentration (mg/kg), using half the non-detect value.
All concentrations and criteria values are expressed as dry weight; bold values indicate selected laboratory analytical method (preferred PQLs and MDLs).
Screening levels were established for COPCs based on storm drain solids for the purpose of future analyses.
Refer to Table 6-2 for definitions of criteria (Ecology 2012b) used as screening levels for NBF-GTSP media.

Table 6-9
Building Materials Screening Information

Chemical	Frequency of Detection	Detected Concentration		Non-Detected Concentration		Representative Screening Levels		Most Stringent SDS Screening Level		Sediment Background Level (SDS-7)	ARI MDL	ARI PQL	RI Selected Screening Level (10x SDS RISL)	Concentration Exceeds RISL		COPC Notes
		Min	Max	Min	Max	SQS / LAET (SDS-1/3)	CSL / 2LAET (SDS-2/4)	Criteria Value	Criteria Reference					Max Detected	Min Non-Detected	
Polychlorinated Aromatic Compounds																
PCB Aroclors (mg/kg)																
Aroclor 1016	0 / 210	--	--	0.03	1,600	--	--	--	--	--	**0.8**	**0.8**	--			
Aroclor 1221	0 / 210	--	--	0.03	1,600	--	--	--	--	--	**0.8**	**0.8**	--			
Aroclor 1232	0 / 210	--	--	0.03	1,600	--	--	--	--	--	**0.8**	**0.8**	--			
Aroclor 1242	2 / 210	6.0	11	0.03	1,600	--	--	--	--	--	**0.8**	**0.8**	--			
Aroclor 1248	40 / 210	0.82	14,000	0.03	950	--	--	--	--	--	**0.8**	**0.8**	--			
Aroclor 1254	106 / 210	0.92	4,800	0.03	2,400	--	--	--	--	--	**0.8**	**0.8**	--			
Aroclor 1260	41 / 210	0.85	11,000	0.03	1,600	--	--	--	--	--	**0.8**	**0.8**	--			
Aroclor 1262	0 / 12	--	--	0.03	0.80	--	--	--	--	--	**0.8**	**0.8**	--			
Total PCBs	116 / 210	0.92	15,800	0.03	16	0.13	1.0	0.13	SDS-3	0.002	--	**0.8**	1.3	●		COPC
Dioxins/Furans (ng/kg)																
Total Dioxins/Furans [1]	--	--	--	--	--	--	--	13	SDS-5	2	--	**1.0**	130			COPC, based on SDS list
Metals (mg/kg)																
Arsenic	20 / 190	7.0	295	5.0	250	57	93	1.3	SDS-5	7.3	**0.31**	**5.0**	73	●		COPC
Cadmium	141 / 190	0.2	439	0.2	10	5.1	6.7	5.1	SDS-1	0.40	**0.02**	**0.2**	51	●		COPC
Chromium	183 / 190	1.0	41,100	1.0	5.0	260	270	260	SDS-1	36	**0.26**	**0.5**	2,600	●		COPC
Copper	190 / 190	1.4	2,950	--	--	390	390	390	SDS-1/2	25	**0.04**	**0.2**	3,900			
Lead	168 / 190	3.0	155,000	2.0	100	450	530	450	SDS-1	11	**0.18**	**2.0**	4,500	●		COPC
Mercury	161 / 190	0.02	130	0.02	0.02	0.41	0.59	0.41	SDS-1	0.10	**0.002**	**0.025**	4.1	●		COPC
Silver	32 / 190	0.8	14	0.3	10	6.1	6.1	6.1	SDS-1/2	--	**0.04**	**0.3**	61			
Zinc	190 / 190	7.0	222,000	--	--	410	960	410	SDS-1	60	**0.37**	**1.0**	4,100	●		COPC
Semivolatile Organic Compounds																
Phenols (mg/kg)											EPA 8270 (Soil/Sediment)					
p-Cresol (4-Methylphenol)	--	--	--	--	--	0.67	0.67	0.67	SDS-1/2	--	**0.022**	**0.067**	6.7			COPC, based on SDS list
Phenol	--	--	--	--	--	0.42	1.2	0.42	SDS-1	--	**0.016**	**0.067**	4.2			COPC, based on SDS list
Phthalates (mg/kg)											EPA 8270 (Soil/Sediment)					
Bis(2-ethylhexyl) phthalate	--	--	--	--	--	1.3	1.9	1.3	SDS-3	--	**0.024**	**0.067**	13			COPC, based on SDS list
Butyl benzyl phthalate	--	--	--	--	--	0.063	0.90	0.063	SDS-3	--	**0.025**	**0.067**	0.67			COPC, based on SDS list
Polycyclic Aromatic Hydrocarbons (mg/kg)											EPA 8270 (Soil/Sediment)					
Acenaphthene	--	--	--	--	--	0.50	0.73	0.50	SDS-3	--	**0.016**	**0.067**	5.0			COPC, based on SDS list
Anthracene	--	--	--	--	--	0.96	4.4	0.96	SDS-3	--	**0.020**	**0.067**	9.6			COPC, based on SDS list
Benzo(a)anthracene	--	--	--	--	--	1.3	1.6	1.3	SDS-3	--	**0.019**	**0.067**	13			COPC, based on SDS list
Total Benzofluoranthenes	--	--	--	--	--	3.2	3.6	3.2	SDS-3	--	**0.033**	**0.067**	32			COPC, based on SDS list
Benzo(g,h,i)perylene	--	--	--	--	--	0.67	0.72	0.67	SDS-3	--	**0.026**	**0.067**	6.7			COPC, based on SDS list
Benzo(a)pyrene	--	--	--	--	--	1.6	3.0	0.15	SDS-5	0.009	**0.021**	**0.067**	1.5			COPC, based on SDS list
Chrysene	--	--	--	--	--	1.4	2.8	1.4	SDS-3	--	**0.021**	**0.067**	14			COPC, based on SDS list
Dibenz(a,h)anthracene	--	--	--	--	--	0.23	0.54	0.23	SDS-3	--	**0.025**	**0.067**	2.3			COPC, based on SDS list
Dibenzofuran	--	--	--	--	--	0.54	0.70	0.54	SDS-3	--	**0.018**	**0.067**	5.4			COPC, based on SDS list
Fluoranthene	--	--	--	--	--	1.7	2.5	1.7	SDS-3	--	**0.042**	**0.067**	17			COPC, based on SDS list
Fluorene	--	--	--	--	--	0.54	1.0	0.54	SDS-3	--	**0.016**	**0.067**	5.4			COPC, based on SDS list
Indeno(1,2,3-cd)pyrene	--	--	--	--	--	0.60	0.69	0.60	SDS-3	--	**0.027**	**0.067**	6.0			COPC, based on SDS list
2-Methylnaphthalene	--	--	--	--	--	0.67	1.4	0.67	SDS-3	--	**0.024**	**0.067**	6.7			COPC, based on SDS list
Phenanthrene	--	--	--	--	--	1.5	5.4	1.5	SDS-3	--	**0.020**	**0.067**	15			COPC, based on SDS list
Pyrene	--	--	--	--	--	2.6	3.3	2.6	SDS-3	--	**0.047**	**0.067**	26			COPC, based on SDS list
Total LPAHs	--	--	--	--	--	5.2	13	5.2	SDS-3	--	--	**0.067**	52			COPC, based on SDS list
Total HPAHs	--	--	--	--	--	12	17	12	SDS-3	--	--	**0.067**	120			COPC, based on SDS list
Total cPAHs [2]	--	--	--	--	--	--	--	0.15	SDS-5	0.009	--	**0.067**	1.5			COPC, based on SDS list

ARI = Analytical Resources, Inc.
CSL = Cleanup Screening Level
LAET = Lowest Apparent Effects Threshold
2LAET = Second Lowest Apparent Effects Threshold
MDL = Method Detection Limit

PQL = Practical Quantitation Limit
RISL = RI Selected Screening Level
SDS = Storm Drain Solids (for criteria in Table 6-2)
SQS = Sediment Quality Standard
-- = Non-detected, not applicable, or not available

1. Total Dioxins/Furans are expressed as a 2,3,7,8-TCDD toxic equivalent (TEQ) concentration (ng/kg), using half the non-detect value. Dioxins/furans will not be analyzed for paint samples.
2. Total cPAHs are expressed as a benzo(a)pyrene TEQ concentration (mg/kg), using half the non-detect value.
Building materials include paint, roof materials, downspout solids, and other exterior materials.
All concentrations and criteria values are expressed as dry weight; bold values indicate selected laboratory analytical method (preferred PQLs and MDLs).
Aside from PCBs, MDLs and PQLs from ARI should be considered target limits and may not be attainable, as they are based on soil and sediment studies, not unconventional matrices.
Screening levels were established for COPCs based on storm drain solids for the purpose of future analyses.
Refer to Table 6-2 for definitions of criteria (Ecology 2012b) used as screening levels for NBF-GTSP media.

Table 6-10
Pavement Screening Information

Chemical	Frequency of Detection	Detected Concentration Min	Detected Concentration Max	Non-Detected Concentration Min	Non-Detected Concentration Max	Representative Screening Level SQS / LAET (SDS-1/3)	Representative Screening Level CSL / 2LAET (SDS-2/4)	Most Stringent SDS Screening Level Criteria Value	Most Stringent SDS Screening Level Criteria Reference	Sediment Background Level (SDS-7)	ARI MDL	ARI PQL	RI Selected Screening Level (10x SDS RISL)	Concentration Exceeds RISL Max Detected	Concentration Exceeds RISL Min Non-Detected	COPC Notes
Polychlorinated Aromatic Compounds																
PCB Aroclors (mg/kg)																
Aroclor 1016	0 / 27	--	--	0.03	32	--	--	--	--	--	**0.024**	**0.10**	--			
Aroclor 1221	0 / 27	--	--	0.03	32	--	--	--	--	--	**0.024**	**0.10**	--			
Aroclor 1232	0 / 27	--	--	0.03	32	--	--	--	--	--	**0.024**	**0.10**	--			
Aroclor 1242	0 / 27	--	--	0.03	32	--	--	--	--	--	**0.030**	**0.10**	--			
Aroclor 1248	4 / 27	0.091	5.1	0.03	32	--	--	--	--	--	**0.030**	**0.10**	--			
Aroclor 1254	19 / 27	0.039	380	0.031	0.80	--	--	--	--	--	**0.030**	**0.10**	--			
Aroclor 1260	8 / 27	0.035	0.45	0.031	32	--	--	--	--	--	**0.030**	**0.10**	--			
Total PCBs	20 / 27	0.045	380	0.031	0.80	0.13	1.0	0.13	SDS-3	0.002	--	**0.10**	1.3	●		COPC
Dioxins/Furans (ng/kg)																
Total Dioxins/Furans [1]	--	--	--	--	--	--	--	13	SDS-5	2	--	**1.0**	130			COPC, based on SDS list
Metals (mg/kg)																
Arsenic	5 / 16	10	50	5.0	30	57	93	1.3	SDS-5	7.3	**0.31**	**5.0**	73			
Cadmium	16 / 16	0.4	31.9	--	--	5.1	6.7	5.1	SDS-1	0.40	**0.02**	**0.2**	51			
Chromium	16 / 16	24.4	43	--	--	260	270	260	SDS-1	36	**0.26**	**0.5**	2,600			
Copper	16 / 16	16	406	--	--	390	390	390	SDS-1/2	25	**0.04**	**0.2**	3,900			
Lead	16 / 16	8.0	1,900	--	--	450	530	450	SDS-1	11	**0.18**	**2.0**	4,500			
Mercury	10 / 16	0.03	1.25	0.02	0.02	0.41	0.59	0.41	SDS-1	0.10	**0.002**	**0.025**	4.1			
Silver	1 / 16	1.8	1.8	0.3	2.0	6.1	6.1	6.1	SDS-1/2	--	**0.04**	**0.3**	61			
Zinc	16 / 16	54	2,140	--	--	410	960	410	SDS-1	60	**0.37**	**1.0**	4,100			
Semivolatile Organic Compounds																
Phenols (mg/kg)											EPA 8270 (Soil/Sediment)					
p-Cresol (4-Methylphenol)	--	--	--	--	--	0.67	0.67	0.67	SDS-1/2	--	**0.022**	**0.067**	6.7			COPC, based on SDS list
Phenol	--	--	--	--	--	0.42	1.2	0.42	SDS-1	--	**0.016**	**0.067**	4.2			COPC, based on SDS list
Phthalates (mg/kg)											EPA 8270 (Soil/Sediment)					
Bis(2-ethylhexyl) phthalate	--	--	--	--	--	1.3	1.9	1.3	SDS-3	--	**0.024**	**0.067**	13			COPC, based on SDS list
Butyl benzyl phthalate	--	--	--	--	--	0.063	0.90	0.063	SDS-3	--	**0.025**	**0.067**	0.67			COPC, based on SDS list
Polycyclic Aromatic Hydrocarbons (mg/kg)											EPA 8270 (Soil/Sediment)					
Acenaphthene	--	--	--	--	--	0.50	0.73	0.50	SDS-3	--	**0.016**	**0.067**	5.0			COPC, based on SDS list
Anthracene	--	--	--	--	--	0.96	4.4	0.96	SDS-3	--	**0.020**	**0.067**	9.6			COPC, based on SDS list
Benzo(a)anthracene	--	--	--	--	--	1.3	1.6	1.3	SDS-3	--	**0.019**	**0.067**	13			COPC, based on SDS list
Total Benzofluoranthenes	--	--	--	--	--	3.2	3.6	3.2	SDS-3	--	**0.033**	**0.067**	32			COPC, based on SDS list
Benzo(g,h,i)perylene	--	--	--	--	--	0.67	0.72	0.67	SDS-3	--	**0.026**	**0.067**	6.7			COPC, based on SDS list
Benzo(a)pyrene	--	--	--	--	--	1.6	3.0	0.15	SDS-5	0.009	**0.021**	**0.067**	1.5			COPC, based on SDS list
Chrysene	--	--	--	--	--	1.4	2.8	1.4	SDS-3	--	**0.021**	**0.067**	14			COPC, based on SDS list
Dibenz(a,h)anthracene	--	--	--	--	--	0.23	0.54	0.23	SDS-3	--	**0.025**	**0.067**	2.3			COPC, based on SDS list
Dibenzofuran	--	--	--	--	--	0.54	0.70	0.54	SDS-3	--	**0.018**	**0.067**	5.4			COPC, based on SDS list
Fluoranthene	--	--	--	--	--	1.7	2.5	1.7	SDS-3	--	**0.042**	**0.067**	17			COPC, based on SDS list
Fluorene	--	--	--	--	--	0.54	1.0	0.54	SDS-3	--	**0.016**	**0.067**	5.4			COPC, based on SDS list
Indeno(1,2,3-cd)pyrene	--	--	--	--	--	0.60	0.69	0.60	SDS-3	--	**0.027**	**0.067**	6.0			COPC, based on SDS list
2-Methylnaphthalene	--	--	--	--	--	0.67	1.4	0.67	SDS-3	--	**0.024**	**0.067**	6.7			COPC, based on SDS list
Phenanthrene	--	--	--	--	--	1.5	5.4	1.5	SDS-3	--	**0.020**	**0.067**	15			COPC, based on SDS list
Pyrene	--	--	--	--	--	2.6	3.3	2.6	SDS-3	--	**0.047**	**0.067**	26			COPC, based on SDS list
Total LPAHs	--	--	--	--	--	5.2	13	5.2	SDS-3	--	--	**0.067**	52			COPC, based on SDS list
Total HPAHs	--	--	--	--	--	12	17	12	SDS-3	--	--	**0.067**	120			COPC, based on SDS list
Total cPAHs [2]	--	--	--	--	--	--	--	0.15	SDS-5	0.009	--	**0.067**	1.5			COPC, based on SDS list

ARI = Analytical Resources, Inc.
CSL = Cleanup Screening Level
LAET = Lowest Apparent Effects Threshold
2LAET = Second Lowest Apparent Effects Threshold
MDL = Method Detection Limit

PQL = Practical Quantitation Limit
RISL = RI Selected Screening Level
SDS = Storm Drain Solids (for criteria in Table 6-2)
SQS = Sediment Quality Standard
-- = Non-detected, not applicable, or not available

1. Total Dioxins/Furans are expressed as a 2,3,7,8-TCDD toxic equivalent (TEQ) concentration (ng/kg), using half the non-detect value.
2. Total cPAHs are expressed as a benzo(a)pyrene TEQ concentration (mg/kg), using half the non-detect value.
All concentrations and criteria values are expressed as dry weight; bold values indicate selected laboratory analytical method (preferred PQLs and MDLs).
Screening levels were established for COPCs based on storm drain solids for the purpose of future analyses.
Refer to Table 6-2 for definitions of criteria (Ecology 2012b) used as screening levels for NBF-GTSP media.

Table 6-11
RI Screening Levels and Criteria for COPCs at NBF-GTSP Site

Chemical	Soil (mg/kg)				Groundwater (ug/L)		Storm Drain Water (ug/L)		Storm Drain Solids (mg/kg)		Surface Debris (mg/kg)		CJM (mg/kg)		Building Material (mg/kg)		Pavement (mg/kg)	
	Without Downgradient Pathways (Non-Leaching)		With Downgradient Pathways (Leaching)															
Polychlorinated Aromatic Compounds																		
Total PCBs	0.50	SO-2	0.033	PQL	0.044	GW-6	0.010	PQL	0.13	SDS-3	0.13	SDS-3	1.3	SDS-3 x10	1.3	SDS-3 x10	1.3	SDS-3 x10
Total Dioxins/Furans (TEQ, ng/kg)*	11	SO-2	11	SO-2	--	--	--	--	13	SDS-5	13 ^	SDS-5	130 ^	SDS-5 x10	130 ^	SDS-5 x10	130 ^	SDS-5 x10
Metals																		
Aluminum	--	--	--	--	16,000	GW-5	--	--	--	--	--	--	--	--	--	--	--	--
Antimony	--	--	--	--	6.0	GW-2/3/4	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	7.0	SO-30 (BG)	7.0	SO-30 (BG)	5.0	GW-9 (BG)	0.87	SDW-23	7.3	SDS-7	7.3	SDS-7	73 ^	SDS-7 x10	73	SDS-7 x10	--	--
Barium	16,000	SO-3	83	SO-5	2,000	GW-2/3/4	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium	--	--	--	--	4.0	GW-2/3/4	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	70	S0-26	1.0	SO-30	2.6	GW-8	0.43	SDW-20	5.1	SDS-1	5.1	SDS-1	51 ^	SDS-1 x10	51	SDS-1 x10	--	--
Chromium	120,000	SO-3	120	SO-30 (BG)	100	GW-2/3/4	--	--	260	SDS-1	260	SDS-1	2,600 ^	SDS-1 x10	2,600	SDS-1 x10	--	--
Copper	3,200	SO-3	36	SO-30 (BG)	120	GW-7/8	2.4	SDW-13/14	390	SDS-1/2	390	SDS-1/2	3,900 ^	SDS-1 x10	--	--	--	--
Iron	--	--	--	--	11,000	GW-5	--	--	--	--	--	--	--	--	--	--	--	--
Lead	400	SO-26	57	SO-11	11	GW-8	8.1	SDW-9/12/14	450	SDS-1	450	SDS-1	4,500 ^	SDS-1 x10	4,500	SDS-1 x10	--	--
Manganese	--	--	--	--	2,200	GW-5	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	10	SO-26	0.070	SO-30 (BG)	0.020	PQL	--	--	0.41	SDS-1	0.41	SDS-1	4.1 ^	SDS-1 x10	4.1	SDS-1 x10	--	--
Nickel	1,600	SO-3	38	SO-30 (BG)	100	GW-4	8.2	SDW-9/12/14	--	--	--	--	--	--	--	--	--	--
Selenium	--	--	--	--	50	GW-2/3/4	--	--	--	--	--	--	--	--	--	--	--	--
Silver	400	SO-3	0.30	PQL	1.5	GW-7/8	--	--	6.1	SDS-1/2	6.1	SDS-1/2	61 ^	SDS-1 x10	--	--	--	--
Thallium	--	--	--	--	0.50	GW-3	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	--	--	--	--	3.0	PQL	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	24,000	SO-3	86	SO-30 (BG)	33	GW-8	33	SDW-18	410	SDS-1	410	SDS-1	4,100 ^	SDS-1 x10	4,100	SDS-1 x10	--	--
Petroleum Hydrocarbons																		
Gasoline Range Hydrocarbons (w/ benzene)	30	SO-1	30	SO-1	800	GW-1	--	--	--	--	--	--	--	--	--	--	--	--
Gasoline Range Hydrocarbons (w/o benzene)	100	SO-1	100	SO-1	1,000	GW-1	--	--	--	--	--	--	--	--	--	--	--	--
Diesel Range Hydrocarbons	2,000	SO-1	2,000	SO-1	500	GW-1	--	--	--	--	--	--	--	--	--	--	--	--
Oil Range Hydrocarbons	2,000	SO-1	2,000	SO-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Jet Fuel (applied to diesel range)	2,000	SO-1	2,000	SO-1	500	GW-1	--	--	--	--	--	--	--	--	--	--	--	--
Semivolatile Organic Compounds (Phenols, Phthalates, PAHs)																		
p-Cresol (4-Methylphenol)	--	--	--	--	--	--	--	--	0.67	SDS-1/2	0.67 ^	SDS-1/2	6.7 ^	SDS-1 x10	6.7 ^	SDS-1 x10	6.7 ^	SDS-1 x10
Phenol	--	--	--	--	--	--	--	--	0.42	SDS-1	0.42 ^	SDS-1	4.2 ^	SDS-1 x10	4.2 ^	SDS-1 x10	4.2 ^	SDS-1 x10
Bis(2-ethylhexyl) phthalate	71	SO-2	0.067	PQL	1.0	PQL	1.4	SDW-23	1.3	SDS-3	1.3 ^	SDS-3	13 ^	SDS-3 x10	13 ^	SDS-3 x10	13 ^	SDS-3 x10
Butyl benzyl phthalate	--	--	--	--	--	--	--	--	0.067	PQL	0.067 ^	PQL	0.67 ^	PQL x10	0.67 ^	PQL x10	0.67 ^	PQL x10
Di-n-octyl phthalate	--	--	--	--	--	--	1.0	PQL	--	--	--	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--	--	0.50	SDS-3	0.50 ^	SDS-3	5.0 ^	SDS-3 x10	5.0 ^	SDS-3 x10	5.0 ^	SDS-3 x10
Anthracene	--	--	--	--	--	--	--	--	0.96	SDS-3	0.96	SDS-3	9.6 ^	SDS-3 x10	9.6 ^	SDS-3 x10	9.6 ^	SDS-3 x10
Benzo(a)anthracene	See Total cPAHs				--	--	--	--	1.3	SDS-3	1.3	SDS-3	13 ^	SDS-3 x10	13 ^	SDS-3 x10	13 ^	SDS-3 x10
Benzo(a)pyrene and Total cPAHs (TEQ)	0.14	SO-2	0.0094	SO-7	--	--	0.010	PQL	0.15	SDS-5	0.15	SDS-5	1.5 ^	SDS-5 x10	1.5 ^	SDS-5 x10	1.5 ^	SDS-5 x10
Total Benzofluoranthenes	See Total cPAHs				--	--	--	--	3.2	SDS-3	3.2	SDS-3	32 ^	SDS-3 x10	32 ^	SDS-3 x10	32 ^	SDS-3 x10
Benzo(g,h,i)perylene	--	--	0.031	SO-11	--	--	0.012	SDW-18	0.67	SDS-3	0.67	SDS-3	6.7 ^	SDS-3 x10	6.7 ^	SDS-3 x10	6.7 ^	SDS-3 x10
Chrysene	See Total cPAHs				--	--	--	--	1.4	SDS-3	1.4	SDS-3	14 ^	SDS-3 x10	14 ^	SDS-3 x10	14 ^	SDS-3 x10
Dibenz(a,h)anthracene	See Total cPAHs				--	--	--	--	0.23	SDS-3	0.23	SDS-3	2.3 ^	SDS-3 x10	2.3 ^	SDS-3 x10	2.3 ^	SDS-3 x10
Dibenzofuran	--	--	--	--	--	--	--	--	0.54	SDS-3	0.54 ^	SDS-3	5.4 ^	SDS-3 x10	5.4 ^	SDS-3 x10	5.4 ^	SDS-3 x10
Fluoranthene	3,200	SO-3	0.16	SO-11	--	--	2.3	SDW-18	1.7	SDS-3	1.7	SDS-3	17 ^	SDS-3 x10	17 ^	SDS-3 x10	17 ^	SDS-3 x10
Fluorene	--	--	--	--	--	--	--	--	0.54	SDS-3	0.54	SDS-3	5.4 ^	SDS-3 x10	5.4 ^	SDS-3 x10	5.4 ^	SDS-3 x10
Indeno(1,2,3-cd)pyrene	See Total cPAHs				--	--	--	--	0.60	SDS-3	0.60	SDS-3	6.0 ^	SDS-3 x10	6.0 ^	SDS-3 x10	6.0 ^	SDS-3 x10
2-Methylnaphthalene	320	SO-3	0.043	SO-11	18	GW-8	--	--	0.67	SDS-3	0.67	SDS-3	6.7 ^	SDS-3 x10	6.7 ^	SDS-3 x10	6.7 ^	SDS-3 x10
Phenanthrene	--	--	--	--	--	--	--	--	1.5	SDS-3	1.5	SDS-3	15 ^	SDS-3 x10	15 ^	SDS-3 x10	15 ^	SDS-3 x10
Pyrene	--	--	--	--	--	--	--	--	2.6	SDS-3	2.6	SDS-3	26 ^	SDS-3 x10	26 ^	SDS-3 x10	26 ^	SDS-3 x10
Total LPAHs	--	--	--	--	--	--	--	--	5.2	SDS-3	5.2	SDS-3	52 ^	SDS-3 x10	52 ^	SDS-3 x10	52 ^	SDS-3 x10
Total HPAHs	--	--	--	--	--	--	--	--	12	SDS-3	12	SDS-3	120 ^	SDS-3 x10	120 ^	SDS-3 x10	120 ^	SDS-3 x10

Table 6-11
RI Screening Levels and Criteria for COPCs at NBF-GTSP Site

Chemical	Soil (mg/kg)				Groundwater (ug/L)		Storm Drain Water (ug/L)		Storm Drain Solids (mg/kg)		Surface Debris (mg/kg)		CJM (mg/kg)		Building Material (mg/kg)		Pavement (mg/kg)	
	Without Downgradient Pathways (Non-Leaching)		With Downgradient Pathways (Leaching)															
Volatile Aromatic Hydrocarbons																		
Benzene	18	SO-3	0.0010	PQL	0.80	GW-6	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds																		
1,1-Dichloroethene	--	--	--	--	7.0	GW-2/3/4	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	160	SO-3	0.0052	SO-5	16	GW-5	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene (mixed isomers)	720	SO-3	0.023	SO-5	72	GW-5	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (PCE)	480	SO-2/3	0.0018	SO-21	5.0	GW-2/4	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	11.5	SO-2	0.0015	SO-7	4.0	GW-5	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	0.20	PQL	--	--	--	--	--	--	--	--	--	--	--	--

BG = Background concentrations for Washington
COPC = Contaminant of Potential Concern
PQL = Practical Quantitation Limit (ARI)
RISL = RI Screening Level
-- Not a COPC

* Screening levels for dioxins/furans in solid materials are in ng/kg; total dioxins/furans is not considered as a COPC for paint, but is a COPC for other building materials.
^ RI screening levels indicate COPCs are not detected or not analyzed, but COPCs are included because they are of concern in storm drain solids.
Note: For Gasoline Range Hydrocarbons, presence of benzene is based on detection or non-detection for each location (boring or well).
All concentrations and criteria values for solid materials are expressed as dry weight.
Refer to Table 6-2 for definitions of criteria (Ecology 2012b) used as screening levels for NBF-GTSP media.

Criteria reference abbreviations:
GW = Groundwater
SDS = Storm Drain Solids
SDW = Storm Drain Water
SO = Soil

Table 6-12
Number of COPCs at NBF-GTSP Site

NBF-GTSP Site Media	Dioxins/ Furans	PCBs	Metals	Petroleum Hydrocarbons	SVOCs	VAHs	VOCs	Total
Soil	1	1	10	4	6	1	4	27
Groundwater		1	18	3	2	1	6	31
Storm Drain Water		1	6		6			13
Storm Drain Solids	1	1	8		22			32
Concrete Joint Material	1	1	8		22			32
Surface Debris	1	1	8		22			32
Building Materials	1	1	8		22			32
Pavement	1	1			22			24

Numbers of COPCs per chemical class are based on the following:
- Dioxins/Furans: single class of compounds
- PCBs: single class of compounds
- Metals: individual metals
- Petroleum Hydrocarbons: individual TPH ranges and Jet fuel
- SVOCs: individual chemicals plus cPAH, LPAH & HPAH classes
- VAHs: volatile aromatic hydrocarbons (benzene only)
- VOCs: individual chemicals

Table 7.1-1
NBF Storm Drain System
Summary of 2010 Video Inspection Results and Areas of Potential Infiltration

SD Line Subdrainage	SD Line Segment	SD Structures within Segments	SD Video Infiltration Notes	SD Video General Notes
	(Water-Table Submergence of Lines Shown in Blue)			
Off-Site, to North End of NBF-GTSP Property				
N1	**North of GTSP to Buried MH**	--	Suspected GW	Multiple cracks, multiple taps, H2O level 30%
North Lateral Drainage Area				
N1	**Buried MH to MH178**	--	Suspected GW	Multiple cracks, H2O level 30%
	MH178 to MH170	**MH172**	--	H2O level 35%, visible flow, encrustations
	MH170 to MH169	--	--	Flowing water
	MH169 to MH158	**MH163**	--	Standing H2O
	MH158 to MH152	--	Suspected GW	two taps (3-626?), flowing water
	MH152 to MH130	--	Suspected GW	Minor crack, encrustations, flowing water
	MH130 to MH112	**MH130A to MH130C**	Suspected GW	Multiple cracks, flow from tap, H2O level 10%
	MH112 to MH108	--	Suspected GW	Multiple cracks, H2O level >1"
	MH108 to Lift Station	CB108A, CB363	--	Video inspection not performed
N2	CB108B to CB363	--	--	Video inspection not performed
N3	MH111 to CB110	--	--	Video inspection not performed
	CB110 to MH109	--	--	Small crack, appears to be repaired
	Bldg 3-350 downspout to MH109	--	--	Clean, dry, no damage
N4	CB124 to CB122	--	--	Sag in pipe, H2O level 80%
	CB121B to CB122	CB120E	--	Standing H2O
	CB120E to CB120D	--	--	Clean, dry, no damage
	CB120D to CB120C	--	--	Sag in pipe, H2O level 10%
	CB120C to CB120B	--	--	Clean, dry, no damage
	Blind connection downstream of CB120 to CB118A	--	Suspected Soil	Fracture, intruding roots, survey abandoned
	CB118G to CB118A	CB118B to CB118F	--	Clean, dry, no damage
	CB119 to CB118	--	--	Sag in pipe, H2O level 10%, CB119 blocked
	CB118A to CB114	--	Soil, Suspected GW	Multiple cracks, separated joints, sag, standing H2O
	CB114 to **MH112**	--	Soil, GW	Multiple cracks, multiple taps
	D117A to CB114	CB117, CB116	--	Video inspection not performed
N5	CB137A to CB136	OWS137	--	Video inspection not performed
	CB136 to CB135	--	--	Clean, dry, no damage
	CB135 to CB142B	--	Suspected Soil	Multiple cracks, encrustations, standing water
	CB134 to N5 before CB142B	--	--	Video inspection not performed
	CB142B to CB141	--	Soil	Multiple cracks, large hole, off-set joint
	CB141 to MH133D	--	GW	Multiple cracks
	D133C to MH133D	--	--	Video inspection not performed
	CB133B to NC5	--	--	Clean, dry, no damage
	MH133D to MH130A	--	--	Video inspection not performed
N6	CB127 to N1 near MH130	--	Suspected Soil, Suspected GW	Multiple cracks, large fracture
	CB131 to MH130	CB133, D133A, OWS132, CB128	--	Video inspection not performed
	CB625B to CB625	CB625A	--	Clean, dry, no damage
	CB621 to CB625	CB622, CB623, UNKCB8	--	Clean, dry, no damage
	CB625 to CB626	--	--	Sag in pipe, H2O level 5%
	CB622 to CB626	--	Suspected GW	Under Bldg. 3-324, pipe size change, inflow of water
	CB626 to CB627	--	--	Sag in pipe, H2O level 10%
	CB620 to CB627	CB628	--	Clean, dry, no damage
	CB627 to MH130	--	--	Clean, dry, no damage
N7	**CB193 to CB146**	--	--	Clean, dry, no damage
	CB146 to UNKMH10	--	GW	Multiple cracks, fractures, breaks, standing water
	UNKMH10 to OWS612-2	--	--	Clean, dry, no damage
	OWS612-2 to UNKMH9	--	--	Clean, dry, no damage
	UNKMH10 to UNKMH9	--	--	Clean, dry, no damage
	UNKMH9 to UNKCB23	--	GW	Multiple cracks, sag in pipe, H2O level 15%
	CB142A to near UNKCB23	--	--	Video inspection not performed
	UNKCB23 to MH139	--	GW	Nothing noted
	CB140 to MH139	--	Suspected GW	Multiple fractures
	MH139 to MH138	--	GW	Multiple cracks
N8	CB173A to unknown	--	--	Clean, dry, no damage
	UNKCB18 to UNKCB16	UNKCB17	--	Clean, dry, no damage
	UNKCB16 to UNKCB14	--	--	Sag in pipe, H2O level 20%
	CB56A to CB209B	--	--	Tap connection, sag in pipe, H2O level 55%
	CB55A to UNKCB13	--	--	Video inspection not performed
	UNKCB20 to D333A	--	--	Video inspection not performed
	CB201 to D333A	--	--	Video inspection not performed
	UNK to UNKCB15	D333B to D333D	--	Video inspection not performed
	UNKCB12 to UNKCB15	CB209B	--	Clean, dry, no damage
	CB209B to OWS153	--	Suspected GW	Multiple cracks, sag in pipe, H2O level 70%
	UNKCB11 to UNKCB9	UNKCB7, CB154	--	Clean, dry, no damage
	UNKCB9 to OWS152	--	--	Video inspection not performed

Table 7.1-1
NBF Storm Drain System
Summary of 2010 Video Inspection Results and Areas of Potential Infiltration

SD Line Subdrainage	SD Line Segment	SD Structures within Segments	SD Video Infiltration Notes	SD Video General Notes
	(Water-Table Submergence of Lines Shown in Blue)			
N9	CB647 to CB652A	CB164, MH651, MH652	--	Clean, dry, no damage
	CB649 to MH651	--	--	Defect in coating
	MH651 to CB159	--	--	Video inspection not performed
N10	**CB184 to CB167**	**CB184B**	--	Unidentified obstruction, *line replaced 10/2010*
	CB184C to CB167	**CB184D**	--	*CB184C & D are new structures*, not inspected
	CB167 to CB165	--	--	One tap, clean, dry, no damage, *line replaced 10/2010*
	CB165B to CB165A	--	--	Clean, dry, no damage, *line replaced 10/2010*
	CB165A to CB165	--	--	Broken PVC, *line replaced 10/2010*
	CB165 to unknown	--	Suspected GW	Multiple fractures, sag in pipe, standing water
N11	CB150 to **CB193**	--	Suspected GW	Small fracture
	MH193 to CB193	--	Suspected GW	Material change, deformed PVC
	CB194 to **MH193**	UNKCB19	Suspected GW	Multiple cracks
	MH193 to MH187	--	--	Clean, dry, no damage
	UNKCB22 to unknown	--	--	Multiple cracks
	CB189A to CB188A	--	--	Multiple taps, material and size change
	CB189 to **CB182**	CB188, CB188A, CB188B, **CB187A, CB185**	--	Clean, dry, no damage
	CB182 to MH181	**CB182A**	--	Clean, dry, no damage
	MH166A to MH181A	--	--	H2O level 10%
	CB187A & MH181A to MH179A	--	--	Clean, dry, no damage
	MH179A to MH179B	--	--	Clean, dry, no damage
	MH179B to CB175	--	--	Clean, dry, no damage
	CB175 to MH172	**CB173**	--	H2O level 10%
	CB174A to CB174	CB174B	Soil, GW	Small crack, survey abandoned, *line replaced 10/2010, CB174B is a new structure*
N12	CB195 to MH178	--	Suspected GW	Off-set joint
	CB177 to MH178	--	--	Shifted joint, survey abandoned
North-Central Lateral Drainage Area				
NC1	KCIA MH to CB229A	--	--	Encrustations, pipe size change, survey abandoned
	CB229A to CB229	UNKCB27	--	Clean, dry, no damage
	CB229A to MH228C	UNKCB6	--	Intruding seal ring
	MH228C to UNKMH19	--	--	Clean, dry, no damage
	UNKMH19 to MH228	--	--	H2O level 20%
	MH228 to **MH221A**	**MH226**	--	Clean, dry, no damage
	MH221A to MH358	**MH219, MH363A, MH362**	--	Video inspection not performed
	MH358 to MH422	--	--	Video inspeciton not performed
NC2	CB364A to MH362	--	--	H2O level 5-10%
NC3	CB225 to **MH363A**	MH223, **MH220**	--	Video inspection data corrupted
	CB224 to MH223	--	--	Video inspection data corrupted
	CB222 to MH220	--	--	Video inspection data corrupted
	MH220 to MH221A	CB221, OWS220A, UNKMH16	--	Video inspection data corrupted
NC4	CB257 to CB256	--	--	H2O level 15-20%
	CB256 to CB255	--	--	Clean, dry, no damage
	CB255 to CB254	--	--	H2O level 10-15%
	CB254 to CB253	--	--	Clean, dry, no damage
	CB253 to CB251	CB252	--	Sag in pipe, H2O level 10%
	CB251 to CB250	--	--	Clean, dry, no damage
	CB250 to VAULT258	--	--	H2O level 30%
	VAULT258 to MH249	--	Soil	Intruding soil, pipe size change
	MH249 to MH248	--	--	Defect in lining
	MH248 to MH247	--	--	Off-set joint
	MH248 toward MH469 on SC7	--	--	Material change, pipe corrosion, off-set joint plug, H2O level 15%
	MH247 to **UNKMH17**	CB372, CB372A	--	Video inspection not performed
	CB227 to **UNKMH17**	--	--	Video inspection not performed
	UNKMH17 to MH226	--	--	H2O level 20-100%
	UNKMH17 to OWS226A	UNKMH18	--	Video inspection not performed
	OWS226A to MH226	--	--	Clean, dry, no damage

Table 7.1-1
NBF Storm Drain System
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SD Line Subdrainage	SD Line Segment	SD Structures within Segments	SD Video Infiltration Notes	SD Video General Notes
	(Water-Table Submergence of Lines Shown in Blue)			
NC5	CB246 to CB137C	CB244	--	Clean, dry, no damage
	CB244 to MH240	CB241A, CB241 to CB243	--	H2O level <1", three active taps
	MH240 to MH610	CB237 to CB239	--	H2O level 10%, three active taps
	MH610 to MH609	--	--	Clean, dry, no damage
	CB236 to MH609	--	--	Clean, dry, no damage
	MH609 to MH607	--	--	Off-set joint
	CB608 to MH607	--	--	H2O level 10%+
	MH607 to CB231	--	--	Off-set joint, survey abandoned
	CB231 to CB231C	--	--	One active tap
	CB231C to UNKMH6	--	--	Clean, dry, no damage
	UNKMH7 to UNKMH6	--	--	H2O level 15-20%
	UNKMH6 to MH228	--	--	Fracture
NC6	CB228F to MH228D	--	--	H2O level 25%
	MH228D to UNKMH21	--	--	H2O level 40%+
	UNKMH21 to UNKCB6	--	--	Clean, dry, no damage
	UNKMH21 to OWSA6	--	--	Clean, dry, no damage
	UNKMH21 to MH228C	--	--	Clean, dry, no damage
South-Central Lateral Drainage Area				
SC1	**MH478 to MH461**	--	--	Video inspection not performed
	MH461 to MH414	--	GW	H2O level 10%, cracks, fractures, flowing water
	MH414 to MH368	**MH413,** CB455, **MH410, CB409, CB373**	GW	Multiple cracks & fractures, H2O level 5-10%, one active tap
	MH368 to CB364	CB367, CB367A	GW	Cracks, fractures, flowing water, survey abandoned (debris)
	CB364 to MH361	--	GW	H2O level 15%, flowing water, encrustations
	MH361 to MH-PRD	CB359A	GW	Intruding tap, survey abandoned (debris)
	MH-PRD to OWS421	--	--	Video inspection not performed
SC2	Roof drain from Bldg 3-369 to MH-PRD	CB359	--	Video inspection not performed
SC3	**CB371 to MH368**	**MH369**	--	Video inspection not performed
SC4	CB374 to CB373	--	--	Video inspection not performed
SC5	**MH402** toward D405C	D405B, D405A	Suspected GW	Cracks, fractures, two active tap, pipe size change
	D408 to **MH402**	D407, D406, D405	--	Video inspection not performed
SC6	CB412 to MH410	CB411	--	Video inspection not performed
SC7	CB419 to CB420	CB418, CB416, CB415	--	Video inspection not performed
SC8	MH471 to **MH461**	CB470 to **MH464**	--	Video inspection not performed
SC9	CB462 to CB472	CB463	--	Video inspection not performed
	CB476 to CB472	CB473 to CB475	--	Clean, dry, no damage
SC10	IN480 to **MH19C**	**MH497**	--	Video inspection not performed
South Lateral Drainage Area				
S1	**MH492 to OWS483F**	CB492A, **MH483A**	--	Video inspection not performed
	OWS483F to MH482	--	Suspected GW	Multiple cracks, one tap
	MH482 to MH481	--	Soil/gravel	Multiple cracks, continuously infiltrating gravel
	MH481 to UNKMH4	--	--	Clean, dry, no damage
	UNKMH4 to CB266	**MH263, MH266A**	--	Clean, dry, no damage, four active taps
	CB266 to MH271B	CB267, CB268, CB271	--	H2O level 10%
	MH271B to MH281	CB348	--	Clean, dry, no damage
	MH281 to MH353	--	Suspected Soil, Suspected GW	H2O level 10-15%, encrusted gravel, intruding roots, three active taps
	MH353 to MH356	CB355A to CB355C	--	Clean, dry, no damage
	MH356 to MH443	CB355	--	H2O level 5-10%
	MH443 to LS431*	**OWS421**	--	Clean, dry, no damage
S2	CB400 to CB395	D393A, UNKCB5	--	Clean, dry, no damage
	CB395 to CB392	UNKCB5	--	H2O level 10%
	CB392 to **OWS1-C**	**MH401**	--	Video inspection not performed
	IN388 to **MH378**	CB387, MH385, CB384, CB386, CB383, CB382, **OWS1-C**, CB380, CB379	--	Video inspection not performed
	UNKCB4 to discharge point	--	--	Clean, dry, no damage
	CB375 to discharge point	--	Suspected GW	Multiple cracks
	MH376 to MH378	--	--	Clean, dry, no damage
	MH378 to MH353	--	Soil, GW	H2O level 0-5%, crack, sand bags in pipe

Table 7.1-1
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SD Line Subdrainage	SD Line Segment	SD Structures within Segments	SD Video Infiltration Notes	SD Video General Notes
	(Water-Table Submergence of Lines Shown in Blue)			
S3	CB346 to IN343	IN345, IN344	--	Multiple cracks & fractures
	IN343 to CB342A		--	Clean, dry, no damage
	CB342A to IN341	IN342	--	Multiple cracks & fractures
	IN341 to IN340	--	--	Clean, dry, no damage
	IN340 to IN327	IN329, CB328A, IN328	--	Multiple cracks & fractures, one capped tap
	IN327 to IN326	--	Suspected Soil; GW	Multiple cracks, break in pipe, intruding roots
	IN326 to UNK3	UNK2	--	Multiple cracks, one capped tap
	UNK3 to CB324	--	Suspected Soil	Multiple cracks, intruding roots
	CB324 to MH311	IN323, IN322, IN321, CB320, UNKCB2, UNKCB3	--	Video inspection not performed
	UNK1 to IN307D	IN307E	--	Multiple cracks
	IN307D to CB307C	--	--	Clean, dry, no damage
	CB307C to IN307A	CB307B	--	Multiple cracks
	IN307A to IN307	--	--	Clean, dry, no damage
	IN307 to CB305	IN306	--	Multiple cracks
	CB305 to CB299	IN300 to IN304	--	Multiple cracks, one capped tap
	CB299 to IN296	IN298, IN297	--	Multiple cracks, standing water, sag in pipe
	IN296 to CB290	UNKCB1, IN295 to IN292	--	Video inspection not performed
	CB290A to CB291	CB290	--	Clean, dry, no damage, survey abandoned
	CB291 to MH288	OWS289	--	Video inspection not performed
	IN288J to MH311	IN288I - IN288E, MH312	--	Video inspection not performed
	MH311 to UNKMH5	MH288	--	Video inspection not performed
	CB285A to UNKMH5	--	--	Clean, dry, no damage
	CB288A to CB288D	CB288B, CB288C	--	Video inspection not performed
	CB288C to discharge point	--	--	Video inspection not performed
	IN288K to MH281	IN288L	--	Video inspection not performed
	CB288N to discharge point	--	--	Clean, dry, no damage
	UNKMH5 to MH281	CB286, CB284, IN288M	--	Video inspection not performed
S4	CB279 to CB278	--	--	Multiple cracks & fractures
	CB278 to CB277	CB833	--	Video inspection not performed
	CB277A to CB277	CB276	--	Clean, dry, no damage
	CB276 to CB274	--	--	Video inspection not performed
	CB273 to CB271C	CB274	--	Clean, dry, no damage
	CB280 to CB271C	CB273A, CB279A, CB274	--	Video inspection not performed
	CB271C to CB271A	--	--	One crack
	CB271A to **MH271B**	--	--	Clean, dry, no damage
S5	CB277B to CB277C	--	--	Video inspection not performed
	CB277C to CB266B	--	--	Clean, dry, no damage
	CB266B to MH266A	--	--	Fracture
S6A	CB310A to MH310F	CB310B to CB310D, CB310E	--	Video inspection not performed
	MH310F to MH310	--	--	H2O level 15%
	MH310 to MH309B	MH309	--	Multiple cracks, H2O level 15%
	MH1302 to CB1307	MH1306	--	Clean, dry, no damage
	MH1306 to MH1316	MH1315, MH1311, CB1310	--	Clean, dry, no damage
	MH1318 to MH1316	MH460A, MH459A	--	Clean, dry, no damage
	MH459B to MH452	MH457A, MH458A, CB446A	--	Clean, dry, no damage
	MH459A to MH459B	--	--	Multiple cracks
	CB448 to CB308	CB447, CB446, CB449, CB450, CB451	--	Video inspection not performed
	MH445C to MH453A	MH445B, MH445A	--	Clean, dry, no damage
	UNKMH13 to MH445C	OWS443B	--	H2O level 15%
	MH445C to UNKMH1	--	--	Clean, dry, no damage
	UNKMH1 to MH444	--	--	Sediments & debris, one tap
	OWS640 to UNKMH4	--	--	Clean, dry, no damage
S6B	CB503 to MH501	--	GW	Multiple cracks, dislodged seal ring
	CB502 to MH500	MH501	--	Minor cracks, encrusted debris
	MH500 to MH499	--	--	Clean, dry, no damage
	MH499 to MH1314	--	--	Multiple fractures
	CB654 to MH657	MH655, CB656, CB510, CB509	--	Clean, dry, no damage
	MH657 to MH505	--	--	Clean, dry, no damage, intruding lateral/ tap
	MH505 to MH1309	CB505A, CB1303, MH505B	--	Clean, dry, no damage
	MH1309 to MH1314	CB1313	--	Clean, dry, no damage
	MH1314 to UNKMH3	--	Soil, GW	Multiple holes, cracks, fractures, one abandoned tap
S7	CB260 to CB259	--	--	Video inspection not performed
	CB259 to UNKMH11	--	--	Clean, dry, no damage
	CB261 to UNKMH12	UNKMH11	--	Multiple cracks and fractures
	UNKMH12 to MH642	**MH414**	--	Multiple cracks, H2O level 15%
	MH642 to UNKMH4	--	--	Clean, dry, no damage

Table 7.1-1
NBF Storm Drain System
Summary of 2010 Video Inspection Results and Areas of Potential Infiltration

SD Line Subdrainage	SD Line Segment	SD Structures within Segments	SD Video Infiltration Notes	SD Video General Notes
	(Water-Table Submergence of Lines Shown in Blue)			
S8	CB491 to CB490	--	--	Clean, dry, no damage
	CB490 to CB486	CB489, CB488, CB487	--	H2O level 10-40%
	CB486 to CB485	--	--	Sag in pipe, H2O level 10%
	CB485 to **MH483A**	MH485A	--	Multiple cracks, H2O level <1%
	CB484 to CB483	--	--	H2O level 20%
	CB483 to MH483A	--	--	Clean, dry, no damage
	MH483A to OWS483F	**OWS483B/C, OWS483E/D**	--	Video inspection not performed
S9	CB351 to MH281	--	--	Video inspection not performed
	CB349A to MH281	CB349, CB347	--	Video inspeciton not performed
Offsite KCIA	IN495 to MH492	MH494, MH493	--	Video inspection not performed
Building 3-380 Drainage Area				
B1	CB109C to CB107A	--	--	Minor cracks
	CB107A to CB429	--	--	H2O level 10%
	CB429 to MH427A	MH428A, MH428	--	Clean, dry, no damage
	MH427A to CB427		--	Clean, dry, no damage
	CB427 to **CB104**	**MH105**	--	Clean, dry, no damage
	CB104 to CB423A	--	--	H2O level 15%
	CB423A to MH422	CB423	--	Clean, dry, no damage
B2	CB102D to CB102A	CB102C, CB102B	--	Clean, dry, no damage
	CB102 to CB104	CB102A	--	Clean, dry, no damage
B3	CB107 to CB106A	CB106	--	Clean, dry, no damage
	CB106 to MH105	--	--	Clean, dry, no damage, survey abandoned
B4	CB428C to MH428	CB428B	--	Clean, dry, no damage
Parking Lot Drainage Area				
PL1	CB432 to CB435	CB433, CB433A		Video inspection not performed
	CB102 to IN433A	CB102A	--	Clean, dry, no damage
PL2	D283A to D436A	CB283	Soil	Intruding roots, tee connection, survey abandoned
	D436A to CB436	--	--	Clean, dry, no damage
	CB436 to CB631	CB630	--	Clean, dry, no damage
	CB631 to MH632	--	--	Clean, dry, no damage
	IN437 to CB633	MH632	--	Fine settled sands
	CB633 to MH434	--	--	Video inspection not performed
PL3	D434A to MH434	--	--	Video inspection not performed
PL4	End of drain to D435B	--	--	Cracks & fractures
	D435B to CB435	--	--	Clean, dry, no damage
	CB435 to MH434	--	--	Video inspection not performed

Notes
Segments are listed by lateral and subdrainage, generally from the upstream to downstream structures.
Bold blue text signifies the location of submergence (partial or full) of SD lines under high water-table conditions.
* Lift Station LS431 and OWS421 are included with the S1 line, although they are downstream of S1 and four other SD drainage areas.
Some unlabeled (UNK) SD structures in this table have been renumbered since the video survey, based on the newest NBF SD map (see Appendix Table B-11).
Suspected infiltration was noted if the video report indicated damaged lines and standing water, inflow of water from unknown source, or moisture at cracks/seams.

Table 7.1-2
Summary of Soil Downgradient Pathway Evaluation

RI SubArea	RI Area of Concern	AOCs with SD Line Infiltration	AOCs with Potential Leaching Concerns	Regular RISLs (Leaching or Infiltration Concerns)	Less Stringent RISLs (Non-Leaching/ Non-Infiltration)
GTSP	*North Yard Area*				✓
	East Yard Area				✓
	Fuel Tank Area		□	✓	
	South Yard Area		■	✓	
	Low-Lying Area		■	✓	
PEL Area	NBF Fenceline Area		■	✓	
	Building 3-323 Area	○	■	✓	
	Buildings 3-302, 3-322 Area	●○		✓	
	Former Building 3-304 Area				✓
	Buildings 3-329, 3-333, 3-335 Area	○	■	✓	
	Building 3-324 Area		■	✓	
	Willow St. Substation Area				✓
	Building 3-353 Area	●		✓	
	Buildings 3-315, 3-626 Area	●		✓	
	Building 3-354 Area				✓
	Wind Tunnel Area				✓
	Green Hornet Area		■	✓	
North Flightline Area	Former Buildings 3-360, 3-361 Area		■	✓	
	Building 3-380 Storm Drain Area	●		✓	
	Building 3-380 Area	●		✓	
	Building 7-27-1 Area				✓
	Building 3-369 Area	●		✓	
	Building 3-374 Area	●○		✓	
	Building 3-390 Area	●		✓	
	Concourse A Area		■	✓	
Central Flightline Area	Buildings 3-800, 3-801 Area	●	■	✓	
	Building 3-818 Area				✓
	Main Fuel Farm Area		■	✓	
	Concourse C Area	●		✓	
	Concourse B Area	●	□	✓	
	Concourse B Storm Drain Replacement Area	●		✓	
	Central Flightline Transformer Areas				✓
South Flightline Area	*UBF-61 Area*				✓
	Former Buildings 3-830, 3-831, 3-832 Area				✓
	OWS-B11-MW1 Area	○		✓	
	Tent Hangar Area				✓

Notes:

● = Confirmed (visible) infiltration in or immediately adjacent to area of concern (AOC), based on video survey results

○ = Potential infiltration along submerged SD line (at high water) in AOC, based on video survey results

■ = Leaching suggested by comparison of significant soil exceedances to groundwater exceedances

□ = Leaching suggested by elevated soil TPH data and historical groundwater data, but with limited new groundwater data (GTSP FTA); or elevated groundwater VOC/TPH data with limited soil data (Concourse B)

Italicized AOCs indicate that the downgradient pathway is not a potential concern, and the less stringent soil RISLs apply

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
North Yard Area											
No detected exceedances											
East Yard Area											
2723	EYASB01	SB	A00-06-21DEYASB01-0.5	08/19/2010	0 - 0.5	PAH	Benzo(a)anthracene	0.047 J	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-0.5	08/19/2010	0 - 0.5	PAH	Benzo(b)fluoranthene	0.038 J	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-0.5	08/19/2010	0 - 0.5	PAH	Benzo(k)fluoranthene	0.038 J	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-0.5	08/19/2010	0 - 0.5	PAH	Total Benzofluoranthenes	0.076	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-0.5	08/19/2010	0 - 0.5	PAH	Chrysene	0.13	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-2	08/18/2010	0.5 - 2	MET	Arsenic	8	7.0	1.1	
2723	EYASB01	SB	A00-06-21DEYASB01-2	08/18/2010	0.5 - 2	PAH	Benzo(a)anthracene	0.42	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-2	08/18/2010	0.5 - 2	PAH	Benzo(b)fluoranthene	0.23 J	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-2	08/18/2010	0.5 - 2	PAH	Benzo(k)fluoranthene	0.23 J	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-2	08/18/2010	0.5 - 2	PAH	Total Benzofluoranthenes	0.46	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-2	08/18/2010	0.5 - 2	PAH	Benzo(g,h,i)perylene	0.12	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-2	08/18/2010	0.5 - 2	PAH	Benzo(a)pyrene	0.29	0.14	2.1	
2723	EYASB01	SB	A00-06-21DEYASB01-2	08/18/2010	0.5 - 2	PAH	Chrysene	0.49	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-2	08/18/2010	0.5 - 2	PAH	Dibenz(a,h)anthracene	0.049 J	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-2	08/18/2010	0.5 - 2	PAH	Indeno(1,2,3-cd)pyrene	0.12	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-2	08/18/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.40	0.14	2.9	
2723	EYASB01	SB	A00-06-21DEYASB01-5S	08/18/2010	3.5 - 5	PAH	Benzo(a)anthracene	0.056	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-5S	08/18/2010	3.5 - 5	PAH	Benzo(b)fluoranthene	0.044	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-5S	08/18/2010	3.5 - 5	PAH	Benzo(k)fluoranthene	0.044	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-5S	08/18/2010	3.5 - 5	PAH	Total Benzofluoranthenes	0.088	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-5S	08/18/2010	3.5 - 5	PAH	Benzo(g,h,i)perylene	0.033	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-5S	08/18/2010	3.5 - 5	PAH	Chrysene	0.056	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-5S	08/18/2010	3.5 - 5	PAH	Dibenz(a,h)anthracene	0.015 J	--	--	
2723	EYASB01	SB	A00-06-21DEYASB01-5S	08/18/2010	3.5 - 5	PAH	Indeno(1,2,3-cd)pyrene	0.029	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-0.5	08/19/2010	0 - 0.5	PAH	Benzo(a)anthracene	0.033 J	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-0.5	08/19/2010	0 - 0.5	PAH	Benzo(b)fluoranthene	0.039 J	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-0.5	08/19/2010	0 - 0.5	PAH	Benzo(k)fluoranthene	0.039 J	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-0.5	08/19/2010	0 - 0.5	PAH	Total Benzofluoranthenes	0.078	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-0.5	08/19/2010	0 - 0.5	PAH	Chrysene	0.063	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-2	08/19/2010	0.5 - 2	PAH	Chrysene	0.047 J	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-3.5	08/19/2010	2 - 3.5	PAH	Benzo(a)anthracene	0.52	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-3.5	08/19/2010	2 - 3.5	PAH	Benzo(b)fluoranthene	0.46 J	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-3.5	08/19/2010	2 - 3.5	PAH	Benzo(k)fluoranthene	0.46 J	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-3.5	08/19/2010	2 - 3.5	PAH	Total Benzofluoranthenes	0.92	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-3.5	08/19/2010	2 - 3.5	PAH	Benzo(g,h,i)perylene	0.22	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-3.5	08/19/2010	2 - 3.5	PAH	Benzo(a)pyrene	0.5	0.14	3.6	
2724	EYASB02	SB	A00-06-21DEYASB02-3.5	08/19/2010	2 - 3.5	PAH	Chrysene	0.69	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-3.5	08/19/2010	2 - 3.5	PAH	Dibenz(a,h)anthracene	0.081	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-3.5	08/19/2010	2 - 3.5	PAH	Indeno(1,2,3-cd)pyrene	0.23	--	--	

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2724	EYASB02	SB	A00-06-21DEYASB02-3.5	08/19/2010	2 - 3.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.68	0.14	4.9	
2724	EYASB02	SB	A00-06-21DEYASB02-5	08/19/2010	3.5 - 5	PAH	Benzo(a)anthracene	0.11	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-5	08/19/2010	3.5 - 5	PAH	Benzo(b)fluoranthene	0.11 J	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-5	08/19/2010	3.5 - 5	PAH	Benzo(k)fluoranthene	0.11 J	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-5	08/19/2010	3.5 - 5	PAH	Total Benzofluoranthenes	0.22	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-5	08/19/2010	3.5 - 5	PAH	Benzo(g,h,i)perylene	0.057	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-5	08/19/2010	3.5 - 5	PAH	Chrysene	0.14	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-5	08/19/2010	3.5 - 5	PAH	Dibenz(a,h)anthracene	0.022	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-5	08/19/2010	3.5 - 5	PAH	Indeno(1,2,3-cd)pyrene	0.057	--	--	
2724	EYASB02	SB	A00-06-21DEYASB02-5	08/19/2010	3.5 - 5	PAH	Total cPAHs (TEQ, NDx0.5)	0.15	0.14	1.1	
2725	EYASB03	SB	A00-06-21DEYASB03-0.5	08/19/2010	0 - 0.5	PAH	Benzo(a)anthracene	0.12	--	--	
2725	EYASB03	SB	A00-06-21DEYASB03-0.5	08/19/2010	0 - 0.5	PAH	Benzo(b)fluoranthene	0.15 J	--	--	
2725	EYASB03	SB	A00-06-21DEYASB03-0.5	08/19/2010	0 - 0.5	PAH	Benzo(k)fluoranthene	0.15 J	--	--	
2725	EYASB03	SB	A00-06-21DEYASB03-0.5	08/19/2010	0 - 0.5	PAH	Total Benzofluoranthenes	0.3	--	--	
2725	EYASB03	SB	A00-06-21DEYASB03-0.5	08/19/2010	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.03	--	--	
2725	EYASB03	SB	A00-06-21DEYASB03-0.5	08/19/2010	0 - 0.5	PAH	Chrysene	0.17	--	--	
2725	EYASB03	SB	A00-06-21DEYASB03-0.5	08/19/2010	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.012 J	--	--	
2725	EYASB03	SB	A00-06-21DEYASB03-0.5	08/19/2010	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.035	--	--	
2725	EYASB03	SB	A00-06-21DEYASB03-0.5	08/19/2010	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.16	0.14	1.1	
2725	EYASB03	SB	A00-06-21DEYASB03-3.5	08/19/2010	2 - 3.5	PAH	Benzo(a)anthracene	0.3 J	--	--	
2725	EYASB03	SB	A00-06-21DEYASB03-3.5	08/19/2010	2 - 3.5	PAH	Benzo(b)fluoranthene	0.29 J	--	--	
2725	EYASB03	SB	A00-06-21DEYASB03-3.5	08/19/2010	2 - 3.5	PAH	Benzo(k)fluoranthene	0.29 J	--	--	
2725	EYASB03	SB	A00-06-21DEYASB03-3.5	08/19/2010	2 - 3.5	PAH	Total Benzofluoranthenes	0.58	--	--	
2725	EYASB03	SB	A00-06-21DEYASB03-3.5	08/19/2010	2 - 3.5	PAH	Benzo(g,h,i)perylene	0.23	--	--	
2725	EYASB03	SB	A00-06-21DEYASB03-3.5	08/19/2010	2 - 3.5	PAH	Benzo(a)pyrene	0.32 J	0.14	2.3	
2725	EYASB03	SB	A00-06-21DEYASB03-3.5	08/19/2010	2 - 3.5	PAH	Chrysene	0.36 J	--	--	
2725	EYASB03	SB	A00-06-21DEYASB03-3.5	08/19/2010	2 - 3.5	PAH	Dibenz(a,h)anthracene	0.053	--	--	
2725	EYASB03	SB	A00-06-21DEYASB03-3.5	08/19/2010	2 - 3.5	PAH	Indeno(1,2,3-cd)pyrene	0.18	--	--	
2725	EYASB03	SB	A00-06-21DEYASB03-3.5	08/19/2010	2 - 3.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.43	0.14	3.1	
2734	GTSP-1	MW	SCL-GTSP1-A	07/27/2006	0 - 2	PAH	Benzo(a)anthracene	0.71	--	--	
2734	GTSP-1	MW	SCL-GTSP1-A	07/27/2006	0 - 2	PAH	Benzo(b)fluoranthene	0.61	--	--	
2734	GTSP-1	MW	SCL-GTSP1-A	07/27/2006	0 - 2	PAH	Benzo(k)fluoranthene	0.57	--	--	
2734	GTSP-1	MW	SCL-GTSP1-A	07/27/2006	0 - 2	PAH	Total Benzofluoranthenes	1.18	--	--	
2734	GTSP-1	MW	SCL-GTSP1-A	07/27/2006	0 - 2	PAH	Benzo(g,h,i)perylene	0.4	--	--	
2734	GTSP-1	MW	SCL-GTSP1-A	07/27/2006	0 - 2	PAH	Benzo(a)pyrene	0.78	0.14	5.6	
2734	GTSP-1	MW	SCL-GTSP1-A	07/27/2006	0 - 2	PAH	Chrysene	0.83	--	--	
2734	GTSP-1	MW	SCL-GTSP1-A	07/27/2006	0 - 2	PAH	Dibenz(a,h)anthracene	0.081	--	--	
2734	GTSP-1	MW	SCL-GTSP1-A	07/27/2006	0 - 2	PAH	Indeno(1,2,3-cd)pyrene	0.37	--	--	
2734	GTSP-1	MW	SCL-GTSP1-A	07/27/2006	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	1.0	0.14	7.3	
2734	GTSP-1	MW	SCL-GTSP1-B	07/27/2006	2 - 4	PAH	Benzo(a)anthracene	0.74	--	--	
2734	GTSP-1	MW	SCL-GTSP1-B	07/27/2006	2 - 4	PAH	Benzo(b)fluoranthene	0.47	--	--	
2734	GTSP-1	MW	SCL-GTSP1-B	07/27/2006	2 - 4	PAH	Benzo(k)fluoranthene	0.56	--	--	
2734	GTSP-1	MW	SCL-GTSP1-B	07/27/2006	2 - 4	PAH	Total Benzofluoranthenes	1.03	--	--	

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2734	GTSP-1	MW	SCL-GTSP1-B	07/27/2006	2 - 4	PAH	Benzo(g,h,i)perylene	0.32	--	--	
2734	GTSP-1	MW	SCL-GTSP1-B	07/27/2006	2 - 4	PAH	Benzo(a)pyrene	0.7	0.14	5.0	
2734	GTSP-1	MW	SCL-GTSP1-B	07/27/2006	2 - 4	PAH	Chrysene	0.79	--	--	
2734	GTSP-1	MW	SCL-GTSP1-B	07/27/2006	2 - 4	PAH	Dibenz(a,h)anthracene	0.064 J	--	--	
2734	GTSP-1	MW	SCL-GTSP1-B	07/27/2006	2 - 4	PAH	Indeno(1,2,3-cd)pyrene	0.32	--	--	
2734	GTSP-1	MW	SCL-GTSP1-B	07/27/2006	2 - 4	PAH	Total cPAHs (TEQ, NDx0.5)	0.92	0.14	6.6	
Fuel Tank Area											
137	FOU-1	SB	FOU-1	09/19/2001	7.5 - 9	TPH	Gasoline Range Hydrocarbons-HCID	290	30	9.7	
137	FOU-1	SB	FOU-1	09/19/2001	7.5 - 9	TPH	Diesel Range Hydrocarbons	4,200	2,000	2.1	
137	FOU-1	SB	FOU-1	09/19/2001	7.5 - 9	TPH	Oil Range Hydrocarbons	2,200	2,000	1.1	
137	FOU-1	SB	FOU-1	09/19/2001	7.5 - 9	TPH	Oil Range Hydrocarbons-HCID	5,800	2,000	2.9	
137	FOU-1	SB	FOU-1	09/19/2001	7.5 - 9	PAH	Benzo(a)anthracene	0.78	--	--	
137	FOU-1	SB	FOU-1	09/19/2001	7.5 - 9	PAH	Benzo(b)fluoranthene	0.23	--	--	
137	FOU-1	SB	FOU-1	09/19/2001	7.5 - 9	PAH	Benzo(k)fluoranthene	0.23	--	--	
137	FOU-1	SB	FOU-1	09/19/2001	7.5 - 9	PAH	Total Benzofluoranthenes	0.46	--	--	
137	FOU-1	SB	FOU-1	09/19/2001	7.5 - 9	PAH	Benzo(g,h,i)perylene	0.078	0.031	2.5	
137	FOU-1	SB	FOU-1	09/19/2001	7.5 - 9	PAH	Benzo(a)pyrene	0.38	0.0094	40	
137	FOU-1	SB	FOU-1	09/19/2001	7.5 - 9	PAH	Chrysene	1.2	--	--	
137	FOU-1	SB	FOU-1	09/19/2001	7.5 - 9	PAH	Fluoranthene	0.33	0.16	2.1	
137	FOU-1	SB	FOU-1	09/19/2001	7.5 - 9	PAH	Indeno(1,2,3-cd)pyrene	0.06	--	--	
137	FOU-1	SB	FOU-1	09/19/2001	7.5 - 9	PAH	2-Methylnaphthalene	3	0.043	70	
137	FOU-1	SB	FOU-1	09/19/2001	7.5 - 9	PAH	Total cPAHs (TEQ, NDx0.5)	0.52	0.0094	56	
140	FOU-4	SB	FOU-4	09/19/2001	8 - 9.5	TPH	Gasoline Range Hydrocarbons-HCID	140	30	4.7	Removed
4110	FS4	EX	FS4	06/30/2009	--	PAH	Benzo(a)anthracene	0.11	--	--	Removed
4110	FS4	EX	FS4	06/30/2009	--	PAH	Benzo(b)fluoranthene	0.14	--	--	Removed
4110	FS4	EX	FS4	06/30/2009	--	PAH	Benzo(k)fluoranthene	0.049	--	--	Removed
4110	FS4	EX	FS4	06/30/2009	--	PAH	Total Benzofluoranthenes	0.189	--	--	Removed
4110	FS4	EX	FS4	06/30/2009	--	PAH	Benzo(g,h,i)perylene	0.14	0.031	4.5	Removed
4110	FS4	EX	FS4	06/30/2009	--	PAH	Benzo(a)pyrene	0.12	0.0094	13	Removed
4110	FS4	EX	FS4	06/30/2009	--	PAH	Chrysene	0.14	--	--	Removed
4110	FS4	EX	FS4	06/30/2009	--	PAH	Dibenz(a,h)anthracene	0.029	--	--	Removed
4110	FS4	EX	FS4	06/30/2009	--	PAH	Fluoranthene	0.25	0.16	1.6	Removed
4110	FS4	EX	FS4	06/30/2009	--	PAH	Indeno(1,2,3-cd)pyrene	0.083	--	--	Removed
4110	FS4	EX	FS4	06/30/2009	--	PAH	Total cPAHs (TEQ, NDx0.5)	0.16	0.0094	17	Removed
3696	FTA-CS01	SB	FTA-CS01-9.5-11	05/17/2011	9.5 - 11	TPH	Diesel Range Hydrocarbons	12,000 J	2,000	6.0	Removed
3696	FTA-CS01	SB	FTA-CS01-9.5-11	05/17/2011	9.5 - 11	TPH	Oil Range Hydrocarbons	11,000 J	2,000	5.5	Removed
3699	FTA-CS04-A	EX	FTA-CS04-A	11/21/2011	3.5 - 4	MET	Copper	131	36	3.6	
2726	FTASB01	SB	A00-06-21DFTASB01-8	08/17/2010	6.5 - 8	TPH	Gasoline Range Hydrocarbons	1,800	30	60	Removed
2726	FTASB01	SB	A00-06-21DFTASB01-8	08/17/2010	6.5 - 8	TPH	Diesel Range Hydrocarbons	8,900	2,000	4.5	Removed
2726	FTASB01	SB	A00-06-21DFTASB01-8	08/17/2010	6.5 - 8	TPH	Oil Range Hydrocarbons	9,300	2,000	4.7	Removed
2726	FTASB01	SB	A00-06-21DFTASB01-8	08/17/2010	6.5 - 8	TPH	Total Petroleum Hydrocarbons	20,000	2,000	10	Removed
2726	FTASB01	SB	A00-06-21DFTASB01-9.5	08/17/2010	8 - 9.5	TPH	Gasoline Range Hydrocarbons	2,700	30	90	Removed

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2726	FTASB01	SB	A00-06-21DFTASB01-9.5	08/17/2010	8 - 9.5	TPH	Diesel Range Hydrocarbons	12,000	2,000	6.0	Removed
2726	FTASB01	SB	A00-06-21DFTASB01-9.5	08/17/2010	8 - 9.5	TPH	Oil Range Hydrocarbons	13,000	2,000	6.5	Removed
2726	FTASB01	SB	A00-06-21DFTASB01-9.5	08/17/2010	8 - 9.5	TPH	Total Petroleum Hydrocarbons	27,700	2,000	14	Removed
2726	FTASB01	SB	A00-06-21DFTASB01-11	08/17/2010	9.5 - 11	TPH	Gasoline Range Hydrocarbons	1,400	30	47	Removed
2726	FTASB01	SB	A00-06-21DFTASB01-11	08/17/2010	9.5 - 11	TPH	Diesel Range Hydrocarbons	4,300	2,000	2.2	Removed
2726	FTASB01	SB	A00-06-21DFTASB01-11	08/17/2010	9.5 - 11	TPH	Oil Range Hydrocarbons	4,500	2,000	2.3	Removed
2726	FTASB01	SB	A00-06-21DFTASB01-11	08/17/2010	9.5 - 11	TPH	Total Petroleum Hydrocarbons	10,200	2,000	5.1	Removed
2727	FTASB02	SB	A00-06-21DFTASB02-9.5S	08/16/2010	8 - 9.5	TPH	Gasoline Range Hydrocarbons	880	100	8.8	Removed
2727	FTASB02	SB	A00-06-21DFTASB02-9.5	08/16/2010	8 - 9.5	TPH	Diesel Range Hydrocarbons	3,900 J	2,000	2.0	Removed
2727	FTASB02	SB	A00-06-21DFTASB02-9.5	08/16/2010	8 - 9.5	TPH	Oil Range Hydrocarbons	4,000	2,000	2.0	Removed
2727	FTASB02	SB	A00-06-21DFTASB02-9.5S	08/16/2010	8 - 9.5	TPH	Total Petroleum Hydrocarbons	8,380 J	2,000	4.2	Removed
2727	FTASB02	SB	A00-06-21DFTASB02-9.5	08/16/2010	8 - 9.5	PAH	Fluoranthene	0.3	0.16	1.9	Removed
2727	FTASB02	SB	A00-06-21DFTASB02-9.5	08/16/2010	8 - 9.5	PAH	2-Methylnaphthalene	0.69	0.043	16	Removed
2729	FTASB04	SB	A00-06-21DFTASB04-8	08/16/2010	6.5 - 8	PAH	Benzo(g,h,i)perylene	0.089 J	0.031	2.9	Removed
2729	FTASB04	SB	A00-06-21DFTASB04-8	08/16/2010	6.5 - 8	PAH	Benzo(a)pyrene	0.05 J	0.0094	5.3	Removed
2729	FTASB04	SB	A00-06-21DFTASB04-8	08/16/2010	6.5 - 8	PAH	Chrysene	0.055 J	--	--	Removed
2729	FTASB04	SB	A00-06-21DFTASB04-8	08/16/2010	6.5 - 8	PAH	2-Methylnaphthalene	0.069 J	0.043	1.6	Removed
2729	FTASB04	SB	A00-06-21DFTASB04-8	08/16/2010	6.5 - 8	PAH	Total cPAHs (TEQ, NDx0.5)	0.056	0.0094	6.0	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-6.5	08/19/2010	5 - 6.5	MET	Copper	236	36	6.6	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-6.5	08/19/2010	5 - 6.5	MET	Lead	76 J	57	1.3	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-6.5	08/19/2010	5 - 6.5	MET	Zinc	237	86	2.8	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-8	08/19/2010	6.5 - 8	MET	Arsenic	20	7.0	2.9	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-8	08/19/2010	6.5 - 8	MET	Cadmium	3.5	1.0	3.5	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-8	08/19/2010	6.5 - 8	MET	Chromium	132	120	1.1	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-8	08/19/2010	6.5 - 8	MET	Copper	2,610	36	73	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-8	08/19/2010	6.5 - 8	MET	Lead	2,830 J	57	50	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-8	08/19/2010	6.5 - 8	MET	Mercury	0.23	0.070	3.3	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-8	08/19/2010	6.5 - 8	MET	Nickel	88	38	2.3	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-8	08/19/2010	6.5 - 8	MET	Zinc	2,850	86	33	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-8	08/19/2010	6.5 - 8	PAH	Benzo(a)anthracene	0.34 J	--	--	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-8	08/19/2010	6.5 - 8	PAH	Benzo(b)fluoranthene	0.36 J	--	--	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-8	08/19/2010	6.5 - 8	PAH	Benzo(k)fluoranthene	0.36 J	--	--	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-8	08/19/2010	6.5 - 8	PAH	Total Benzofluoranthenes	0.72	--	--	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-8	08/19/2010	6.5 - 8	PAH	Benzo(a)pyrene	0.39 J	0.0094	41	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-8	08/19/2010	6.5 - 8	PAH	Chrysene	0.56	--	--	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-8	08/19/2010	6.5 - 8	PAH	Fluoranthene	0.84	0.16	5.3	Removed
2730	FTASB05	SB	A00-06-21DFTASB05-8	08/19/2010	6.5 - 8	PAH	Total cPAHs (TEQ, NDx0.5)	0.51	0.0094	55	Removed
2731	FTATW01	TW	A00-06-21DFATW01-8	07/30/2010	6.5 - 8	TPH	Total Petroleum Hydrocarbons	3,000 J	2,000	1.5	Removed
2731	FTATW01	TW	A00-06-21DFTATW01-9.5	07/30/2010	8 - 9.5	TPH	Gasoline Range Hydrocarbons	1,500	30	50	Removed
2731	FTATW01	TW	A00-06-21DFTATW01-9.5	07/30/2010	8 - 9.5	TPH	Diesel Range Hydrocarbons	4,600 J	2,000	2.3	Removed
2731	FTATW01	TW	A00-06-21DFTATW01-9.5	07/30/2010	8 - 9.5	TPH	Oil Range Hydrocarbons	5,100 J	2,000	2.6	Removed
2731	FTATW01	TW	A00-06-21DFTATW01-9.5	07/30/2010	8 - 9.5	TPH	Total Petroleum Hydrocarbons	11,200 J	2,000	5.6	Removed
2731	FTATW01	TW	A00-06-21DFTATW01-11	07/30/2010	9.5 - 11	TPH	Gasoline Range Hydrocarbons	2,200	30	73	Removed

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2731	FTATW01	TW	A00-06-21DFTATW01-11	07/30/2010	9.5 - 11	TPH	Diesel Range Hydrocarbons	15,000 J	2,000	7.5	Removed
2731	FTATW01	TW	A00-06-21DFTATW01-11	07/30/2010	9.5 - 11	TPH	Oil Range Hydrocarbons	18,000 J	2,000	9.0	Removed
2731	FTATW01	TW	A00-06-21DFTATW01-11	07/30/2010	9.5 - 11	TPH	Total Petroleum Hydrocarbons	35,200 J	2,000	18	Removed
2731	FTATW01	TW	A00-06-21DFTATW01-12.5	07/30/2010	11 - 12.5	TPH	Diesel Range Hydrocarbons	7,300	2,000	3.7	Removed
2731	FTATW01	TW	A00-06-21DFTATW01-12.5	07/30/2010	11 - 12.5	TPH	Oil Range Hydrocarbons	8,300	2,000	4.2	Removed
2731	FTATW01	TW	A00-06-21DFTATW01-12.5	07/30/2010	11 - 12.5	TPH	Total Petroleum Hydrocarbons	15,600	2,000	7.8	Removed
2731	FTATW01	TW	A00-06-21DFTATW01-14	07/30/2010	12.5 - 14	TPH	Diesel Range Hydrocarbons	2,200	2,000	1.1	Removed
2731	FTATW01	TW	A00-06-21DFTATW01-14	07/30/2010	12.5 - 14	TPH	Oil Range Hydrocarbons	2,600	2,000	1.3	Removed
2731	FTATW01	TW	A00-06-21DFTATW01-14	07/30/2010	12.5 - 14	TPH	Total Petroleum Hydrocarbons	4,800	2,000	2.4	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-8	07/29/2010	6.5 - 8	PHT	Bis(2-ethylhexyl) phthalate	1.5	0.067	22	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-8	07/29/2010	6.5 - 8	PAH	Benzo(a)anthracene	0.054 J	--	--	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-8	07/29/2010	6.5 - 8	PAH	Benzo(b)fluoranthene	0.063 J	--	--	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-8	07/29/2010	6.5 - 8	PAH	Benzo(k)fluoranthene	0.062 J	--	--	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-8	07/29/2010	6.5 - 8	PAH	Total Benzofluoranthenes	0.125	--	--	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-8	07/29/2010	6.5 - 8	PAH	Benzo(g,h,i)perylene	0.047 J	0.031	1.5	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-8	07/29/2010	6.5 - 8	PAH	Benzo(a)pyrene	0.041 J	0.0094	4.4	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-8	07/29/2010	6.5 - 8	PAH	Chrysene	0.14	--	--	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-8	07/29/2010	6.5 - 8	PAH	Total cPAHs (TEQ, NDx0.5)	0.062	0.0094	6.6	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-8	07/29/2010	6.5 - 8	VAH	Benzene	0.0013	0.0010	1.3	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-9.5	07/29/2010	8 - 9.5	TPH	Gasoline Range Hydrocarbons	4,500	30	150	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-9.5	07/29/2010	8 - 9.5	TPH	Diesel Range Hydrocarbons	4,100 J	2,000	2.1	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-9.5	07/29/2010	8 - 9.5	TPH	Oil Range Hydrocarbons	4,200	2,000	2.1	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-9.5	07/29/2010	8 - 9.5	TPH	Total Petroleum Hydrocarbons	12,800 J	2,000	6.4	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-9.5	07/29/2010	8 - 9.5	PAH	Benzo(a)anthracene	0.37 J	--	--	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-9.5	07/29/2010	8 - 9.5	PAH	Chrysene	1.1	--	--	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-9.5	07/29/2010	8 - 9.5	PAH	Fluoranthene	0.22 J	0.16	1.4	Removed
2732	FTATW02	TW	A00-06-21DFTATW02-9.5	07/29/2010	8 - 9.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.12	0.0094	13	Removed
2025	GTSP08-39	SB	GTSP08-39-2-4	09/16/2008	2 - 4	PCB	Total PCBs	0.113	0.033	3.4	
2739	GTSP-6	MW	A00-06-21DGTSP6A-SS-0.5	06/16/2010	0 - 0.5	TPH	Gasoline Range Hydrocarbons	44	30	1.5	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6G-BH-9.5	06/16/2010	8 - 9.5	TPH	Total Petroleum Hydrocarbons	3,100 J	2,000	1.6	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6G-BH-9.5	06/16/2010	8 - 9.5	PAH	Benzo(a)anthracene	0.076	--	--	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6G-BH-9.5	06/16/2010	8 - 9.5	PAH	Chrysene	0.53	--	--	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6G-BH-9.5	06/16/2010	8 - 9.5	PAH	2-Methylnaphthalene	0.83	0.043	19	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6G-BH-9.5	06/16/2010	8 - 9.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.021	0.0094	2.3	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6H-BH-11.0	06/16/2010	9.5 - 11	TPH	Gasoline Range Hydrocarbons	2,400	30	80	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6H-BH-11.0	06/16/2010	9.5 - 11	TPH	Diesel Range Hydrocarbons	6,300 J	2,000	3.2	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6H-BH-11.0	06/16/2010	9.5 - 11	TPH	Oil Range Hydrocarbons	7,800	2,000	3.9	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6H-BH-11.0	06/16/2010	9.5 - 11	TPH	Total Petroleum Hydrocarbons	16,500 J	2,000	8.3	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6H-BH-11.0	06/16/2010	9.5 - 11	PAH	Benzo(a)anthracene	0.56	--	--	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6H-BH-11.0	06/16/2010	9.5 - 11	PAH	Chrysene	2.8	--	--	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6H-BH-11.0	06/16/2010	9.5 - 11	PAH	Fluoranthene	1	0.16	6.3	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6H-BH-11.0	06/16/2010	9.5 - 11	PAH	2-Methylnaphthalene	15	0.043	350	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6H-BH-11.0	06/16/2010	9.5 - 11	PAH	Total cPAHs (TEQ, NDx0.5)	0.14	0.0094	14	Removed

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2739	GTSP-6	MW	A00-06-21DGTSP6H-BH-11.0	06/16/2010	9.5 - 11	VAH	Benzene	0.051	0.0010	51	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6I-BH-12.5	06/16/2010	11 - 12.5	TPH	Diesel Range Hydrocarbons	7,200	2,000	3.6	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6I-BH-12.5	06/16/2010	11 - 12.5	TPH	Oil Range Hydrocarbons	8,200	2,000	4.1	Removed
2739	GTSP-6	MW	A00-06-21DGTSP6I-BH-12.5	06/16/2010	11 - 12.5	TPH	Total Petroleum Hydrocarbons	15,400	2,000	7.7	Removed
1121	GX-62	SS	GX-62	10/12/1987	0 - 1.2	TPH	Oil Range Hydrocarbons	8,240	2,000	4.1	Removed
1122	GX-63	SS	GX-63	10/12/1987	--	TPH	Oil Range Hydrocarbons	35,690	2,000	18	Removed
1037	Tank 1	EX	Tank 1	03/22/1989	9.8	TPH	Total Petroleum Hydrocarbons	2,460	2,000	1.2	Removed
South Yard Area											
126	BD-2	SB	BD-2	09/19/2001	5 - 7	MET	Copper	59.1	36	1.6	
126	BD-2	SB	BD-2	09/19/2001	5 - 7	MET	Mercury	1.1	0.070	16	
128	BFP-1	SB	BFP-1	09/19/2001	3 - 5	PCB	Total PCBs	0.058	0.033	1.8	
128	BFP-1	SB	BFP-1	09/19/2001	3 - 5	MET	Mercury	0.09	0.070	1.3	
130	BFP-3	SB	BFP-3 (DUP)	09/19/2001	1.5 - 6	PAH	Benzo(a)anthracene	0.32	--	--	
130	BFP-3	SB	BFP-3 (DUP)	09/19/2001	1.5 - 6	PAH	Benzo(b)fluoranthene	0.56	--	--	
130	BFP-3	SB	BFP-3 (DUP)	09/19/2001	1.5 - 6	PAH	Benzo(k)fluoranthene	0.42	--	--	
130	BFP-3	SB	BFP-3 (DUP)	09/19/2001	1.5 - 6	PAH	Total Benzofluoranthenes	0.98	--	--	
130	BFP-3	SB	BFP-3 (DUP)	09/19/2001	1.5 - 6	PAH	Benzo(g,h,i)perylene	0.1	0.031	3.2	
130	BFP-3	SB	BFP-3 (DUP)	09/19/2001	1.5 - 6	PAH	Benzo(a)pyrene	0.32	0.0094	34	
130	BFP-3	SB	BFP-3 (DUP)	09/19/2001	1.5 - 6	PAH	Chrysene	0.41	--	--	
130	BFP-3	SB	BFP-3 (DUP)	09/19/2001	1.5 - 6	PAH	Dibenz(a,h)anthracene	0.031	--	--	
130	BFP-3	SB	BFP-3 (DUP)	09/19/2001	1.5 - 6	PAH	Fluoranthene	0.68	0.16	4.3	
130	BFP-3	SB	BFP-3 (DUP)	09/19/2001	1.5 - 6	PAH	Indeno(1,2,3-cd)pyrene	0.1	--	--	
130	BFP-3	SB	BFP-3 (DUP)	09/19/2001	1.5 - 6	PAH	2-Methylnaphthalene	0.064	0.043	1.5	
130	BFP-3	SB	BFP-3 (DUP)	09/19/2001	1.5 - 6	PAH	Total cPAHs (TEQ, NDx0.5)	0.47	0.0094	50	
132	BFP-5	SB	BFP-5	09/19/2001	4 - 6	PAH	Benzo(a)anthracene	0.81	--	--	
132	BFP-5	SB	BFP-5	09/19/2001	4 - 6	PAH	Benzo(b)fluoranthene	0.75	--	--	
132	BFP-5	SB	BFP-5	09/19/2001	4 - 6	PAH	Benzo(k)fluoranthene	0.56	--	--	
132	BFP-5	SB	BFP-5	09/19/2001	4 - 6	PAH	Total Benzofluoranthenes	1.31	--	--	
132	BFP-5	SB	BFP-5	09/19/2001	4 - 6	PAH	Benzo(g,h,i)perylene	0.14	0.031	4.5	
132	BFP-5	SB	BFP-5	09/19/2001	4 - 6	PAH	Benzo(a)pyrene	0.63	0.0094	67	
132	BFP-5	SB	BFP-5	09/19/2001	4 - 6	PAH	Chrysene	0.85	--	--	
132	BFP-5	SB	BFP-5	09/19/2001	4 - 6	PAH	Dibenz(a,h)anthracene	0.067	--	--	
132	BFP-5	SB	BFP-5	09/19/2001	4 - 6	PAH	Fluoranthene	1.6	0.16	10	
132	BFP-5	SB	BFP-5	09/19/2001	4 - 6	PAH	Indeno(1,2,3-cd)pyrene	0.17	--	--	
132	BFP-5	SB	BFP-5	09/19/2001	4 - 6	PAH	Total cPAHs (TEQ, NDx0.5)	0.87	0.0094	93	
133	CCS-1	SB	CCS-1	09/19/2001	5.5 - 7	MET	Zinc	180	86	2.1	
134	CCS-2	SB	CCS-2	09/19/2001	0.5 - 2.5	MET	Mercury	0.17	0.070	2.4	
134	CCS-2	SB	CCS-2	09/19/2001	0.5 - 2.5	MET	Nickel	137	38	3.6	
135	CCS-3	SB	CCS-3	09/19/2001	5.5 - 7	MET	Copper	68	36	1.9	
135	CCS-3	SB	CCS-3	09/19/2001	5.5 - 7	MET	Mercury	0.36	0.070	5.1	
135	CCS-3	SB	CCS-3	09/19/2001	5.5 - 7	MET	Zinc	94.2	86	1.1	
135	CCS-3	SB	CCS-3	09/19/2001	5.5 - 7	PAH	Benzo(a)anthracene	0.21	--	--	

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
135	CCS-3	SB	CCS-3	09/19/2001	5.5 - 7	PAH	Benzo(b)fluoranthene	0.33	--	--	
135	CCS-3	SB	CCS-3	09/19/2001	5.5 - 7	PAH	Benzo(k)fluoranthene	0.25	--	--	
135	CCS-3	SB	CCS-3	09/19/2001	5.5 - 7	PAH	Total Benzofluoranthenes	0.58	--	--	
135	CCS-3	SB	CCS-3	09/19/2001	5.5 - 7	PAH	Benzo(g,h,i)perylene	0.061	0.031	2.0	
135	CCS-3	SB	CCS-3	09/19/2001	5.5 - 7	PAH	Benzo(a)pyrene	0.22	0.0094	23	
135	CCS-3	SB	CCS-3	09/19/2001	5.5 - 7	PAH	Chrysene	0.24	--	--	
135	CCS-3	SB	CCS-3	09/19/2001	5.5 - 7	PAH	Dibenz(a,h)anthracene	0.027	--	--	
135	CCS-3	SB	CCS-3	09/19/2001	5.5 - 7	PAH	Fluoranthene	0.39	0.16	2.4	
135	CCS-3	SB	CCS-3	09/19/2001	5.5 - 7	PAH	Indeno(1,2,3-cd)pyrene	0.064	--	--	
135	CCS-3	SB	CCS-3	09/19/2001	5.5 - 7	PAH	Total cPAHs (TEQ, NDx0.5)	0.31	0.0094	33	
136	CCS-4	SB	CCS-4	09/19/2001	1 - 3	PAH	Benzo(a)anthracene	0.053	--	--	
136	CCS-4	SB	CCS-4	09/19/2001	1 - 3	PAH	Benzo(b)fluoranthene	0.058	--	--	
136	CCS-4	SB	CCS-4	09/19/2001	1 - 3	PAH	Benzo(k)fluoranthene	0.63	--	--	
136	CCS-4	SB	CCS-4	09/19/2001	1 - 3	PAH	Total Benzofluoranthenes	0.688	--	--	
136	CCS-4	SB	CCS-4	09/19/2001	1 - 3	PAH	Benzo(a)pyrene	0.053	0.0094	5.6	
136	CCS-4	SB	CCS-4	09/19/2001	1 - 3	PAH	Chrysene	0.064	--	--	
136	CCS-4	SB	CCS-4	09/19/2001	1 - 3	PAH	Total cPAHs (TEQ, NDx0.5)	0.13	0.0094	14	
2735	GTSP-2	MW	SCL-GTSP2-A	07/27/2006	0 - 0.5	PCB	Total PCBs	0.255	0.033	7.7	Removed
2735	GTSP-2	MW	SCL-GTSP2-A	07/27/2006	0 - 0.5	MET	Mercury	0.12	0.070	1.7	Removed
2735	GTSP-2	MW	SCL-GTSP2-A	07/27/2006	0 - 0.5	PAH	Benzo(a)anthracene	0.047 J	--	--	Removed
2735	GTSP-2	MW	SCL-GTSP2-A	07/27/2006	0 - 0.5	PAH	Benzo(b)fluoranthene	0.064	--	--	Removed
2735	GTSP-2	MW	SCL-GTSP2-A	07/27/2006	0 - 0.5	PAH	Benzo(k)fluoranthene	0.038 J	--	--	Removed
2735	GTSP-2	MW	SCL-GTSP2-A	07/27/2006	0 - 0.5	PAH	Total Benzofluoranthenes	0.102	--	--	Removed
2735	GTSP-2	MW	SCL-GTSP2-A	07/27/2006	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.035 J	0.031	1.1	Removed
2735	GTSP-2	MW	SCL-GTSP2-A	07/27/2006	0 - 0.5	PAH	Benzo(a)pyrene	0.059 J	0.0094	6.3	Removed
2735	GTSP-2	MW	SCL-GTSP2-A	07/27/2006	0 - 0.5	PAH	Chrysene	0.063 J	--	--	Removed
2735	GTSP-2	MW	SCL-GTSP2-A	07/27/2006	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.034 J	--	--	Removed
2735	GTSP-2	MW	SCL-GTSP2-A	07/27/2006	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.081	0.0094	8.6	Removed
2735	GTSP-2	MW	SCL-GTSP2-B	07/27/2006	2.5 - 4	MET	Mercury	0.11	0.070	1.6	
2735	GTSP-2	MW	SCL-GTSP2-B	07/27/2006	2.5 - 4	PAH	2-Methylnaphthalene	0.19	0.043	4.4	
2735	GTSP-2	MW	SCL-GTSP2-D	07/27/2006	6 - 8	PAH	2-Methylnaphthalene	0.063 J	0.043	1.5	
2735	GTSP-2	MW	SCL-GTSP2-E	07/27/2006	8 - 10	VOC	Vinyl chloride	0.0016	--	--	
2737	GTSP-4	MW	SCL-GTSP4-A	07/27/2006	0 - 1.5	PCB	Total PCBs	0.54	0.033	16	Removed
2737	GTSP-4	MW	SCL-GTSP4-A	07/27/2006	0 - 1.5	MET	Mercury	1.1	0.070	16	Removed
2737	GTSP-4	MW	SCL-GTSP4-A	07/27/2006	0 - 1.5	PAH	Benzo(a)anthracene	0.054 J	--	--	Removed
2737	GTSP-4	MW	SCL-GTSP4-A	07/27/2006	0 - 1.5	PAH	Benzo(b)fluoranthene	0.066	--	--	Removed
2737	GTSP-4	MW	SCL-GTSP4-A	07/27/2006	0 - 1.5	PAH	Benzo(k)fluoranthene	0.044 J	--	--	Removed
2737	GTSP-4	MW	SCL-GTSP4-A	07/27/2006	0 - 1.5	PAH	Total Benzofluoranthenes	0.11	--	--	Removed
2737	GTSP-4	MW	SCL-GTSP4-A	07/27/2006	0 - 1.5	PAH	Benzo(a)pyrene	0.052 J	0.0094	5.5	Removed
2737	GTSP-4	MW	SCL-GTSP4-A	07/27/2006	0 - 1.5	PAH	Chrysene	0.066	--	--	Removed
2737	GTSP-4	MW	SCL-GTSP4-A	07/27/2006	0 - 1.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.075	0.0094	8.0	Removed
2737	GTSP-4	MW	SCL-GTSP4-B	07/27/2006	4.5 - 5.5	MET	Mercury	0.62	0.070	8.9	
2737	GTSP-4	MW	SCL-GTSP4-B	07/27/2006	4.5 - 5.5	PAH	Benzo(a)anthracene	0.081	--	--	

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2737	GTSP-4	MW	SCL-GTSP4-B	07/27/2006	4.5 - 5.5	PAH	Benzo(b)fluoranthene	0.14	--	--	
2737	GTSP-4	MW	SCL-GTSP4-B	07/27/2006	4.5 - 5.5	PAH	Benzo(k)fluoranthene	0.088	--	--	
2737	GTSP-4	MW	SCL-GTSP4-B	07/27/2006	4.5 - 5.5	PAH	Total Benzofluoranthenes	0.228	--	--	
2737	GTSP-4	MW	SCL-GTSP4-B	07/27/2006	4.5 - 5.5	PAH	Benzo(g,h,i)perylene	0.041 J	0.031	1.3	
2737	GTSP-4	MW	SCL-GTSP4-B	07/27/2006	4.5 - 5.5	PAH	Benzo(a)pyrene	0.11	0.0094	12	
2737	GTSP-4	MW	SCL-GTSP4-B	07/27/2006	4.5 - 5.5	PAH	Chrysene	0.14	--	--	
2737	GTSP-4	MW	SCL-GTSP4-B	07/27/2006	4.5 - 5.5	PAH	Fluoranthene	0.34	0.16	2.1	
2737	GTSP-4	MW	SCL-GTSP4-B	07/27/2006	4.5 - 5.5	PAH	Indeno(1,2,3-cd)pyrene	0.034 J	--	--	
2737	GTSP-4	MW	SCL-GTSP4-B	07/27/2006	4.5 - 5.5	PAH	2-Methylnaphthalene	0.048 J	0.043	1.1	
2737	GTSP-4	MW	SCL-GTSP4-B	07/27/2006	4.5 - 5.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.15	0.0094	16	
2737	GTSP-4	MW	SCL-GTSP4-B	07/27/2006	4.5 - 5.5	VOC	Tetrachloroethene (PCE)	0.003	0.0018	1.7	
1004	IA25	EX	SCL-IA25	05/18/2006	2.6 - 3.1	PCB	Total PCBs	1.4	0.033	42	Removed
1005	IA27	EX	SCL-IA27	05/18/2006	2.8 - 3.3	PCB	Total PCBs	1.2	0.033	36	Removed
1006	IA29	EX	SCL-IA29	05/18/2006	3 - 3.6	PCB	Total PCBs	1.4	0.033	42	Removed
1007	IA31	EX	SCL-IA31	05/18/2006	3.4 - 3.9	PCB	Total PCBs	0.06	0.033	1.8	Removed
1008	IA32	EX	SCL-IA32	05/18/2006	3.4 - 3.9	PCB	Total PCBs	0.077	0.033	2.3	Removed
1009	IA33	EX	SCL-IA33	05/18/2006	3.4 - 3.9	PCB	Total PCBs	0.198	0.033	6.0	Removed
3709	LLA-CS07	EX	LLA-CS07-A	11/22/2011	10.1 - 10.6	PCB	Total PCBs	0.207	0.033	6.3	
3709	LLA-CS07	EX	LLA-CS07-A	11/22/2011	10.1 - 10.6	TPH	Gasoline Range Hydrocarbons	32	30	1.1	
2748	LLASB09	SB	A00-06-21DLLASB09-0.5	07/23/2010	0 - 0.5	PCB	Total PCBs	0.374	0.033	11	Removed
2748	LLASB09	SB	A00-06-21DLLASB09-0.5	07/23/2010	0 - 0.5	D/F	Total Dioxins/Furans (TEQ, NDx0.5)	24.3	11	2.2	Removed
2748	LLASB09	SB	A00-06-21DLLASB09-2	07/23/2010	0.5 - 2	PCB	Total PCBs	0.228	0.033	6.9	Removed
2748	LLASB09	SB	A00-06-21DLLASB09-3.5	07/23/2010	2 - 3.5	PCB	Total PCBs	0.54	0.033	16	Removed
2748	LLASB09	SB	A00-06-21DLLASB09-5	07/23/2010	3.5 - 5	PCB	Total PCBs	0.55	0.033	17	Removed
2748	LLASB09	SB	A00-06-21DLLASB09-6.5	07/23/2010	5 - 6.5	PCB	Total PCBs	1.42	0.033	43	Removed
2748	LLASB09	SB	A00-06-21DLLASB09-8	07/23/2010	6.5 - 8	PCB	Total PCBs	0.52	0.033	16	
2748	LLASB09	SB	A00-06-21DLLASB09-9.5	07/23/2010	8 - 9.5	PCB	Total PCBs	0.118	0.033	3.6	
157	RR-2	SB	RR-2	09/19/2001	0.5 - 2	PCB	Total PCBs	0.39	0.033	12	Removed
158	RR-3	SB	RR-3	09/19/2001	0.5 - 2	PCB	Total PCBs	0.65	0.033	20	Removed
160	RR-5	SB	RR-5	09/19/2001	0.5 - 2	PCB	Total PCBs	0.221	0.033	6.7	Removed
161	RR-6	SB	RR-6	09/19/2001	0.5 - 2	PCB	Total PCBs	0.039	0.033	1.2	Removed
162	RR-7	SB	RR-7	09/19/2001	0.5 - 2	PCB	Total PCBs	0.211	0.033	6.4	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-0.5	07/23/2010	0 - 0.5	PHT	Bis(2-ethylhexyl) phthalate	0.11	0.067	1.6	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-0.5	07/23/2010	0 - 0.5	PAH	Benzo(a)anthracene	0.054	--	--	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-0.5	07/23/2010	0 - 0.5	PAH	Benzo(b)fluoranthene	0.064	--	--	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-0.5	07/23/2010	0 - 0.5	PAH	Benzo(k)fluoranthene	0.064	--	--	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-0.5	07/23/2010	0 - 0.5	PAH	Total Benzofluoranthenes	0.128	--	--	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-0.5	07/23/2010	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.05	0.031	1.6	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-0.5	07/23/2010	0 - 0.5	PAH	Benzo(a)pyrene	0.067	0.0094	7.1	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-0.5	07/23/2010	0 - 0.5	PAH	Chrysene	0.078	--	--	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-0.5	07/23/2010	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.02	--	--	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-0.5	07/23/2010	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.044	--	--	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-0.5	07/23/2010	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.092	0.0094	9.8	Removed

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2756	SYASB01	SB	A00-06-21DSYASB01-2	07/23/2010	0.5 - 2	PAH	Benzo(a)anthracene	0.08	--	--	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-2	07/23/2010	0.5 - 2	PAH	Benzo(b)fluoranthene	0.082	--	--	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-2	07/23/2010	0.5 - 2	PAH	Benzo(k)fluoranthene	0.082	--	--	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-2	07/23/2010	0.5 - 2	PAH	Total Benzofluoranthenes	0.164	--	--	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-2	07/23/2010	0.5 - 2	PAH	Benzo(g,h,i)perylene	0.054	0.031	1.7	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-2	07/23/2010	0.5 - 2	PAH	Benzo(a)pyrene	0.088	0.0094	9.4	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-2	07/23/2010	0.5 - 2	PAH	Chrysene	0.1	--	--	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-2	07/23/2010	0.5 - 2	PAH	Dibenz(a,h)anthracene	0.026	--	--	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-2	07/23/2010	0.5 - 2	PAH	Fluoranthene	0.17	0.16	1.1	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-2	07/23/2010	0.5 - 2	PAH	Indeno(1,2,3-cd)pyrene	0.053	--	--	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-2	07/23/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.12	0.0094	13	Removed
2756	SYASB01	SB	A00-06-21DSYASB01-5	07/23/2010	3.5 - 5	D/F	Total Dioxins/Furans (TEQ, NDx0.5)	141	11	13	
2756	SYASB01	SB	A00-06-21DSYASB01-5	07/23/2010	3.5 - 5	MET	Arsenic	16	7.0	2.3	
2756	SYASB01	SB	A00-06-21DSYASB01-5	07/23/2010	3.5 - 5	MET	Copper	104	36	2.9	
2756	SYASB01	SB	A00-06-21DSYASB01-5	07/23/2010	3.5 - 5	MET	Lead	126	57	2.2	
2756	SYASB01	SB	A00-06-21DSYASB01-5LR	07/23/2010	3.5 - 5	MET	Mercury	2.33	0.070	33	
2756	SYASB01	SB	A00-06-21DSYASB01-5	07/23/2010	3.5 - 5	MET	Nickel	47	38	1.2	
2756	SYASB01	SB	A00-06-21DSYASB01-5	07/23/2010	3.5 - 5	MET	Zinc	233 J	86	2.7	
2756	SYASB01	SB	A00-06-21DSYASB01-5	07/23/2010	3.5 - 5	PAH	Benzo(a)anthracene	0.045 J	--	--	
2756	SYASB01	SB	A00-06-21DSYASB01-5	07/23/2010	3.5 - 5	PAH	Benzo(b)fluoranthene	0.038 J	--	--	
2756	SYASB01	SB	A00-06-21DSYASB01-5	07/23/2010	3.5 - 5	PAH	Benzo(k)fluoranthene	0.038 J	--	--	
2756	SYASB01	SB	A00-06-21DSYASB01-5	07/23/2010	3.5 - 5	PAH	Total Benzofluoranthenes	0.076	--	--	
2756	SYASB01	SB	A00-06-21DSYASB01-5	07/23/2010	3.5 - 5	PAH	Benzo(a)pyrene	0.034 J	0.0094	3.6	
2756	SYASB01	SB	A00-06-21DSYASB01-5	07/23/2010	3.5 - 5	PAH	Chrysene	0.074	--	--	
2756	SYASB01	SB	A00-06-21DSYASB01-5	07/23/2010	3.5 - 5	PAH	2-Methylnaphthalene	0.43	0.043	10	
2756	SYASB01	SB	A00-06-21DSYASB01-5	07/23/2010	3.5 - 5	PAH	Total cPAHs (TEQ, NDx0.5)	0.048	0.0094	5.1	
2756	SYASB01	SB	A00-06-21DSYASB01-5	07/23/2010	3.5 - 5	VAH	Benzene	0.003	0.0010	3.0	
2756	SYASB01	SB	A00-06-21DSYASB01-6.5	07/23/2010	5 - 6.5	MET	Cadmium	2.9	1.0	2.9	
2756	SYASB01	SB	A00-06-21DSYASB01-6.5	07/23/2010	5 - 6.5	MET	Copper	71	36	2.0	
2756	SYASB01	SB	A00-06-21DSYASB01-6.5	07/23/2010	5 - 6.5	MET	Lead	91	57	1.6	
2756	SYASB01	SB	A00-06-21DSYASB01-6.5	07/23/2010	5 - 6.5	MET	Mercury	0.26	0.070	3.7	
2756	SYASB01	SB	A00-06-21DSYASB01-6.5	07/23/2010	5 - 6.5	MET	Nickel	64	38	1.7	
2756	SYASB01	SB	A00-06-21DSYASB01-6.5	07/23/2010	5 - 6.5	MET	Zinc	549 J	86	6.4	
2756	SYASB01	SB	A00-06-21DSYASB01-6.5	07/23/2010	5 - 6.5	PAH	Benzo(b)fluoranthene	0.01 J	--	--	
2756	SYASB01	SB	A00-06-21DSYASB01-6.5	07/23/2010	5 - 6.5	PAH	Benzo(k)fluoranthene	0.01 J	--	--	
2756	SYASB01	SB	A00-06-21DSYASB01-6.5	07/23/2010	5 - 6.5	PAH	Total Benzofluoranthenes	0.02	--	--	
2756	SYASB01	SB	A00-06-21DSYASB01-6.5	07/23/2010	5 - 6.5	PAH	Chrysene	0.017 J	--	--	
2756	SYASB01	SB	A00-06-21DSYASB01-8S	07/23/2010	6.5 - 8	MET	Copper	49	36	1.4	
2756	SYASB01	SB	A00-06-21DSYASB01-8S	07/23/2010	6.5 - 8	MET	Lead	186	57	3.3	
2756	SYASB01	SB	A00-06-21DSYASB01-8	07/23/2010	6.5 - 8	MET	Nickel	107	38	2.8	
2756	SYASB01	SB	A00-06-21DSYASB01-8S	07/23/2010	6.5 - 8	MET	Zinc	176 J	86	2.0	
2756	SYASB01	SB	A00-06-21DSYASB01-8	07/23/2010	6.5 - 8	PAH	Benzo(a)anthracene	0.016 J	--	--	
2756	SYASB01	SB	A00-06-21DSYASB01-8	07/23/2010	6.5 - 8	PAH	Benzo(b)fluoranthene	0.015 J	--	--	

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2756	SYASB01	SB	A00-06-21DSYASB01-8	07/23/2010	6.5 - 8	PAH	Benzo(k)fluoranthene	0.015 J	--	--	
2756	SYASB01	SB	A00-06-21DSYASB01-8	07/23/2010	6.5 - 8	PAH	Total Benzofluoranthenes	0.03	--	--	
2756	SYASB01	SB	A00-06-21DSYASB01-8	07/23/2010	6.5 - 8	PAH	Benzo(a)pyrene	0.018 J	0.0094	1.9	
2756	SYASB01	SB	A00-06-21DSYASB01-8	07/23/2010	6.5 - 8	PAH	Chrysene	0.027	--	--	
2756	SYASB01	SB	A00-06-21DSYASB01-8	07/23/2010	6.5 - 8	PAH	Indeno(1,2,3-cd)pyrene	0.0098 J	--	--	
2756	SYASB01	SB	A00-06-21DSYASB01-8S	07/23/2010	6.5 - 8	PAH	2-Methylnaphthalene	0.052	0.043	1.2	
2756	SYASB01	SB	A00-06-21DSYASB01-8	07/23/2010	6.5 - 8	PAH	Total cPAHs (TEQ, NDx0.5)	0.024	0.0094	2.6	
2756	SYASB01	SB	A00-06-21DSYASB01-8	07/23/2010	6.5 - 8	VAH	Benzene	0.0042	0.0010	4.2	
2757	SYASB02	SB	A00-06-21DSYASB02-0.5	08/19/2010	0 - 0.5	PAH	Benzo(a)anthracene	0.052	--	--	Removed
2757	SYASB02	SB	A00-06-21DSYASB02-0.5	08/19/2010	0 - 0.5	PAH	Benzo(b)fluoranthene	0.11 J	--	--	Removed
2757	SYASB02	SB	A00-06-21DSYASB02-0.5	08/19/2010	0 - 0.5	PAH	Benzo(k)fluoranthene	0.11 J	--	--	Removed
2757	SYASB02	SB	A00-06-21DSYASB02-0.5	08/19/2010	0 - 0.5	PAH	Total Benzofluoranthenes	0.22	--	--	Removed
2757	SYASB02	SB	A00-06-21DSYASB02-0.5	08/19/2010	0 - 0.5	PAH	Benzo(a)pyrene	0.081	0.0094	8.6	Removed
2757	SYASB02	SB	A00-06-21DSYASB02-0.5	08/19/2010	0 - 0.5	PAH	Chrysene	0.073	--	--	Removed
2757	SYASB02	SB	A00-06-21DSYASB02-0.5	08/19/2010	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.024	--	--	Removed
2757	SYASB02	SB	A00-06-21DSYASB02-0.5	08/19/2010	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.11	0.0094	12	Removed
2757	SYASB02	SB	A00-06-21DSYASB02-2	08/19/2010	0.5 - 2	PAH	Chrysene	0.083 J	--	--	Removed
2757	SYASB02	SB	A00-06-21DSYASB02-2	08/19/2010	0.5 - 2	PAH	2-Methylnaphthalene	0.08 J	0.043	1.9	Removed
2757	SYASB02	SB	A00-06-21DSYASB02-2	08/19/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.017	0.0094	1.8	Removed
2757	SYASB02	SB	A00-06-21DSYASB02-3.5	08/18/2010	2 - 3.5	MET	Arsenic	10	7.0	1.4	
2757	SYASB02	SB	A00-06-21DSYASB02-3.5	08/18/2010	2 - 3.5	MET	Copper	39.5	36	1.1	
2757	SYASB02	SB	A00-06-21DSYASB02-3.5	08/18/2010	2 - 3.5	MET	Mercury	1.01	0.070	14	
2757	SYASB02	SB	A00-06-21DSYASB02-3.5	08/18/2010	2 - 3.5	PAH	Benzo(a)anthracene	0.039 J	--	--	
2757	SYASB02	SB	A00-06-21DSYASB02-3.5	08/18/2010	2 - 3.5	PAH	Benzo(b)fluoranthene	0.031 J	--	--	
2757	SYASB02	SB	A00-06-21DSYASB02-3.5	08/18/2010	2 - 3.5	PAH	Benzo(k)fluoranthene	0.031 J	--	--	
2757	SYASB02	SB	A00-06-21DSYASB02-3.5	08/18/2010	2 - 3.5	PAH	Total Benzofluoranthenes	0.062	--	--	
2757	SYASB02	SB	A00-06-21DSYASB02-3.5	08/18/2010	2 - 3.5	PAH	Benzo(a)pyrene	0.015 J	0.0094	1.6	
2757	SYASB02	SB	A00-06-21DSYASB02-3.5	08/18/2010	2 - 3.5	PAH	Chrysene	0.093	--	--	
2757	SYASB02	SB	A00-06-21DSYASB02-3.5	08/18/2010	2 - 3.5	PAH	2-Methylnaphthalene	0.21	0.043	4.9	
2757	SYASB02	SB	A00-06-21DSYASB02-3.5	08/18/2010	2 - 3.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.026	0.0094	2.8	
2757	SYASB02	SB	A00-06-21DSYASB02-6.5	08/18/2010	5 - 6.5	MET	Copper	53.8	36	1.5	
2757	SYASB02	SB	A00-06-21DSYASB02-6.5	08/18/2010	5 - 6.5	MET	Mercury	0.15	0.070	2.1	
2757	SYASB02	SB	A00-06-21DSYASB02-6.5	08/18/2010	5 - 6.5	PHT	Bis(2-ethylhexyl) phthalate	0.3	0.067	4.5	
2757	SYASB02	SB	A00-06-21DSYASB02-6.5	08/18/2010	5 - 6.5	PAH	Benzo(a)anthracene	0.01 J	--	--	
2757	SYASB02	SB	A00-06-21DSYASB02-6.5	08/18/2010	5 - 6.5	PAH	Chrysene	0.024	--	--	
2757	SYASB02	SB	A00-06-21DSYASB02-6.5	08/18/2010	5 - 6.5	PAH	2-Methylnaphthalene	0.24	0.043	5.6	
2757	SYASB02	SB	A00-06-21DSYASB02-8	08/18/2010	6.5 - 8	PHT	Bis(2-ethylhexyl) phthalate	0.32	0.067	4.8	
2758	SYASB03	SB	A00-06-21DSYASB03-0.5	07/23/2010	0 - 0.5	PHT	Bis(2-ethylhexyl) phthalate	0.074	0.067	1.1	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-0.5	07/23/2010	0 - 0.5	PAH	Benzo(a)anthracene	1.2	--	--	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-0.5	07/23/2010	0 - 0.5	PAH	Benzo(b)fluoranthene	1.2	--	--	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-0.5	07/23/2010	0 - 0.5	PAH	Benzo(k)fluoranthene	1.2	--	--	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-0.5	07/23/2010	0 - 0.5	PAH	Total Benzofluoranthenes	2.4	--	--	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-0.5	07/23/2010	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.72	0.031	23	Removed

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2758	SYASB03	SB	A00-06-21DSYASB03-0.5	07/23/2010	0 - 0.5	PAH	Benzo(a)pyrene	1.2	0.0094	130	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-0.5	07/23/2010	0 - 0.5	PAH	Chrysene	1.5	--	--	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-0.5	07/23/2010	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.38	--	--	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-0.5	07/23/2010	0 - 0.5	PAH	Fluoranthene	2.5	0.16	16	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-0.5	07/23/2010	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.76	--	--	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-0.5	07/23/2010	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	1.7	0.0094	180	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-2	07/23/2010	0.5 - 2	PHT	Bis(2-ethylhexyl) phthalate	0.12	0.067	1.8	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-2	07/23/2010	0.5 - 2	PAH	Benzo(a)anthracene	1.5	--	--	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-2	07/23/2010	0.5 - 2	PAH	Benzo(b)fluoranthene	1.3	--	--	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-2	07/23/2010	0.5 - 2	PAH	Benzo(k)fluoranthene	1.3	--	--	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-2	07/23/2010	0.5 - 2	PAH	Total Benzofluoranthenes	2.6	--	--	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-2	07/23/2010	0.5 - 2	PAH	Benzo(g,h,i)perylene	0.59	0.031	19	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-2	07/23/2010	0.5 - 2	PAH	Benzo(a)pyrene	1.5	0.0094	160	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-2	07/23/2010	0.5 - 2	PAH	Chrysene	1.8	--	--	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-2	07/23/2010	0.5 - 2	PAH	Dibenz(a,h)anthracene	0.35	--	--	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-2	07/23/2010	0.5 - 2	PAH	Fluoranthene	3.2	0.16	20	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-2	07/23/2010	0.5 - 2	PAH	Indeno(1,2,3-cd)pyrene	0.66	--	--	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-2	07/23/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	2.0	0.0094	220	Removed
2758	SYASB03	SB	A00-06-21DSYASB03-5	07/23/2010	3.5 - 5	PAH	Chrysene	0.032	--	--	
2758	SYASB03	SB	A00-06-21DSYASB03-5	07/23/2010	3.5 - 5	PAH	2-Methylnaphthalene	0.55	0.043	13	
2758	SYASB03	SB	A00-06-21DSYASB03-8	07/23/2010	6.5 - 8	PAH	Benzo(a)anthracene	0.022	--	--	
2758	SYASB03	SB	A00-06-21DSYASB03-8	07/23/2010	6.5 - 8	PAH	Benzo(b)fluoranthene	0.028	--	--	
2758	SYASB03	SB	A00-06-21DSYASB03-8	07/23/2010	6.5 - 8	PAH	Benzo(k)fluoranthene	0.028	--	--	
2758	SYASB03	SB	A00-06-21DSYASB03-8	07/23/2010	6.5 - 8	PAH	Total Benzofluoranthenes	0.056	--	--	
2758	SYASB03	SB	A00-06-21DSYASB03-8	07/23/2010	6.5 - 8	PAH	Benzo(a)pyrene	0.037	0.0094	3.9	
2758	SYASB03	SB	A00-06-21DSYASB03-8	07/23/2010	6.5 - 8	PAH	Chrysene	0.03	--	--	
2758	SYASB03	SB	A00-06-21DSYASB03-8	07/23/2010	6.5 - 8	PAH	Dibenz(a,h)anthracene	0.012 J	--	--	
2758	SYASB03	SB	A00-06-21DSYASB03-8	07/23/2010	6.5 - 8	PAH	Indeno(1,2,3-cd)pyrene	0.02	--	--	
2758	SYASB03	SB	A00-06-21DSYASB03-8	07/23/2010	6.5 - 8	PAH	Total cPAHs (TEQ, NDx0.5)	0.048	0.0094	5.1	
2759	SYASB04	SB	A00-06-21DSYASB04-0.5	07/22/2010	0 - 0.5	PAH	Benzo(a)anthracene	0.12	--	--	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-0.5	07/22/2010	0 - 0.5	PAH	Benzo(b)fluoranthene	0.16	--	--	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-0.5	07/22/2010	0 - 0.5	PAH	Benzo(k)fluoranthene	0.16	--	--	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-0.5	07/22/2010	0 - 0.5	PAH	Total Benzofluoranthenes	0.23	--	--	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-0.5	07/22/2010	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.062	0.031	2.0	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-0.5	07/22/2010	0 - 0.5	PAH	Benzo(a)pyrene	0.16	0.0094	17	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-0.5	07/22/2010	0 - 0.5	PAH	Chrysene	0.14	--	--	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-0.5	07/22/2010	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.017	--	--	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-0.5	07/22/2010	0 - 0.5	PAH	Fluoranthene	0.22	0.16	1.4	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-0.5	07/22/2010	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.057	--	--	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-0.5	07/22/2010	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.032	0.0094	3.4	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-0.5	07/22/2010	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.20	0.0094	22	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-2	07/22/2010	0.5 - 2	PAH	Benzo(a)anthracene	0.042	--	--	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-2	07/22/2010	0.5 - 2	PAH	Benzo(b)fluoranthene	0.038	--	--	Removed

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2759	SYASB04	SB	A00-06-21DSYASB04-2	07/22/2010	0.5 - 2	PAH	Benzo(k)fluoranthene	0.038	--	--	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-2	07/22/2010	0.5 - 2	PAH	Total Benzofluoranthenes	0.089	--	--	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-2	07/22/2010	0.5 - 2	PAH	Benzo(a)pyrene	0.061	0.0094	6.5	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-2	07/22/2010	0.5 - 2	PAH	Chrysene	0.058	--	--	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-2	07/22/2010	0.5 - 2	PAH	Dibenz(a,h)anthracene	0.0074	--	--	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-2	07/22/2010	0.5 - 2	PAH	Indeno(1,2,3-cd)pyrene	0.027	--	--	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-2	07/22/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.078	0.0094	8.3	Removed
2759	SYASB04	SB	A00-06-21DSYASB04-3.5	07/22/2010	2 - 3.5	MET	Arsenic	8	7.0	1.1	
2759	SYASB04	SB	A00-06-21DSYASB04-3.5	07/22/2010	2 - 3.5	MET	Copper	118	36	3.3	
2759	SYASB04	SB	A00-06-21DSYASB04-3.5	07/22/2010	2 - 3.5	MET	Mercury	0.67	0.070	9.6	
2759	SYASB04	SB	A00-06-21DSYASB04-3.5	07/22/2010	2 - 3.5	MET	Nickel	44	38	1.2	
2759	SYASB04	SB	A00-06-21DSYASB04-3.5	07/22/2010	2 - 3.5	PAH	Benzo(a)anthracene	0.019	--	--	
2759	SYASB04	SB	A00-06-21DSYASB04-3.5	07/22/2010	2 - 3.5	PAH	Benzo(b)fluoranthene	0.018 J	--	--	
2759	SYASB04	SB	A00-06-21DSYASB04-3.5	07/22/2010	2 - 3.5	PAH	Benzo(k)fluoranthene	0.018 J	--	--	
2759	SYASB04	SB	A00-06-21DSYASB04-3.5	07/22/2010	2 - 3.5	PAH	Total Benzofluoranthenes	0.036	--	--	
2759	SYASB04	SB	A00-06-21DSYASB04-3.5	07/22/2010	2 - 3.5	PAH	Benzo(a)pyrene	0.023	0.0094	2.4	
2759	SYASB04	SB	A00-06-21DSYASB04-3.5	07/22/2010	2 - 3.5	PAH	Chrysene	0.027	--	--	
2759	SYASB04	SB	A00-06-21DSYASB04-3.5	07/22/2010	2 - 3.5	PAH	Indeno(1,2,3-cd)pyrene	0.015	--	--	
2759	SYASB04	SB	A00-06-21DSYASB04-3.5	07/22/2010	2 - 3.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.030	0.0094	3.2	
2759	SYASB04	SB	A00-06-21DSYASB04-5	07/22/2010	3.5 - 5	MET	Arsenic	140	7.0	20	
2759	SYASB04	SB	A00-06-21DSYASB04-5	07/22/2010	3.5 - 5	MET	Cadmium	3.9	1.0	3.9	
2759	SYASB04	SB	A00-06-21DSYASB04-5	07/22/2010	3.5 - 5	MET	Copper	241	36	6.7	
2759	SYASB04	SB	A00-06-21DSYASB04-5	07/22/2010	3.5 - 5	MET	Lead	137	57	2.4	
2759	SYASB04	SB	A00-06-21DSYASB04-5	07/22/2010	3.5 - 5	MET	Nickel	236	38	6.2	
2759	SYASB04	SB	A00-06-21DSYASB04-5	07/22/2010	3.5 - 5	MET	Zinc	196	86	2.3	
2759	SYASB04	SB	A00-06-21DSYASB04-6.5	07/22/2010	5 - 6.5	MET	Copper	92.1	36	2.6	
2759	SYASB04	SB	A00-06-21DSYASB04-6.5	07/22/2010	5 - 6.5	MET	Mercury	0.26	0.070	3.7	
2759	SYASB04	SB	A00-06-21DSYASB04-6.5	07/22/2010	5 - 6.5	MET	Nickel	43	38	1.1	
2759	SYASB04	SB	A00-06-21DSYASB04-6.5	07/22/2010	5 - 6.5	MET	Zinc	98	86	1.1	
2759	SYASB04	SB	A00-06-21DSYASB04-6.5	07/22/2010	5 - 6.5	PAH	Benzo(a)anthracene	0.046	--	--	
2759	SYASB04	SB	A00-06-21DSYASB04-6.5	07/22/2010	5 - 6.5	PAH	Total Benzofluoranthenes	0.069	--	--	
2759	SYASB04	SB	A00-06-21DSYASB04-6.5	07/22/2010	5 - 6.5	PAH	Benzo(a)pyrene	0.046	0.0094	4.9	
2759	SYASB04	SB	A00-06-21DSYASB04-6.5	07/22/2010	5 - 6.5	PAH	Chrysene	0.049	--	--	
2759	SYASB04	SB	A00-06-21DSYASB04-6.5	07/22/2010	5 - 6.5	PAH	Indeno(1,2,3-cd)pyrene	0.018	--	--	
2759	SYASB04	SB	A00-06-21DSYASB04-6.5	07/22/2010	5 - 6.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.060	0.0094	6.4	
2759	SYASB04	SB	A00-06-21DSYASB04-8	07/22/2010	6.5 - 8	MET	Copper	51.8	36	1.4	
2759	SYASB04	SB	A00-06-21DSYASB04-8	07/22/2010	6.5 - 8	MET	Mercury	0.08	0.070	1.1	
2759	SYASB04	SB	A00-06-21DSYASB04-8	07/22/2010	6.5 - 8	MET	Nickel	41	38	1.1	
2759	SYASB04	SB	A00-06-21DSYASB04-8	07/22/2010	6.5 - 8	PAH	Benzo(b)fluoranthene	0.045 J	--	--	
2759	SYASB04	SB	A00-06-21DSYASB04-8	07/22/2010	6.5 - 8	PAH	Benzo(k)fluoranthene	0.045 J	--	--	
2759	SYASB04	SB	A00-06-21DSYASB04-8	07/22/2010	6.5 - 8	PAH	Total Benzofluoranthenes	0.035	--	--	
2759	SYASB04	SB	A00-06-21DSYASB04-8	07/22/2010	6.5 - 8	PAH	Benzo(g,h,i)perylene	0.076	0.031	2.5	
2759	SYASB04	SB	A00-06-21DSYASB04-8	07/22/2010	6.5 - 8	PAH	Total cPAHs (TEQ, NDx0.5)	0.012	0.0094	1.3	

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2760	SYASB05	SB	A00-06-21DSYASB05-0.5	07/24/2010	0 - 0.5	D/F	Total Dioxins/Furans (TEQ, NDx0.5)	27.3	11	2.5	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-0.5	07/24/2010	0 - 0.5	PAH	Benzo(a)anthracene	0.35	--	--	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-0.5	07/24/2010	0 - 0.5	PAH	Benzo(b)fluoranthene	0.35	--	--	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-0.5	07/24/2010	0 - 0.5	PAH	Benzo(k)fluoranthene	0.35	--	--	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-0.5	07/24/2010	0 - 0.5	PAH	Total Benzofluoranthenes	0.7	--	--	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-0.5	07/24/2010	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.17	0.031	5.5	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-0.5	07/24/2010	0 - 0.5	PAH	Benzo(a)pyrene	0.38	0.0094	40	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-0.5	07/24/2010	0 - 0.5	PAH	Chrysene	0.44	--	--	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-0.5	07/24/2010	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.089	--	--	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-0.5	07/24/2010	0 - 0.5	PAH	Fluoranthene	0.73	0.16	4.6	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-0.5	07/24/2010	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.18	--	--	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-0.5	07/24/2010	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.52	0.0094	55	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	MET	Arsenic	30	7.0	4.3	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	MET	Cadmium	1.3	1.0	1.3	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	MET	Copper	94.8	36	2.6	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	MET	Lead	323	57	5.7	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	MET	Mercury	0.36 J	0.070	5.1	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	MET	Nickel	2,330	38	61	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	MET	Zinc	233 J	86	2.7	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	PAH	Benzo(a)anthracene	0.35	--	--	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	PAH	Benzo(b)fluoranthene	0.28	--	--	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	PAH	Benzo(k)fluoranthene	0.28	--	--	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	PAH	Total Benzofluoranthenes	0.56	--	--	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	PAH	Benzo(g,h,i)perylene	0.13	0.031	4.2	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	PAH	Benzo(a)pyrene	0.34	0.0094	36	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	PAH	Chrysene	0.46	--	--	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	PAH	Dibenz(a,h)anthracene	0.088	--	--	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	PAH	Fluoranthene	0.85	0.16	5.3	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	PAH	Indeno(1,2,3-cd)pyrene	0.15	--	--	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	PAH	2-Methylnaphthalene	0.3	0.043	7.0	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-2	07/24/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.46	0.0094	49	Removed
2760	SYASB05	SB	A00-06-21DSYASB05-3.5	07/24/2010	2 - 3.5	MET	Arsenic	9	7.0	1.3	
2760	SYASB05	SB	A00-06-21DSYASB05-3.5	07/24/2010	2 - 3.5	MET	Copper	60	36	1.7	
2760	SYASB05	SB	A00-06-21DSYASB05-3.5	07/24/2010	2 - 3.5	MET	Mercury	0.24 J	0.070	3.4	
2760	SYASB05	SB	A00-06-21DSYASB05-3.5	07/24/2010	2 - 3.5	MET	Nickel	58	38	1.5	
2760	SYASB05	SB	A00-06-21DSYASB05-3.5	07/24/2010	2 - 3.5	MET	Zinc	417 J	86	4.8	
2760	SYASB05	SB	A00-06-21DSYASB05-3.5	07/24/2010	2 - 3.5	PAH	Benzo(a)anthracene	0.11	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-3.5	07/24/2010	2 - 3.5	PAH	Benzo(b)fluoranthene	0.07	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-3.5	07/24/2010	2 - 3.5	PAH	Benzo(k)fluoranthene	0.07	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-3.5	07/24/2010	2 - 3.5	PAH	Total Benzofluoranthenes	0.14	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-3.5	07/24/2010	2 - 3.5	PAH	Benzo(a)pyrene	0.084	0.0094	8.9	
2760	SYASB05	SB	A00-06-21DSYASB05-3.5	07/24/2010	2 - 3.5	PAH	Chrysene	0.16	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-3.5	07/24/2010	2 - 3.5	PAH	Dibenz(a,h)anthracene	0.039 J	--	--	

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2760	SYASB05	SB	A00-06-21DSYASB05-3.5	07/24/2010	2 - 3.5	PAH	Fluoranthene	0.27	0.16	1.7	
2760	SYASB05	SB	A00-06-21DSYASB05-3.5	07/24/2010	2 - 3.5	PAH	2-Methylnaphthalene	0.24	0.043	5.6	
2760	SYASB05	SB	A00-06-21DSYASB05-3.5	07/24/2010	2 - 3.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.12	0.0094	12	
2760	SYASB05	SB	A00-06-21DSYASB05-5S	07/24/2010	3.5 - 5	MET	Copper	50.5	36	1.4	
2760	SYASB05	SB	A00-06-21DSYASB05-5S	07/24/2010	3.5 - 5	MET	Mercury	0.57 J	0.070	8.1	
2760	SYASB05	SB	A00-06-21DSYASB05-5S	07/24/2010	3.5 - 5	MET	Zinc	277 J	86	3.2	
2760	SYASB05	SB	A00-06-21DSYASB05-5	07/24/2010	3.5 - 5	TPH	Gasoline Range Hydrocarbons	38	30	1.3	
2760	SYASB05	SB	A00-06-21DSYASB05-5S	07/24/2010	3.5 - 5	PAH	Benzo(a)anthracene	0.058 J	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-5S	07/24/2010	3.5 - 5	PAH	Chrysene	0.094	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-5S	07/24/2010	3.5 - 5	PAH	2-Methylnaphthalene	0.25	0.043	5.8	
2760	SYASB05	SB	A00-06-21DSYASB05-5S	07/24/2010	3.5 - 5	PAH	Total cPAHs (TEQ, NDx0.5)	0.017	0.0094	1.9	
2760	SYASB05	SB	A00-06-21DSYASB05-6.5	07/24/2010	5 - 6.5	MET	Arsenic	24	7.0	3.4	
2760	SYASB05	SB	A00-06-21DSYASB05-6.5	07/24/2010	5 - 6.5	MET	Copper	61	36	1.7	
2760	SYASB05	SB	A00-06-21DSYASB05-6.5	07/24/2010	5 - 6.5	MET	Lead	87	57	1.5	
2760	SYASB05	SB	A00-06-21DSYASB05-6.5	07/24/2010	5 - 6.5	MET	Mercury	3.3	0.070	47	
2760	SYASB05	SB	A00-06-21DSYASB05-6.5	07/24/2010	5 - 6.5	MET	Nickel	216	38	5.7	
2760	SYASB05	SB	A00-06-21DSYASB05-6.5	07/24/2010	5 - 6.5	MET	Zinc	100 J	86	1.2	
2760	SYASB05	SB	A00-06-21DSYASB05-6.5	07/24/2010	5 - 6.5	PHT	Bis(2-ethylhexyl) phthalate	0.09	0.067	1.3	
2760	SYASB05	SB	A00-06-21DSYASB05-6.5	07/24/2010	5 - 6.5	PAH	Benzo(a)anthracene	0.036 J	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-6.5	07/24/2010	5 - 6.5	PAH	Chrysene	0.058 J	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-6.5	07/24/2010	5 - 6.5	PAH	2-Methylnaphthalene	0.054 J	0.043	1.3	
2760	SYASB05	SB	A00-06-21DSYASB05-6.5	07/24/2010	5 - 6.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.015	0.0094	1.6	
2760	SYASB05	SB	A00-06-21DSYASB05-8	07/24/2010	6.5 - 8	MET	Arsenic	13	7.0	1.9	
2760	SYASB05	SB	A00-06-21DSYASB05-8	07/24/2010	6.5 - 8	MET	Copper	50.5	36	1.4	
2760	SYASB05	SB	A00-06-21DSYASB05-8	07/24/2010	6.5 - 8	MET	Lead	72	57	1.3	
2760	SYASB05	SB	A00-06-21DSYASB05-8	07/24/2010	6.5 - 8	MET	Mercury	0.22 J	0.070	3.1	
2760	SYASB05	SB	A00-06-21DSYASB05-8	07/24/2010	6.5 - 8	MET	Zinc	106 J	86	1.2	
2760	SYASB05	SB	A00-06-21DSYASB05-8	07/24/2010	6.5 - 8	PHT	Bis(2-ethylhexyl) phthalate	0.13	0.067	1.9	
2760	SYASB05	SB	A00-06-21DSYASB05-8	07/24/2010	6.5 - 8	PAH	Benzo(a)anthracene	0.039 J	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-8	07/24/2010	6.5 - 8	PAH	Chrysene	0.073	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-8	07/24/2010	6.5 - 8	PAH	2-Methylnaphthalene	0.093	0.043	2.2	
2760	SYASB05	SB	A00-06-21DSYASB05-8	07/24/2010	6.5 - 8	PAH	Total cPAHs (TEQ, NDx0.5)	0.017	0.0094	1.8	
2760	SYASB05	SB	A00-06-21DSYASB05-8	07/24/2010	6.5 - 8	VAH	Benzene	0.016	0.0010	16	
2760	SYASB05	SB	A00-06-21DSYASB05-9.5	07/24/2010	8 - 9.5	PAH	Benzo(a)anthracene	0.05	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-9.5	07/24/2010	8 - 9.5	PAH	Benzo(b)fluoranthene	0.04	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-9.5	07/24/2010	8 - 9.5	PAH	Benzo(k)fluoranthene	0.04	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-9.5	07/24/2010	8 - 9.5	PAH	Total Benzofluoranthenes	0.08	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-9.5	07/24/2010	8 - 9.5	PAH	Benzo(a)pyrene	0.047	0.0094	5.0	
2760	SYASB05	SB	A00-06-21DSYASB05-9.5	07/24/2010	8 - 9.5	PAH	Chrysene	0.056	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-9.5	07/24/2010	8 - 9.5	PAH	Dibenz(a,h)anthracene	0.012 J	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-9.5	07/24/2010	8 - 9.5	PAH	Indeno(1,2,3-cd)pyrene	0.023	--	--	
2760	SYASB05	SB	A00-06-21DSYASB05-9.5	07/24/2010	8 - 9.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.064	0.0094	6.8	
2761	SYASB06	SB	A00-06-21DSYASB06-0.5	08/17/2010	0 - 0.5	PAH	Benzo(a)anthracene	1	--	--	Removed

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2761	SYASB06	SB	A00-06-21DSYASB06-0.5	08/17/2010	0 - 0.5	PAH	Benzo(b)fluoranthene	0.87 J	--	--	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-0.5	08/17/2010	0 - 0.5	PAH	Benzo(k)fluoranthene	0.87 J	--	--	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-0.5	08/17/2010	0 - 0.5	PAH	Total Benzofluoranthenes	1.74	--	--	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-0.5	08/17/2010	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.65	0.031	21	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-0.5	08/17/2010	0 - 0.5	PAH	Benzo(a)pyrene	0.96	0.0094	100	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-0.5	08/17/2010	0 - 0.5	PAH	Chrysene	1.1	--	--	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-0.5	08/17/2010	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.33	--	--	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-0.5	08/17/2010	0 - 0.5	PAH	Fluoranthene	2.4	0.16	15	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-0.5	08/17/2010	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.61	--	--	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-0.5	08/17/2010	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	1.3	0.0094	140	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-2	08/17/2010	0.5 - 2	PHT	Bis(2-ethylhexyl) phthalate	0.53	0.067	7.9	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-2	08/17/2010	0.5 - 2	PAH	Benzo(a)anthracene	0.32 J	--	--	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-2	08/17/2010	0.5 - 2	PAH	Benzo(b)fluoranthene	0.26 J	--	--	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-2	08/17/2010	0.5 - 2	PAH	Benzo(k)fluoranthene	0.26 J	--	--	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-2	08/17/2010	0.5 - 2	PAH	Total Benzofluoranthenes	0.52	--	--	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-2	08/17/2010	0.5 - 2	PAH	Benzo(g,h,i)perylene	0.22 J	0.031	7.1	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-2	08/17/2010	0.5 - 2	PAH	Benzo(a)pyrene	0.33 J	0.0094	35	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-2	08/17/2010	0.5 - 2	PAH	Chrysene	0.37 J	--	--	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-2	08/17/2010	0.5 - 2	PAH	Dibenz(a,h)anthracene	0.1	--	--	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-2	08/17/2010	0.5 - 2	PAH	Fluoranthene	0.6 J	0.16	3.8	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-2	08/17/2010	0.5 - 2	PAH	Indeno(1,2,3-cd)pyrene	0.19 J	--	--	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-2	08/17/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.45	0.0094	48	Removed
2761	SYASB06	SB	A00-06-21DSYASB06-5	08/17/2010	3.5 - 5	PAH	Benzo(a)anthracene	0.025	--	--	
2761	SYASB06	SB	A00-06-21DSYASB06-5	08/17/2010	3.5 - 5	PAH	Benzo(b)fluoranthene	0.023 J	--	--	
2761	SYASB06	SB	A00-06-21DSYASB06-5	08/17/2010	3.5 - 5	PAH	Benzo(k)fluoranthene	0.023 J	--	--	
2761	SYASB06	SB	A00-06-21DSYASB06-5	08/17/2010	3.5 - 5	PAH	Total Benzofluoranthenes	0.046	--	--	
2761	SYASB06	SB	A00-06-21DSYASB06-5	08/17/2010	3.5 - 5	PAH	Benzo(a)pyrene	0.026	0.0094	2.8	
2761	SYASB06	SB	A00-06-21DSYASB06-5	08/17/2010	3.5 - 5	PAH	Chrysene	0.029	--	--	
2761	SYASB06	SB	A00-06-21DSYASB06-5	08/17/2010	3.5 - 5	PAH	Indeno(1,2,3-cd)pyrene	0.015 J	--	--	
2761	SYASB06	SB	A00-06-21DSYASB06-5	08/17/2010	3.5 - 5	PAH	Total cPAHs (TEQ, NDx0.5)	0.035	0.0094	3.7	
2762	SYASB07	SB	A00-06-21DSYASB07-0.5	07/22/2010	0 - 0.5	PAH	Benzo(a)anthracene	0.059	--	--	Removed
2762	SYASB07	SB	A00-06-21DSYASB07-0.5	07/22/2010	0 - 0.5	PAH	Benzo(b)fluoranthene	0.055	--	--	Removed
2762	SYASB07	SB	A00-06-21DSYASB07-0.5	07/22/2010	0 - 0.5	PAH	Benzo(k)fluoranthene	0.055	--	--	Removed
2762	SYASB07	SB	A00-06-21DSYASB07-0.5	07/22/2010	0 - 0.5	PAH	Total Benzofluoranthenes	0.11	--	--	Removed
2762	SYASB07	SB	A00-06-21DSYASB07-0.5	07/22/2010	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.039	0.031	1.3	Removed
2762	SYASB07	SB	A00-06-21DSYASB07-0.5	07/22/2010	0 - 0.5	PAH	Benzo(a)pyrene	0.073	0.0094	7.8	Removed
2762	SYASB07	SB	A00-06-21DSYASB07-0.5	07/22/2010	0 - 0.5	PAH	Chrysene	0.072	--	--	Removed
2762	SYASB07	SB	A00-06-21DSYASB07-0.5	07/22/2010	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.011	--	--	Removed
2762	SYASB07	SB	A00-06-21DSYASB07-0.5	07/22/2010	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.038	--	--	Removed
2762	SYASB07	SB	A00-06-21DSYASB07-0.5	07/22/2010	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.011	0.0094	1.2	Removed
2762	SYASB07	SB	A00-06-21DSYASB07-0.5	07/22/2010	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.096	0.0094	10	Removed
2762	SYASB07	SB	A00-06-21DSYASB07-2LR	07/22/2010	0.5 - 2	MET	Arsenic	30	7.0	4.3	
2762	SYASB07	SB	A00-06-21DSYASB07-2LR	07/22/2010	0.5 - 2	MET	Copper	75	36	2.1	

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2762	SYASB07	SB	A00-06-21DSYASB07-2	07/22/2010	0.5 - 2	MET	Lead	110	57	1.9	
2762	SYASB07	SB	A00-06-21DSYASB07-2	07/22/2010	0.5 - 2	MET	Mercury	0.2	0.070	2.9	
2762	SYASB07	SB	A00-06-21DSYASB07-2LR	07/22/2010	0.5 - 2	MET	Zinc	615	86	7.2	
2762	SYASB07	SB	A00-06-21DSYASB07-2	07/22/2010	0.5 - 2	PAH	Benzo(a)anthracene	0.14	--	--	
2762	SYASB07	SB	A00-06-21DSYASB07-2	07/22/2010	0.5 - 2	PAH	Benzo(b)fluoranthene	0.062	--	--	
2762	SYASB07	SB	A00-06-21DSYASB07-2	07/22/2010	0.5 - 2	PAH	Benzo(k)fluoranthene	0.062	--	--	
2762	SYASB07	SB	A00-06-21DSYASB07-2	07/22/2010	0.5 - 2	PAH	Total Benzofluoranthenes	0.18	--	--	
2762	SYASB07	SB	A00-06-21DSYASB07-2	07/22/2010	0.5 - 2	PAH	Benzo(g,h,i)perylene	0.033	0.031	1.1	
2762	SYASB07	SB	A00-06-21DSYASB07-2	07/22/2010	0.5 - 2	PAH	Benzo(a)pyrene	0.08	0.0094	8.5	
2762	SYASB07	SB	A00-06-21DSYASB07-2	07/22/2010	0.5 - 2	PAH	Chrysene	0.2	--	--	
2762	SYASB07	SB	A00-06-21DSYASB07-2	07/22/2010	0.5 - 2	PAH	Fluoranthene	0.31	0.16	1.9	
2762	SYASB07	SB	A00-06-21DSYASB07-2	07/22/2010	0.5 - 2	PAH	Indeno(1,2,3-cd)pyrene	0.024	--	--	
2762	SYASB07	SB	A00-06-21DSYASB07-2	07/22/2010	0.5 - 2	PAH	2-Methylnaphthalene	0.79	0.043	18	
2762	SYASB07	SB	A00-06-21DSYASB07-2	07/22/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.012	0.0094	1.3	
2762	SYASB07	SB	A00-06-21DSYASB07-2	07/22/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.12	0.0094	12	
2762	SYASB07	SB	A00-06-21DSYASB07-3.5	07/22/2010	2 - 3.5	PAH	Benzo(a)anthracene	0.28	--	--	
2762	SYASB07	SB	A00-06-21DSYASB07-3.5	07/22/2010	2 - 3.5	PAH	Benzo(b)fluoranthene	0.15	--	--	
2762	SYASB07	SB	A00-06-21DSYASB07-3.5	07/22/2010	2 - 3.5	PAH	Benzo(k)fluoranthene	0.15	--	--	
2762	SYASB07	SB	A00-06-21DSYASB07-3.5	07/22/2010	2 - 3.5	PAH	Total Benzofluoranthenes	0.42	--	--	
2762	SYASB07	SB	A00-06-21DSYASB07-3.5	07/22/2010	2 - 3.5	PAH	Benzo(g,h,i)perylene	0.088	0.031	2.8	
2762	SYASB07	SB	A00-06-21DSYASB07-3.5	07/22/2010	2 - 3.5	PAH	Benzo(a)pyrene	0.3	0.0094	32	
2762	SYASB07	SB	A00-06-21DSYASB07-3.5	07/22/2010	2 - 3.5	PAH	Chrysene	0.28	--	--	
2762	SYASB07	SB	A00-06-21DSYASB07-3.5	07/22/2010	2 - 3.5	PAH	Dibenz(a,h)anthracene	0.029	--	--	
2762	SYASB07	SB	A00-06-21DSYASB07-3.5	07/22/2010	2 - 3.5	PAH	Fluoranthene	0.57	0.16	3.6	
2762	SYASB07	SB	A00-06-21DSYASB07-3.5	07/22/2010	2 - 3.5	PAH	Indeno(1,2,3-cd)pyrene	0.094	--	--	
2762	SYASB07	SB	A00-06-21DSYASB07-3.5	07/22/2010	2 - 3.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.030	0.0094	3.2	
2762	SYASB07	SB	A00-06-21DSYASB07-3.5	07/22/2010	2 - 3.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.39	0.0094	41	
2763	SYASB08	SB	A00-06-21DSYASB08-0.5	08/19/2010	0 - 0.5	PAH	Benzo(a)anthracene	0.059	--	--	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-0.5	08/19/2010	0 - 0.5	PAH	Benzo(b)fluoranthene	0.082 J	--	--	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-0.5	08/19/2010	0 - 0.5	PAH	Benzo(k)fluoranthene	0.082 J	--	--	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-0.5	08/19/2010	0 - 0.5	PAH	Total Benzofluoranthenes	0.164	--	--	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-0.5	08/19/2010	0 - 0.5	PAH	Benzo(a)pyrene	0.063	0.0094	6.7	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-0.5	08/19/2010	0 - 0.5	PAH	Chrysene	0.096	--	--	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-0.5	08/19/2010	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.088	0.0094	9.3	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-2	08/18/2010	0.5 - 2	PAH	Benzo(a)anthracene	0.14	--	--	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-2	08/18/2010	0.5 - 2	PAH	Benzo(b)fluoranthene	0.15	--	--	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-2	08/18/2010	0.5 - 2	PAH	Benzo(k)fluoranthene	0.15	--	--	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-2	08/18/2010	0.5 - 2	PAH	Total Benzofluoranthenes	0.3	--	--	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-2	08/18/2010	0.5 - 2	PAH	Benzo(g,h,i)perylene	0.065	0.031	2.1	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-2	08/18/2010	0.5 - 2	PAH	Benzo(a)pyrene	0.16	0.0094	17	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-2	08/18/2010	0.5 - 2	PAH	Chrysene	0.19	--	--	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-2	08/18/2010	0.5 - 2	PAH	Fluoranthene	0.36	0.16	2.3	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-2	08/18/2010	0.5 - 2	PAH	Indeno(1,2,3-cd)pyrene	0.052 J	--	--	Removed

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2763	SYASB08	SB	A00-06-21DSYASB08-2	08/18/2010	0.5 - 2	PAH	2-Methylnaphthalene	0.071	0.043	1.7	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-2	08/18/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.21	0.0094	23	Removed
2763	SYASB08	SB	A00-06-21DSYASB08-5S	08/18/2010	3.5 - 5	PAH	Benzo(a)anthracene	0.01 J	--	--	
2763	SYASB08	SB	A00-06-21DSYASB08-5S	08/18/2010	3.5 - 5	PAH	Benzo(b)fluoranthene	0.01 J	--	--	
2763	SYASB08	SB	A00-06-21DSYASB08-5S	08/18/2010	3.5 - 5	PAH	Benzo(k)fluoranthene	0.01 J	--	--	
2763	SYASB08	SB	A00-06-21DSYASB08-5S	08/18/2010	3.5 - 5	PAH	Total Benzofluoranthenes	0.02	--	--	
2763	SYASB08	SB	A00-06-21DSYASB08-5S	08/18/2010	3.5 - 5	PAH	Chrysene	0.012 J	--	--	
2764	SYASB09	SB	A00-06-21DSYASB09-0.5	08/17/2010	0 - 0.5	PAH	Benzo(a)anthracene	230	--	--	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-0.5	08/17/2010	0 - 0.5	PAH	Benzo(b)fluoranthene	170 J	--	--	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-0.5	08/17/2010	0 - 0.5	PAH	Benzo(k)fluoranthene	170 J	--	--	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-0.5	08/17/2010	0 - 0.5	PAH	Total Benzofluoranthenes	340	--	--	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-0.5	08/17/2010	0 - 0.5	PAH	Benzo(g,h,i)perylene	120	0.031	3,900	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-0.5	08/17/2010	0 - 0.5	PAH	Benzo(a)pyrene	210	0.0094	22,000	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-0.5	08/17/2010	0 - 0.5	PAH	Chrysene	220	--	--	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-0.5	08/17/2010	0 - 0.5	PAH	Dibenz(a,h)anthracene	44	--	--	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-0.5	08/17/2010	0 - 0.5	PAH	Fluoranthene	440	0.16	2,800	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-0.5	08/17/2010	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	120	--	--	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-0.5	08/17/2010	0 - 0.5	PAH	2-Methylnaphthalene	0.44 J	0.043	10	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-0.5	08/17/2010	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	286	0.0094	30,000	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-2	08/17/2010	0.5 - 2	PAH	Benzo(a)anthracene	37	--	--	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-2	08/17/2010	0.5 - 2	PAH	Benzo(b)fluoranthene	22 J	--	--	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-2	08/17/2010	0.5 - 2	PAH	Benzo(k)fluoranthene	22 J	--	--	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-2	08/17/2010	0.5 - 2	PAH	Total Benzofluoranthenes	44	--	--	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-2	08/17/2010	0.5 - 2	PAH	Benzo(g,h,i)perylene	20	0.031	650	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-2	08/17/2010	0.5 - 2	PAH	Benzo(a)pyrene	34	0.0094	3,600	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-2	08/17/2010	0.5 - 2	PAH	Chrysene	38	--	--	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-2	08/17/2010	0.5 - 2	PAH	Dibenz(a,h)anthracene	12	--	--	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-2	08/17/2010	0.5 - 2	PAH	Fluoranthene	50	0.16	310	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-2	08/17/2010	0.5 - 2	PAH	Indeno(1,2,3-cd)pyrene	18	--	--	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-2	08/17/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	45	0.0094	4,800	Removed
2764	SYASB09	SB	A00-06-21DSYASB09-5	08/17/2010	3.5 - 5	PAH	Benzo(a)anthracene	0.39	--	--	
2764	SYASB09	SB	A00-06-21DSYASB09-5	08/17/2010	3.5 - 5	PAH	Benzo(b)fluoranthene	0.33 J	--	--	
2764	SYASB09	SB	A00-06-21DSYASB09-5	08/17/2010	3.5 - 5	PAH	Benzo(k)fluoranthene	0.33 J	--	--	
2764	SYASB09	SB	A00-06-21DSYASB09-5	08/17/2010	3.5 - 5	PAH	Total Benzofluoranthenes	0.66	--	--	
2764	SYASB09	SB	A00-06-21DSYASB09-5	08/17/2010	3.5 - 5	PAH	Benzo(g,h,i)perylene	0.27	0.031	8.7	
2764	SYASB09	SB	A00-06-21DSYASB09-5	08/17/2010	3.5 - 5	PAH	Benzo(a)pyrene	0.39	0.0094	41	
2764	SYASB09	SB	A00-06-21DSYASB09-5	08/17/2010	3.5 - 5	PAH	Chrysene	0.43	--	--	
2764	SYASB09	SB	A00-06-21DSYASB09-5	08/17/2010	3.5 - 5	PAH	Dibenz(a,h)anthracene	0.11	--	--	
2764	SYASB09	SB	A00-06-21DSYASB09-5	08/17/2010	3.5 - 5	PAH	Fluoranthene	0.66	0.16	4.1	
2764	SYASB09	SB	A00-06-21DSYASB09-5	08/17/2010	3.5 - 5	PAH	Indeno(1,2,3-cd)pyrene	0.23	--	--	
2764	SYASB09	SB	A00-06-21DSYASB09-5	08/17/2010	3.5 - 5	PAH	Total cPAHs (TEQ, NDx0.5)	0.53	0.0094	57	
2764	SYASB09	SB	A00-06-21DSYASB09-8	08/17/2010	6.5 - 8	PAH	Benzo(a)anthracene	0.76	--	--	
2764	SYASB09	SB	A00-06-21DSYASB09-8	08/17/2010	6.5 - 8	PAH	Benzo(b)fluoranthene	0.61 J	--	--	

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2764	SYASB09	SB	A00-06-21DSYASB09-8	08/17/2010	6.5 - 8	PAH	Benzo(k)fluoranthene	0.61 J	--	--	
2764	SYASB09	SB	A00-06-21DSYASB09-8	08/17/2010	6.5 - 8	PAH	Total Benzofluoranthenes	1.22	--	--	
2764	SYASB09	SB	A00-06-21DSYASB09-8	08/17/2010	6.5 - 8	PAH	Benzo(g,h,i)perylene	0.44	0.031	14	
2764	SYASB09	SB	A00-06-21DSYASB09-8	08/17/2010	6.5 - 8	PAH	Benzo(a)pyrene	0.69	0.0094	73	
2764	SYASB09	SB	A00-06-21DSYASB09-8	08/17/2010	6.5 - 8	PAH	Chrysene	0.78	--	--	
2764	SYASB09	SB	A00-06-21DSYASB09-8	08/17/2010	6.5 - 8	PAH	Dibenz(a,h)anthracene	0.25	--	--	
2764	SYASB09	SB	A00-06-21DSYASB09-8	08/17/2010	6.5 - 8	PAH	Fluoranthene	1.3	0.16	8.1	
2764	SYASB09	SB	A00-06-21DSYASB09-8	08/17/2010	6.5 - 8	PAH	Indeno(1,2,3-cd)pyrene	0.44	--	--	
2764	SYASB09	SB	A00-06-21DSYASB09-8	08/17/2010	6.5 - 8	PAH	Total cPAHs (TEQ, NDx0.5)	0.96	0.0094	100	
2765	SYASB10	SB	A00-06-21DSYASB10-0.5	08/19/2010	0 - 0.5	PAH	Benzo(a)anthracene	0.29	--	--	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-0.5	08/19/2010	0 - 0.5	PAH	Benzo(b)fluoranthene	0.38 J	--	--	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-0.5	08/19/2010	0 - 0.5	PAH	Benzo(k)fluoranthene	0.38 J	--	--	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-0.5	08/19/2010	0 - 0.5	PAH	Total Benzofluoranthenes	0.76	--	--	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-0.5	08/19/2010	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.11	0.031	3.5	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-0.5	08/19/2010	0 - 0.5	PAH	Benzo(a)pyrene	0.36	0.0094	38	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-0.5	08/19/2010	0 - 0.5	PAH	Chrysene	0.34	--	--	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-0.5	08/19/2010	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.042 J	--	--	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-0.5	08/19/2010	0 - 0.5	PAH	Fluoranthene	0.54	0.16	3.4	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-0.5	08/19/2010	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.13	--	--	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-0.5	08/19/2010	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.49	0.0094	52	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-2	08/18/2010	0.5 - 2	PAH	Benzo(a)anthracene	0.19	--	--	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-2	08/18/2010	0.5 - 2	PAH	Benzo(b)fluoranthene	0.22	--	--	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-2	08/18/2010	0.5 - 2	PAH	Benzo(k)fluoranthene	0.22	--	--	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-2	08/18/2010	0.5 - 2	PAH	Total Benzofluoranthenes	0.44	--	--	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-2	08/18/2010	0.5 - 2	PAH	Benzo(g,h,i)perylene	0.084 J	0.031	2.7	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-2	08/18/2010	0.5 - 2	PAH	Benzo(a)pyrene	0.23	0.0094	24	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-2	08/18/2010	0.5 - 2	PAH	Chrysene	0.24	--	--	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-2	08/18/2010	0.5 - 2	PAH	Fluoranthene	0.31	0.16	1.9	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-2	08/18/2010	0.5 - 2	PAH	Indeno(1,2,3-cd)pyrene	0.075 J	--	--	Removed
2765	SYASB10	SB	A00-06-21DSYASB10-2	08/18/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.30	0.0094	32	Removed
2766	SYASB11	SB	A00-06-21DSYASB11-0.5	08/19/2010	0 - 0.5	PAH	Benzo(a)anthracene	0.89	--	--	Removed
2766	SYASB11	SB	A00-06-21DSYASB11-0.5	08/19/2010	0 - 0.5	PAH	Benzo(b)fluoranthene	1 J	--	--	Removed
2766	SYASB11	SB	A00-06-21DSYASB11-0.5	08/19/2010	0 - 0.5	PAH	Benzo(k)fluoranthene	1 J	--	--	Removed
2766	SYASB11	SB	A00-06-21DSYASB11-0.5	08/19/2010	0 - 0.5	PAH	Total Benzofluoranthenes	2	--	--	Removed
2766	SYASB11	SB	A00-06-21DSYASB11-0.5	08/19/2010	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.24	0.031	7.7	Removed
2766	SYASB11	SB	A00-06-21DSYASB11-0.5	08/19/2010	0 - 0.5	PAH	Benzo(a)pyrene	0.92	0.0094	98	Removed
2766	SYASB11	SB	A00-06-21DSYASB11-0.5	08/19/2010	0 - 0.5	PAH	Chrysene	1	--	--	Removed
2766	SYASB11	SB	A00-06-21DSYASB11-0.5	08/19/2010	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.15	--	--	Removed
2766	SYASB11	SB	A00-06-21DSYASB11-0.5	08/19/2010	0 - 0.5	PAH	Fluoranthene	2	0.16	13	Removed
2766	SYASB11	SB	A00-06-21DSYASB11-0.5	08/19/2010	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.29	--	--	Removed
2766	SYASB11	SB	A00-06-21DSYASB11-0.5	08/19/2010	0 - 0.5	PAH	2-Methylnaphthalene	0.073	0.043	1.7	Removed
2766	SYASB11	SB	A00-06-21DSYASB11-0.5	08/19/2010	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	1.3	0.0094	130	Removed
2766	SYASB11	SB	A00-06-21DSYASB11-2	08/18/2010	0.5 - 2	PAH	Benzo(a)anthracene	0.063	--	--	

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2766	SYASB11	SB	A00-06-21DSYASB11-2	08/18/2010	0.5 - 2	PAH	Benzo(b)fluoranthene	0.097	--	--	
2766	SYASB11	SB	A00-06-21DSYASB11-2	08/18/2010	0.5 - 2	PAH	Benzo(k)fluoranthene	0.097	--	--	
2766	SYASB11	SB	A00-06-21DSYASB11-2	08/18/2010	0.5 - 2	PAH	Total Benzofluoranthenes	0.194	--	--	
2766	SYASB11	SB	A00-06-21DSYASB11-2	08/18/2010	0.5 - 2	PAH	Benzo(g,h,i)perylene	0.036	0.031	1.2	
2766	SYASB11	SB	A00-06-21DSYASB11-2	08/18/2010	0.5 - 2	PAH	Benzo(a)pyrene	0.069	0.0094	7.3	
2766	SYASB11	SB	A00-06-21DSYASB11-2	08/18/2010	0.5 - 2	PAH	Chrysene	0.094	--	--	
2766	SYASB11	SB	A00-06-21DSYASB11-2	08/18/2010	0.5 - 2	PAH	Indeno(1,2,3-cd)pyrene	0.034	--	--	
2766	SYASB11	SB	A00-06-21DSYASB11-2	08/18/2010	0.5 - 2	PAH	2-Methylnaphthalene	0.043	0.043	1.0	
2766	SYASB11	SB	A00-06-21DSYASB11-2	08/18/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.099	0.0094	11	
2766	SYASB11	SB	A00-06-21DSYASB11-5	08/18/2010	3.5 - 5	PAH	Benzo(a)anthracene	0.011 J	--	--	
2766	SYASB11	SB	A00-06-21DSYASB11-5	08/18/2010	3.5 - 5	PAH	Benzo(b)fluoranthene	0.0099 J	--	--	
2766	SYASB11	SB	A00-06-21DSYASB11-5	08/18/2010	3.5 - 5	PAH	Benzo(k)fluoranthene	0.0099 J	--	--	
2766	SYASB11	SB	A00-06-21DSYASB11-5	08/18/2010	3.5 - 5	PAH	Total Benzofluoranthenes	0.0198	--	--	
2766	SYASB11	SB	A00-06-21DSYASB11-5	08/18/2010	3.5 - 5	PAH	Chrysene	0.012 J	--	--	
2767	SYASB12	SB	A00-06-21DSYASB12-0.5	08/19/2010	0 - 0.5	PAH	Benzo(a)anthracene	0.23	--	--	Removed
2767	SYASB12	SB	A00-06-21DSYASB12-0.5	08/19/2010	0 - 0.5	PAH	Benzo(b)fluoranthene	0.27 J	--	--	Removed
2767	SYASB12	SB	A00-06-21DSYASB12-0.5	08/19/2010	0 - 0.5	PAH	Benzo(k)fluoranthene	0.27 J	--	--	Removed
2767	SYASB12	SB	A00-06-21DSYASB12-0.5	08/19/2010	0 - 0.5	PAH	Total Benzofluoranthenes	0.54	--	--	Removed
2767	SYASB12	SB	A00-06-21DSYASB12-0.5	08/19/2010	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.066	0.031	2.1	Removed
2767	SYASB12	SB	A00-06-21DSYASB12-0.5	08/19/2010	0 - 0.5	PAH	Benzo(a)pyrene	0.18	0.0094	19	Removed
2767	SYASB12	SB	A00-06-21DSYASB12-0.5	08/19/2010	0 - 0.5	PAH	Chrysene	0.3	--	--	Removed
2767	SYASB12	SB	A00-06-21DSYASB12-0.5	08/19/2010	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.039 J	--	--	Removed
2767	SYASB12	SB	A00-06-21DSYASB12-0.5	08/19/2010	0 - 0.5	PAH	Fluoranthene	0.6	0.16	3.8	Removed
2767	SYASB12	SB	A00-06-21DSYASB12-0.5	08/19/2010	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.077	--	--	Removed
2767	SYASB12	SB	A00-06-21DSYASB12-0.5	08/19/2010	0 - 0.5	PAH	2-Methylnaphthalene	0.15	0.043	3.5	Removed
2767	SYASB12	SB	A00-06-21DSYASB12-0.5	08/19/2010	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.27	0.0094	29	Removed
2767	SYASB12	SB	A00-06-21DSYASB12-2	08/18/2010	0.5 - 2	PAH	Benzo(a)anthracene	0.019 J	--	--	
2767	SYASB12	SB	A00-06-21DSYASB12-2	08/18/2010	0.5 - 2	PAH	Benzo(b)fluoranthene	0.021	--	--	
2767	SYASB12	SB	A00-06-21DSYASB12-2	08/18/2010	0.5 - 2	PAH	Benzo(k)fluoranthene	0.021	--	--	
2767	SYASB12	SB	A00-06-21DSYASB12-2	08/18/2010	0.5 - 2	PAH	Total Benzofluoranthenes	0.042	--	--	
2767	SYASB12	SB	A00-06-21DSYASB12-2	08/18/2010	0.5 - 2	PAH	Benzo(a)pyrene	0.016 J	0.0094	1.7	
2767	SYASB12	SB	A00-06-21DSYASB12-2	08/18/2010	0.5 - 2	PAH	Chrysene	0.031	--	--	
2767	SYASB12	SB	A00-06-21DSYASB12-2	08/18/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.023	0.0094	2.4	
2767	SYASB12	SB	A00-06-21DSYASB12-8	08/18/2010	6.5 - 8	PHT	Bis(2-ethylhexyl) phthalate	0.77	0.067	11	
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1071	GF-7	SS	GF-7	04/24/1987	0 - 0.1	PCB	Total PCBs	5.9	0.033	180	Removed
1072	GF-8	SS	GF-8	04/24/1987	0 - 0.1	PCB	Total PCBs	4	0.033	120	Removed
1073	GF-9	SS	GF-9	04/24/1987	0 - 0.1	PCB	Total PCBs	15	0.033	450	Removed
1998	GTSP08-12	SB	GTSP08-12-6-8	09/15/2008	6 - 8	PCB	Total PCBs	2.3	0.033	70	
1999	GTSP08-13	SB	GTSP08-13-3-5	09/15/2008	3 - 5	PCB	Total PCBs	0.198	0.033	6.0	
1999	GTSP08-13	SB	GTSP08-13-7-9	09/15/2008	7 - 9	PCB	Total PCBs	0.184	0.033	5.6	
2001	GTSP08-15	SB	GTSP08-15-1.5-3.5	09/15/2008	1.5 - 3.5	PCB	Total PCBs	0.082	0.033	2.5	Removed

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
1990	GTSP08-4	SB	GTSP08-4-3-5	09/15/2008	3 - 5	PCB	Total PCBs	1	0.033	30	Removed
1994	GTSP08-8	SB	GTSP08-8-5.5-7	09/15/2008	5.5 - 7	PCB	Total PCBs	6.2	0.033	190	Removed
1994	GTSP08-8	SB	GTSP08-8-7-9	09/15/2008	7 - 9	PCB	Total PCBs	0.037	0.033	1.1	Removed
2736	GTSP-3	MW	SCL-GTSP3-A	07/27/2006	0 - 3	PCB	Total PCBs	3.8	0.033	120	
2736	GTSP-3	MW	SCL-GTSP3-A	07/27/2006	0 - 3	MET	Cadmium	5.3	1.0	5.3	
2736	GTSP-3	MW	SCL-GTSP3-A	07/27/2006	0 - 3	MET	Mercury	1.38	0.070	20	
2736	GTSP-3	MW	SCL-GTSP3-A	07/27/2006	0 - 3	PAH	Benzo(a)anthracene	0.045 J	--	--	
2736	GTSP-3	MW	SCL-GTSP3-A	07/27/2006	0 - 3	PAH	Benzo(b)fluoranthene	0.088	--	--	
2736	GTSP-3	MW	SCL-GTSP3-A	07/27/2006	0 - 3	PAH	Benzo(k)fluoranthene	0.1	--	--	
2736	GTSP-3	MW	SCL-GTSP3-A	07/27/2006	0 - 3	PAH	Total Benzofluoranthenes	0.188	--	--	
2736	GTSP-3	MW	SCL-GTSP3-A	07/27/2006	0 - 3	PAH	Benzo(g,h,i)perylene	0.086	0.031	2.8	
2736	GTSP-3	MW	SCL-GTSP3-A	07/27/2006	0 - 3	PAH	Benzo(a)pyrene	0.079	0.0094	8.4	
2736	GTSP-3	MW	SCL-GTSP3-A	07/27/2006	0 - 3	PAH	Chrysene	0.071	--	--	
2736	GTSP-3	MW	SCL-GTSP3-A	07/27/2006	0 - 3	PAH	Indeno(1,2,3-cd)pyrene	0.08	--	--	
2736	GTSP-3	MW	SCL-GTSP3-A	07/27/2006	0 - 3	PAH	2-Methylnaphthalene	0.052 J	0.043	1.2	
2736	GTSP-3	MW	SCL-GTSP3-A	07/27/2006	0 - 3	PAH	Total cPAHs (TEQ, NDx0.5)	0.11	0.0094	12	
2736	GTSP-3	MW	SCL-GTSP3-C	07/27/2006	4 - 6	PCB	Total PCBs	0.069	0.033	2.1	
2738	GTSP-5	MW	SCL-GTSP5-A	07/28/2006	0 - 2	PCB	Total PCBs	0.25	0.033	7.6	Removed
2738	GTSP-5	MW	SCL-GTSP5-B	07/28/2006	2 - 4	PCB	Total PCBs	0.11	0.033	3.3	Removed
2738	GTSP-5	MW	SCL-GTSP5-C	07/28/2006	4 - 6	PCB	Total PCBs	1.3	0.033	39	Removed
2738	GTSP-5	MW	SCL-GTSP5-C	07/28/2006	4 - 6	MET	Mercury	0.1	0.070	1.4	Removed
2738	GTSP-5	MW	SCL-GTSP5-CS	07/28/2006	4 - 6	TPH	Gasoline Range Hydrocarbons	120 J	100	1.2	Removed
2738	GTSP-5	MW	SCL-GTSP5-C	07/28/2006	4 - 6	PHT	Bis(2-ethylhexyl) phthalate	0.25	0.067	3.7	Removed
2738	GTSP-5	MW	SCL-GTSP5-D	07/28/2006	6 - 8	PCB	Total PCBs	0.262	0.033	7.9	Removed
2738	GTSP-5	MW	SCL-GTSP5-D	07/28/2006	6 - 8	PHT	Bis(2-ethylhexyl) phthalate	0.07	0.067	1.0	Removed
2738	GTSP-5	MW	SCL-GTSP5-E	07/28/2006	8 - 10	PCB	Total PCBs	0.133	0.033	4.0	
2738	GTSP-5	MW	SCL-GTSP5-E	07/28/2006	8 - 10	PHT	Bis(2-ethylhexyl) phthalate	0.072	0.067	1.1	
2738	GTSP-5	MW	SCL-GTSP5-F	07/28/2006	10 - 12	PCB	Total PCBs	0.102	0.033	3.1	
2738	GTSP-5	MW	SCL-GTSP5-F	07/28/2006	10 - 12	PHT	Bis(2-ethylhexyl) phthalate	0.088	0.067	1.3	
2738	GTSP-5	MW	SCL-GTSP5-G	07/28/2006	12 - 14	PCB	Total PCBs	0.092	0.033	2.8	
2738	GTSP-5	MW	SCL-GTSP5-H	07/28/2006	14 - 15	PCB	Total PCBs	0.036	0.033	1.1	
987	IA01	EX	SCL-IA01	05/16/2006	1 - 1.5	PCB	Total PCBs	890	0.033	27,000	Removed
988	IA02	EX	SCL-IA02	05/16/2006	1 - 1.5	PCB	Total PCBs	15	0.033	450	Removed
989	IA03	EX	SCL-IA03	05/16/2006	1 - 1.5	PCB	Total PCBs	140	0.033	4,200	Removed
990	IA04	EX	SCL-IA04	05/16/2006	1.4 - 1.9	PCB	Total PCBs	160	0.033	4,800	Removed
991	IA05	EX	SCL-IA05	05/16/2006	1.8 - 2.3	PCB	Total PCBs	110	0.033	3,300	Removed
992	IA06	EX	SCL-IA06	05/16/2006	2.2 - 2.7	PCB	Total PCBs	1,100	0.033	33,000	Removed
993	IA07	EX	SCL-IA07	05/16/2006	2.6 - 3.1	PCB	Total PCBs	930	0.033	28,000	Removed
994	IA08	EX	SCL-IA08	05/16/2006	2.5 - 3	PCB	Total PCBs	3,800	0.033	120,000	Removed
995	IA09	EX	SCL-IA09	05/16/2006	2.5 - 3	PCB	Total PCBs	2,500	0.033	76,000	Removed
996	IA10	EX	SCL-IA10	05/16/2006	2.5 - 3	PCB	Total PCBs	2,000	0.033	61,000	Removed
997	IA11	EX	SCL-IA11	05/16/2006	2.5 - 3	PCB	Total PCBs	120	0.033	3,600	Removed
998	IA12	EX	SCL-IA12	05/16/2006	2.5 - 3	PCB	Total PCBs	62	0.033	1,900	Removed

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
999	IA15	EX	SCL-IA15	05/17/2006	2.7 - 3.2	PCB	Total PCBs	2.2	0.033	67	Removed
1000	IA17	EX	SCL-IA17	05/17/2006	2.7 - 3.2	PCB	Total PCBs	1.3	0.033	39	Removed
1001	IA19	EX	SCL-IA19	05/17/2006	2.8 - 3.3	PCB	Total PCBs	0.35	0.033	11	Removed
1002	IA21	EX	SCL-IA21	05/17/2006	3.2 - 3.8	PCB	Total PCBs	120	0.033	3,600	Removed
1003	IA23	EX	SCL-IA23	05/17/2006	3.1 - 3.6	PCB	Total PCBs	0.33	0.033	10	Removed
149	LLA-1	SB	LLA-1	09/19/2001	5.5 - 7.5	PCB	Total PCBs	8	0.033	240	Removed
150	LLA-2	SB	LLA-2	09/19/2001	5 - 6.5	PCB	Total PCBs	0.22	0.033	6.7	Removed
151	LLA-3	SB	LLA-3	09/19/2001	6 - 7.5	PCB	Total PCBs	0.057	0.033	1.7	Removed
151	LLA-3	SB	LLA-3	09/19/2001	6 - 7.5	TPH	Gasoline Range Hydrocarbons-HCID	240	30	8.0	Removed
151	LLA-3	SB	LLA-3	09/19/2001	6 - 7.5	PAH	2-Methylnaphthalene	0.045	0.043	1.0	Removed
3703	LLA-CS01	SB	LLA-CS01-3.5-5	05/17/2011	3.5 - 5	PCB	Total PCBs	6.6	0.033	200	Removed
3703	LLA-CS01	SB	LLA-CS01-5-6.5	05/17/2011	5 - 6.5	PCB	Total PCBs	0.063	0.033	1.9	Removed
3704	LLA-CS02	SB	LLA-CS02-5-6.5	05/17/2011	5 - 6.5	PCB	Total PCBs	57	0.033	1,700	Removed
3705	LLA-CS03	SB	LLA-CS03-8-9.5	05/17/2011	8 - 9.5	PCB	Total PCBs	0.038	0.033	1.2	Removed
3711	LLA-CS09	EX	LLA-CS09-A	11/21/2011	7.4 - 7.9	PCB	Total PCBs	0.046	0.033	1.4	
3712	LLA-CS10	EX	LLA-CS10-A	12/02/2011	1.7 - 2.2	PCB	Total PCBs	0.92	0.033	28	
3714	LLA-CS12	EX	LLA-CS12-A	08/29/2011	1.5 - 2	PCB	Total PCBs	0.104	0.033	3.2	
3715	LLA-CS13	EX	LLA-CS13-A	08/29/2011	1.2 - 1.7	PCB	Total PCBs	1.77	0.033	54	Removed
3716	LLA-CS14	EX	LLA-CS14-A	08/29/2011	1.7 - 2.2	PCB	Total PCBs	0.134	0.033	4.1	
2740	LLASB01	SB	A00-06-21DLLASB01-0.5	07/28/2010	0 - 0.5	PCB	Total PCBs	64	0.033	1,900	Removed
2740	LLASB01	SB	A00-06-21DLLASB01-2	07/27/2010	0.5 - 2	PCB	Total PCBs	530	0.033	16,000	Removed
2740	LLASB01	SB	A00-06-21DLLASB01-3.5	07/27/2010	2 - 3.5	PCB	Total PCBs	23.8	0.033	720	Removed
2740	LLASB01	SB	A00-06-21DLLASB01-5	07/27/2010	3.5 - 5	PCB	Total PCBs	0.32	0.033	9.7	Removed
2740	LLASB01	SB	A00-06-21DLLASB01-5LR	07/27/2010	3.5 - 5	MET	Mercury	0.1	0.070	1.4	Removed
2740	LLASB01	SB	A00-06-21DLLASB01-5	07/27/2010	3.5 - 5	PAH	2-Methylnaphthalene	0.059	0.043	1.4	Removed
2740	LLASB01	SB	A00-06-21DLLASB01-6.5	07/27/2010	5 - 6.5	PCB	Total PCBs	0.085	0.033	2.6	Removed
2741	LLASB02	SB	A00-06-21DLLASB02-0.5	07/27/2010	0 - 0.5	PCB	Total PCBs	0.41	0.033	12	Removed
2741	LLASB02	SB	A00-06-21DLLASB02-2	07/28/2010	0.5 - 2	PCB	Total PCBs	7.4	0.033	220	Removed
2741	LLASB02	SB	A00-06-21DLLASB02-5	07/28/2010	3.5 - 5	TPH	Gasoline Range Hydrocarbons	1,200	100	12	
2741	LLASB02	SB	A00-06-21DLLASB02-5	07/28/2010	3.5 - 5	PHT	Bis(2-ethylhexyl) phthalate	0.15	0.067	2.2	
2741	LLASB02	SB	A00-06-21DLLASB02-5	07/28/2010	3.5 - 5	PAH	Total Benzofluoranthenes	0.006	--	--	
2741	LLASB02	SB	A00-06-21DLLASB02-5	07/28/2010	3.5 - 5	PAH	Indeno(1,2,3-cd)pyrene	0.0054	--	--	
2741	LLASB02	SB	A00-06-21DLLASB02-5	07/28/2010	3.5 - 5	PAH	2-Methylnaphthalene	0.11 J	0.043	2.6	
2742	LLASB03	SB	A00-06-21DLLASB03-0.5	07/21/2010	0 - 0.5	PCB	Total PCBs	0.202	0.033	6.1	Removed
2742	LLASB03	SB	A00-06-21DLLASB03-2	07/21/2010	0.5 - 2	PCB	Total PCBs	1.08	0.033	33	Removed
2742	LLASB03	SB	A00-06-21DLLASB03-3.5	07/21/2010	2 - 3.5	PCB	Total PCBs	0.176	0.033	5.3	
2742	LLASB03	SB	A00-06-21DLLASB03-5	07/21/2010	3.5 - 5	PCB	Total PCBs	0.049	0.033	1.5	
2742	LLASB03	SB	A00-06-21DLLASB03-6.5	07/21/2010	5 - 6.5	PCB	Total PCBs	0.138	0.033	4.2	
2742	LLASB03	SB	A00-06-21DLLASB03-8	07/21/2010	6.5 - 8	TPH	Gasoline Range Hydrocarbons	1,200	30	40	
2743	LLASB04	SB	A00-06-21DLLASB04-0.5	07/21/2010	0 - 0.5	PCB	Total PCBs	1.02	0.033	31	Removed
2743	LLASB04	SB	A00-06-21DLLASB04-2	07/21/2010	0.5 - 2	PCB	Total PCBs	0.68	0.033	21	Removed
2743	LLASB04	SB	A00-06-21DLLASB04-3.5	07/21/2010	2 - 3.5	PCB	Total PCBs	5.2	0.033	160	
2743	LLASB04	SB	A00-06-21DLLASB04-5	07/21/2010	3.5 - 5	PCB	Total PCBs	0.109	0.033	3.3	

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2743	LLASB04	SB	A00-06-21DLLASB04-6.5	07/21/2010	5 - 6.5	PCB	Total PCBs	0.41	0.033	12	
2744	LLASB05	SB	A00-06-21DLLASB05-0.5	07/24/2010	0 - 0.5	PCB	Total PCBs	0.45	0.033	14	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-2	07/24/2010	0.5 - 2	PCB	Total PCBs	0.7	0.033	21	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-3.5	07/24/2010	2 - 3.5	PCB	Total PCBs	1.45	0.033	44	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-5	07/24/2010	3.5 - 5	PCB	Total PCBs	1.18	0.033	36	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-6.5	07/24/2010	5 - 6.5	PCB	Total PCBs	12.5	0.033	380	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	PCB	Total PCBs	5.6	0.033	170	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	MET	Arsenic	11	7.0	1.6	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	MET	Cadmium	2.6	1.0	2.6	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	MET	Copper	136	36	3.8	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	MET	Lead	140	57	2.5	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	MET	Mercury	2.56	0.070	37	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	MET	Nickel	130	38	3.4	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	MET	Zinc	310	86	3.6	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	TPH	Gasoline Range Hydrocarbons	1,500	30	50	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	PHT	Bis(2-ethylhexyl) phthalate	1	0.067	15	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	PAH	Benzo(a)anthracene	0.16	--	--	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	PAH	Benzo(b)fluoranthene	0.27	--	--	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	PAH	Benzo(k)fluoranthene	0.27	--	--	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	PAH	Total Benzofluoranthenes	0.4	--	--	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	PAH	Benzo(g,h,i)perylene	0.17	0.031	5.5	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	PAH	Benzo(a)pyrene	0.2	0.0094	21	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	PAH	Chrysene	0.23	--	--	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	PAH	Dibenz(a,h)anthracene	0.031	--	--	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	PAH	Fluoranthene	0.3	0.16	1.9	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	PAH	Indeno(1,2,3-cd)pyrene	0.15	--	--	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	PAH	2-Methylnaphthalene	0.2	0.043	4.7	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	PAH	Total cPAHs (TEQ, NDx0.5)	0.054	0.0094	5.7	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-8	07/24/2010	6.5 - 8	PAH	Total cPAHs (TEQ, NDx0.5)	0.28	0.0094	29	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-9.5	07/24/2010	8 - 9.5	PCB	Total PCBs	0.28	0.033	8.5	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-9.5	07/24/2010	8 - 9.5	PHT	Bis(2-ethylhexyl) phthalate	0.3	0.067	4.5	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-9.5	07/24/2010	8 - 9.5	PAH	Benzo(a)anthracene	0.065	--	--	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-9.5	07/24/2010	8 - 9.5	PAH	Total Benzofluoranthenes	0.092	--	--	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-9.5	07/24/2010	8 - 9.5	PAH	Benzo(g,h,i)perylene	0.036	0.031	1.2	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-9.5	07/24/2010	8 - 9.5	PAH	Benzo(a)pyrene	0.053	0.0094	5.6	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-9.5	07/24/2010	8 - 9.5	PAH	Chrysene	0.071	--	--	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-9.5	07/24/2010	8 - 9.5	PAH	Indeno(1,2,3-cd)pyrene	0.03	--	--	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-9.5	07/24/2010	8 - 9.5	PAH	2-Methylnaphthalene	0.086	0.043	2.0	Removed
2744	LLASB05	SB	A00-06-21DLLASB05-9.5	07/24/2010	8 - 9.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.073	0.0094	7.8	Removed
2745	LLASB06	SB	A00-06-21DLLASB06-0.5	07/26/2010	0 - 0.5	PCB	Total PCBs	0.251	0.033	7.6	Removed
2745	LLASB06	SB	A00-06-21DLLASB06-2	07/26/2010	0.5 - 2	MET	Arsenic	9	7.0	1.3	
2745	LLASB06	SB	A00-06-21DLLASB06-2	07/26/2010	0.5 - 2	PAH	Benzo(a)anthracene	0.01 J	--	--	
2745	LLASB06	SB	A00-06-21DLLASB06-2	07/26/2010	0.5 - 2	PAH	Benzo(a)pyrene	0.035	0.0094	3.7	

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2745	LLASB06	SB	A00-06-21DLLASB06-2	07/26/2010	0.5 - 2	PAH	Chrysene	0.041	--	--	
2745	LLASB06	SB	A00-06-21DLLASB06-2	07/26/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.037	0.0094	4.0	
2745	LLASB06	SB	A00-06-21DLLASB06-3.5	07/26/2010	2 - 3.5	MET	Arsenic	10	7.0	1.4	
2745	LLASB06	SB	A00-06-21DLLASB06-5	07/26/2010	3.5 - 5	MET	Arsenic	17	7.0	2.4	
2745	LLASB06	SB	A00-06-21DLLASB06-5	07/26/2010	3.5 - 5	MET	Zinc	137	86	1.6	
2745	LLASB06	SB	A00-06-21DLLASB06-6.5	07/26/2010	5 - 6.5	MET	Arsenic	11	7.0	1.6	
2745	LLASB06	SB	A00-06-21DLLASB06-6.5	07/26/2010	5 - 6.5	MET	Zinc	95	86	1.1	
2745	LLASB06	SB	A00-06-21DLLASB06-8S	07/26/2010	6.5 - 8	MET	Arsenic	8	7.0	1.1	
2746	LLASB07	SB	A00-06-21DLLASB07-0.5	07/26/2010	0 - 0.5	PCB	Total PCBs	0.44	0.033	13	Removed
2746	LLASB07	SB	A00-06-21DLLASB07-2	07/28/2010	0.5 - 2	PCB	Total PCBs	0.086	0.033	2.6	
2746	LLASB07	SB	A00-06-21DLLASB07-2	07/28/2010	0.5 - 2	TPH	Gasoline Range Hydrocarbons	50	30	1.7	
2746	LLASB07	SB	A00-06-21DLLASB07-3.5	07/28/2010	2 - 3.5	MET	Arsenic	16	7.0	2.3	
2746	LLASB07	SB	A00-06-21DLLASB07-3.5	07/28/2010	2 - 3.5	MET	Copper	50.9	36	1.4	
2746	LLASB07	SB	A00-06-21DLLASB07-3.5	07/28/2010	2 - 3.5	MET	Mercury	0.12	0.070	1.7	
2746	LLASB07	SB	A00-06-21DLLASB07-3.5	07/28/2010	2 - 3.5	MET	Zinc	112	86	1.3	
2746	LLASB07	SB	A00-06-21DLLASB07-3.5	07/28/2010	2 - 3.5	PAH	Benzo(a)anthracene	0.011 J	--	--	
2746	LLASB07	SB	A00-06-21DLLASB07-3.5	07/28/2010	2 - 3.5	PAH	Benzo(b)fluoranthene	0.01 J	--	--	
2746	LLASB07	SB	A00-06-21DLLASB07-3.5	07/28/2010	2 - 3.5	PAH	Benzo(k)fluoranthene	0.01 J	--	--	
2746	LLASB07	SB	A00-06-21DLLASB07-3.5	07/28/2010	2 - 3.5	PAH	Total Benzofluoranthenes	0.02	--	--	
2746	LLASB07	SB	A00-06-21DLLASB07-3.5	07/28/2010	2 - 3.5	PAH	Chrysene	0.027	--	--	
2746	LLASB07	SB	A00-06-21DLLASB07-3.5	07/28/2010	2 - 3.5	PAH	2-Methylnaphthalene	0.068	0.043	1.6	
2746	LLASB07	SB	A00-06-21DLLASB07-6.5	07/28/2010	5 - 6.5	MET	Arsenic	11	7.0	1.6	
2746	LLASB07	SB	A00-06-21DLLASB07-6.5	07/28/2010	5 - 6.5	MET	Copper	63	36	1.8	
2746	LLASB07	SB	A00-06-21DLLASB07-6.5	07/28/2010	5 - 6.5	MET	Mercury	0.14	0.070	2.0	
2746	LLASB07	SB	A00-06-21DLLASB07-6.5	07/28/2010	5 - 6.5	PAH	2-Methylnaphthalene	0.077	0.043	1.8	
2746	LLASB07	SB	A00-06-21DLLASB07-8	07/28/2010	6.5 - 8	MET	Zinc	234	86	2.7	
2746	LLASB07	SB	A00-06-21DLLASB07-8	07/28/2010	6.5 - 8	TPH	Gasoline Range Hydrocarbons	38	30	1.3	
2746	LLASB07	SB	A00-06-21DLLASB07-8	07/28/2010	6.5 - 8	PAH	2-Methylnaphthalene	0.16	0.043	3.7	
2747	LLASB08	SB	A00-06-21DLLASB08-0.5	07/24/2010	0 - 0.5	PCB	Total PCBs	4.09	0.033	120	Removed
2747	LLASB08	SB	A00-06-21DLLASB08-2	07/24/2010	0.5 - 2	PCB	Total PCBs	0.392	0.033	12	Removed
2747	LLASB08	SB	A00-06-21DLLASB08-8LR	07/24/2010	6.5 - 8	MET	Mercury	0.08	0.070	1.1	
2749	LLASB10	SB	A00-06-21DLLASB10-0.5	07/26/2010	0 - 0.5	PCB	Total PCBs	1.36	0.033	41	Removed
2749	LLASB10	SB	A00-06-21DLLASB10-2	07/26/2010	0.5 - 2	PCB	Total PCBs	0.359	0.033	11	Removed
2749	LLASB10	SB	A00-06-21DLLASB10-2LR	07/26/2010	0.5 - 2	MET	Arsenic	12	7.0	1.7	Removed
2749	LLASB10	SB	A00-06-21DLLASB10-2LR	07/26/2010	0.5 - 2	MET	Copper	42.3	36	1.2	Removed
2749	LLASB10	SB	A00-06-21DLLASB10-2	07/26/2010	0.5 - 2	MET	Lead	85	57	1.5	Removed
2749	LLASB10	SB	A00-06-21DLLASB10-2	07/26/2010	0.5 - 2	MET	Mercury	0.34 J	0.070	4.9	Removed
2749	LLASB10	SB	A00-06-21DLLASB10-2LR	07/26/2010	0.5 - 2	MET	Zinc	113	86	1.3	Removed
2749	LLASB10	SB	A00-06-21DLLASB10-2	07/26/2010	0.5 - 2	PAH	Benzo(a)anthracene	0.023	--	--	Removed
2749	LLASB10	SB	A00-06-21DLLASB10-2	07/26/2010	0.5 - 2	PAH	Benzo(b)fluoranthene	0.028	--	--	Removed
2749	LLASB10	SB	A00-06-21DLLASB10-2	07/26/2010	0.5 - 2	PAH	Benzo(k)fluoranthene	0.028	--	--	Removed
2749	LLASB10	SB	A00-06-21DLLASB10-2	07/26/2010	0.5 - 2	PAH	Total Benzofluoranthenes	0.056	--	--	Removed
2749	LLASB10	SB	A00-06-21DLLASB10-2	07/26/2010	0.5 - 2	PAH	Benzo(a)pyrene	0.026	0.0094	2.8	Removed

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2749	LLASB10	SB	A00-06-21DLLASB10-2	07/26/2010	0.5 - 2	PAH	Chrysene	0.054	--	--	Removed
2749	LLASB10	SB	A00-06-21DLLASB10-2	07/26/2010	0.5 - 2	PAH	Indeno(1,2,3-cd)pyrene	0.012 J	--	--	Removed
2749	LLASB10	SB	A00-06-21DLLASB10-2	07/26/2010	0.5 - 2	PAH	2-Methylnaphthalene	0.06	0.043	1.4	Removed
2749	LLASB10	SB	A00-06-21DLLASB10-2	07/26/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.036	0.0094	3.8	Removed
2749	LLASB10	SB	A00-06-21DLLASB10-3.5	07/26/2010	2 - 3.5	PCB	Total PCBs	0.071	0.033	2.2	
2749	LLASB10	SB	A00-06-21DLLASB10-3.5	07/26/2010	2 - 3.5	MET	Arsenic	13	7.0	1.9	
2749	LLASB10	SB	A00-06-21DLLASB10-3.5	07/26/2010	2 - 3.5	MET	Zinc	88	86	1.0	
2749	LLASB10	SB	A00-06-21DLLASB10-3.5	07/26/2010	2 - 3.5	PAH	Benzo(a)anthracene	0.01 J	--	--	
2749	LLASB10	SB	A00-06-21DLLASB10-3.5	07/26/2010	2 - 3.5	PAH	Benzo(a)pyrene	0.01 J	0.0094	1.1	
2749	LLASB10	SB	A00-06-21DLLASB10-3.5	07/26/2010	2 - 3.5	PAH	Chrysene	0.025	--	--	
2749	LLASB10	SB	A00-06-21DLLASB10-3.5	07/26/2010	2 - 3.5	PAH	2-Methylnaphthalene	0.086	0.043	2.0	
2749	LLASB10	SB	A00-06-21DLLASB10-3.5	07/26/2010	2 - 3.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.012	0.0094	1.3	
2749	LLASB10	SB	A00-06-21DLLASB10-5S	07/26/2010	3.5 - 5	MET	Arsenic	12	7.0	1.7	
2749	LLASB10	SB	A00-06-21DLLASB10-5S	07/26/2010	3.5 - 5	MET	Zinc	109	86	1.3	
2749	LLASB10	SB	A00-06-21DLLASB10-6.5	07/26/2010	5 - 6.5	PCB	Total PCBs	0.047	0.033	1.4	
2749	LLASB10	SB	A00-06-21DLLASB10-8	07/26/2010	6.5 - 8	MET	Mercury	0.17 J	0.070	2.4	
2750	LLASB11	SB	A00-06-21DLLASB11-0.5	07/26/2010	0 - 0.5	PCB	Total PCBs	0.29	0.033	8.8	Removed
2750	LLASB11	SB	A00-06-21DLLASB11-8	07/26/2010	6.5 - 8	MET	Arsenic	14	7.0	2.0	
2750	LLASB11	SB	A00-06-21DLLASB11-8	07/26/2010	6.5 - 8	MET	Zinc	118	86	1.4	
2750	LLASB11	SB	A00-06-21DLLASB11-8	07/26/2010	6.5 - 8	PAH	Benzo(a)anthracene	0.01 J	--	--	
2750	LLASB11	SB	A00-06-21DLLASB11-8	07/26/2010	6.5 - 8	PAH	Chrysene	0.018 J	--	--	
2750	LLASB11	SB	A00-06-21DLLASB11-8	07/26/2010	6.5 - 8	PAH	2-Methylnaphthalene	0.19	0.043	4.4	
2751	LLASB12	SB	A00-06-21DLLASB12-0.5	07/29/2010	0 - 0.5	PCB	Total PCBs	0.25	0.033	7.6	Removed
2751	LLASB12	SB	A00-06-21DLLASB12-5	07/28/2010	3.5 - 5	MET	Copper	45.2	36	1.3	
2751	LLASB12	SB	A00-06-21DLLASB12-5	07/28/2010	3.5 - 5	PHT	Bis(2-ethylhexyl) phthalate	0.1	0.067	1.5	
2751	LLASB12	SB	A00-06-21DLLASB12-6.5	07/28/2010	5 - 6.5	MET	Arsenic	9	7.0	1.3	
2751	LLASB12	SB	A00-06-21DLLASB12-6.5	07/28/2010	5 - 6.5	MET	Copper	63	36	1.8	
2751	LLASB12	SB	A00-06-21DLLASB12-6.5	07/28/2010	5 - 6.5	MET	Mercury	0.49	0.070	7.0	
2751	LLASB12	SB	A00-06-21DLLASB12-6.5	07/28/2010	5 - 6.5	PHT	Bis(2-ethylhexyl) phthalate	0.21	0.067	3.1	
2751	LLASB12	SB	A00-06-21DLLASB12-6.5	07/28/2010	5 - 6.5	PAH	Benzo(b)fluoranthene	0.01 J	--	--	
2751	LLASB12	SB	A00-06-21DLLASB12-6.5	07/28/2010	5 - 6.5	PAH	Benzo(k)fluoranthene	0.01 J	--	--	
2751	LLASB12	SB	A00-06-21DLLASB12-6.5	07/28/2010	5 - 6.5	PAH	Total Benzofluoranthenes	0.02	--	--	
2751	LLASB12	SB	A00-06-21DLLASB12-6.5	07/28/2010	5 - 6.5	PAH	Benzo(a)pyrene	0.012 J	0.0094	1.3	
2751	LLASB12	SB	A00-06-21DLLASB12-6.5	07/28/2010	5 - 6.5	PAH	Chrysene	0.014 J	--	--	
2751	LLASB12	SB	A00-06-21DLLASB12-6.5	07/28/2010	5 - 6.5	PAH	2-Methylnaphthalene	0.099	0.043	2.3	
2751	LLASB12	SB	A00-06-21DLLASB12-6.5	07/28/2010	5 - 6.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.015	0.0094	1.6	
2751	LLASB12	SB	A00-06-21DLLASB12-7.5	07/28/2010	6.5 - 7.5	MET	Arsenic	11	7.0	1.6	
2751	LLASB12	SB	A00-06-21DLLASB12-7.5	07/28/2010	6.5 - 7.5	MET	Copper	109	36	3.0	
2752	LLATW01	TW	A00-06-21DLLATW01-0.5	07/20/2010	0 - 0.5	PCB	Total PCBs	1.67	0.033	51	Removed
2752	LLATW01	TW	A00-06-21DLLATW01-2	07/20/2010	0.5 - 2	PCB	Total PCBs	0.36	0.033	11	Removed
2752	LLATW01	TW	A00-06-21DLLATW01-3.5	07/20/2010	2 - 3.5	PCB	Total PCBs	0.203	0.033	6.2	Removed
2752	LLATW01	TW	A00-06-21DLLATW01-5	07/20/2010	3.5 - 5	PCB	Total PCBs	78.9	0.033	2,400	Removed
2752	LLATW01	TW	A00-06-21DLLATW01-5	07/20/2010	3.5 - 5	TPH	Gasoline Range Hydrocarbons	2,700	100	27	Removed

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2752	LLATW01	TW	A00-06-21DLLATW01-5	07/20/2010	3.5 - 5	PAH	Benzo(a)anthracene	0.014	--	--	Removed
2752	LLATW01	TW	A00-06-21DLLATW01-5	07/20/2010	3.5 - 5	PAH	Total Benzofluoranthenes	0.031	--	--	Removed
2752	LLATW01	TW	A00-06-21DLLATW01-5	07/20/2010	3.5 - 5	PAH	Chrysene	0.02	--	--	Removed
2752	LLATW01	TW	A00-06-21DLLATW01-5	07/20/2010	3.5 - 5	PAH	Indeno(1,2,3-cd)pyrene	0.011	--	--	Removed
2752	LLATW01	TW	A00-06-21DLLATW01-5	07/20/2010	3.5 - 5	PAH	2-Methylnaphthalene	0.15	0.043	3.5	Removed
2752	LLATW01	TW	A00-06-21DLLATW01-6.5	07/20/2010	5 - 6.5	PCB	Total PCBs	2.4	0.033	73	
2752	LLATW01	TW	A00-06-21DLLATW01-8	07/20/2010	6.5 - 8	PCB	Total PCBs	0.064	0.033	1.9	
2752	LLATW01	TW	A00-06-21DLLATW01-11	07/21/2010	9.5 - 11	PCB	Total PCBs	0.13	0.033	3.9	
2753	LLATW02	TW	A00-06-21DLLATW02-0.5	07/23/2010	0 - 0.5	PCB	Total PCBs	0.293	0.033	8.9	Removed
2753	LLATW02	TW	A00-06-21DLLATW02-2	07/23/2010	0.5 - 2	PCB	Total PCBs	1.61	0.033	49	Removed
2753	LLATW02	TW	A00-06-21DLLATW02-3.5	07/23/2010	2 - 3.5	PCB	Total PCBs	0.66	0.033	20	Removed
2753	LLATW02	TW	A00-06-21DLLATW02-4.5	07/23/2010	3.5 - 4.5	PCB	Total PCBs	0.169	0.033	5.1	
2753	LLATW02	TW	A00-06-21DLLATW02-4.5	07/23/2010	3.5 - 4.5	TPH	Gasoline Range Hydrocarbons	1,000 J	100	10	
2754	LLATW03	TW	A00-06-21DLLATW03-0.5	07/20/2010	0 - 0.5	PCB	Total PCBs	62	0.033	1,900	Removed
2754	LLATW03	TW	A00-06-21DLLATW03-3.5	07/20/2010	2 - 3.5	PCB	Total PCBs	5.4	0.033	160	Removed
2754	LLATW03	TW	A00-06-21DLLATW03-5S	07/20/2010	3.5 - 5	PCB	Total PCBs	1.1	0.033	33	Removed
2754	LLATW03	TW	A00-06-21DLLATW03-6.5	07/20/2010	5 - 6.5	PCB	Total PCBs	0.52	0.033	16	Removed
2754	LLATW03	TW	A00-06-21DLLATW03-6.5	07/20/2010	5 - 6.5	TPH	Gasoline Range Hydrocarbons	32	30	1.1	Removed
2754	LLATW03	TW	A00-06-21DLLATW03-6.5	07/20/2010	5 - 6.5	VAH	Benzene	0.073	0.0010	73	Removed
2754	LLATW03	TW	A00-06-21DLLATW03-11	07/21/2010	9.5 - 11	PCB	Total PCBs	0.08	0.033	2.4	
2754	LLATW03	TW	A00-06-21DLLATW03-15.5	07/21/2010	14 - 15.5	PCB	Total PCBs	0.067	0.033	2.0	
2755	LLATW04	TW	A00-06-21DLLATW04-0.5	07/20/2010	0 - 0.5	PAH	Benzo(a)anthracene	0.017	--	--	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-0.5	07/20/2010	0 - 0.5	PAH	Benzo(b)fluoranthene	0.026 J	--	--	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-0.5	07/20/2010	0 - 0.5	PAH	Benzo(k)fluoranthene	0.026 J	--	--	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-0.5	07/20/2010	0 - 0.5	PAH	Total Benzofluoranthenes	0.051	--	--	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-0.5	07/20/2010	0 - 0.5	PAH	Benzo(a)pyrene	0.033	0.0094	3.5	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-0.5	07/20/2010	0 - 0.5	PAH	Chrysene	0.037	--	--	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-0.5	07/20/2010	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.0068	--	--	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-0.5	07/20/2010	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.021	--	--	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-0.5	07/20/2010	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.043	0.0094	4.6	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-2	07/20/2010	0.5 - 2	PCB	Total PCBs	16	0.033	480	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-2	07/20/2010	0.5 - 2	PHT	Bis(2-ethylhexyl) phthalate	0.097	0.067	1.4	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-2	07/20/2010	0.5 - 2	PAH	Benzo(a)anthracene	0.033	--	--	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-2	07/20/2010	0.5 - 2	PAH	Benzo(b)fluoranthene	0.12 J	--	--	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-2	07/20/2010	0.5 - 2	PAH	Benzo(k)fluoranthene	0.12 J	--	--	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-2	07/20/2010	0.5 - 2	PAH	Total Benzofluoranthenes	0.077	--	--	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-2	07/20/2010	0.5 - 2	PAH	Benzo(a)pyrene	0.044	0.0094	4.7	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-2	07/20/2010	0.5 - 2	PAH	Chrysene	0.055	--	--	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-2	07/20/2010	0.5 - 2	PAH	Dibenz(a,h)anthracene	0.0077	--	--	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-2	07/20/2010	0.5 - 2	PAH	Indeno(1,2,3-cd)pyrene	0.027	--	--	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-2	07/20/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.024	0.0094	2.6	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-2	07/20/2010	0.5 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.059	0.0094	6.3	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-3.5	07/20/2010	2 - 3.5	PCB	Total PCBs	12	0.033	360	Removed

Table 7.1-3
RI Selected Screening Level Exceedances for Detected COPCs in Soil at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)*	RISL (mg/kg)*	RISL Exceedance Factor	Excavation Status
2755	LLATW04	TW	A00-06-21DLLATW04-5	07/20/2010	3.5 - 5	PCB	Total PCBs	2.3	0.033	70	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-8	07/20/2010	6.5 - 8	PCB	Total PCBs	9.3	0.033	280	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-8S	07/20/2010	6.5 - 8	TPH	Gasoline Range Hydrocarbons	110	30	3.7	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-8S	07/20/2010	6.5 - 8	PAH	2-Methylnaphthalene	0.2	0.043	4.7	Removed
2755	LLATW04	TW	A00-06-21DLLATW04-9.5	07/20/2010	8 - 9.5	PCB	Total PCBs	0.189	0.033	5.7	Removed
159	RR-4	SB	RR-4	09/19/2001	0.5 - 2	PCB	Total PCBs	3.61	0.033	110	Removed

* = Dioxins/furans are presented in ng/kg

D/F = Dioxins/furans
EX = Excavation
J = Estimated value
MET = Metals
MW = Monitoring well
PAH = Polycyclic aromatic hydrocarbons
PCB = Polychlorinated biphenyls
PHT = Phthalates
SB = Soil boring
SS = Surface soil
TPH = Petroleum Hydrocarbons
TW = Temporary well
VAH = Volatile aromatic hydrocarbons
VOC = Volatile organic compounds
-- = Not applicable

Table 7.1-4
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at GTSP

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
East Yard Area										
No detected exceedances										
Fuel Tank Area										
No detected exceedances										
South Yard Area										
2768	SYATW01	TW	A00-06-21DSYATW01-GW	07/29/2010	PHT	Bis(2-ethylhexyl) phthalate	1.7	1.0	1.7	Abandoned
Low Lying Area										
2738	GTSP-5	MW	SCL-GTSP5-1	08/02/2006	PCB	Total PCBs	0.24	0.044	5.5	Abandoned
2738	GTSP-5	MW	SCL-GTSP5-2D	11/16/2006	PCB	Total PCBs	0.19	0.044	4.3	Abandoned
2738	GTSP-5	MW	SCL-GTSP5-3	02/28/2007	PCB	Total PCBs	0.16	0.044	3.6	Abandoned
2738	GTSP-5	MW	SCL-GTSP5-4	05/30/2007	PCB	Total PCBs	0.17	0.044	3.9	Abandoned
2738	GTSP-5	MW	A00-06-21DGTSP-51-GW-6-10	06/18/2010	PCB	Total PCBs	0.23	0.044	5.2	Abandoned
2752	LLATW01	TW	A00-06-21DLLATW01-GW	07/22/2010	PCB	Total PCBs	4.3	0.044	98	Abandoned
2755	LLATW04	TW	A00-06-21DLLATW04-GW	07/22/2010	PCB	Total PCBs	0.157	0.044	3.6	Abandoned

MW = Monitoring well
PCB = Polychlorinated biphenyls
PHT = Phthalates
TW = Temporary well

Table 7.1-5

RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
NBF Fenceline Area											
3543	CONFIRM-1	EX	CONFIRM-1(2.5-3.0)-080911	08/09/2011	2.5 - 3	PCB	Total PCBs	0.107	0.033	3.2	
2427	FL-3	SB	FL-3	05/18/2004	2 - 3	PCB	Total PCBs	102	0.033	3,100	Removed
3559	IAFE-S01	SB	IAFE-S01(8-9)052011	05/20/2011	8 - 9	PCB	Total PCBs	0.26	0.033	7.9	
3560	IAFE-S02	SB	IAFE-S02(7-8)051911	05/19/2011	7 - 8	PCB	Total PCBs	0.17	0.033	5.2	
3564	IAFE-S06	SB	IAFE-S06(5-6)052011	05/20/2011	5 - 6	PCB	Total PCBs	25.9	0.033	780	Removed
3564	IAFE-S06	SB	IAFE-S06(7-8)052011	05/20/2011	7 - 8	PCB	Total PCBs	11.7	0.033	350	Removed
3565	IAFE-S08	SB	IAFE-S08(5-6)052011	05/20/2011	5 - 6	PCB	Total PCBs	14	0.033	420	Removed
3565	IAFE-S08	SB	IAFE-S08(7-8)052011	05/20/2011	7 - 8	PCB	Total PCBs	0.22	0.033	6.7	
3566	IAFE-S09	SB	IAFE-S09(5-6)052011	05/20/2011	5 - 6	PCB	Total PCBs	10.4	0.033	320	Removed
3567	IAFE-S10	SB	IAFE-S10(5-6)052011	05/20/2011	5 - 6	PCB	Total PCBs	1.27	0.033	38	Removed
3568	IAFE-S11	SB	IAFE-S11(4-5)052011	05/20/2011	4 - 5	PCB	Total PCBs	56	0.033	1,700	Removed
3569	IAFE-S12	SB	IAFE-S12(5-6)051911	05/19/2011	5 - 6	PCB	Total PCBs	340	0.033	10,000	Removed
3570	IAFE-S13	SB	IAFE-S13(5-6)051911	05/19/2011	5 - 6	PCB	Total PCBs	3.5	0.033	110	Removed
3571	IAFE-S14	SB	IAFE-S14(5-6)051911	05/19/2011	5 - 6	PCB	Total PCBs	11	0.033	330	Removed
3572	IAFE-S15	SB	IAFE-S15(5-6)051911	05/19/2011	5 - 6	PCB	Total PCBs	0.16	0.033	4.8	Removed
3573	IAFE-S16	SB	IAFE-S16(5-6)051911	05/19/2011	5 - 6	PCB	Total PCBs	0.076	0.033	2.3	Removed
980	J1	RE	SCL-J1-F1	01/26/2006	0	PCB	Total PCBs	0.52	0.033	16	Removed
980	J1	RE	SCL-J1-F1	01/26/2006	0	MET	Arsenic	8	7.0	1.1	Removed
980	J1	RE	SCL-J1-F1	01/26/2006	0	MET	Mercury	1.02 J	0.07	15	Removed
980	J1	RE	SCL-J1-F1	01/26/2006	0	MET	Zinc	1130 J	86	13	Removed
980	J1	RE	SCL-J1-F1	01/26/2006	0	PAH	Benzo(a)anthracene	0.034 J	--	--	Removed
980	J1	RE	SCL-J1-F1	01/26/2006	0	PAH	Benzo(b)fluoranthene	0.053 J	--	--	Removed
980	J1	RE	SCL-J1-F1	01/26/2006	0	PAH	Benzo(k)fluoranthene	0.04 J	--	--	Removed
980	J1	RE	SCL-J1-F1	01/26/2006	0	PAH	Total Benzofluoranthenes	0.093	--	--	Removed
980	J1	RE	SCL-J1-F1	01/26/2006	0	PAH	Benzo(a)pyrene	0.049 J	0.0094	5.2	Removed
980	J1	RE	SCL-J1-F1	01/26/2006	0	PAH	Chrysene	0.042 J	--	--	Removed
980	J1	RE	SCL-J1-F1	01/26/2006	0	PAH	Total cPAHs (TEQ, NDx0.5)	0.068	0.0094	7.3	Removed
980	J1	RE	SCL-J1-B1	01/27/2006	0.25 - 3	PCB	Total PCBs	0.07	0.033	2.1	Removed
980	J1	RE	SCL-J1-B2	01/27/2006	0.25 - 3	MET	Mercury	1.08	0.07	15	Removed
981	J2	RE	SCL-J2-S2	01/26/2006	0 - 0.25	PCB	Total PCBs	0.32	0.033	9.7	Removed
981	J2	RE	SCL-J2-S1	01/26/2006	0 - 0.25	MET	Mercury	0.18 J	0.07	2.6	Removed
981	J2	RE	SCL-J2-S1	01/26/2006	0 - 0.25	MET	Zinc	588	86	6.8	Removed
981	J2	RE	SCL-J2-F1	01/26/2006	0	PCB	Total PCBs	11	0.033	330	Removed
981	J2	RE	SCL-J2-F1	01/26/2006	0	MET	Arsenic	10	7.0	1.4	Removed
981	J2	RE	SCL-J2-F1	01/26/2006	0	MET	Cadmium	1.7	1.0	1.7	Removed
981	J2	RE	SCL-J2-F1	01/26/2006	0	MET	Copper	50.9	36	1.4	Removed
981	J2	RE	SCL-J2-F1	01/26/2006	0	MET	Lead	74	57	1.3	Removed
981	J2	RE	SCL-J2-F1	01/26/2006	0	MET	Mercury	1.39	0.070	20	Removed
981	J2	RE	SCL-J2-F1	01/26/2006	0	MET	Zinc	344	86	4.0	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
981	J2	RE	SCL-J2-F1	01/26/2006	0	PAH	Benzo(a)anthracene	0.05 J	--	--	Removed
981	J2	RE	SCL-J2-F1	01/26/2006	0	PAH	Benzo(b)fluoranthene	0.069	--	--	Removed
981	J2	RE	SCL-J2-F1	01/26/2006	0	PAH	Benzo(k)fluoranthene	0.077	--	--	Removed
981	J2	RE	SCL-J2-F1	01/26/2006	0	PAH	Total Benzofluoranthenes	0.146	--	--	Removed
981	J2	RE	SCL-J2-F1	01/26/2006	0	PAH	Benzo(a)pyrene	0.06 J	0.0094	6.4	Removed
981	J2	RE	SCL-J2-F1	01/26/2006	0	PAH	Chrysene	0.07	--	--	Removed
981	J2	RE	SCL-J2-F1	01/26/2006	0	PAH	Total cPAHs (TEQ, NDx0.5)	0.087	0.0094	9.2	Removed
981	J2	RE	SCL-J2-B1	01/27/2006	0.25 - 3	PCB	Total PCBs	36	0.033	1,100	Removed
981	J2	RE	SCL-J2-B1	01/27/2006	0.25 - 3	MET	Mercury	2.9	0.070	41	Removed
981	J2	RE	SCL-J2-B1	01/27/2006	0.25 - 3	MET	Zinc	175	86	2.0	Removed
982	J3	RE	SCL-J3-S1	01/26/2006	0 - 0.25	PCB	Total PCBs	0.087	0.033	2.6	Removed
982	J3	RE	SCL-J3-S1	01/26/2006	0 - 0.25	MET	Copper	40.7	36	1.1	Removed
982	J3	RE	SCL-J3-S1	01/26/2006	0 - 0.25	MET	Zinc	242	86	2.8	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	PCB	Total PCBs	6	0.033	180	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	MET	Arsenic	9	7.0	1.3	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	MET	Cadmium	1.4	1.0	1.4	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	MET	Copper	42	36	1.2	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	MET	Lead	58	57	1.0	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	MET	Mercury	1.19	0.070	17	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	MET	Zinc	269	86	3.1	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	PAH	Benzo(a)anthracene	0.26	--	--	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	PAH	Benzo(b)fluoranthene	0.26	--	--	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	PAH	Benzo(k)fluoranthene	0.23	--	--	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	PAH	Total Benzofluoranthenes	0.49	--	--	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	PAH	Benzo(g,h,i)perylene	0.054 J	0.031	1.7	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	PAH	Benzo(a)pyrene	0.22	0.0094	23	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	PAH	Chrysene	0.32	--	--	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	PAH	Fluoranthene	0.4	0.16	2.5	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	PAH	Indeno(1,2,3-cd)pyrene	0.056 J	--	--	Removed
982	J3	RE	SCL-J3-F1	01/26/2006	0	PAH	Total cPAHs (TEQ, NDx0.5)	0.31	0.0094	33	Removed
982	J3	RE	SCL-J3-B1	01/27/2006	0.25 - 3	PCB	Total PCBs	28	0.033	850	Removed
982	J3	RE	SCL-J3-B1	01/27/2006	0.25 - 3	MET	Mercury	0.9	0.070	13	Removed
983	J4	RE	SCL-J4-S1	01/26/2006	0 - 0.25	PCB	Total PCBs	0.15	0.033	4.5	Removed
983	J4	RE	SCL-J4-S1	01/26/2006	0 - 0.25	MET	Copper	48.5	36	1.3	Removed
983	J4	RE	SCL-J4-S1	01/26/2006	0 - 0.25	MET	Mercury	0.52	0.070	7.4	Removed
983	J4	RE	SCL-J4-F1	01/26/2006	0	PCB	Total PCBs	5	0.033	150	Removed
983	J4	RE	SCL-J4-F1	01/26/2006	0	MET	Arsenic	9	7.0	1.3	Removed
983	J4	RE	SCL-J4-F1	01/26/2006	0	MET	Cadmium	1.6	1.0	1.6	Removed
983	J4	RE	SCL-J4-F1	01/26/2006	0	MET	Copper	46.8	36	1.3	Removed
983	J4	RE	SCL-J4-F1	01/26/2006	0	MET	Mercury	2.16	0.070	31	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
983	J4	RE	SCL-J4-F1	01/26/2006	0	MET	Zinc	712	86	8.3	Removed
983	J4	RE	SCL-J4-F1	01/26/2006	0	PAH	Benzo(a)anthracene	0.038 J	--	--	Removed
983	J4	RE	SCL-J4-F1	01/26/2006	0	PAH	Benzo(b)fluoranthene	0.086	--	--	Removed
983	J4	RE	SCL-J4-F1	01/26/2006	0	PAH	Benzo(k)fluoranthene	0.056 J	--	--	Removed
983	J4	RE	SCL-J4-F1	01/26/2006	0	PAH	Total Benzofluoranthenes	0.142	--	--	Removed
983	J4	RE	SCL-J4-F1	01/26/2006	0	PAH	Benzo(a)pyrene	0.068	0.0094	7.2	Removed
983	J4	RE	SCL-J4-F1	01/26/2006	0	PAH	Chrysene	0.059 J	--	--	Removed
983	J4	RE	SCL-J4-F1	01/26/2006	0	PAH	Total cPAHs (TEQ, NDx0.5)	0.093	0.0094	9.9	Removed
983	J4	RE	SCL-J4-B1	01/27/2006	0.25 - 3	PCB	Total PCBs	7	0.033	210	Removed
983	J4	RE	SCL-J4-B1	01/27/2006	0.25 - 3	MET	Mercury	1.36	0.070	19	Removed
984	J5	RE	SCL-J5-S1	01/26/2006	0 - 0.25	PCB	Total PCBs	0.42	0.033	13	Removed
984	J5	RE	SCL-J5-S1	01/26/2006	0 - 0.25	MET	Cadmium	1.5	1.0	1.5	Removed
984	J5	RE	SCL-J5-S1	01/26/2006	0 - 0.25	MET	Copper	142	36	3.9	Removed
984	J5	RE	SCL-J5-S1	01/26/2006	0 - 0.25	MET	Nickel	40	38	1.1	Removed
984	J5	RE	SCL-J5-S1	01/26/2006	0 - 0.25	MET	Zinc	4330	86	50	Removed
984	J5	RE	SCL-J5-S1	01/26/2006	0 - 0.25	PAH	Benzo(a)anthracene	0.035 J	--	--	Removed
984	J5	RE	SCL-J5-S1	01/26/2006	0 - 0.25	PAH	Benzo(b)fluoranthene	0.089	--	--	Removed
984	J5	RE	SCL-J5-S1	01/26/2006	0 - 0.25	PAH	Benzo(k)fluoranthene	0.074	--	--	Removed
984	J5	RE	SCL-J5-S1	01/26/2006	0 - 0.25	PAH	Total Benzofluoranthenes	0.163	--	--	Removed
984	J5	RE	SCL-J5-S1	01/26/2006	0 - 0.25	PAH	Benzo(a)pyrene	0.046 J	0.0094	4.9	Removed
984	J5	RE	SCL-J5-S1	01/26/2006	0 - 0.25	PAH	Chrysene	0.067	--	--	Removed
984	J5	RE	SCL-J5-S1	01/26/2006	0 - 0.25	PAH	Total cPAHs (TEQ, NDx0.5)	0.073	0.0094	7.8	Removed
984	J5	RE	SCL-J5-F1	01/26/2006	0	PCB	Total PCBs	28	0.033	850	Removed
984	J5	RE	SCL-J5-F1	01/26/2006	0	MET	Arsenic	9	7.0	1.3	Removed
984	J5	RE	SCL-J5-F1	01/26/2006	0	MET	Cadmium	1.7	1.0	1.7	Removed
984	J5	RE	SCL-J5-F1	01/26/2006	0	MET	Copper	48.3	36	1.3	Removed
984	J5	RE	SCL-J5-F1	01/26/2006	0	MET	Mercury	1.82	0.070	26	Removed
984	J5	RE	SCL-J5-F1	01/26/2006	0	PAH	Benzo(a)anthracene	0.29	--	--	Removed
984	J5	RE	SCL-J5-F1	01/26/2006	0	PAH	Benzo(b)fluoranthene	0.35	--	--	Removed
984	J5	RE	SCL-J5-F1	01/26/2006	0	PAH	Benzo(k)fluoranthene	0.46	--	--	Removed
984	J5	RE	SCL-J5-F1	01/26/2006	0	PAH	Total Benzofluoranthenes	0.81	--	--	Removed
984	J5	RE	SCL-J5-F1	01/26/2006	0	PAH	Benzo(g,h,i)perylene	0.07	0.031	2.3	Removed
984	J5	RE	SCL-J5-F1	01/26/2006	0	PAH	Benzo(a)pyrene	0.38	0.0094	40	Removed
984	J5	RE	SCL-J5-F1	01/26/2006	0	PAH	Chrysene	0.37	--	--	Removed
984	J5	RE	SCL-J5-F1	01/26/2006	0	PAH	Dibenz(a,h)anthracene	0.066	--	--	Removed
984	J5	RE	SCL-J5-F1	01/26/2006	0	PAH	Fluoranthene	0.44	0.16	2.8	Removed
984	J5	RE	SCL-J5-F1	01/26/2006	0	PAH	Indeno(1,2,3-cd)pyrene	0.077	--	--	Removed
984	J5	RE	SCL-J5-F1	01/26/2006	0	PAH	Total cPAHs (TEQ, NDx0.5)	0.51	0.0094	54	Removed
984	J5	RE	SCL-J5-B1	01/27/2006	0.25 - 3	PCB	Total PCBs	16	0.033	480	Removed
984	J5	RE	SCL-J5-B1	01/27/2006	0.25 - 3	MET	Arsenic	10	7.0	1.4	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
984	J5	RE	SCL-J5-B1	01/27/2006	0.25 - 3	MET	Cadmium	1.1	1.0	1.1	Removed
984	J5	RE	SCL-J5-B1	01/27/2006	0.25 - 3	MET	Mercury	2.03	0.070	29	Removed
984	J5	RE	SCL-J5-B1	01/27/2006	0.25 - 3	MET	Zinc	153	86	1.8	Removed
985	J6	RE	SCL-J6-S1	01/26/2006	0 - 0.25	PCB	Total PCBs	2.6	0.033	79	Removed
985	J6	RE	SCL-J6-S1	01/26/2006	0 - 0.25	MET	Chromium	124	120	1.0	Removed
985	J6	RE	SCL-J6-S1	01/26/2006	0 - 0.25	MET	Copper	75.1	36	2.1	Removed
985	J6	RE	SCL-J6-S1	01/26/2006	0 - 0.25	MET	Mercury	0.32	0.070	4.6	Removed
985	J6	RE	SCL-J6-S1	01/26/2006	0 - 0.25	MET	Nickel	57	38	1.5	Removed
985	J6	RE	SCL-J6-S1	01/26/2006	0 - 0.25	MET	Zinc	1110	86	13	Removed
985	J6	RE	SCL-J6-S1	01/26/2006	0 - 0.25	PAH	Benzo(b)fluoranthene	0.042 J	--	--	Removed
985	J6	RE	SCL-J6-S1	01/26/2006	0 - 0.25	PAH	Benzo(k)fluoranthene	0.041 J	--	--	Removed
985	J6	RE	SCL-J6-S1	01/26/2006	0 - 0.25	PAH	Total Benzofluoranthenes	0.083	--	--	Removed
985	J6	RE	SCL-J6-S1	01/26/2006	0 - 0.25	PAH	Chrysene	0.036 J	--	--	Removed
985	J6	RE	SCL-J6-S1	01/26/2006	0 - 0.25	PAH	Total cPAHs (TEQ, NDx0.5)	0.051	0.0094	5.4	Removed
985	J6	RE	SCL-J6-F1	01/26/2006	0	PCB	Total PCBs	410	0.033	12,000	Removed
985	J6	RE	SCL-J6-F1	01/26/2006	0	MET	Arsenic	9	7.0	1.3	Removed
985	J6	RE	SCL-J6-F1	01/26/2006	0	MET	Cadmium	2.9	1.0	2.9	Removed
985	J6	RE	SCL-J6-F1	01/26/2006	0	MET	Copper	60.3	36	1.7	Removed
985	J6	RE	SCL-J6-F1	01/26/2006	0	MET	Lead	67	57	1.2	Removed
985	J6	RE	SCL-J6-F1	01/26/2006	0	MET	Mercury	4.33	0.070	62	Removed
985	J6	RE	SCL-J6-F1	01/26/2006	0	MET	Zinc	978	86	11	Removed
985	J6	RE	SCL-J6-F1	01/26/2006	0	PAH	Benzo(a)anthracene	0.041 J	--	--	Removed
985	J6	RE	SCL-J6-F1	01/26/2006	0	PAH	Benzo(b)fluoranthene	0.087	--	--	Removed
985	J6	RE	SCL-J6-F1	01/26/2006	0	PAH	Benzo(k)fluoranthene	0.059 J	--	--	Removed
985	J6	RE	SCL-J6-F1	01/26/2006	0	PAH	Total Benzofluoranthenes	0.146	--	--	Removed
985	J6	RE	SCL-J6-F1	01/26/2006	0	PAH	Benzo(a)pyrene	0.053 J	0.0094	5.6	Removed
985	J6	RE	SCL-J6-F1	01/26/2006	0	PAH	Chrysene	0.064 J	--	--	Removed
985	J6	RE	SCL-J6-F1	01/26/2006	0	PAH	Total cPAHs (TEQ, NDx0.5)	0.079	0.0094	8.4	Removed
985	J6	RE	SCL-J6-B1	01/27/2006	0.25 - 3	PCB	Total PCBs	3900	0.033	120,000	Removed
985	J6	RE	SCL-J6-B1	01/27/2006	0.25 - 3	MET	Arsenic	14	7.0	2.0	Removed
985	J6	RE	SCL-J6-B1	01/27/2006	0.25 - 3	MET	Cadmium	2.5	1.0	2.5	Removed
985	J6	RE	SCL-J6-B1	01/27/2006	0.25 - 3	MET	Copper	36.8	36	1.0	Removed
985	J6	RE	SCL-J6-B1	01/27/2006	0.25 - 3	MET	Mercury	5.7	0.070	81	Removed
985	J6	RE	SCL-J6-B1	01/27/2006	0.25 - 3	MET	Zinc	224	86	2.6	Removed
986	J7	RE	SCL-J7-S1	01/26/2006	0 - 0.25	PCB	Total PCBs	78	0.033	2,400	Removed
986	J7	RE	SCL-J7-S1	01/26/2006	0 - 0.25	MET	Arsenic	9	7.0	1.3	Removed
986	J7	RE	SCL-J7-S1	01/26/2006	0 - 0.25	MET	Cadmium	2.1	1.0	2.1	Removed
986	J7	RE	SCL-J7-S1	01/26/2006	0 - 0.25	MET	Copper	62.6	36	1.7	Removed
986	J7	RE	SCL-J7-S1	01/26/2006	0 - 0.25	MET	Lead	64	57	1.1	Removed
986	J7	RE	SCL-J7-S1	01/26/2006	0 - 0.25	MET	Mercury	0.49	0.070	7.0	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
986	J7	RE	SCL-J7-S1	01/26/2006	0 - 0.25	MET	Zinc	256	86	3.0	Removed
986	J7	RE	SCL-J7-S1	01/26/2006	0 - 0.25	PAH	Benzo(a)anthracene	0.11	--	--	Removed
986	J7	RE	SCL-J7-S1	01/26/2006	0 - 0.25	PAH	Benzo(b)fluoranthene	0.24	--	--	Removed
986	J7	RE	SCL-J7-S1	01/26/2006	0 - 0.25	PAH	Benzo(k)fluoranthene	0.13	--	--	Removed
986	J7	RE	SCL-J7-S1	01/26/2006	0 - 0.25	PAH	Total Benzofluoranthenes	0.37	--	--	Removed
986	J7	RE	SCL-J7-S1	01/26/2006	0 - 0.25	PAH	Benzo(a)pyrene	0.13	0.0094	14	Removed
986	J7	RE	SCL-J7-S1	01/26/2006	0 - 0.25	PAH	Chrysene	0.13	--	--	Removed
986	J7	RE	SCL-J7-S1	01/26/2006	0 - 0.25	PAH	Fluoranthene	0.27	0.16	1.7	Removed
986	J7	RE	SCL-J7-S1	01/26/2006	0 - 0.25	PAH	Total cPAHs (TEQ, NDx0.5)	0.19	0.0094	20	Removed
986	J7	RE	SCL-J7-F1	01/26/2006	0	PCB	Total PCBs	58	0.033	1,800	Removed
986	J7	RE	SCL-J7-F1	01/26/2006	0	PAH	Benzo(b)fluoranthene	0.088	--	--	Removed
986	J7	RE	SCL-J7-F1	01/26/2006	0	PAH	Benzo(k)fluoranthene	0.078	--	--	Removed
986	J7	RE	SCL-J7-F1	01/26/2006	0	PAH	Total Benzofluoranthenes	0.166	--	--	Removed
986	J7	RE	SCL-J7-F1	01/26/2006	0	PAH	Benzo(a)pyrene	0.055 J	0.0094	5.9	Removed
986	J7	RE	SCL-J7-F1	01/26/2006	0	PAH	Chrysene	0.071	--	--	Removed
986	J7	RE	SCL-J7-F1	01/26/2006	0	PAH	Total cPAHs (TEQ, NDx0.5)	0.082	0.0094	8.7	Removed
986	J7	RE	SCL-J7-B1	01/27/2006	0.25 - 3	PCB	Total PCBs	63	0.033	1,900	Removed
986	J7	RE	SCL-J7-B1	01/27/2006	0.25 - 3	MET	Arsenic	9	7.0	1.3	Removed
986	J7	RE	SCL-J7-B1	01/27/2006	0.25 - 3	MET	Cadmium	1.4	1.0	1.4	Removed
986	J7	RE	SCL-J7-B1	01/27/2006	0.25 - 3	MET	Copper	39.5	36	1.1	Removed
986	J7	RE	SCL-J7-B1	01/27/2006	0.25 - 3	MET	Mercury	0.63	0.070	9.0	Removed
986	J7	RE	SCL-J7-B1	01/27/2006	0.25 - 3	MET	Zinc	139	86	1.6	Removed
986	J7	RE	SCL-J7-B1	01/27/2006	0.25 - 3	PAH	Benzo(b)fluoranthene	0.082	--	--	Removed
986	J7	RE	SCL-J7-B1	01/27/2006	0.25 - 3	PAH	Benzo(k)fluoranthene	0.066 J	--	--	Removed
986	J7	RE	SCL-J7-B1	01/27/2006	0.25 - 3	PAH	Total Benzofluoranthenes	0.148	--	--	Removed
986	J7	RE	SCL-J7-B1	01/27/2006	0.25 - 3	PAH	Benzo(a)pyrene	0.063 J	0.0094	6.7	Removed
986	J7	RE	SCL-J7-B1	01/27/2006	0.25 - 3	PAH	Chrysene	0.046 J	--	--	Removed
986	J7	RE	SCL-J7-B1	01/27/2006	0.25 - 3	PAH	Total cPAHs (TEQ, NDx0.5)	0.088	0.0094	9.4	Removed
2502	LAI-SB01	SB	SB01(0-2)071310	07/13/2010	0 - 2	PCB	Total PCBs	0.2	0.033	6.1	
2503	LAI-SB02	SB	SB02(2-4)071310	07/13/2010	2 - 4	VAH	Benzene	0.0033	0.001	3.3	
2503	LAI-SB02	SB	SB02(2-4)071310	07/13/2010	2 - 4	VOC	Tetrachloroethene (PCE)	0.0046	0.0018	2.6	
2503	LAI-SB02	SB	SB02(2-4)071310	07/13/2010	2 - 4	VOC	Trichloroethene (TCE)	0.12	0.0015	80	
2504	LAI-SB03	SB	SB03(0-2)071310	07/13/2010	0 - 2	PCB	Total PCBs	0.43	0.033	13	Removed
2504	LAI-SB03	SB	SB03(2-4)071310	07/13/2010	2 - 4	PCB	Total PCBs	0.65	0.033	20	Removed
2504	LAI-SB03	SB	SB03(2-4)071310	07/13/2010	2 - 4	MET	Arsenic	10	7.0	1.4	Removed
2504	LAI-SB03	SB	SB03(2-4)071310	07/13/2010	2 - 4	MET	Copper	59	36	1.6	Removed
2504	LAI-SB03	SB	SB03(2-4)071310	07/13/2010	2 - 4	MET	Mercury	0.18	0.070	2.6	Removed
2505	LAI-SB04	SB	SB04(0-2)071310	07/13/2010	0 - 2	PCB	Total PCBs	5.4	0.033	160	Removed
2505	LAI-SB04	SB	SB04(0-2)071310	07/13/2010	0 - 2	VOC	Trichloroethene (TCE)	0.0019	0.0015	1.3	Removed
2505	LAI-SB04	SB	SB04(2-4)071310	07/13/2010	2 - 4	PCB	Total PCBs	0.47	0.033	14	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
2505	LAI-SB04	SB	SB04(4-6)071410	07/14/2010	4 - 6	PCB	Total PCBs	0.108	0.033	3.3	Removed
2506	LAI-SB05	SB	SB05(0-2)071310	07/13/2010	0 - 2	PCB	Total PCBs	0.065	0.033	2.0	Removed
2507	LAI-SB06	SB	SB06(0-2)071510	07/15/2010	0 - 2	PCB	Total PCBs	0.091	0.033	2.8	
2508	LAI-SB07	SB	SB07(0-2)071310	07/13/2010	0 - 2	PCB	Total PCBs	3.2	0.033	97	Removed
2508	LAI-SB07	SB	SB07(0-2)071310	07/13/2010	0 - 2	VAH	Benzene	0.0049	0.001	4.9	Removed
2508	LAI-SB07	SB	SB07(2-4)071310	07/13/2010	2 - 4	PCB	Total PCBs	640	0.033	19,000	Removed
2508	LAI-SB07	SB	SB07(2-4)071310	07/13/2010	2 - 4	MET	Cadmium	2.5	1.0	2.5	Removed
2508	LAI-SB07	SB	SB07(2-4)071310	07/13/2010	2 - 4	MET	Mercury	4	0.070	57	Removed
2508	LAI-SB07	SB	SB07(4-6)071410	07/14/2010	4 - 6	PCB	Total PCBs	2300	0.033	70,000	Removed
2508	LAI-SB07	SB	SB07(6-8)071410	07/14/2010	6 - 8	PCB	Total PCBs	0.26	0.033	7.9	Removed
2509	LAI-SB08	SB	SB08(0-2)071510	07/15/2010	0 - 2	PCB	Total PCBs	8.9	0.033	270	Removed
2510	LAI-SB09	SB	SB09(0-2)071410	07/14/2010	0 - 2	PCB	Total PCBs	0.072	0.033	2.2	
2510	LAI-SB09	SB	SB09(0-2)071410	07/14/2010	0 - 2	PAH	Chrysene	0.11	--	--	
2510	LAI-SB09	SB	SB09(0-2)071410	07/14/2010	0 - 2	PAH	2-Methylnaphthalene	0.2	0.043	4.7	
2510	LAI-SB09	SB	SB09(0-2)071410	07/14/2010	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.046	0.0094	4.9	
2510	LAI-SB09	SB	SB09(4-6)071410	07/14/2010	4 - 6	PCB	Total PCBs	0.41	0.033	12	
2510	LAI-SB09	SB	SB09(6-8)071410	07/14/2010	6 - 8	PCB	Total PCBs	0.138	0.033	4.2	
2512	LAI-SB11	SB	SB11(0-2)071410	07/14/2010	0 - 2	PCB	Total PCBs	0.318	0.033	9.6	
2514	LAI-SB13	SB	SB13(2-4)071410	07/14/2010	2 - 4	MET	Mercury	0.23	0.070	3.3	
2515	LAI-SB14	SB	SB14(0-2)071410	07/14/2010	0 - 2	PCB	Total PCBs	0.36	0.033	11	
2517	LAI-SB16	SB	SB16(0-2)071410	07/14/2010	0 - 2	PCB	Total PCBs	0.034	0.033	1.0	
2517	LAI-SB16	SB	SB16(2-4)071410	07/14/2010	2 - 4	PCB	Total PCBs	0.039	0.033	1.2	
2518	LAI-SB17	SB	SB17(0-2)071510	07/15/2010	0 - 2	PCB	Total PCBs	0.046	0.033	1.4	
2523	LAI-SB22	SB	SB22(2-4)071510	07/15/2010	2 - 4	PCB	Total PCBs	0.22	0.033	6.7	
2536	LAI-SB35	SB	LAISB-35-0-2-080310	08/03/2010	0 - 2	PCB	Total PCBs	1.4	0.033	42	Removed
2536	LAI-SB35	SB	LAISB-35-2-4-080310	08/03/2010	2 - 4	PCB	Total PCBs	0.07	0.033	2.1	Removed
2538	LAI-SB37	SB	LAISB-37-0-2-080310	08/03/2010	0 - 2	PCB	Total PCBs	0.44	0.033	13	Removed
2539	LAI-SB38	SB	LAISB-38-0-2-080310	08/03/2010	0 - 2	PCB	Total PCBs	0.047	0.033	1.4	
2540	LAI-SB39	SB	LAISB-39-0-2-080310	08/03/2010	0 - 2	PCB	Total PCBs	1.05	0.033	32	Removed
2541	LAI-SB40	SB	LAISB-40-0-2-080310	08/03/2010	0 - 2	PCB	Total PCBs	9.2	0.033	280	Removed
2542	LAI-SB41	SB	LAISB-41-0-2-080310	08/03/2010	0 - 2	PCB	Total PCBs	2.06	0.033	62	Removed
2543	LAI-SB42	SB	LAISB-42-0-2-080310	08/03/2010	0 - 2	PCB	Total PCBs	264	0.033	8,000	Removed
2543	LAI-SB42	SB	LAISB-42-2-4-080310	08/03/2010	2 - 4	PCB	Total PCBs	560	0.033	17,000	Removed
2543	LAI-SB42	SB	LAISB-42-4-6-080310	08/03/2010	4 - 6	PCB	Total PCBs	100	0.033	3,000	Removed
2543	LAI-SB42	SB	LAISB-42-6-8-080310	08/03/2010	6 - 8	PCB	Total PCBs	0.037	0.033	1.1	Removed
2544	LAI-SB43	SB	LAISB-43-0-2-080310	08/03/2010	0 - 2	PCB	Total PCBs	0.146	0.033	4.4	Removed
2544	LAI-SB43	SB	LAISB-43-2-4-080310	08/03/2010	2 - 4	PCB	Total PCBs	1.25	0.033	38	Removed
2544	LAI-SB43	SB	LAISB-43-4-6-080310	08/03/2010	4 - 6	PCB	Total PCBs	0.4	0.033	12	Removed
2544	LAI-SB43	SB	LAISB-43-6-8-080310	08/03/2010	6 - 8	PCB	Total PCBs	0.036	0.033	1.1	Removed
2545	LAI-SB44	SB	LAISB-44-0-2-080310	08/03/2010	0 - 2	PCB	Total PCBs	3.1	0.033	94	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
2546	LAI-SB46	SB	LAISB-46-0-2-080310	08/03/2010	0 - 2	PCB	Total PCBs	320	0.033	9,700	Removed
2546	LAI-SB46	SB	LAISB-46-2-4-080310	08/03/2010	2 - 4	PCB	Total PCBs	0.105	0.033	3.2	Removed
2546	LAI-SB46	SB	LAISB-46-4-6-080310	08/03/2010	4 - 6	PCB	Total PCBs	1.79	0.033	54	Removed
3651	MH179Soil	SS	MH179Soil	08/05/2009	--	PCB	Total PCBs	1.61	0.033	49	Removed
2056	NBF08-13	SB	NBF08-13-1-2	09/18/2008	1 - 2	PCB	Total PCBs	880	0.033	27,000	Removed
2057	NBF08-14	SB	NBF08-14-3-4	09/18/2008	3 - 4	PCB	Total PCBs	0.43	0.033	13	
2059	NBF08-8	SB	NBF08-8-1-2	09/18/2008	1 - 2	PCB	Total PCBs	0.45	0.033	14	
1010	NBF-1	EX	NBF-1	06/07/2007	2.75 - 3.75	PCB	Total PCBs	43	0.033	1,300	Removed
1019	NBF-10	EX	NBF-10	06/19/2007	1 - 2	PCB	Total PCBs	1.4	0.033	42	
1019	NBF-10	EX	NBF-10	06/19/2007	4.5 - 5	PCB	Total PCBs	7.9	0.033	240	
1020	NBF-11	EX	NBF-11	06/19/2007	1 - 2	PCB	Total PCBs	0.075	0.033	2.3	
1020	NBF-11	EX	NBF-11	06/19/2007	4 - 5	PCB	Total PCBs	0.29	0.033	8.8	
1021	NBF-12	EX	NBF-12	07/09/2007	1 - 2	PCB	Total PCBs	21.1	0.033	640	Removed
1021	NBF-12	EX	NBF-12	07/09/2007	3 - 4	PCB	Total PCBs	0.056	0.033	1.7	Removed
1022	NBF-13	EX	NBF-13	07/09/2007	1 - 2	PCB	Total PCBs	157	0.033	4,800	Removed
1022	NBF-13	EX	NBF-13	07/09/2007	3 - 4	PCB	Total PCBs	175	0.033	5,300	Removed
1023	NBF-14	EX	NBF-14	07/09/2007	1 - 2	PCB	Total PCBs	15.4	0.033	470	Removed
1023	NBF-14	EX	NBF-14	07/09/2007	3 - 4	PCB	Total PCBs	77	0.033	2,300	Removed
1024	NBF-15	EX	NBF-15	07/09/2007	1 - 2	PCB	Total PCBs	24	0.033	730	Removed
1024	NBF-15	EX	NBF-15	07/09/2007	3 - 4	PCB	Total PCBs	2680	0.033	81,000	Removed
1011	NBF-2	EX	NBF-2	06/07/2007	2.75 - 3.75	PCB	Total PCBs	186	0.033	5,600	Removed
1012	NBF-3	EX	NBF-3	06/07/2007	1 - 2	PCB	Total PCBs	0.11	0.033	3.3	Removed
1013	NBF-4	EX	NBF-4	06/07/2007	1 - 2	PCB	Total PCBs	0.049	0.033	1.5	Removed
1014	NBF-5	EX	NBF-5	06/07/2007	1 - 2	PCB	Total PCBs	6.5	0.033	200	Removed
1014	NBF-5	EX	NBF-5	06/07/2007	3 - 4	PCB	Total PCBs	8.6	0.033	260	Removed
1015	NBF-6	EX	NBF-6	06/08/2007	1 - 2	PCB	Total PCBs	62	0.033	1,900	Removed
1015	NBF-6	EX	NBF-6	06/08/2007	3 - 4	PCB	Total PCBs	15	0.033	450	Removed
1016	NBF-7	EX	NBF-7	06/12/2007	1 - 2	PCB	Total PCBs	69	0.033	2,100	Removed
1016	NBF-7	EX	NBF-7	06/12/2007	3 - 4	PCB	Total PCBs	3.5	0.033	110	Removed
1017	NBF-8	EX	NBF-8	06/18/2007	1 - 2	PCB	Total PCBs	1100	0.033	33,000	Removed
1017	NBF-8	EX	NBF-8	06/18/2007	3 - 4	PCB	Total PCBs	0.31	0.033	9.4	Removed
1018	NBF-9	EX	NBF-9	06/19/2007	1 - 2	PCB	Total PCBs	0.66	0.033	20	Removed
2547	NGW501	MW	NGW501(0-2)082410	08/24/2010	0 - 2	PCB	Total PCBs	18	0.033	550	Removed
2547	NGW501	MW	NGW501(2-4)082410	08/24/2010	2 - 4	PCB	Total PCBs	8.9	0.033	270	Removed
2547	NGW501	MW	NGW501(4-6)082410	08/24/2010	4 - 6	PCB	Total PCBs	2.1	0.033	64	Removed
2547	NGW501	MW	NGW5011(8-10)082410	08/24/2010	8 - 10	PCB	Total PCBs	0.109	0.033	3.3	
2548	NGW502	MW	NGW502(0-2)082410	08/24/2010	0 - 2	PCB	Total PCBs	48	0.033	1,500	Removed
2548	NGW502	MW	NGW502(2-4)082410	08/24/2010	2 - 4	PCB	Total PCBs	61	0.033	1,800	Removed
2548	NGW502	MW	NGW502(4-6)082410	08/24/2010	4 - 6	PCB	Total PCBs	520	0.033	16,000	Removed
2548	NGW502	MW	NGW502(6-8)082410	08/24/2010	6 - 8	PCB	Total PCBs	211	0.033	6,400	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
2548	NGW502	MW	NGW502(8-10)082410	08/24/2010	8 - 10	PCB	Total PCBs	223	0.033	6,800	Removed
2548	NGW502	MW	NGW502(10-12)082410	08/24/2010	10 - 12	PCB	Total PCBs	0.097	0.033	2.9	
2548	NGW502	MW	NGW502(12-14)082410	08/24/2010	12 - 14	PCB	Total PCBs	0.14	0.033	4.2	
2548	NGW502	MW	NGW502(14-15)082410	08/24/2010	14 - 15	PCB	Total PCBs	0.07	0.033	2.1	
2549	NGW503	MW	NGW503(0-2)082410	08/24/2010	0 - 2	PCB	Total PCBs	1.6	0.033	48	Removed
2549	NGW503	MW	NGW503(4-6)082410	08/24/2010	4 - 6	PCB	Total PCBs	0.12	0.033	3.6	
2549	NGW503	MW	NGW503(8-10)082410	08/24/2010	8 - 10	PCB	Total PCBs	0.11	0.033	3.3	
2550	NGW504	MW	NGW504(0-2)082410	08/24/2010	0 - 2	PCB	Total PCBs	64	0.033	1,900	Removed
2550	NGW504	MW	NGW504(2-4)082410	08/24/2010	2 - 4	PCB	Total PCBs	156	0.033	4,700	Removed
2550	NGW504	MW	NGW504(4-6)082410	08/24/2010	4 - 6	PCB	Total PCBs	104	0.033	3,200	Removed
2550	NGW504	MW	NGW504(6-8)082410	08/24/2010	6 - 8	PCB	Total PCBs	11.5	0.033	350	Removed
2550	NGW504	MW	NGW504(8-10)082410	08/24/2010	8 - 10	PCB	Total PCBs	52	0.033	1,600	Removed
2550	NGW504	MW	NGW504(10-12)082410	08/24/2010	10 - 12	PCB	Total PCBs	0.039	0.033	1.2	
2550	NGW504	MW	NGW504(12-14)082410	08/24/2010	12 - 14	PCB	Total PCBs	0.041	0.033	1.2	
2550	NGW504	MW	NGW504(14-15)082410	08/24/2010	14 - 15	PCB	Total PCBs	0.12	0.033	3.6	
3099	NGW505	MW	NGW505(0-2)012111	01/21/2011	0 - 2	PCB	Total PCBs	0.185	0.033	5.6	
3099	NGW505	MW	NGW505(2-4)012111	01/21/2011	2 - 4	MET	Arsenic	8	7.0	1.1	
3099	NGW505	MW	NGW505(2-4)012111	01/21/2011	2 - 4	PAH	Total Benzofluoranthenes	0.095	--	--	
3099	NGW505	MW	NGW505(2-4)012111	01/21/2011	2 - 4	PAH	Chrysene	0.068	--	--	
3099	NGW505	MW	NGW505(2-4)012111	01/21/2011	2 - 4	PAH	Total cPAHs (TEQ, NDx0.5)	0.049	0.0094	5.2	
3100	NGW506	MW	NGW506(0-2)012111	01/21/2011	0 - 2	PCB	Total PCBs	0.117	0.033	3.5	
3101	NGW507	MW	NGW507(0-2)012111	01/21/2011	0 - 2	PCB	Total PCBs	0.79	0.033	24	Removed
3101	NGW507	MW	NGW507(0-2)012111	01/21/2011	0 - 2	PAH	Benzo(a)anthracene	0.094	--	--	Removed
3101	NGW507	MW	NGW507(0-2)012111	01/21/2011	0 - 2	PAH	Total Benzofluoranthenes	0.16	--	--	Removed
3101	NGW507	MW	NGW507(0-2)012111	01/21/2011	0 - 2	PAH	Benzo(a)pyrene	0.094	0.0094	10	Removed
3101	NGW507	MW	NGW507(0-2)012111	01/21/2011	0 - 2	PAH	Chrysene	0.09	--	--	Removed
3101	NGW507	MW	NGW507(0-2)012111	01/21/2011	0 - 2	PAH	Fluoranthene	0.19	0.16	1.2	Removed
3101	NGW507	MW	NGW507(0-2)012111	01/21/2011	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.13	0.0094	13	Removed
3101	NGW507	MW	NGW507(2-4)012111	01/21/2011	2 - 4	PCB	Total PCBs	0.143	0.033	4.3	
3101	NGW507	MW	NGW507(2-4)012111	01/21/2011	2 - 4	MET	Mercury	0.08	0.070	1.1	
731	P1	SB	UBF-55/P1/3.4-5.9	09/15/1997	3.4 - 5.9	PCB	Total PCBs	0.283	0.033	8.6	
741	P11	SB	UBF-55/P11/2.2-4.1	09/15/1997	2.2 - 4.1	PCB	Total PCBs	0.07	0.033	2.1	Removed
741	P11	SB	UBF-55/P11/2.2-4.1	09/15/1997	2.2 - 4.1	PHT	Bis(2-ethylhexyl) phthalate	0.19	0.067	2.8	Removed
742	P13	SB	UBF-55/P13B/2.2-4.1	09/15/1997	2.2 - 4.1	PCB	Total PCBs	0.66	0.033	20	Removed
743	P14	SB	UBF-55/P14/2.3-4.1	09/15/1997	2.3 - 4.1	PCB	Total PCBs	0.095	0.033	2.9	
744	P15	SB	UBF-55/P151/2.2-4.1-DL	09/15/1997	2.2 - 4.1	PCB	Total PCBs	7.1	0.033	220	
745	P16	SB	UBF-55/P16/0.3-2.2-DL	09/15/1997	0.3 - 2.2	PCB	Total PCBs	172	0.033	5,200	Removed
746	P17	SB	UBF-55/P17/0.3-2.2	09/15/1997	0.3 - 2.2	PCB	Total PCBs	0.92	0.033	28	Removed
746	P17	SB	UBF-55/P17/2.2-4.1	09/15/1997	2.2 - 4.1	PCB	Total PCBs	0.12	0.033	3.6	
747	P18	SB	UBF-55/P18/2.2-4.1	09/15/1997	2.2 - 4.1	PCB	Total PCBs	0.052	0.033	1.6	

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
748	P19	SB	UBF-55/P19/2.2-4.1	09/15/1997	2.2 - 4.1	PCB	Total PCBs	0.172	0.033	5.2	
732	P2	SB	UBF-55/P2/2.2-4.1-DL	09/15/1997	2.2 - 4.1	PCB	Total PCBs	36.4	0.033	1,100	Removed
733	P3	SB	UBF-55/P3/2.2-4.1-DL	09/15/1997	2.2 - 4.1	PCB	Total PCBs	17.7	0.033	540	Removed
733	P3	SB	UBF-55/P3/2.2-4.1	09/15/1997	2.2 - 4.1	TPH	Gasoline Range Hydrocarbons	150	100	1.5	Removed
733	P3	SB	UBF-55/P3/2.2-4.1	09/15/1997	2.2 - 4.1	PHT	Bis(2-ethylhexyl) phthalate	0.24	0.067	3.6	Removed
733	P3	SB	UBF-55/P3/2.2-4.1	09/15/1997	2.2 - 4.1	PAH	Chrysene	0.11	--	--	Removed
733	P3	SB	UBF-55/P3/2.2-4.1	09/15/1997	2.2 - 4.1	PAH	Total cPAHs (TEQ, NDx0.5)	0.056	0.0094	5.9	Removed
734	P4	SB	UBF-55/P4/2.2-4.1-DL	09/15/1997	2.2 - 4.1	PCB	Total PCBs	46.3	0.033	1,400	Removed
736	P6	SB	UBF-55/P6/0.3-2.2	09/15/1997	0.3 - 2.2	PCB	Total PCBs	0.048	0.033	1.5	Removed
737	P7	SB	UBF-55/P7/0.3-2.2-DL	09/15/1997	0.3 - 2.2	PCB	Total PCBs	260	0.033	7,900	Removed
737	P7	SB	UBF-55/P7/2.2-4.1-DL	09/15/1997	2.2 - 4.1	PCB	Total PCBs	570	0.033	17,000	Removed
737	P7	SB	UBF-55/P7/2.2-4.1	09/15/1997	2.2 - 4.1	PHT	Bis(2-ethylhexyl) phthalate	0.11	0.067	1.6	Removed
737	P7	SB	UBF-55/P7/2.2-4.1	09/15/1997	2.2 - 4.1	PAH	Chrysene	0.11	--	--	Removed
737	P7	SB	UBF-55/P7/2.2-4.1	09/15/1997	2.2 - 4.1	PAH	Total cPAHs (TEQ, NDx0.5)	0.056	0.0094	5.9	Removed
738	P8	SB	UBF-55/P8/2.2-4.1-DL	09/15/1997	2.2 - 4.1	PCB	Total PCBs	5.4	0.033	160	Removed
739	P9	SB	UBF-55/P9/2.2-4.1-DL	09/15/1997	2.2 - 4.1	PCB	Total PCBs	96	0.033	2,900	Removed
114	S-10	RE	S-10	11/17/2005	0	PCB	Total PCBs	0.056	0.033	1.7	
115	S-11	RE	S-11	11/17/2005	0	PCB	Total PCBs	0.78	0.033	24	
116	S-12	RE	S-12	11/17/2005	0	PCB	Total PCBs	0.2	0.033	6.1	
117	S-13	RE	S-13	11/17/2005	0	PCB	Total PCBs	2.2	0.033	67	Removed
118	S-14	RE	S-14	11/17/2005	0	PCB	Total PCBs	0.63	0.033	19	Removed
119	S-15	RE	S-15	11/17/2005	0	PCB	Total PCBs	6.8	0.033	210	Removed
120	S-16	RE	S-16	11/17/2005	0	PCB	Total PCBs	2400	0.033	73,000	Removed
121	S-17	RE	S-17	11/17/2005	0	PCB	Total PCBs	5.1	0.033	150	Removed
122	S-18	RE	S-18	11/17/2005	0	PCB	Total PCBs	22	0.033	670	Removed
123	S-19	RE	S-19	11/17/2005	0	PCB	Total PCBs	400	0.033	12,000	Removed
124	S-20	RE	S-20	11/17/2005	0	PCB	Total PCBs	98	0.033	3,000	Removed
111	S-7	RE	S-7	11/17/2005	0	PCB	Total PCBs	0.11	0.033	3.3	
112	S-8	RE	S-8	11/17/2005	0	PCB	Total PCBs	0.049	0.033	1.5	
113	S-9	RE	S-9	11/17/2005	0	PCB	Total PCBs	0.058	0.033	1.8	
967	SB-26	SB	SB-26-1-2	04/02/2007	1 - 2	PCB	Total PCBs	0.23	0.033	7.0	Removed
967	SB-26	SB	SB-26-5-6	04/02/2007	5 - 6	PCB	Total PCBs	0.042	0.033	1.3	
971	SB-30	SB	SB-30-1-2	04/02/2007	1 - 2	PCB	Total PCBs	17.6	0.033	530	Removed
972	SB-31	SB	SB-31-1-2	03/30/2007	1 - 2	PCB	Total PCBs	25.9	0.033	780	Removed
972	SB-31	SB	SB-31-5-6	03/30/2007	5 - 6	PCB	Total PCBs	3.4	0.033	100	Removed
973	SB-32	SB	SB-32-1-2	03/30/2007	1 - 2	PCB	Total PCBs	0.41	0.033	12	
973	SB-32	SB	SB-32-5-6	03/30/2007	5 - 6	PCB	Total PCBs	0.09	0.033	2.7	
974	SB-33	SB	SB-33-1-2	03/29/2007	1 - 2	PCB	Total PCBs	0.047	0.033	1.4	Removed
975	SB-34	SB	SB-34-1-2	03/29/2007	1 - 2	PCB	Total PCBs	0.55	0.033	17	
814	SLR-1	SB	SLR-1(3-4)	11/22/2006	3 - 4	PCB	Total PCBs	0.039	0.033	1.2	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
814	SLR-1	SB	SLR-1(5-6)	11/22/2006	5 - 6	PCB	Total PCBs	3.8	0.033	120	Removed
815	SLR-2	SB	SLR-2(1-2)	11/22/2006	1 - 2	PCB	Total PCBs	200	0.033	6,100	
815	SLR-2	SB	SLR-2(3-4)	11/22/2006	3 - 4	PCB	Total PCBs	0.85	0.033	26	
815	SLR-2	SB	SLR-2(5-6)	11/22/2006	5 - 6	PCB	Total PCBs	200	0.033	6,100	
816	SLR-3	SB	SLR-3(1-2)	11/22/2006	1 - 2	PCB	Total PCBs	260	0.033	7,900	
816	SLR-3	SB	SLR-3(3-4)	11/22/2006	3 - 4	VOC	cis-1,2-Dichloroethene	0.14	0.0052	27	
816	SLR-3	SB	SLR-3(3-4)	11/22/2006	3 - 4	VOC	Trichloroethene (TCE)	0.035	0.0015	23	
816	SLR-3	SB	SLR-3(5-6)	11/22/2006	5 - 6	PCB	Total PCBs	0.04	0.033	1.2	
817	SLR-4	SB	SLR-4(1-2)	11/22/2006	1 - 2	PCB	Total PCBs	2.3	0.033	70	
818	SLR-5	SB	SLR-5(1-2)	11/22/2006	1 - 2	PCB	Total PCBs	0.12	0.033	3.6	
819	UBF-27	EX	BF-27 4'(area composite)	05/21/1986	4	PCB	Total PCBs	40	0.033	1,200	Removed
819	UBF-27	EX	BF-27 8'(area composite)	05/22/1986	8	PCB	Total PCBs	13	0.033	390	Removed
4161	UBF-27-N	EX	BF-27 12'(N. composite)	05/28/1986	12	PCB	Total PCBs	43	0.033	1,300	
4162	UBF-27-S	EX	BF-27 12'(S. composite)	05/28/1986	12	PCB	Total PCBs	15	0.033	450	
Building 3-323 Area											
4085	C2	SB	C2B03	09/28/2006	0 - 0.25	PAH	Benzo(a)anthracene	0.077	--	--	Removed
4085	C2	SB	C2B03	09/28/2006	0 - 0.25	PAH	Benzo(b)fluoranthene	0.13	--	--	Removed
4085	C2	SB	C2B03	09/28/2006	0 - 0.25	PAH	Benzo(k)fluoranthene	0.12	--	--	Removed
4085	C2	SB	C2B03	09/28/2006	0 - 0.25	PAH	Total Benzofluoranthenes	0.25	--	--	Removed
4085	C2	SB	C2B03	09/28/2006	0 - 0.25	PAH	Benzo(a)pyrene	0.11	0.0094	12	Removed
4085	C2	SB	C2B03	09/28/2006	0 - 0.25	PAH	Chrysene	0.11	--	--	Removed
4085	C2	SB	C2B03	09/28/2006	0 - 0.25	PAH	Dibenz(a,h)anthracene	0.008	--	--	Removed
4085	C2	SB	C2B03	09/28/2006	0 - 0.25	PAH	Indeno(1,2,3-cd)pyrene	0.022	--	--	Removed
4085	C2	SB	C2B03	09/28/2006	0 - 0.25	PAH	Total cPAHs (TEQ, NDx0.5)	0.15	0.0094	16	Removed
4085	C2	SB	C2B12	09/28/2006	0.5 - 1	PAH	Benzo(a)anthracene	0.12	--	--	Removed
4085	C2	SB	C2B12	09/28/2006	0.5 - 1	PAH	Benzo(b)fluoranthene	0.16	--	--	Removed
4085	C2	SB	C2B12	09/28/2006	0.5 - 1	PAH	Benzo(k)fluoranthene	0.14	--	--	Removed
4085	C2	SB	C2B12	09/28/2006	0.5 - 1	PAH	Total Benzofluoranthenes	0.3	--	--	Removed
4085	C2	SB	C2B12	09/28/2006	0.5 - 1	PAH	Benzo(a)pyrene	0.14	0.0094	15	Removed
4085	C2	SB	C2B12	09/28/2006	0.5 - 1	PAH	Chrysene	0.17	--	--	Removed
4085	C2	SB	C2B12	09/28/2006	0.5 - 1	PAH	Dibenz(a,h)anthracene	0.011	--	--	Removed
4085	C2	SB	C2B12	09/28/2006	0.5 - 1	PAH	Fluoranthene	0.2	0.16	1.3	Removed
4085	C2	SB	C2B12	09/28/2006	0.5 - 1	PAH	Indeno(1,2,3-cd)pyrene	0.032	--	--	Removed
4085	C2	SB	C2B12	09/28/2006	0.5 - 1	PAH	Total cPAHs (TEQ, NDx0.5)	0.19	0.0094	20	Removed
4106	ES1	EX	ES1	06/19/2009	--	PAH	Benzo(a)anthracene	0.047	--	--	Removed
4106	ES1	EX	ES1	06/19/2009	--	PAH	Benzo(b)fluoranthene	0.057	--	--	Removed
4106	ES1	EX	ES1	06/19/2009	--	PAH	Benzo(k)fluoranthene	0.047	--	--	Removed
4106	ES1	EX	ES1	06/19/2009	--	PAH	Total Benzofluoranthenes	0.104	--	--	Removed
4106	ES1	EX	ES1	06/19/2009	--	PAH	Benzo(a)pyrene	0.055	0.0094	5.9	Removed
4106	ES1	EX	ES1	06/19/2009	--	PAH	Chrysene	0.085	--	--	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
4106	ES1	EX	ES1	06/19/2009	--	PAH	Indeno(1,2,3-cd)pyrene	0.021	--	--	Removed
4106	ES1	EX	ES1	06/19/2009	--	PAH	Total cPAHs (TEQ, NDx0.5)	0.073	0.0094	7.8	Removed
4108	FS2	EX	FS2	06/26/2009	--	PCB	Total PCBs	0.1	0.033	3.0	Removed
4108	FS2	EX	FS2	06/26/2009	--	TPH	Diesel Range Hydrocarbons	8000	2,000	4.0	Removed
4108	FS2	EX	FS2	06/26/2009	--	TPH	Oil Range Hydrocarbons	14000	2,000	7.0	Removed
4108	FS2	EX	FS2	06/26/2009	--	PAH	Benzo(a)anthracene	0.55	--	--	Removed
4108	FS2	EX	FS2	06/26/2009	--	PAH	Benzo(b)fluoranthene	0.32	--	--	Removed
4108	FS2	EX	FS2	06/26/2009	--	PAH	Total Benzofluoranthenes	0.32	--	--	Removed
4108	FS2	EX	FS2	06/26/2009	--	PAH	Benzo(g,h,i)perylene	0.17	0.031	5.5	Removed
4108	FS2	EX	FS2	06/26/2009	--	PAH	Benzo(a)pyrene	0.29	0.0094	31	Removed
4108	FS2	EX	FS2	06/26/2009	--	PAH	Chrysene	1.6	--	--	Removed
4108	FS2	EX	FS2	06/26/2009	--	PAH	Fluoranthene	0.24	0.16	1.5	Removed
4108	FS2	EX	FS2	06/26/2009	--	PAH	2-Methylnaphthalene	1.9	0.043	44	Removed
4108	FS2	EX	FS2	06/26/2009	--	PAH	Total cPAHs (TEQ, NDx0.5)	0.41	0.0094	43	Removed
2453	LAI-SB51	SB	LAI-SB51(0-2)091310	09/13/2010	0 - 2	PCB	Total PCBs	0.091	0.033	2.8	
2453	LAI-SB51	SB	LAI-SB51(2-4)091310	09/13/2010	2 - 4	MET	Mercury	0.11	0.070	1.6	
2453	LAI-SB51	SB	LAI-SB51(2-4)091310	09/13/2010	2 - 4	PAH	Total Benzofluoranthenes	0.077	--	--	
2453	LAI-SB51	SB	LAI-SB51(2-4)091310	09/13/2010	2 - 4	PAH	Total cPAHs (TEQ, NDx0.5)	0.047	0.0094	5.0	
2467	LAI-SB65	SB	LAI-SB65(2-4)091510	09/15/2010	2 - 4	MET	Mercury	0.12	0.070	1.7	
2467	LAI-SB65	SB	LAI-SB65(4-6)091510	09/15/2010	4 - 6	MET	Copper	157	36	4.4	
2467	LAI-SB65	SB	LAI-SB65(4-6)091510	09/15/2010	4 - 6	MET	Mercury	0.08	0.070	1.1	
2468	LAI-SB66	SB	LAI-SB66(0-2)091510	09/15/2010	0 - 2	PCB	Total PCBs	0.072	0.033	2.2	
2469	LAI-SB67	SB	LAI-SB67(2-4)091510	09/15/2010	2 - 4	MET	Mercury	0.17	0.070	2.4	
2469	LAI-SB67	SB	LAI-SB67(2-4)091510	09/15/2010	2 - 4	MET	Zinc	1430	86	17	
2469	LAI-SB67	SB	LAI-SB67(2-4)091510	09/15/2010	2 - 4	PAH	Benzo(a)anthracene	1.1	--	--	
2469	LAI-SB67	SB	LAI-SB67(2-4)091510	09/15/2010	2 - 4	PAH	Total Benzofluoranthenes	1.4	--	--	
2469	LAI-SB67	SB	LAI-SB67(2-4)091510	09/15/2010	2 - 4	PAH	Benzo(g,h,i)perylene	0.35	0.031	11	
2469	LAI-SB67	SB	LAI-SB67(2-4)091510	09/15/2010	2 - 4	PAH	Benzo(a)pyrene	0.77	0.0094	82	
2469	LAI-SB67	SB	LAI-SB67(2-4)091510	09/15/2010	2 - 4	PAH	Chrysene	1.2	--	--	
2469	LAI-SB67	SB	LAI-SB67(2-4)091510	09/15/2010	2 - 4	PAH	Dibenz(a,h)anthracene	0.19	--	--	
2469	LAI-SB67	SB	LAI-SB67(2-4)091510	09/15/2010	2 - 4	PAH	Fluoranthene	1.4	0.16	8.8	
2469	LAI-SB67	SB	LAI-SB67(2-4)091510	09/15/2010	2 - 4	PAH	Indeno(1,2,3-cd)pyrene	0.34	--	--	
2469	LAI-SB67	SB	LAI-SB67(2-4)091510	09/15/2010	2 - 4	PAH	Total cPAHs (TEQ, NDx0.5)	1.1	0.0094	120	
2469	LAI-SB67	SB	LAI-SB67(4-6)091510	09/15/2010	4 - 6	MET	Zinc	104	86	1.2	
2469	LAI-SB67	SB	LAI-SB67(4-6)091510	09/15/2010	4 - 6	PAH	Benzo(a)anthracene	0.081	--	--	
2469	LAI-SB67	SB	LAI-SB67(4-6)091510	09/15/2010	4 - 6	PAH	Total Benzofluoranthenes	0.11	--	--	
2469	LAI-SB67	SB	LAI-SB67(4-6)091510	09/15/2010	4 - 6	PAH	Chrysene	0.095	--	--	
2469	LAI-SB67	SB	LAI-SB67(4-6)091510	09/15/2010	4 - 6	PAH	Total cPAHs (TEQ, NDx0.5)	0.060	0.0094	6.3	
2471	LAI-SB69	SB	LAI-SB69(0-2)091710	09/17/2010	0 - 2	PCB	Total PCBs	9.2	0.033	280	
2471	LAI-SB69	SB	LAI-SB69(0-2)091710	09/17/2010	0 - 2	PAH	Total Benzofluoranthenes	0.068	--	--	

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
2471	LAI-SB69	SB	LAI-SB69(0-2)091710	09/17/2010	0 - 2	PAH	2-Methylnaphthalene	0.062	0.043	1.4	
2471	LAI-SB69	SB	LAI-SB69(0-2)091710	09/17/2010	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.047	0.0094	5.0	
2471	LAI-SB69	SB	LAI-SB69(2-4)091710	09/17/2010	2 - 4	PCB	Total PCBs	0.12	0.033	3.6	
2471	LAI-SB69	SB	LAI-SB69(2-4)091710	09/17/2010	2 - 4	MET	Copper	37.6	36	1.0	
2471	LAI-SB69	SB	LAI-SB69(2-4)091710	09/17/2010	2 - 4	MET	Mercury	0.8 J	0.070	11	
2471	LAI-SB69	SB	LAI-SB69(2-4)091710	09/17/2010	2 - 4	PAH	Chrysene	0.075	--	--	
2471	LAI-SB69	SB	LAI-SB69(2-4)091710	09/17/2010	2 - 4	PAH	2-Methylnaphthalene	0.089	0.043	2.1	
2471	LAI-SB69	SB	LAI-SB69(2-4)091710	09/17/2010	2 - 4	PAH	Total cPAHs (TEQ, NDx0.5)	0.046	0.0094	4.9	
2471	LAI-SB69	SB	LAI-SB69(4-6)091710	09/17/2010	4 - 6	PCB	Total PCBs	0.072	0.033	2.2	
2471	LAI-SB69	SB	LAI-SB69(4-6)091710	09/17/2010	4 - 6	MET	Mercury	0.11	0.070	1.6	
2472	LAI-SB70	SB	LAI-SB70(0-2)091710	09/17/2010	0 - 2	PAH	Total Benzofluoranthenes	0.071	--	--	
2472	LAI-SB70	SB	LAI-SB70(0-2)091710	09/17/2010	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.046	0.0094	4.9	
2472	LAI-SB70	SB	LAI-SB70(2-4)091710	09/17/2010	2 - 4	PCB	Total PCBs	0.041	0.033	1.2	
2472	LAI-SB70	SB	LAI-SB70(2-4)091710	09/17/2010	2 - 4	MET	Mercury	1.04	0.070	15	
2472	LAI-SB70	SB	LAI-SB70(2-4)091710	09/17/2010	2 - 4	MET	Zinc	188	86	2.2	
2473	LAI-SB71	SB	LAI-SB71(2-4)091710	09/17/2010	2 - 4	MET	Mercury	0.08	0.070	1.1	
2476	LAI-SB74	SB	LAI-SB74(0-2)091710	09/17/2010	0 - 2	PCB	Total PCBs	0.61	0.033	18	
2476	LAI-SB74	SB	LAI-SB74(2-4)091710	09/17/2010	2 - 4	PCB	Total PCBs	0.24	0.033	7.3	
2476	LAI-SB74	SB	LAI-SB74(2-4)091710	09/17/2010	2 - 4	MET	Copper	43.6	36	1.2	
2476	LAI-SB74	SB	LAI-SB74(2-4)091710	09/17/2010	2 - 4	MET	Mercury	0.13	0.070	1.9	
2476	LAI-SB74	SB	LAI-SB74(4-6)091710	09/17/2010	4 - 6	PCB	Total PCBs	0.061	0.033	1.8	
2476	LAI-SB74	SB	LAI-SB74(4-6)091710	09/17/2010	4 - 6	MET	Mercury	0.14	0.070	2.0	
2477	LAI-SB75	SB	LAI-SB75(0-2)091710	09/17/2010	0 - 2	PCB	Total PCBs	0.083	0.033	2.5	
1025	NBF-GB1	EX	NBF-GB1	09/06/2007	2 - 3	PCB	Total PCBs	1.89	0.033	57	
1027	NBF-GB3	EX	NBF-GB3	09/06/2007	2 - 3	PCB	Total PCBs	0.54	0.033	16	
1028	NBF-GB4	EX	NBF-GB4	09/10/2007	6 - 7	PCB	Total PCBs	0.046	0.033	1.4	
3106	NGW512	MW	NGW512(2-4)012411	01/24/2011	2 - 4	MET	Mercury	0.1	0.070	1.4	
3106	NGW512	MW	NGW512(4-6)012411	01/24/2011	4 - 6	MET	Mercury	0.1	0.070	1.4	
2424	OFS-1	SB	OFS-1	05/18/2004	2.5 - 3	PAH	Benzo(a)anthracene	7.2	--	--	
2424	OFS-1	SB	OFS-1	05/18/2004	2.5 - 3	PAH	Benzo(a)pyrene	2.6	0.0094	280	
2424	OFS-1	SB	OFS-1	05/18/2004	2.5 - 3	PAH	Chrysene	12	--	--	
2424	OFS-1	SB	OFS-1	05/18/2004	2.5 - 3	PAH	Fluoranthene	3	0.16	19	
2424	OFS-1	SB	OFS-1	05/18/2004	2.5 - 3	PAH	2-Methylnaphthalene	23	0.043	530	
2424	OFS-1	SB	OFS-1	05/18/2004	2.5 - 3	PAH	Total cPAHs (TEQ, NDx0.5)	3.7	0.0094	400	
3617	S01-CB174	EX	S01-CB174-0-1-100110	10/01/2010	0 - 1	PCB	Total PCBs	0.198	0.033	6.0	
3619	S02-CB174	EX	S02-CB174-0-1-100110	10/01/2010	0 - 1	PCB	Total PCBs	0.24	0.033	7.3	
3625	S05-CB174	EX	S05-CB174-0-1-100110	10/01/2010	0 - 1	PCB	Total PCBs	0.06	0.033	1.8	
105	S-1	RE	S-1	11/17/2005	0	PCB	Total PCBs	0.138	0.033	4.2	
106	S-2	RE	S-2	11/17/2005	0	PCB	Total PCBs	0.159	0.033	4.8	
107	S-3	RE	S-3	11/17/2005	0	PCB	Total PCBs	0.186	0.033	5.6	

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
108	S-4	RE	S-4	11/17/2005	0	PCB	Total PCBs	0.196	0.033	5.9	
109	S-5	RE	S-5	11/17/2005	0	PCB	Total PCBs	0.23	0.033	7.0	
110	S-6	RE	S-6	11/17/2005	0	PCB	Total PCBs	0.182	0.033	5.5	
955	SB-14	SB	SB-14-1-2	03/29/2007	1 - 2	PCB	Total PCBs	0.111	0.033	3.4	
957	SB-16	SB	SB-16-1-2	03/29/2007	1 - 2	PCB	Total PCBs	0.193	0.033	5.8	
958	SB-17	SB	SB-17-1-2	03/29/2007	1 - 2	PCB	Total PCBs	1.02	0.033	31	
961	SB-20	SB	SB-20-7-8	03/30/2007	7 - 8	PCB	Total PCBs	0.42	0.033	13	
2425	TNF-1	SB	TNF-1	05/18/2004	2 - 3	PCB	Total PCBs	0.062	0.033	1.9	
2425	TNF-1	SB	TNF-1	05/18/2004	4.7 - 5.3	PAH	Benzo(a)anthracene	0.073 M	--	--	
2425	TNF-1	SB	TNF-1	05/18/2004	4.7 - 5.3	PAH	Chrysene	0.24	--	--	
2425	TNF-1	SB	TNF-1	05/18/2004	4.7 - 5.3	PAH	2-Methylnaphthalene	0.13	0.043	3.0	
2425	TNF-1	SB	TNF-1	05/18/2004	4.7 - 5.3	PAH	Total cPAHs (TEQ, NDx0.5)	0.040	0.0094	4.2	
Buildings 3-302, 3-322 Area											
2443	LAI-SB102	SB	LAI-SB102(0-2)092810	09/28/2010	0 - 2	PCB	Total PCBs	0.093	0.033	2.8	
2513	LAI-SB12	SB	SB12(0-2)071410	07/14/2010	0 - 2	PCB	Total PCBs	0.26	0.033	7.9	
2513	LAI-SB12	SB	SB12(2-4)071410	07/14/2010	2 - 4	PCB	Total PCBs	0.215	0.033	6.5	
2513	LAI-SB12	SB	SB12(2-4)071410	07/14/2010	2 - 4	MET	Copper	36.6	36	1.0	
2513	LAI-SB12	SB	SB12(2-4)071410	07/14/2010	2 - 4	MET	Mercury	0.09	0.070	1.3	
2513	LAI-SB12	SB	SB12(2-4)071410	07/14/2010	2 - 4	MET	Zinc	156	86	1.8	
2513	LAI-SB12	SB	SB12-(6-8)071410	07/14/2010	6 - 8	PCB	Total PCBs	0.054	0.033	1.6	
2530	LAI-SB29	SB	SBDUP29(0-2)071510	07/15/2010	0 - 2	PCB	Total PCBs	0.157	0.033	4.8	
2530	LAI-SB29	SB	SB29(2-4)071510	07/15/2010	2 - 4	MET	Copper	38.8	36	1.1	
2530	LAI-SB29	SB	SB29(2-4)071510	07/15/2010	2 - 4	MET	Lead	88	57	1.5	
2530	LAI-SB29	SB	SB29(2-4)071510	07/15/2010	2 - 4	MET	Mercury	0.38	0.070	5.4	
2530	LAI-SB29	SB	SB29(2-4)071510	07/15/2010	2 - 4	MET	Zinc	138	86	1.6	
2531	LAI-SB30	SB	SB30(0-2)071510	07/15/2010	0 - 2	PCB	Total PCBs	5.3	0.033	160	Removed
2531	LAI-SB30	SB	SB30(2-4)071510	07/15/2010	2 - 4	PCB	Total PCBs	0.53	0.033	16	Removed
2532	LAI-SB31	SB	SB31(0-2)071510	07/15/2010	0 - 2	PCB	Total PCBs	0.85	0.033	26	
2532	LAI-SB31	SB	SB31(4-6)071610	07/16/2010	4 - 6	PCB	Total PCBs	0.034	0.033	1.0	
2452	LAI-SB50	SB	LAI-SB50(0-2)091310	09/13/2010	0 - 2	PCB	Total PCBs	0.54	0.033	16	
2452	LAI-SB50	SB	LAI-SB50(2-4)091310	09/13/2010	2 - 4	PCB	Total PCBs	0.179	0.033	5.4	
2452	LAI-SB50	SB	LAI-SB50(2-4)091310	09/13/2010	2 - 4	MET	Mercury	0.43	0.070	6.1	
2452	LAI-SB50	SB	LAI-SB50(4-6)091310	09/13/2010	4 - 6	MET	Mercury	0.35	0.070	5.0	
2474	LAI-SB72	SB	LAI-SB72(0-2)091710	09/17/2010	0 - 2	PCB	Total PCBs	0.099	0.033	3.0	
2484	LAI-SB82	SB	LAI-SB82(4-6)092810	09/28/2010	4 - 6	PAH	Total Benzofluoranthenes	0.082	--	--	
2484	LAI-SB82	SB	LAI-SB82(4-6)092810	09/28/2010	4 - 6	PAH	Total cPAHs (TEQ, NDx0.5)	0.049	0.0094	5.2	
2485	LAI-SB83	SB	LAI-SB83(0-2)092010	09/20/2010	0 - 2	PAH	Benzo(a)anthracene	0.063	--	--	
2485	LAI-SB83	SB	LAI-SB83(0-2)092010	09/20/2010	0 - 2	PAH	Total Benzofluoranthenes	0.14	--	--	
2485	LAI-SB83	SB	LAI-SB83(0-2)092010	09/20/2010	0 - 2	PAH	Benzo(g,h,i)perylene	0.065	0.031	2.1	
2485	LAI-SB83	SB	LAI-SB83(0-2)092010	09/20/2010	0 - 2	PAH	Benzo(a)pyrene	0.097	0.0094	10	

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
2485	LAI-SB83	SB	LAI-SB83(0-2)092010	09/20/2010	0 - 2	PAH	Chrysene	0.1	--	--	
2485	LAI-SB83	SB	LAI-SB83(0-2)092010	09/20/2010	0 - 2	PAH	Fluoranthene	0.2	0.16	1.3	
2485	LAI-SB83	SB	LAI-SB83(0-2)092010	09/20/2010	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.12	0.0094	13	
2485	LAI-SB83	SB	LAI-SB83(2-4)092010	09/20/2010	2 - 4	PAH	Benzo(a)anthracene	0.091	--	--	
2485	LAI-SB83	SB	LAI-SB83(2-4)092010	09/20/2010	2 - 4	PAH	Benzo(b)fluoranthene	0.1	--	--	
2485	LAI-SB83	SB	LAI-SB83(2-4)092010	09/20/2010	2 - 4	PAH	Benzo(k)fluoranthene	0.1	--	--	
2485	LAI-SB83	SB	LAI-SB83(2-4)092010	09/20/2010	2 - 4	PAH	Total Benzofluoranthenes	0.2	--	--	
2485	LAI-SB83	SB	LAI-SB83(2-4)092010	09/20/2010	2 - 4	PAH	Benzo(g,h,i)perylene	0.068	0.031	2.2	
2485	LAI-SB83	SB	LAI-SB83(2-4)092010	09/20/2010	2 - 4	PAH	Benzo(a)pyrene	0.11	0.0094	12	
2485	LAI-SB83	SB	LAI-SB83(2-4)092010	09/20/2010	2 - 4	PAH	Chrysene	0.14	--	--	
2485	LAI-SB83	SB	LAI-SB83(2-4)092010	09/20/2010	2 - 4	PAH	Fluoranthene	0.35	0.16	2.2	
2485	LAI-SB83	SB	LAI-SB83(2-4)092010	09/20/2010	2 - 4	PAH	Indeno(1,2,3-cd)pyrene	0.064	--	--	
2485	LAI-SB83	SB	LAI-SB83(2-4)092010	09/20/2010	2 - 4	PAH	Total cPAHs (TEQ, NDx0.5)	0.15	0.0094	16	
2485	LAI-SB83	SB	LAI-SB83(4-6)092010	09/20/2010	4 - 6	PAH	Benzo(a)anthracene	0.13	--	--	
2485	LAI-SB83	SB	LAI-SB83(4-6)092010	09/20/2010	4 - 6	PAH	Benzo(b)fluoranthene	0.14	--	--	
2485	LAI-SB83	SB	LAI-SB83(4-6)092010	09/20/2010	4 - 6	PAH	Benzo(k)fluoranthene	0.14	--	--	
2485	LAI-SB83	SB	LAI-SB83(4-6)092010	09/20/2010	4 - 6	PAH	Total Benzofluoranthenes	0.28	--	--	
2485	LAI-SB83	SB	LAI-SB83(4-6)092010	09/20/2010	4 - 6	PAH	Benzo(a)pyrene	0.15	0.0094	16	
2485	LAI-SB83	SB	LAI-SB83(4-6)092010	09/20/2010	4 - 6	PAH	Chrysene	0.22	--	--	
2485	LAI-SB83	SB	LAI-SB83(4-6)092010	09/20/2010	4 - 6	PAH	Fluoranthene	0.38	0.16	2.4	
2485	LAI-SB83	SB	LAI-SB83(4-6)092010	09/20/2010	4 - 6	PAH	Total cPAHs (TEQ, NDx0.5)	0.20	0.0094	21	
2486	LAI-SB84	SB	LAI-SB84(0-2)092010	09/20/2010	0 - 2	PAH	Benzo(a)anthracene	0.065	--	--	
2486	LAI-SB84	SB	LAI-SB84(0-2)092010	09/20/2010	0 - 2	PAH	Total Benzofluoranthenes	0.13	--	--	
2486	LAI-SB84	SB	LAI-SB84(0-2)092010	09/20/2010	0 - 2	PAH	Benzo(g,h,i)perylene	0.062	0.031	2.0	
2486	LAI-SB84	SB	LAI-SB84(0-2)092010	09/20/2010	0 - 2	PAH	Benzo(a)pyrene	0.089	0.0094	9.5	
2486	LAI-SB84	SB	LAI-SB84(0-2)092010	09/20/2010	0 - 2	PAH	Chrysene	0.14	--	--	
2486	LAI-SB84	SB	LAI-SB84(0-2)092010	09/20/2010	0 - 2	PAH	Fluoranthene	0.22	0.16	1.4	
2486	LAI-SB84	SB	LAI-SB84(0-2)092010	09/20/2010	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.12	0.0094	12	
2486	LAI-SB84	SB	LAI-SB84(2-4)092010	09/20/2010	2 - 4	PAH	Benzo(a)anthracene	0.091	--	--	
2486	LAI-SB84	SB	LAI-SB84(2-4)092010	09/20/2010	2 - 4	PAH	Benzo(b)fluoranthene	0.084	--	--	
2486	LAI-SB84	SB	LAI-SB84(2-4)092010	09/20/2010	2 - 4	PAH	Benzo(k)fluoranthene	0.084	--	--	
2486	LAI-SB84	SB	LAI-SB84(2-4)092010	09/20/2010	2 - 4	PAH	Total Benzofluoranthenes	0.168	--	--	
2486	LAI-SB84	SB	LAI-SB84(2-4)092010	09/20/2010	2 - 4	PAH	Benzo(a)pyrene	0.1	0.0094	11	
2486	LAI-SB84	SB	LAI-SB84(2-4)092010	09/20/2010	2 - 4	PAH	Chrysene	0.13	--	--	
2486	LAI-SB84	SB	LAI-SB84(2-4)092010	09/20/2010	2 - 4	PAH	Fluoranthene	0.31	0.16	1.9	
2486	LAI-SB84	SB	LAI-SB84(2-4)092010	09/20/2010	2 - 4	PAH	Total cPAHs (TEQ, NDx0.5)	0.13	0.0094	14	
3102	NGW508	MW	NGW508(0-2)012111	01/21/2011	0 - 2	TPH	Gasoline Range Hydrocarbons	110	100	1.1	
3102	NGW508	MW	NGW508(0-2)012111	01/21/2011	0 - 2	PAH	Total Benzofluoranthenes	0.24	--	--	
3102	NGW508	MW	NGW508(0-2)012111	01/21/2011	0 - 2	PAH	Benzo(a)pyrene	0.18	0.0094	19	
3102	NGW508	MW	NGW508(0-2)012111	01/21/2011	0 - 2	PAH	Chrysene	0.3	--	--	

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
3102	NGW508	MW	NGW508(0-2)012111	01/21/2011	0 - 2	PAH	Fluoranthene	0.39	0.16	2.4	
3102	NGW508	MW	NGW508(0-2)012111	01/21/2011	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.23	0.0094	25	
3102	NGW508	MW	NGW508(2-4)012111	01/21/2011	2 - 4	TPH	Gasoline Range Hydrocarbons	80	100	<1.0	
3102	NGW508	MW	NGW508(2-4)012111	01/21/2011	2 - 4	PAH	Benzo(a)anthracene	0.22	--	--	
3102	NGW508	MW	NGW508(2-4)012111	01/21/2011	2 - 4	PAH	Total Benzofluoranthenes	0.36	--	--	
3102	NGW508	MW	NGW508(2-4)012111	01/21/2011	2 - 4	PAH	Benzo(g,h,i)perylene	0.11 J	0.031	3.5	
3102	NGW508	MW	NGW508(2-4)012111	01/21/2011	2 - 4	PAH	Benzo(a)pyrene	0.22	0.0094	23	
3102	NGW508	MW	NGW508(2-4)012111	01/21/2011	2 - 4	PAH	Chrysene	0.27	--	--	
3102	NGW508	MW	NGW508(2-4)012111	01/21/2011	2 - 4	PAH	Fluoranthene	0.58	0.16	3.6	
3102	NGW508	MW	NGW508(2-4)012111	01/21/2011	2 - 4	PAH	Indeno(1,2,3-cd)pyrene	0.1	--	--	
3102	NGW508	MW	NGW508(2-4)012111	01/21/2011	2 - 4	PAH	Total cPAHs (TEQ, NDx0.5)	0.29	0.0094	31	
3102	NGW508	MW	NGW508(4-6)012111	01/21/2011	4 - 6	TPH	Gasoline Range Hydrocarbons	44	100	<1.0	
3102	NGW508	MW	NGW508(4-6)012111	01/21/2011	4 - 6	PAH	Benzo(a)anthracene	0.11	--	--	
3102	NGW508	MW	NGW508(4-6)012111	01/21/2011	4 - 6	PAH	Total Benzofluoranthenes	0.15	--	--	
3102	NGW508	MW	NGW508(4-6)012111	01/21/2011	4 - 6	PAH	Benzo(a)pyrene	0.088	0.0094	9.4	
3102	NGW508	MW	NGW508(4-6)012111	01/21/2011	4 - 6	PAH	Chrysene	0.13	--	--	
3102	NGW508	MW	NGW508(4-6)012111	01/21/2011	4 - 6	PAH	Fluoranthene	0.21	0.16	1.3	
3102	NGW508	MW	NGW508(4-6)012111	01/21/2011	4 - 6	PAH	Total cPAHs (TEQ, NDx0.5)	0.12	0.0094	13	
3104	NGW510	MW	NGW510(2-4)012411	01/24/2011	2 - 4	PCB	Total PCBs	0.107	0.033	3.2	
3104	NGW510	MW	NGW510(2-4)012411	01/24/2011	2 - 4	MET	Mercury	0.33	0.070	4.7	
3104	NGW510	MW	NGW510(4-6)012411	01/24/2011	4 - 6	PCB	Total PCBs	0.073	0.033	2.2	
3104	NGW510	MW	NGW510(4-6)012411	01/24/2011	4 - 6	MET	Mercury	0.22	0.070	3.1	
3104	NGW510	MW	NGW510(6-8)012411	01/24/2011	6 - 8	PCB	Total PCBs	0.043	0.033	1.3	
1706	S01	SB	PM25E	08/28/2009	0 - 0.25	PCB	Total PCBs	4.5	0.033	140	Removed
1706	S01	SB	PM25F	08/28/2009	0.25 - 0.5	PCB	Total PCBs	5.6	0.033	170	Removed
1706	S01	SB	PM25G	08/28/2009	0.5 - 0.75	PCB	Total PCBs	14.1	0.033	430	Removed
1706	S01	SB	QN41C	03/10/2010	1.5 - 2	PCB	Total PCBs	4.3	0.033	130	Removed
1706	S01	SB	QN41D	03/10/2010	2.5 - 3	PCB	Total PCBs	6.4	0.033	190	Removed
3618	S01-CB184-Bottom	EX	S01-CB184-Bottom-100510	10/05/2010	4	PCB	Total PCBs	0.62	0.033	19	Removed
1707	S02	SB	PM25A	08/28/2009	0 - 0.25	PCB	Total PCBs	24.1	0.033	730	Removed
1707	S02	SB	PM25B	08/28/2009	0.25 - 0.5	PCB	Total PCBs	10.4	0.033	320	Removed
1707	S02	SB	PM25C	08/28/2009	0.5 - 0.75	PCB	Total PCBs	10.9	0.033	330	Removed
1707	S02	SB	QN41E	03/10/2010	1.5 - 2	PCB	Total PCBs	2.2	0.033	67	Removed
1707	S02	SB	QN41F	03/10/2010	2.5 - 3	PCB	Total PCBs	1.5	0.033	45	Removed
3620	S02-CB184-Bottom	EX	S02-CB184-Bottom-100510	10/05/2010	4	PCB	Total PCBs	20	0.033	610	Removed
1708	S03	SB	PM25H	08/28/2009	0 - 0.25	PCB	Total PCBs	0.2	0.033	6.1	Removed
1708	S03	SB	PM25I	08/28/2009	0.25 - 0.5	PCB	Total PCBs	0.22	0.033	6.7	Removed
1708	S03	SB	PM25J	08/28/2009	0.5 - 0.75	PCB	Total PCBs	0.2	0.033	6.1	Removed
3622	S03-CB184-Bottom	EX	S03-CB184-Bottom-100610	10/06/2010	4	PCB	Total PCBs	6.4	0.033	190	Removed
1709	S04	SB	PM25Q	08/28/2009	0 - 0.25	PCB	Total PCBs	0.16	0.033	4.8	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
1709	S04	SB	PM25R	08/28/2009	0.25 - 0.5	PCB	Total PCBs	13.7	0.033	420	Removed
1709	S04	SB	PM25D	08/28/2009	0.5 - 0.75	PCB	Total PCBs	4.3	0.033	130	Removed
1709	S04	SB	QN41G	03/10/2010	1.5 - 2	PCB	Total PCBs	2.19	0.033	66	Removed
1709	S04	SB	QN41H	03/10/2010	2.5 - 3	PCB	Total PCBs	0.062	0.033	1.9	Removed
3624	S04-CB184-Bottom	EX	S04-CB184-Bottom-100610	10/06/2010	4	PCB	Total PCBs	12.4	0.033	380	Removed
1710	S05	SB	PM25O	08/28/2009	0.25 - 0.5	PCB	Total PCBs	3.39	0.033	100	Removed
1710	S05	SB	PM25P	08/28/2009	0.5 - 0.75	PCB	Total PCBs	9.6	0.033	290	Removed
1710	S05	SB	QN41I	03/10/2010	1.5 - 2	PCB	Total PCBs	9.1	0.033	280	Removed
1710	S05	SB	QN41J	03/10/2010	2.5 - 3	PCB	Total PCBs	0.3	0.033	9.1	Removed
3626	S05-CB184-Bottom	EX	S05-CB184-Bottom-100710	10/07/2010	4	PCB	Total PCBs	1.69	0.033	51	
1711	S06	SB	PM25K	08/28/2009	0 - 0.25	PCB	Total PCBs	0.12	0.033	3.6	Removed
1711	S06	SB	PM25L	08/28/2009	0.25 - 0.5	PCB	Total PCBs	0.9	0.033	27	Removed
1711	S06	SB	PM25M	08/28/2009	0.5 - 0.75	PCB	Total PCBs	0.51	0.033	15	Removed
3627	S06-CB184-Bottom	EX	S06-CB184-Bottom-100710	10/07/2010	4	PCB	Total PCBs	0.125	0.033	3.8	
1712	S07	SB	PM26C	08/28/2009	0 - 0.25	PCB	Total PCBs	41	0.033	1,200	Removed
1712	S07	SB	PM26D	08/28/2009	0.25 - 0.5	PCB	Total PCBs	29.9	0.033	910	Removed
1712	S07	SB	PM26E	08/28/2009	0.5 - 0.75	PCB	Total PCBs	14.6	0.033	440	Removed
1712	S07	SB	QN41A	03/10/2010	1.5 - 2	PCB	Total PCBs	1.6	0.033	48	Removed
1712	S07	SB	QN41B	03/10/2010	2.5 - 3	PCB	Total PCBs	2	0.033	61	Removed
3628	S07-CB184-Bottom	EX	S07-CB184-BOTTOM-101510	10/15/2010	5.5	PCB	Total PCBs	0.34	0.033	10	
1713	S08	SB	PM26J	08/28/2009	0 - 0.25	PCB	Total PCBs	1.1	0.033	33	Removed
1713	S08	SB	PM26K	08/28/2009	0.25 - 0.5	PCB	Total PCBs	1.03	0.033	31	Removed
3629	S08-CB184-Bottom	EX	S08-CB184-BOTTOM-101510	10/15/2010	5.5	PCB	Total PCBs	0.59	0.033	18	
1714	S09	SB	PM26L	08/28/2009	0 - 0.25	PCB	Total PCBs	0.13	0.033	3.9	Removed
1714	S09	SB	PM26M	08/28/2009	0.25 - 0.5	PCB	Total PCBs	0.078	0.033	2.4	Removed
3630	S09-CB184-Bottom	EX	S09-CB184-BOTTOM-101510	10/15/2010	5.5	PCB	Total PCBs	0.48	0.033	15	
1715	S10	SB	PM26N	08/28/2009	0 - 0.25	PCB	Total PCBs	0.31	0.033	9.4	
1715	S10	SB	PM26O	08/28/2009	0.25 - 0.5	PCB	Total PCBs	0.165	0.033	5.0	
3631	S10-CB184-Bottom	EX	S10-CB184-BOTTOM-101510	10/15/2010	5.5	PCB	Total PCBs	0.8	0.033	24	
1716	S11	SB	PM26P	08/28/2009	0 - 0.25	PCB	Total PCBs	0.236	0.033	7.2	
1716	S11	SB	PM26Q	08/28/2009	0.25 - 0.5	PCB	Total PCBs	0.36	0.033	11	
1716	S11	SB	PM26R	08/28/2009	0.5 - 0.75	PCB	Total PCBs	0.27	0.033	8.2	
1717	S12	SB	PM27A	08/28/2009	0 - 0.25	PCB	Total PCBs	0.068	0.033	2.1	
1717	S12	SB	PM27B	08/28/2009	0.25 - 0.5	PCB	Total PCBs	0.224	0.033	6.8	
1718	S13	SB	PM27C	08/28/2009	0 - 0.25	PCB	Total PCBs	0.25	0.033	7.6	
1718	S13	SB	PM27D	08/28/2009	0.25 - 0.5	PCB	Total PCBs	0.086	0.033	2.6	
1719	S14	SB	PM27E	08/28/2009	0 - 0.25	PCB	Total PCBs	0.176	0.033	5.3	
1719	S14	SB	PM27F	08/28/2009	0.25 - 0.5	PCB	Total PCBs	0.15	0.033	4.5	
2346	S15	SB	QN41K	03/10/2010	0 - 0.5	PCB	Total PCBs	1.27	0.033	38	Removed
2346	S15	SB	QN41L	03/10/2010	1.5 - 2	PCB	Total PCBs	0.084	0.033	2.5	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
2346	S15	SB	QN41M	03/10/2010	2.5 - 3	PCB	Total PCBs	0.04	0.033	1.2	
2347	S16	SB	QN41N	03/10/2010	0 - 0.5	PCB	Total PCBs	0.95	0.033	29	Removed
2347	S16	SB	QN41O	03/10/2010	1.5 - 2	PCB	Total PCBs	0.14	0.033	4.2	Removed
2326	S17	SB	QN98A	03/15/2010	0 - 0.25	PCB	Total PCBs	0.3	0.033	9.1	Removed
2326	S17	SB	QN98B	03/15/2010	1 - 1.5	PCB	Total PCBs	0.68	0.033	21	Removed
2326	S17	SB	QN98C	03/15/2010	1.5 - 2	PCB	Total PCBs	0.94	0.033	28	Removed
2327	S18	SB	QN98D	03/15/2010	0 - 0.25	PCB	Total PCBs	0.65	0.033	20	Removed
2327	S18	SB	QN98E	03/15/2010	1 - 1.5	PCB	Total PCBs	0.56	0.033	17	Removed
2327	S18	SB	QN98F	03/15/2010	1.5 - 2	PCB	Total PCBs	0.134	0.033	4.1	Removed
2328	S19	SB	QN98G	03/15/2010	0 - 0.25	PCB	Total PCBs	0.76	0.033	23	Removed
2328	S19	SB	QN98H	03/15/2010	1 - 1.5	PCB	Total PCBs	1.04	0.033	32	Removed
2328	S19	SB	QN98I	03/15/2010	1.5 - 2	PCB	Total PCBs	1.84	0.033	56	Removed
2329	S20	SB	QN98J	03/15/2010	0 - 0.25	PCB	Total PCBs	3.5	0.033	110	Removed
2329	S20	SB	QN98K	03/15/2010	1 - 1.5	PCB	Total PCBs	0.7	0.033	21	Removed
2329	S20	SB	QN98L	03/15/2010	1.5 - 2	PCB	Total PCBs	0.658	0.033	20	Removed
2330	S21	SB	QO26A	03/16/2010	0 - 0.25	PCB	Total PCBs	2.94	0.033	89	Removed
2330	S21	SB	QO26B	03/16/2010	1 - 1.5	PCB	Total PCBs	0.86	0.033	26	Removed
2330	S21	SB	QO26C	03/16/2010	1.5 - 2	PCB	Total PCBs	1.6	0.033	48	Removed
2331	S22	SB	QO26D	03/16/2010	0 - 0.25	PCB	Total PCBs	0.42	0.033	13	Removed
2331	S22	SB	QO26E	03/16/2010	1 - 1.5	PCB	Total PCBs	0.95	0.033	29	Removed
2331	S22	SB	QO26F	03/16/2010	1.5 - 2	PCB	Total PCBs	1.1	0.033	33	Removed
2332	S23	SB	QO26G	03/16/2010	0 - 0.25	PCB	Total PCBs	0.54	0.033	16	Removed
2332	S23	SB	QO26H	03/16/2010	0.5 - 1	PCB	Total PCBs	0.82	0.033	25	Removed
2333	S24	SB	QO26I	03/16/2010	0 - 0.25	PCB	Total PCBs	140	0.033	4,200	Removed
2333	S24	SB	QO26J	03/16/2010	0.5 - 1	PCB	Total PCBs	6.7	0.033	200	Removed
2334	S25	SB	QO26K	03/16/2010	0 - 0.25	PCB	Total PCBs	0.85	0.033	26	Removed
2334	S25	SB	QO26L	03/16/2010	1 - 1.5	PCB	Total PCBs	1.05	0.033	32	Removed
2334	S25	SB	QO26M	03/16/2010	1.5 - 2	PCB	Total PCBs	0.55	0.033	17	Removed
2335	S26	SB	QO26N	03/16/2010	0 - 0.25	PCB	Total PCBs	11	0.033	330	Removed
2335	S26	SB	QO26O	03/16/2010	1 - 1.5	PCB	Total PCBs	1.19	0.033	36	Removed
2335	S26	SB	QO26P	03/16/2010	1.5 - 2	PCB	Total PCBs	1.42	0.033	43	Removed
2361	S27	SB	QP11A	03/19/2010	0.25 - 0.5	PCB	Total PCBs	0.47	0.033	14	
2362	S28	SB	QP11B	03/19/2010	0.25 - 0.5	PCB	Total PCBs	0.212	0.033	6.4	
2363	S29	SB	QP11C	03/19/2010	0.5 - 3	PCB	Total PCBs	0.37	0.033	11	
2364	S30	SB	QP11D	03/19/2010	0.5 - 3	PCB	Total PCBs	0.093	0.033	2.8	
2365	S31	SB	QP11E	03/19/2010	0.25 - 0.5	PCB	Total PCBs	0.278	0.033	8.4	
2366	S32	SB	QP11F	03/19/2010	0.25 - 0.5	PCB	Total PCBs	0.26	0.033	7.9	
2354	S33	SB	QP11G	03/19/2010	0.25 - 0.75	PCB	Total PCBs	2.02	0.033	61	Removed
2367	S34	SB	QP11H	03/19/2010	0.25 - 0.5	PCB	Total PCBs	1.31	0.033	40	
2355	S35	SB	QP11J	03/19/2010	2.5 - 3	PCB	Total PCBs	1.37	0.033	42	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
2368	S36	SB	QP11I	03/19/2010	0.25 - 0.75	PCB	Total PCBs	0.83	0.033	25	Removed
2369	S37	SB	QP11K	03/19/2010	0 - 0.25	PCB	Total PCBs	0.183	0.033	5.5	
2370	S38	SB	QP11L	03/19/2010	0 - 0.25	PCB	Total PCBs	0.216	0.033	6.5	
2371	S39	SB	QP11M	03/19/2010	0.5 - 3	PCB	Total PCBs	0.049	0.033	1.5	
2372	S40	SB	QP11N	03/19/2010	0 - 0.25	PCB	Total PCBs	0.48	0.033	15	
2356	S41	SB	QP11O	03/19/2010	0.25 - 0.75	PCB	Total PCBs	0.84	0.033	25	Removed
2373	S42	SB	QP11P	03/19/2010	0.5 - 3	PCB	Total PCBs	0.296	0.033	9.0	
2374	S43	SB	QP11Q	03/19/2010	0.5 - 3	PCB	Total PCBs	0.45	0.033	14	
2375	S44	SB	QP25K	03/22/2010	0.5 - 1	PCB	Total PCBs	1.1	0.033	33	
2376	S45	SB	QP25L	03/22/2010	0.5 - 1	PCB	Total PCBs	0.49	0.033	15	
2377	S46	SB	QP25M	03/22/2010	0.5 - 1	PCB	Total PCBs	1.34	0.033	41	
2357	S47	SB	QP25N	03/22/2010	0.5 - 1	PCB	Total PCBs	2.9	0.033	88	Removed
2358	S48	SB	QP25O	03/22/2010	3	PCB	Total PCBs	0.84	0.033	25	Removed
2378	S49	SB	QP25B	03/22/2010	2.5 - 3	PCB	Total PCBs	2.8	0.033	85	
2379	S50	SB	QP25C	03/22/2010	2.5 - 3	PCB	Total PCBs	9.4	0.033	280	
2380	S51	SB	QP25D	03/22/2010	2.5 - 3	PCB	Total PCBs	8.1	0.033	250	
2381	S52	SB	QP25E	03/22/2010	0.5 - 1	PCB	Total PCBs	1.21	0.033	37	
2382	S53	SB	QP25F	03/22/2010	0.5 - 1	PCB	Total PCBs	1	0.033	30	
2359	S54	SB	QP25G	03/22/2010	0.5 - 1	PCB	Total PCBs	3.6	0.033	110	Removed
2383	S55	SB	QP25H	03/22/2010	0.5 - 1	PCB	Total PCBs	1.1	0.033	33	
2384	S56	SB	QP25I	03/22/2010	0.5 - 1	PCB	Total PCBs	0.35	0.033	11	
2385	S57	SB	QP25J	03/22/2010	0.5 - 3	PCB	Total PCBs	0.167	0.033	5.1	
2386	S58	SB	QP25A	03/22/2010	2.5 - 3	PCB	Total PCBs	33	0.033	1,000	
2348	S59	SB	QP92A	03/26/2010	0 - 0.5	PCB	Total PCBs	0.97	0.033	29	Removed
2348	S59	SB	QP92B	03/26/2010	1.5 - 2	PCB	Total PCBs	0.11	0.033	3.3	Removed
2348	S59	SB	QP92C	03/26/2010	2.5 - 3	PCB	Total PCBs	0.058	0.033	1.8	
2349	S60	SB	QP92D	03/26/2010	0 - 0.5	PCB	Total PCBs	0.21	0.033	6.4	Removed
2349	S60	SB	QP92E	03/26/2010	1.5 - 2	PCB	Total PCBs	0.05	0.033	1.5	Removed
2349	S60	SB	QP92F	03/26/2010	2.5 - 3	PCB	Total PCBs	1.76	0.033	53	
2350	S61	SB	QP92G	03/26/2010	0 - 0.5	PCB	Total PCBs	0.345	0.033	10	Removed
2350	S61	SB	QP92H	03/26/2010	1.5 - 2	PCB	Total PCBs	5.2	0.033	160	Removed
2350	S61	SB	QP92I	03/26/2010	2.5 - 3	PCB	Total PCBs	0.42	0.033	13	
2351	S62	SB	QP92J	03/26/2010	0 - 0.5	PCB	Total PCBs	0.265	0.033	8.0	
2351	S62	SB	QP92K	03/26/2010	1.5 - 2	PCB	Total PCBs	0.041	0.033	1.2	
2352	S63	SB	QP92M	03/26/2010	0 - 0.5	PCB	Total PCBs	0.234	0.033	7.1	Removed
2352	S63	SB	QP92N	03/26/2010	1.5 - 2	PCB	Total PCBs	0.91	0.033	28	Removed
2352	S63	SB	QP92O	03/26/2010	2.5 - 3	PCB	Total PCBs	0.24	0.033	7.3	
2353	S64	SB	QP92P	03/26/2010	0 - 0.5	PCB	Total PCBs	0.206	0.033	6.2	
2391	S65	SB	QS16A	04/09/2010	2.5 - 3	PCB	Total PCBs	0.6	0.033	18	
2392	S66	SB	QS16B	04/09/2010	2 - 2.25	PCB	Total PCBs	0.96	0.033	29	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
2393	S67	SB	QS16C	04/09/2010	2 - 2.25	PCB	Total PCBs	0.295	0.033	8.9	
2394	S68	SB	QS16D	04/09/2010	0.75 - 1	PCB	Total PCBs	0.93	0.033	28	
2395	S69	SB	QS16E	04/09/2010	2.5 - 3	PCB	Total PCBs	0.87	0.033	26	
2396	S70	SB	QS16F	04/09/2010	2.5 - 2.75	PCB	Total PCBs	0.043	0.033	1.3	
2397	S71	SB	QS16G	04/09/2010	2 - 2.5	PCB	Total PCBs	0.072	0.033	2.2	
2398	S72	SB	QS16H	04/09/2010	2 - 2.5	PCB	Total PCBs	0.06	0.033	1.8	
2399	S73	SB	QS16I	04/09/2010	2.5 - 2.75	PCB	Total PCBs	0.69	0.033	21	
2400	S74	SB	QS16J	04/09/2010	2.5 - 2.75	PCB	Total PCBs	0.24	0.033	7.3	
2402	S76	SB	QS16L	04/09/2010	2.5 - 3	PCB	Total PCBs	0.1	0.033	3.0	
2403	S77	SB	QS16M	04/09/2010	2.5 - 3	PCB	Total PCBs	1.41	0.033	43	
2404	S78	SB	QS16N	04/09/2010	2.5 - 3	PCB	Total PCBs	0.669	0.033	20	
2405	S79	SB	QS16O	04/09/2010	2.5 - 3	PCB	Total PCBs	1.37	0.033	42	
2406	S80	SB	QS16P	04/09/2010	2.75 - 3	PCB	Total PCBs	0.056	0.033	1.7	
2407	S81	SB	QS16Q	04/09/2010	2.75 - 3	PCB	Total PCBs	0.52	0.033	16	
2408	S82	SB	QS16R	04/09/2010	0.5 - 3	PCB	Total PCBs	0.08	0.033	2.4	
2409	S83	SB	QS16S	04/09/2010	0.5 - 3	PCB	Total PCBs	0.099	0.033	3.0	
2410	S84	SB	QS16T	04/09/2010	1 - 3	PCB	Total PCBs	0.138	0.033	4.2	
2060	SB08-22	SB	SB08-22-1-2	09/18/2008	1 - 2	PCB	Total PCBs	4.6	0.033	140	
962	SB-21	SB	SB-21-1-2	03/29/2007	1 - 2	PCB	Total PCBs	0.311	0.033	9.4	
963	SB-22	SB	SB-22-1-2	04/02/2007	1 - 2	PCB	Total PCBs	5.3	0.033	160	
964	SB-23	SB	SB-23-1-2	03/29/2007	1 - 2	PCB	Total PCBs	0.6	0.033	18	
965	SB-24	SB	SB-24-1-2	03/30/2007	1 - 2	PCB	Total PCBs	1.2	0.033	36	Removed
969	SB-28	SB	SB-28-1-2	03/30/2007	1 - 2	PCB	Total PCBs	0.121	0.033	3.7	
979	SB-39	SB	SB-39-1-2	04/02/2007	1 - 2	PCB	Total PCBs	0.96	0.033	29	
Former Building 3-304 Area											
2525	LAI-SB24	SB	SB24(2-4)071510	07/15/2010	2 - 4	MET	Arsenic	9	7.0	1.3	
192	S4	EX	S4	11/05/2001	5 - 6	PCB	Total PCBs	1.8	0.50	3.6	
192	S4	EX	S4	11/05/2001	5 - 6	MET	Arsenic	8	7.0	1.1	
192	S4	EX	S4	11/05/2001	5 - 6	TPH	Gasoline Range Hydrocarbons	67	100	<1.0	
193	S5	EX	S5	11/05/2001	5 - 6	MET	Arsenic	11	7.0	1.6	
193	S5	EX	S5	11/05/2001	5 - 6	TPH	Gasoline Range Hydrocarbons	1100	100	11	
180	SS-304-1	SB	SS-304-1(1')	10/31/2000	1	PCB	Total PCBs	1.5	0.50	3.0	
Buildings 3-329, 3-333, 3-335 Area											
234	3-333-19	EX	3-333-19	09/12/1996	4 - 4.5	VOC	Trichloroethene (TCE)	0.2206	0.0015	150	
235	3-333-20	EX	3-333-20	09/12/1996	4 - 4.5	PCB	Total PCBs	16.6	0.033	500	Removed
238	3-333-23A	EX	3-333-23S	09/16/1996	4 - 4.5	PCB	Total PCBs	2.9	0.033	88	Removed
238	3-333-23A	EX	3-333-23D	09/16/1996	6	PCB	Total PCBs	77	0.033	2,300	Removed
238	3-333-23A	EX	3-333-23B	09/23/1996	6 - 6.5	PCB	Total PCBs	67	0.033	2,000	Removed
242	3-333-24A	EX	3-333-24S	09/16/1996	4 - 4.5	PCB	Total PCBs	84	0.033	2,500	Removed
242	3-333-24A	EX	3-333-24D	09/16/1996	6	PCB	Total PCBs	0.75	0.033	23	

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
242	3-333-24A	EX	3-333-24A	09/23/1996	6 - 6.5	PCB	Total PCBs	3.1	0.033	94	
245	3-333-25D	EX	3-333-25D	09/16/1996	6	PCB	Total PCBs	0.1	0.033	3.0	
253	3-333-30	EX	3-333-30S	09/16/1996	4 - 4.5	PCB	Total PCBs	10	0.033	300	
444	3-335-SS	TP	3-335-SS-101398	10/13/1998	1	PCB	Total PCBs	0.63	0.033	19	Removed
444	3-335-SS	TP	3-335-SS-101398	10/13/1998	1	MET	Aluminum	5860	--	--	Removed
444	3-335-SS	TP	3-335-SS-101398	10/13/1998	1	MET	Barium	114.5	83	1.4	Removed
444	3-335-SS	TP	3-335-SS-101398	10/13/1998	1	MET	Cadmium	1.01	1.0	1.0	Removed
444	3-335-SS	TP	3-335-SS-101398	10/13/1998	1	MET	Iron	9558	--	--	Removed
444	3-335-SS	TP	3-335-SS-101398	10/13/1998	1	MET	Zinc	88.29	86	1.0	Removed
440	3-335-SS1	TP	3-335-SS1-100598	10/05/1998	1	PCB	Total PCBs	0.61	0.033	18	
440	3-335-SS1	TP	3-335-SS1-100598	10/05/1998	1	MET	Aluminum	7936	--	--	
440	3-335-SS1	TP	3-335-SS1-100598	10/05/1998	1	MET	Barium	83.58	83	1.0	
440	3-335-SS1	TP	3-335-SS1-100598	10/05/1998	1	MET	Iron	12710	--	--	
440	3-335-SS1	TP	3-335-SS1-100598	10/05/1998	1	MET	Zinc	106.8	86	1.2	
441	3-335-SS2	TP	3-335-SS2-100598	10/05/1998	1	PCB	Total PCBs	0.37	0.033	11	
441	3-335-SS2	TP	3-335-SS2-100598	10/05/1998	1	MET	Aluminum	11540	--	--	
441	3-335-SS2	TP	3-335-SS2-100598	10/05/1998	1	MET	Iron	17230	--	--	
441	3-335-SS2	TP	3-335-SS2-100598	10/05/1998	1	MET	Zinc	120.8	86	1.4	
442	3-335-SS3	TP	3-335-SS3-100598	10/05/1998	1	PCB	Total PCBs	0.56	0.033	17	
442	3-335-SS3	TP	3-335-SS3-100598	10/05/1998	1	MET	Aluminum	10060	--	--	
442	3-335-SS3	TP	3-335-SS3-100598	10/05/1998	1	MET	Barium	98.5	83	1.2	
442	3-335-SS3	TP	3-335-SS3-100598	10/05/1998	1	MET	Iron	15030	--	--	
442	3-335-SS3	TP	3-335-SS3-100598	10/05/1998	1	MET	Zinc	96.96	86	1.1	
442	3-335-SS3	TP	3-335-SS3-100598	10/05/1998	1	TPH	Gasoline Range Hydrocarbons	53	100	<1.0	
443	3-335-SS4	TP	3-335-SS4-100598	10/05/1998	1	PCB	Total PCBs	0.56	0.033	17	
443	3-335-SS4	TP	3-335-SS4-100598	10/05/1998	1	MET	Aluminum	10400	--	--	
443	3-335-SS4	TP	3-335-SS4-100598	10/05/1998	1	MET	Barium	89.79	83	1.1	
443	3-335-SS4	TP	3-335-SS4-100598	10/05/1998	1	MET	Iron	16470	--	--	
443	3-335-SS4	TP	3-335-SS4-100598	10/05/1998	1	MET	Zinc	99.27	86	1.2	
445	A(1)-93-7.0	TP	A(1)-93-7.0	10/22/1998	7	PCB	Total PCBs	0.25	0.033	7.6	
750	A1-31	EX	A1-31-2.0-DL	08/25/1997	2	PCB	Total PCBs	1.9	0.033	58	
753	A3-33	EX	A3-33-4.0	08/20/1997	4	PCB	Total PCBs	20.2	0.033	610	Removed
754	A4-60	EX	A4-60-2.4	08/21/1997	2.4	PCB	Total PCBs	0.6	0.033	18	Removed
754	A4-60	EX	A4-60-4.1	08/21/1997	4.1	PCB	Total PCBs	7	0.033	210	Removed
755	AA0-44	EX	AA0-44-3.9	08/21/1997	3.9	PCB	Total PCBs	12.4	0.033	380	Removed
756	AA0-50	EX	AA0-50-4.2	08/25/1997	4.2	PCB	Total PCBs	15.9	0.033	480	Removed
758	AA1-62	EX	AA1-62-3.7-DL	08/25/1997	3.7	PCB	Total PCBs	51	0.033	1,500	
758	AA1-62	EX	AA1-6200-3.7	08/25/1997	3.7	TPH	Gasoline Range Hydrocarbons	860	30	29	
758	AA1-62	EX	AA1-6200-3.7-DL	08/25/1997	3.7	TPH	Diesel Range Hydrocarbons	4300	2,000	2.2	
759	AA2-81	EX	AA2-81-4.7-Dup	08/25/1997	4.7	PCB	Total PCBs	6.9	0.033	210	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
759	AA2-81	EX	AA2-81-4.7-Dup	08/25/1997	4.7	TPH	Diesel Range Hydrocarbons	3040	2,000	1.5	Removed
760	B0-31	EX	B0-31-4.0	08/21/1997	4	PCB	Total PCBs	3.5	0.033	110	Removed
762	B0-54	EX	B0-54-4.6-DL	08/25/1997	4.6	PCB	Total PCBs	6.3	0.033	190	
762	B0-54	EX	B0-54-4.6	08/25/1997	4.6	TPH	Gasoline Range Hydrocarbons	1200	30	40	
762	B0-54	EX	B0-54-4.6-DL	08/25/1997	4.6	TPH	Diesel Range Hydrocarbons	3900	2,000	2.0	
765	C0-21	EX	C0-21-4.3	08/21/1997	4.3	PCB	Total PCBs	14.3	0.033	430	Removed
769	D1-70	EX	D1-70-3.7	08/25/1997	3.7	PCB	Total PCBs	0.063	0.033	1.9	
770	D2-30	EX	D2-30-4.2	08/19/1997	4.2	PCB	Total PCBs	19.1	0.033	580	Removed
770	D2-30	EX	D2-30-4.2	08/19/1997	4.2	TPH	Diesel Range Hydrocarbons	2630	2,000	1.3	Removed
771	D2-43	EX	D2-43-4.5	08/19/1997	4.5	PCB	Total PCBs	15	0.033	450	Removed
771	D2-43	EX	D2-43-4.5	08/19/1997	4.5	TPH	Diesel Range Hydrocarbons	4670	2,000	2.3	Removed
772	D3-63	EX	D3-63-2.4	08/21/1997	2.4	PCB	Total PCBs	3.4	0.033	100	Removed
773	D4-21	EX	D4-21-5.0	08/25/1997	5	PCB	Total PCBs	2.2	0.033	67	Removed
774	E1-12	EX	E1-12-4.5	08/21/1997	4.5	PCB	Total PCBs	39.6	0.033	1,200	Removed
775	E2-30	EX	E2-30-3.5	08/19/1997	3.5	PCB	Total PCBs	217	0.033	6,600	Removed
775	E2-30	EX	E2-30-3.5	08/19/1997	3.5	TPH	Diesel Range Hydrocarbons	5250	2,000	2.6	Removed
777	F0-10	EX	F0-10-4.0-Dup	08/20/1997	4	PCB	Total PCBs	216	0.033	6,500	Removed
778	F0-70	EX	F0-70-4.5	08/19/1997	4.5	PCB	Total PCBs	23	0.033	700	Removed
778	F0-70	EX	F0-70-4.5	08/19/1997	4.5	TPH	Diesel Range Hydrocarbons	7730	2,000	3.9	Removed
780	G0-40	EX	G0-40-5.2	08/19/1997	5.2	PCB	Total PCBs	1.1	0.033	33	Removed
782	G0-772-Sump	EX	G0-772-Sump	08/22/1997	--	PCB	Total PCBs	5	0.033	150	Removed
784	H1-10	EX	H1-10-3.4	08/20/1997	3.4	PCB	Total PCBs	4150	0.033	130,000	Removed
784	H1-10	EX	H1-10-4.9	08/20/1997	4.9	PCB	Total PCBs	1520	0.033	46,000	Removed
784	H1-10	EX	H1-10-4.9	08/20/1997	4.9	TPH	Diesel Range Hydrocarbons	6390	2,000	3.2	Removed
786	H2-12	EX	H2-12-5.2-DL	08/26/1997	5.2	PCB	Total PCBs	380	0.033	12,000	Removed
786	H2-12	EX	H2-1200-5.2	08/26/1997	5.2	TPH	Gasoline Range Hydrocarbons	1200	30	40	Removed
786	H2-12	EX	H2-1200-5.2-DL	08/26/1997	5.2	TPH	Diesel Range Hydrocarbons	3100	2,000	1.6	Removed
787	H4-51	EX	H4-51-4.6-DL	08/27/1997	4.6	PCB	Total PCBs	100	0.033	3,000	
787	H4-51	EX	H4-51-4.6	08/27/1997	4.6	TPH	Gasoline Range Hydrocarbons	96	30	3.2	
864	HA-1	SB	HA-1	08/11/1994	3 - 3.5	PCB	Total PCBs	1.82	0.033	55	Removed
873	HA-10	SB	HA-10	08/11/1994	6 - 6.5	PCB	Total PCBs	0.87	0.033	26	
873	HA-10	SB	HA-10	08/11/1994	6 - 6.5	TPH	Gasoline Range Hydrocarbons	2400	30	80	
873	HA-10	SB	HA-10	08/11/1994	6 - 6.5	TPH	Diesel Range Hydrocarbons	2800	2,000	1.4	
874	HA-11	SB	HA-11	08/11/1994	6 - 6.5	PCB	Total PCBs	400	0.033	12,000	Removed
874	HA-11	SB	HA-11	08/11/1994	6 - 6.5	TPH	Gasoline Range Hydrocarbons	5300	30	180	Removed
874	HA-11	SB	HA-11	08/11/1994	6 - 6.5	TPH	Diesel Range Hydrocarbons	3900	2,000	2.0	Removed
875	HA-12	SB	HA-12	08/11/1994	6 - 6.5	PCB	Total PCBs	1.6	0.033	48	
865	HA-2	SB	HA-2	08/11/1994	3 - 3.5	PCB	Total PCBs	1	0.033	30	Removed
866	HA-3	SB	HA-3	08/11/1994	3 - 3.5	PCB	Total PCBs	0.11	0.033	3.3	Removed
868	HA-5	SB	HA-5	08/11/1994	3 - 3.5	PCB	Total PCBs	0.142	0.033	4.3	

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
869	HA-6	SB	HA-6	08/11/1994	3 - 3.5	PCB	Total PCBs	0.77	0.033	23	Removed
871	HA-8	SB	HA-8	08/11/1994	6 - 6.5	PCB	Total PCBs	0.1	0.033	3.0	
3546	IA3-333-S05	SB	IA3-333-S05(8-9)051811	05/18/2011	8 - 9	PCB	Total PCBs	3.76	0.033	110	Removed
3548	IA3-333-S07	SB	IA3-333-S07(8-9)051811	05/18/2011	8 - 9	PCB	Total PCBs	2.5	0.033	76	Removed
3552	IA3-333-S11	SB	IA3-333-S11(7-8)051811	05/18/2011	7 - 8	PCB	Total PCBs	0.08	0.033	2.4	
3553	IA3-333-S12	SB	IA3-333-S12(8-9)051811	05/18/2011	8 - 9	PCB	Total PCBs	0.78	0.033	24	
3761	IA3-333-S15	EX	IA3-333-S15-102011	10/20/2011	5 - 6	PCB	Total PCBs	3.1	0.033	94	Removed
3762	IA3-333-S16	EX	IA3-333-S16-102011	10/20/2011	5 - 6	PCB	Total PCBs	0.095	0.033	2.9	
3765	IA3-333-S19	EX	IA3-333-S19-102511	10/25/2011	5 - 6	TPH	Gasoline Range Hydrocarbons	490	30	16	
790	J2-42	EX	J2-42-4.3	08/19/1997	4.3	PCB	Total PCBs	294	0.033	8,900	Removed
794	K2-113	EX	K2-113-3.9-DL	08/25/1997	3.9	PCB	Total PCBs	4.7	0.033	140	Removed
795	K4-30	EX	K4-30-4.7	08/25/1997	4.7	PCB	Total PCBs	0.5	0.033	15	Removed
797	L1-40	EX	L1-40-1.8	08/27/1997	1.8	PCB	Total PCBs	0.12	0.033	3.6	
2444	LAI-SB103	SB	LAI-SB103(0-2)092810	09/28/2010	0 - 2	PCB	Total PCBs	0.79	0.033	24	
2444	LAI-SB103	SB	LAI-SB103(2-4)092810	09/28/2010	2 - 4	PCB	Total PCBs	0.083	0.033	2.5	
2444	LAI-SB103	SB	LAI-SB103(2-4)092810	09/28/2010	2 - 4	MET	Mercury	0.08	0.070	1.1	
2444	LAI-SB103	SB	LAI-SB103(4-6)092810	09/28/2010	4 - 6	PCB	Total PCBs	0.13	0.033	3.9	
2445	LAI-SB104	SB	LAI-SB104(0-2)092810	09/28/2010	0 - 2	PCB	Total PCBs	0.048	0.033	1.5	
2445	LAI-SB104	SB	LAI-SB104(2-4)092810	09/28/2010	2 - 4	PCB	Total PCBs	0.204	0.033	6.2	
2445	LAI-SB104	SB	LAI-SB104(4-6)092810	09/28/2010	4 - 6	PCB	Total PCBs	0.046	0.033	1.4	
2445	LAI-SB104	SB	LAI-SB104(4-6)092810	09/28/2010	4 - 6	TPH	Gasoline Range Hydrocarbons	7000	100	70	
2445	LAI-SB104	SB	LAI-SB104(6-8)092810	09/28/2010	6 - 8	TPH	Gasoline Range Hydrocarbons	420	100	4.2	
2446	LAI-SB105	SB	LAI-SB105(0-2)092810	09/28/2010	0 - 2	PCB	Total PCBs	0.21	0.033	6.4	
2446	LAI-SB105	SB	LAI-SB105(2-4)092810	09/28/2010	2 - 4	PCB	Total PCBs	0.52	0.033	16	
2446	LAI-SB105	SB	LAI-SB105(2-4)092810	09/28/2010	2 - 4	MET	Mercury	0.09	0.070	1.3	
2447	LAI-SB106	SB	LAI-SB106(0-2)092810	09/28/2010	0 - 2	PCB	Total PCBs	0.048	0.033	1.5	
2447	LAI-SB106	SB	LAI-SB106(0-2)092810	09/28/2010	0 - 2	TPH	Gasoline Range Hydrocarbons	50	100	<1.0	
2462	LAI-SB60	SB	LAI-SB60(0-2)091410	09/14/2010	0 - 2	PAH	Total Benzofluoranthenes	0.12	--	--	
2462	LAI-SB60	SB	LAI-SB60(0-2)091410	09/14/2010	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.055	0.0094	5.9	
2462	LAI-SB60	SB	LAI-SB60(2-4)091410	09/14/2010	2 - 4	PAH	Total Benzofluoranthenes	0.13	--	--	
2462	LAI-SB60	SB	LAI-SB60(2-4)091410	09/14/2010	2 - 4	PAH	Benzo(a)pyrene	0.063	0.0094	6.7	
2462	LAI-SB60	SB	LAI-SB60(2-4)091410	09/14/2010	2 - 4	PAH	Total cPAHs (TEQ, NDx0.5)	0.085	0.0094	9.1	
2462	LAI-SB60	SB	LAI-SB60(4-6)091410	09/14/2010	4 - 6	MET	Zinc	119	86	1.4	
2462	LAI-SB60	SB	LAI-SB60(4-6)091410	09/14/2010	4 - 6	TPH	Gasoline Range Hydrocarbons	39	30	1.3	
2462	LAI-SB60	SB	LAI-SB60(4-6)091410	09/14/2010	4 - 6	VAH	Benzene	0.31	0.001	310	
2463	LAI-SB61	SB	LAI-SB61(0-2)091410	09/14/2010	0 - 2	PCB	Total PCBs	0.125	0.033	3.8	Removed
2463	LAI-SB61	SB	LAI-SB61(0-2)091410	09/14/2010	0 - 2	PAH	Total Benzofluoranthenes	0.089	--	--	Removed
2463	LAI-SB61	SB	LAI-SB61(0-2)091410	09/14/2010	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.049	0.0094	5.2	Removed
2463	LAI-SB61	SB	LAI-SB61(6-8)091610	09/16/2010	6 - 8	PCB	Total PCBs	20	0.033	610	Removed
2463	LAI-SB61	SB	LAI-SB61(6-8)091610	09/16/2010	6 - 8	TPH	Gasoline Range Hydrocarbons	170	100	1.7	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
2464	LAI-SB62	SB	LAI-SB62(0-2)091410	09/14/2010	0 - 2	PCB	Total PCBs	0.037	0.033	1.1	
2465	LAI-SB63	SB	LAI-SB63(0-2)091410	09/14/2010	0 - 2	PCB	Total PCBs	0.173	0.033	5.2	Removed
2465	LAI-SB63	SB	LAI-SB63(2-4)091410	09/14/2010	2 - 4	PCB	Total PCBs	2.86	0.033	87	Removed
2465	LAI-SB63	SB	LAI-SB63(4-6)091410	09/14/2010	4 - 6	PCB	Total PCBs	3.91	0.033	120	Removed
2465	LAI-SB63	SB	LAI-SB63(4-6)091410	09/14/2010	4 - 6	PAH	Total Benzofluoranthenes	0.26	--	--	Removed
2465	LAI-SB63	SB	LAI-SB63(4-6)091410	09/14/2010	4 - 6	PAH	Benzo(a)pyrene	0.13	0.0094	14	Removed
2465	LAI-SB63	SB	LAI-SB63(4-6)091410	09/14/2010	4 - 6	PAH	Total cPAHs (TEQ, NDx0.5)	0.17	0.0094	18	Removed
2481	LAI-SB79	SB	LAI-SB79(0-2)091710	09/17/2010	0 - 2	PCB	Total PCBs	0.038	0.033	1.2	
2481	LAI-SB79	SB	LAI-SB79(4-6)091710	09/17/2010	4 - 6	MET	Mercury	0.09	0.070	1.3	
2481	LAI-SB79	SB	LAI-SB79(4-6)091710	09/17/2010	4 - 6	PAH	2-Methylnaphthalene	0.081	0.043	1.9	
2495	LAI-SB93	SB	LAI-SB93(0-2)092210	09/22/2010	0 - 2	PCB	Total PCBs	0.16	0.033	4.8	
3107	NGW513	MW	NGW513(0-2)012011	01/20/2011	0 - 2	PCB	Total PCBs	0.77	0.033	23	
3108	NGW514	MW	NGW514(0-2)012011	01/20/2011	0 - 2	PCB	Total PCBs	0.05	0.033	1.5	
3108	NGW514	MW	NGW514(0-2)012011	01/20/2011	0 - 2	TPH	Gasoline Range Hydrocarbons	54	100	<1.0	
3108	NGW514	MW	NGW514(4-6)012011	01/20/2011	4 - 6	PCB	Total PCBs	0.061	0.033	1.8	
3108	NGW514	MW	NGW514(4-6)012011	01/20/2011	4 - 6	TPH	Gasoline Range Hydrocarbons	56	100	<1.0	
3108	NGW514	MW	NGW514(6-8)012011	01/20/2011	6 - 8	TPH	Gasoline Range Hydrocarbons	4800	100	48	
3108	NGW514	MW	NGW514(8-10)012011	01/20/2011	8 - 10	TPH	Gasoline Range Hydrocarbons	1100	100	11	
3108	NGW514	MW	NGW514(14-15)012011	01/20/2011	14 - 15	TPH	Gasoline Range Hydrocarbons	33	100	<1.0	
3109	NGW515	MW	NGW515(0-2)012011	01/20/2011	0 - 2	PCB	Total PCBs	1.54	0.033	47	
3109	NGW515	MW	NGW515(2-4)012011	01/20/2011	2 - 4	PCB	Total PCBs	2.22	0.033	67	
3109	NGW515	MW	NGW515(4-6)012011	01/20/2011	4 - 6	PCB	Total PCBs	1.4	0.033	42	
3110	NGW516	MW	NGW516(0-2)012011	01/20/2011	0 - 2	PCB	Total PCBs	0.44	0.033	13	
3110	NGW516	MW	NGW516(2-4)012011	01/20/2011	2 - 4	PCB	Total PCBs	0.131	0.033	4.0	
3110	NGW516	MW	NGW516(6-8)012011	01/20/2011	6 - 8	TPH	Gasoline Range Hydrocarbons	39	30	1.3	
3110	NGW516	MW	NGW516(10-12)012011	01/20/2011	10 - 12	TPH	Gasoline Range Hydrocarbons	43	30	1.4	
3110	NGW516	MW	NGW516(10-12)012011	01/20/2011	10 - 12	PAH	2-Methylnaphthalene	0.076	0.043	1.8	
3110	NGW516	MW	NGW516(10-12)012011	01/20/2011	10 - 12	VAH	Benzene	0.15 J	0.001	150	
3111	NGW517	MW	NGW517(0-2)012011	01/20/2011	0 - 2	PCB	Total PCBs	0.2	0.033	6.1	Removed
3111	NGW517	MW	NGW517(0-2)012011	01/20/2011	0 - 2	PAH	Total Benzofluoranthenes	0.12	--	--	Removed
3111	NGW517	MW	NGW517(0-2)012011	01/20/2011	0 - 2	PAH	Benzo(a)pyrene	0.068	0.0094	7.2	Removed
3111	NGW517	MW	NGW517(0-2)012011	01/20/2011	0 - 2	PAH	Chrysene	0.079	--	--	Removed
3111	NGW517	MW	NGW517(0-2)012011	01/20/2011	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.090	0.0094	9.6	Removed
3111	NGW517	MW	NGW517(2-4)012011	01/20/2011	2 - 4	PCB	Total PCBs	0.106	0.033	3.2	Removed
3111	NGW517	MW	NGW517(2-4)012011	01/20/2011	2 - 4	PAH	Chrysene	0.076	--	--	Removed
3111	NGW517	MW	NGW517(2-4)012011	01/20/2011	2 - 4	PAH	Total cPAHs (TEQ, NDx0.5)	0.043	0.0094	4.6	Removed
3111	NGW517	MW	NGW517(4-6)012011	01/20/2011	4 - 6	PCB	Total PCBs	0.135	0.033	4.1	Removed
3111	NGW517	MW	NGW517(4-6)012011	01/20/2011	4 - 6	PAH	Total Benzofluoranthenes	0.072	--	--	Removed
3111	NGW517	MW	NGW517(4-6)012011	01/20/2011	4 - 6	PAH	Chrysene	0.069	--	--	Removed
3111	NGW517	MW	NGW517(4-6)012011	01/20/2011	4 - 6	PAH	Total cPAHs (TEQ, NDx0.5)	0.047	0.0094	5.0	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
3111	NGW517	MW	NGW517(6-8)012011	01/20/2011	6 - 8	PCB	Total PCBs	140	0.033	4,200	Removed
3111	NGW517	MW	NGW517(6-8)012011	01/20/2011	6 - 8	TPH	Gasoline Range Hydrocarbons	620	30	21	Removed
3111	NGW517	MW	NGW517(6-8)012011	01/20/2011	6 - 8	VAH	Benzene	0.17	0.001	170	Removed
3111	NGW517	MW	NGW517(8-10)012011	01/20/2011	8 - 10	PCB	Total PCBs	9.5	0.033	290	Removed
3111	NGW517	MW	NGW517(8-10)012011	01/20/2011	8 - 10	TPH	Gasoline Range Hydrocarbons	90	30	3.0	Removed
3111	NGW517	MW	NGW517(10-12)012011	01/20/2011	10 - 12	PCB	Total PCBs	8.2	0.033	250	
3111	NGW517	MW	NGW517(10-12)012011	01/20/2011	10 - 12	TPH	Gasoline Range Hydrocarbons	850	30	28	
3111	NGW517	MW	NGW517(12-14)012011	01/20/2011	12 - 14	PCB	Total PCBs	3.4	0.033	100	
3111	NGW517	MW	NGW517(14-15)012011	01/20/2011	14 - 15	PCB	Total PCBs	0.48	0.033	15	
3111	NGW517	MW	NGW517(14-15)012011	01/20/2011	14 - 15	TPH	Gasoline Range Hydrocarbons	1100	30	37	
3112	NGW518	MW	NGW518(0-2)012011	01/20/2011	0 - 2	PCB	Total PCBs	0.28	0.033	8.5	
3112	NGW518	MW	NGW518(2-4)012011	01/20/2011	2 - 4	PCB	Total PCBs	0.143	0.033	4.3	
3112	NGW518	MW	NGW518(9-11)012011	01/20/2011	9 - 11	PAH	Benzo(a)anthracene	0.064	--	--	
3112	NGW518	MW	NGW518(9-11)012011	01/20/2011	9 - 11	PAH	Total Benzofluoranthenes	0.13	--	--	
3112	NGW518	MW	NGW518(9-11)012011	01/20/2011	9 - 11	PAH	Chrysene	0.11	--	--	
3112	NGW518	MW	NGW518(9-11)012011	01/20/2011	9 - 11	PAH	Total cPAHs (TEQ, NDx0.5)	0.059	0.0094	6.3	
461	P1	SB	3.321/P1/3.2-4.2	06/21/1997	3.2 - 4.2	PCB	Total PCBs	0.106	0.033	3.2	
446	P11	SB	3-321/P11/3.7-6.7	06/20/1997	3.7 - 6.7	PCB	Total PCBs	22	0.033	670	
446	P11	SB	3-321/P11/3.7-6.7	06/20/1997	3.7 - 6.7	TPH	Gasoline Range Hydrocarbons	600	30	20	
447	P12	SB	3-321/P12/1.5-3.5	06/20/1997	1.5 - 3.5	PCB	Total PCBs	3.6	0.033	110	Removed
447	P12	SB	3-321/P12/1.5-3.5	06/20/1997	1.5 - 3.5	TPH	Gasoline Range Hydrocarbons	3400	30	110	Removed
447	P12	SB	3-321/P12/3.5-6.5	06/20/1997	3.5 - 6.5	PCB	Total PCBs	9.8	0.033	300	Removed
447	P12	SB	3-321/P12/3.5-6.5	06/20/1997	3.5 - 6.5	TPH	Gasoline Range Hydrocarbons	820	30	27	Removed
447	P12	SB	3-321/P12/3.5-6.5	06/20/1997	3.5 - 6.5	TPH	Diesel Range Hydrocarbons	3900	2,000	2.0	Removed
448	P13	SB	3-321/P13/0.7-1.7	06/20/1997	0.7 - 1.7	PCB	Total PCBs	6.3	0.033	190	Removed
448	P13	SB	3-321/P13/0.7-1.7	06/20/1997	0.7 - 1.7	TPH	Gasoline Range Hydrocarbons	78	30	2.6	Removed
448	P13	SB	3-321/P13/1.7-3.7	06/20/1997	1.7 - 3.7	PCB	Total PCBs	120	0.033	3,600	Removed
448	P13	SB	3-321/P13/1.7-3.7	06/20/1997	1.7 - 3.7	TPH	Gasoline Range Hydrocarbons	7200	30	240	Removed
448	P13	SB	3-321/P13/1.7-3.7	06/20/1997	1.7 - 3.7	TPH	Diesel Range Hydrocarbons	2100	2,000	1.1	Removed
448	P13	SB	3-321/P13/3.7-6.7	06/20/1997	3.7 - 6.7	PCB	Total PCBs	120	0.033	3,600	Removed
448	P13	SB	3-321/P13/3.7-6.7	06/20/1997	3.7 - 6.7	TPH	Gasoline Range Hydrocarbons	430	30	14	Removed
448	P13	SB	3-321/P13/3.7-6.7	06/20/1997	3.7 - 6.7	TPH	Diesel Range Hydrocarbons	2600	2,000	1.3	Removed
449	P14	SB	3-321/P14/1.6-3.1	06/20/1997	1.6 - 3.1	PCB	Total PCBs	1.8	0.033	55	Removed
449	P14	SB	3-321/P14/1.6-3.1	06/20/1997	1.6 - 3.1	TPH	Gasoline Range Hydrocarbons	160	30	5.3	Removed
449	P14	SB	3-321/P14/3.1-5.6	06/20/1997	3.1 - 5.6	PCB	Total PCBs	184	0.033	5,600	Removed
449	P14	SB	3-321/P14/3.1-5.6	06/20/1997	3.1 - 5.6	TPH	Gasoline Range Hydrocarbons	2000	30	67	Removed
449	P14	SB	3-321/P14/3.1-5.6	06/20/1997	3.1 - 5.6	TPH	Diesel Range Hydrocarbons	2900	2,000	1.5	Removed
450	P15	SB	3-321/P15/3.6-6.6	06/20/1997	3.6 - 6.6	PCB	Total PCBs	630	0.033	19,000	Removed
450	P15	SB	3-321/P15/3.6-6.6	06/20/1997	3.6 - 6.6	TPH	Gasoline Range Hydrocarbons	890	30	30	Removed
450	P15	SB	3-321/P15/3.6-6.6	06/20/1997	3.6 - 6.6	TPH	Diesel Range Hydrocarbons	4800	2,000	2.4	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
451	P16	SB	3-321/P16/0.7-1.7	06/20/1997	0.7 - 1.7	PCB	Total PCBs	1600	0.033	48,000	Removed
451	P16	SB	3-321/P16/1.7-3.7	06/20/1997	1.7 - 3.7	PCB	Total PCBs	150	0.033	4,500	Removed
451	P16	SB	3-321/P16/1.7-3.7	06/20/1997	1.7 - 3.7	TPH	Gasoline Range Hydrocarbons	830	30	28	Removed
451	P16	SB	3-321/P16/3.7-6.7	06/20/1997	3.7 - 6.7	PCB	Total PCBs	83	0.033	2,500	Removed
451	P16	SB	3-321/P16/3.7-6.7	06/20/1997	3.7 - 6.7	TPH	Gasoline Range Hydrocarbons	7500	30	250	Removed
463	P17	SB	3.321/P17/0.7-1.7	06/21/1997	0.7 - 1.7	PCB	Total PCBs	2.9	0.033	88	Removed
463	P17	SB	3.321/P17/1.7-3.7	06/21/1997	1.7 - 3.7	PCB	Total PCBs	2.2	0.033	67	Removed
463	P17	SB	3.321/P17/3.7-6.7	06/21/1997	3.7 - 6.7	PCB	Total PCBs	3.7	0.033	110	
463	P17	SB	3.321/P171/3.7-6.7	06/21/1997	3.7 - 6.7	TPH	Gasoline Range Hydrocarbons	4800	30	160	
452	P18	SB	3-321/P18/1.7-3.7	06/20/1997	1.7 - 3.7	PCB	Total PCBs	420	0.033	13,000	Removed
452	P18	SB	3-321/P181/1.7-3.7	06/20/1997	1.7 - 3.7	TPH	Gasoline Range Hydrocarbons	370	30	12	Removed
452	P18	SB	3-321/P18/1.7-3.7	06/20/1997	1.7 - 3.7	TPH	Diesel Range Hydrocarbons	7900	2,000	4.0	Removed
452	P18	SB	3-321/P181/3.7-6.7	06/20/1997	3.7 - 6.7	PCB	Total PCBs	280	0.033	8,500	
452	P18	SB	3-321/P181/3.7-6.7	06/20/1997	3.7 - 6.7	TPH	Gasoline Range Hydrocarbons	7800	30	260	
452	P18	SB	3-321/P181/3.7-6.7	06/20/1997	3.7 - 6.7	TPH	Diesel Range Hydrocarbons	7600	2,000	3.8	
453	P19	SB	3-321/P19/0.5-1.5	06/20/1997	0.5 - 1.5	PCB	Total PCBs	2.9	0.033	88	Removed
453	P19	SB	3-321/P19/4.0-6.0	06/20/1997	4 - 6	PCB	Total PCBs	0.53	0.033	16	Removed
454	P20	SB	3-321/P20/0.5-1.5	06/20/1997	0.5 - 1.5	PCB	Total PCBs	0.14	0.033	4.2	Removed
467	P28	SB	3.321/P28/0.5-1.5	06/21/1997	0.5 - 1.5	PCB	Total PCBs	0.048	0.033	1.5	
467	P28	SB	3.321/P28/1.5-3.0	06/21/1997	1.5 - 3	PCB	Total PCBs	0.16	0.033	4.8	
470	P5	SB	3.321/P5/0.4-1.4	06/21/1997	0.4 - 1.4	PCB	Total PCBs	0.58	0.033	18	Removed
470	P5	SB	3.321/P5/1.4-3.4	06/21/1997	1.4 - 3.4	PCB	Total PCBs	0.052	0.033	1.6	Removed
470	P5	SB	3.321/P5/3.4-6.4	06/21/1997	3.4 - 6.4	PCB	Total PCBs	4	0.033	120	Removed
471	P6	SB	3.321/P6/0.5-1.2	06/21/1997	0.5 - 1.2	PCB	Total PCBs	0.088	0.033	2.7	
807	PCBPC-Back	EX	PCBPC-Back	08/26/1997	--	PCB	Total PCBs	6.2	0.033	190	Removed
808	PCBPC-Int	EX	PCBPC-Int	08/26/1997	--	PCB	Total PCBs	4.5	0.033	140	Removed
935	S-12	EX	S-12	03/12/1996	4	TPH	Gasoline Range Hydrocarbons	4700	30	160	
935	S-12	EX	S-12	03/12/1996	4	TPH	Diesel Range Hydrocarbons	9900	2,000	5.0	
935	S-12	EX	S-12	03/12/1996	4	TPH	Total Petroleum Hydrocarbons	14000	2,000	7.0	
926	S-3	EX	S-3	03/12/1996	4	TPH	Gasoline Range Hydrocarbons	1800	30	60	
926	S-3	EX	S-3	03/12/1996	4	TPH	Diesel Range Hydrocarbons	8800	2,000	4.4	
926	S-3	EX	S-3	03/12/1996	4	TPH	Total Petroleum Hydrocarbons	10000	2,000	5.0	
927	S-4	EX	S-4	03/12/1996	4	TPH	Gasoline Range Hydrocarbons	3700	30	120	
927	S-4	EX	S-4	03/12/1996	4	TPH	Diesel Range Hydrocarbons	3000	2,000	1.5	
2212	SB01	SB	SB01@1.5	11/30/1994	1.5	PCB	Total PCBs	0.044	0.033	1.3	Removed
942	SB-01	SB	SB-01-1-2	03/29/2007	1 - 2	PCB	Total PCBs	0.07	0.033	2.1	
943	SB-02	SB	SB-02-1-2	03/29/2007	1 - 2	PCB	Total PCBs	0.12	0.033	3.6	
944	SB-03	SB	SB-03-1-2	03/29/2007	1 - 2	PCB	Total PCBs	0.066	0.033	2.0	
2216	SB05	SB	SB05@2	11/29/1994	2	PCB	Total PCBs	0.15	0.033	4.5	
2219	SB08	SB	SB08@2	11/29/1994	2	PCB	Total PCBs	0.096	0.033	2.9	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
2219	SB08	SB	SB08@6	11/29/1994	6	PCB	Total PCBs	0.11	0.033	3.3	
949	SB-08	SB	SB-08-1-2	04/02/2007	1 - 2	PCB	Total PCBs	0.2	0.033	6.1	
949	SB-08	SB	SB-08-6-7	04/02/2007	6 - 7	TPH	Gasoline Range Hydrocarbons	1600	100	16	
2061	SB08-36	SB	SB08-36-5-6	09/18/2008	5 - 6	PCB	Total PCBs	270	0.033	8,200	Removed
2222	SB11	SB	SB11@2.0	11/29/1994	2	PCB	Total PCBs	3	0.033	91	Removed
2223	SB12	SB	SB12@3	11/30/1994	3	PCB	Total PCBs	0.28	0.033	8.5	Removed
2223	SB12	SB	SB12@8	11/30/1994	8	PCB	Total PCBs	1.2	0.033	36	
953	SB-12	SB	SB-12-1-2	04/03/2007	1 - 2	PCB	Total PCBs	0.225	0.033	6.8	
2225	SB14	SB	SB14@1	11/30/1994	1	PCB	Total PCBs	1.4	0.033	42	Removed
2226	SB15	SB	SB15@3	11/30/1994	3	PCB	Total PCBs	0.32	0.033	9.7	Removed
2229	SB18	SB	SB18@2	11/30/1994	2	PCB	Total PCBs	0.08	0.033	2.4	
976	SB-36	SB	SB-36-1-2	03/29/2007	1 - 2	PCB	Total PCBs	0.11	0.033	3.3	Removed
976	SB-36	SB	SB-36-5-6	03/29/2007	5 - 6	PCB	Total PCBs	133	0.033	4,000	Removed
976	SB-36	SB	SB-36-5-6	03/29/2007	5 - 6	TPH	Gasoline Range Hydrocarbons	2900	100	29	Removed
434	TP8/4.7	TP	TP8/4.7	09/22/1998	4.7	PCB	Total PCBs	7.7	0.033	230	
434	TP8/4.7	TP	TP8/4.7	09/22/1998	4.7	TPH	Gasoline Range Hydrocarbons	560	30	19	
435	TP9/4.3	TP	TP9/4.3	09/22/1998	4.3	PCB	Total PCBs	0.96	0.033	29	
Building 3-324 Area											
4084	C1	SB	C1B03	09/28/2006	0 - 0.25	PAH	Benzo(a)anthracene	0.1	--	--	Removed
4084	C1	SB	C1B03	09/28/2006	0 - 0.25	PAH	Benzo(b)fluoranthene	0.16	--	--	Removed
4084	C1	SB	C1B03	09/28/2006	0 - 0.25	PAH	Benzo(k)fluoranthene	0.14	--	--	Removed
4084	C1	SB	C1B03	09/28/2006	0 - 0.25	PAH	Total Benzofluoranthenes	0.3	--	--	Removed
4084	C1	SB	C1B03	09/28/2006	0 - 0.25	PAH	Benzo(a)pyrene	0.13	0.0094	14	Removed
4084	C1	SB	C1B03	09/28/2006	0 - 0.25	PAH	Chrysene	0.13	--	--	Removed
4084	C1	SB	C1B03	09/28/2006	0 - 0.25	PAH	Dibenz(a,h)anthracene	0.008	--	--	Removed
4084	C1	SB	C1B03	09/28/2006	0 - 0.25	PAH	Indeno(1,2,3-cd)pyrene	0.028	--	--	Removed
4084	C1	SB	C1B03	09/28/2006	0 - 0.25	PAH	Total cPAHs (TEQ, NDx0.5)	0.17	0.0094	19	Removed
4084	C1	SB	C1B12	09/28/2006	0.5 - 1	PAH	Benzo(a)anthracene	0.14	--	--	Removed
4084	C1	SB	C1B12	09/28/2006	0.5 - 1	PAH	Benzo(b)fluoranthene	0.24	--	--	Removed
4084	C1	SB	C1B12	09/28/2006	0.5 - 1	PAH	Benzo(k)fluoranthene	0.24	--	--	Removed
4084	C1	SB	C1B12	09/28/2006	0.5 - 1	PAH	Total Benzofluoranthenes	0.48	--	--	Removed
4084	C1	SB	C1B12	09/28/2006	0.5 - 1	PAH	Benzo(g,h,i)perylene	0.045	0.031	1.5	Removed
4084	C1	SB	C1B12	09/28/2006	0.5 - 1	PAH	Benzo(a)pyrene	0.22	0.0094	23	Removed
4084	C1	SB	C1B12	09/28/2006	0.5 - 1	PAH	Chrysene	0.2	--	--	Removed
4084	C1	SB	C1B12	09/28/2006	0.5 - 1	PAH	Dibenz(a,h)anthracene	0.011	--	--	Removed
4084	C1	SB	C1B12	09/28/2006	0.5 - 1	PAH	Fluoranthene	0.21	0.16	1.3	Removed
4084	C1	SB	C1B12	09/28/2006	0.5 - 1	PAH	Indeno(1,2,3-cd)pyrene	0.05	--	--	Removed
4084	C1	SB	C1B12	09/28/2006	0.5 - 1	PAH	Total cPAHs (TEQ, NDx0.5)	0.29	0.0094	31	Removed
4084	C1	SB	C1B24	09/28/2006	1 - 2	PAH	Benzo(a)anthracene	0.0032 J	--	--	Removed
4084	C1	SB	C1B24	09/28/2006	1 - 2	PAH	Benzo(b)fluoranthene	0.0038 J	--	--	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
4084	C1	SB	C1B24	09/28/2006	1 - 2	PAH	Benzo(k)fluoranthene	0.0051 J	--	--	Removed
4084	C1	SB	C1B24	09/28/2006	1 - 2	PAH	Total Benzofluoranthenes	0.0089	--	--	Removed
4084	C1	SB	C1B24	09/28/2006	1 - 2	PAH	Chrysene	0.0077	--	--	Removed
4087	CS1	EX	CS1	06/22/2009	--	PAH	Benzo(a)anthracene	0.011	--	--	Removed
4087	CS1	EX	CS1	06/22/2009	--	PAH	Chrysene	0.016	--	--	Removed
4102	CS7	EX	CS7A	07/09/2009	--	PAH	Benzo(a)anthracene	0.13	--	--	Removed
4102	CS7	EX	CS7A	07/09/2009	--	PAH	Benzo(b)fluoranthene	0.2	--	--	Removed
4102	CS7	EX	CS7A	07/09/2009	--	PAH	Benzo(k)fluoranthene	0.056	--	--	Removed
4102	CS7	EX	CS7A	07/09/2009	--	PAH	Total Benzofluoranthenes	0.256	--	--	Removed
4102	CS7	EX	CS7A	07/09/2009	--	PAH	Benzo(g,h,i)perylene	0.057	0.031	1.8	Removed
4102	CS7	EX	CS7A	07/09/2009	--	PAH	Benzo(a)pyrene	0.085	0.0094	9.0	Removed
4102	CS7	EX	CS7A	07/09/2009	--	PAH	Chrysene	0.2	--	--	Removed
4102	CS7	EX	CS7A	07/09/2009	--	PAH	Dibenz(a,h)anthracene	0.018	--	--	Removed
4102	CS7	EX	CS7A	07/09/2009	--	PAH	Fluoranthene	0.51	0.16	3.2	Removed
4102	CS7	EX	CS7A	07/09/2009	--	PAH	Indeno(1,2,3-cd)pyrene	0.051	--	--	Removed
4102	CS7	EX	CS7A	07/09/2009	--	PAH	Total cPAHs (TEQ, NDx0.5)	0.13	0.0094	14	Removed
2460	LAI-SB58	SB	LAI-SB58(2-4)091410	09/14/2010	2 - 4	PAH	Benzo(a)anthracene	0.16	--	--	
2460	LAI-SB58	SB	LAI-SB58(2-4)091410	09/14/2010	2 - 4	PAH	Total Benzofluoranthenes	0.37	--	--	
2460	LAI-SB58	SB	LAI-SB58(2-4)091410	09/14/2010	2 - 4	PAH	Benzo(g,h,i)perylene	0.13	0.031	4.2	
2460	LAI-SB58	SB	LAI-SB58(2-4)091410	09/14/2010	2 - 4	PAH	Benzo(a)pyrene	0.2	0.0094	21	
2460	LAI-SB58	SB	LAI-SB58(2-4)091410	09/14/2010	2 - 4	PAH	Chrysene	0.22	--	--	
2460	LAI-SB58	SB	LAI-SB58(2-4)091410	09/14/2010	2 - 4	PAH	Fluoranthene	0.21	0.16	1.3	
2460	LAI-SB58	SB	LAI-SB58(2-4)091410	09/14/2010	2 - 4	PAH	Indeno(1,2,3-cd)pyrene	0.1	--	--	
2460	LAI-SB58	SB	LAI-SB58(2-4)091410	09/14/2010	2 - 4	PAH	Total cPAHs (TEQ, NDx0.5)	0.27	0.0094	29	
2460	LAI-SB58	SB	LAI-SB58(4-6)091410	09/14/2010	4 - 6	PAH	Benzo(a)anthracene	0.17	--	--	
2460	LAI-SB58	SB	LAI-SB58(4-6)091410	09/14/2010	4 - 6	PAH	Total Benzofluoranthenes	0.38	--	--	
2460	LAI-SB58	SB	LAI-SB58(4-6)091410	09/14/2010	4 - 6	PAH	Benzo(g,h,i)perylene	0.12	0.031	3.9	
2460	LAI-SB58	SB	LAI-SB58(4-6)091410	09/14/2010	4 - 6	PAH	Benzo(a)pyrene	0.21	0.0094	22	
2460	LAI-SB58	SB	LAI-SB58(4-6)091410	09/14/2010	4 - 6	PAH	Chrysene	0.2	--	--	
2460	LAI-SB58	SB	LAI-SB58(4-6)091410	09/14/2010	4 - 6	PAH	Indeno(1,2,3-cd)pyrene	0.1	--	--	
2460	LAI-SB58	SB	LAI-SB58(4-6)091410	09/14/2010	4 - 6	PAH	Total cPAHs (TEQ, NDx0.5)	0.28	0.0094	30	
2460	LAI-SB58	SB	LAI-SB58(6-8)091610	09/16/2010	6 - 8	PAH	Benzo(a)anthracene	0.076	--	--	
2460	LAI-SB58	SB	LAI-SB58(6-8)091610	09/16/2010	6 - 8	PAH	Total Benzofluoranthenes	0.24	--	--	
2460	LAI-SB58	SB	LAI-SB58(6-8)091610	09/16/2010	6 - 8	PAH	Benzo(a)pyrene	0.086	0.0094	9.1	
2460	LAI-SB58	SB	LAI-SB58(6-8)091610	09/16/2010	6 - 8	PAH	Chrysene	0.1	--	--	
2460	LAI-SB58	SB	LAI-SB58(6-8)091610	09/16/2010	6 - 8	PAH	Total cPAHs (TEQ, NDx0.5)	0.12	0.0094	13	
2461	LAI-SB59	SB	LAI-SB59(4-6)091410	09/14/2010	4 - 6	PAH	Benzo(a)anthracene	1.2	--	--	
2461	LAI-SB59	SB	LAI-SB59(4-6)091410	09/14/2010	4 - 6	PAH	Benzo(b)fluoranthene	1.3	--	--	
2461	LAI-SB59	SB	LAI-SB59(4-6)091410	09/14/2010	4 - 6	PAH	Benzo(k)fluoranthene	1.3	--	--	
2461	LAI-SB59	SB	LAI-SB59(4-6)091410	09/14/2010	4 - 6	PAH	Total Benzofluoranthenes	2.6	--	--	

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
2461	LAI-SB59	SB	LAI-SB59(4-6)091410	09/14/2010	4 - 6	PAH	Benzo(g,h,i)perylene	0.98	0.031	32	
2461	LAI-SB59	SB	LAI-SB59(4-6)091410	09/14/2010	4 - 6	PAH	Benzo(a)pyrene	1.7	0.0094	180	
2461	LAI-SB59	SB	LAI-SB59(4-6)091410	09/14/2010	4 - 6	PAH	Chrysene	1.4	--	--	
2461	LAI-SB59	SB	LAI-SB59(4-6)091410	09/14/2010	4 - 6	PAH	Dibenz(a,h)anthracene	0.34	--	--	
2461	LAI-SB59	SB	LAI-SB59(4-6)091410	09/14/2010	4 - 6	PAH	Fluoranthene	2.1	0.16	13	
2461	LAI-SB59	SB	LAI-SB59(4-6)091410	09/14/2010	4 - 6	PAH	Indeno(1,2,3-cd)pyrene	0.9	--	--	
2461	LAI-SB59	SB	LAI-SB59(4-6)091410	09/14/2010	4 - 6	PAH	Total cPAHs (TEQ, NDx0.5)	2.2	0.0094	240	
2466	LAI-SB64	SB	LAI-SB64(0-2)091610	09/16/2010	0 - 2	PCB	Total PCBs	0.105	0.033	3.2	
2466	LAI-SB64	SB	LAI-SB64(0-2)091610	09/16/2010	0 - 2	PAH	Benzo(a)anthracene	0.37	--	--	
2466	LAI-SB64	SB	LAI-SB64(0-2)091610	09/16/2010	0 - 2	PAH	Total Benzofluoranthenes	0.64	--	--	
2466	LAI-SB64	SB	LAI-SB64(0-2)091610	09/16/2010	0 - 2	PAH	Benzo(g,h,i)perylene	0.26	0.031	8.4	
2466	LAI-SB64	SB	LAI-SB64(0-2)091610	09/16/2010	0 - 2	PAH	Benzo(a)pyrene	0.38	0.0094	40	
2466	LAI-SB64	SB	LAI-SB64(0-2)091610	09/16/2010	0 - 2	PAH	Chrysene	0.52	--	--	
2466	LAI-SB64	SB	LAI-SB64(0-2)091610	09/16/2010	0 - 2	PAH	Fluoranthene	0.94	0.16	5.9	
2466	LAI-SB64	SB	LAI-SB64(0-2)091610	09/16/2010	0 - 2	PAH	Indeno(1,2,3-cd)pyrene	0.24	--	--	
2466	LAI-SB64	SB	LAI-SB64(0-2)091610	09/16/2010	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.52	0.0094	55	
2493	LAI-SB91	SB	LAI-SB91(0-2)092210	09/22/2010	0 - 2	PCB	Total PCBs	0.071	0.033	2.2	
2493	LAI-SB91	SB	LAI-SB91(2-4)092210	09/22/2010	2 - 4	PAH	Total Benzofluoranthenes	0.066	--	--	
2493	LAI-SB91	SB	LAI-SB91(2-4)092210	09/22/2010	2 - 4	PAH	Total cPAHs (TEQ, NDx0.5)	0.046	0.0094	4.9	
2493	LAI-SB91	SB	LAI-SB91(4-6)092210	09/22/2010	4 - 6	PAH	Benzo(a)anthracene	0.066	--	--	
2493	LAI-SB91	SB	LAI-SB91(4-6)092210	09/22/2010	4 - 6	PAH	Total Benzofluoranthenes	0.099	--	--	
2493	LAI-SB91	SB	LAI-SB91(4-6)092210	09/22/2010	4 - 6	PAH	Benzo(a)pyrene	0.068	0.0094	7.2	
2493	LAI-SB91	SB	LAI-SB91(4-6)092210	09/22/2010	4 - 6	PAH	Chrysene	0.074	--	--	
2493	LAI-SB91	SB	LAI-SB91(4-6)092210	09/22/2010	4 - 6	PAH	Total cPAHs (TEQ, NDx0.5)	0.091	0.0094	9.7	
2494	LAI-SB92	SB	LAI-SB92(0-2)092210	09/22/2010	0 - 2	PCB	Total PCBs	0.67	0.033	20	
2494	LAI-SB92	SB	LAI-SB92(0-2)092210	09/22/2010	0 - 2	PAH	Total Benzofluoranthenes	0.12	--	--	
2494	LAI-SB92	SB	LAI-SB92(0-2)092210	09/22/2010	0 - 2	PAH	Benzo(g,h,i)perylene	0.1	0.031	3.2	
2494	LAI-SB92	SB	LAI-SB92(0-2)092210	09/22/2010	0 - 2	PAH	Benzo(a)pyrene	0.085	0.0094	9.0	
2494	LAI-SB92	SB	LAI-SB92(0-2)092210	09/22/2010	0 - 2	PAH	Chrysene	0.093	--	--	
2494	LAI-SB92	SB	LAI-SB92(0-2)092210	09/22/2010	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.11	0.0094	11	
2494	LAI-SB92	SB	LAI-SB92(2-4)092210	09/22/2010	2 - 4	PCB	Total PCBs	1.028	0.033	31	
2494	LAI-SB92	SB	LAI-SB92(2-4)092210	09/22/2010	2 - 4	MET	Arsenic	10	7.0	1.4	
2494	LAI-SB92	SB	LAI-SB92(4-6)092210	09/22/2010	4 - 6	PCB	Total PCBs	0.25	0.033	7.6	
2494	LAI-SB92	SB	LAI-SB92(4-6)092210	09/22/2010	4 - 6	MET	Arsenic	24	7.0	3.4	
2494	LAI-SB92	SB	LAI-SB92(4-6)092210	09/22/2010	4 - 6	MET	Cadmium	1.2	1.0	1.2	
2494	LAI-SB92	SB	LAI-SB92(4-6)092210	09/22/2010	4 - 6	MET	Zinc	94	86	1.1	
3113	NGW519	MW	NGW519(0-2)012411	01/24/2011	0 - 2	PCB	Total PCBs	0.17	0.033	5.2	
3113	NGW519	MW	NGW519(0-2)012411	01/24/2011	0 - 2	PAH	Total Benzofluoranthenes	0.2	--	--	
3113	NGW519	MW	NGW519(0-2)012411	01/24/2011	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.14	0.0094	15	
3113	NGW519	MW	NGW519(2-4)012411	01/24/2011	2 - 4	PCB	Total PCBs	0.324	0.033	9.8	

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
3113	NGW519	MW	NGW519(2-4)012411	01/24/2011	2 - 4	MET	Arsenic	29	7.0	4.1	
3113	NGW519	MW	NGW519(4-6)012411	01/24/2011	4 - 6	MET	Arsenic	23	7.0	3.3	
657	SB6	SB	FG-SB6@6.5-7	11/30/1993	6.5 - 7	TPH	Gasoline Range Hydrocarbons	120	100	1.2	
659	SB8	SB	FG-SB8@7-7.5	11/30/1993	7 - 7.5	TPH	Gasoline Range Hydrocarbons	1000	100	10	Removed
659	SB8	SB	FG-SB8@8.5-9	11/30/1993	8.5 - 9	TPH	Gasoline Range Hydrocarbons	130	100	1.3	Removed
2426	WF-2	SB	WF-2	05/18/2004	4 - 5	PCB	Total PCBs	0.33	0.033	10	
Willow St. Substation Area											
4127	SS1	SS	SS106	09/22/2006	0 - 0.5	PCB	Total PCBs	0.56	0.50	1.1	
4128	SS10	SS	SS1006	11/22/2006	0 - 0.5	PCB	Total PCBs	12.5	0.50	25	Removed
4129	SS2	SS	SS206	09/22/2006	0 - 0.5	PAH	Benzo(a)anthracene	0.0069	--	--	
4129	SS2	SS	SS206	09/22/2006	0 - 0.5	PAH	Benzo(b)fluoranthene	0.0088	--	--	
4129	SS2	SS	SS206	09/22/2006	0 - 0.5	PAH	Benzo(k)fluoranthene	0.0044 J	--	--	
4129	SS2	SS	SS206	09/22/2006	0 - 0.5	PAH	Total Benzofluoranthenes	0.0132	--	--	
4129	SS2	SS	SS206	09/22/2006	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.0044 J	--	--	
4129	SS2	SS	SS206	09/22/2006	0 - 0.5	PAH	Chrysene	0.0082	--	--	
4130	SS3	SS	SS306	09/22/2006	0 - 0.5	PCB	Total PCBs	0.86	0.50	1.7	
4130	SS3	SS	SS306	09/22/2006	0 - 0.5	PAH	Benzo(a)anthracene	0.006	--	--	
4130	SS3	SS	SS306	09/22/2006	0 - 0.5	PAH	Benzo(b)fluoranthene	0.011	--	--	
4130	SS3	SS	SS306	09/22/2006	0 - 0.5	PAH	Benzo(k)fluoranthene	0.01	--	--	
4130	SS3	SS	SS306	09/22/2006	0 - 0.5	PAH	Total Benzofluoranthenes	0.021	--	--	
4130	SS3	SS	SS306	09/22/2006	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.006 J	--	--	
4130	SS3	SS	SS306	09/22/2006	0 - 0.5	PAH	Chrysene	0.011	--	--	
4131	SS4	SS	SS406	09/22/2006	0 - 0.5	PCB	Total PCBs	6.3	0.50	13	Removed
4131	SS4	SS	SS412	11/22/2006	0.5 - 1	PCB	Total PCBs	13.5	0.50	27	Removed
4133	SS5	SS	SS506	09/22/2006	0 - 0.5	PCB	Total PCBs	0.93	0.50	1.9	
4133	SS5	SS	SS506	09/22/2006	0 - 0.5	PAH	Benzo(a)anthracene	0.007	--	--	
4133	SS5	SS	SS506	09/22/2006	0 - 0.5	PAH	Benzo(b)fluoranthene	0.009	--	--	
4133	SS5	SS	SS506	09/22/2006	0 - 0.5	PAH	Benzo(k)fluoranthene	0.008	--	--	
4133	SS5	SS	SS506	09/22/2006	0 - 0.5	PAH	Total Benzofluoranthenes	0.017	--	--	
4133	SS5	SS	SS506	09/22/2006	0 - 0.5	PAH	Chrysene	0.01	--	--	
4134	SS6	SS	SS606	09/22/2006	0 - 0.5	PAH	Benzo(a)anthracene	0.015	--	--	
4134	SS6	SS	SS606	09/22/2006	0 - 0.5	PAH	Benzo(b)fluoranthene	0.022	--	--	
4134	SS6	SS	SS606	09/22/2006	0 - 0.5	PAH	Benzo(k)fluoranthene	0.019	--	--	
4134	SS6	SS	SS606	09/22/2006	0 - 0.5	PAH	Total Benzofluoranthenes	0.041	--	--	
4134	SS6	SS	SS606	09/22/2006	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.011	--	--	
4134	SS6	SS	SS606	09/22/2006	0 - 0.5	PAH	Chrysene	0.024	--	--	
4134	SS6	SS	SS606	09/22/2006	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.008	--	--	
4135	SS7	SS	SS706	09/22/2006	0 - 0.5	PCB	Total PCBs	0.81	0.50	1.6	
4135	SS7	SS	SS706	09/22/2006	0 - 0.5	PAH	Benzo(a)anthracene	0.008	--	--	
4135	SS7	SS	SS706	09/22/2006	0 - 0.5	PAH	Benzo(b)fluoranthene	0.01	--	--	

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
4135	SS7	SS	SS706	09/22/2006	0 - 0.5	PAH	Benzo(k)fluoranthene	0.012	--	--	
4135	SS7	SS	SS706	09/22/2006	0 - 0.5	PAH	Total Benzofluoranthenes	0.022	--	--	
4135	SS7	SS	SS706	09/22/2006	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.006	--	--	
4135	SS7	SS	SS706	09/22/2006	0 - 0.5	PAH	Chrysene	0.013	--	--	
4135	SS7	SS	SS706	09/22/2006	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.005 J	--	--	
4136	SS8	SS	SS806	11/22/2006	0 - 0.5	PCB	Total PCBs	85	0.50	170	Removed
4137	SS9	SS	SS906	11/22/2006	0 - 0.5	PCB	Total PCBs	11.6	0.50	23	Removed
4147	W4	SB	W4B03	09/21/2006	0 - 0.25	PCB	Total PCBs	1.44	0.50	2.9	Removed
4147	W4	SB	W4B03	09/21/2006	0 - 0.25	MET	Arsenic	13	7.0	1.9	Removed
4147	W4	SB	W4B03	09/21/2006	0 - 0.25	PAH	Benzo(a)anthracene	0.066	--	--	Removed
4147	W4	SB	W4B03	09/21/2006	0 - 0.25	PAH	Benzo(b)fluoranthene	0.095	--	--	Removed
4147	W4	SB	W4B03	09/21/2006	0 - 0.25	PAH	Benzo(k)fluoranthene	0.12	--	--	Removed
4147	W4	SB	W4B03	09/21/2006	0 - 0.25	PAH	Total Benzofluoranthenes	0.215	--	--	Removed
4147	W4	SB	W4B03	09/21/2006	0 - 0.25	PAH	Benzo(g,h,i)perylene	0.03	--	--	Removed
4147	W4	SB	W4B03	09/21/2006	0 - 0.25	PAH	Chrysene	0.11	--	--	Removed
4147	W4	SB	W4B03	09/21/2006	0 - 0.25	PAH	Dibenz(a,h)anthracene	0.009	--	--	Removed
4147	W4	SB	W4B03	09/21/2006	0 - 0.25	PAH	Indeno(1,2,3-cd)pyrene	0.03	--	--	Removed
4147	W4	SB	W4T06-East	12/13/2006	0 - 0.5	PAH	Benzo(a)anthracene	0.18	--	--	Removed
4147	W4	SB	W4T06-East	12/13/2006	0 - 0.5	PAH	Benzo(b)fluoranthene	0.3	--	--	Removed
4147	W4	SB	W4T06-East	12/13/2006	0 - 0.5	PAH	Benzo(k)fluoranthene	0.35	--	--	Removed
4147	W4	SB	W4T06-East	12/13/2006	0 - 0.5	PAH	Total Benzofluoranthenes	0.65	--	--	Removed
4147	W4	SB	W4T06-East	12/13/2006	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.094	--	--	Removed
4147	W4	SB	W4T06-East	12/13/2006	0 - 0.5	PAH	Benzo(a)pyrene	0.24	0.14	1.7	Removed
4147	W4	SB	W4T06-East	12/13/2006	0 - 0.5	PAH	Chrysene	0.28	--	--	Removed
4147	W4	SB	W4T06-East	12/13/2006	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.038	--	--	Removed
4147	W4	SB	W4T06-East	12/13/2006	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.1	--	--	Removed
4147	W4	SB	W4T06-East	12/13/2006	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.34	0.14	2.4	Removed
4147	W4	SB	W4S18	09/20/2006	2.5 - 3	PAH	Benzo(a)anthracene	0.16	--	--	Removed
4147	W4	SB	W4T36-East	12/13/2006	2.5 - 3	PAH	Benzo(a)anthracene	1.2	--	--	Removed
4147	W4	SB	W4S18	09/20/2006	2.5 - 3	PAH	Benzo(b)fluoranthene	0.21	--	--	Removed
4147	W4	SB	W4T36-East	12/13/2006	2.5 - 3	PAH	Benzo(b)fluoranthene	0.54	--	--	Removed
4147	W4	SB	W4S18	09/20/2006	2.5 - 3	PAH	Benzo(k)fluoranthene	0.21	--	--	Removed
4147	W4	SB	W4T36-East	12/13/2006	2.5 - 3	PAH	Benzo(k)fluoranthene	0.42	--	--	Removed
4147	W4	SB	W4S18	09/20/2006	2.5 - 3	PAH	Total Benzofluoranthenes	0.42	--	--	Removed
4147	W4	SB	W4T36-East	12/13/2006	2.5 - 3	PAH	Total Benzofluoranthenes	0.96	--	--	Removed
4147	W4	SB	W4S18	09/20/2006	2.5 - 3	PAH	Benzo(g,h,i)perylene	0.053	--	--	Removed
4147	W4	SB	W4T36-East	12/13/2006	2.5 - 3	PAH	Benzo(g,h,i)perylene	0.041	--	--	Removed
4147	W4	SB	W4S18	09/20/2006	2.5 - 3	PAH	Benzo(a)pyrene	0.2	0.14	1.4	Removed
4147	W4	SB	W4T36-East	12/13/2006	2.5 - 3	PAH	Benzo(a)pyrene	0.46	0.14	3.3	Removed
4147	W4	SB	W4S18	09/20/2006	2.5 - 3	PAH	Chrysene	0.21	--	--	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
4147	W4	SB	W4T36-East	12/13/2006	2.5 - 3	PAH	Chrysene	0.49	--	--	Removed
4147	W4	SB	W4S18	09/20/2006	2.5 - 3	PAH	Dibenz(a,h)anthracene	0.013	--	--	Removed
4147	W4	SB	W4T36-East	12/13/2006	2.5 - 3	PAH	Dibenz(a,h)anthracene	0.11	--	--	Removed
4147	W4	SB	W4S18	09/20/2006	2.5 - 3	PAH	Indeno(1,2,3-cd)pyrene	0.052	--	--	Removed
4147	W4	SB	W4T36-East	12/13/2006	2.5 - 3	PAH	Indeno(1,2,3-cd)pyrene	0.48	--	--	Removed
4147	W4	SB	W4S18	09/20/2006	2.5 - 3	PAH	Total cPAHs (TEQ, NDx0.5)	0.27	0.14	1.9	Removed
4147	W4	SB	W4T36-East	12/13/2006	2.5 - 3	PAH	Total cPAHs (TEQ, NDx0.5)	0.74	0.14	5.3	Removed
4148	Willow-1-B	EX	Willow-1-B	12/10/2010	2.5	PCB	Total PCBs	4.9	0.50	9.8	
4149	Willow-1-E	EX	Willow-1-E	12/10/2010	2	PCB	Total PCBs	26	0.50	52	
4150	Willow-1-N	EX	Willow-1-N	12/10/2010	2	PCB	Total PCBs	6.8	0.50	14	
4151	Willow-1-S	EX	Willow-1-S	12/10/2010	2	PCB	Total PCBs	7.8	0.50	16	
4152	Willow-1-W	EX	Willow-1-W	12/10/2010	2	PCB	Total PCBs	5.5	0.50	11	
4153	Willow-2-B	EX	Willow-2-B	12/29/2010	2.5	PCB	Total PCBs	3.7	0.50	7.4	
4154	Willow-2-E	EX	Willow-2-E	12/29/2010	2	PCB	Total PCBs	29	0.50	58	
4155	Willow-2-N	EX	Willow-2-N	12/29/2010	2	PCB	Total PCBs	3.4	0.50	6.8	
4156	Willow-2-S	EX	Willow-2-S	12/29/2010	2	PCB	Total PCBs	4.9	0.50	9.8	
4157	Willow-2-W	EX	Willow-2-W	12/29/2010	2	PCB	Total PCBs	1.3	0.50	2.6	
2076	WSS08-01	SB	WSS08-01-1.4-1.8	09/19/2008	1.4 - 1.8	PCB	Total PCBs	0.62	0.50	1.2	
2077	WSS08-02	SB	WSS08-02-1-1.4	09/19/2008	1 - 1.4	PCB	Total PCBs	6	0.50	12	Removed
2077	WSS08-02	SB	WSS08-02-1.4-1.8	09/19/2008	1.4 - 1.8	PCB	Total PCBs	13	0.50	26	Removed
2078	WSS08-03	SB	WSS08-03-1-1.4	09/19/2008	1 - 1.4	PCB	Total PCBs	6.4	0.50	13	Removed
2078	WSS08-03	SB	WSS08-03-1.4-1.8	09/19/2008	1.4 - 1.8	PCB	Total PCBs	68	0.50	140	Removed
2079	WSS08-04	SB	WSS08-04-1-1.4	09/19/2008	1 - 1.4	PCB	Total PCBs	2	0.50	4.0	
2079	WSS08-04	SB	WSS08-04-1.4-1.8	09/19/2008	1.4 - 1.8	PCB	Total PCBs	0.68	0.50	1.4	
Buildings 3-315, 3-626 Area											
2454	LAI-SB52	SB	LAI-SB52(2-4)091310	09/13/2010	2 - 4	PAH	Benzo(a)anthracene	0.083	--	--	
2454	LAI-SB52	SB	LAI-SB52(2-4)091310	09/13/2010	2 - 4	PAH	Total Benzofluoranthenes	0.23	--	--	
2454	LAI-SB52	SB	LAI-SB52(2-4)091310	09/13/2010	2 - 4	PAH	Benzo(a)pyrene	0.1	0.0094	11	
2454	LAI-SB52	SB	LAI-SB52(2-4)091310	09/13/2010	2 - 4	PAH	Chrysene	0.15	--	--	
2454	LAI-SB52	SB	LAI-SB52(2-4)091310	09/13/2010	2 - 4	PAH	Fluoranthene	0.33	0.16	2.1	
2454	LAI-SB52	SB	LAI-SB52(2-4)091310	09/13/2010	2 - 4	PAH	Total cPAHs (TEQ, NDx0.5)	0.14	0.0094	15	
2454	LAI-SB52	SB	LAI-SB52(4-6)091310	09/13/2010	4 - 6	MET	Copper	49.1	36	1.4	
2455	LAI-SB53	SB	LAI-SB53(0-2)091410	09/14/2010	0 - 2	PAH	Benzo(a)anthracene	0.069	--	--	
2455	LAI-SB53	SB	LAI-SB53(0-2)091410	09/14/2010	0 - 2	PAH	Total Benzofluoranthenes	0.14	--	--	
2455	LAI-SB53	SB	LAI-SB53(0-2)091410	09/14/2010	0 - 2	PAH	Benzo(g,h,i)perylene	0.079	0.031	2.5	
2455	LAI-SB53	SB	LAI-SB53(0-2)091410	09/14/2010	0 - 2	PAH	Benzo(a)pyrene	0.091	0.0094	9.7	
2455	LAI-SB53	SB	LAI-SB53(0-2)091410	09/14/2010	0 - 2	PAH	Chrysene	0.1	--	--	
2455	LAI-SB53	SB	LAI-SB53(0-2)091410	09/14/2010	0 - 2	PAH	Indeno(1,2,3-cd)pyrene	0.062	--	--	
2455	LAI-SB53	SB	LAI-SB53(0-2)091410	09/14/2010	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.12	0.0094	13	
2455	LAI-SB53	SB	LAI-SB53(4-6)091410	09/14/2010	4 - 6	PAH	2-Methylnaphthalene	0.065	0.043	1.5	

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
2457	LAI-SB55	SB	LAI-SB55(0-2)091410	09/14/2010	0 - 2	PAH	Total Benzofluoranthenes	0.067	--	--	
2457	LAI-SB55	SB	LAI-SB55(0-2)091410	09/14/2010	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.046	0.0094	4.9	
2489	LAI-SB87	SB	LAI-SB87(0-2)092810	09/28/2010	0 - 2	PCB	Total PCBs	0.289	0.033	8.8	
2489	LAI-SB87	SB	LAI-SB87(0-2)092810	09/28/2010	0 - 2	PAH	Total Benzofluoranthenes	0.066	--	--	
2489	LAI-SB87	SB	LAI-SB87(0-2)092810	09/28/2010	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.046	0.0094	4.9	
2489	LAI-SB87	SB	LAI-SB87(2-4)092810	09/28/2010	2 - 4	MET	Arsenic	9	7.0	1.3	
2490	LAI-SB88	SB	LAI-SB88(0-2)092210	09/22/2010	0 - 2	PCB	Total PCBs	0.068	0.033	2.1	
2490	LAI-SB88	SB	LAI-SB88(2-4)092210	09/22/2010	2 - 4	MET	Lead	68	57	1.2	
2490	LAI-SB88	SB	LAI-SB88(2-4)092210	09/22/2010	2 - 4	PAH	2-Methylnaphthalene	0.064	0.043	1.5	
948	SB-07	SB	SB-07-1-2	03/29/2007	1 - 2	PCB	Total PCBs	0.051	0.033	1.5	
Building 3-353 Area											
2448	LAI-SB107	SB	LAI-SB107(0-2)092810	09/28/2010	0 - 2	PAH	Total Benzofluoranthenes	0.24	--	--	
2448	LAI-SB107	SB	LAI-SB107(0-2)092810	09/28/2010	0 - 2	PAH	Chrysene	0.21	--	--	
2448	LAI-SB107	SB	LAI-SB107(0-2)092810	09/28/2010	0 - 2	PAH	Fluoranthene	0.47	0.16	2.9	
2448	LAI-SB107	SB	LAI-SB107(0-2)092810	09/28/2010	0 - 2	PAH	Total cPAHs (TEQ, NDx0.5)	0.16	0.0094	17	
2448	LAI-SB107	SB	LAI-SB107(0-2)092810	09/28/2010	0 - 2	VAH	Benzene	0.065	0.001	65	
2448	LAI-SB107	SB	LAI-SB107(2-4)092810	09/28/2010	2 - 4	MET	Mercury	0.08	0.070	1.1	
2448	LAI-SB107	SB	LAI-SB107(4-6)092810	09/28/2010	4 - 6	MET	Mercury	0.1	0.070	1.4	
2456	LAI-SB54	SB	LAI-SB54(0-2)091410	09/14/2010	0 - 2	PCB	Total PCBs	0.037	0.033	1.1	
2456	LAI-SB54	SB	LAI-SB54(2-4)091410	09/14/2010	2 - 4	MET	Mercury	0.1	0.070	1.4	
2456	LAI-SB54	SB	LAI-SB54(4-6)091410	09/14/2010	4 - 6	MET	Mercury	0.08	0.070	1.1	
2483	LAI-SB81	SB	LAI-SB81(0-2)092010	09/20/2010	0 - 2	PCB	Total PCBs	0.17	0.033	5.2	
2483	LAI-SB81	SB	LAI-SB81(2-4)092010	09/20/2010	2 - 4	PAH	Total Benzofluoranthenes	0.1	--	--	
2483	LAI-SB81	SB	LAI-SB81(2-4)092010	09/20/2010	2 - 4	PAH	Benzo(a)pyrene	0.069	0.0094	7.3	
2483	LAI-SB81	SB	LAI-SB81(2-4)092010	09/20/2010	2 - 4	PAH	Chrysene	0.081	--	--	
2483	LAI-SB81	SB	LAI-SB81(2-4)092010	09/20/2010	2 - 4	PAH	Total cPAHs (TEQ, NDx0.5)	0.089	0.0094	9.5	
2483	LAI-SB81	SB	LAI-SB81(4-6)092010	09/20/2010	4 - 6	PCB	Total PCBs	0.13	0.033	3.9	
2496	LAI-SB94	SB	LAI-SB94(0-2)092210	09/22/2010	0 - 2	PCB	Total PCBs	0.064	0.033	1.9	
2497	LAI-SB95	SB	LAI-SB95(0-2)092310	09/23/2010	0 - 2	PCB	Total PCBs	0.14	0.033	4.2	
2498	LAI-SB96	SB	LAI-SB96(2-4)092310	09/23/2010	2 - 4	TPH	Gasoline Range Hydrocarbons	44	100	<1.0	
476	SB-1	SB	SB-1A	09/21/1989	2.5	MET	Arsenic	11	7.0	1.6	
476	SB-1	SB	SB-1A	09/21/1989	2.5	MET	Barium	340	83	4.1	
476	SB-1	SB	SB-1A	09/21/1989	2.5	MET	Chromium	290	120	2.4	
476	SB-1	SB	SB-1A	09/21/1989	2.5	MET	Selenium	0.2	--	--	
477	SB-2	SB	SB-2A	09/21/1989	2.5	MET	Arsenic	28	7.0	4.0	
477	SB-2	SB	SB-2A	09/21/1989	2.5	MET	Barium	220	83	2.7	
477	SB-2	SB	SB-2A	09/21/1989	2.5	MET	Chromium	560	120	4.7	
477	SB-2	SB	SB-2A	09/21/1989	2.5	MET	Copper	63	36	1.8	
477	SB-2	SB	SB-2A	09/21/1989	2.5	MET	Selenium	0.4	--	--	
477	SB-2	SB	SB-2A	09/21/1989	2.5	MET	Zinc	90	86	1.0	

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
478	SB-3	SB	SB-3A	09/21/1989	2.5	MET	Barium	88	83	1.1	
478	SB-3	SB	SB-3B	09/21/1989	5.5	PCB	Total PCBs	2.9	0.033	88	
480	SB-5	SB	SB-5A	09/21/1989	2.5	MET	Arsenic	8.9	7.0	1.3	
480	SB-5	SB	SB-5A	09/21/1989	2.5	MET	Barium	110	83	1.3	
Building 3-354 Area											
No detected exceedances											
Wind Tunnel Area											
2449	LAI-SB47	SB	LAI-SB47(0-2)091310	09/13/2010	0 - 2	PAH	Benzo(a)anthracene	0.081	--	--	
2449	LAI-SB47	SB	LAI-SB47(0-2)091310	09/13/2010	0 - 2	PAH	Total Benzofluoranthenes	0.15	--	--	
2449	LAI-SB47	SB	LAI-SB47(0-2)091310	09/13/2010	0 - 2	PAH	Benzo(g,h,i)perylene	0.082 J	--	--	
2449	LAI-SB47	SB	LAI-SB47(0-2)091310	09/13/2010	0 - 2	PAH	Chrysene	0.093	--	--	
2449	LAI-SB47	SB	LAI-SB47(0-2)091310	09/13/2010	0 - 2	PAH	Indeno(1,2,3-cd)pyrene	0.065	--	--	
2449	LAI-SB47	SB	LAI-SB47(2-4)091310	09/13/2010	2 - 4	PAH	Total Benzofluoranthenes	0.09	--	--	
2449	LAI-SB47	SB	LAI-SB47(2-4)091310	09/13/2010	2 - 4	PAH	Chrysene	0.079	--	--	
2487	LAI-SB85	SB	LAI-SB85(0-2)092010	09/20/2010	0 - 2	PAH	Chrysene	0.062	--	--	
2488	LAI-SB86	SB	LAI-SB86(2-4)092010	09/20/2010	2 - 4	PAH	Chrysene	0.067	--	--	
Green Hornet Area											
849	EX2	EX	NBF-GH-EX2	02/10/1993	3	TPH	Diesel Range Hydrocarbons	13000	2,000	6.5	Removed
672	EX-2-NE	EX	EX-2-NE	09/07/1993	9	TPH	Gasoline Range Hydrocarbons	180	100	1.8	
681	EX-DE2-8.5	EX	EX-DE2-8.5	09/14/1993	8.5	TPH	Gasoline Range Hydrocarbons	1400	100	14	
681	EX-DE2-8.5	EX	EX-DE2-8.5	09/14/1993	8.5	TPH	Diesel Range Hydrocarbons	3900	2,000	2.0	
681	EX-DE2-8.5	EX	EX-DE2-8.5	09/14/1993	8.5	PAH	2-Methylnaphthalene	26	0.043	600	
676	EX-DMW-8	EX	EX-DMW-8	09/13/1993	8	MET	Mercury	0.09	0.070	1.3	
677	EX-DSE-8	EX	EX-DSE-8	09/13/1993	8	PHT	Bis(2-ethylhexyl) phthalate	3.7	0.067	55	
674	EX-DWW-8	EX	EX-DWW-8	09/10/1993	8	TPH	Gasoline Range Hydrocarbons	260	100	2.6	
674	EX-DWW-8	EX	EX-DWW-8	09/10/1993	8	TPH	Total Petroleum Hydrocarbons	3600	2,000	1.8	
674	EX-DWW-8	EX	EX-DWW-8	09/10/1993	8	PAH	2-Methylnaphthalene	0.33 M	0.043	7.7	
678	EX-SMW-4	EX	EX-SMW-4	09/13/1993	4	TPH	Gasoline Range Hydrocarbons	150	100	1.5	
678	EX-SMW-4	EX	EX-SMW-4	09/13/1993	4	PAH	2-Methylnaphthalene	4.9	0.043	110	
679	EX-SSE-4	EX	EX-SSE-4	09/13/1993	4	MET	Mercury	0.38	0.070	5.4	
679	EX-SSE-4	EX	EX-SSE-4	09/13/1993	4	PAH	Benzo(a)anthracene	0.29	--	--	
679	EX-SSE-4	EX	EX-SSE-4	09/13/1993	4	PAH	Benzo(b)fluoranthene	0.28	--	--	
679	EX-SSE-4	EX	EX-SSE-4	09/13/1993	4	PAH	Benzo(k)fluoranthene	0.13	--	--	
679	EX-SSE-4	EX	EX-SSE-4	09/13/1993	4	PAH	Total Benzofluoranthenes	0.41	--	--	
679	EX-SSE-4	EX	EX-SSE-4	09/13/1993	4	PAH	Benzo(a)pyrene	0.18	0.0094	19	
679	EX-SSE-4	EX	EX-SSE-4	09/13/1993	4	PAH	Chrysene	0.31	--	--	
679	EX-SSE-4	EX	EX-SSE-4	09/13/1993	4	PAH	Fluoranthene	0.63	0.16	3.9	
679	EX-SSE-4	EX	EX-SSE-4	09/13/1993	4	PAH	Total cPAHs (TEQ, NDx0.5)	0.26	0.0094	28	
675	EX-SWW-4	EX	EX-SWW-4	09/10/1993	4	MET	Mercury	0.11	0.070	1.6	
568	GH-2	MW	NBF-GH-2	04/24/1986	5.5	TPH	Jet Fuel	7140	2,000	3.6	Removed

Table 7.1-5
RI Selected Screening Level Exceedances for Detected COPCs in Soil at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
568	GH-2	MW	NBF-GH-2	04/24/1986	5.5	TPH	Total Petroleum Hydrocarbons	7140	2,000	3.6	Removed
2442	LAI-SB101	SB	LAI-SB101(0-2)092310	09/23/2010	0 - 2	PCB	Total PCBs	0.034	0.033	1.0	
2442	LAI-SB101	SB	LAI-SB101(2-4)092310	09/23/2010	2 - 4	PCB	Total PCBs	0.034	0.033	1.0	
2442	LAI-SB101	SB	LAI-SB101(4-6)092310	09/23/2010	4 - 6	PAH	Chrysene	0.071	--	--	
2442	LAI-SB101	SB	LAI-SB101(4-6)092310	09/23/2010	4 - 6	PAH	Total cPAHs (TEQ, NDx0.5)	0.048	0.0094	5.1	
2451	LAI-SB49	SB	LAI-SB49(2-4)091310	09/13/2010	2 - 4	MET	Mercury	0.13	0.070	1.9	
2451	LAI-SB49	SB	LAI-SB49(2-4)091310	09/13/2010	2 - 4	TPH	Gasoline Range Hydrocarbons	50	100	<1.0	
2500	LAI-SB98	SB	LAI-SB98(0-2)092310	09/23/2010	0 - 2	PCB	Total PCBs	0.101	0.033	3.1	
2500	LAI-SB98	SB	LAI-SB98(0-2)092310	09/23/2010	0 - 2	TPH	Gasoline Range Hydrocarbons	5800	30	190	
2500	LAI-SB98	SB	LAI-SB98(0-2)092310	09/23/2010	0 - 2	PAH	2-Methylnaphthalene	7.9	0.043	180	
2500	LAI-SB98	SB	LAI-SB98(2-4)092310	09/23/2010	2 - 4	MET	Mercury	0.08	0.070	1.1	
2500	LAI-SB98	SB	LAI-SB98(2-4)092310	09/23/2010	2 - 4	TPH	Gasoline Range Hydrocarbons	7300	30	240	
2500	LAI-SB98	SB	LAI-SB98(2-4)092310	09/23/2010	2 - 4	PAH	2-Methylnaphthalene	0.76	0.043	18	
2500	LAI-SB98	SB	LAI-SB98(4-6)092310	09/23/2010	4 - 6	MET	Mercury	0.09	0.070	1.3	
2500	LAI-SB98	SB	LAI-SB98(4-6)092310	09/23/2010	4 - 6	TPH	Gasoline Range Hydrocarbons	720	30	24	
2500	LAI-SB98	SB	LAI-SB98(4-6)092310	09/23/2010	4 - 6	PAH	2-Methylnaphthalene	0.71	0.043	17	
2500	LAI-SB98	SB	LAI-SB98(4-6)092310	09/23/2010	4 - 6	VAH	Benzene	0.087 J	0.001	87	
2500	LAI-SB98	SB	LAI-SB98(6-8)092310	09/23/2010	6 - 8	TPH	Gasoline Range Hydrocarbons	620	30	21	
2500	LAI-SB98	SB	LAI-SB98(6-8)092310	09/23/2010	6 - 8	PAH	2-Methylnaphthalene	0.43	0.043	10	
2500	LAI-SB98	SB	LAI-SB98(6-8)092310	09/23/2010	6 - 8	VAH	Benzene	0.48 J	0.001	480	
562	NGW102	MW	GH-MW2@6-6.5	11/29/1993	6 - 6.5	TPH	Gasoline Range Hydrocarbons	210	100	2.1	
564	NGW104	MW	GH-MW4@6.5-7	11/29/1993	6.5 - 7	TPH	Gasoline Range Hydrocarbons	500	100	5.0	

AOC = Area of Concern
EX = Excavation
J = Estimated value
M = Estimated value with low spectral match parameters
MET = Metals
MW = Monitoring well
PAH = Polycyclic aromatic hydrocarbons
PCB = Polychlorinated biphenyls
PHT = Phthalates
RE = Retaining wall
SB = Soil boring
SS = Surface soil
TP = Test pit
TPH = Petroleum Hydrocarbons
VAH = Volatile aromatic hydrocarbons
VOC = Volatile organic compounds
-- = Not applicable

Table 7.1-6
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
NBF Fenceline Area										
2547	NGW501	MW	NGW5011-GW-083010	08/30/2010	TPH	Oil Range Hydrocarbons	220	--	--	Abandoned
2547	NGW501	MW	NGW5011-GW-083010	08/30/2010	PHT	Bis(2-ethylhexyl) phthalate	7.9 J	1.0	7.9	Abandoned
2548	NGW502	MW	NGW502-GW-083010	08/30/2010	PCB	Total PCBs	8.1	0.044	180	Abandoned
2549	NGW503	MW	NGW503-GW-083010	08/30/2010	PCB	Total PCBs	0.072	0.044	1.6	Abandoned
2550	NGW504	MW	NGW504-GW-083010	08/30/2010	PCB	Total PCBs	2	0.044	45	Abandoned
Building 3-323 Area										
3998	DW-09	DW	DW-09-TE80A	07/20/2011	VOC	Vinyl chloride	1.8	0.20	9.0	Abandoned
4000	DW-11	DW	DW-11-TE80B	07/20/2011	VOC	Vinyl chloride	1.1	0.20	5.5	Abandoned
1031	NBF-GW01	EX	NBF-GW01	09/10/2007	PCB	Total PCBs	1.9	0.044	43	--
551	SB-6	SB	SB-6W	05/23/1990	MET	Vanadium	300	3	100	--
551	SB-6	SB	SB-6W	05/23/1990	MET	Zinc	150	33	4.5	--
Buildings 3-302, 3-322 Area										
3102	NGW508	MW	NGW508-013011	01/30/2011	TPH	Oil Range Hydrocarbons	670	--	--	Active
Buildings 3-329, 3-333, 3-335 Area										
3997	DW-08	DW	DW-08-TE69E	07/19/2011	VOC	Tetrachloroethene (PCE)	18	5.0	3.6	Abandoned
475	NGW151	MW	MW-1-DL	12/02/1994	PCB	Total PCBs	840	0.044	19,000	Abandoned
475	NGW151	MW	MW-1	12/02/1994	PCB	Total PCBs	840	0.044	19,000	Abandoned
475	NGW151	MW	MW-1	01/25/1995	PCB	Total PCBs	12	0.044	270	Abandoned
475	NGW151	MW	NBF-3-333-MW-1-DUP	05/24/1995	PCB	Total PCBs	34	0.044	770	Abandoned
475	NGW151	MW	MW-1	05/24/1995	PCB	Total PCBs	34	0.044	770	Abandoned
475	NGW151	MW	MW-1	09/19/1995	PCB	Total PCBs	63	0.044	1,400	Abandoned
475	NGW151	MW	MW-1	03/20/1996	PCB	Total PCBs	22.9	0.044	520	Abandoned
475	NGW151	MW	3-333-MW-1 (unf)	09/05/1996	PCB	Total PCBs	8.5	0.044	190	Abandoned
475	NGW151	MW	3-333-MW-1	03/20/1997	PCB	Total PCBs	63	0.044	1,400	Abandoned
475	NGW151	MW	MW-1	07/16/1997	PCB	Total PCBs	14.7	0.044	330	Abandoned
475	NGW151	MW	MW-1	12/02/1994	TPH	Gasoline Range Hydrocarbons	2,800	800	3.5	Abandoned
475	NGW151	MW	MW-1	05/24/1995	TPH	Gasoline Range Hydrocarbons	1,000	800	1.3	Abandoned
475	NGW151	MW	NBF-3-333-MW-1-DUP	05/24/1995	TPH	Gasoline Range Hydrocarbons	1,100	800	1.4	Abandoned
475	NGW151	MW	MW-1	09/19/1995	TPH	Gasoline Range Hydrocarbons	1,300	800	1.6	Abandoned
475	NGW151	MW	3-333-MW-1 (unf)	09/05/1996	TPH	Gasoline Range Hydrocarbons	890	800	1.1	Abandoned
475	NGW151	MW	MW-1	12/02/1994	TPH	Diesel Range Hydrocarbons	25,000	500	50	Abandoned
475	NGW151	MW	MW-1	01/25/1995	TPH	Diesel Range Hydrocarbons	600	500	1.2	Abandoned
475	NGW151	MW	MW-1	05/24/1995	TPH	Diesel Range Hydrocarbons	3,600	500	7.2	Abandoned
475	NGW151	MW	MW-1	09/19/1995	TPH	Diesel Range Hydrocarbons	3,100	500	6.2	Abandoned
475	NGW151	MW	MW-1	03/20/1996	TPH	Diesel Range Hydrocarbons	1,100	500	2.2	Abandoned
475	NGW151	MW	3-333-MW-1 (unf)	09/05/1996	TPH	Diesel Range Hydrocarbons	1,500	500	3.0	Abandoned
475	NGW151	MW	3-333-MW-1	03/20/1997	TPH	Diesel Range Hydrocarbons	2,200	500	4.4	Abandoned
475	NGW151	MW	MW-1	07/16/1997	TPH	Diesel Range Hydrocarbons	980	500	2.0	Abandoned
475	NGW151	MW	MW-1	12/02/1994	TPH	Total Petroleum Hydrocarbons	23,000	500	46	Abandoned
475	NGW151	MW	MW-1	01/25/1995	TPH	Total Petroleum Hydrocarbons	2,400	500	4.8	Abandoned
475	NGW151	MW	MW-1	05/24/1995	TPH	Total Petroleum Hydrocarbons	5,600	500	11	Abandoned

Table 7.1-6
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
475	NGW151	MW	MW-1	09/19/1995	TPH	Total Petroleum Hydrocarbons	2,200	500	4.4	Abandoned
475	NGW151	MW	3-333-MW-1	03/20/1997	TPH	Total Petroleum Hydrocarbons	1,800	500	3.6	Abandoned
475	NGW151	MW	MW-1	12/02/1994	VAH	Benzene	1.6	0.80	2.0	Abandoned
475	NGW151	MW	NBF-3-333-MW-1-DUP	05/24/1995	VAH	Benzene	2.4	0.80	3.0	Abandoned
475	NGW151	MW	MW-1	05/24/1995	VAH	Benzene	2.5	0.80	3.1	Abandoned
475	NGW151	MW	MW-1	09/19/1995	VAH	Benzene	1.5	0.80	1.9	Abandoned
3107	NGW513	MW	NGW513	01/26/2011	VOC	Vinyl chloride	0.3	0.20	1.5	Active
3108	NGW514	MW	NGW514	01/26/2011	TPH	Gasoline Range Hydrocarbons	1,500	1,000	1.5	Active
3108	NGW514	MW	NGW514	01/26/2011	VOC	Vinyl chloride	0.9	0.20	4.5	Active
3109	NGW515	MW	NGW515-030811	03/08/2011	PCB	Total PCBs	0.344	0.044	7.8	Active
3111	NGW517	MW	NGW517-030811	03/08/2011	PCB	Total PCBs	0.76	0.044	17	Abandoned
3111	NGW517	MW	NGW517-013011	01/30/2011	TPH	Gasoline Range Hydrocarbons	1,100	800	1.4	Abandoned
3112	NGW518	MW	NGW518-013011	01/30/2011	VOC	Tetrachloroethene (PCE)	5.8	5.0	1.2	Abandoned
3112	NGW518	MW	NGW518-013011	01/30/2011	VOC	Vinyl chloride	0.7	0.20	3.5	Abandoned
Building 3-324 Area										
591	FG-11	MW	FG-11	03/31/1992	TPH	Diesel Range Hydrocarbons	2,400	500	4.8	Abandoned
591	FG-11	MW	FG-11	07/21/1992	TPH	Diesel Range Hydrocarbons	1,000	500	2.0	Abandoned
591	FG-11	MW	FG-11	10/28/1992	TPH	Diesel Range Hydrocarbons	3,600	500	7.2	Abandoned
591	FG-11	MW	FG-11	01/25/1993	TPH	Diesel Range Hydrocarbons	1,100	500	2.2	Abandoned
591	FG-11	MW	FG-11	10/26/1993	TPH	Diesel Range Hydrocarbons	1,900	500	3.8	Abandoned
591	FG-11	MW	FG-11	07/21/1992	VAH	Benzene	1.1	0.80	1.4	Abandoned
585	FG-5	MW	FG-5	07/21/1992	TPH	Diesel Range Hydrocarbons	790	500	1.6	Abandoned
585	FG-5	MW	FG-5	07/20/1993	TPH	Diesel Range Hydrocarbons	720	500	1.4	Abandoned
585	FG-5	MW	FG-5	10/26/1993	TPH	Diesel Range Hydrocarbons	1,000	500	2.0	Abandoned
585	FG-5	MW	FG-5	08/14/1986	TPH	Total Petroleum Hydrocarbons	560	500	1.1	Abandoned
586	FG-6	MW	FG-6	08/14/1986	TPH	Jet Fuel	1,390	500	2.8	Abandoned
587	FG-7	MW	FG-7	08/14/1986	TPH	Jet Fuel	1,580	500	3.2	Abandoned
Building 3-353 Area										
485	GT-1114-2	MW	GT-1114-2	02/06/1990	PHT	Bis(2-ethylhexyl) phthalate	48	1.00	48	Active
486	GT-1114-3	MW	GT-1114-3	02/06/1990	PHT	Bis(2-ethylhexyl) phthalate	110	1	110	Abandoned
Wind Tunnel Area										
No detected exceedances										
Green Hornet Area										
567	GH-1	MW	GH-1	01/25/1993	VAH	Benzene	1.3	0.80	1.6	Abandoned
568	GH-2	MW	GH-2	07/21/1992	TPH	Gasoline Range Hydrocarbons-HCID	250,000	800	310	Abandoned
568	GH-2	MW	GH-2	03/31/1992	TPH	Diesel Range Hydrocarbons	79,000	500	160	Abandoned
568	GH-2	MW	GH-2	01/25/1993	TPH	Diesel Range Hydrocarbons	250,000	500	500	Abandoned
568	GH-2	MW	GH-2	07/21/1992	TPH	Diesel Range Hydrocarbons-HCID	280,000	500	560	Abandoned
568	GH-2	MW	NBF-GH-2	08/14/1986	TPH	Jet Fuel	1,390	500	2.8	Abandoned
568	GH-2	MW	NBF-GH-2	08/14/1986	TPH	Total Petroleum Hydrocarbons	1,390	500	2.8	Abandoned
568	GH-2	MW	NBF-GH-2	08/14/1986	VAH	Benzene	6	0.80	7.5	Abandoned
569	GH-3	MW	GH-3	03/31/1992	TPH	Diesel Range Hydrocarbons	15,000	500	30	Abandoned

Table 7.1-6
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
569	GH-3	MW	GH-3	01/25/1993	TPH	Diesel Range Hydrocarbons	930	500	1.9	Abandoned
569	GH-3	MW	GH-3	07/21/1992	TPH	Diesel Range Hydrocarbons-HCID	1,100	500	2.2	Abandoned
569	GH-3	MW	NBF-GH-3	08/14/1986	TPH	Jet Fuel	1,440	500	2.9	Abandoned
569	GH-3	MW	NBF-GH-3	08/14/1986	TPH	Total Petroleum Hydrocarbons	1,440	500	2.9	Abandoned
570	GH-4	MW	NBF-GH-4	08/14/1986	TPH	Jet Fuel	540	500	1.1	Abandoned
570	GH-4	MW	NBF-GH-4	08/14/1986	TPH	Total Petroleum Hydrocarbons	540	500	1.1	Abandoned
562	NGW102	MW	GH-MW-2	03/19/1997	TPH	Diesel Range Hydrocarbons	520	500	1.0	Active
562	NGW102	MW	GH-MW2	07/20/1994	VAH	Benzene	3.6	0.80	4.5	Active
564	NGW104	MW	GH-MW-4	12/07/1993	TPH	Gasoline Range Hydrocarbons	3,200	800	4.0	Active
564	NGW104	MW	GH-MW4	01/26/1994	TPH	Diesel Range Hydrocarbons	3,600	500	7.2	Active
564	NGW104	MW	GH-MW4	04/15/1994	TPH	Diesel Range Hydrocarbons	4,000	500	8.0	Active
564	NGW104	MW	GH-MW4	10/24/1994	TPH	Diesel Range Hydrocarbons	550	500	1.1	Active
564	NGW104	MW	GH-MW-4	01/24/1995	TPH	Diesel Range Hydrocarbons	7,300	500	15	Active
564	NGW104	MW	GH-MW-4	09/08/1995	TPH	Diesel Range Hydrocarbons	14,000	500	28	Active
564	NGW104	MW	GH-MW-4	03/26/1996	TPH	Diesel Range Hydrocarbons	570	500	1.1	Active
564	NGW104	MW	GH-MW-4	03/17/1997	TPH	Diesel Range Hydrocarbons	2,700	500	5.4	Active
564	NGW104	MW	GH-MW-4	08/29/1997	TPH	Diesel Range Hydrocarbons	2,300	500	4.6	Active
564	NGW104	MW	GH-MW4	02/25/1998	TPH	Diesel Range Hydrocarbons	1,400	500	2.8	Active
564	NGW104	MW	NGW104	02/19/2001	TPH	Diesel Range Hydrocarbons	810	500	1.6	Active
564	NGW104	MW	NGW104	02/25/2002	TPH	Diesel Range Hydrocarbons	910	500	1.8	Active
564	NGW104	MW	NGW104	08/19/2002	TPH	Diesel Range Hydrocarbons	510	500	1.0	Active
564	NGW104	MW	NGW104	02/19/2003	TPH	Diesel Range Hydrocarbons	670	500	1.3	Active
564	NGW104	MW	NGW104	02/20/2006	TPH	Diesel Range Hydrocarbons	1,000	500	2.0	Active
564	NGW104	MW	NGW104	02/21/2007	TPH	Diesel Range Hydrocarbons	600	500	1.2	Active
564	NGW104	MW	NGW104	02/19/2008	TPH	Diesel Range Hydrocarbons	520	500	1.0	Active
564	NGW104	MW	NGW104	02/18/2010	TPH	Diesel Range Hydrocarbons	910	500	1.8	Active
564	NGW104	MW	NGW104	02/10/2011	TPH	Diesel Range Hydrocarbons	660	500	1.3	Active
564	NGW104	MW	NGW104-120216	02/16/2012	TPH	Diesel Range Hydrocarbons	640	500	1.3	Active
564	NGW104	MW	NGW104	02/19/2001	TPH	Jet Fuel	790	500	1.6	Active
564	NGW104	MW	NGW104	02/25/2002	TPH	Jet Fuel	990	500	2.0	Active
564	NGW104	MW	NGW104	02/19/2003	TPH	Jet Fuel	740	500	1.5	Active
564	NGW104	MW	NGW104	02/20/2006	TPH	Jet Fuel	1,200	500	2.4	Active
564	NGW104	MW	NGW104	02/21/2007	TPH	Jet Fuel	750	500	1.5	Active
564	NGW104	MW	NGW104	02/19/2008	TPH	Jet Fuel	590	500	1.2	Active
564	NGW104	MW	NGW104	02/16/2009	TPH	Jet Fuel	640	500	1.3	Active
564	NGW104	MW	NGW104	02/18/2010	TPH	Jet Fuel	1,300	500	2.6	Active
564	NGW104	MW	NGW104	02/10/2011	TPH	Jet Fuel	970	500	1.9	Active
564	NGW104	MW	GH-MW-4	12/07/1993	TPH	Total Petroleum Hydrocarbons	8,800	500	18	Active
564	NGW104	MW	GH-MW4	01/26/1994	VAH	Benzene	1	0.80	1.3	Active
565	NGW105	MW	NGW105	02/10/2011	TPH	Oil Range Hydrocarbons	270	--	--	Active
565	NGW105	MW	NGW-105-120801	08/01/2012	TPH	Oil Range Hydrocarbons	260	--	--	Active
565	NGW105	MW	GH-MW5	12/07/1993	VAH	Benzene	5	0.80	6.3	Active

Table 7.1-6
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at PEL Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
565	NGW105	MW	GH-MW5	04/15/1994	VAH	Benzene	3.4	0.80	4.3	Active
565	NGW105	MW	GH-MW5	07/20/1994	VAH	Benzene	2	0.80	2.5	Active
565	NGW105	MW	GH-MW5	10/24/1994	VAH	Benzene	3.7	0.80	4.6	Active
565	NGW105	MW	GH-MW-5	01/24/1995	VAH	Benzene	3.3	0.80	4.1	Active
565	NGW105	MW	GH-MW-5	09/08/1995	VAH	Benzene	2.2	0.80	2.8	Active
2547	NGW501	MW	NGW501-GW-083010	08/30/2010	PCB	Total PCBs	2.34	0.044	53	Abandoned

DW = Dewatering well
EX = Excavation water
J = Estimated value
MET = Metals
MW = Monitoring well
PCB = Polychlorinated biphenyls
PHT = Phthalates
SB = Soil boring
TPH = Petroleum Hydrocarbons
VAH = Volatile aromatic hydrocarbons
VOC = Volatile organic compounds
-- = Not applicable
* = Dioxins/furans are presented in pg/L

Table 7.1-7
RI Selected Screening Level Exceedances for Detected COPCs in Soil at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
Former Buildings 3-360, 3-361 Area											
2103	360-SB-2	SB	360/1/5-SB-2-4.5	11/13/1991	4.5 - 5	MET	Beryllium	0.21	--	--	
2103	360-SB-2	SB	360/1/5-SB-2-4.5	11/13/1991	4.5 - 5	MET	Mercury	0.35	0.070	5.0	
637	DP1	TW	DP1-8-10	05/23/2002	8 - 10	VOC	cis-1,2-Dichloroethene	0.034	0.0052	6.5	
637	DP1	TW	DP1-8-10	05/23/2002	8 - 10	VOC	Trichloroethene (TCE)	0.2	0.0015	130	
4163	SS-1-360	EX	SS1-9-9.5	03/25/2002	9 - 9.5	VOC	cis-1,2-Dichloroethene	0.7	0.0052	130	Removed
4163	SS-1-360	EX	SS1-9-9.5	03/25/2002	9 - 9.5	VOC	Trichloroethene (TCE)	3.7	0.0015	2,500	Removed
4164	SS-2-360	EX	SS2-7-7.5	03/25/2002	7 - 7.5	VOC	Trichloroethene (TCE)	0.017	0.0015	11	Removed
4165	SS-3-360	EX	SS3-7-7.5	03/25/2002	7 - 7.5	VOC	cis-1,2-Dichloroethene	0.013	0.0052	2.5	Removed
4165	SS-3-360	EX	SS3-7-7.5	03/25/2002	7 - 7.5	VOC	Trichloroethene (TCE)	0.15	0.0015	100	Removed
4166	SS-4-360	EX	SS4-7-7.5	03/26/2002	7 - 7.5	VOC	Trichloroethene (TCE)	0.24	0.0015	160	Removed
4167	SS-5-360	EX	SS5-7-7.5	03/26/2002	7 - 7.5	VOC	cis-1,2-Dichloroethene	0.07	0.0052	13	Removed
4167	SS-5-360	EX	SS5-7-7.5	03/26/2002	7 - 7.5	VOC	Trichloroethene (TCE)	0.34	0.0015	230	Removed
4168	SS-6-360	EX	SS6-9-9.5	03/26/2002	9 - 9.5	VOC	cis-1,2-Dichloroethene	0.5	0.0052	96	
4168	SS-6-360	EX	SS6-9-9.5	03/26/2002	9 - 9.5	VOC	Trichloroethene (TCE)	5.4	0.0015	3,600	
4146	W3	SB	W3B03	09/21/2006	0 - 0.25	PCB	Total PCBs	0.11	0.033	3.3	Removed
4146	W3	SB	W3B03	09/21/2006	0 - 0.25	PAH	Benzo(a)anthracene	0.0044 J	--	--	Removed
4146	W3	SB	W3B03	09/21/2006	0 - 0.25	PAH	Benzo(b)fluoranthene	0.0076	--	--	Removed
4146	W3	SB	W3B03	09/21/2006	0 - 0.25	PAH	Benzo(k)fluoranthene	0.0063	--	--	Removed
4146	W3	SB	W3B03	09/21/2006	0 - 0.25	PAH	Total Benzofluoranthenes	0.0139	--	--	Removed
4146	W3	SB	W3B03	09/21/2006	0 - 0.25	PAH	Chrysene	0.0063	--	--	Removed
4146	W3	SB	W3T06-East	12/13/2006	0 - 0.5	PAH	Benzo(a)anthracene	0.46	--	--	Removed
4146	W3	SB	W3T06-East	12/13/2006	0 - 0.5	PAH	Benzo(b)fluoranthene	1.5	--	--	Removed
4146	W3	SB	W3T06-East	12/13/2006	0 - 0.5	PAH	Benzo(k)fluoranthene	0.91	--	--	Removed
4146	W3	SB	W3T06-East	12/13/2006	0 - 0.5	PAH	Total Benzofluoranthenes	2.41	--	--	Removed
4146	W3	SB	W3T06-East	12/13/2006	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.3	0.031	9.7	Removed
4146	W3	SB	W3T06-East	12/13/2006	0 - 0.5	PAH	Benzo(a)pyrene	1.1	0.0094	120	Removed
4146	W3	SB	W3T06-East	12/13/2006	0 - 0.5	PAH	Chrysene	0.59	--	--	Removed
4146	W3	SB	W3T06-East	12/13/2006	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.096	--	--	Removed
4146	W3	SB	W3T06-East	12/13/2006	0 - 0.5	PAH	Fluoranthene	0.32	0.16	2.0	Removed
4146	W3	SB	W3T06-East	12/13/2006	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.28	--	--	Removed
4146	W3	SB	W3T06-East	12/13/2006	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	1.4	0.0094	150	Removed
4146	W3	SB	W3S18	09/21/2006	2.5 - 3	PCB	Total PCBs	0.18	0.033	5.5	Removed
4146	W3	SB	W3S18	09/21/2006	2.5 - 3	PAH	Benzo(a)anthracene	0.11	--	--	Removed
4146	W3	SB	W3T36-East	12/13/2006	2.5 - 3	PAH	Benzo(a)anthracene	0.068	--	--	Removed
4146	W3	SB	W3S18	09/21/2006	2.5 - 3	PAH	Benzo(b)fluoranthene	0.62	--	--	Removed
4146	W3	SB	W3T36-East	12/13/2006	2.5 - 3	PAH	Benzo(b)fluoranthene	0.36	--	--	Removed
4146	W3	SB	W3S18	09/21/2006	2.5 - 3	PAH	Benzo(k)fluoranthene	0.44	--	--	Removed
4146	W3	SB	W3T36-East	12/13/2006	2.5 - 3	PAH	Benzo(k)fluoranthene	0.21	--	--	Removed
4146	W3	SB	W3S18	09/21/2006	2.5 - 3	PAH	Total Benzofluoranthenes	1.06	--	--	Removed
4146	W3	SB	W3T36-East	12/13/2006	2.5 - 3	PAH	Total Benzofluoranthenes	0.57	--	--	Removed
4146	W3	SB	W3S18	09/21/2006	2.5 - 3	PAH	Benzo(g,h,i)perylene	0.22	0.031	7.1	Removed
4146	W3	SB	W3T36-East	12/13/2006	2.5 - 3	PAH	Benzo(g,h,i)perylene	0.15	0.031	4.8	Removed

Table 7.1-7
RI Selected Screening Level Exceedances for Detected COPCs in Soil at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
4146	W3	SB	W3S18	09/21/2006	2.5 - 3	PAH	Benzo(a)pyrene	0.62	0.0094	66	Removed
4146	W3	SB	W3T36-East	12/13/2006	2.5 - 3	PAH	Benzo(a)pyrene	0.32	0.0094	34	Removed
4146	W3	SB	W3S18	09/21/2006	2.5 - 3	PAH	Chrysene	0.19	--	--	Removed
4146	W3	SB	W3T36-East	12/13/2006	2.5 - 3	PAH	Chrysene	0.1	--	--	Removed
4146	W3	SB	W3S18	09/21/2006	2.5 - 3	PAH	Dibenz(a,h)anthracene	0.071	--	--	Removed
4146	W3	SB	W3T36-East	12/13/2006	2.5 - 3	PAH	Dibenz(a,h)anthracene	0.03	--	--	Removed
4146	W3	SB	W3S18	09/21/2006	2.5 - 3	PAH	Indeno(1,2,3-cd)pyrene	0.18	--	--	Removed
4146	W3	SB	W3T36-East	12/13/2006	2.5 - 3	PAH	Indeno(1,2,3-cd)pyrene	0.12	--	--	Removed
4146	W3	SB	W3S18	09/21/2006	2.5 - 3	PAH	Total cPAHs (TEQ, NDx0.5)	0.76	0.0094	81	Removed
4146	W3	SB	W3T36-East	12/13/2006	2.5 - 3	PAH	Total cPAHs (TEQ, NDx0.5)	0.40	0.0094	43	Removed
Building 3-380 Storm Drain Area											
4088	CS10	EX	CS10A	07/15/2009	--	PAH	Benzo(a)anthracene	0.014	--	--	Removed
4088	CS10	EX	CS10A	07/15/2009	--	PAH	Benzo(b)fluoranthene	0.029	--	--	Removed
4088	CS10	EX	CS10A	07/15/2009	--	PAH	Benzo(k)fluoranthene	0.0095	--	--	Removed
4088	CS10	EX	CS10A	07/15/2009	--	PAH	Total Benzofluoranthenes	0.0385	--	--	Removed
4088	CS10	EX	CS10A	07/15/2009	--	PAH	Benzo(g,h,i)perylene	0.034	0.031	1.1	Removed
4088	CS10	EX	CS10A	07/15/2009	--	PAH	Benzo(a)pyrene	0.031	0.0094	3.3	Removed
4088	CS10	EX	CS10A	07/15/2009	--	PAH	Chrysene	0.018	--	--	Removed
4088	CS10	EX	CS10A	07/15/2009	--	PAH	Indeno(1,2,3-cd)pyrene	0.023	--	--	Removed
4088	CS10	EX	CS10A	07/15/2009	--	PAH	Total cPAHs (TEQ, NDx0.5)	0.039	0.0094	4.2	Removed
4090	CS12	EX	CS12A	07/15/2009	--	PAH	Benzo(a)anthracene	0.017	--	--	Removed
4090	CS12	EX	CS12A	07/15/2009	--	PAH	Benzo(b)fluoranthene	0.046	--	--	Removed
4090	CS12	EX	CS12A	07/15/2009	--	PAH	Benzo(k)fluoranthene	0.013	--	--	Removed
4090	CS12	EX	CS12A	07/15/2009	--	PAH	Total Benzofluoranthenes	0.059	--	--	Removed
4090	CS12	EX	CS12A	07/15/2009	--	PAH	Benzo(a)pyrene	0.023	0.0094	2.4	Removed
4090	CS12	EX	CS12A	07/15/2009	--	PAH	Chrysene	0.037	--	--	Removed
4090	CS12	EX	CS12A	07/15/2009	--	PAH	Indeno(1,2,3-cd)pyrene	0.021	--	--	Removed
4090	CS12	EX	CS12A	07/15/2009	--	PAH	Total cPAHs (TEQ, NDx0.5)	0.033	0.0094	3.6	Removed
4104	CS9	EX	CS9A	07/15/2009	--	PCB	Total PCBs	0.13	0.033	3.9	Removed
4104	CS9	EX	CS9A	07/15/2009	--	PAH	Benzo(a)anthracene	0.074	--	--	Removed
4104	CS9	EX	CS9A	07/15/2009	--	PAH	Benzo(b)fluoranthene	0.12	--	--	Removed
4104	CS9	EX	CS9A	07/15/2009	--	PAH	Benzo(k)fluoranthene	0.027	--	--	Removed
4104	CS9	EX	CS9A	07/15/2009	--	PAH	Total Benzofluoranthenes	0.147	--	--	Removed
4104	CS9	EX	CS9A	07/15/2009	--	PAH	Benzo(g,h,i)perylene	0.048	0.031	1.5	Removed
4104	CS9	EX	CS9A	07/15/2009	--	PAH	Benzo(a)pyrene	0.069	0.0094	7.3	Removed
4104	CS9	EX	CS9A	07/15/2009	--	PAH	Chrysene	0.088	--	--	Removed
4104	CS9	EX	CS9A	07/15/2009	--	PAH	Dibenz(a,h)anthracene	0.016	--	--	Removed
4104	CS9	EX	CS9A	07/15/2009	--	PAH	Indeno(1,2,3-cd)pyrene	0.039	--	--	Removed
4104	CS9	EX	CS9A	07/15/2009	--	PAH	Total cPAHs (TEQ, NDx0.5)	0.097	0.0094	10	Removed
2080	ESS08-01	SB	ESS08-01-0-0.5	09/18/2008	0 - 0.5	PCB	Total PCBs	0.042	0.033	1.3	
2081	ESS08-02	SB	ESS08-02-0-0.5	09/18/2008	0 - 0.5	PCB	Total PCBs	0.068	0.033	2.1	
2081	ESS08-02	SB	ESS08-02-0.5-1	09/18/2008	0.5 - 1	PCB	Total PCBs	0.036	0.033	1.1	

Table 7.1-7
RI Selected Screening Level Exceedances for Detected COPCs in Soil at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
2082	ESS08-03	SB	ESS08-03-0-0.5	09/18/2008	0 - 0.5	PCB	Total PCBs	0.12	0.033	3.6	
2082	ESS08-03	SB	ESS08-03-0.5-1	09/18/2008	0.5 - 1	PCB	Total PCBs	0.054	0.033	1.6	
2083	ESS08-04	SB	ESS08-04-0-0.5	09/18/2008	0 - 0.5	PCB	Total PCBs	0.31	0.033	9.4	
2083	ESS08-04	SB	ESS08-04-0.5-1	09/18/2008	0.5 - 1	PCB	Total PCBs	0.15	0.033	4.5	
2084	ESS08-05	SB	ESS08-05-0-0.5	09/18/2008	0 - 0.5	PCB	Total PCBs	0.058	0.033	1.8	
2084	ESS08-05	SB	ESS08-05-0.5-1	09/18/2008	0.5 - 1	PCB	Total PCBs	0.079	0.033	2.4	
2086	ESS08-07	SB	ESS08-07-0-1	09/23/2008	0 - 1	PCB	Total PCBs	0.05	0.033	1.5	
2086	ESS08-07	SB	ESS08-07-1-2	09/23/2008	1 - 2	PCB	Total PCBs	0.075	0.033	2.3	
2086	ESS08-07	SB	ESS08-07-3-4	09/23/2008	3 - 4	PCB	Total PCBs	0.04	0.033	1.2	
4115	MS01SS	SS	MS01SS	11/21/2006	0 - 0.5	PAH	Benzo(a)anthracene	0.034	--	--	Removed
4115	MS01SS	SS	MS01SS	11/21/2006	0 - 0.5	PAH	Benzo(b)fluoranthene	0.058	--	--	Removed
4115	MS01SS	SS	MS01SS	11/21/2006	0 - 0.5	PAH	Benzo(k)fluoranthene	0.09	--	--	Removed
4115	MS01SS	SS	MS01SS	11/21/2006	0 - 0.5	PAH	Total Benzofluoranthenes	0.148	--	--	Removed
4115	MS01SS	SS	MS01SS	11/21/2006	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.041	0.031	1.3	Removed
4115	MS01SS	SS	MS01SS	11/21/2006	0 - 0.5	PAH	Benzo(a)pyrene	0.043	0.0094	4.6	Removed
4115	MS01SS	SS	MS01SS	11/21/2006	0 - 0.5	PAH	Chrysene	0.095	--	--	Removed
4115	MS01SS	SS	MS01SS	11/21/2006	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.0072	--	--	Removed
4115	MS01SS	SS	MS01SS	11/21/2006	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.033	--	--	Removed
4115	MS01SS	SS	MS01SS	11/21/2006	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.066	0.0094	7.0	Removed
4116	MS02SS	SS	MS02SS	11/22/2006	0 - 0.5	PAH	Benzo(a)anthracene	0.1	--	--	Removed
4116	MS02SS	SS	MS02SS	11/22/2006	0 - 0.5	PAH	Benzo(b)fluoranthene	0.27	--	--	Removed
4116	MS02SS	SS	MS02SS	11/22/2006	0 - 0.5	PAH	Benzo(k)fluoranthene	0.24	--	--	Removed
4116	MS02SS	SS	MS02SS	11/22/2006	0 - 0.5	PAH	Total Benzofluoranthenes	0.51	--	--	Removed
4116	MS02SS	SS	MS02SS	11/22/2006	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.11	0.031	3.5	Removed
4116	MS02SS	SS	MS02SS	11/22/2006	0 - 0.5	PAH	Benzo(a)pyrene	0.2	0.0094	21	Removed
4116	MS02SS	SS	MS02SS	11/22/2006	0 - 0.5	PAH	Chrysene	0.24	--	--	Removed
4116	MS02SS	SS	MS02SS	11/22/2006	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.026	--	--	Removed
4116	MS02SS	SS	MS02SS	11/22/2006	0 - 0.5	PAH	Fluoranthene	0.24	0.16	1.5	Removed
4116	MS02SS	SS	MS02SS	11/22/2006	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.09	--	--	Removed
4116	MS02SS	SS	MS02SS	11/22/2006	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.28	0.0094	29	Removed
4117	MS03SS	SS	MS03SS	11/22/2006	0 - 0.5	PCB	Total PCBs	0.36	0.033	11	Removed
4117	MS03SS	SS	MS03SS	11/22/2006	0 - 0.5	PAH	Benzo(a)anthracene	0.22	--	--	Removed
4117	MS03SS	SS	MS03SS	11/22/2006	0 - 0.5	PAH	Benzo(b)fluoranthene	0.38	--	--	Removed
4117	MS03SS	SS	MS03SS	11/22/2006	0 - 0.5	PAH	Benzo(k)fluoranthene	0.32	--	--	Removed
4117	MS03SS	SS	MS03SS	11/22/2006	0 - 0.5	PAH	Total Benzofluoranthenes	0.7	--	--	Removed
4117	MS03SS	SS	MS03SS	11/22/2006	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.13	0.031	4.2	Removed
4117	MS03SS	SS	MS03SS	11/22/2006	0 - 0.5	PAH	Benzo(a)pyrene	0.31	0.0094	33	Removed
4117	MS03SS	SS	MS03SS	11/22/2006	0 - 0.5	PAH	Chrysene	0.35	--	--	Removed
4117	MS03SS	SS	MS03SS	11/22/2006	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.031	--	--	Removed
4117	MS03SS	SS	MS03SS	11/22/2006	0 - 0.5	PAH	Fluoranthene	0.61	0.16	3.8	Removed
4117	MS03SS	SS	MS03SS	11/22/2006	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.12	--	--	Removed
4117	MS03SS	SS	MS03SS	11/22/2006	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.42	0.0094	45	Removed
4118	MS04SS	SS	MS04SS	11/22/2006	0 - 0.5	PCB	Total PCBs	0.18	0.033	5.5	Removed

Table 7.1-7
RI Selected Screening Level Exceedances for Detected COPCs in Soil at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
4118	MS04SS	SS	MS04SS	11/22/2006	0 - 0.5	PAH	Benzo(a)anthracene	0.15	--	--	Removed
4118	MS04SS	SS	MS04SS	11/22/2006	0 - 0.5	PAH	Benzo(b)fluoranthene	0.54	--	--	Removed
4118	MS04SS	SS	MS04SS	11/22/2006	0 - 0.5	PAH	Benzo(k)fluoranthene	0.39	--	--	Removed
4118	MS04SS	SS	MS04SS	11/22/2006	0 - 0.5	PAH	Total Benzofluoranthenes	0.93	--	--	Removed
4118	MS04SS	SS	MS04SS	11/22/2006	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.19	0.031	6.1	Removed
4118	MS04SS	SS	MS04SS	11/22/2006	0 - 0.5	PAH	Benzo(a)pyrene	0.41	0.0094	44	Removed
4118	MS04SS	SS	MS04SS	11/22/2006	0 - 0.5	PAH	Chrysene	0.31	--	--	Removed
4118	MS04SS	SS	MS04SS	11/22/2006	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.044	--	--	Removed
4118	MS04SS	SS	MS04SS	11/22/2006	0 - 0.5	PAH	Fluoranthene	0.36	0.16	2.3	Removed
4118	MS04SS	SS	MS04SS	11/22/2006	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.15	--	--	Removed
4118	MS04SS	SS	MS04SS	11/22/2006	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.54	0.0094	58	Removed
4119	North Pad-East	SS	North Pad-East	02/23/2007	0 - 0.5	PCB	Total PCBs	0.083	0.033	2.5	
4120	North Pad-North	SS	North Pad-North	02/23/2007	0 - 0.5	PCB	Total PCBs	0.064	0.033	1.9	
4121	North Pad-West	SS	North Pad-West	02/23/2007	0 - 0.5	PCB	Total PCBs	16.1	0.033	490	Removed
4177	P5-T	SS	P5-T	04/01/2005	0 - 0.1	PCB	Total PCBs	1.5	0.033	45	Removed
4177	P5-T	SS	P5-T	04/01/2005	0 - 0.1	MET	Antimony	0.4	--	--	Removed
4177	P5-T	SS	P5-T	04/01/2005	0 - 0.1	MET	Barium	116	83	1.4	Removed
4177	P5-T	SS	P5-T	04/01/2005	0 - 0.1	MET	Copper	95.1	36	2.6	Removed
4177	P5-T	SS	P5-T	04/01/2005	0 - 0.1	MET	Lead	73	57	1.3	Removed
4177	P5-T	SS	P5-T	04/01/2005	0 - 0.1	MET	Manganese	569	--	--	Removed
4177	P5-T	SS	P5-T	04/01/2005	0 - 0.1	MET	Mercury	0.08	0.070	1.1	Removed
4177	P5-T	SS	P5-T	04/01/2005	0 - 0.1	MET	Nickel	43	38	1.1	Removed
4177	P5-T	SS	P5-T	04/01/2005	0 - 0.1	MET	Zinc	195	86	2.3	Removed
4177	P5-T	SS	P5-T	04/01/2005	0 - 0.1	TPH	Oil Range Hydrocarbons	3,000	2,000	1.5	Removed
4177	P5-T	SS	P5-T	04/01/2005	0 - 0.1	PHT	Bis(2-ethylhexyl) phthalate	3.8	0.067	57	Removed
4177	P5-T	SS	P5-T	04/01/2005	0 - 0.1	PAH	Chrysene	0.81 J	--	--	Removed
4177	P5-T	SS	P5-T	04/01/2005	0 - 0.1	PAH	Fluoranthene	1	0.16	6.3	Removed
4177	P5-T	SS	P5-T	04/01/2005	0 - 0.1	PAH	Total cPAHs (TEQ, NDx0.5)	1.2	0.0094	130	Removed
1651	SD20	SB	NBF-SD20-0-2	11/17/2008	0 - 2	PCB	Total PCBs	0.062	0.033	1.9	
1652	SD21	SB	NBF-SD21-0-2	11/17/2008	0 - 2	PCB	Total PCBs	0.037	0.033	1.1	
1652	SD21	SB	NBF-SD21-2-4	11/17/2008	2 - 4	PCB	Total PCBs	0.057	0.033	1.7	
1653	SD22	SB	NBF-SD22-0-2	11/17/2008	0 - 2	PCB	Total PCBs	0.048	0.033	1.5	
1654	SD24	SB	NBF-SD24-0-2	11/17/2008	0 - 2	PCB	Total PCBs	0.077	0.033	2.3	
1656	SD26	SB	NBF-SD26-2-4	11/17/2008	2 - 4	PCB	Total PCBs	0.6	0.033	18	
1657	SD27	SB	NBF-SD27-0-2	11/18/2008	0 - 2	PCB	Total PCBs	0.26	0.033	7.9	
1658	SD28	SB	NBF-SD28-0-2	11/18/2008	0 - 2	PCB	Total PCBs	0.23	0.033	7.0	
1659	SD29	SB	NBF-SD29-0-2-Dup	11/18/2008	0 - 2	PCB	Total PCBs	0.042	0.033	1.3	
1659	SD29	SB	NBF-SD29-2-4	11/18/2008	2 - 4	PCB	Total PCBs	0.044	0.033	1.3	
4139	STrans-N/W	SS	STrans-N/W	02/23/2007	0 - 0.5	PCB	Total PCBs	0.087	0.033	2.6	
4140	STrans-S/E	SS	STrans-S/E	02/23/2007	0 - 0.5	PCB	Total PCBs	0.074	0.033	2.2	
4144	W2	SB	W2B03	09/22/2006	0 - 0.25	PCB	Total PCBs	0.82	0.033	25	Removed
4144	W2	SB	W2B03	09/22/2006	0 - 0.25	MET	Arsenic	12	7.0	1.7	Removed
4144	W2	SB	W2B03	09/22/2006	0 - 0.25	MET	Lead	77	57	1.4	Removed

Table 7.1-7
RI Selected Screening Level Exceedances for Detected COPCs in Soil at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
4144	W2	SB	W2B03	09/22/2006	0 - 0.25	MET	Mercury	0.16	0.070	2.3	Removed
4144	W2	SB	W2B03	09/22/2006	0 - 0.25	PAH	Benzo(a)anthracene	0.18	--	--	Removed
4144	W2	SB	W2B03	09/22/2006	0 - 0.25	PAH	Benzo(b)fluoranthene	1.1	--	--	Removed
4144	W2	SB	W2B03	09/22/2006	0 - 0.25	PAH	Benzo(k)fluoranthene	0.39	--	--	Removed
4144	W2	SB	W2B03	09/22/2006	0 - 0.25	PAH	Total Benzofluoranthenes	1.49	--	--	Removed
4144	W2	SB	W2B03	09/22/2006	0 - 0.25	PAH	Benzo(g,h,i)perylene	0.52	0.031	17	Removed
4144	W2	SB	W2B03	09/22/2006	0 - 0.25	PAH	Benzo(a)pyrene	0.96	0.0094	100	Removed
4144	W2	SB	W2B03	09/22/2006	0 - 0.25	PAH	Chrysene	0.42	--	--	Removed
4144	W2	SB	W2B03	09/22/2006	0 - 0.25	PAH	Dibenz(a,h)anthracene	0.16	--	--	Removed
4144	W2	SB	W2B03	09/22/2006	0 - 0.25	PAH	Fluoranthene	0.23	0.16	1.4	Removed
4144	W2	SB	W2B03	09/22/2006	0 - 0.25	PAH	Indeno(1,2,3-cd)pyrene	0.4	--	--	Removed
4144	W2	SB	W2B03	09/22/2006	0 - 0.25	PAH	Total cPAHs (TEQ, NDx0.5)	1.2	0.0094	130	Removed
4144	W2	SB	W2T06	11/21/2006	0 - 0.5	PAH	Benzo(a)anthracene	0.66	--	--	Removed
4144	W2	SB	W2T06-East	12/13/2006	0 - 0.5	PAH	Benzo(a)anthracene	0.016	--	--	Removed
4144	W2	SB	W2T06	11/21/2006	0 - 0.5	PAH	Benzo(b)fluoranthene	0.78	--	--	Removed
4144	W2	SB	W2T06-East	12/13/2006	0 - 0.5	PAH	Benzo(b)fluoranthene	0.028	--	--	Removed
4144	W2	SB	W2T06	11/21/2006	0 - 0.5	PAH	Benzo(k)fluoranthene	0.84	--	--	Removed
4144	W2	SB	W2T06-East	12/13/2006	0 - 0.5	PAH	Benzo(k)fluoranthene	0.022	--	--	Removed
4144	W2	SB	W2T06	11/21/2006	0 - 0.5	PAH	Total Benzofluoranthenes	1.62	--	--	Removed
4144	W2	SB	W2T06-East	12/13/2006	0 - 0.5	PAH	Total Benzofluoranthenes	0.05	--	--	Removed
4144	W2	SB	W2T06	11/21/2006	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.75	0.031	24	Removed
4144	W2	SB	W2T06	11/21/2006	0 - 0.5	PAH	Benzo(a)pyrene	0.8	0.0094	85	Removed
4144	W2	SB	W2T06-East	12/13/2006	0 - 0.5	PAH	Benzo(a)pyrene	0.018	0.0094	1.9	Removed
4144	W2	SB	W2T06	11/21/2006	0 - 0.5	PAH	Chrysene	0.92	--	--	Removed
4144	W2	SB	W2T06-East	12/13/2006	0 - 0.5	PAH	Chrysene	0.025	--	--	Removed
4144	W2	SB	W2T06	11/21/2006	0 - 0.5	PAH	Dibenz(a,h)anthracene	0.17	--	--	Removed
4144	W2	SB	W2T06	11/21/2006	0 - 0.5	PAH	Fluoranthene	1.3	0.16	8.1	Removed
4144	W2	SB	W2T06	11/21/2006	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.51	--	--	Removed
4144	W2	SB	W2T06-East	12/13/2006	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.0072	--	--	Removed
4144	W2	SB	W2T06	11/21/2006	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	1.1	0.0094	120	Removed
4144	W2	SB	W2T06-East	12/13/2006	0 - 0.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.026	0.0094	2.8	Removed
4144	W2	SB	W2B12	09/22/2006	0.5 - 1	MET	Arsenic	8	7.0	1.1	Removed
4144	W2	SB	W2B12	09/22/2006	0.5 - 1	PAH	Benzo(a)anthracene	0.038	--	--	Removed
4144	W2	SB	W2B12	09/22/2006	0.5 - 1	PAH	Benzo(b)fluoranthene	0.083	--	--	Removed
4144	W2	SB	W2B12	09/22/2006	0.5 - 1	PAH	Benzo(k)fluoranthene	0.06	--	--	Removed
4144	W2	SB	W2B12	09/22/2006	0.5 - 1	PAH	Total Benzofluoranthenes	0.143	--	--	Removed
4144	W2	SB	W2B12	09/22/2006	0.5 - 1	PAH	Benzo(g,h,i)perylene	0.089	0.031	2.9	Removed
4144	W2	SB	W2B12	09/22/2006	0.5 - 1	PAH	Benzo(a)pyrene	0.094	0.0094	10	Removed
4144	W2	SB	W2B12	09/22/2006	0.5 - 1	PAH	Chrysene	0.055	--	--	Removed
4144	W2	SB	W2B12	09/22/2006	0.5 - 1	PAH	Dibenz(a,h)anthracene	0.02	--	--	Removed
4144	W2	SB	W2B12	09/22/2006	0.5 - 1	PAH	Indeno(1,2,3-cd)pyrene	0.061	--	--	Removed
4144	W2	SB	W2B12	09/22/2006	0.5 - 1	PAH	Total cPAHs (TEQ, NDx0.5)	0.12	0.0094	13	Removed
4144	W2	SB	W2B18	09/22/2006	1 - 1.5	PAH	Benzo(a)anthracene	0.014	--	--	Removed

Table 7.1-7
RI Selected Screening Level Exceedances for Detected COPCs in Soil at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
4144	W2	SB	W2B18	09/22/2006	1 - 1.5	PAH	Benzo(b)fluoranthene	0.055	--	--	Removed
4144	W2	SB	W2B18	09/22/2006	1 - 1.5	PAH	Benzo(k)fluoranthene	0.028	--	--	Removed
4144	W2	SB	W2B18	09/22/2006	1 - 1.5	PAH	Total Benzofluoranthenes	0.083	--	--	Removed
4144	W2	SB	W2B18	09/22/2006	1 - 1.5	PAH	Benzo(g,h,i)perylene	0.053	0.031	1.7	Removed
4144	W2	SB	W2B18	09/22/2006	1 - 1.5	PAH	Benzo(a)pyrene	0.062	0.0094	6.6	Removed
4144	W2	SB	W2B18	09/22/2006	1 - 1.5	PAH	Chrysene	0.027	--	--	Removed
4144	W2	SB	W2B18	09/22/2006	1 - 1.5	PAH	Dibenz(a,h)anthracene	0.012	--	--	Removed
4144	W2	SB	W2B18	09/22/2006	1 - 1.5	PAH	Indeno(1,2,3-cd)pyrene	0.037	--	--	Removed
4144	W2	SB	W2B18	09/22/2006	1 - 1.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.077	0.0094	8.2	Removed
4144	W2	SB	W2S18	09/20/2006	2.5 - 3	PAH	Benzo(a)anthracene	0.15	--	--	Removed
4144	W2	SB	W2T36-East	12/13/2006	2.5 - 3	PAH	Benzo(a)anthracene	0.0077	--	--	Removed
4144	W2	SB	W2S18	09/20/2006	2.5 - 3	PAH	Benzo(b)fluoranthene	0.82	--	--	Removed
4144	W2	SB	W2T36-East	12/13/2006	2.5 - 3	PAH	Benzo(b)fluoranthene	0.0096	--	--	Removed
4144	W2	SB	W2S18	09/20/2006	2.5 - 3	PAH	Benzo(k)fluoranthene	0.59	--	--	Removed
4144	W2	SB	W2T36-East	12/13/2006	2.5 - 3	PAH	Benzo(k)fluoranthene	0.0096	--	--	Removed
4144	W2	SB	W2S18	09/20/2006	2.5 - 3	PAH	Total Benzofluoranthenes	1.41	--	--	Removed
4144	W2	SB	W2T36-East	12/13/2006	2.5 - 3	PAH	Total Benzofluoranthenes	0.0192	--	--	Removed
4144	W2	SB	W2S18	09/20/2006	2.5 - 3	PAH	Benzo(g,h,i)perylene	0.52	0.031	17	Removed
4144	W2	SB	W2S18	09/20/2006	2.5 - 3	PAH	Benzo(a)pyrene	0.87	0.0094	93	Removed
4144	W2	SB	W2S18	09/20/2006	2.5 - 3	PAH	Chrysene	0.29	--	--	Removed
4144	W2	SB	W2T36-East	12/13/2006	2.5 - 3	PAH	Chrysene	0.01	--	--	Removed
4144	W2	SB	W2S18	09/20/2006	2.5 - 3	PAH	Dibenz(a,h)anthracene	0.18	--	--	Removed
4144	W2	SB	W2S18	09/20/2006	2.5 - 3	PAH	Indeno(1,2,3-cd)pyrene	0.44	--	--	Removed
4144	W2	SB	W2S18	09/20/2006	2.5 - 3	PAH	Total cPAHs (TEQ, NDx0.5)	1.1	0.0094	120	Removed
4144	W2	SB	W2T36-East	12/13/2006	2.5 - 3	PAH	Total cPAHs (TEQ, NDx0.5)	0.012	0.0094	1.3	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	PCB	Total PCBs	0.82	0.033	25	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	MET	Arsenic	16	7.0	2.3	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	MET	Cadmium	1.6	1.0	1.6	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	MET	Copper	90.4	36	2.5	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	MET	Lead	317	57	5.6	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	MET	Mercury	0.19	0.070	2.7	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	PAH	Benzo(a)anthracene	3.4	--	--	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	PAH	Benzo(b)fluoranthene	2.5	--	--	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	PAH	Benzo(k)fluoranthene	2.1	--	--	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	PAH	Total Benzofluoranthenes	4.6	--	--	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	PAH	Benzo(g,h,i)perylene	0.4	0.031	13	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	PAH	Benzo(a)pyrene	1.5	0.0094	160	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	PAH	Chrysene	5.4	--	--	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	PAH	Dibenz(a,h)anthracene	0.17	--	--	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	PAH	Fluoranthene	7.5	0.16	47	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	PAH	Indeno(1,2,3-cd)pyrene	0.42	--	--	Removed
4145	W2T18	SS	W2T18	09/20/2006	0 - 1.5	PAH	Total cPAHs (TEQ, NDx0.5)	2.4	0.0094	260	Removed

Table 7.1-7
RI Selected Screening Level Exceedances for Detected COPCs in Soil at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
Building 7-27-1 Area											
3366	3-350-S1	SR	3-350-S1-091208	12/08/2009	0.2 - 1	TPH	Oil Range Hydrocarbons-HCID	5,700	2,000	2.9	Removed
3367	3-350-S2	SR	3-350-S2-091208	12/08/2009	0.2 - 1	PCB	Total PCBs	0.51	0.5	1.0	Removed
4143	W1	SB	W1B03	09/21/2006	0 - 0.25	PCB	Total PCBs	0.94	0.50	1.9	Removed
4143	W1	SB	W1B03	09/21/2006	0 - 0.25	PAH	Benzo(a)anthracene	0.061	--	--	Removed
4143	W1	SB	W1B03	09/21/2006	0 - 0.25	PAH	Benzo(b)fluoranthene	0.1	--	--	Removed
4143	W1	SB	W1B03	09/21/2006	0 - 0.25	PAH	Benzo(k)fluoranthene	0.12	--	--	Removed
4143	W1	SB	W1B03	09/21/2006	0 - 0.25	PAH	Total Benzofluoranthenes	0.22	--	--	Removed
4143	W1	SB	W1B03	09/21/2006	0 - 0.25	PAH	Benzo(g,h,i)perylene	0.11	--	--	Removed
4143	W1	SB	W1B03	09/21/2006	0 - 0.25	PAH	Chrysene	0.12	--	--	Removed
4143	W1	SB	W1B03	09/21/2006	0 - 0.25	PAH	Dibenz(a,h)anthracene	0.031	--	--	Removed
4143	W1	SB	W1B03	09/21/2006	0 - 0.25	PAH	Indeno(1,2,3-cd)pyrene	0.089	--	--	Removed
4143	W1	SB	W1B03	09/21/2006	0 - 0.25	PAH	Total cPAHs (TEQ, NDx0.5)	0.14	0.14	1.0	Removed
4143	W1	SB	W1T06-East	12/13/2006	0 - 0.5	PAH	Benzo(a)anthracene	0.018	--	--	Removed
4143	W1	SB	W1T06-West	12/13/2006	0 - 0.5	PAH	Benzo(b)fluoranthene	0.042	--	--	Removed
4143	W1	SB	W1T06-West	12/13/2006	0 - 0.5	PAH	Benzo(k)fluoranthene	0.033	--	--	Removed
4143	W1	SB	W1T06-West	12/13/2006	0 - 0.5	PAH	Total Benzofluoranthenes	0.075	--	--	Removed
4143	W1	SB	W1T06-East	12/13/2006	0 - 0.5	PAH	Benzo(g,h,i)perylene	0.015	--	--	Removed
4143	W1	SB	W1T06-West	12/13/2006	0 - 0.5	PAH	Chrysene	0.036	--	--	Removed
4143	W1	SB	W1T06-East	12/13/2006	0 - 0.5	PAH	Indeno(1,2,3-cd)pyrene	0.012	--	--	Removed
4143	W1	SB	W1B12	09/21/2006	0.5 - 1	PAH	Benzo(a)anthracene	0.004 J	--	--	Removed
4143	W1	SB	W1B12	09/21/2006	0.5 - 1	PAH	Chrysene	0.006 J	--	--	Removed
4143	W1	SB	W1S18	09/21/2006	2.5 - 3	MET	Arsenic	11	7.0	1.6	Removed
4143	W1	SB	W1S18	09/21/2006	2.5 - 3	PAH	Benzo(a)anthracene	0.011	--	--	Removed
4143	W1	SB	W1S18	09/21/2006	2.5 - 3	PAH	Benzo(b)fluoranthene	0.024	--	--	Removed
4143	W1	SB	W1S18	09/21/2006	2.5 - 3	PAH	Benzo(k)fluoranthene	0.026	--	--	Removed
4143	W1	SB	W1S18	09/21/2006	2.5 - 3	PAH	Total Benzofluoranthenes	0.05	--	--	Removed
4143	W1	SB	W1S18	09/21/2006	2.5 - 3	PAH	Benzo(g,h,i)perylene	0.0093	--	--	Removed
4143	W1	SB	W1S18	09/21/2006	2.5 - 3	PAH	Chrysene	0.043	--	--	Removed
4143	W1	SB	W1S18	09/21/2006	2.5 - 3	PAH	Indeno(1,2,3-cd)pyrene	0.008	--	--	Removed
Building 3-380 Area											
517	B-3	SB	B-3	03/13/1990	2 - 6	PAH	Benzo(a)pyrene	0.77	0.0094	82	
517	B-3	SB	B-3	03/13/1990	2 - 6	PAH	Total cPAHs (TEQ, NDx0.5)	0.85	0.0094	91	
493	GT-2	MW	GT-2	03/16/1989	7.5	MET	Beryllium	1.3	--	--	
495	GT-4	MW	GT-4	03/17/1989	7.5	MET	Beryllium	1.4	--	--	
Building 3-374 Area											
No detected exceedances											
Building 3-390 Area											
No detected exceedances											
Concourse A Area											
1980	A5	TW	A5 @ 6.0	07/25/1996	6 - 7	TPH	Gasoline Range Hydrocarbons-HCID	8,500	30	280	
1980	A5	TW	A5 @ 6.0	07/25/1996	6 - 7	TPH	Diesel Range Hydrocarbons-HCID	3,900	2,000	2.0	

Table 7.1-7
RI Selected Screening Level Exceedances for Detected COPCs in Soil at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
1980	A5	TW	A5 @ 6.0	07/25/1996	6 - 7	PHT	Bis(2-ethylhexyl) phthalate	0.89	0.067	13	
1980	A5	TW	A5 @ 6.0	07/25/1996	6 - 7	PAH	2-Methylnaphthalene	8.9	0.043	210	
1980	A5	TW	A5 @ 6.0	07/25/1996	6 - 7	VAH	Benzene	0.11574	0.0010	120	
1981	A6	TW	A6 @ 6.0	07/25/1996	6 - 7.5	PHT	Bis(2-ethylhexyl) phthalate	0.1	0.067	1.5	

EX = Excavation
J = Estimated value
MET = Metals
MW = Monitoring well
PAH = Polycyclic aromatic hydrocarbons
PCB = Polychlorinated biphenyls
PHT = Phthalates
SB = Soil boring
SR = Soil regrading
SS = Surface soil
TPH = Petroleum Hydrocarbons
TW = Temporary well
VAH = Volatile aromatic hydrocarbons
VOC = Volatile organic compounds
-- = Not applicable

Table 7.1-8
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
Former Buildings 3-360, 3-361 Area										
637	DP1	TW	DP1-15 EK12A	05/23/2002	VOC	cis-1,2-Dichloroethene	310	16	19	Abandoned
637	DP1	TW	DP1-15 EK12A	05/23/2002	VOC	Trichloroethene (TCE)	810	4.0	200	Abandoned
637	DP1	TW	DP1-15 EK12A	05/23/2002	VOC	Vinyl chloride	0.4	0.20	2.0	Abandoned
646	DP10	TW	DP10-15 EJ99G	05/22/2002	VOC	cis-1,2-Dichloroethene	38	16	2.4	Abandoned
646	DP10	TW	DP10-15 EJ99G	05/22/2002	VOC	Trichloroethene (TCE)	90	4.0	23	Abandoned
646	DP10	TW	DP10-60 EJ99J	05/22/2002	VOC	Vinyl chloride	0.3	0.20	1.5	Abandoned
647	DP11	TW	DP11-15 EK30K	05/28/2002	VOC	cis-1,2-Dichloroethene	58	16	3.6	Abandoned
647	DP11	TW	DP11-15 EK30K	05/28/2002	VOC	Trichloroethene (TCE)	170	4.0	43	Abandoned
648	DP12	TW	DP12-15 EK30E	05/28/2002	VOC	cis-1,2-Dichloroethene	35	16	2.2	Abandoned
648	DP12	TW	DP12-15 EK30E	05/28/2002	VOC	Trichloroethene (TCE)	110	4.0	28	Abandoned
649	DP13	TW	DP13-15 EK51K	05/30/2002	VOC	cis-1,2-Dichloroethene	41	16	2.6	Abandoned
638	DP2	TW	DP2-15 EK11A	05/23/2002	VOC	Trichloroethene (TCE)	8.9	4.0	2.2	Abandoned
639	DP3	TW	DP3-15 EK12G	05/23/2002	VOC	cis-1,2-Dichloroethene	73	16	4.6	Abandoned
639	DP3	TW	DP3-15 EK12G	05/23/2002	VOC	Trichloroethene (TCE)	130	4.0	33	Abandoned
640	DP4	TW	DP4-15 EK20D	05/24/2002	VOC	cis-1,2-Dichloroethene	27	16	1.7	Abandoned
640	DP4	TW	DP4-15 EK20D	05/24/2002	VOC	Trichloroethene (TCE)	100	4.0	25	Abandoned
641	DP5	TW	DP5-15 EK20I	05/24/2002	VOC	Trichloroethene (TCE)	28	4.0	7.0	Abandoned
642	DP6	TW	DP6-15 EK39D	05/29/2002	VOC	cis-1,2-Dichloroethene	44	16	2.8	Abandoned
642	DP6	TW	DP6-15 EK39D	05/29/2002	VOC	Trichloroethene (TCE)	160	4.0	40	Abandoned
643	DP7	TW	DP7-15 EK39J	05/29/2002	VOC	cis-1,2-Dichloroethene	120	16	7.5	Abandoned
643	DP7	TW	DP7-15 EK39J	05/29/2002	VOC	Trichloroethene (TCE)	410	4.0	100	Abandoned
643	DP7	TW	DP7-75 EK51C	05/30/2002	VOC	Vinyl chloride	1.2	0.20	6.0	Abandoned
644	DP8	TW	DP8-15 EK51E	05/30/2002	VOC	cis-1,2-Dichloroethene	67	16	4.2	Abandoned
644	DP8	TW	DP8-15 EK51E	05/30/2002	VOC	Trichloroethene (TCE)	95	4.0	24	Abandoned
645	DP9	TW	DP9-15 EJ99A	05/20/2002	VOC	cis-1,2-Dichloroethene	43	16	2.7	Abandoned
624	NGW201	IW	MW-1	10/27/1993	MET	Arsenic	10	5.0	2.0	Active
624	NGW201	IW	MW-1	04/20/1994	MET	Arsenic	7	5.0	1.4	Active
624	NGW201	IW	NGW201	07/20/1994	MET	Arsenic	10	5.0	2.0	Active
624	NGW201	IW	MW-1	10/24/1994	MET	Arsenic	14	5.0	2.8	Active
624	NGW201	IW	NGW201	05/11/1995	MET	Arsenic	45	5.0	9.0	Active
624	NGW201	IW	MW-1	09/14/1995	MET	Arsenic	38	5.0	7.6	Active
624	NGW201	IW	MW-1	07/23/1993	MET	Cadmium	5	2.6	1.9	Active
624	NGW201	IW	MW-1	11/20/1991	TPH	Diesel Range Hydrocarbons	1,400	500	2.8	Active
624	NGW201	IW	3-360/361/365-MW-1	11/20/1991	TPH	Total Petroleum Hydrocarbons	1,400	500	2.8	Active
624	NGW201	IW	NGW201	04/20/1994	VOC	cis-1,2-Dichloroethene	25	16	1.6	Active
624	NGW201	IW	NGW201	05/11/1995	VOC	cis-1,2-Dichloroethene	33	16	2.1	Active
624	NGW201	IW	MW-1	09/14/1995	VOC	cis-1,2-Dichloroethene	32	16	2.0	Active
624	NGW201	IW	MW-1	03/20/1996	VOC	cis-1,2-Dichloroethene	73	16	4.6	Active
624	NGW201	IW	3-360-MW-1	03/14/1997	VOC	cis-1,2-Dichloroethene	86	16	5.4	Active
624	NGW201	IW	3-360-MW-1	08/26/1997	VOC	cis-1,2-Dichloroethene	72	16	4.5	Active

Table 7.1-8
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
624	NGW201	IW	MW-1	02/23/1998	VOC	cis-1,2-Dichloroethene	78	16	4.9	Active
624	NGW201	IW	MW-1	07/27/1998	VOC	cis-1,2-Dichloroethene	88	16	5.5	Active
624	NGW201	IW	NGW201	01/19/1999	VOC	cis-1,2-Dichloroethene	44	16	2.8	Active
624	NGW201	IW	NGW201	07/19/1999	VOC	cis-1,2-Dichloroethene	66	16	4.1	Active
624	NGW201	IW	NGW201	02/22/2000	VOC	cis-1,2-Dichloroethene	76	16	4.8	Active
624	NGW201	IW	NGW201	07/25/2000	VOC	cis-1,2-Dichloroethene	44	16	2.8	Active
624	NGW201	IW	NGW201	02/20/2001	VOC	cis-1,2-Dichloroethene	52	16	3.3	Active
624	NGW201	IW	NGW201	08/21/2001	VOC	cis-1,2-Dichloroethene	53	16	3.3	Active
624	NGW201	IW	NGW201	02/19/2002	VOC	cis-1,2-Dichloroethene	50	16	3.1	Active
624	NGW201	IW	NGW201	08/20/2002	VOC	cis-1,2-Dichloroethene	78	16	4.9	Active
624	NGW201	IW	NGW201U	02/18/2003	VOC	cis-1,2-Dichloroethene	40	16	2.5	Active
624	NGW201	IW	NGW201U	07/15/2003	VOC	cis-1,2-Dichloroethene	68	16	4.3	Active
624	NGW201	IW	NGW201U	02/10/2004	VOC	cis-1,2-Dichloroethene	85	16	5.3	Active
624	NGW201	IW	NGW201-Dup	02/19/2008	VOC	cis-1,2-Dichloroethene	55	16	3.4	Active
624	NGW201	IW	NGW201	02/18/2010	VOC	cis-1,2-Dichloroethene	33	16	2.1	Active
624	NGW201	IW	3-360/361/365-MW-1	11/20/1991	VOC	Trichloroethene (TCE)	1,000	4.0	250	Active
624	NGW201	IW	MW-1	07/23/1993	VOC	Trichloroethene (TCE)	12	4.0	3.0	Active
624	NGW201	IW	MW-1	10/27/1993	VOC	Trichloroethene (TCE)	280	4.0	70	Active
624	NGW201	IW	MW-1	01/25/1994	VOC	Trichloroethene (TCE)	240	4.0	60	Active
624	NGW201	IW	NGW201	04/20/1994	VOC	Trichloroethene (TCE)	280	4.0	70	Active
624	NGW201	IW	NGW201	07/20/1994	VOC	Trichloroethene (TCE)	90	4.0	23	Active
624	NGW201	IW	MW-1	10/24/1994	VOC	Trichloroethene (TCE)	120	4.0	30	Active
624	NGW201	IW	MW-1	01/24/1995	VOC	Trichloroethene (TCE)	160	4.0	40	Active
624	NGW201	IW	NGW201	05/11/1995	VOC	Trichloroethene (TCE)	150	4.0	38	Active
624	NGW201	IW	MW-1	09/14/1995	VOC	Trichloroethene (TCE)	120	4.0	30	Active
624	NGW201	IW	MW-1	03/20/1996	VOC	Trichloroethene (TCE)	170	4.0	43	Active
624	NGW201	IW	3-360-MW-1	03/14/1997	VOC	Trichloroethene (TCE)	140	4.0	35	Active
624	NGW201	IW	3-360-MW-1	08/26/1997	VOC	Trichloroethene (TCE)	160	4.0	40	Active
624	NGW201	IW	MW-1	02/23/1998	VOC	Trichloroethene (TCE)	180	4.0	45	Active
624	NGW201	IW	MW-1	07/27/1998	VOC	Trichloroethene (TCE)	210	4.0	53	Active
624	NGW201	IW	NGW201	01/19/1999	VOC	Trichloroethene (TCE)	89	4.0	22	Active
624	NGW201	IW	NGW201	07/19/1999	VOC	Trichloroethene (TCE)	120	4.0	30	Active
624	NGW201	IW	NGW201	02/22/2000	VOC	Trichloroethene (TCE)	130	4.0	33	Active
624	NGW201	IW	NGW201	07/25/2000	VOC	Trichloroethene (TCE)	73	4.0	18	Active
624	NGW201	IW	NGW201	02/20/2001	VOC	Trichloroethene (TCE)	92	4.0	23	Active
624	NGW201	IW	NGW201	08/21/2001	VOC	Trichloroethene (TCE)	84	4.0	21	Active
624	NGW201	IW	NGW201	02/19/2002	VOC	Trichloroethene (TCE)	77	4.0	19	Active
624	NGW201	IW	NGW201	08/20/2002	VOC	Trichloroethene (TCE)	86	4.0	22	Active
624	NGW201	IW	NGW201U	02/18/2003	VOC	Trichloroethene (TCE)	71	4.0	18	Active
624	NGW201	IW	NGW201U	07/15/2003	VOC	Trichloroethene (TCE)	72	4.0	18	Active
624	NGW201	IW	NGW201U	02/10/2004	VOC	Trichloroethene (TCE)	67	4.0	17	Active

Table 7.1-8
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
624	NGW201	IW	NGW201-Dup	02/19/2008	VOC	Trichloroethene (TCE)	30	4.0	7.5	Active
624	NGW201	IW	NGW201	02/18/2010	VOC	Trichloroethene (TCE)	11	4.0	2.8	Active
626	NGW203	IW	MW-3	10/27/1993	MET	Arsenic	21	5.0	4.2	Active
626	NGW203	IW	MW-3	01/25/1994	MET	Arsenic	7	5.0	1.4	Active
626	NGW203	IW	NGW203	04/20/1994	MET	Arsenic	6	5.0	1.2	Active
626	NGW203	IW	NGW203	07/20/1994	MET	Arsenic	15	5.0	3.0	Active
626	NGW203	IW	MW-3	10/24/1994	MET	Arsenic	18	5.0	3.6	Active
626	NGW203	IW	MW-3	01/24/1995	MET	Arsenic	7	5.0	1.4	Active
626	NGW203	IW	NGW203	05/11/1995	MET	Arsenic	27	5.0	5.4	Active
626	NGW203	IW	MW-3	09/14/1995	MET	Arsenic	16	5.0	3.2	Active
626	NGW203	IW	MW-3	07/23/1993	MET	Cadmium	5	2.6	1.9	Active
626	NGW203	IW	MW-3	10/27/1993	MET	Cadmium	3	2.6	1.2	Active
626	NGW203	IW	NGW203	05/11/1995	MET	Mercury	0.1	0.020	5.0	Active
626	NGW203	IW	MW-3	07/23/1993	VOC	cis-1,2-Dichloroethene	29	16	1.8	Active
626	NGW203	IW	MW-3	10/27/1993	VOC	cis-1,2-Dichloroethene	29	16	1.8	Active
626	NGW203	IW	MW-3	01/25/1994	VOC	cis-1,2-Dichloroethene	29	16	1.8	Active
626	NGW203	IW	NGW203	04/20/1994	VOC	cis-1,2-Dichloroethene	29	16	1.8	Active
626	NGW203	IW	NGW203	07/20/1994	VOC	cis-1,2-Dichloroethene	40	16	2.5	Active
626	NGW203	IW	MW-3	10/24/1994	VOC	cis-1,2-Dichloroethene	44	16	2.8	Active
626	NGW203	IW	MW-3	09/14/1995	VOC	cis-1,2-Dichloroethene	19	16	1.2	Active
626	NGW203	IW	NGW203	02/20/2001	VOC	cis-1,2-Dichloroethene	18	16	1.1	Active
626	NGW203	IW	NGW203	08/21/2001	VOC	cis-1,2-Dichloroethene	32	16	2.0	Active
626	NGW203	IW	NGW203	08/20/2002	VOC	cis-1,2-Dichloroethene	29	16	1.8	Active
626	NGW203	IW	NGW203	12/02/2002	VOC	cis-1,2-Dichloroethene	35	16	2.2	Active
626	NGW203	IW	NGW203U	02/18/2003	VOC	cis-1,2-Dichloroethene	48	16	3.0	Active
626	NGW203	IW	NGW203U	07/15/2003	VOC	cis-1,2-Dichloroethene	30	16	1.9	Active
626	NGW203	IW	NGW203	08/09/2004	VOC	cis-1,2-Dichloroethene	23	16	1.4	Active
626	NGW203	IW	NGW203	02/20/2007	VOC	cis-1,2-Dichloroethene	21	16	1.3	Active
626	NGW203	IW	NGW203	08/22/2007	VOC	cis-1,2-Dichloroethene	34	16	2.1	Active
626	NGW203	IW	NGW203	02/19/2008	VOC	cis-1,2-Dichloroethene	31	16	1.9	Active
626	NGW203	IW	NGW203	08/20/2008	VOC	cis-1,2-Dichloroethene	68	16	4.3	Active
626	NGW203	IW	NGW203	02/16/2009	VOC	cis-1,2-Dichloroethene	33	16	2.1	Active
626	NGW203	IW	NGW203	02/18/2010	VOC	cis-1,2-Dichloroethene	29	16	1.8	Active
626	NGW203	IW	NGW203	08/19/2010	VOC	cis-1,2-Dichloroethene	86	16	5.4	Active
626	NGW203	IW	NGW203-110802	08/02/2011	VOC	cis-1,2-Dichloroethene	38	16	2.4	Active
626	NGW203	IW	NGW203-120215	02/15/2012	VOC	cis-1,2-Dichloroethene	39	16	2.4	Active
626	NGW203	IW	NGW-203-120731	07/31/2012	VOC	cis-1,2-Dichloroethene	70	16	4.4	Active
626	NGW203	IW	MW-3	10/27/1993	VOC	Tetrachloroethene (PCE)	6.5	5.0	1.3	Active
626	NGW203	IW	MW-3	01/25/1994	VOC	Tetrachloroethene (PCE)	7.8	5.0	1.6	Active
626	NGW203	IW	NGW203	07/20/1994	VOC	Tetrachloroethene (PCE)	7	5.0	1.4	Active
626	NGW203	IW	MW-3	10/24/1994	VOC	Tetrachloroethene (PCE)	6.2	5.0	1.2	Active

Table 7.1-8
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
626	NGW203	IW	MW-3	07/23/1993	VOC	Trichloroethene (TCE)	620	4.0	160	Active
626	NGW203	IW	MW-3	10/27/1993	VOC	Trichloroethene (TCE)	810	4.0	200	Active
626	NGW203	IW	MW-3	01/25/1994	VOC	Trichloroethene (TCE)	1,300	4.0	330	Active
626	NGW203	IW	NGW203	04/20/1994	VOC	Trichloroethene (TCE)	730	4.0	180	Active
626	NGW203	IW	NGW203	07/20/1994	VOC	Trichloroethene (TCE)	730	4.0	180	Active
626	NGW203	IW	MW-3	10/24/1994	VOC	Trichloroethene (TCE)	890	4.0	220	Active
626	NGW203	IW	MW-3	01/24/1995	VOC	Trichloroethene (TCE)	110	4.0	28	Active
626	NGW203	IW	NGW203	05/11/1995	VOC	Trichloroethene (TCE)	94	4.0	24	Active
626	NGW203	IW	MW-3	09/14/1995	VOC	Trichloroethene (TCE)	190	4.0	48	Active
626	NGW203	IW	MW-3	03/20/1996	VOC	Trichloroethene (TCE)	42	4.0	11	Active
626	NGW203	IW	3-360-MW-3	03/14/1997	VOC	Trichloroethene (TCE)	36	4.0	9.0	Active
626	NGW203	IW	3-360-MW-3	08/26/1997	VOC	Trichloroethene (TCE)	76	4.0	19	Active
626	NGW203	IW	MW-3	07/27/1998	VOC	Trichloroethene (TCE)	78	4.0	20	Active
626	NGW203	IW	NGW203	01/19/1999	VOC	Trichloroethene (TCE)	6.4	4.0	1.6	Active
626	NGW203	IW	NGW203	07/19/1999	VOC	Trichloroethene (TCE)	28	4.0	7.0	Active
626	NGW203	IW	NGW203	02/22/2000	VOC	Trichloroethene (TCE)	38	4.0	9.5	Active
626	NGW203	IW	NGW203	07/25/2000	VOC	Trichloroethene (TCE)	39	4.0	9.8	Active
626	NGW203	IW	NGW203	02/20/2001	VOC	Trichloroethene (TCE)	48	4.0	12	Active
626	NGW203	IW	NGW203	08/21/2001	VOC	Trichloroethene (TCE)	67	4.0	17	Active
626	NGW203	IW	NGW203	08/20/2002	VOC	Trichloroethene (TCE)	39	4.0	9.8	Active
626	NGW203	IW	NGW203	12/02/2002	VOC	Trichloroethene (TCE)	38	4.0	9.5	Active
626	NGW203	IW	NGW203U	02/18/2003	VOC	Trichloroethene (TCE)	59	4.0	15	Active
626	NGW203	IW	NGW203U	07/15/2003	VOC	Trichloroethene (TCE)	42	4.0	11	Active
626	NGW203	IW	NGW203U	02/10/2004	VOC	Trichloroethene (TCE)	8.4	4.0	2.1	Active
626	NGW203	IW	NGW203	08/09/2004	VOC	Trichloroethene (TCE)	38	4.0	9.5	Active
626	NGW203	IW	NGW203	02/07/2005	VOC	Trichloroethene (TCE)	24	4.0	6.0	Active
626	NGW203	IW	NGW203	08/18/2005	VOC	Trichloroethene (TCE)	25	4.0	6.3	Active
626	NGW203	IW	NGW203	02/21/2006	VOC	Trichloroethene (TCE)	9.1	4.0	2.3	Active
626	NGW203	IW	NGW203	02/20/2007	VOC	Trichloroethene (TCE)	11	4.0	2.8	Active
626	NGW203	IW	NGW203	08/22/2007	VOC	Trichloroethene (TCE)	10	4.0	2.5	Active
626	NGW203	IW	NGW203	02/19/2008	VOC	Trichloroethene (TCE)	9	4.0	2.3	Active
626	NGW203	IW	NGW203	08/20/2008	VOC	Trichloroethene (TCE)	7.9	4.0	2.0	Active
626	NGW203	IW	NGW203	02/16/2009	VOC	Trichloroethene (TCE)	6.8	4.0	1.7	Active
626	NGW203	IW	NGW203	02/18/2010	VOC	Trichloroethene (TCE)	4.5	4.0	1.1	Active
626	NGW203	IW	NGW203	08/19/2010	VOC	Trichloroethene (TCE)	4.6	4.0	1.2	Active
626	NGW203	IW	NGW203-110802	08/02/2011	VOC	Trichloroethene (TCE)	7.3	4.0	1.8	Active
626	NGW203	IW	NGW-203-120731	07/31/2012	VOC	Trichloroethene (TCE)	15	4.0	3.8	Active
626	NGW203	IW	NGW203	07/20/1994	VOC	Vinyl chloride	0.22	0.20	1.1	Active
626	NGW203	IW	NGW203	08/14/2006	VOC	Vinyl chloride	1	0.20	5.0	Active
626	NGW203	IW	NGW203	08/19/2010	VOC	Vinyl chloride	0.7	0.20	3.5	Active
626	NGW203	IW	NGW203-110802	08/02/2011	VOC	Vinyl chloride	0.6	0.20	3.0	Active

Table 7.1-8
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
627	NGW204	MW	MW-4	10/27/1993	MET	Arsenic	6	5.0	1.2	Active
627	NGW204	MW	NGW204	07/20/1994	MET	Arsenic	8	5.0	1.6	Active
627	NGW204	MW	MW-4	10/24/1994	MET	Arsenic	8	5.0	1.6	Active
627	NGW204	MW	NGW204	05/11/1995	MET	Arsenic	42	5.0	8.4	Active
627	NGW204	MW	MW-4	09/14/1995	MET	Arsenic	43	5.0	8.6	Active
627	NGW204	MW	MW-4	10/27/1993	MET	Cadmium	3	2.6	1.2	Active
627	NGW204	MW	MW-4	09/14/1995	MET	Mercury	0.2	0.020	10	Active
627	NGW204	MW	MW-4	11/20/1991	TPH	Diesel Range Hydrocarbons	4,600	500	9.2	Active
627	NGW204	MW	3-360/361/365-MW-4	11/20/1991	TPH	Total Petroleum Hydrocarbons	4,600	500	9.2	Active
627	NGW204	MW	MW-4	07/23/1993	VOC	Trichloroethene (TCE)	12	4.0	3.0	Active
628	NGW205	MW	NGW205	05/12/1995	MET	Arsenic	145	5.0	29	Abandoned
628	NGW205	MW	MW-5	09/14/1995	MET	Arsenic	105	5.0	21	Abandoned
628	NGW205	MW	NGW205	05/12/1995	MET	Lead	23	11	2.1	Abandoned
628	NGW205	MW	MW-5	09/14/1995	MET	Lead	13	11	1.2	Abandoned
628	NGW205	MW	NGW205	05/12/1995	MET	Mercury	0.2	0.020	10	Abandoned
628	NGW205	MW	NGW205	05/12/1995	VOC	Trichloroethene (TCE)	8.8	4.0	2.2	Abandoned
628	NGW205	MW	MW-5	09/14/1995	VOC	Trichloroethene (TCE)	18	4.0	4.5	Abandoned
628	NGW205	MW	MW-5	03/20/1996	VOC	Trichloroethene (TCE)	12	4.0	3.0	Abandoned
628	NGW205	MW	3-360-MW-5	03/14/1997	VOC	Trichloroethene (TCE)	12	4.0	3.0	Abandoned
628	NGW205	MW	3-360-MW-5	08/26/1997	VOC	Trichloroethene (TCE)	10	4.0	2.5	Abandoned
628	NGW205	MW	MW-5	02/23/1998	VOC	Trichloroethene (TCE)	7.1	4.0	1.8	Abandoned
628	NGW205	MW	MW-5	07/27/1998	VOC	Trichloroethene (TCE)	16	4.0	4.0	Abandoned
628	NGW205	MW	NGW205	01/19/1999	VOC	Trichloroethene (TCE)	5.5	4.0	1.4	Abandoned
628	NGW205	MW	NGW205	07/25/2000	VOC	Trichloroethene (TCE)	7.3	4.0	1.8	Abandoned
628	NGW205	MW	NGW205	02/20/2001	VOC	Trichloroethene (TCE)	9.4	4.0	2.4	Abandoned
628	NGW205	MW	NGW205	08/21/2001	VOC	Trichloroethene (TCE)	5.1	4.0	1.3	Abandoned
628	NGW205	MW	NGW205	02/19/2002	VOC	Trichloroethene (TCE)	5.4	4.0	1.4	Abandoned
629	NGW206	IW	NGW206	05/12/1995	MET	Arsenic	30	5.0	6.0	Active
629	NGW206	IW	NGW206	05/12/1995	MET	Arsenic	33	5.0	6.6	Active
629	NGW206	IW	MW-6	09/14/1995	MET	Arsenic	33	5.0	6.6	Active
629	NGW206	IW	NGW206	05/12/1995	MET	Lead	75	11	6.8	Active
629	NGW206	IW	MW-6	09/14/1995	MET	Lead	39	11	3.5	Active
629	NGW206	IW	NGW206	05/12/1995	MET	Mercury	0.3	0.020	15	Active
629	NGW206	IW	NGW206	05/12/1995	VOC	cis-1,2-Dichloroethene	56	16	3.5	Active
629	NGW206	IW	MW-6	09/14/1995	VOC	cis-1,2-Dichloroethene	42	16	2.6	Active
629	NGW206	IW	MW-6	03/20/1996	VOC	cis-1,2-Dichloroethene	46	16	2.9	Active
629	NGW206	IW	3-360-MW-6	03/14/1997	VOC	cis-1,2-Dichloroethene	52	16	3.3	Active
629	NGW206	IW	3-360-MW-6	08/26/1997	VOC	cis-1,2-Dichloroethene	42	16	2.6	Active
629	NGW206	IW	MW-6	02/23/1998	VOC	cis-1,2-Dichloroethene	32	16	2.0	Active
629	NGW206	IW	MW-6	07/27/1998	VOC	cis-1,2-Dichloroethene	43	16	2.7	Active
629	NGW206	IW	NGW206	01/19/1999	VOC	cis-1,2-Dichloroethene	53	16	3.3	Active

Table 7.1-8
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
629	NGW206	IW	NGW206-Dup	07/19/1999	VOC	cis-1,2-Dichloroethene	29	16	1.8	Active
629	NGW206	IW	NGW206	02/22/2000	VOC	cis-1,2-Dichloroethene	88	16	5.5	Active
629	NGW206	IW	NGW206	07/25/2000	VOC	cis-1,2-Dichloroethene	120	16	7.5	Active
629	NGW206	IW	NGW206-Dup	02/20/2001	VOC	cis-1,2-Dichloroethene	95	16	5.9	Active
629	NGW206	IW	NGW206	08/21/2001	VOC	cis-1,2-Dichloroethene	180	16	11	Active
629	NGW206	IW	NGW206	02/19/2002	VOC	cis-1,2-Dichloroethene	120	16	7.5	Active
629	NGW206	IW	NGW206	08/20/2002	VOC	cis-1,2-Dichloroethene	120	16	7.5	Active
629	NGW206	IW	NGW206U	02/18/2003	VOC	cis-1,2-Dichloroethene	160	16	10	Active
629	NGW206	IW	NGW206U	07/15/2003	VOC	cis-1,2-Dichloroethene	180	16	11	Active
629	NGW206	IW	NGW206U	02/10/2004	VOC	cis-1,2-Dichloroethene	140	16	8.8	Active
629	NGW206	IW	NGW206	08/09/2004	VOC	cis-1,2-Dichloroethene	130	16	8.1	Active
629	NGW206	IW	NGW206	02/07/2005	VOC	cis-1,2-Dichloroethene	87	16	5.4	Active
629	NGW206	IW	NGW206	08/18/2005	VOC	cis-1,2-Dichloroethene	63	16	3.9	Active
629	NGW206	IW	NGW206	02/21/2006	VOC	cis-1,2-Dichloroethene	37	16	2.3	Active
629	NGW206	IW	NGW206	02/20/2007	VOC	cis-1,2-Dichloroethene	45	16	2.8	Active
629	NGW206	IW	NGW206	08/22/2007	VOC	cis-1,2-Dichloroethene	58	16	3.6	Active
629	NGW206	IW	NGW206	02/19/2008	VOC	cis-1,2-Dichloroethene	93	16	5.8	Active
629	NGW206	IW	NGW206	08/20/2008	VOC	cis-1,2-Dichloroethene	90	16	5.6	Active
629	NGW206	IW	NGW206	02/16/2009	VOC	cis-1,2-Dichloroethene	61	16	3.8	Active
629	NGW206	IW	NGW206	02/19/2010	VOC	cis-1,2-Dichloroethene	32	16	2.0	Active
629	NGW206	IW	NGW206	08/19/2010	VOC	cis-1,2-Dichloroethene	68	16	4.3	Active
629	NGW206	IW	NGW-206	02/10/2011	VOC	cis-1,2-Dichloroethene	44	16	2.8	Active
629	NGW206	IW	NGW206-110802	08/02/2011	VOC	cis-1,2-Dichloroethene	47	16	2.9	Active
629	NGW206	IW	NGW-206-120731	07/31/2012	VOC	cis-1,2-Dichloroethene	73	16	4.6	Active
629	NGW206	IW	NGW206	05/12/1995	VOC	Trichloroethene (TCE)	260	4.0	65	Active
629	NGW206	IW	MW-6	09/14/1995	VOC	Trichloroethene (TCE)	200	4.0	50	Active
629	NGW206	IW	MW-6	03/20/1996	VOC	Trichloroethene (TCE)	200	4.0	50	Active
629	NGW206	IW	3-360-MW-6	03/14/1997	VOC	Trichloroethene (TCE)	160	4.0	40	Active
629	NGW206	IW	3-360-MW-6	08/26/1997	VOC	Trichloroethene (TCE)	150	4.0	38	Active
629	NGW206	IW	MW-6	02/23/1998	VOC	Trichloroethene (TCE)	120	4.0	30	Active
629	NGW206	IW	MW-6	07/27/1998	VOC	Trichloroethene (TCE)	160	4.0	40	Active
629	NGW206	IW	NGW206	01/19/1999	VOC	Trichloroethene (TCE)	190	4.0	48	Active
629	NGW206	IW	NGW206-Dup	07/19/1999	VOC	Trichloroethene (TCE)	98	4.0	25	Active
629	NGW206	IW	NGW206	02/22/2000	VOC	Trichloroethene (TCE)	170	4.0	43	Active
629	NGW206	IW	NGW206	07/25/2000	VOC	Trichloroethene (TCE)	220	4.0	55	Active
629	NGW206	IW	NGW206-Dup	02/20/2001	VOC	Trichloroethene (TCE)	190	4.0	48	Active
629	NGW206	IW	NGW206	08/21/2001	VOC	Trichloroethene (TCE)	250	4.0	63	Active
629	NGW206	IW	NGW206	02/19/2002	VOC	Trichloroethene (TCE)	220	4.0	55	Active
629	NGW206	IW	NGW206	08/20/2002	VOC	Trichloroethene (TCE)	240	4.0	60	Active
629	NGW206	IW	NGW206U	02/18/2003	VOC	Trichloroethene (TCE)	250	4.0	63	Active
629	NGW206	IW	NGW206U	07/15/2003	VOC	Trichloroethene (TCE)	270	4.0	68	Active

Table 7.1-8
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
629	NGW206	IW	NGW206U	02/10/2004	VOC	Trichloroethene (TCE)	280	4.0	70	Active
629	NGW206	IW	NGW206	08/09/2004	VOC	Trichloroethene (TCE)	220	4.0	55	Active
629	NGW206	IW	NGW206	02/07/2005	VOC	Trichloroethene (TCE)	160	4.0	40	Active
629	NGW206	IW	NGW206	08/18/2005	VOC	Trichloroethene (TCE)	190	4.0	48	Active
629	NGW206	IW	NGW206	02/21/2006	VOC	Trichloroethene (TCE)	97	4.0	24	Active
629	NGW206	IW	NGW206	08/14/2006	VOC	Trichloroethene (TCE)	130	4.0	33	Active
629	NGW206	IW	NGW206	02/20/2007	VOC	Trichloroethene (TCE)	84	4.0	21	Active
629	NGW206	IW	NGW206	08/22/2007	VOC	Trichloroethene (TCE)	100	4.0	25	Active
629	NGW206	IW	NGW206	02/19/2008	VOC	Trichloroethene (TCE)	130	4.0	33	Active
629	NGW206	IW	NGW206	08/20/2008	VOC	Trichloroethene (TCE)	100	4.0	25	Active
629	NGW206	IW	NGW206	02/16/2009	VOC	Trichloroethene (TCE)	58	4.0	15	Active
629	NGW206	IW	NGW206	02/18/2010	VOC	Trichloroethene (TCE)	25	4.0	6.3	Active
629	NGW206	IW	NGW206	08/19/2010	VOC	Trichloroethene (TCE)	40	4.0	10	Active
629	NGW206	IW	NGW-206	02/10/2011	VOC	Trichloroethene (TCE)	64	4.0	16	Active
629	NGW206	IW	NGW206-110802	08/02/2011	VOC	Trichloroethene (TCE)	18	4.0	4.5	Active
629	NGW206	IW	NGW206L	07/15/2003	VOC	Vinyl chloride	3.3	0.20	17	Active
629	NGW206	IW	NGW206U	02/10/2004	VOC	Vinyl chloride	14	0.20	70	Active
629	NGW206	IW	NGW206	02/20/2007	VOC	Vinyl chloride	1.8	0.20	9.0	Active
629	NGW206	IW	NGW206	08/19/2010	VOC	Vinyl chloride	0.3	0.20	1.5	Active
629	NGW206	IW	NGW-206-120731	07/31/2012	VOC	Vinyl chloride	0.8	0.20	4.0	Active
630	NGW207	IW	NGW207	05/12/1995	MET	Arsenic	32	5.0	6.4	Active
630	NGW207	IW	MW-7	09/14/1995	MET	Arsenic	11	5.0	2.2	Active
630	NGW207	IW	NGW207	05/12/1995	MET	Chromium	122	100	1.2	Active
630	NGW207	IW	NGW207	05/12/1995	MET	Lead	28	11	2.5	Active
630	NGW207	IW	NGW207	05/12/1995	MET	Mercury	0.3	0.020	15	Active
630	NGW207	IW	NGW207	05/12/1995	VOC	Trichloroethene (TCE)	5.4	4.0	1.4	Active
630	NGW207	IW	MW-7	09/14/1995	VOC	Trichloroethene (TCE)	7.6	4.0	1.9	Active
630	NGW207	IW	MW-7	03/20/1996	VOC	Trichloroethene (TCE)	5.4	4.0	1.4	Active
630	NGW207	IW	3-360-MW-7	08/26/1997	VOC	Trichloroethene (TCE)	4.8	4.0	1.2	Active
630	NGW207	IW	MW-7	07/27/1998	VOC	Trichloroethene (TCE)	4.8	4.0	1.2	Active
622	NGW209	MW	MW-9	03/22/1996	VOC	cis-1,2-Dichloroethene	19	16	1.2	Active
622	NGW209	MW	3-360-MW-9	03/14/1997	VOC	cis-1,2-Dichloroethene	27	16	1.7	Active
622	NGW209	MW	3-360-MW-9	08/26/1997	VOC	cis-1,2-Dichloroethene	33	16	2.1	Active
622	NGW209	MW	MW-9	02/23/1998	VOC	cis-1,2-Dichloroethene	35	16	2.2	Active
622	NGW209	MW	MW-9	07/27/1998	VOC	cis-1,2-Dichloroethene	44	16	2.8	Active
622	NGW209	MW	NGW209	01/19/1999	VOC	cis-1,2-Dichloroethene	30	16	1.9	Active
622	NGW209	MW	NGW209	07/19/1999	VOC	cis-1,2-Dichloroethene	44	16	2.8	Active
622	NGW209	MW	NGW209	02/22/2000	VOC	cis-1,2-Dichloroethene	38	16	2.4	Active
622	NGW209	MW	NGW209	07/25/2000	VOC	cis-1,2-Dichloroethene	27	16	1.7	Active
622	NGW209	MW	NGW209	02/20/2001	VOC	cis-1,2-Dichloroethene	21	16	1.3	Active
622	NGW209	MW	NGW209	08/21/2001	VOC	cis-1,2-Dichloroethene	23	16	1.4	Active

Table 7.1-8
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
622	NGW209	MW	NGW209	02/19/2002	VOC	cis-1,2-Dichloroethene	23	16	1.4	Active
622	NGW209	MW	NGW209-Dup	08/20/2002	VOC	cis-1,2-Dichloroethene	32	16	2.0	Active
622	NGW209	MW	NGW209	08/20/2002	VOC	cis-1,2-Dichloroethene	33	16	2.1	Active
622	NGW209	MW	NGW209	12/02/2002	VOC	cis-1,2-Dichloroethene	35	16	2.2	Active
622	NGW209	MW	NGW209M	01/29/2003	VOC	cis-1,2-Dichloroethene	35	16	2.2	Active
622	NGW209	MW	MW-9	10/17/1995	VOC	Trichloroethene (TCE)	110	4.0	28	Active
622	NGW209	MW	MW-9	03/22/1996	VOC	Trichloroethene (TCE)	110	4.0	28	Active
622	NGW209	MW	3-360-MW-9	03/14/1997	VOC	Trichloroethene (TCE)	120	4.0	30	Active
622	NGW209	MW	3-360-MW-9	08/26/1997	VOC	Trichloroethene (TCE)	130	4.0	33	Active
622	NGW209	MW	MW-9	02/23/1998	VOC	Trichloroethene (TCE)	140	4.0	35	Active
622	NGW209	MW	MW-9	07/27/1998	VOC	Trichloroethene (TCE)	200	4.0	50	Active
622	NGW209	MW	NGW209	01/19/1999	VOC	Trichloroethene (TCE)	120	4.0	30	Active
622	NGW209	MW	NGW209	07/19/1999	VOC	Trichloroethene (TCE)	130	4.0	33	Active
622	NGW209	MW	NGW209	02/22/2000	VOC	Trichloroethene (TCE)	120	4.0	30	Active
622	NGW209	MW	NGW209	07/25/2000	VOC	Trichloroethene (TCE)	59	4.0	15	Active
622	NGW209	MW	NGW209	02/20/2001	VOC	Trichloroethene (TCE)	39	4.0	9.8	Active
622	NGW209	MW	NGW209	08/21/2001	VOC	Trichloroethene (TCE)	52	4.0	13	Active
622	NGW209	MW	NGW209	02/19/2002	VOC	Trichloroethene (TCE)	48	4.0	12	Active
622	NGW209	MW	NGW209-Dup	08/20/2002	VOC	Trichloroethene (TCE)	52	4.0	13	Active
622	NGW209	MW	NGW209	08/20/2002	VOC	Trichloroethene (TCE)	53	4.0	13	Active
622	NGW209	MW	NGW209	12/02/2002	VOC	Trichloroethene (TCE)	38	4.0	9.5	Active
622	NGW209	MW	NGW209M	01/29/2003	VOC	Trichloroethene (TCE)	56	4.0	14	Active
632	NGW210	MW	MW-10	10/17/1995	MET	Iron	61,300	11000	5.6	Active
632	NGW210	MW	MW-10	10/17/1995	MET	Zinc	148	33	4.5	Active
632	NGW210	MW	MW-10	10/17/1995	VOC	cis-1,2-Dichloroethene	22	16	1.4	Active
632	NGW210	MW	MW-10	03/22/1996	VOC	cis-1,2-Dichloroethene	30	16	1.9	Active
632	NGW210	MW	3-360-MW-10	03/14/1997	VOC	cis-1,2-Dichloroethene	28	16	1.8	Active
632	NGW210	MW	3-360-MW-10	08/26/1997	VOC	cis-1,2-Dichloroethene	42	16	2.6	Active
632	NGW210	MW	MW-10	02/23/1998	VOC	cis-1,2-Dichloroethene	37	16	2.3	Active
632	NGW210	MW	MW-10	07/27/1998	VOC	cis-1,2-Dichloroethene	41	16	2.6	Active
632	NGW210	MW	NGW210	01/19/1999	VOC	cis-1,2-Dichloroethene	57	16	3.6	Active
632	NGW210	MW	NGW210	07/19/1999	VOC	cis-1,2-Dichloroethene	32	16	2.0	Active
632	NGW210	MW	NGW210	02/22/2000	VOC	cis-1,2-Dichloroethene	90	16	5.6	Active
632	NGW210	MW	NGW210	07/25/2000	VOC	cis-1,2-Dichloroethene	51	16	3.2	Active
632	NGW210	MW	NGW210	02/20/2001	VOC	cis-1,2-Dichloroethene	73	16	4.6	Active
632	NGW210	MW	NGW210-Dup	08/21/2001	VOC	cis-1,2-Dichloroethene	56	16	3.5	Active
632	NGW210	MW	NGW210	08/21/2001	VOC	cis-1,2-Dichloroethene	63	16	3.9	Active
632	NGW210	MW	NGW210-Dup	02/19/2002	VOC	cis-1,2-Dichloroethene	58	16	3.6	Active
632	NGW210	MW	NGW210	02/19/2002	VOC	cis-1,2-Dichloroethene	64	16	4.0	Active
632	NGW210	MW	NGW210	08/20/2002	VOC	cis-1,2-Dichloroethene	68	16	4.3	Active
632	NGW210	MW	MW-10	10/17/1995	VOC	Trichloroethene (TCE)	260	4.0	65	Active

Table 7.1-8
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
632	NGW210	MW	MW-10	03/22/1996	VOC	Trichloroethene (TCE)	280	4.0	70	Active
632	NGW210	MW	3-360-MW-10	03/14/1997	VOC	Trichloroethene (TCE)	160	4.0	40	Active
632	NGW210	MW	3-360-MW-10	08/26/1997	VOC	Trichloroethene (TCE)	120	4.0	30	Active
632	NGW210	MW	MW-10	02/23/1998	VOC	Trichloroethene (TCE)	120	4.0	30	Active
632	NGW210	MW	MW-10	07/27/1998	VOC	Trichloroethene (TCE)	130	4.0	33	Active
632	NGW210	MW	NGW210	01/19/1999	VOC	Trichloroethene (TCE)	140	4.0	35	Active
632	NGW210	MW	NGW210	07/19/1999	VOC	Trichloroethene (TCE)	55	4.0	14	Active
632	NGW210	MW	NGW210	02/22/2000	VOC	Trichloroethene (TCE)	80	4.0	20	Active
632	NGW210	MW	NGW210	07/25/2000	VOC	Trichloroethene (TCE)	58	4.0	15	Active
632	NGW210	MW	NGW210	02/20/2001	VOC	Trichloroethene (TCE)	48	4.0	12	Active
632	NGW210	MW	NGW210-Dup	08/21/2001	VOC	Trichloroethene (TCE)	36	4.0	9.0	Active
632	NGW210	MW	NGW210	08/21/2001	VOC	Trichloroethene (TCE)	38	4.0	9.5	Active
632	NGW210	MW	NGW210-Dup	02/19/2002	VOC	Trichloroethene (TCE)	40	4.0	10	Active
632	NGW210	MW	NGW210	02/19/2002	VOC	Trichloroethene (TCE)	41	4.0	10	Active
632	NGW210	MW	NGW210	08/20/2002	VOC	Trichloroethene (TCE)	54	4.0	14	Active
633	NGW211	MW	MW-11	07/27/1998	VOC	cis-1,2-Dichloroethene	17	16	1.1	Active
633	NGW211	MW	NGW211	07/19/1999	VOC	cis-1,2-Dichloroethene	29	16	1.8	Active
633	NGW211	MW	NGW211	07/25/2000	VOC	cis-1,2-Dichloroethene	27	16	1.7	Active
633	NGW211	MW	NGW211	02/20/2001	VOC	cis-1,2-Dichloroethene	31	16	1.9	Active
633	NGW211	MW	NGW211	08/21/2001	VOC	cis-1,2-Dichloroethene	26	16	1.6	Active
633	NGW211	MW	NGW211	08/20/2002	VOC	cis-1,2-Dichloroethene	25	16	1.6	Active
633	NGW211	MW	MW-11	10/17/1995	VOC	Trichloroethene (TCE)	46	4.0	12	Active
633	NGW211	MW	MW-11	03/22/1996	VOC	Trichloroethene (TCE)	58	4.0	15	Active
633	NGW211	MW	3-360-MW-11	03/14/1997	VOC	Trichloroethene (TCE)	51	4.0	13	Active
633	NGW211	MW	3-360-MW-11	08/26/1997	VOC	Trichloroethene (TCE)	66	4.0	17	Active
633	NGW211	MW	MW-11	02/23/1998	VOC	Trichloroethene (TCE)	60	4.0	15	Active
633	NGW211	MW	MW-11	07/27/1998	VOC	Trichloroethene (TCE)	72	4.0	18	Active
633	NGW211	MW	NGW211	01/19/1999	VOC	Trichloroethene (TCE)	40	4.0	10	Active
633	NGW211	MW	NGW211	07/19/1999	VOC	Trichloroethene (TCE)	50	4.0	13	Active
633	NGW211	MW	NGW211	02/22/2000	VOC	Trichloroethene (TCE)	36	4.0	9.0	Active
633	NGW211	MW	NGW211	07/25/2000	VOC	Trichloroethene (TCE)	27	4.0	6.8	Active
633	NGW211	MW	NGW211	02/20/2001	VOC	Trichloroethene (TCE)	23	4.0	5.8	Active
633	NGW211	MW	NGW211	08/21/2001	VOC	Trichloroethene (TCE)	16	4.0	4.0	Active
633	NGW211	MW	NGW211	02/19/2002	VOC	Trichloroethene (TCE)	18	4.0	4.5	Active
633	NGW211	MW	NGW211	08/20/2002	VOC	Trichloroethene (TCE)	20	4.0	5.0	Active
633	NGW211	MW	NGW-211	02/10/2011	VOC	Trichloroethene (TCE)	13	4.0	3.3	Active
623	NGW212	IW	NGW212	12/02/2002	VOC	cis-1,2-Dichloroethene	26	16	1.6	Active
623	NGW212	IW	NGW212L	01/29/2003	VOC	cis-1,2-Dichloroethene	76	16	4.8	Active
623	NGW212	IW	NGW212M	01/29/2003	VOC	cis-1,2-Dichloroethene	300	16	19	Active
623	NGW212	IW	NGW212U	01/29/2003	VOC	cis-1,2-Dichloroethene	440	16	28	Active
623	NGW212	IW	NGW212U	02/18/2003	VOC	cis-1,2-Dichloroethene	110	16	6.9	Active

Table 7.1-8
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
623	NGW212	IW	NGW212U	07/15/2003	VOC	cis-1,2-Dichloroethene	79	16	4.9	Active
623	NGW212	IW	NGW212	08/09/2004	VOC	cis-1,2-Dichloroethene	17	16	1.1	Active
623	NGW212	IW	NGW212	02/19/2008	VOC	cis-1,2-Dichloroethene	20	16	1.3	Active
623	NGW212	IW	NGW212	08/20/2008	VOC	cis-1,2-Dichloroethene	17	16	1.1	Active
623	NGW212	IW	NGW212	02/16/2009	VOC	cis-1,2-Dichloroethene	30	16	1.9	Active
623	NGW212	IW	NGW212	12/02/2002	VOC	Trichloroethene (TCE)	32	4.0	8.0	Active
623	NGW212	IW	NGW212L	01/29/2003	VOC	Trichloroethene (TCE)	10	4.0	2.5	Active
623	NGW212	IW	NGW212M	01/29/2003	VOC	Trichloroethene (TCE)	150	4.0	38	Active
623	NGW212	IW	NGW212U	01/29/2003	VOC	Trichloroethene (TCE)	200	4.0	50	Active
623	NGW212	IW	NGW212U	02/18/2003	VOC	Trichloroethene (TCE)	46	4.0	12	Active
623	NGW212	IW	NGW212U	07/15/2003	VOC	Trichloroethene (TCE)	54	4.0	14	Active
623	NGW212	IW	NGW212U	02/10/2004	VOC	Trichloroethene (TCE)	28	4.0	7.0	Active
623	NGW212	IW	NGW212	08/09/2004	VOC	Trichloroethene (TCE)	30	4.0	7.5	Active
623	NGW212	IW	NGW212-Dup	02/07/2005	VOC	Trichloroethene (TCE)	20	4.0	5.0	Active
623	NGW212	IW	NGW212	08/18/2005	VOC	Trichloroethene (TCE)	24	4.0	6.0	Active
623	NGW212	IW	NGW212	02/21/2006	VOC	Trichloroethene (TCE)	17	4.0	4.3	Active
623	NGW212	IW	NGW212	08/14/2006	VOC	Trichloroethene (TCE)	12	4.0	3.0	Active
623	NGW212	IW	NGW212	02/20/2007	VOC	Trichloroethene (TCE)	12	4.0	3.0	Active
623	NGW212	IW	NGW212	08/22/2007	VOC	Trichloroethene (TCE)	16	4.0	4.0	Active
623	NGW212	IW	NGW212	02/19/2008	VOC	Trichloroethene (TCE)	10	4.0	2.5	Active
623	NGW212	IW	NGW212	08/20/2008	VOC	Trichloroethene (TCE)	11	4.0	2.8	Active
623	NGW212	IW	NGW212	02/16/2009	VOC	Trichloroethene (TCE)	11	4.0	2.8	Active
623	NGW212	IW	NGW-212	02/10/2011	VOC	Trichloroethene (TCE)	6.6	4.0	1.7	Active
623	NGW212	IW	NGW212L	01/29/2003	VOC	Vinyl chloride	200	0.20	1,000	Active
623	NGW212	IW	NGW212M	01/29/2003	VOC	Vinyl chloride	230	0.20	1,200	Active
623	NGW212	IW	NGW212U	01/29/2003	VOC	Vinyl chloride	240	0.20	1,200	Active
623	NGW212	IW	NGW212U	02/18/2003	VOC	Vinyl chloride	100	0.20	500	Active
623	NGW212	IW	NGW212U	07/15/2003	VOC	Vinyl chloride	57	0.20	290	Active
623	NGW212	IW	NGW212U	02/10/2004	VOC	Vinyl chloride	17	0.20	85	Active
623	NGW212	IW	NGW212	08/09/2004	VOC	Vinyl chloride	8.8	0.20	44	Active
623	NGW212	IW	NGW212-Dup	02/07/2005	VOC	Vinyl chloride	4	0.20	20	Active
623	NGW212	IW	NGW212	08/18/2005	VOC	Vinyl chloride	3.6	0.20	18	Active
623	NGW212	IW	NGW212	02/21/2006	VOC	Vinyl chloride	3.2	0.20	16	Active
623	NGW212	IW	NGW212	02/20/2007	VOC	Vinyl chloride	3.1	0.20	16	Active
623	NGW212	IW	NGW212	08/22/2007	VOC	Vinyl chloride	4.4	0.20	22	Active
623	NGW212	IW	NGW212	02/19/2008	VOC	Vinyl chloride	5.1	0.20	26	Active
623	NGW212	IW	NGW212	08/20/2008	VOC	Vinyl chloride	4.3	0.20	22	Active
623	NGW212	IW	NGW212	02/16/2009	VOC	Vinyl chloride	6	0.20	30	Active
623	NGW212	IW	NGW212	02/19/2010	VOC	Vinyl chloride	4	0.20	20	Active
623	NGW212	IW	NGW212	08/19/2010	VOC	Vinyl chloride	7	0.20	35	Active
623	NGW212	IW	NGW-212	02/10/2011	VOC	Vinyl chloride	5.3	0.20	27	Active

Table 7.1-8
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
623	NGW212	IW	NGW212-110802	08/02/2011	VOC	Vinyl chloride	5.7	0.20	29	Active
3980	NGW222	IW	NGW-222-062011	06/20/2011	VOC	Trichloroethene (TCE)	8.4	4.0	2.1	Active
3987	NGW225	IW	NGW-225-062011	06/20/2011	VOC	Trichloroethene (TCE)	4.3	4.0	1.1	Active
3985	NGW227	IW	NGW-227-062011	06/20/2011	VOC	Trichloroethene (TCE)	4.4	4.0	1.1	Active
Building 3-380 Storm Drain Area										
3992	DW-03	DW	DW-03-TE69A	07/19/2011	VOC	Vinyl chloride	0.5	0.20	2.5	Abandoned
3993	DW-04	DW	DW-04-TE13A	07/14/2011	VOC	Tetrachloroethene (PCE)	6.4	5.0	1.3	Abandoned
625	NGW202	MW	NGW202	05/11/1995	MET	Arsenic	35	5.0	7.0	Active
625	NGW202	MW	MW-2-DUPL	09/14/1995	MET	Arsenic	100	5.0	20	Active
625	NGW202	MW	MW-2	09/14/1995	MET	Arsenic	100	5.0	20	Active
625	NGW202	MW	MW-2	07/23/1993	MET	Cadmium	5	2.6	1.9	Active
625	NGW202	MW	MW-2	10/27/1993	MET	Cadmium	5	2.6	1.9	Active
625	NGW202	MW	MW-2-DUPL	09/14/1995	MET	Lead	23	11	2.1	Active
625	NGW202	MW	MW-2	09/14/1995	MET	Lead	24	11	2.2	Active
625	NGW202	MW	NGW202	07/20/1994	MET	Mercury	0.1	0.020	5.0	Active
625	NGW202	MW	MW-2	09/14/1995	MET	Mercury	0.2	0.020	10	Active
625	NGW202	MW	MW-2-DUPL	09/14/1995	MET	Mercury	0.3	0.020	15	Active
625	NGW202	MW	MW-2	11/20/1991	TPH	Diesel Range Hydrocarbons	1,000	500	2.0	Active
625	NGW202	MW	3-360/361/365-MW-2	11/20/1991	TPH	Total Petroleum Hydrocarbons	1,000	500	2.0	Active
625	NGW202	MW	MW-2	07/23/1993	VOC	Trichloroethene (TCE)	7.5	4.0	1.9	Active
625	NGW202	MW	MW-2	01/25/1994	VOC	Trichloroethene (TCE)	7.8	4.0	2.0	Active
625	NGW202	MW	NGW202	05/11/1995	VOC	Vinyl chloride	0.9	0.20	4.5	Active
625	NGW202	MW	MW-2	03/20/1996	VOC	Vinyl chloride	0.43	0.20	2.2	Active
625	NGW202	MW	3-360-MW-2	03/14/1997	VOC	Vinyl chloride	0.46	0.20	2.3	Active
625	NGW202	MW	MW-2	02/23/1998	VOC	Vinyl chloride	0.29	0.20	1.5	Active
1638	NGW254	MW	7-027-MW-4	11/20/1991	TPH	Total Petroleum Hydrocarbons	1,700	500	3.4	Active
1638	NGW254	MW	MW-4	02/03/1993	VOC	Vinyl chloride	0.7	0.20	3.5	Active
Building 7-27-1 Area										
1636	NGW252	MW	7-027-MW-2	11/20/1991	MET	Lead	46	11	4.2	Active
1636	NGW252	MW	MW-2D	02/03/1993	TPH	Gasoline Range Hydrocarbons	1,600	1,000	1.6	Active
1636	NGW252	MW	7-027-MW-2	11/20/1991	TPH	Total Petroleum Hydrocarbons	1,700	500	3.4	Active
1636	NGW252	MW	7-027-MW-2	11/20/1991	VAH	Benzene	4	0.80	5.0	Active
1636	NGW252	MW	MW-2D	02/03/1993	VAH	Benzene	1.5	0.80	1.9	Active
1637	NGW253	MW	7-027-MW-3	11/20/1991	TPH	Total Petroleum Hydrocarbons	2,000	500	4.0	Active
1637	NGW253	MW	7-027-MW-3	11/20/1991	VOC	Trichloroethene (TCE)	24	4.0	6.0	Active
1637	NGW253	MW	MW-3	02/03/1993	VOC	Trichloroethene (TCE)	22	4.0	5.5	Active
1637	NGW253	MW	NGW253	01/16/2002	VOC	Trichloroethene (TCE)	8	4.0	2.0	Active
1637	NGW253	MW	MW-3	02/03/1993	VOC	Vinyl chloride	1.2	0.20	6.0	Active

Table 7.1-8
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
Building 3-380 Area										
492	GT-1	MW	GT-1	03/20/1989	MET	Arsenic	61	5.0	12	Abandoned
492	GT-1	MW	GT-1	03/05/1990	MET	Arsenic	17,000	5.0	3,400	Abandoned
492	GT-1	MW	GT-1	03/05/1990	MET	Chromium	100,000	100	1,000	Abandoned
492	GT-1	MW	GT-1	03/20/1989	MET	Copper	360	120	3.0	Abandoned
492	GT-1	MW	GT-1	03/05/1990	MET	Copper	60,000	120	500	Abandoned
492	GT-1	MW	GT-1	03/20/1989	MET	Mercury	4	0.020	200	Abandoned
492	GT-1	MW	GT-1	03/20/1989	MET	Zinc	180	33	5.5	Abandoned
492	GT-1	MW	GT-1	03/05/1990	MET	Zinc	40,000	33	1,200	Abandoned
493	GT-2	MW	GT-2	03/20/1989	MET	Arsenic	36	5.0	7.2	Abandoned
493	GT-2	MW	GT-2	03/05/1990	MET	Arsenic	10,000	5.0	2,000	Abandoned
493	GT-2	MW	GT-2	03/05/1990	MET	Chromium	30,000	100	300	Abandoned
493	GT-2	MW	GT-2	03/05/1990	MET	Copper	40,000	120	330	Abandoned
493	GT-2	MW	GT-2	03/20/1989	MET	Mercury	3	0.020	150	Abandoned
494	GT-3	MW	GT-3	03/20/1989	MET	Arsenic	9	5.0	1.8	Abandoned
494	GT-3	MW	GT-3	03/05/1990	MET	Chromium	50,000	100	500	Abandoned
494	GT-3	MW	GT-3	03/05/1990	MET	Copper	40,000	120	330	Abandoned
494	GT-3	MW	GT-3	03/20/1989	MET	Mercury	2	0.020	100	Abandoned
494	GT-3	MW	GT-3	03/05/1990	MET	Zinc	60,000	33	1,800	Abandoned
495	GT-4	MW	GT-4	03/20/1989	MET	Arsenic	17	5.0	3.4	Abandoned
495	GT-4	MW	GT-4	03/05/1990	MET	Arsenic	20,000	5.0	4,000	Abandoned
495	GT-4	MW	GT-4	03/05/1990	MET	Chromium	80,000	100	800	Abandoned
495	GT-4	MW	GT-4	03/20/1989	MET	Mercury	2	0.020	100	Abandoned
495	GT-4	MW	GT-4	03/20/1989	MET	Zinc	69	33	2.1	Abandoned
495	GT-4	MW	GT-4	03/05/1990	MET	Zinc	50,000	33	1,500	Abandoned
496	GT-5	MW	GT-5	03/20/1989	MET	Arsenic	15	5.0	3.0	Abandoned
496	GT-5	MW	GT-5	03/05/1990	MET	Chromium	30,000	100	300	Abandoned
496	GT-5	MW	GT-5	03/05/1990	MET	Copper	20,000	120	170	Abandoned
496	GT-5	MW	GT-5	03/20/1989	MET	Mercury	2	0.020	100	Abandoned
496	GT-5	MW	GT-5	03/20/1989	MET	Zinc	78	33	2.4	Abandoned
496	GT-5	MW	GT-5	03/05/1990	MET	Zinc	20,000	33	610	Abandoned
Building 3-369 Area										
4058	DW-1-370	MW	DW-1-082212	08/22/2012	MET	Arsenic	30	5.0	6.0	Active
4058	DW-1-370	MW	DW-1-082212	08/22/2012	MET	Chromium	188	100	1.9	Active
4058	DW-1-370	MW	DW-1-082212	08/22/2012	MET	Copper	205	120	1.7	Active
4058	DW-1-370	MW	DW-1-082212	08/22/2012	MET	Lead	42	11	3.8	Active
4058	DW-1-370	MW	DW-1-082212	08/22/2012	MET	Mercury	0.3	0.020	15	Active
4058	DW-1-370	MW	DW-1-082212	08/22/2012	MET	Zinc	190	33	5.8	Active
557	GT88-1	MW	GT88-1	06/21/1991	MET	Cadmium	110	2.600	42	Active
557	GT88-1	MW	GT88-1	08/09/1989	MET	Chromium	600	100	6.0	Active
557	GT88-1	MW	GT88-1	06/21/1991	MET	Chromium	1,600	100	16	Active

Table 7.1-8
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
557	GT88-1	MW	GT88-1	08/09/1989	MET	Copper	2,000	120	17	Active
557	GT88-1	MW	GT88-1	06/21/1991	MET	Copper	2,070	120	17	Active
557	GT88-1	MW	GT88-1	06/21/1991	MET	Lead	1,560	11	140	Active
557	GT88-1	MW	GT88-1	08/09/1989	MET	Mercury	2	0.020	100	Active
557	GT88-1	MW	GT88-1	08/09/1989	MET	Nickel	400	100	4.0	Active
557	GT88-1	MW	GT88-1	06/21/1991	MET	Nickel	1,260	100	13	Active
557	GT88-1	MW	GT88-1	06/21/1991	MET	Silver	40	1.5	27	Active
557	GT88-1	MW	GT88-1	08/09/1989	MET	Thallium	400	0.50	800	Active
557	GT88-1	MW	GT88-1	08/09/1989	MET	Zinc	1,000	33	30	Active
557	GT88-1	MW	GT88-1	06/21/1991	MET	Zinc	380	33	12	Active
558	GT88-2	MW	GT88-2	08/09/1989	MET	Antimony	2,000	6.0	330	Active
558	GT88-2	MW	GT88-2	08/09/1989	MET	Mercury	0.9	0.020	45	Active
558	GT88-2	MW	GT88-2	08/09/1989	MET	Thallium	400	0.50	800	Active
559	GT88-3	MW	GT88-3	08/09/1989	MET	Antimony	2,000	6.0	330	Abandoned
559	GT88-3	MW	GT88-3	08/09/1989	MET	Chromium	300	100	3.0	Abandoned
559	GT88-3	MW	GT88-3	08/09/1989	MET	Mercury	2	0.020	100	Abandoned
559	GT88-3	MW	GT88-3	08/09/1989	MET	Nickel	200	100	2.0	Abandoned
559	GT88-3	MW	GT88-3	08/09/1989	MET	Thallium	400	0.50	800	Abandoned
559	GT88-3	MW	GT88-3	08/09/1989	MET	Zinc	600	33	18	Abandoned
Concourse A Area										
1980	A5	TW	A5	07/25/1996	MET	Aluminum	165,200	16000	10	Abandoned
1980	A5	TW	A5	07/25/1996	MET	Arsenic	80	5.0	16	Abandoned
1980	A5	TW	A5	07/25/1996	MET	Chromium	300	100	3.0	Abandoned
1980	A5	TW	A5	07/25/1996	MET	Copper	410	120	3.4	Abandoned
1980	A5	TW	A5	07/25/1996	MET	Iron	188,300	11000	17	Abandoned
1980	A5	TW	A5	07/25/1996	MET	Lead	100	11	9.1	Abandoned
1980	A5	TW	A5	07/25/1996	MET	Manganese	2,930	2200	1.3	Abandoned
1980	A5	TW	A5	07/25/1996	MET	Nickel	160	100	1.6	Abandoned
1980	A5	TW	A5	07/25/1996	MET	Selenium	80	50	1.6	Abandoned
1980	A5	TW	A5	07/25/1996	MET	Vanadium	470	3.0	160	Abandoned
1980	A5	TW	A5	07/25/1996	MET	Zinc	3,610	33	110	Abandoned
1980	A5	TW	A5	07/25/1996	TPH	Total Petroleum Hydrocarbons	2,000	500	4.0	Abandoned
1980	A5	TW	A5	07/25/1996	PHT	Bis(2-ethylhexyl) phthalate	7.6	1.0	7.6	Abandoned
1980	A5	TW	A5	07/25/1996	PAH	2-Methylnaphthalene	56	18	3.1	Abandoned
1981	A6	TW	A6	07/25/1996	MET	Aluminum	246,000	16000	15	Abandoned
1981	A6	TW	A6	07/25/1996	MET	Arsenic	70	5.0	14	Abandoned
1981	A6	TW	A6	07/25/1996	MET	Beryllium	10	4.0	2.5	Abandoned
1981	A6	TW	A6	07/25/1996	MET	Cadmium	10	2.6	3.8	Abandoned
1981	A6	TW	A6	07/25/1996	MET	Chromium	500	100	5.0	Abandoned
1981	A6	TW	A6	07/25/1996	MET	Copper	750	120	6.3	Abandoned
1981	A6	TW	A6	07/25/1996	MET	Iron	251,800	11000	23	Abandoned

Table 7.1-8
RI Selected Screening Level Exceedances for Detected COPCs in Groundwater at North Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
1981	A6	TW	A6	07/25/1996	MET	Lead	150	11	14	Abandoned
1981	A6	TW	A6	07/25/1996	MET	Manganese	2,480	2200	1.1	Abandoned
1981	A6	TW	A6	07/25/1996	MET	Nickel	240	100	2.4	Abandoned
1981	A6	TW	A6	07/25/1996	MET	Selenium	150	50	3.0	Abandoned
1981	A6	TW	A6	07/25/1996	MET	Vanadium	850	3.0	280	Abandoned
1981	A6	TW	A6	07/25/1996	MET	Zinc	2,910	33	88	Abandoned
1981	A6	TW	A5	07/25/1996	PHT	Bis(2-ethylhexyl) phthalate	1.2	1.0	1.2	Abandoned
Not in AOC										
4059	DW-2-370	MW	DW-2-082212	08/22/2012	MET	Arsenic	6.2	5.0	1.2	Active
4060	DW-3-370	MW	DW-3-082212	08/22/2012	MET	Arsenic	6.5	5.000	1.3	Active
4061	DW-4-370	MW	DW-4-082212	08/22/2012	MET	Arsenic	11	5.0	2.2	Active
4061	DW-4-370	MW	DW-4-082212	08/22/2012	MET	Lead	14.3	11	1.3	Active
4061	DW-4-370	MW	DW-4-082212	08/22/2012	MET	Zinc	90	33	2.7	Active
4062	DW-5-370	MW	DW-5-082212	08/22/2012	MET	Arsenic	7.1	5.0	1.4	Active
4063	DW-6-370	MW	DW-6-082212	08/22/2012	MET	Arsenic	11.8	5.0	2.4	Active
4063	DW-6-370	MW	DW-6-082212	08/22/2012	MET	Lead	13	11	1.2	Active
4063	DW-6-370	MW	DW-6-082212	08/22/2012	MET	Mercury	0.3	0.020	15	Active
4063	DW-6-370	MW	DW-6-082212	08/22/2012	MET	Zinc	47	33	1.4	Active

DW = Dewatering well
IW = Injection well
MET = Metals
MW = Monitoring well
PAH = Polycyclic aromatic hydrocarbons
PHT = Phthalates
TPH = Petroleum Hydrocarbons
TW = Temporary well
VAH = Volatile aromatic hydrocarbons
VOC = Volatile organic compounds

Table 7.1-9
RI Selected Screening Level Exceedances for Detected COPCs in Soil at Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
Buildings 3-800, 3-801 Area											
305	810 E-11	TP	810E-13	10/03/1989	7	TPH	Total Petroleum Hydrocarbons	5,800	2,000	2.9	Removed
309	810N-14	TP	810N-14	10/03/1989	7	TPH	Total Petroleum Hydrocarbons	4,900	2,000	2.5	Removed
309	810N-14	TP	810N-14	10/03/1989	7	PAH	2-Methylnaphthalene	0.5 J	0.043	12	Removed
310	810N-2	TP	810N-2	09/21/1989	7	TPH	Total Petroleum Hydrocarbons	11,000	2,000	5.5	Removed
311	810N-21	TP	810NB-21	09/26/1989	7	TPH	Diesel Range Hydrocarbons	6,200	2,000	3.1	Removed
311	810N-21	TP	810N-21	09/26/1989	7	TPH	Total Petroleum Hydrocarbons	8,700	2,000	4.4	Removed
577	Abandoned NGW307	MW	MW104A-7	03/03/1992	8	VOC	cis-1,2-Dichloroethene	0.037	0.0052	7.1	
577	Abandoned NGW307	MW	MW104A-7	03/03/1992	8	VOC	Vinyl chloride	0.067	--	--	
577	Abandoned NGW307	MW	MW104A-9.5	03/03/1992	10.5	MET	Beryllium	0.3	--	--	
577	Abandoned NGW307	MW	MW104A-9.5	03/03/1992	10.5	MET	Copper	43.9	36	1.2	
577	Abandoned NGW307	MW	MW104A-9.5	03/03/1992	10.5	MET	Mercury	0.14	0.070	2.0	
577	Abandoned NGW307	MW	MW104A-9.5	03/03/1992	10.5	MET	Selenium	0.1	--	--	
577	Abandoned NGW307	MW	MW104A-9.5	03/03/1992	10.5	VOC	Vinyl chloride	0.01	--	--	
577	Abandoned NGW307	MW	MW104A-14	03/03/1992	15	VOC	Tetrachloroethene (PCE)	0.048	0.0018	27	
577	Abandoned NGW307	MW	MW104A-14	03/03/1992	15	VOC	Trichloroethene (TCE)	0.0028	0.0015	1.9	
578	Abandoned NGW308	MW	MW105A-6.5	03/04/1992	7.5	VOC	Tetrachloroethene (PCE)	0.0027	0.0018	1.5	
578	Abandoned NGW308	MW	MW105A-9.5	03/04/1992	10.5	MET	Arsenic	10	7.0	1.4	
578	Abandoned NGW308	MW	MW105A-9.5	03/04/1992	10.5	MET	Beryllium	0.7	--	--	
578	Abandoned NGW308	MW	MW105A-9.5	03/04/1992	10.5	MET	Copper	46.9	36	1.3	
578	Abandoned NGW308	MW	MW105A-9.5	03/04/1992	10.5	MET	Mercury	0.09	0.070	1.3	
1957	B-2	SB	B-2	02/07/1990	11.5	MET	Beryllium	0.3	--	--	
1957	B-2	SB	B-2	02/07/1990	11.5	VOC	1,2-Dichloroethene	0.13	0.023	5.7	
1957	B-2	SB	B-2	02/07/1990	11.5	VOC	Tetrachloroethene (PCE)	0.0082	0.0018	4.6	
1957	B-2	SB	B-2	02/07/1990	11.5	VOC	Trichloroethene (TCE)	0.03	0.0015	20	
1958	B-3	SB	B-3	02/07/1990	11.5	VOC	Tetrachloroethene (PCE)	0.0042	0.0018	2.3	Removed
1960	B-5	SB	B-5	02/07/1990	11.5	PAH	Benzo(a)anthracene	0.092	--	--	
1960	B-5	SB	B-5	02/07/1990	11.5	PAH	Benzo(a)pyrene	0.099	0.0094	11	
1960	B-5	SB	B-5	02/07/1990	11.5	PAH	Chrysene	0.11	--	--	
1960	B-5	SB	B-5	02/07/1990	11.5	PAH	Fluoranthene	0.21	0.16	1.3	
1960	B-5	SB	B-5	02/07/1990	11.5	PAH	Indeno(1,2,3-cd)pyrene	0.072 J	--	--	
1960	B-5	SB	B-5	02/07/1990	11.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.12	0.0094	13	
1960	B-5	SB	B-5	02/07/1990	11.5	VOC	Tetrachloroethene (PCE)	0.074	0.0018	41	
1961	B-6	SB	B-6	02/07/1990	11.5	VOC	Tetrachloroethene (PCE)	0.35	0.0018	190	
1843	EX2	EX	EX2(6')	03/11/1992	6	TPH	Total Petroleum Hydrocarbons-HCID	26,000	2,000	13	
1876	EX36	EX	EX36(7.5')	03/23/1992	7.5	TPH	Total Petroleum Hydrocarbons-HCID	8,100	2,000	4.1	
4189	HC-B2	SB	HC-B2	09/13/1990	14	VOC	cis-1,2-Dichloroethene	0.0071	0.0052	1.4	
4189	HC-B2	SB	HC-B2	09/13/1990	14	VOC	Tetrachloroethene (PCE)	0.98	0.0018	540	
4189	HC-B2	SB	HC-B2	09/13/1990	14	VOC	Trichloroethene (TCE)	0.069	0.0015	46	
4188	HC-E2	SB	HC-E2	09/13/1990	--	VOC	Tetrachloroethene (PCE)	0.017	0.0018	9.4	
4187	HC-N2	SB	HC-N2	09/13/1990	--	VOC	Tetrachloroethene (PCE)	0.28	0.0018	160	
4187	HC-N2	SB	HC-N2	09/13/1990	--	VOC	Trichloroethene (TCE)	0.0081	0.0015	5.4	
4190	HC-W2	SB	HC-W2	09/13/1990	--	VOC	Tetrachloroethene (PCE)	0.11	0.0018	61	

Table 7.1-9
RI Selected Screening Level Exceedances for Detected COPCs in Soil at Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
4190	HC-W2	SB	HC-W2	09/13/1990	--	VOC	Trichloroethene (TCE)	0.013	0.0015	8.7	
1759	MW-1	MW	MW-1-5.5-6	07/05/1991	6.5 - 7	TPH	Total Petroleum Hydrocarbons	17,000	2,000	8.5	
1963	MW-2	MW	B2-8.5 (MW-2)	02/15/1990	8.5	PAH	Benzo(a)pyrene	0.77	0.0094	82	
1963	MW-2	MW	B2-8.5 (MW-2)	02/15/1990	8.5	PAH	Total cPAHs (TEQ, NDx0.5)	0.84	0.0094	89	
572	NGW302	MW	MW101B-9.5	03/02/1992	10.5	MET	Beryllium	0.5	--	--	
572	NGW302	MW	MW101B-9.5	03/02/1992	10.5	MET	Mercury	0.1	0.070	1.4	
572	NGW302	MW	MW101B-9.5	03/02/1992	10.5	MET	Selenium	0.9	--	--	
572	NGW302	MW	MW101B-9.5	03/02/1992	10.5	VOC	Tetrachloroethene (PCE)	0.0081	0.0018	4.5	
572	NGW302	MW	MW101B-9.5	03/02/1992	10.5	VOC	Vinyl chloride	0.0082	--	--	
572	NGW302	MW	MW101B-14.5	03/02/1992	15.5	VOC	cis-1,2-Dichloroethene	0.014	0.0052	2.7	
572	NGW302	MW	MW101B-14.5	03/02/1992	15.5	VOC	Vinyl chloride	0.12	--	--	
574	NGW304	MW	MW102B-6	03/04/1992	7	VOC	Tetrachloroethene (PCE)	0.0093	0.0018	5.2	
574	NGW304	MW	MW102B-10	03/04/1992	11	MET	Beryllium	0.5	--	--	
574	NGW304	MW	MW102B-10	03/04/1992	11	MET	Copper	131	36	3.6	
574	NGW304	MW	MW102B-10	03/04/1992	11	MET	Mercury	0.09	0.070	1.3	
574	NGW304	MW	MW102B-10	03/04/1992	11	MET	Zinc	98.5	86	1.1	
582	NGW305	MW	RMW103A-5.0-5.5	01/17/1994	5 - 5.5	VOC	cis-1,2-Dichloroethene	0.12	0.0052	23	
582	NGW305	MW	RMW103A-5.0-5.5	01/17/1994	5 - 5.5	VOC	Tetrachloroethene (PCE)	0.02	0.0018	11	
582	NGW305	MW	RMW103A-5.0-5.5	01/17/1994	5 - 5.5	VOC	Trichloroethene (TCE)	0.008	0.0015	5.3	
582	NGW305	MW	RMW103A-5.0-5.5	01/17/1994	5 - 5.5	VOC	Vinyl chloride	0.028	--	--	
576	NGW306	MW	MW103B-6	03/03/1992	7	VOC	Tetrachloroethene (PCE)	0.18	0.0018	100	
576	NGW306	MW	MW103B-6	03/03/1992	7	VOC	Trichloroethene (TCE)	0.0066	0.0015	4.4	
576	NGW306	MW	MW103B-10	03/03/1992	11	MET	Beryllium	0.4	--	--	
576	NGW306	MW	MW103B-10	03/03/1992	11	MET	Copper	95.6	36	2.7	
576	NGW306	MW	MW103B-10	03/03/1992	11	MET	Selenium	0.4	--	--	
576	NGW306	MW	MW103B-10	03/03/1992	11	MET	Zinc	86.4	86	1.0	
576	NGW306	MW	MW103B-10	03/03/1992	11	PAH	Benzo(a)anthracene	0.048 J	--	--	
576	NGW306	MW	MW103B-10	03/03/1992	11	PAH	Chrysene	0.053 J	--	--	
576	NGW306	MW	MW103B-10	03/03/1992	11	PAH	Total cPAHs (TEQ, NDx0.5)	0.059	0.0094	6.3	
576	NGW306	MW	MW103B-25	03/03/1992	26	VOC	Tetrachloroethene (PCE)	0.0072	0.0018	4.0	
583	NGW307	MW	RMW104A-6.0-6.5	01/17/1994	6 - 6.5	VOC	cis-1,2-Dichloroethene	0.32	0.0052	62	
583	NGW307	MW	RMW104A-6.0-6.5	01/17/1994	6 - 6.5	VOC	Tetrachloroethene (PCE)	0.085	0.0018	47	
583	NGW307	MW	RMW104A-6.0-6.5	01/17/1994	6 - 6.5	VOC	Trichloroethene (TCE)	0.07	0.0015	47	
583	NGW307	MW	RMW104A-6.0-6.5	01/17/1994	6 - 6.5	VOC	Vinyl chloride	0.091	--	--	
1764	SB-1	SB	SB-1-3.5-4	07/05/1991	4.5 - 5	MET	Cadmium	1.1	1.0	1.1	
1764	SB-1	SB	SB-1-3.5-4	07/05/1991	4.5 - 5	MET	Copper	69	36	1.9	
1764	SB-1	SB	SB-1-3.5-4	07/05/1991	4.5 - 5	MET	Zinc	95.1	86	1.1	
1774	SB-11	SB	SB-11-2.5-3	07/05/1991	3.5 - 4	MET	Cadmium	1.7	1.0	1.7	
1774	SB-11	SB	SB-11-2.5-3	07/05/1991	3.5 - 4	MET	Copper	58.5	36	1.6	
1775	SB-12	SB	SB-12-2.5-3	07/05/1991	3.5 - 4	MET	Beryllium	0.5	--	--	
1775	SB-12	SB	SB-12-2.5-3	07/05/1991	3.5 - 4	MET	Cadmium	2.1	1.0	2.1	
1775	SB-12	SB	SB-12-2.5-3	07/05/1991	3.5 - 4	MET	Copper	80.3	36	2.2	
1775	SB-12	SB	SB-12-2.5-3	07/05/1991	3.5 - 4	MET	Zinc	119	86	1.4	

Table 7.1-9
RI Selected Screening Level Exceedances for Detected COPCs in Soil at Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
1778	SB-15	SB	SB-15-3.5-4	07/05/1991	4.5 - 5	MET	Beryllium	0.5	--	--	
1778	SB-15	SB	SB-15-3.5-4	07/05/1991	4.5 - 5	MET	Cadmium	1.3	1.0	1.3	
1778	SB-15	SB	SB-15-3.5-4	07/05/1991	4.5 - 5	VOC	Trichloroethene (TCE)	0.4	0.0015	270	
1779	SB-16	SB	SB-16-5.5-6	07/05/1991	6.5 - 7	MET	Cadmium	1.1	1.0	1.1	
1780	SB-17	SB	SB-17-5.5-6	07/05/1991	6.5 - 7	MET	Cadmium	1.2	1.0	1.2	
1785	SB-1A	SB	SB-1A@8	09/19/1991	9 - 9.5	MET	Arsenic	7.5	7.0	1.1	
1784	SB-21	SB	SB-21-6.5-7	07/05/1991	7.5 - 8	MET	Cadmium	1.1	1.0	1.1	
1766	SB-3	SB	SB-3-5.5-6	07/05/1991	6.5 - 7	MET	Cadmium	2	1.0	2.0	
1766	SB-3	SB	SB-3-5.5-6	07/05/1991	6.5 - 7	MET	Copper	81.6	36	2.3	
1766	SB-3	SB	SB-3-5.5-6	07/05/1991	6.5 - 7	MET	Zinc	109	86	1.3	
1770	SB-7	SB	SB-7-2.5-3	07/05/1991	3.5 - 4	MET	Cadmium	1.1	1.0	1.1	
1772	SB-9	SB	SB-9-5.5-6	07/05/1991	6.5 - 7	MET	Cadmium	2.1	1.0	2.1	
1772	SB-9	SB	SB-9-5.5-6	07/05/1991	6.5 - 7	MET	Copper	153	36	4.3	
1772	SB-9	SB	SB-9-5.5-6	07/05/1991	6.5 - 7	MET	Zinc	175	86	2.0	
373	TP12	TP	TP12-6	10/16/1989	6	TPH	Total Petroleum Hydrocarbons	2,100	2,000	1.1	Removed
385	TP2	TP	TP2-6	10/16/1989	6	TPH	Total Petroleum Hydrocarbons	16,000	2,000	8.0	Removed
404	TP38	TP	TP38-6	10/16/1989	6	TPH	Total Petroleum Hydrocarbons	3,800	2,000	1.9	Removed
Building 3-818 Area											
No detected exceedances											
Main Fuel Farm Area											
895	EW6	EX	BMFF-EW6@4'	07/01/1994	4	TPH	Gasoline Range Hydrocarbons	4,500	100	45	
895	EW6	EX	BMFF-EW6@4'	07/01/1994	4	TPH	Diesel Range Hydrocarbons	4,100	2,000	2.1	
895	EW6	EX	BMFF-EW6@4'	07/01/1994	4	PAH	2-Methylnaphthalene	1.1 M	0.043	26	
897	EW8	EX	BMFF-EW8@8	07/01/1994	8	TPH	Gasoline Range Hydrocarbons	1,500	30	50	
4112	GEI-1	SB	GEI-1-S7-9.5 Ft	10/31/2012	9.5 - 11	MET	Aluminum	18,000	--	--	
4112	GEI-1	SB	GEI-1-S7-9.5 Ft	10/31/2012	9.5 - 11	MET	Iron	13,000	--	--	
4113	GEI-2	SB	GEI-2-S3-3.5 Ft	11/01/2012	3.5 - 5	MET	Aluminum	11,000	--	--	
4113	GEI-2	SB	GEI-2-S3-3.5 Ft	11/01/2012	3.5 - 5	MET	Iron	11,000	--	--	
4113	GEI-2	SB	GEI-2-S5-6.5 Ft	11/01/2012	6.5 - 8	MET	Aluminum	16,000	--	--	
4113	GEI-2	SB	GEI-2-S5-6.5 Ft	11/01/2012	6.5 - 8	MET	Iron	18,000	--	--	
4113	GEI-2	SB	GEI-2-S15-40.0 Ft	11/01/2012	40 - 41.5	MET	Aluminum	6,900	--	--	
4113	GEI-2	SB	GEI-2-S15-40.0 Ft	11/01/2012	40 - 41.5	MET	Barium	2,400	83	29	
4113	GEI-2	SB	GEI-2-S15-40.0 Ft	11/01/2012	40 - 41.5	MET	Iron	8,300	--	--	
4114	GEI-3	SB	GEI-3-S3-3.5 Ft	11/02/2012	3.5 - 5	MET	Aluminum	9,200	--	--	
4114	GEI-3	SB	GEI-3-S3-3.5 Ft	11/02/2012	3.5 - 5	MET	Iron	11,000	--	--	
691	MW-13	MW	NBF-MF-13	04/29/1986	10	TPH	Jet Fuel	2,500	2,000	1.3	
598	MW-19	MW	NBF-MF-19	04/28/1986	3	TPH	Jet Fuel	4,170	2,000	2.1	
900	NW26	EX	BMFF-NW26@8B	07/22/1994	8	TPH	Gasoline Range Hydrocarbons	87	30	2.9	
903	NW28	EX	BMFF-NW28@8'	07/22/1994	8	TPH	Gasoline Range Hydrocarbons	310	30	10	
904	NWW	EX	BMFF-NWW@4'	06/29/1994	4	TPH	Gasoline Range Hydrocarbons	39	30	1.3	
904	NWW	EX	BMFF-NWW@4'	06/29/1994	4	VAH	Benzene	0.0098	0.0010	9.8	
904	NWW	EX	BMFF-NWW@8'	06/29/1994	8	TPH	Gasoline Range Hydrocarbons	710	30	24	

Table 7.1-9
RI Selected Screening Level Exceedances for Detected COPCs in Soil at Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
904	NWW	EX	BMFF-NWW@8'	06/29/1994	8	PAH	2-Methylnaphthalene	1.3	0.043	30	
916	SW16	EX	BMFF-SW16@8	07/11/1994	8	TPH	Gasoline Range Hydrocarbons	6,100	30	200	
916	SW16	EX	BMFF-SW16@8	07/11/1994	8	TPH	Diesel Range Hydrocarbons	6,600	2,000	3.3	
918	SW21	EX	BMFF-SW21@8	07/14/1994	8	TPH	Diesel Range Hydrocarbons	14,000	2,000	7.0	
918	SW21	EX	BMFF-SW21@8	07/14/1994	8	TPH	Total Petroleum Hydrocarbons	26,000	2,000	13	
918	SW21	EX	BMFF-SW21@8	07/14/1994	8	PAH	Benzo(a)anthracene	8.5	--	--	
918	SW21	EX	BMFF-SW21@8	07/14/1994	8	PAH	Benzo(b)fluoranthene	6	--	--	
918	SW21	EX	BMFF-SW21@8	07/14/1994	8	PAH	Benzo(k)fluoranthene	2.8	--	--	
918	SW21	EX	BMFF-SW21@8	07/14/1994	8	PAH	Total Benzofluoranthenes	8.8	--	--	
918	SW21	EX	BMFF-SW21@8	07/14/1994	8	PAH	Benzo(g,h,i)perylene	0.87	0.031	28	
918	SW21	EX	BMFF-SW21@8	07/14/1994	8	PAH	Benzo(a)pyrene	4.3	0.0094	460	
918	SW21	EX	BMFF-SW21@8	07/14/1994	8	PAH	Chrysene	7.3	--	--	
918	SW21	EX	BMFF-SW21@8	07/14/1994	8	PAH	Fluoranthene	22	0.16	140	
918	SW21	EX	BMFF-SW21@8	07/14/1994	8	PAH	Indeno(1,2,3-cd)pyrene	1	--	--	
918	SW21	EX	BMFF-SW21@8	07/14/1994	8	PAH	2-Methylnaphthalene	15 M	0.043	350	
918	SW21	EX	BMFF-SW21@8	07/14/1994	8	PAH	Total cPAHs (TEQ, NDx0.5)	6.2	0.0094	660	
861	UST-7	EX	NBF-MFF-UST-7	12/18/1992	7.5	TPH	Total Petroleum Hydrocarbons	50,000	2,000	25	Removed
862	UST-8	EX	NBF-MFF-UST-8	12/18/1992	7.5	TPH	Total Petroleum Hydrocarbons	5,400	2,000	2.7	Removed
863	UST-9	EX	NBF-MFF-UST-9	12/18/1992	7.5	TPH	Total Petroleum Hydrocarbons	3,200	2,000	1.6	Removed
919	WW	EX	BMFF-WW@5'	06/29/1994	5	TPH	Gasoline Range Hydrocarbons	1,100	100	11	
919	WW	EX	BMFF-WW@5'	06/29/1994	5	PAH	2-Methylnaphthalene	8.2	0.043	190	
921	WW19	EX	BMFF-WW19@7	07/14/1994	7	TPH	Gasoline Range Hydrocarbons	320	100	3.2	
921	WW19	EX	BMFF-WW19@7	07/14/1994	7	PAH	Benzo(a)anthracene	0.32	--	--	
921	WW19	EX	BMFF-WW19@7	07/14/1994	7	PAH	Benzo(b)fluoranthene	0.2	--	--	
921	WW19	EX	BMFF-WW19@7	07/14/1994	7	PAH	Benzo(k)fluoranthene	0.26	--	--	
921	WW19	EX	BMFF-WW19@7	07/14/1994	7	PAH	Total Benzofluoranthenes	0.46	--	--	
921	WW19	EX	BMFF-WW19@7	07/14/1994	7	PAH	Benzo(a)pyrene	0.19	0.0094	20	
921	WW19	EX	BMFF-WW19@7	07/14/1994	7	PAH	Chrysene	0.28	--	--	
921	WW19	EX	BMFF-WW19@7	07/14/1994	7	PAH	Fluoranthene	0.82	0.16	5.1	
921	WW19	EX	BMFF-WW19@7	07/14/1994	7	PAH	Total cPAHs (TEQ, NDx0.5)	0.28	0.0094	30	
Concourse C Area											
1789	B-1	SB	NBF-C-B1 E6	08/22/1991	6	VAH	Benzene	0.17	0.0010	170	Removed
194	B-1-90	SB	B-1 1&2-A Composite	09/06/1990	1 - 6	TPH	Diesel Range Hydrocarbons	5,500	2,000	2.8	
1790	B-2	SB	NBF-C-B2 E4	08/22/1991	4	TPH	Diesel Range Hydrocarbons	2,500	2,000	1.3	Removed
1790	B-2	SB	NBF-C-B2 E6	08/22/1991	6	VAH	Benzene	0.0081	0.0010	8.1	Removed
1811	HA-15	SB	NBFC-HA-15-03'	10/09/1991	3 - 3.5	TPH	Diesel Range Hydrocarbons	4,400	2,000	2.2	Removed
Concourse B Area											
No detected exceedances											

EX = Excavation
J = Estimated value
M = Estimated value, with low spectral match parameters
MET = Metals
MW = Monitoring well
PAH = Polycyclic aromatic hydrocarbons
SB = Soil boring
TP = Test pit
TPH = Petroleum Hydrocarbons
VAH = Volatile aromatic hydrocarbons
VOC = Volatile organic compounds
-- = Not applicable

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
Buildings 3-800, 3-801 Area										
575	Abandoned NGW305	MW	MW103A	10/06/1992	MET	Arsenic	8	5.0	1.6	Abandoned
575	Abandoned NGW305	MW	MW-103A	02/24/1998	MET	Arsenic	10	5.0	2.0	Abandoned
575	Abandoned NGW305	MW	NGW305	01/18/1999	MET	Arsenic	9	5.0	1.8	Abandoned
575	Abandoned NGW305	MW	NGW305	07/19/1999	MET	Arsenic	6	5.0	1.2	Abandoned
575	Abandoned NGW305	MW	NGW305	02/21/2000	MET	Arsenic	9	5.0	1.8	Abandoned
575	Abandoned NGW305	MW	NGW305	07/24/2000	MET	Arsenic	7	5.0	1.4	Abandoned
575	Abandoned NGW305	MW	NGW305-Dup	07/24/2000	MET	Arsenic	8	5.0	1.6	Abandoned
575	Abandoned NGW305	MW	MW103A	10/06/1992	MET	Cadmium	10	2.6	3.8	Abandoned
575	Abandoned NGW305	MW	MW103A	07/22/1993	MET	Cadmium	5	2.6	1.9	Abandoned
575	Abandoned NGW305	MW	MW103A	10/27/1993	MET	Cadmium	3	2.6	1.2	Abandoned
575	Abandoned NGW305	MW	MW103A	10/06/1992	MET	Chromium	204	100	2.0	Abandoned
575	Abandoned NGW305	MW	MW-103A	02/24/1998	MET	Chromium	139	100	1.4	Abandoned
575	Abandoned NGW305	MW	MW103A	10/06/1992	MET	Lead	50	11	4.5	Abandoned
575	Abandoned NGW305	MW	MW-103A	02/24/1998	MET	Lead	17	11	1.5	Abandoned
575	Abandoned NGW305	MW	MW103A	10/06/1992	MET	Mercury	5	0.020	250	Abandoned
575	Abandoned NGW305	MW	NGW305	01/18/1999	MET	Mercury	0.1	0.020	5.0	Abandoned
575	Abandoned NGW305	MW	MW103A	03/09/1992	VOC	cis-1,2-Dichloroethene	28	16	1.8	Abandoned
575	Abandoned NGW305	MW	MW103A	10/27/1993	VOC	cis-1,2-Dichloroethene	25	16	1.6	Abandoned
575	Abandoned NGW305	MW	MW103A	03/09/1992	VOC	Tetrachloroethene (PCE)	19	5.0	3.8	Abandoned
575	Abandoned NGW305	MW	MW103A	10/06/1992	VOC	Tetrachloroethene (PCE)	38	5.0	7.6	Abandoned
575	Abandoned NGW305	MW	MW103A	07/22/1993	VOC	Tetrachloroethene (PCE)	43	5.0	8.6	Abandoned
575	Abandoned NGW305	MW	MW103A	10/27/1993	VOC	Tetrachloroethene (PCE)	35	5.0	7.0	Abandoned
575	Abandoned NGW305	MW	NGW305	01/18/1999	VOC	Tetrachloroethene (PCE)	5.1	5.0	1.0	Abandoned
575	Abandoned NGW305	MW	MW103A	03/09/1992	VOC	Trichloroethene (TCE)	7.4	4.0	1.9	Abandoned
575	Abandoned NGW305	MW	MW103A	10/06/1992	VOC	Trichloroethene (TCE)	8.6	4.0	2.2	Abandoned
575	Abandoned NGW305	MW	MW103A	07/22/1993	VOC	Trichloroethene (TCE)	13	4.0	3.3	Abandoned
575	Abandoned NGW305	MW	MW103A	10/27/1993	VOC	Trichloroethene (TCE)	13	4.0	3.3	Abandoned
575	Abandoned NGW305	MW	MW103A	03/09/1992	VOC	Vinyl chloride	46	0.20	230	Abandoned
575	Abandoned NGW305	MW	MW103A	10/06/1992	VOC	Vinyl chloride	3.7	0.20	19	Abandoned
575	Abandoned NGW305	MW	MW103A	07/22/1993	VOC	Vinyl chloride	2.7	0.20	14	Abandoned
575	Abandoned NGW305	MW	MW103A	10/27/1993	VOC	Vinyl chloride	3.4	0.20	17	Abandoned
575	Abandoned NGW305	MW	MW-103A	02/24/1998	VOC	Vinyl chloride	36	0.20	180	Abandoned
575	Abandoned NGW305	MW	NGW305	01/18/1999	VOC	Vinyl chloride	2.2	0.20	11	Abandoned
575	Abandoned NGW305	MW	NGW305	01/18/1999	VOC	Vinyl chloride	4.6	0.20	23	Abandoned
575	Abandoned NGW305	MW	NGW305	07/19/1999	VOC	Vinyl chloride	2.3	0.20	12	Abandoned
575	Abandoned NGW305	MW	NGW305	02/21/2000	VOC	Vinyl chloride	9.7	0.20	49	Abandoned
575	Abandoned NGW305	MW	NGW305	02/21/2000	VOC	Vinyl chloride	9.8	0.20	49	Abandoned
575	Abandoned NGW305	MW	NGW305	07/24/2000	VOC	Vinyl chloride	1.5	0.20	7.5	Abandoned
575	Abandoned NGW305	MW	NGW305-Dup	07/24/2000	VOC	Vinyl chloride	1.5	0.20	7.5	Abandoned
575	Abandoned NGW305	MW	NGW305	07/24/2000	VOC	Vinyl chloride	4.7	0.20	24	Abandoned
575	Abandoned NGW305	MW	NGW305-Dup	07/24/2000	VOC	Vinyl chloride	4.8	0.20	24	Abandoned

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
575	Abandoned NGW305	MW	NGW305	02/18/2001	VOC	Vinyl chloride	4	0.20	20	Abandoned
575	Abandoned NGW305	MW	NGW305-Dup	02/18/2001	VOC	Vinyl chloride	4.3	0.20	22	Abandoned
575	Abandoned NGW305	MW	NGW305	08/20/2001	VOC	Vinyl chloride	2.1	0.20	11	Abandoned
575	Abandoned NGW305	MW	NGW305-Dup	08/20/2001	VOC	Vinyl chloride	2.1	0.20	11	Abandoned
575	Abandoned NGW305	MW	NGW305	02/18/2002	VOC	Vinyl chloride	2.8	0.20	14	Abandoned
575	Abandoned NGW305	MW	NGW305	08/18/2002	VOC	Vinyl chloride	2.7	0.20	14	Abandoned
575	Abandoned NGW305	MW	NGW305-Dup	08/18/2002	VOC	Vinyl chloride	2.9	0.20	15	Abandoned
577	Abandoned NGW307	MW	MW104A	10/06/1992	MET	Cadmium	7	2.6	2.7	Abandoned
577	Abandoned NGW307	MW	MW104A	07/22/1993	MET	Cadmium	11	2.6	4.2	Abandoned
577	Abandoned NGW307	MW	MW104A	10/27/1993	MET	Cadmium	4	2.6	1.5	Abandoned
577	Abandoned NGW307	MW	MW104A	10/06/1992	MET	Chromium	177	100	1.8	Abandoned
577	Abandoned NGW307	MW	MW104A	10/06/1992	MET	Lead	52	11	4.7	Abandoned
577	Abandoned NGW307	MW	MW104A	10/06/1992	MET	Mercury	0.4	0.020	20	Abandoned
577	Abandoned NGW307	MW	MW104A	03/09/1992	VOC	Tetrachloroethene (PCE)	42	5.0	8.4	Abandoned
577	Abandoned NGW307	MW	MW104A	10/06/1992	VOC	Tetrachloroethene (PCE)	62	5.0	12	Abandoned
577	Abandoned NGW307	MW	MW104A	07/22/1993	VOC	Tetrachloroethene (PCE)	37	5.0	7.4	Abandoned
577	Abandoned NGW307	MW	MW104A	10/27/1993	VOC	Tetrachloroethene (PCE)	8.3	5.0	1.7	Abandoned
577	Abandoned NGW307	MW	MW104A	10/06/1992	VOC	Trichloroethene (TCE)	7.3	4.0	1.8	Abandoned
577	Abandoned NGW307	MW	MW104A	07/22/1993	VOC	Trichloroethene (TCE)	11	4.0	2.8	Abandoned
577	Abandoned NGW307	MW	MW104A	03/09/1992	VOC	Vinyl chloride	4.7	0.20	24	Abandoned
577	Abandoned NGW307	MW	MW104A	10/06/1992	VOC	Vinyl chloride	2.9 M	0.20	15	Abandoned
577	Abandoned NGW307	MW	MW104A	07/22/1993	VOC	Vinyl chloride	1.5 J	0.20	7.5	Abandoned
577	Abandoned NGW307	MW	MW104A	10/27/1993	VOC	Vinyl chloride	1.7 J	0.20	8.5	Abandoned
578	Abandoned NGW308	MW	MW105A	10/06/1992	MET	Arsenic	6	5.0	1.2	Abandoned
578	Abandoned NGW308	MW	MW105A	07/22/1993	MET	Cadmium	6	2.6	2.3	Abandoned
578	Abandoned NGW308	MW	MW105A	10/06/1992	MET	Chromium	130	100	1.3	Abandoned
578	Abandoned NGW308	MW	MW105A	10/06/1992	MET	Lead	37	11	3.4	Abandoned
578	Abandoned NGW308	MW	MW105A	10/06/1992	MET	Mercury	0.3	0.020	15	Abandoned
578	Abandoned NGW308	MW	MW105A	10/06/1992	VOC	Tetrachloroethene (PCE)	5.4	5.0	1.1	Abandoned
578	Abandoned NGW308	MW	MW105A	03/09/1992	VOC	Vinyl chloride	1 M	0.20	5.0	Abandoned
1962	MW-1	MW	MW-1	02/16/1990	VOC	1,2-Dichloroethene	380	72	5.3	Abandoned
1962	MW-1	MW	MW-1	02/16/1990	VOC	Tetrachloroethene (PCE)	97	5.0	19	Abandoned
1962	MW-1	MW	MW-1	02/16/1990	VOC	Trichloroethene (TCE)	380	4.0	95	Abandoned
1962	MW-1	MW	MW-1	02/16/1990	VOC	Vinyl chloride	64	0.20	320	Abandoned
1963	MW-2	MW	MW-2	02/16/1990	VOC	1,1-Dichloroethene	25	7.0	3.6	Abandoned
1963	MW-2	MW	MW-2	02/16/1990	VOC	1,2-Dichloroethene	200	72	2.8	Abandoned
1963	MW-2	MW	MW-2	02/16/1990	VOC	Tetrachloroethene (PCE)	62	5.0	12	Abandoned
1963	MW-2	MW	MW-2	02/16/1990	VOC	Trichloroethene (TCE)	350	4.0	88	Abandoned
1963	MW-2	MW	MW-2	02/16/1990	VOC	Vinyl chloride	230	0.20	1,200	Abandoned
1761	MW-3	MW	MW-3	09/04/1991	MET	Antimony	21	6.0	3.5	Abandoned
1761	MW-3	MW	MW-3	09/04/1991	MET	Arsenic	6.4	5.0	1.3	Abandoned
424	MW-3	MW	MW-3	10/14/1989	PAH	Fluoranthene	0.5 J	--	--	Abandoned

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
1762	MW-4	MW	MW-4	09/04/1991	MET	Antimony	57	6.0	9.5	Abandoned
1762	MW-4	MW	MW-4	07/11/1991	MET	Arsenic	170	5.0	34	Abandoned
1762	MW-4	MW	MW-4	09/04/1991	MET	Arsenic	6.5	5.0	1.3	Abandoned
1762	MW-4	MW	MW-4	09/04/1991	MET	Zinc	65	33	2.0	Abandoned
1975	MW-5A	MW	MW-5A	03/06/1990	VOC	Vinyl chloride	59	0.20	300	Abandoned
571	NGW301	MW	MW101A	03/09/1992	MET	Arsenic	8	5.0	1.6	Active
571	NGW301	MW	MW101A	10/06/1992	MET	Arsenic	12	5.0	2.4	Active
571	NGW301	MW	NGW301	08/18/2002	MET	Arsenic	12	5.0	2.4	Active
571	NGW301	MW	MW101A	07/22/1993	MET	Cadmium	5	2.6	1.9	Active
571	NGW301	MW	MW101A	10/06/1992	MET	Chromium	300	100	3.0	Active
571	NGW301	MW	MW101A	03/09/1992	MET	Copper	125	120	1.0	Active
571	NGW301	MW	MW101A	03/09/1992	MET	Lead	22	11	2.0	Active
571	NGW301	MW	MW101A	10/06/1992	MET	Lead	68	11	6.2	Active
571	NGW301	MW	MW101A	03/09/1992	MET	Mercury	0.2	0.020	10	Active
571	NGW301	MW	MW101A	10/06/1992	MET	Mercury	0.7	0.020	35	Active
571	NGW301	MW	MW101A	03/09/1992	MET	Zinc	157	33	4.8	Active
571	NGW301	MW	MW101A	03/09/1992	VOC	cis-1,2-Dichloroethene	79	16	4.9	Active
571	NGW301	MW	MW101A	10/06/1992	VOC	cis-1,2-Dichloroethene	180	16	11	Active
571	NGW301	MW	MW101A	10/27/1993	VOC	cis-1,2-Dichloroethene	75	16	4.7	Active
571	NGW301	MW	MW101A	01/24/1994	VOC	cis-1,2-Dichloroethene	60	16	3.8	Active
571	NGW301	MW	MW101A	04/19/1994	VOC	cis-1,2-Dichloroethene	100	16	6.3	Active
571	NGW301	MW	MW101A	07/19/1994	VOC	cis-1,2-Dichloroethene	180	16	11	Active
571	NGW301	MW	MW101A	10/20/1994	VOC	cis-1,2-Dichloroethene	150	16	9.4	Active
571	NGW301	MW	MW101A	01/23/1995	VOC	cis-1,2-Dichloroethene	54	16	3.4	Active
571	NGW301	MW	MW101A	03/27/1996	VOC	cis-1,2-Dichloroethene	26	16	1.6	Active
571	NGW301	MW	NGW301/MW101A	09/10/1996	VOC	cis-1,2-Dichloroethene	36	16	2.3	Active
571	NGW301	MW	NGW301	07/24/2000	VOC	cis-1,2-Dichloroethene	17	16	1.1	Active
571	NGW301	MW	NGW301	02/18/2001	VOC	cis-1,2-Dichloroethene	58	16	3.6	Active
571	NGW301	MW	NGW301	02/18/2002	VOC	cis-1,2-Dichloroethene	37	16	2.3	Active
571	NGW301	MW	NGW301	08/18/2002	VOC	cis-1,2-Dichloroethene	39	16	2.4	Active
571	NGW301	MW	NGW301	02/17/2003	VOC	cis-1,2-Dichloroethene	39	16	2.4	Active
571	NGW301	MW	NGW301	07/10/2003	VOC	cis-1,2-Dichloroethene	55	16	3.4	Active
571	NGW301	MW	NGW301-Dup	02/09/2004	VOC	cis-1,2-Dichloroethene	28	16	1.8	Active
571	NGW301	MW	NGW301	02/07/2005	VOC	cis-1,2-Dichloroethene	32	16	2.0	Active
571	NGW301	MW	NGW301	08/18/2005	VOC	cis-1,2-Dichloroethene	43	16	2.7	Active
571	NGW301	MW	NGW301	02/20/2006	VOC	cis-1,2-Dichloroethene	32	16	2.0	Active
571	NGW301	MW	NGW301	08/14/2006	VOC	cis-1,2-Dichloroethene	26	16	1.6	Active
571	NGW301	MW	NGW301	02/20/2007	VOC	cis-1,2-Dichloroethene	24	16	1.5	Active
571	NGW301	MW	NGW301	08/20/2007	VOC	cis-1,2-Dichloroethene	52	16	3.3	Active
571	NGW301	MW	NGW301	02/19/2008	VOC	cis-1,2-Dichloroethene	60	16	3.8	Active
571	NGW301	MW	NGW301	08/20/2008	VOC	cis-1,2-Dichloroethene	140	16	8.8	Active
571	NGW301	MW	NGW301	02/12/2009	VOC	cis-1,2-Dichloroethene	50	16	3.1	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
571	NGW301	MW	NGW301	02/18/2010	VOC	cis-1,2-Dichloroethene	30	16	1.9	Active
571	NGW301	MW	NGW301	08/18/2010	VOC	cis-1,2-Dichloroethene	24	16	1.5	Active
571	NGW301	MW	NGW301	02/14/2011	VOC	cis-1,2-Dichloroethene	37	16	2.3	Active
571	NGW301	MW	MW101A	03/09/1992	VOC	Tetrachloroethene (PCE)	240	5.0	48	Active
571	NGW301	MW	MW101A	10/06/1992	VOC	Tetrachloroethene (PCE)	120	5.0	24	Active
571	NGW301	MW	MW101A	10/27/1993	VOC	Tetrachloroethene (PCE)	30	5.0	6.0	Active
571	NGW301	MW	MW101A	01/24/1994	VOC	Tetrachloroethene (PCE)	130	5.0	26	Active
571	NGW301	MW	MW101A	04/19/1994	VOC	Tetrachloroethene (PCE)	240	5.0	48	Active
571	NGW301	MW	MW101A	07/19/1994	VOC	Tetrachloroethene (PCE)	190	5.0	38	Active
571	NGW301	MW	MW101A	10/20/1994	VOC	Tetrachloroethene (PCE)	50	5.0	10	Active
571	NGW301	MW	MW101A	01/23/1995	VOC	Tetrachloroethene (PCE)	210	5.0	42	Active
571	NGW301	MW	MW101A	09/18/1995	VOC	Tetrachloroethene (PCE)	26	5.0	5.2	Active
571	NGW301	MW	MW101A	03/27/1996	VOC	Tetrachloroethene (PCE)	92	5.0	18	Active
571	NGW301	MW	NGW301/MW101A	09/10/1996	VOC	Tetrachloroethene (PCE)	83	5.0	17	Active
571	NGW301	MW	NGW301/MW101A	03/18/1997	VOC	Tetrachloroethene (PCE)	54	5.0	11	Active
571	NGW301	MW	NGW301/MW101A	08/27/1997	VOC	Tetrachloroethene (PCE)	28	5.0	5.6	Active
571	NGW301	MW	MW-101A	02/24/1998	VOC	Tetrachloroethene (PCE)	25	5.0	5.0	Active
571	NGW301	MW	MW-101A	07/28/1998	VOC	Tetrachloroethene (PCE)	38	5.0	7.6	Active
571	NGW301	MW	NGW301	01/18/1999	VOC	Tetrachloroethene (PCE)	42	5.0	8.4	Active
571	NGW301	MW	NGW301	07/19/1999	VOC	Tetrachloroethene (PCE)	42	5.0	8.4	Active
571	NGW301	MW	NGW301	02/21/2000	VOC	Tetrachloroethene (PCE)	41	5.0	8.2	Active
571	NGW301	MW	NGW301	07/24/2000	VOC	Tetrachloroethene (PCE)	51	5.0	10	Active
571	NGW301	MW	NGW301	02/18/2001	VOC	Tetrachloroethene (PCE)	72	5.0	14	Active
571	NGW301	MW	NGW301	08/20/2001	VOC	Tetrachloroethene (PCE)	11	5.0	2.2	Active
571	NGW301	MW	NGW301	02/18/2002	VOC	Tetrachloroethene (PCE)	89	5.0	18	Active
571	NGW301	MW	NGW301	08/18/2002	VOC	Tetrachloroethene (PCE)	44	5.0	8.8	Active
571	NGW301	MW	NGW301	02/17/2003	VOC	Tetrachloroethene (PCE)	84	5.0	17	Active
571	NGW301	MW	NGW301	07/10/2003	VOC	Tetrachloroethene (PCE)	29	5.0	5.8	Active
571	NGW301	MW	NGW301-Dup	02/09/2004	VOC	Tetrachloroethene (PCE)	60	5.0	12	Active
571	NGW301	MW	NGW301	08/06/2004	VOC	Tetrachloroethene (PCE)	6.8	5.0	1.4	Active
571	NGW301	MW	NGW301	02/07/2005	VOC	Tetrachloroethene (PCE)	54	5.0	11	Active
571	NGW301	MW	NGW301	08/18/2005	VOC	Tetrachloroethene (PCE)	8	5.0	1.6	Active
571	NGW301	MW	NGW301	02/20/2006	VOC	Tetrachloroethene (PCE)	66	5.0	13	Active
571	NGW301	MW	NGW301	02/20/2007	VOC	Tetrachloroethene (PCE)	22	5.0	4.4	Active
571	NGW301	MW	NGW301	02/19/2008	VOC	Tetrachloroethene (PCE)	60	5.0	12	Active
571	NGW301	MW	NGW301	02/12/2009	VOC	Tetrachloroethene (PCE)	6.4	5.0	1.3	Active
571	NGW301	MW	MW101A	03/09/1992	VOC	Trichloroethene (TCE)	91	4.0	23	Active
571	NGW301	MW	MW101A	10/06/1992	VOC	Trichloroethene (TCE)	130	4.0	33	Active
571	NGW301	MW	MW101A	10/27/1993	VOC	Trichloroethene (TCE)	54	4.0	14	Active
571	NGW301	MW	MW101A	01/24/1994	VOC	Trichloroethene (TCE)	60	4.0	15	Active
571	NGW301	MW	MW101A	04/19/1994	VOC	Trichloroethene (TCE)	120	4.0	30	Active
571	NGW301	MW	MW101A	07/19/1994	VOC	Trichloroethene (TCE)	160	4.0	40	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
571	NGW301	MW	MW101A	10/20/1994	VOC	Trichloroethene (TCE)	80	4.0	20	Active
571	NGW301	MW	MW101A	01/23/1995	VOC	Trichloroethene (TCE)	69	4.0	17	Active
571	NGW301	MW	MW101A	09/18/1995	VOC	Trichloroethene (TCE)	11	4.0	2.8	Active
571	NGW301	MW	MW101A	03/27/1996	VOC	Trichloroethene (TCE)	14	4.0	3.5	Active
571	NGW301	MW	NGW301/MW101A	09/10/1996	VOC	Trichloroethene (TCE)	19	4.0	4.8	Active
571	NGW301	MW	NGW301/MW101A	03/18/1997	VOC	Trichloroethene (TCE)	5.9	4.0	1.5	Active
571	NGW301	MW	MW-101A	07/28/1998	VOC	Trichloroethene (TCE)	11	4.0	2.8	Active
571	NGW301	MW	NGW301	01/18/1999	VOC	Trichloroethene (TCE)	4.6	4.0	1.2	Active
571	NGW301	MW	NGW301	07/19/1999	VOC	Trichloroethene (TCE)	7.4	4.0	1.9	Active
571	NGW301	MW	NGW301	02/21/2000	VOC	Trichloroethene (TCE)	5.4	4.0	1.4	Active
571	NGW301	MW	NGW301	07/24/2000	VOC	Trichloroethene (TCE)	13	4.0	3.3	Active
571	NGW301	MW	NGW301	02/18/2001	VOC	Trichloroethene (TCE)	26	4.0	6.5	Active
571	NGW301	MW	NGW301	02/18/2002	VOC	Trichloroethene (TCE)	29	4.0	7.3	Active
571	NGW301	MW	NGW301	08/18/2002	VOC	Trichloroethene (TCE)	20	4.0	5.0	Active
571	NGW301	MW	NGW301	02/17/2003	VOC	Trichloroethene (TCE)	30	4.0	7.5	Active
571	NGW301	MW	NGW301	07/10/2003	VOC	Trichloroethene (TCE)	20	4.0	5.0	Active
571	NGW301	MW	NGW301-Dup	02/09/2004	VOC	Trichloroethene (TCE)	31	4.0	7.8	Active
571	NGW301	MW	NGW301	08/06/2004	VOC	Trichloroethene (TCE)	4.9	4.0	1.2	Active
571	NGW301	MW	NGW301	02/07/2005	VOC	Trichloroethene (TCE)	21	4.0	5.3	Active
571	NGW301	MW	NGW301	08/18/2005	VOC	Trichloroethene (TCE)	18	4.0	4.5	Active
571	NGW301	MW	NGW301	02/20/2006	VOC	Trichloroethene (TCE)	33	4.0	8.3	Active
571	NGW301	MW	NGW301	08/14/2006	VOC	Trichloroethene (TCE)	5.6	4.0	1.4	Active
571	NGW301	MW	NGW301	02/20/2007	VOC	Trichloroethene (TCE)	17	4.0	4.3	Active
571	NGW301	MW	NGW301	02/19/2008	VOC	Trichloroethene (TCE)	54	4.0	14	Active
571	NGW301	MW	NGW301	08/20/2008	VOC	Trichloroethene (TCE)	8	4.0	2.0	Active
571	NGW301	MW	NGW301	02/12/2009	VOC	Trichloroethene (TCE)	19	4.0	4.8	Active
571	NGW301	MW	MW101A	03/09/1992	VOC	Vinyl chloride	51	0.20	260	Active
571	NGW301	MW	MW101A	10/06/1992	VOC	Vinyl chloride	29	0.20	150	Active
571	NGW301	MW	MW101A	07/22/1993	VOC	Vinyl chloride	2.9	0.20	15	Active
571	NGW301	MW	MW101A	10/27/1993	VOC	Vinyl chloride	38	0.20	190	Active
571	NGW301	MW	MW101A	01/24/1994	VOC	Vinyl chloride	15	0.20	75	Active
571	NGW301	MW	MW101A	04/19/1994	VOC	Vinyl chloride	2.8	0.20	14	Active
571	NGW301	MW	MW101A	07/19/1994	VOC	Vinyl chloride	18	0.20	90	Active
571	NGW301	MW	MW101A	10/20/1994	VOC	Vinyl chloride	22	0.20	110	Active
571	NGW301	MW	MW101A	01/23/1995	VOC	Vinyl chloride	1.5	0.20	7.5	Active
571	NGW301	MW	MW101A	09/18/1995	VOC	Vinyl chloride	2.3	0.20	12	Active
571	NGW301	MW	MW101A	03/27/1996	VOC	Vinyl chloride	0.96	0.20	4.8	Active
571	NGW301	MW	NGW301/MW101A	09/10/1996	VOC	Vinyl chloride	4.1	0.20	21	Active
571	NGW301	MW	MW-101A	07/28/1998	VOC	Vinyl chloride	0.32	0.20	1.6	Active
571	NGW301	MW	NGW301	07/19/1999	VOC	Vinyl chloride	0.7 J	0.20	3.5	Active
571	NGW301	MW	NGW301	07/24/2000	VOC	Vinyl chloride	5.3	0.20	27	Active
571	NGW301	MW	NGW301	02/18/2001	VOC	Vinyl chloride	6.2	0.20	31	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
571	NGW301	MW	NGW301	08/20/2001	VOC	Vinyl chloride	1.9	0.20	9.5	Active
571	NGW301	MW	NGW301	02/18/2002	VOC	Vinyl chloride	2.2	0.20	11	Active
571	NGW301	MW	NGW301	08/18/2002	VOC	Vinyl chloride	4.4	0.20	22	Active
571	NGW301	MW	NGW301	02/17/2003	VOC	Vinyl chloride	1.9	0.20	9.5	Active
571	NGW301	MW	NGW301	07/10/2003	VOC	Vinyl chloride	4.7	0.20	24	Active
571	NGW301	MW	NGW301	08/06/2004	VOC	Vinyl chloride	1.9	0.20	9.5	Active
571	NGW301	MW	NGW301	08/18/2005	VOC	Vinyl chloride	1.3	0.20	6.5	Active
571	NGW301	MW	NGW301	02/20/2007	VOC	Vinyl chloride	1.5	0.20	7.5	Active
571	NGW301	MW	NGW301	08/20/2007	VOC	Vinyl chloride	1.8	0.20	9.0	Active
571	NGW301	MW	NGW301	02/19/2008	VOC	Vinyl chloride	2.1	0.20	11	Active
571	NGW301	MW	NGW301	08/20/2008	VOC	Vinyl chloride	6.1	0.20	31	Active
571	NGW301	MW	NGW301	02/12/2009	VOC	Vinyl chloride	1.4	0.20	7.0	Active
571	NGW301	MW	NGW301	02/18/2010	VOC	Vinyl chloride	4.5	0.20	23	Active
571	NGW301	MW	NGW301	08/18/2010	VOC	Vinyl chloride	10	0.20	50	Active
571	NGW301	MW	NGW301	02/14/2011	VOC	Vinyl chloride	12	0.20	60	Active
571	NGW301	MW	NGW301-110802	08/02/2011	VOC	Vinyl chloride	7.4	0.20	37	Active
571	NGW301	MW	NGW301-120215	02/15/2012	VOC	Vinyl chloride	3.5	0.20	18	Active
571	NGW301	MW	NGW-301-120731	07/31/2012	VOC	Vinyl chloride	4.9	0.20	25	Active
572	NGW302	MW	MW101B	10/06/1992	MET	Cadmium	34	2.6	13	Active
572	NGW302	MW	MW101B	07/22/1993	MET	Cadmium	6	2.6	2.3	Active
572	NGW302	MW	MW101B	07/22/1993	MET	Cadmium	6	2.6	2.3	Active
572	NGW302	MW	MW101B	03/09/1992	MET	Lead	12	11	1.1	Active
572	NGW302	MW	MW101B	03/09/1992	MET	Mercury	0.1	0.020	5.0	Active
572	NGW302	MW	MW101B	03/09/1992	MET	Zinc	73	33	2.2	Active
572	NGW302	MW	NBF800-MW101B	03/16/1992	PAH	Benzo(a)anthracene	0.18	--	--	Active
572	NGW302	MW	NBF800-MW101B	03/16/1992	PAH	Fluoranthene	0.18	--	--	Active
572	NGW302	MW	NBF800-MW101B	03/16/1992	PAH	Total cPAHs (TEQ, NDx0.5)	0.0885	--	--	Active
572	NGW302	MW	MW101B	04/19/1994	VOC	Vinyl chloride	1.1	0.20	5.5	Active
572	NGW302	MW	MW101B	03/27/1996	VOC	Vinyl chloride	0.43	0.20	2.2	Active
572	NGW302	MW	NGW302/MW-101B	03/18/1997	VOC	Vinyl chloride	0.26	0.20	1.3	Active
572	NGW302	MW	NGW302/MW-101B	08/27/1997	VOC	Vinyl chloride	0.3	0.20	1.5	Active
573	NGW303	MW	MW102A	03/09/1992	MET	Arsenic	21	5.0	4.2	Active
573	NGW303	MW	MW102A	10/06/1992	MET	Arsenic	8	5.0	1.6	Active
573	NGW303	MW	MW102A	10/06/1992	MET	Arsenic	10	5.0	2.0	Active
573	NGW303	MW	NGW303/MW-102A	08/27/1997	MET	Arsenic	6	5.0	1.2	Active
573	NGW303	MW	MW102A	03/09/1992	MET	Beryllium	5	4.0	1.3	Active
573	NGW303	MW	MW102A	03/09/1992	MET	Cadmium	3	2.6	1.2	Active
573	NGW303	MW	MW102A	10/06/1992	MET	Cadmium	4	2.6	1.5	Active
573	NGW303	MW	MW102A	10/06/1992	MET	Cadmium	6	2.6	2.3	Active
573	NGW303	MW	MW102A	07/22/1993	MET	Cadmium	10	2.6	3.8	Active
573	NGW303	MW	MW102A	10/27/1993	MET	Cadmium	8	2.6	3.1	Active
573	NGW303	MW	MW102A	01/24/1994	MET	Cadmium	7	2.6	2.7	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
573	NGW303	MW	MW102A	03/09/1992	MET	Chromium	346	100	3.5	Active
573	NGW303	MW	MW102A	10/06/1992	MET	Chromium	196	100	2.0	Active
573	NGW303	MW	MW102A	10/06/1992	MET	Chromium	216	100	2.2	Active
573	NGW303	MW	MW102A	03/09/1992	MET	Copper	457	120	3.8	Active
573	NGW303	MW	MW102A	03/09/1992	MET	Lead	94.4	11	8.6	Active
573	NGW303	MW	MW102A	10/06/1992	MET	Lead	54	11	4.9	Active
573	NGW303	MW	MW102A	10/06/1992	MET	Lead	67	11	6.1	Active
573	NGW303	MW	MW102A	03/09/1992	MET	Mercury	0.6	0.020	30	Active
573	NGW303	MW	MW102A	10/06/1992	MET	Mercury	0.4	0.020	20	Active
573	NGW303	MW	MW102A	10/06/1992	MET	Mercury	0.5	0.020	25	Active
573	NGW303	MW	MW102A	03/09/1992	MET	Nickel	200	100	2.0	Active
573	NGW303	MW	MW102A	03/09/1992	MET	Silver	4	1.5	2.7	Active
573	NGW303	MW	MW102A	03/09/1992	MET	Zinc	489	33	15	Active
573	NGW303	MW	MW102A	03/09/1992	VOC	cis-1,2-Dichloroethene	190	16	12	Active
573	NGW303	MW	MW102A	10/06/1992	VOC	cis-1,2-Dichloroethene	120	16	7.5	Active
573	NGW303	MW	MW102A	10/06/1992	VOC	cis-1,2-Dichloroethene	130	16	8.1	Active
573	NGW303	MW	MW102A	07/22/1993	VOC	cis-1,2-Dichloroethene	73	16	4.6	Active
573	NGW303	MW	MW102A	10/27/1993	VOC	cis-1,2-Dichloroethene	56	16	3.5	Active
573	NGW303	MW	MW102A	03/27/1996	VOC	cis-1,2-Dichloroethene	17	16	1.1	Active
573	NGW303	MW	NGW303/MW-102A	08/27/1997	VOC	cis-1,2-Dichloroethene	55	16	3.4	Active
573	NGW303	MW	NGW303	02/21/2000	VOC	cis-1,2-Dichloroethene	17	16	1.1	Active
573	NGW303	MW	NGW303-Dup	02/21/2000	VOC	cis-1,2-Dichloroethene	17	16	1.1	Active
573	NGW303	MW	MW102A	07/22/1993	VOC	Tetrachloroethene (PCE)	8.5	5.0	1.7	Active
573	NGW303	MW	MW102A	10/27/1993	VOC	Tetrachloroethene (PCE)	7.6	5.0	1.5	Active
573	NGW303	MW	MW102A	01/24/1994	VOC	Tetrachloroethene (PCE)	34	5.0	6.8	Active
573	NGW303	MW	MW102A	04/19/1994	VOC	Tetrachloroethene (PCE)	9.4	5.0	1.9	Active
573	NGW303	MW	MW102A	10/20/1994	VOC	Tetrachloroethene (PCE)	5.1	5.0	1.0	Active
573	NGW303	MW	MW102A	01/23/1995	VOC	Tetrachloroethene (PCE)	15	5.0	3.0	Active
573	NGW303	MW	NGW303/MW-102A	03/18/1997	VOC	Tetrachloroethene (PCE)	52	5.0	10	Active
573	NGW303	MW	MW-102A	02/24/1998	VOC	Tetrachloroethene (PCE)	21	5.0	4.2	Active
573	NGW303	MW	NGW303	01/18/1999	VOC	Tetrachloroethene (PCE)	7.6	5.0	1.5	Active
573	NGW303	MW	NGW303	02/18/2002	VOC	Tetrachloroethene (PCE)	6.2	5.0	1.2	Active
573	NGW303	MW	MW102A	01/24/1994	VOC	Trichloroethene (TCE)	8.1	4.0	2.0	Active
573	NGW303	MW	NGW303/MW-102A	03/18/1997	VOC	Trichloroethene (TCE)	5.3	4.0	1.3	Active
573	NGW303	MW	MW-102A	02/24/1998	VOC	Trichloroethene (TCE)	6.2	4.0	1.6	Active
573	NGW303	MW	NGW303	01/18/1999	VOC	Trichloroethene (TCE)	13	4.0	3.3	Active
573	NGW303	MW	MW102A	03/09/1992	VOC	Vinyl chloride	99	0.20	500	Active
573	NGW303	MW	MW102A	10/06/1992	VOC	Vinyl chloride	49	0.20	250	Active
573	NGW303	MW	MW102A	10/06/1992	VOC	Vinyl chloride	55	0.20	280	Active
573	NGW303	MW	MW102A	07/22/1993	VOC	Vinyl chloride	52	0.20	260	Active
573	NGW303	MW	MW102A	10/27/1993	VOC	Vinyl chloride	70	0.20	350	Active
573	NGW303	MW	MW102A	01/24/1994	VOC	Vinyl chloride	68	0.20	340	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
573	NGW303	MW	MW102A	04/19/1994	VOC	Vinyl chloride	39	0.20	200	Active
573	NGW303	MW	MW101B	07/19/1994	VOC	Vinyl chloride	14	0.20	70	Active
573	NGW303	MW	MW102A	10/20/1994	VOC	Vinyl chloride	8.6	0.20	43	Active
573	NGW303	MW	MW102A	01/23/1995	VOC	Vinyl chloride	3.8	0.20	19	Active
573	NGW303	MW	MW102A	01/23/1995	VOC	Vinyl chloride	4.6	0.20	23	Active
573	NGW303	MW	MW102A	09/18/1995	VOC	Vinyl chloride	2	0.20	10	Active
573	NGW303	MW	MW102A	03/27/1996	VOC	Vinyl chloride	65	0.20	330	Active
573	NGW303	MW	NGW303/MW-102A	09/10/1996	VOC	Vinyl chloride	35	0.20	180	Active
573	NGW303	MW	NGW303/MW-102A	03/18/1997	VOC	Vinyl chloride	6.4	0.20	32	Active
573	NGW303	MW	NGW303/MW-102A	03/18/1997	VOC	Vinyl chloride	6.4	0.20	32	Active
573	NGW303	MW	NGW303/MW-102A	08/27/1997	VOC	Vinyl chloride	170	0.20	850	Active
573	NGW303	MW	MW-102A	02/24/1998	VOC	Vinyl chloride	5.8	0.20	29	Active
573	NGW303	MW	MW-102A	07/28/1998	VOC	Vinyl chloride	23	0.20	120	Active
573	NGW303	MW	NGW303	01/18/1999	VOC	Vinyl chloride	2.6	0.20	13	Active
573	NGW303	MW	NGW303	07/19/1999	VOC	Vinyl chloride	6.6 E	0.20	33	Active
573	NGW303	MW	NGW303	07/19/1999	VOC	Vinyl chloride	8.8	0.20	44	Active
573	NGW303	MW	NGW303	02/21/2000	VOC	Vinyl chloride	4.9	0.20	25	Active
573	NGW303	MW	NGW303-Dup	02/21/2000	VOC	Vinyl chloride	4.9	0.20	25	Active
573	NGW303	MW	NGW303	02/21/2000	VOC	Vinyl chloride	5.2	0.20	26	Active
573	NGW303	MW	NGW303-Dup	02/21/2000	VOC	Vinyl chloride	5.4	0.20	27	Active
573	NGW303	MW	NGW303	07/24/2000	VOC	Vinyl chloride	6.9 E	0.20	35	Active
573	NGW303	MW	NGW303	07/24/2000	VOC	Vinyl chloride	24	0.20	120	Active
573	NGW303	MW	NGW303	02/18/2001	VOC	Vinyl chloride	1	0.20	5.0	Active
573	NGW303	MW	NGW303	08/20/2001	VOC	Vinyl chloride	1.2	0.20	6.0	Active
573	NGW303	MW	NGW303	02/18/2002	VOC	Vinyl chloride	0.99	0.20	5.0	Active
573	NGW303	MW	NGW303	08/18/2002	VOC	Vinyl chloride	1.7	0.20	8.5	Active
574	NGW304	MW	MW102B	03/09/1992	MET	Cadmium	3	2.6	1.2	Active
574	NGW304	MW	MW102B	10/06/1992	MET	Cadmium	5	2.6	1.9	Active
574	NGW304	MW	MW102B	10/27/1993	MET	Cadmium	4	2.6	1.5	Active
574	NGW304	MW	MW102B	03/09/1992	MET	Chromium	101	100	1.0	Active
574	NGW304	MW	MW102B	03/09/1992	MET	Lead	13	11	1.2	Active
574	NGW304	MW	MW102B	03/09/1992	MET	Nickel	130	100	1.3	Active
574	NGW304	MW	MW102B	03/09/1992	MET	Zinc	96	33	2.9	Active
574	NGW304	MW	MW102B	03/09/1992	PHT	Bis(2-ethylhexyl) phthalate	18	1.0	18	Active
574	NGW304	MW	MW102B	10/20/1994	VOC	Tetrachloroethene (PCE)	11	5.0	2.2	Active
574	NGW304	MW	MW102B	10/20/1994	VOC	Trichloroethene (TCE)	14	4.0	3.5	Active
574	NGW304	MW	MW102B	03/09/1992	VOC	Vinyl chloride	6.6	0.20	33	Active
574	NGW304	MW	MW102B	04/19/1994	VOC	Vinyl chloride	0.44	0.20	2.2	Active
574	NGW304	MW	MW102B	10/20/1994	VOC	Vinyl chloride	0.34	0.20	1.7	Active
582	NGW305	MW	RMW103A	01/24/1994	MET	Arsenic	8	5.0	1.6	Active
582	NGW305	MW	NGW305/MW-103A	09/10/1996	MET	Arsenic	6	5.0	1.2	Active
582	NGW305	MW	NGW305/MW-103A	03/18/1997	MET	Arsenic	8	5.0	1.6	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
582	NGW305	MW	NGW305/MW-103A	08/27/1997	MET	Arsenic	6	5.0	1.2	Active
582	NGW305	MW	MW-103A	07/28/1998	MET	Arsenic	12	5.0	2.4	Active
582	NGW305	MW	RMW103A	01/24/1994	MET	Cadmium	5	2.6	1.9	Active
582	NGW305	MW	RMW103A	01/24/1994	MET	Mercury	0.1	0.020	5.0	Active
582	NGW305	MW	RMW103A	07/19/1994	VOC	cis-1,2-Dichloroethene	17	16	1.1	Active
582	NGW305	MW	RMW103A	03/27/1996	VOC	cis-1,2-Dichloroethene	73	16	4.6	Active
582	NGW305	MW	NGW305/MW-103A	09/10/1996	VOC	cis-1,2-Dichloroethene	54	16	3.4	Active
582	NGW305	MW	NGW305/MW-103A	03/18/1997	VOC	cis-1,2-Dichloroethene	75	16	4.7	Active
582	NGW305	MW	RMW103A	04/19/1994	VOC	Tetrachloroethene (PCE)	12	5.0	2.4	Active
582	NGW305	MW	RMW103A	07/19/1994	VOC	Tetrachloroethene (PCE)	26	5.0	5.2	Active
582	NGW305	MW	RMW103A	10/20/1994	VOC	Tetrachloroethene (PCE)	11	5.0	2.2	Active
582	NGW305	MW	RMW103A	01/23/1995	VOC	Tetrachloroethene (PCE)	17	5.0	3.4	Active
582	NGW305	MW	RMW103A	04/19/1994	VOC	Trichloroethene (TCE)	4.9	4.0	1.2	Active
582	NGW305	MW	RMW103A	07/19/1994	VOC	Trichloroethene (TCE)	8	4.0	2.0	Active
582	NGW305	MW	RMW103A	10/20/1994	VOC	Trichloroethene (TCE)	14	4.0	3.5	Active
582	NGW305	MW	RMW103A	01/23/1995	VOC	Trichloroethene (TCE)	7.6	4.0	1.9	Active
582	NGW305	MW	RMW103A	03/27/1996	VOC	Trichloroethene (TCE)	17	4.0	4.3	Active
582	NGW305	MW	RMW103A	01/24/1994	VOC	Vinyl chloride	4.5	0.20	23	Active
582	NGW305	MW	RMW103A	04/19/1994	VOC	Vinyl chloride	2.1	0.20	11	Active
582	NGW305	MW	RMW103A	07/19/1994	VOC	Vinyl chloride	3.4	0.20	17	Active
582	NGW305	MW	RMW103A	10/20/1994	VOC	Vinyl chloride	5.4	0.20	27	Active
582	NGW305	MW	RMW103A	01/23/1995	VOC	Vinyl chloride	5.7	0.20	29	Active
582	NGW305	MW	RMW103A	09/18/1995	VOC	Vinyl chloride	26	0.20	130	Active
582	NGW305	MW	RMW103A	03/27/1996	VOC	Vinyl chloride	130	0.20	650	Active
582	NGW305	MW	NGW305/MW-103A	09/10/1996	VOC	Vinyl chloride	150	0.20	750	Active
582	NGW305	MW	NGW305/MW-103A	03/18/1997	VOC	Vinyl chloride	160	0.20	800	Active
582	NGW305	MW	NGW305/MW-103A	08/27/1997	VOC	Vinyl chloride	86	0.20	430	Active
582	NGW305	MW	MW-103A	07/28/1998	VOC	Vinyl chloride	7.4	0.20	37	Active
582	NGW305	MW	NGW305	02/14/2011	VOC	Vinyl chloride	1.8	0.20	9.0	Active
582	NGW305	MW	NGW305-120215	02/15/2012	VOC	Vinyl chloride	2.6	0.20	13	Active
576	NGW306	MW	MW103B	10/06/1992	MET	Arsenic	7	5.0	1.4	Active
576	NGW306	MW	MW103B	10/06/1992	MET	Cadmium	49	2.6	19	Active
576	NGW306	MW	MW103B	07/22/1993	MET	Cadmium	3	2.6	1.2	Active
576	NGW306	MW	MW103B	10/27/1993	MET	Cadmium	3	2.6	1.2	Active
576	NGW306	MW	MW103B	10/06/1992	MET	Lead	22	11	2.0	Active
576	NGW306	MW	MW103B	10/06/1992	MET	Mercury	0.2	0.020	10	Active
576	NGW306	MW	MW103B	03/09/1992	VOC	Vinyl chloride	1.1 J	0.20	5.5	Active
576	NGW306	MW	MW103B	04/19/1994	VOC	Vinyl chloride	0.27	0.20	1.4	Active
576	NGW306	MW	MW103B	10/20/1994	VOC	Vinyl chloride	0.95	0.20	4.8	Active
576	NGW306	MW	MW103B	09/18/1995	VOC	Vinyl chloride	0.26	0.20	1.3	Active
576	NGW306	MW	MW103B	03/27/1996	VOC	Vinyl chloride	0.34	0.20	1.7	Active
576	NGW306	MW	NGW306/MW-103B	09/10/1996	VOC	Vinyl chloride	0.29	0.20	1.5	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
583	NGW307	MW	RMW104A	01/24/1994	MET	Arsenic	7	5.0	1.4	Active
583	NGW307	MW	NGW307/MW-104A	08/27/1997	MET	Arsenic	8	5.0	1.6	Active
583	NGW307	MW	MW-104A-Dup	02/24/1998	MET	Arsenic	13	5.0	2.6	Active
583	NGW307	MW	MW-104A	07/28/1998	MET	Arsenic	7	5.0	1.4	Active
583	NGW307	MW	NGW307	07/19/1999	MET	Arsenic	6	5.0	1.2	Active
583	NGW307	MW	MW-104A-Dup	02/24/1998	MET	Chromium	151	100	1.5	Active
583	NGW307	MW	MW-104A-Dup	02/24/1998	MET	Lead	14	11	1.3	Active
583	NGW307	MW	NGW307	07/19/1999	MET	Mercury	0.1	0.020	5.0	Active
583	NGW307	MW	RMW104A	10/20/1994	VOC	cis-1,2-Dichloroethene	24	16	1.5	Active
583	NGW307	MW	RMW104A	01/23/1995	VOC	cis-1,2-Dichloroethene	68	16	4.3	Active
583	NGW307	MW	RMW104A	09/19/1995	VOC	cis-1,2-Dichloroethene	25	16	1.6	Active
583	NGW307	MW	RMW104A	03/27/1996	VOC	cis-1,2-Dichloroethene	220	16	14	Active
583	NGW307	MW	NGW307/MW-104A	09/10/1996	VOC	cis-1,2-Dichloroethene	300	16	19	Active
583	NGW307	MW	NGW307/MW-104A	03/18/1997	VOC	cis-1,2-Dichloroethene	350	16	22	Active
583	NGW307	MW	NGW307/MW-104A	08/27/1997	VOC	cis-1,2-Dichloroethene	390	16	24	Active
583	NGW307	MW	MW-104A-Dup	02/24/1998	VOC	cis-1,2-Dichloroethene	120	16	7.5	Active
583	NGW307	MW	MW-104A	07/28/1998	VOC	cis-1,2-Dichloroethene	22	16	1.4	Active
583	NGW307	MW	NGW307	01/18/1999	VOC	cis-1,2-Dichloroethene	210	16	13	Active
583	NGW307	MW	NGW307	07/19/1999	VOC	cis-1,2-Dichloroethene	77	16	4.8	Active
583	NGW307	MW	NGW307	02/21/2000	VOC	cis-1,2-Dichloroethene	150	16	9.4	Active
583	NGW307	MW	NGW307	07/24/2000	VOC	cis-1,2-Dichloroethene	110	16	6.9	Active
583	NGW307	MW	NGW307	02/18/2002	VOC	cis-1,2-Dichloroethene	20	16	1.3	Active
583	NGW307	MW	NGW307	02/17/2003	VOC	cis-1,2-Dichloroethene	31	16	1.9	Active
583	NGW307	MW	NGW307	02/09/2004	VOC	cis-1,2-Dichloroethene	120	16	7.5	Active
583	NGW307	MW	NGW307	02/20/2006	VOC	cis-1,2-Dichloroethene	66	16	4.1	Active
583	NGW307	MW	NGW307	02/12/2009	VOC	cis-1,2-Dichloroethene	44	16	2.8	Active
583	NGW307	MW	NGW307	02/18/2010	VOC	cis-1,2-Dichloroethene	17	16	1.1	Active
583	NGW307	MW	RMW104A	01/24/1994	VOC	Tetrachloroethene (PCE)	12	5.0	2.4	Active
583	NGW307	MW	RMW104A	04/19/1994	VOC	Tetrachloroethene (PCE)	42	5.0	8.4	Active
583	NGW307	MW	RMW104A	07/19/1994	VOC	Tetrachloroethene (PCE)	29	5.0	5.8	Active
583	NGW307	MW	RMW104A	10/20/1994	VOC	Tetrachloroethene (PCE)	72	5.0	14	Active
583	NGW307	MW	RMW104A	01/23/1995	VOC	Tetrachloroethene (PCE)	140	5.0	28	Active
583	NGW307	MW	RMW104A	09/19/1995	VOC	Tetrachloroethene (PCE)	5.4	5.0	1.1	Active
583	NGW307	MW	RMW104A	03/27/1996	VOC	Tetrachloroethene (PCE)	64	5.0	13	Active
583	NGW307	MW	NGW307/MW-104A	09/10/1996	VOC	Tetrachloroethene (PCE)	9.8	5.0	2.0	Active
583	NGW307	MW	NGW307/MW-104A	03/18/1997	VOC	Tetrachloroethene (PCE)	200	5.0	40	Active
583	NGW307	MW	NGW307/MW-104A	08/27/1997	VOC	Tetrachloroethene (PCE)	14	5.0	2.8	Active
583	NGW307	MW	MW-104A-Dup	02/24/1998	VOC	Tetrachloroethene (PCE)	170	5.0	34	Active
583	NGW307	MW	MW-104A	07/28/1998	VOC	Tetrachloroethene (PCE)	14	5.0	2.8	Active
583	NGW307	MW	NGW307	01/18/1999	VOC	Tetrachloroethene (PCE)	93	5.0	19	Active
583	NGW307	MW	NGW307	07/19/1999	VOC	Tetrachloroethene (PCE)	5.6	5.0	1.1	Active
583	NGW307	MW	NGW307	02/21/2000	VOC	Tetrachloroethene (PCE)	140	5.0	28	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
583	NGW307	MW	NGW307	07/24/2000	VOC	Tetrachloroethene (PCE)	5.3	5.0	1.1	Active
583	NGW307	MW	NGW307	02/18/2001	VOC	Tetrachloroethene (PCE)	8.3	5.0	1.7	Active
583	NGW307	MW	NGW307	08/20/2001	VOC	Tetrachloroethene (PCE)	8	5.0	1.6	Active
583	NGW307	MW	NGW307	02/18/2002	VOC	Tetrachloroethene (PCE)	24	5.0	4.8	Active
583	NGW307	MW	NGW307	08/18/2002	VOC	Tetrachloroethene (PCE)	8.1	5.0	1.6	Active
583	NGW307	MW	NGW307	02/17/2003	VOC	Tetrachloroethene (PCE)	15	5.0	3.0	Active
583	NGW307	MW	NGW307	07/10/2003	VOC	Tetrachloroethene (PCE)	9.3	5.0	1.9	Active
583	NGW307	MW	NGW307	02/09/2004	VOC	Tetrachloroethene (PCE)	130	5.0	26	Active
583	NGW307	MW	NGW307	02/07/2005	VOC	Tetrachloroethene (PCE)	9.5	5.0	1.9	Active
583	NGW307	MW	NGW307	02/20/2006	VOC	Tetrachloroethene (PCE)	48	5.0	9.6	Active
583	NGW307	MW	NGW307	02/20/2007	VOC	Tetrachloroethene (PCE)	6.3	5.0	1.3	Active
583	NGW307	MW	NGW307	08/20/2007	VOC	Tetrachloroethene (PCE)	6.2	5.0	1.2	Active
583	NGW307	MW	NGW307	02/19/2008	VOC	Tetrachloroethene (PCE)	8.2	5.0	1.6	Active
583	NGW307	MW	NGW307	02/12/2009	VOC	Tetrachloroethene (PCE)	7.2	5.0	1.4	Active
583	NGW307	MW	RMW104A	04/19/1994	VOC	Trichloroethene (TCE)	11	4.0	2.8	Active
583	NGW307	MW	RMW104A	07/19/1994	VOC	Trichloroethene (TCE)	9.9	4.0	2.5	Active
583	NGW307	MW	RMW104A	10/20/1994	VOC	Trichloroethene (TCE)	28	4.0	7.0	Active
583	NGW307	MW	RMW104A	01/23/1995	VOC	Trichloroethene (TCE)	88	4.0	22	Active
583	NGW307	MW	RMW104A	03/27/1996	VOC	Trichloroethene (TCE)	81	4.0	20	Active
583	NGW307	MW	NGW307/MW-104A	09/10/1996	VOC	Trichloroethene (TCE)	34	4.0	8.5	Active
583	NGW307	MW	NGW307/MW-104A	03/18/1997	VOC	Trichloroethene (TCE)	120	4.0	30	Active
583	NGW307	MW	NGW307/MW-104A	08/27/1997	VOC	Trichloroethene (TCE)	6.1	4.0	1.5	Active
583	NGW307	MW	MW-104A-Dup	02/24/1998	VOC	Trichloroethene (TCE)	170	4.0	43	Active
583	NGW307	MW	NGW307	01/18/1999	VOC	Trichloroethene (TCE)	250	4.0	63	Active
583	NGW307	MW	NGW307	02/21/2000	VOC	Trichloroethene (TCE)	140	4.0	35	Active
583	NGW307	MW	NGW307	02/18/2002	VOC	Trichloroethene (TCE)	12	4.0	3.0	Active
583	NGW307	MW	NGW307	02/17/2003	VOC	Trichloroethene (TCE)	17	4.0	4.3	Active
583	NGW307	MW	NGW307	02/09/2004	VOC	Trichloroethene (TCE)	69	4.0	17	Active
583	NGW307	MW	NGW307	02/20/2006	VOC	Trichloroethene (TCE)	46	4.0	12	Active
583	NGW307	MW	RMW104A	01/24/1994	VOC	Vinyl chloride	2.9	0.20	15	Active
583	NGW307	MW	RMW104A	04/19/1994	VOC	Vinyl chloride	5	0.20	25	Active
583	NGW307	MW	RMW104A	07/19/1994	VOC	Vinyl chloride	2.8	0.20	14	Active
583	NGW307	MW	RMW104A	10/20/1994	VOC	Vinyl chloride	5.3	0.20	27	Active
583	NGW307	MW	RMW104A	01/23/1995	VOC	Vinyl chloride	19	0.20	95	Active
583	NGW307	MW	RMW104A	09/19/1995	VOC	Vinyl chloride	47	0.20	240	Active
583	NGW307	MW	RMW104A	03/27/1996	VOC	Vinyl chloride	76	0.20	380	Active
583	NGW307	MW	NGW307/MW-104A	09/10/1996	VOC	Vinyl chloride	190	0.20	950	Active
583	NGW307	MW	NGW307/MW-104A	03/18/1997	VOC	Vinyl chloride	92	0.20	460	Active
583	NGW307	MW	NGW307/MW-104A	08/27/1997	VOC	Vinyl chloride	270	0.20	1,400	Active
583	NGW307	MW	MW-104A-Dup	02/24/1998	VOC	Vinyl chloride	73	0.20	370	Active
583	NGW307	MW	MW-104A	07/28/1998	VOC	Vinyl chloride	140	0.20	700	Active
583	NGW307	MW	NGW307	01/18/1999	VOC	Vinyl chloride	13	0.20	65	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
583	NGW307	MW	NGW307	07/19/1999	VOC	Vinyl chloride	93	0.20	470	Active
583	NGW307	MW	NGW307	02/21/2000	VOC	Vinyl chloride	5.4	0.20	27	Active
583	NGW307	MW	NGW307	07/24/2000	VOC	Vinyl chloride	180	0.20	900	Active
583	NGW307	MW	NGW307	02/18/2001	VOC	Vinyl chloride	22	0.20	110	Active
583	NGW307	MW	NGW307	08/20/2001	VOC	Vinyl chloride	6.2	0.20	31	Active
583	NGW307	MW	NGW307	02/18/2002	VOC	Vinyl chloride	95	0.20	480	Active
583	NGW307	MW	NGW307	08/18/2002	VOC	Vinyl chloride	31	0.20	160	Active
583	NGW307	MW	NGW307	02/17/2003	VOC	Vinyl chloride	9.1	0.20	46	Active
583	NGW307	MW	NGW307	07/10/2003	VOC	Vinyl chloride	9.8	0.20	49	Active
583	NGW307	MW	NGW307	02/07/2005	VOC	Vinyl chloride	3.6	0.20	18	Active
583	NGW307	MW	NGW307	08/18/2005	VOC	Vinyl chloride	2.8	0.20	14	Active
583	NGW307	MW	NGW307	02/20/2006	VOC	Vinyl chloride	2	0.20	10	Active
583	NGW307	MW	NGW307	08/14/2006	VOC	Vinyl chloride	3.2	0.20	16	Active
583	NGW307	MW	NGW307	02/20/2007	VOC	Vinyl chloride	7.6	0.20	38	Active
583	NGW307	MW	NGW307	08/20/2007	VOC	Vinyl chloride	1.5	0.20	7.5	Active
583	NGW307	MW	NGW307	02/19/2008	VOC	Vinyl chloride	3.7	0.20	19	Active
583	NGW307	MW	NGW307	08/20/2008	VOC	Vinyl chloride	3.2	0.20	16	Active
583	NGW307	MW	NGW307	02/12/2009	VOC	Vinyl chloride	15	0.20	75	Active
583	NGW307	MW	NGW307	02/18/2010	VOC	Vinyl chloride	22	0.20	110	Active
584	NGW308	MW	RMW105A	01/24/1994	MET	Arsenic	8	5.0	1.6	Active
584	NGW308	MW	RMW105A	04/19/1994	MET	Arsenic	8	5.0	1.6	Active
584	NGW308	MW	NGW308/MW-105A	09/10/1996	MET	Arsenic	12	5.0	2.4	Active
584	NGW308	MW	NGW308/MW-105A	03/18/1997	MET	Arsenic	20	5.0	4.0	Active
584	NGW308	MW	NGW308/MW-105A	08/27/1997	MET	Arsenic	26	5.0	5.2	Active
584	NGW308	MW	MW-105A	02/24/1998	MET	Arsenic	50	5.0	10	Active
584	NGW308	MW	MW-105A	07/28/1998	MET	Arsenic	21	5.0	4.2	Active
584	NGW308	MW	NGW308	01/18/1999	MET	Arsenic	24	5.0	4.8	Active
584	NGW308	MW	NGW308	08/20/2001	MET	Arsenic	8	5.0	1.6	Active
584	NGW308	MW	NGW308	02/18/2002	MET	Arsenic	6	5.0	1.2	Active
584	NGW308	MW	NGW308	08/18/2002	MET	Arsenic	9	5.0	1.8	Active
584	NGW308	MW	NGW308	01/18/1999	MET	Cadmium	3	2.6	1.2	Active
584	NGW308	MW	NGW308/MW-105A	09/10/1996	MET	Chromium	144	100	1.4	Active
584	NGW308	MW	NGW308/MW-105A	03/18/1997	MET	Chromium	311	100	3.1	Active
584	NGW308	MW	NGW308/MW-105A	08/27/1997	MET	Chromium	155	100	1.6	Active
584	NGW308	MW	MW-105A	02/24/1998	MET	Chromium	1,600	100	16	Active
584	NGW308	MW	MW-105A	07/28/1998	MET	Chromium	156	100	1.6	Active
584	NGW308	MW	NGW308	01/18/1999	MET	Chromium	593	100	5.9	Active
584	NGW308	MW	RMW105A	01/24/1994	MET	Lead	14	11	1.3	Active
584	NGW308	MW	NGW308/MW-105A	09/10/1996	MET	Lead	13	11	1.2	Active
584	NGW308	MW	NGW308/MW-105A	03/18/1997	MET	Lead	57	11	5.2	Active
584	NGW308	MW	MW-105A	02/24/1998	MET	Lead	370	11	34	Active
584	NGW308	MW	MW-105A	07/28/1998	MET	Lead	20	11	1.8	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
584	NGW308	MW	NGW308	01/18/1999	MET	Lead	74	11	6.7	Active
584	NGW308	MW	RMW105A	01/24/1994	MET	Mercury	0.2	0.020	10	Active
584	NGW308	MW	NGW308/MW-105A	03/18/1997	MET	Mercury	0.5	0.020	25	Active
584	NGW308	MW	MW-105A	02/24/1998	MET	Mercury	2.8	0.020	140	Active
584	NGW308	MW	MW-105A	07/28/1998	MET	Mercury	0.4	0.020	20	Active
584	NGW308	MW	NGW308	01/18/1999	MET	Mercury	0.7	0.020	35	Active
584	NGW308	MW	RMW105A	01/23/1995	VOC	cis-1,2-Dichloroethene	98	16	6.1	Active
584	NGW308	MW	RMW105A	03/27/1996	VOC	cis-1,2-Dichloroethene	160	16	10	Active
584	NGW308	MW	NGW308/MW-105A	09/10/1996	VOC	cis-1,2-Dichloroethene	290	16	18	Active
584	NGW308	MW	NGW308/MW-105A	03/18/1997	VOC	cis-1,2-Dichloroethene	210	16	13	Active
584	NGW308	MW	NGW308/MW-105A	08/27/1997	VOC	cis-1,2-Dichloroethene	200	16	13	Active
584	NGW308	MW	MW-105A	02/24/1998	VOC	cis-1,2-Dichloroethene	190	16	12	Active
584	NGW308	MW	MW-105A	07/28/1998	VOC	cis-1,2-Dichloroethene	68	16	4.3	Active
584	NGW308	MW	NGW308	01/18/1999	VOC	cis-1,2-Dichloroethene	83	16	5.2	Active
584	NGW308	MW	NGW308	07/19/1999	VOC	cis-1,2-Dichloroethene	18	16	1.1	Active
584	NGW308	MW	NGW308	02/21/2000	VOC	cis-1,2-Dichloroethene	34	16	2.1	Active
584	NGW308	MW	NGW308	08/20/2001	VOC	cis-1,2-Dichloroethene	33	16	2.1	Active
584	NGW308	MW	NGW308	08/18/2005	VOC	cis-1,2-Dichloroethene	38	16	2.4	Active
584	NGW308	MW	NGW308	08/20/2008	VOC	cis-1,2-Dichloroethene	24	16	1.5	Active
584	NGW308	MW	NGW308-110802	08/02/2011	VOC	cis-1,2-Dichloroethene	28	16	1.8	Active
584	NGW308	MW	RMW105A	04/19/1994	VOC	Tetrachloroethene (PCE)	9.3	5.0	1.9	Active
584	NGW308	MW	RMW105A	07/19/1994	VOC	Tetrachloroethene (PCE)	31	5.0	6.2	Active
584	NGW308	MW	RMW105A	01/23/1995	VOC	Tetrachloroethene (PCE)	380	5.0	76	Active
584	NGW308	MW	RMW105A	03/27/1996	VOC	Tetrachloroethene (PCE)	350	5.0	70	Active
584	NGW308	MW	NGW308/MW-105A	09/10/1996	VOC	Tetrachloroethene (PCE)	280	5.0	56	Active
584	NGW308	MW	NGW308/MW-105A	03/18/1997	VOC	Tetrachloroethene (PCE)	410	5.0	82	Active
584	NGW308	MW	NGW308/MW-105A	08/27/1997	VOC	Tetrachloroethene (PCE)	190	5.0	38	Active
584	NGW308	MW	MW-105A	02/24/1998	VOC	Tetrachloroethene (PCE)	180	5.0	36	Active
584	NGW308	MW	MW-105A	07/28/1998	VOC	Tetrachloroethene (PCE)	120	5.0	24	Active
584	NGW308	MW	NGW308	01/18/1999	VOC	Tetrachloroethene (PCE)	130	5.0	26	Active
584	NGW308	MW	NGW308-Dup	07/19/1999	VOC	Tetrachloroethene (PCE)	92	5.0	18	Active
584	NGW308	MW	NGW308	02/21/2000	VOC	Tetrachloroethene (PCE)	79	5.0	16	Active
584	NGW308	MW	NGW308	07/24/2000	VOC	Tetrachloroethene (PCE)	56	5.0	11	Active
584	NGW308	MW	NGW308	02/18/2001	VOC	Tetrachloroethene (PCE)	32	5.0	6.4	Active
584	NGW308	MW	NGW308	08/20/2001	VOC	Tetrachloroethene (PCE)	61	5.0	12	Active
584	NGW308	MW	NGW308	02/18/2002	VOC	Tetrachloroethene (PCE)	94	5.0	19	Active
584	NGW308	MW	NGW308	08/18/2002	VOC	Tetrachloroethene (PCE)	18	5.0	3.6	Active
584	NGW308	MW	NGW308	02/17/2003	VOC	Tetrachloroethene (PCE)	54	5.0	11	Active
584	NGW308	MW	NGW308	07/10/2003	VOC	Tetrachloroethene (PCE)	19	5.0	3.8	Active
584	NGW308	MW	NGW308	02/09/2004	VOC	Tetrachloroethene (PCE)	43	5.0	8.6	Active
584	NGW308	MW	NGW308	02/07/2005	VOC	Tetrachloroethene (PCE)	28	5.0	5.6	Active
584	NGW308	MW	NGW308	08/18/2005	VOC	Tetrachloroethene (PCE)	35	5.0	7.0	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
584	NGW308	MW	NGW308	02/20/2006	VOC	Tetrachloroethene (PCE)	24	5.0	4.8	Active
584	NGW308	MW	NGW308	08/14/2006	VOC	Tetrachloroethene (PCE)	19	5.0	3.8	Active
584	NGW308	MW	NGW308	02/20/2007	VOC	Tetrachloroethene (PCE)	5.9	5.0	1.2	Active
584	NGW308	MW	NGW308	08/20/2007	VOC	Tetrachloroethene (PCE)	13	5.0	2.6	Active
584	NGW308	MW	NGW308	02/19/2008	VOC	Tetrachloroethene (PCE)	21	5.0	4.2	Active
584	NGW308	MW	NGW308	08/20/2008	VOC	Tetrachloroethene (PCE)	32	5.0	6.4	Active
584	NGW308	MW	NGW308	02/12/2009	VOC	Tetrachloroethene (PCE)	10	5.0	2.0	Active
584	NGW308	MW	NGW308	08/18/2010	VOC	Tetrachloroethene (PCE)	6.7	5.0	1.3	Active
584	NGW308	MW	NGW308-110802	08/02/2011	VOC	Tetrachloroethene (PCE)	7.4	5.0	1.5	Active
584	NGW308	MW	RMW105A	07/19/1994	VOC	Trichloroethene (TCE)	7.4	4.0	1.9	Active
584	NGW308	MW	RMW105A	01/23/1995	VOC	Trichloroethene (TCE)	120	4.0	30	Active
584	NGW308	MW	RMW105A	09/19/1995	VOC	Trichloroethene (TCE)	5.8	4.0	1.5	Active
584	NGW308	MW	RMW105A	03/27/1996	VOC	Trichloroethene (TCE)	180	4.0	45	Active
584	NGW308	MW	NGW308/MW-105A	09/10/1996	VOC	Trichloroethene (TCE)	170	4.0	43	Active
584	NGW308	MW	NGW308/MW-105A	03/18/1997	VOC	Trichloroethene (TCE)	140	4.0	35	Active
584	NGW308	MW	NGW308/MW-105A	08/27/1997	VOC	Trichloroethene (TCE)	120	4.0	30	Active
584	NGW308	MW	MW-105A	02/24/1998	VOC	Trichloroethene (TCE)	74	4.0	19	Active
584	NGW308	MW	MW-105A	07/28/1998	VOC	Trichloroethene (TCE)	31	4.0	7.8	Active
584	NGW308	MW	NGW308	01/18/1999	VOC	Trichloroethene (TCE)	42	4.0	11	Active
584	NGW308	MW	NGW308	07/19/1999	VOC	Trichloroethene (TCE)	13	4.0	3.3	Active
584	NGW308	MW	NGW308	02/21/2000	VOC	Trichloroethene (TCE)	14	4.0	3.5	Active
584	NGW308	MW	NGW308	07/24/2000	VOC	Trichloroethene (TCE)	5	4.0	1.3	Active
584	NGW308	MW	NGW308	02/18/2001	VOC	Trichloroethene (TCE)	4.2	4.0	1.1	Active
584	NGW308	MW	NGW308	08/20/2001	VOC	Trichloroethene (TCE)	19	4.0	4.8	Active
584	NGW308	MW	NGW308	02/18/2002	VOC	Trichloroethene (TCE)	14	4.0	3.5	Active
584	NGW308	MW	NGW308	02/17/2003	VOC	Trichloroethene (TCE)	4.4	4.0	1.1	Active
584	NGW308	MW	NGW308	02/09/2004	VOC	Trichloroethene (TCE)	4.8	4.0	1.2	Active
584	NGW308	MW	NGW308	08/18/2005	VOC	Trichloroethene (TCE)	12	4.0	3.0	Active
584	NGW308	MW	NGW308	08/20/2008	VOC	Trichloroethene (TCE)	8.4	4.0	2.1	Active
584	NGW308	MW	RMW105A	04/19/1994	VOC	Vinyl chloride	0.78	0.20	3.9	Active
584	NGW308	MW	RMW105A	07/19/1994	VOC	Vinyl chloride	0.87	0.20	4.4	Active
584	NGW308	MW	RMW105A	10/20/1994	VOC	Vinyl chloride	0.66	0.20	3.3	Active
584	NGW308	MW	RMW105A	01/23/1995	VOC	Vinyl chloride	4.6	0.20	23	Active
584	NGW308	MW	RMW105A	09/19/1995	VOC	Vinyl chloride	1.2	0.20	6.0	Active
584	NGW308	MW	RMW105A	03/27/1996	VOC	Vinyl chloride	31	0.20	160	Active
584	NGW308	MW	NGW308/MW-105A	09/10/1996	VOC	Vinyl chloride	41	0.20	210	Active
584	NGW308	MW	NGW308/MW-105A	03/18/1997	VOC	Vinyl chloride	33	0.20	170	Active
584	NGW308	MW	NGW308/MW-105A	08/27/1997	VOC	Vinyl chloride	24	0.20	120	Active
584	NGW308	MW	MW-105A	02/24/1998	VOC	Vinyl chloride	7.7	0.20	39	Active
584	NGW308	MW	MW-105A	07/28/1998	VOC	Vinyl chloride	4.1	0.20	21	Active
584	NGW308	MW	NGW308	01/18/1999	VOC	Vinyl chloride	4.6	0.20	23	Active
584	NGW308	MW	NGW308	07/19/1999	VOC	Vinyl chloride	0.37	0.20	1.9	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
584	NGW308	MW	NGW308	02/21/2000	VOC	Vinyl chloride	4	0.20	20	Active
584	NGW308	MW	NGW308	07/24/2000	VOC	Vinyl chloride	1.3	0.20	6.5	Active
584	NGW308	MW	NGW308	02/18/2001	VOC	Vinyl chloride	1.2	0.20	6.0	Active
584	NGW308	MW	NGW308	08/20/2001	VOC	Vinyl chloride	1.7	0.20	8.5	Active
584	NGW308	MW	NGW308	02/18/2002	VOC	Vinyl chloride	0.46	0.20	2.3	Active
584	NGW308	MW	NGW308	08/18/2002	VOC	Vinyl chloride	3	0.20	15	Active
584	NGW308	MW	NGW308	02/17/2003	VOC	Vinyl chloride	1	0.20	5.0	Active
584	NGW308	MW	NGW308	07/10/2003	VOC	Vinyl chloride	6.9	0.20	35	Active
584	NGW308	MW	NGW308	02/07/2005	VOC	Vinyl chloride	1.3	0.20	6.5	Active
584	NGW308	MW	NGW308	08/18/2005	VOC	Vinyl chloride	2.5	0.20	13	Active
584	NGW308	MW	NGW308	02/20/2006	VOC	Vinyl chloride	1.7	0.20	8.5	Active
584	NGW308	MW	NGW308	08/14/2006	VOC	Vinyl chloride	1.5	0.20	7.5	Active
584	NGW308	MW	NGW308	02/19/2008	VOC	Vinyl chloride	0.7	0.20	3.5	Active
584	NGW308	MW	NGW308	08/20/2008	VOC	Vinyl chloride	4.1	0.20	21	Active
584	NGW308	MW	NGW308	02/12/2009	VOC	Vinyl chloride	0.8	0.20	4.0	Active
584	NGW308	MW	NGW308	02/18/2010	VOC	Vinyl chloride	0.4	0.20	2.0	Active
584	NGW308	MW	NGW308	08/18/2010	VOC	Vinyl chloride	2.4	0.20	12	Active
584	NGW308	MW	NGW308	02/14/2011	VOC	Vinyl chloride	1.4	0.20	7.0	Active
584	NGW308	MW	NGW308-110802	08/02/2011	VOC	Vinyl chloride	7.3	0.20	37	Active
584	NGW308	MW	NGW-308-120731	07/31/2012	VOC	Vinyl chloride	0.3	0.20	1.5	Active
579	NGW309	MW	MW106A	10/06/1992	MET	Cadmium	24	2.6	9.2	Active
579	NGW309	MW	MW106A	10/27/1993	MET	Cadmium	31	2.6	12	Active
579	NGW309	MW	MW106A	01/24/1994	MET	Cadmium	10	2.6	3.8	Active
579	NGW309	MW	MW106A	04/19/1994	MET	Cadmium	18	2.6	6.9	Active
579	NGW309	MW	MW106A	10/06/1992	MET	Chromium	105	100	1.1	Active
579	NGW309	MW	MW106A	10/06/1992	MET	Lead	31	11	2.8	Active
579	NGW309	MW	MW106A	10/06/1992	MET	Mercury	0.2	0.020	10	Active
579	NGW309	MW	MW106A	03/09/1992	VOC	Vinyl chloride	1.6 J	0.20	8.0	Active
579	NGW309	MW	MW106A	04/19/1994	VOC	Vinyl chloride	0.9	0.20	4.5	Active
579	NGW309	MW	MW106A	07/19/1994	VOC	Vinyl chloride	0.55	0.20	2.8	Active
579	NGW309	MW	MW106A	10/20/1994	VOC	Vinyl chloride	0.6	0.20	3.0	Active
579	NGW309	MW	MW106A	01/23/1995	VOC	Vinyl chloride	0.96	0.20	4.8	Active
579	NGW309	MW	MW106A	09/18/1995	VOC	Vinyl chloride	0.64	0.20	3.2	Active
579	NGW309	MW	MW106A	03/27/1996	VOC	Vinyl chloride	0.44	0.20	2.2	Active
579	NGW309	MW	NGW309/MW-106A	09/10/1996	VOC	Vinyl chloride	0.61	0.20	3.1	Active
579	NGW309	MW	NGW309/MW-106A	03/18/1997	VOC	Vinyl chloride	0.52	0.20	2.6	Active
579	NGW309	MW	NGW309/MW-106A	08/27/1997	VOC	Vinyl chloride	0.27	0.20	1.4	Active
579	NGW309	MW	MW-106A	02/24/1998	VOC	Vinyl chloride	1	0.20	5.0	Active
579	NGW309	MW	MW-106A	07/28/1998	VOC	Vinyl chloride	0.68	0.20	3.4	Active
579	NGW309	MW	NGW309	01/18/1999	VOC	Vinyl chloride	0.92	0.20	4.6	Active
579	NGW309	MW	NGW309	07/19/1999	VOC	Vinyl chloride	1.3	0.20	6.5	Active
579	NGW309	MW	NGW309	02/21/2000	VOC	Vinyl chloride	1.2	0.20	6.0	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
579	NGW309	MW	NGW309	07/24/2000	VOC	Vinyl chloride	2.5	0.20	13	Active
579	NGW309	MW	NGW309	02/18/2001	VOC	Vinyl chloride	2.2	0.20	11	Active
579	NGW309	MW	NGW309	08/20/2001	VOC	Vinyl chloride	0.95	0.20	4.8	Active
579	NGW309	MW	NGW309	02/18/2002	VOC	Vinyl chloride	0.79	0.20	4.0	Active
579	NGW309	MW	NGW309	02/19/2008	VOC	Vinyl chloride	0.4	0.20	2.0	Active
579	NGW309	MW	NGW309	08/20/2008	VOC	Vinyl chloride	0.3	0.20	1.5	Active
579	NGW309	MW	NGW309	02/12/2009	VOC	Vinyl chloride	0.4	0.20	2.0	Active
579	NGW309	MW	NGW309	02/18/2010	VOC	Vinyl chloride	0.3	0.20	1.5	Active
580	NGW310	MW	MW106B	10/06/1992	MET	Arsenic	6	5.0	1.2	Active
580	NGW310	MW	MW106B	10/06/1992	MET	Cadmium	51	2.6	20	Active
580	NGW310	MW	MW106B	07/22/1993	MET	Cadmium	4	2.6	1.5	Active
580	NGW310	MW	MW106B	10/27/1993	MET	Cadmium	9	2.6	3.5	Active
580	NGW310	MW	MW106B	04/19/1994	MET	Cadmium	4	2.6	1.5	Active
580	NGW310	MW	MW106B	10/06/1992	MET	Lead	32	11	2.9	Active
580	NGW310	MW	MW106B	10/27/1993	MET	Lead	15	11	1.4	Active
580	NGW310	MW	MW106B	10/06/1992	MET	Mercury	0.1	0.020	5.0	Active
581	NGW311	MW	MW107B	10/06/1992	MET	Cadmium	48	2.6	18	Active
581	NGW311	MW	MW107B	07/22/1993	MET	Cadmium	22	2.6	8.5	Active
581	NGW311	MW	MW107B	10/27/1993	MET	Cadmium	10	2.6	3.8	Active
581	NGW311	MW	MW107B	01/24/1994	MET	Cadmium	4	2.6	1.5	Active
581	NGW311	MW	NGW311	07/19/1999	VOC	Vinyl chloride	0.94	0.20	4.7	Active
581	NGW311	MW	NGW311	07/19/1999	VOC	Vinyl chloride	1	0.20	5.0	Active
581	NGW311	MW	NGW311	02/21/2000	VOC	Vinyl chloride	0.78	0.20	3.9	Active
581	NGW311	MW	NGW311	07/24/2000	VOC	Vinyl chloride	0.64	0.20	3.2	Active
581	NGW311	MW	NGW311	07/24/2000	VOC	Vinyl chloride	2	0.20	10	Active
581	NGW311	MW	NGW311	02/18/2001	VOC	Vinyl chloride	1.2	0.20	6.0	Active
581	NGW311	MW	NGW311	08/20/2001	VOC	Vinyl chloride	0.45	0.20	2.3	Active
581	NGW311	MW	NGW311	02/18/2002	VOC	Vinyl chloride	0.22	0.20	1.1	Active
Building 3-818 Area										
No detected exceedances										
Main Fuel Farm Area										
593	MW-12	MW	MF-12	12/04/1991	TPH	Diesel Range Hydrocarbons	1,200	500	2.4	Abandoned
593	MW-12	MW	MF-12	04/01/1992	TPH	Diesel Range Hydrocarbons	1,400	500	2.8	Abandoned
593	MW-12	MW	MF-12	07/22/1992	TPH	Diesel Range Hydrocarbons-HCID	850	500	1.7	Abandoned
593	MW-12	MW	NBF-MF-12	08/13/1986	TPH	Jet Fuel	2,920	500	5.8	Abandoned
593	MW-12	MW	NBF-MF-12	08/13/1986	TPH	Total Petroleum Hydrocarbons	2,920	500	5.8	Abandoned
593	MW-12	MW	NBF-MF-12	08/13/1986	VAH	Benzene	4	0.80	5.0	Abandoned
593	MW-12	MW	MF-12	07/22/1992	VAH	Benzene	1.4	0.80	1.8	Abandoned
691	MW-13	MW	NBF-MF-13	08/13/1986	TPH	Jet Fuel	1,300	500	2.6	Abandoned
691	MW-13	MW	NBF-MF-13	08/13/1986	TPH	Total Petroleum Hydrocarbons	1,300	500	2.6	Abandoned
692	MW-14	MW	NBF-MF-14	08/13/1986	TPH	Jet Fuel	4,470	500	8.9	Abandoned
692	MW-14	MW	NBF-MF-14	08/13/1986	TPH	Total Petroleum Hydrocarbons	4,470	500	8.9	Abandoned

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
595	MW-16	MW	MF-16	04/01/1992	TPH	Diesel Range Hydrocarbons	780	500	1.6	Abandoned
597	MW-18	MW	MF-18	12/04/1991	TPH	Diesel Range Hydrocarbons	49,000	500	98	Abandoned
597	MW-18	MW	MF-18	04/01/1992	TPH	Diesel Range Hydrocarbons	58,000	500	120	Abandoned
597	MW-18	MW	NBF-MF-18	08/13/1986	TPH	Total Petroleum Hydrocarbons	720	500	1.4	Abandoned
598	MW-19	MW	MF-19	04/01/1992	TPH	Diesel Range Hydrocarbons	1,100	500	2.2	Abandoned
598	MW-19	MW	NBF-MF-19	08/13/1986	TPH	Jet Fuel	600	500	1.2	Abandoned
598	MW-19	MW	NBF-MF-19	08/13/1986	TPH	Total Petroleum Hydrocarbons	830	500	1.7	Abandoned
599	MW-20	MW	MW-20	04/01/1992	TPH	Diesel Range Hydrocarbons	19,000	500	38	Abandoned
599	MW-20	MW	MW-20	04/01/1992	VAH	Benzene	20	0.80	25	Abandoned
607	MW-28	MW	MW-28	04/01/1992	TPH	Diesel Range Hydrocarbons	820	500	1.6	Abandoned
607	MW-28	MW	MF-28	10/30/1992	TPH	Diesel Range Hydrocarbons	820	500	1.6	Abandoned
607	MW-28	MW	MF-28	04/26/1993	TPH	Diesel Range Hydrocarbons	900	500	1.8	Abandoned
607	MW-28	MW	MF-28	10/26/1993	TPH	Diesel Range Hydrocarbons	1,400	500	2.8	Abandoned
607	MW-28	MW	MF-28	01/25/1994	TPH	Diesel Range Hydrocarbons	650	500	1.3	Abandoned
607	MW-28	MW	MF-28	07/22/1992	TPH	Diesel Range Hydrocarbons-HCID	540	500	1.1	Abandoned
607	MW-28	MW	MW-28	04/01/1992	VAH	Benzene	5.9	0.80	7.4	Abandoned
607	MW-28	MW	MF-28	07/22/1992	VAH	Benzene	5.7	0.80	7.1	Abandoned
607	MW-28	MW	MF-28	01/26/1993	VAH	Benzene	5.5	0.80	6.9	Abandoned
607	MW-28	MW	MF-28	04/26/1993	VAH	Benzene	1.2	0.80	1.5	Abandoned
607	MW-28	MW	MF-28	07/21/1993	VAH	Benzene	6.2	0.80	7.8	Abandoned
607	MW-28	MW	MF-28	10/26/1993	VAH	Benzene	35	0.80	44	Abandoned
607	MW-28	MW	MF-28	01/25/1994	VAH	Benzene	10	0.80	13	Abandoned
607	MW-28	MW	MW-28	04/20/1994	VAH	Benzene	5.8	0.80	7.3	Abandoned
605	NGW353	MW	NGW353	08/14/2001	TPH	Diesel Range Hydrocarbons	4,200	500	8.4	Active
605	NGW353	MW	NGW353	08/14/2001	TPH	Jet Fuel	7,200	500	14	Active
606	NGW354	MW	MW-27	10/25/1994	TPH	Diesel Range Hydrocarbons	560	500	1.1	Active
606	NGW354	MW	MW-27	05/18/1995	TPH	Diesel Range Hydrocarbons	3,900	500	7.8	Active
606	NGW354	MW	MFF-MW-27	09/12/1995	TPH	Diesel Range Hydrocarbons	1,900	500	3.8	Active
606	NGW354	MW	MW-27	03/21/1996	TPH	Diesel Range Hydrocarbons	790	500	1.6	Active
606	NGW354	MW	MFF-MW-27	03/20/1997	TPH	Diesel Range Hydrocarbons	52,000	500	100	Active
606	NGW354	MW	MFF-MW-27	08/28/1997	TPH	Diesel Range Hydrocarbons	29,000	500	58	Active
606	NGW354	MW	MW-27	07/29/1998	TPH	Diesel Range Hydrocarbons	6,800	500	14	Active
606	NGW354	MW	NGW354	01/21/1999	TPH	Diesel Range Hydrocarbons	2,700	500	5.4	Active
606	NGW354	MW	NGW354	02/23/2000	TPH	Diesel Range Hydrocarbons	4,900	500	9.8	Active
606	NGW354	MW	NGW354	07/26/2000	TPH	Diesel Range Hydrocarbons	24,000	500	48	Active
606	NGW354	MW	NGW354	02/21/2001	TPH	Diesel Range Hydrocarbons	61,000	500	120	Active
606	NGW354	MW	NGW354	08/14/2001	TPH	Diesel Range Hydrocarbons	36,000	500	72	Active
606	NGW354	MW	NGW354	02/21/2002	TPH	Diesel Range Hydrocarbons	18,000	500	36	Active
606	NGW354	MW	NGW354	08/15/2002	TPH	Diesel Range Hydrocarbons	2,200	500	4.4	Active
606	NGW354	MW	NGW354	02/17/2003	TPH	Diesel Range Hydrocarbons	30,000	500	60	Active
606	NGW354	MW	NGW354	07/10/2003	TPH	Diesel Range Hydrocarbons	27,000	500	54	Active
606	NGW354	MW	NGW354	02/11/2004	TPH	Diesel Range Hydrocarbons	4,300	500	8.6	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
606	NGW354	MW	NGW354	08/06/2004	TPH	Diesel Range Hydrocarbons	6,600	500	13	Active
606	NGW354	MW	NGW354	02/08/2005	TPH	Diesel Range Hydrocarbons	7,500	500	15	Active
606	NGW354	MW	NGW354	08/19/2005	TPH	Diesel Range Hydrocarbons	11,000	500	22	Active
606	NGW354	MW	NGW354	02/20/2006	TPH	Diesel Range Hydrocarbons	4,700	500	9.4	Active
606	NGW354	MW	NGW354	08/15/2006	TPH	Diesel Range Hydrocarbons	3,600	500	7.2	Active
606	NGW354	MW	NGW354	02/19/2007	TPH	Diesel Range Hydrocarbons	40,000	500	80	Active
606	NGW354	MW	NGW354	08/23/2007	TPH	Diesel Range Hydrocarbons	3,800	500	7.6	Active
606	NGW354	MW	NGW354	02/20/2008	TPH	Diesel Range Hydrocarbons	3,700	500	7.4	Active
606	NGW354	MW	NGW354	08/21/2008	TPH	Diesel Range Hydrocarbons	21,000	500	42	Active
606	NGW354	MW	NGW354	02/12/2009	TPH	Diesel Range Hydrocarbons	28,000	500	56	Active
606	NGW354	MW	NGW354	08/19/2009	TPH	Diesel Range Hydrocarbons	16,000	500	32	Active
606	NGW354	MW	NGW354	02/19/2010	TPH	Diesel Range Hydrocarbons	200,000	500	400	Active
606	NGW354	MW	NGW354	08/19/2010	TPH	Diesel Range Hydrocarbons	2,000	500	4.0	Active
606	NGW354	MW	NGW354	02/14/2011	TPH	Diesel Range Hydrocarbons	6,200	500	12	Active
606	NGW354	MW	NGW354-110803	08/03/2011	TPH	Diesel Range Hydrocarbons	1,600	500	3.2	Active
606	NGW354	MW	NGW354-120216	02/16/2012	TPH	Diesel Range Hydrocarbons	7,500	500	15	Active
606	NGW354	MW	NGW-354-120801	08/01/2012	TPH	Diesel Range Hydrocarbons	2,400	500	4.8	Active
606	NGW354	MW	NGW354	02/21/2001	TPH	Jet Fuel	180,000	500	360	Active
606	NGW354	MW	NGW354	08/14/2001	TPH	Jet Fuel	82,000	500	160	Active
606	NGW354	MW	NGW354	02/21/2002	TPH	Jet Fuel	47,000	500	94	Active
606	NGW354	MW	NGW354	02/17/2003	TPH	Jet Fuel	83,000	500	170	Active
606	NGW354	MW	NGW354	07/10/2003	TPH	Jet Fuel	66,000	500	130	Active
606	NGW354	MW	NGW354	02/11/2004	TPH	Jet Fuel	9,600	500	19	Active
606	NGW354	MW	NGW354	08/06/2004	TPH	Jet Fuel	13,000	500	26	Active
606	NGW354	MW	NGW354	02/08/2005	TPH	Jet Fuel	18,000	500	36	Active
606	NGW354	MW	NGW354	08/19/2005	TPH	Jet Fuel	23,000	500	46	Active
606	NGW354	MW	NGW354	02/20/2006	TPH	Jet Fuel	10,000	500	20	Active
606	NGW354	MW	NGW354	08/15/2006	TPH	Jet Fuel	11,000	500	22	Active
606	NGW354	MW	NGW354	02/19/2007	TPH	Jet Fuel	95,000	500	190	Active
606	NGW354	MW	NGW354	08/23/2007	TPH	Jet Fuel	11,000	500	22	Active
606	NGW354	MW	NGW354	02/20/2008	TPH	Jet Fuel	8,400	500	17	Active
606	NGW354	MW	NGW354	08/21/2008	TPH	Jet Fuel	35,000	500	70	Active
606	NGW354	MW	NGW354	02/12/2009	TPH	Jet Fuel	71,000	500	140	Active
606	NGW354	MW	NGW354	08/19/2009	TPH	Jet Fuel	28,000	500	56	Active
606	NGW354	MW	NGW354	02/19/2010	TPH	Jet Fuel	610,000	500	1,200	Active
606	NGW354	MW	NGW354	08/19/2010	TPH	Jet Fuel	7,300	500	15	Active
606	NGW354	MW	NGW354	02/14/2011	TPH	Jet Fuel	18,000	500	36	Active
606	NGW354	MW	NGW354-110803	08/03/2011	TPH	Jet Fuel	2,400	500	4.8	Active
606	NGW354	MW	NGW-354-120801	08/01/2012	TPH	Jet Fuel	4,100	500	8.2	Active
606	NGW354	MW	MW-27	04/01/1992	VAH	Benzene	4.9	0.80	6.1	Active
606	NGW354	MW	MF-27	07/22/1992	VAH	Benzene	51	0.80	64	Active
606	NGW354	MW	MF-27	10/29/1992	VAH	Benzene	40	0.80	50	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
606	NGW354	MW	MF-27	01/26/1993	VAH	Benzene	9.6	0.80	12	Active
606	NGW354	MW	MF-27	04/26/1993	VAH	Benzene	5.1	0.80	6.4	Active
606	NGW354	MW	MF-27	07/21/1993	VAH	Benzene	4.8	0.80	6.0	Active
606	NGW354	MW	MF-27	10/26/1993	VAH	Benzene	27	0.80	34	Active
606	NGW354	MW	MF-27	01/25/1994	VAH	Benzene	5.7	0.80	7.1	Active
606	NGW354	MW	MW-27	07/20/1994	VAH	Benzene	49	0.80	61	Active
606	NGW354	MW	MW-27	10/25/1994	VAH	Benzene	62	0.80	78	Active
606	NGW354	MW	MW-27	01/25/1995	VAH	Benzene	2.3	0.80	2.9	Active
606	NGW354	MW	MFF-MW-27	09/12/1995	VAH	Benzene	48	0.80	60	Active
606	NGW354	MW	MW-27	03/21/1996	VAH	Benzene	4.1	0.80	5.1	Active
606	NGW354	MW	MFF-MW-27	03/20/1997	VAH	Benzene	13	0.80	16	Active
606	NGW354	MW	MFF-MW-27	08/28/1997	VAH	Benzene	85	0.80	110	Active
606	NGW354	MW	MW-27	07/29/1998	VAH	Benzene	58	0.80	73	Active
606	NGW354	MW	NGW354	01/21/1999	VAH	Benzene	25	0.80	31	Active
606	NGW354	MW	NGW354	07/26/2000	VAH	Benzene	63	0.80	79	Active
606	NGW354	MW	NGW354	02/21/2001	VAH	Benzene	94	0.80	120	Active
606	NGW354	MW	NGW354	08/14/2001	VAH	Benzene	110	0.80	140	Active
606	NGW354	MW	NGW354	02/21/2002	VAH	Benzene	30	0.80	38	Active
606	NGW354	MW	NGW354	08/15/2002	VAH	Benzene	59	0.80	74	Active
606	NGW354	MW	NGW354	02/17/2003	VAH	Benzene	44	0.80	55	Active
606	NGW354	MW	NGW354	07/10/2003	VAH	Benzene	10	0.80	13	Active
606	NGW354	MW	NGW354	02/11/2004	VAH	Benzene	48	0.80	60	Active
606	NGW354	MW	NGW354	08/06/2004	VAH	Benzene	240	0.80	300	Active
606	NGW354	MW	NGW354	02/08/2005	VAH	Benzene	56	0.80	70	Active
606	NGW354	MW	NGW354	08/19/2005	VAH	Benzene	77	0.80	96	Active
606	NGW354	MW	NGW354	02/20/2006	VAH	Benzene	34	0.80	43	Active
606	NGW354	MW	NGW354	08/15/2006	VAH	Benzene	120	0.80	150	Active
606	NGW354	MW	NGW354	02/19/2007	VAH	Benzene	21	0.80	26	Active
606	NGW354	MW	NGW354	08/23/2007	VAH	Benzene	79	0.80	99	Active
606	NGW354	MW	NGW354	02/20/2008	VAH	Benzene	51	0.80	64	Active
606	NGW354	MW	NGW354	08/21/2008	VAH	Benzene	180	0.80	230	Active
606	NGW354	MW	NGW354	02/12/2009	VAH	Benzene	100	0.80	130	Active
606	NGW354	MW	NGW354	08/19/2009	VAH	Benzene	50	0.80	63	Active
606	NGW354	MW	NGW354	02/19/2010	VAH	Benzene	10	0.80	13	Active
606	NGW354	MW	NGW354	08/19/2010	VAH	Benzene	270	0.80	340	Active
606	NGW354	MW	NGW354	02/14/2011	VAH	Benzene	5	0.80	6.3	Active
606	NGW354	MW	NGW354-110803	08/03/2011	VAH	Benzene	30	0.80	38	Active
606	NGW354	MW	NGW-354-120801	08/01/2012	VAH	Benzene	37	0.80	46	Active
608	NGW355	MW	NGW355	02/21/2001	TPH	Jet Fuel	900	500	1.8	Active
609	NGW356	MW	MW-30	01/25/1995	TPH	Diesel Range Hydrocarbons	2,000	500	4.0	Active
609	NGW356	MW	MW-30	05/19/1995	TPH	Diesel Range Hydrocarbons	1,300	500	2.6	Active
609	NGW356	MW	MFF-MW-30	09/11/1995	TPH	Diesel Range Hydrocarbons	1,100	500	2.2	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
609	NGW356	MW	MW-30	03/21/1996	TPH	Diesel Range Hydrocarbons	930	500	1.9	Active
609	NGW356	MW	MFF-MW-30	03/20/1997	TPH	Diesel Range Hydrocarbons	1,800	500	3.6	Active
609	NGW356	MW	MFF-MW-30	08/28/1997	TPH	Diesel Range Hydrocarbons	2,600	500	5.2	Active
609	NGW356	MW	MW-30-Dup	07/29/1998	TPH	Diesel Range Hydrocarbons	1,100	500	2.2	Active
609	NGW356	MW	NGW356	01/21/1999	TPH	Diesel Range Hydrocarbons	600	500	1.2	Active
609	NGW356	MW	NGW356	02/23/2000	TPH	Diesel Range Hydrocarbons	700	500	1.4	Active
609	NGW356	MW	NGW356	07/26/2000	TPH	Diesel Range Hydrocarbons	750	500	1.5	Active
609	NGW356	MW	NGW356	02/21/2001	TPH	Diesel Range Hydrocarbons	2,000	500	4.0	Active
609	NGW356	MW	NGW356	08/14/2001	TPH	Diesel Range Hydrocarbons	1,700	500	3.4	Active
609	NGW356	MW	NGW356	02/21/2002	TPH	Diesel Range Hydrocarbons	950	500	1.9	Active
609	NGW356	MW	NGW356	08/15/2002	TPH	Diesel Range Hydrocarbons	1,200	500	2.4	Active
609	NGW356	MW	NGW356	02/17/2003	TPH	Diesel Range Hydrocarbons	1,400	500	2.8	Active
609	NGW356	MW	NGW356	07/10/2003	TPH	Diesel Range Hydrocarbons	1,200	500	2.4	Active
609	NGW356	MW	NGW356	02/11/2004	TPH	Diesel Range Hydrocarbons	810	500	1.6	Active
609	NGW356	MW	NGW356	08/06/2004	TPH	Diesel Range Hydrocarbons	870	500	1.7	Active
609	NGW356	MW	NGW356	02/08/2005	TPH	Diesel Range Hydrocarbons	1,100	500	2.2	Active
609	NGW356	MW	NGW356	08/19/2005	TPH	Diesel Range Hydrocarbons	580	500	1.2	Active
609	NGW356	MW	NGW356	02/20/2006	TPH	Diesel Range Hydrocarbons	1,200	500	2.4	Active
609	NGW356	MW	NGW356	02/19/2007	TPH	Diesel Range Hydrocarbons	620	500	1.2	Active
609	NGW356	MW	NGW356	08/23/2007	TPH	Diesel Range Hydrocarbons	800	500	1.6	Active
609	NGW356	MW	NGW356	02/20/2008	TPH	Diesel Range Hydrocarbons	630	500	1.3	Active
609	NGW356	MW	NGW356	08/21/2008	TPH	Diesel Range Hydrocarbons	640	500	1.3	Active
609	NGW356	MW	NGW356	02/12/2009	TPH	Diesel Range Hydrocarbons	1,000	500	2.0	Active
609	NGW356	MW	NGW356	08/19/2009	TPH	Diesel Range Hydrocarbons	870	500	1.7	Active
609	NGW356	MW	NGW356	02/19/2010	TPH	Diesel Range Hydrocarbons	600	500	1.2	Active
609	NGW356	MW	NGW356-110803	08/03/2011	TPH	Diesel Range Hydrocarbons	810	500	1.6	Active
609	NGW356	MW	NGW356-120216	02/16/2012	TPH	Diesel Range Hydrocarbons	770	500	1.5	Active
609	NGW356	MW	NGW-356-120801	08/01/2012	TPH	Diesel Range Hydrocarbons	630	500	1.3	Active
609	NGW356	MW	NGW-356-120801	08/01/2012	TPH	Oil Range Hydrocarbons	370	--	--	Active
609	NGW356	MW	NGW356	02/21/2001	TPH	Jet Fuel	2,200	500	4.4	Active
609	NGW356	MW	NGW356	08/14/2001	TPH	Jet Fuel	1,500	500	3.0	Active
609	NGW356	MW	NGW356	02/21/2002	TPH	Jet Fuel	1,000	500	2.0	Active
609	NGW356	MW	NGW356	02/17/2003	TPH	Jet Fuel	1,200	500	2.4	Active
609	NGW356	MW	NGW356	07/10/2003	TPH	Jet Fuel	1,000	500	2.0	Active
609	NGW356	MW	NGW356	02/11/2004	TPH	Jet Fuel	770	500	1.5	Active
609	NGW356	MW	NGW356	08/06/2004	TPH	Jet Fuel	720	500	1.4	Active
609	NGW356	MW	NGW356	02/08/2005	TPH	Jet Fuel	1,000	500	2.0	Active
609	NGW356	MW	NGW356	02/20/2006	TPH	Jet Fuel	1,100	500	2.2	Active
609	NGW356	MW	NGW356	08/23/2007	TPH	Jet Fuel	810	500	1.6	Active
609	NGW356	MW	NGW356	02/20/2008	TPH	Jet Fuel	560	500	1.1	Active
609	NGW356	MW	NGW356	02/12/2009	TPH	Jet Fuel	810	500	1.6	Active
609	NGW356	MW	NGW356	08/19/2009	TPH	Jet Fuel	570	500	1.1	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
609	NGW356	MW	NGW356	02/19/2010	TPH	Jet Fuel	620	500	1.2	Active
609	NGW356	MW	NGW356	08/18/2010	TPH	Jet Fuel	600	500	1.2	Active
609	NGW356	MW	NGW356	02/14/2011	TPH	Jet Fuel	510	500	1.0	Active
609	NGW356	MW	NGW356-110803	08/03/2011	TPH	Jet Fuel	610	500	1.2	Active
609	NGW356	MW	MFF-MW-30	09/11/1995	VAH	Benzene	1.7	0.80	2.1	Active
609	NGW356	MW	MW-30	03/21/1996	VAH	Benzene	1.3	0.80	1.6	Active
610	NGW357	MW	MW-31	01/25/1995	TPH	Diesel Range Hydrocarbons	3,200	500	6.4	Active
610	NGW357	MW	MW-31	05/19/1995	TPH	Diesel Range Hydrocarbons	1,500	500	3.0	Active
610	NGW357	MW	MFF-MW-31	09/12/1995	TPH	Diesel Range Hydrocarbons	3,600	500	7.2	Active
610	NGW357	MW	MW-31	03/21/1996	TPH	Diesel Range Hydrocarbons	1,700	500	3.4	Active
610	NGW357	MW	MFF-MW-31	03/20/1997	TPH	Diesel Range Hydrocarbons	1,100	500	2.2	Active
610	NGW357	MW	MFF-MW-31	08/28/1997	TPH	Diesel Range Hydrocarbons	860	500	1.7	Active
610	NGW357	MW	MW-31	07/29/1998	TPH	Diesel Range Hydrocarbons	820	500	1.6	Active
610	NGW357	MW	NGW357	01/21/1999	TPH	Diesel Range Hydrocarbons	720	500	1.4	Active
610	NGW357	MW	NGW357	07/20/1999	TPH	Diesel Range Hydrocarbons	580	500	1.2	Active
610	NGW357	MW	NGW357	02/23/2000	TPH	Diesel Range Hydrocarbons	990	500	2.0	Active
610	NGW357	MW	NGW357	07/26/2000	TPH	Diesel Range Hydrocarbons	640	500	1.3	Active
610	NGW357	MW	NGW357	02/21/2001	TPH	Diesel Range Hydrocarbons	2,000	500	4.0	Active
610	NGW357	MW	NGW357	08/14/2001	TPH	Diesel Range Hydrocarbons	1,500	500	3.0	Active
610	NGW357	MW	NGW357	02/21/2002	TPH	Diesel Range Hydrocarbons	1,900	500	3.8	Active
610	NGW357	MW	NGW357	08/15/2002	TPH	Diesel Range Hydrocarbons	850	500	1.7	Active
610	NGW357	MW	NGW357	02/17/2003	TPH	Diesel Range Hydrocarbons	1,700	500	3.4	Active
610	NGW357	MW	NGW357	07/10/2003	TPH	Diesel Range Hydrocarbons	930	500	1.9	Active
610	NGW357	MW	NGW357	02/11/2004	TPH	Diesel Range Hydrocarbons	740	500	1.5	Active
610	NGW357	MW	NGW357	08/06/2004	TPH	Diesel Range Hydrocarbons	560	500	1.1	Active
610	NGW357	MW	NGW357	02/08/2005	TPH	Diesel Range Hydrocarbons	680	500	1.4	Active
610	NGW357	MW	NGW357	02/20/2006	TPH	Diesel Range Hydrocarbons	1,100	500	2.2	Active
610	NGW357	MW	NGW357	08/15/2006	TPH	Diesel Range Hydrocarbons	530	500	1.1	Active
610	NGW357	MW	NGW357	02/19/2007	TPH	Diesel Range Hydrocarbons	600	500	1.2	Active
610	NGW357	MW	NGW357	02/20/2008	TPH	Diesel Range Hydrocarbons	810	500	1.6	Active
610	NGW357	MW	NGW357	02/12/2009	TPH	Diesel Range Hydrocarbons	780	500	1.6	Active
610	NGW357	MW	NGW357	08/19/2009	TPH	Diesel Range Hydrocarbons	520	500	1.0	Active
610	NGW357	MW	NGW357	02/19/2010	TPH	Diesel Range Hydrocarbons	1,200	500	2.4	Active
610	NGW357	MW	NGW357	02/14/2011	TPH	Diesel Range Hydrocarbons	820	500	1.6	Active
610	NGW357	MW	NGW357-110803	08/03/2011	TPH	Diesel Range Hydrocarbons	520	500	1.0	Active
610	NGW357	MW	NGW357-120216	02/16/2012	TPH	Diesel Range Hydrocarbons	1,100	500	2.2	Active
610	NGW357	MW	NGW357	02/21/2001	TPH	Jet Fuel	2,800	500	5.6	Active
610	NGW357	MW	NGW357	08/14/2001	TPH	Jet Fuel	1,800	500	3.6	Active
610	NGW357	MW	NGW357	02/21/2002	TPH	Jet Fuel	2,200	500	4.4	Active
610	NGW357	MW	NGW357	02/17/2003	TPH	Jet Fuel	1,800	500	3.6	Active
610	NGW357	MW	NGW357	07/10/2003	TPH	Jet Fuel	1,100	500	2.2	Active
610	NGW357	MW	NGW357	02/11/2004	TPH	Jet Fuel	1,000	500	2.0	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
610	NGW357	MW	NGW357	08/06/2004	TPH	Jet Fuel	710	500	1.4	Active
610	NGW357	MW	NGW357	02/08/2005	TPH	Jet Fuel	880	500	1.8	Active
610	NGW357	MW	NGW357	08/19/2005	TPH	Jet Fuel	640	500	1.3	Active
610	NGW357	MW	NGW357	02/20/2006	TPH	Jet Fuel	1,200	500	2.4	Active
610	NGW357	MW	NGW357	08/15/2006	TPH	Jet Fuel	850	500	1.7	Active
610	NGW357	MW	NGW357	02/19/2007	TPH	Jet Fuel	670	500	1.3	Active
610	NGW357	MW	NGW357	08/23/2007	TPH	Jet Fuel	770	500	1.5	Active
610	NGW357	MW	NGW357	02/20/2008	TPH	Jet Fuel	1,000	500	2.0	Active
610	NGW357	MW	NGW357	02/12/2009	TPH	Jet Fuel	870	500	1.7	Active
610	NGW357	MW	NGW357	08/19/2009	TPH	Jet Fuel	590	500	1.2	Active
610	NGW357	MW	NGW357	02/19/2010	TPH	Jet Fuel	1,700	500	3.4	Active
610	NGW357	MW	NGW357	08/18/2010	TPH	Jet Fuel	720	500	1.4	Active
610	NGW357	MW	NGW357	02/14/2011	TPH	Jet Fuel	1,400	500	2.8	Active
610	NGW357	MW	NGW357-110803	08/03/2011	TPH	Jet Fuel	600	500	1.2	Active
610	NGW357	MW	MFF-MW-31	03/20/1997	VAH	Benzene	5.8	0.80	7.3	Active
611	NGW358	MW	MW-32	01/25/1995	TPH	Diesel Range Hydrocarbons	14,000	500	28	Active
611	NGW358	MW	MW-32	05/18/1995	TPH	Diesel Range Hydrocarbons	8,000	500	16	Active
611	NGW358	MW	MFF-MW-32	09/12/1995	TPH	Diesel Range Hydrocarbons	20,000	500	40	Active
611	NGW358	MW	MW-32	03/21/1996	TPH	Diesel Range Hydrocarbons	3,000	500	6.0	Active
611	NGW358	MW	MFF-MW-32	03/20/1997	TPH	Diesel Range Hydrocarbons	6,600	500	13	Active
611	NGW358	MW	MFF-MW-32	08/28/1997	TPH	Diesel Range Hydrocarbons	2,500	500	5.0	Active
611	NGW358	MW	MW-32	07/29/1998	TPH	Diesel Range Hydrocarbons	3,200	500	6.4	Active
611	NGW358	MW	NGW358	01/21/1999	TPH	Diesel Range Hydrocarbons	1,100	500	2.2	Active
611	NGW358	MW	NGW358	02/21/2001	TPH	Diesel Range Hydrocarbons	1,600	500	3.2	Active
611	NGW358	MW	NGW358-Dup	08/14/2001	TPH	Diesel Range Hydrocarbons	840	500	1.7	Active
611	NGW358	MW	NGW358	02/21/2002	TPH	Diesel Range Hydrocarbons	2,600	500	5.2	Active
611	NGW358	MW	NGW358	08/15/2002	TPH	Diesel Range Hydrocarbons	2,000	500	4.0	Active
611	NGW358	MW	NGW358	02/17/2003	TPH	Diesel Range Hydrocarbons	3,700	500	7.4	Active
611	NGW358	MW	NGW358	07/10/2003	TPH	Diesel Range Hydrocarbons	2,100	500	4.2	Active
611	NGW358	MW	NGW358-Dup	02/11/2004	TPH	Diesel Range Hydrocarbons	2,100	500	4.2	Active
611	NGW358	MW	NGW358	08/06/2004	TPH	Diesel Range Hydrocarbons	2,200	500	4.4	Active
611	NGW358	MW	NGW358	02/08/2005	TPH	Diesel Range Hydrocarbons	5,000	500	10	Active
611	NGW358	MW	NGW358	08/19/2005	TPH	Diesel Range Hydrocarbons	930	500	1.9	Active
611	NGW358	MW	NGW358	02/20/2006	TPH	Diesel Range Hydrocarbons	970	500	1.9	Active
611	NGW358	MW	NGW358	02/20/2008	TPH	Diesel Range Hydrocarbons	850	500	1.7	Active
611	NGW358	MW	NGW358	08/21/2008	TPH	Diesel Range Hydrocarbons	690	500	1.4	Active
611	NGW358	MW	NGW358	02/12/2009	TPH	Diesel Range Hydrocarbons	2,800	500	5.6	Active
611	NGW358	MW	NGW358	08/19/2009	TPH	Diesel Range Hydrocarbons	2,400	500	4.8	Active
611	NGW358	MW	NGW358	02/19/2010	TPH	Diesel Range Hydrocarbons	2,800	500	5.6	Active
611	NGW358	MW	NGW358	08/18/2010	TPH	Diesel Range Hydrocarbons	1,900	500	3.8	Active
611	NGW358	MW	NGW358	02/14/2011	TPH	Diesel Range Hydrocarbons	2,800	500	5.6	Active
611	NGW358	MW	NGW358-110803	08/03/2011	TPH	Diesel Range Hydrocarbons	3,600	500	7.2	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
611	NGW358	MW	NGW358-120216	02/16/2012	TPH	Diesel Range Hydrocarbons	4,900	500	9.8	Active
611	NGW358	MW	NGW-358-120801	08/01/2012	TPH	Diesel Range Hydrocarbons	3,100	500	6.2	Active
611	NGW358	MW	NGW-358-120801	08/01/2012	TPH	Oil Range Hydrocarbons	1,500	--	--	Active
611	NGW358	MW	NGW358	02/21/2001	TPH	Jet Fuel	3,400	500	6.8	Active
611	NGW358	MW	NGW358-Dup	08/14/2001	TPH	Jet Fuel	1,800	500	3.6	Active
611	NGW358	MW	NGW358	02/21/2002	TPH	Jet Fuel	4,600	500	9.2	Active
611	NGW358	MW	NGW358	02/17/2003	TPH	Jet Fuel	5,000	500	10	Active
611	NGW358	MW	NGW358	07/10/2003	TPH	Jet Fuel	2,800	500	5.6	Active
611	NGW358	MW	NGW358-Dup	02/11/2004	TPH	Jet Fuel	3,600	500	7.2	Active
611	NGW358	MW	NGW358	08/06/2004	TPH	Jet Fuel	3,000	500	6.0	Active
611	NGW358	MW	NGW358	02/08/2005	TPH	Jet Fuel	6,400	500	13	Active
611	NGW358	MW	NGW358	08/19/2005	TPH	Jet Fuel	1,700	500	3.4	Active
611	NGW358	MW	NGW358	02/20/2006	TPH	Jet Fuel	1,600	500	3.2	Active
611	NGW358	MW	NGW358	08/15/2006	TPH	Jet Fuel	1,100	500	2.2	Active
611	NGW358	MW	NGW358	02/19/2007	TPH	Jet Fuel	780	500	1.6	Active
611	NGW358	MW	NGW358	08/23/2007	TPH	Jet Fuel	740	500	1.5	Active
611	NGW358	MW	NGW358	02/20/2008	TPH	Jet Fuel	1,300	500	2.6	Active
611	NGW358	MW	NGW358	08/21/2008	TPH	Jet Fuel	980	500	2.0	Active
611	NGW358	MW	NGW358	02/12/2009	TPH	Jet Fuel	3,100	500	6.2	Active
611	NGW358	MW	NGW358	08/19/2009	TPH	Jet Fuel	2,700	500	5.4	Active
611	NGW358	MW	NGW358	02/19/2010	TPH	Jet Fuel	4,200	500	8.4	Active
611	NGW358	MW	NGW358	08/18/2010	TPH	Jet Fuel	4,000	500	8.0	Active
611	NGW358	MW	NGW358	02/14/2011	TPH	Jet Fuel	4,800	500	9.6	Active
611	NGW358	MW	NGW358-110803	08/03/2011	TPH	Jet Fuel	4,000	500	8.0	Active
611	NGW358	MW	NGW-358-120801	08/01/2012	TPH	Jet Fuel	3,200	500	6.4	Active
611	NGW358	MW	MW-32	01/25/1995	VAH	Benzene	210	0.80	260	Active
611	NGW358	MW	MFF-MW-32	09/12/1995	VAH	Benzene	160	0.80	200	Active
611	NGW358	MW	MW-32	03/21/1996	VAH	Benzene	100	0.80	130	Active
611	NGW358	MW	MFF-MW-32	03/20/1997	VAH	Benzene	9.3	0.80	12	Active
611	NGW358	MW	MFF-MW-32	08/28/1997	VAH	Benzene	6.6	0.80	8.3	Active
611	NGW358	MW	MW-32	07/29/1998	VAH	Benzene	3.9	0.80	4.9	Active
611	NGW358	MW	NGW358	01/21/1999	VAH	Benzene	1.4	0.80	1.8	Active
611	NGW358	MW	NGW358	07/26/2000	VAH	Benzene	1.1	0.80	1.4	Active
611	NGW358	MW	NGW358	02/21/2001	VAH	Benzene	4.4	0.80	5.5	Active
611	NGW358	MW	NGW358-Dup	08/14/2001	VAH	Benzene	5.4	0.80	6.8	Active
611	NGW358	MW	NGW358	02/21/2002	VAH	Benzene	3.9	0.80	4.9	Active
611	NGW358	MW	NGW358	08/15/2002	VAH	Benzene	5.2	0.80	6.5	Active
611	NGW358	MW	NGW358-Dup	02/17/2003	VAH	Benzene	3.5	0.80	4.4	Active
611	NGW358	MW	NGW358	07/10/2003	VAH	Benzene	5.3	0.80	6.6	Active
611	NGW358	MW	NGW358-Dup	02/11/2004	VAH	Benzene	3.3	0.80	4.1	Active
611	NGW358	MW	NGW358	08/06/2004	VAH	Benzene	4.8	0.80	6.0	Active
611	NGW358	MW	NGW358	02/08/2005	VAH	Benzene	2.4	0.80	3.0	Active

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
611	NGW358	MW	NGW358	08/15/2006	VAH	Benzene	1	0.80	1.3	Active
612	NGW359	MW	MW-33	01/25/1995	TPH	Diesel Range Hydrocarbons	9,100	500	18	Active
612	NGW359	MW	MW-33	05/18/1995	TPH	Diesel Range Hydrocarbons	81,000	500	160	Active
612	NGW359	MW	MFF-MW-33	09/12/1995	TPH	Diesel Range Hydrocarbons	46,000	500	92	Active
612	NGW359	MW	MW-33	03/21/1996	TPH	Diesel Range Hydrocarbons	28,000	500	56	Active
612	NGW359	MW	MFF-MW-33	03/20/1997	TPH	Diesel Range Hydrocarbons	19,000	500	38	Active
612	NGW359	MW	MFF-MW-33	08/28/1997	TPH	Diesel Range Hydrocarbons	13,000	500	26	Active
612	NGW359	MW	MW-33	07/29/1998	TPH	Diesel Range Hydrocarbons	580	500	1.2	Active
612	NGW359	MW	MW-33	01/25/1995	VAH	Benzene	24	0.80	30	Active
612	NGW359	MW	MFF-MW-33	09/12/1995	VAH	Benzene	10	0.80	13	Active
612	NGW359	MW	MW-33	03/21/1996	VAH	Benzene	3.3	0.80	4.1	Active
Concourse B Area										
1982	B4	TW	B4	07/25/1996	MET	Aluminum	469,000	16000	29	Abandoned
1982	B4	TW	B4	07/25/1996	MET	Arsenic	140	5.0	28	Abandoned
1982	B4	TW	B4	07/25/1996	MET	Beryllium	10	4.0	2.5	Abandoned
1982	B4	TW	B4	07/25/1996	MET	Cadmium	10	2.6	3.8	Abandoned
1982	B4	TW	B4	07/25/1996	MET	Chromium	700	100	7.0	Abandoned
1982	B4	TW	B4	07/25/1996	MET	Copper	1,660	120	14	Abandoned
1982	B4	TW	B4	07/25/1996	MET	Iron	325,900	11000	30	Abandoned
1982	B4	TW	B4	07/25/1996	MET	Lead	320	11	29	Abandoned
1982	B4	TW	B4	07/25/1996	MET	Manganese	3,960	2200	1.8	Abandoned
1982	B4	TW	B4	07/25/1996	MET	Nickel	340	100	3.4	Abandoned
1982	B4	TW	B4	07/25/1996	MET	Selenium	290	50	5.8	Abandoned
1982	B4	TW	B4	07/25/1996	MET	Vanadium	1,980	3.0	660	Abandoned
1982	B4	TW	B4	07/25/1996	MET	Zinc	2,850	33	86	Abandoned
1982	B4	TW	B4	07/25/1996	PHT	Bis(2-ethylhexyl) phthalate	2	1.0	2.0	Abandoned
1982	B4	TW	B4	07/25/1996	VOC	Tetrachloroethene (PCE)	18	5.0	3.6	Abandoned
1983	B8	TW	B8	07/25/1996	MET	Aluminum	743,200	16000	46	Abandoned
1983	B8	TW	B8	07/25/1996	MET	Arsenic	200	5.0	40	Abandoned
1983	B8	TW	B8	07/25/1996	MET	Barium	3,000	2000	1.5	Abandoned
1983	B8	TW	B8	07/25/1996	MET	Beryllium	20	4.0	5.0	Abandoned
1983	B8	TW	B8	07/25/1996	MET	Cadmium	20	2.6	7.7	Abandoned
1983	B8	TW	B8	07/25/1996	MET	Chromium	1,260	100	13	Abandoned
1983	B8	TW	B8	07/25/1996	MET	Copper	2,080	120	17	Abandoned
1983	B8	TW	B8	07/25/1996	MET	Iron	442,300	11000	40	Abandoned
1983	B8	TW	B8	07/25/1996	MET	Lead	460	11	42	Abandoned
1983	B8	TW	B8	07/25/1996	MET	Manganese	8,240	2200	3.7	Abandoned
1983	B8	TW	B8	07/25/1996	MET	Mercury	50	0.020	2,500	Abandoned
1983	B8	TW	B8	07/25/1996	MET	Nickel	790	100	7.9	Abandoned
1983	B8	TW	B8	07/25/1996	MET	Selenium	370	50	7.4	Abandoned
1983	B8	TW	B8	07/25/1996	MET	Vanadium	2,170	3.0	720	Abandoned
1983	B8	TW	B8	07/25/1996	MET	Zinc	13,350	33	400	Abandoned

Table 7.1-10
RI Selected Screening Level Exceedances for Detected COPCs in Central Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
1983	B8	TW	B8	07/25/1996	TPH	Total Petroleum Hydrocarbons	5,000	500	10	Abandoned
1983	B8	TW	B8	07/25/1996	PHT	Bis(2-ethylhexyl) phthalate	3.9	1.0	3.9	Abandoned
1983	B8	TW	B8	07/25/1996	VOC	Trichloroethene (TCE)	51	4.0	13	Abandoned

E = Quantitated value falls above limites of calibration curve
J = Estimated value
M = Estimated value with low spectral match
MET = Metals
MW = Monitoring well
PAH = Polycyclic aromatic hydrocarbons
PHT = Phthalates
TPH = Petroleum Hydrocarbons
TW = Temporary well
VAH = Volatile aromatic hydrocarbons
VOC = Volatile organic compounds
-- = Not applicable

Table 7.1-11
RI Selected Screening Level Exceedances for Detected COPCs in Soil at South Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Depth (ft bgs)	Chemical Class	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Excavation Status
UBF-61 Area											
No detected exceedances											
Former Buildings 3-830, 3-831, 3-832 Area											
830	B-2	SB	B-2	10/25/1989	10	MET	Arsenic	19.6	7	2.8	

MET = Metals

SB = Soil boring

-- = Not applicable

Table 7.1-12
RI Selected Screening Level Exceedances for Dectected COPCs in Groundwater at South Flightline Area

User Location ID	Location Name	Location Type	Sample ID	Sample Date	Chemical Class	Chemical	Concentration (ug/L)	RISL	RISL Exceedance Factor	Well Status
Former Buildings 3-830, 3-831, 3-832 Area										
834	MW-1	MW	MW-1	11/09/1989	VAH	Benzene	1.2 M	0.80	1.5	Abandoned
835	MW-2	MW	MW-2	11/09/1989	VAH	Benzene	2.4	0.80	3.0	Abandoned

M = Estimated value with low spectral match

MW = Monitoring well

VAH = Volatile aromatic hydrocarbons

Table 7.1-13
Summary of Vapor Intrusion Screening at NBF-GTSP Site

Area of Concern	AOC with Elevated EFs	Existing Nearby Buildings	Volatile Chemical or Substance	Vapor Intrusion Screening Using Groundwater Data								Elevated Detected VOCs and TPH-G in Soil for AOCs with VI Concern					Proposed RI Activities Related to Vapor Intrusion
				Maximum detected exceedance during last three years of sampling				Most recent detected exceedance				Maximum detected exceedance for in-situ vadose soil					
				Sample Date	Conc (ug/L)	VI EF Value	Well	Sample Date	Conc (ug/L)	VI EF Value	Well	Sample Date	Conc (mg/kg)	RISL EF Value	Depth (ft bgs)	Location	
PEL Area																	
Building 3-323 Area (Figure 7.1-21)	●	3-317, 3-323, 3-334	Chloroform	07/20/11	4.7	3.9	DW-11	07/20/11	4.7	3.9	DW-11	--	--	--	--	--	• Install one soil vapor point near SE corner of Bldg 3-323, based on elevated VOC soil concentrations in this area (LAI-SB02 and SLR-3). • Install one soil vapor point boring near NW corner of Bldg 3-323, based on elevated vinyl chloride groundwater concentrations in this area (DW-09 and DW-11). • Add NGW511 to the groundwater monitoring program for four rounds of quarterly sampling for VOCs.
			Vinyl chloride	07/20/11	1.8	5.3	DW-09	07/20/11	1.8	5.3	DW-09	--	--	--	--	--	
			cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	11/22/06	0.14	27	3 - 4	SLR-3	
			Trichloroethene (TCE)	--	--	--	--	--	--	--	--	07/13/10	0.12	80	2 - 4	LAI-SB02	
Buildings 3-302, 3-322 Area		3-302, 3-322	Trichloroethene (TCE)	01/27/11	2	1.3	NGW509	01/27/11	2	1.3	NGW509	--	--	--	--	--	
Buildings 3-329, 3-333, 3-335 Area (Figures 7.1-30, 31)	●	3-333, 3-335	Vinyl chloride	01/30/11	0.7	2.1	NGW518	01/30/11	0.7	2.1	NGW518	--	--	--	--	--	• Install one soil vapor point near NW corner of Bldg 3-335, based on elevated benzene and TPH-G soil concentrations in this area (LAI-SB60, P11, P18). • Install one soil vapor point near NE corner of Bldg 3-335, based on elevated TPH-G and possible benzene soil concentrations in this area (P17, B0-54, AA1-62). • Install one soil vapor point near NE portion of Bldg 3-333, based on elevated TCE soil concentration in area (3-333-19).
			Trichloroethene (TCE)	--	--	--	--	--	--	--	--	09/12/96	0.22	150	4 - 4.5	3-333-19	
			Benzene	--	--	--	--	--	--	--	--	07/19/11	0.31	310	4 - 6	LAI-SB60	
			Gas Range Hydrocarbons	--	--	--	--	--	--	--	--	06/20/97	7,800	260	3.7 - 6.7*	P18	
		3-310, 3-626, Test Bldg	Vinyl chloride	01/26/11	0.9	2.6	NGW514	01/26/11	0.9	2.6	NGW514	--	--	--	--	--	
			Gas Range Hydrocarbons	--	--	--	--	--	--	--	--	09/28/10	7,000	70	4 - 6	LAI-SB104	
Building 3-324 Area (Figure 7.1-37)	●	3-324	Chloroform	07/19/11	1.3	1.1	DW-07	07/19/11	1.3	1.1	DW-07	--	--	--	--	--	• Install one soil vapor point near NE corner of Bldg 3-324, based on elevated benzene soil concentrations in adjacent Bldg 3-335 area (NGW516 and LAI-SB60).
			Benzene	--	--	--	--	--	--	--	--	07/19/11	0.31	310	4 - 6	LAI-SB60	
Building 3-353 Area (Figure 7.1-42)	●	3-353	Benzene	--	--	--	--	--	--	--	--	09/23/10	0.48	480	6 - 8*	LAI-SB98	• Install one soil vapor point near SE corner of Bldg 3-353, based on elevated benzene and TPH-G soil concentrations in adjacent Green Hornet area (LAI-SB98).
			Gas Range Hydrocarbons	--	--	--	--	--	--	--	--	09/23/10	7,300	240	2 - 4	LAI-SB98	
North Flightline Area																	
Former Buildings 3-360, 3-361 Area (Figure 7.1-52)	●	Offsite buildings	Trichloroethene (TCE)	07/31/12	15	9.4	NGW203	07/31/12	15	9.4	NGW203	--	--	--	--	--	• Continue Boeing semi-annual monitoring.
			Vinyl chloride	08/19/10	0.7	2.1	NGW203	08/02/11	0.6	1.8	NGW203	--	--	--	--	--	
Building 3-380 SD Area		3-365	Trichloroethene (TCE)	07/14/11	4	2.5	DW-04	07/19/11	3.2	2.0	DW-04	--	--	--	--	--	
Building 7-27-1 Area		7-27-1	Trichloroethene (TCE)	01/16/02	8	5.0	NGW253	01/16/02	8	5.0	NGW253	--	--	--	--	--	
Building 3-380 Area		3-380	Mercury	03/20/89	4	4.7	GT-1	03/20/89	4	4.7	GT-1	--	--	--	--	--	
Building 3-369 Area		3-369, 3-374, 3-370, 3-380	Mercury	08/09/89	2	2.4	GT88-1, GT88-3	08/09/89	2	2.4	GT88-1, GT88-3	--	--	--	--	--	
Central Flightline Area																	
Buildings 3-800, 3-801 Area (Figure 7.1-66)	●	3-800	Chloroform	10/15/86	4.9	20	MW-4	10/15/86	4.9	20	MW-4	--	--	--	--	--	• Install one soil vapor point near NW area of Bldg 3-800, based on elevated VOC soil and groundwater concentrations in this area (HC-N2, NGW307, NGW308). • Install one soil vapor point near north area of Bldg 3-801, based on elevated TCE soil concentration in area (SB-15). • Continue Boeing semi-annual monitoring, with the addition of NGW307 and NGW309.
			Trichloroethene (TCE)	08/18/10	3.3	2.1	NGW308	08/18/10	3.3	2.1	NGW308	01/17/94	0.07	47	6 - 6.5	NGW307	
			Vinyl chloride	02/19/07	22	65	NGW307	07/31/12	4.9	14	NGW301	--	--	--	--	--	
			cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	01/17/94	0.32	62	6 - 6.5	NGW307	
			Tetrachloroethene (PCE)	--	--	--	--	--	--	--	--	09/13/90	0.28	160	~7	HC-N2	
		3-801	Chloroform	10/14/89	4.9	4.1	MW-4	10/14/89	4.9	4.1	MW-4	--	--	--	--	--	
			Trichloroethene (TCE)	--	--	--	--	--	--	--	--	07/05/91	0.4	270	3.5 - 4	SB-15	
Main Fuel Farm Area (Figure 7.1-69)	●	3-818, 3-826	Benzene	08/19/10	270	110	NGW354	08/01/12	37	15	NGW354	--	--	--	--	--	• Install one soil vapor point near SE area of Bldg 3-818, based on elevated benzene groundwater concentration in this area (NGW354). • Continue Boeing semi-annual monitoring, with NGW353.

Conc = Groundwater or soil concentration TPH-G = Gasoline Range Hydrocarbons VI = Vapor intrusion VI EF = Vapor intrusion exceedance factors based on the VI groundwater screening levels modified from Ecology's Draft Soil Vapor Intrusion Guidance (October 2009).

* Soil sample interval extends at least halfway below the water table at time of sampling; however, the water table fluctuates seasonally; removal of these maximum sample results would not impact VI decisions.

● Chemicals were detected with GW VI EFs >5 (yellow, orange, or red) and/or soil VOC RISL EFs >25 (orange or red) in the AOC; buildings are located within ~100 feet of the sample location with elevated EFs.

Groundwater VI screening level values: Benzene = 2.4, Chloroform = 1.2, Mercury = 0.85, PCE = 24, TCE = 1.6, Vinyl chloride = 0.34 ug/L (see text Section 6.2.3).

Groundwater data include any detected results with VI EF >1 from the last three years of sampling at each location; soil data include any detected results with RISL EF >25 located within ~100 feet of an existing building.

The GTSP Area and the NBF South Flightline Area did not include any identified areas of VI concern.

EF Colors	EF Ranges
(yellow)	> 5.0 - 25
(orange)	> 25 - 125
(red)	> 125

Table 7.1-14
Summary of Proposed RI Activities for Soil, Groundwater, and Soil Vapor

Site Sub-Area/ Area of Concern	Number of Individual Sampling Locations				Total Number of Boring Locations*	Number of Samples			Priority	Analyses	Rationale for Activity
	Proposed Soil Borings	Proposed GW Monitoring Wells	Existing GW Monitoring Wells for RI Sampling	Proposed Soil Vapor Points		Minimum Number of Soil Samples*	Minimum Number of GW Samples	Minimum Number of Soil Vapor Samples^			
GTSP Property (Section 7.1.3)											
North Yard Area (Fig 7.1-6)	1	--	--	--	1	2	--	--	Medium	PCBs, Dioxins/Furans	Assess previously uncharacterized portions of GTSP in this area, to confirm soil is not contaminated by key COPCs.
East Yard Area (Fig 7.1-6)	1	--	--	--	1	2	--	--	Low	PCBs, Metals, SVOC, VOCs, Dioxins/Furans	Assess previously uncharacterized portions of GTSP in this area, to confirm soil is not contaminated by key COPCs.
Fuel Tank Area (Fig 7.1-6)	--	--	1	--	--	--	4	--	Medium	TPH	Determine effectiveness of soil removal near fuel tanks based on impacts to downgradient groundwater at existing well GTSP-8.
South Yard Area and Low-Lying Area (Figs 7.1-8, 9)	--	--	2	--	--	--	8	--	Medium	PCBs, Metals, SVOC, cVOCs	Determine effectiveness of fenceline area soil removal based on impacts to groundwater at existing wells GTSP-2 and GTSP-7.
NBF -- PEL Area (Section 7.1.4)											
NBF Fenceline Area (Figs 7.1-8, 9, 12)	--	--	3	--	--	--	12	--	High	PCBs, cVOCs	Sample existing wells NGW521 through NGW523 to determine effectiveness of soil removal, based on groundwater quality and potential vapor intrusion concerns.
Building 3-323 Area**:**											
● Soil Borings, Vapor Points (Fig 7.1-21)	6	--	--	2	8	14	--	4	High	PCBs, Metals, PAHs (Soil); VOCs (VP)	Determine the extent of COPC exceedances, notably PCBs and PAHs, in soil (and groundwater) of this area; determine if soil vapor intrusion is a concern for Building 3-323 from chlorinated VOCs in soil and groundwater.
● Existing Monitoring Well (Fig 7.1-21)	--	--	1	--	--	--	4	--	High	PCBs, TPH, SVOCs, VOCs	Sample existing well NGW511 to confirm groundwater contamination extent in this area.
Buildings 3-302 and 3-322 Area (Fig 7.1-24)	2	--	--	--	2	4	--	--	Medium	PCBs, Metals	Sample between former excavations in areas not previously sampled, to confirm presence/absence of PCBs in soil; remnant PCB hot-spot contamination near former Building 3-303 will not be sampled due to access and utility concerns.
Former Building 3-304 Area											No proposed RI activities.
Buildings 3-329, 3-333, 3-335 Area**:**											
● Building 3-329 area (Fig 7.1-32)	--	2	--	--	2	4	8	--	Medium (Soil) High (GW)	PCBs, VOCs	Determine the potential offsite/onsite sources and extent of mainly low-level VOC groundwater contamination in this area, with installation of up & downgradient wells.
● North end of Building 3-335 (Fig 7.1-30)	1	1	1	--	2	4	8	--	Medium (Soil) High (GW)	PCBs, TPH, VOCs	Determine extent of elevated levels of PCBs, TPH, and benzene in soil and new well located between previous excavations with remnant contamination, and at downgradient existing well NGW520.
● West of Building 3-335 (Fig 7.1-30)	--	--	1	--	--	--	4	--	High	PCBs, TPH, SVOCs, VOCs	Sample existing well NGW516 to determine extent of elevated levels of COPCs in groundwater downgradient of recent excavation.
● SE of Building 3-335, and near Test Building (Figs 7.1-30, 31)	5	--	--	--	5	10	--	--	Medium	PCBs, TPH, and three borings for VOCs	Sample soil borings and sample existing wells NGW514 and NGW515 to determine the extent of COPC exceedances in areas surrounding soil and groundwater contamination.
	--	--	2	--	--	--	8	--	High	PCBs, TPH, VOCs, and one well for Metals	
● Soil Vapor Points (Figs 7.1-30, 31)	--	--	--	3	3	3	--	6	High	VOCs, TPH	Determine potential vapor intrusion concerns into Buildings 3-333 and 3-335 from nearby soil benzene, TPH-gas, and TCE.
Building 3-324 Area**:**											
● Soil Borings, Vapor Point (Fig 7.1-37)	4	--	--	1	5	9	--	2	Medium (Soil) High (VP)	PCBs, TPH, PAHs, BTEX; VOCs (vapor)	Confirm presence/absence of COPCs near former excavations and near elevated levels of COPCs in previous samples; determine potential vapor intrusion concerns into Building 3-324 from nearby soil benzene.
● Monitoring Wells (Fig 7.1-37)	--	1	1	--	1	2	8	--	High	PCBs, Metals, TPH, PAHs, BTEX	Sample existing downgradient well NGW519, and install well downgradient of former "G" Slab excavation and area of COPC exceedances, to determine presence/absence of contamination.

Table 7.1-14
Summary of Proposed RI Activities for Soil, Groundwater, and Soil Vapor

Site Sub-Area/ Area of Concern	Number of Individual Sampling Locations: Proposed Soil Borings	Proposed GW Monitoring Wells	Existing GW Monitoring Wells for RI Sampling	Proposed Soil Vapor Points	Total Number of Boring Locations*	Number of Samples: Minimum Number of Soil Samples*	Minimum Number of GW Samples	Minimum Number of Soil Vapor Samples^	Priority	Analyses	Rationale for Activity
Willow Street Substation Area											No proposed RI activities.
Buildings 3-315 and 3-626 Area (Fig 7.1-41)	3	--	--	--	3	6	--	--	Medium	PCBs, PAHs	Identify potential presence of PCBs within soil in areas of historical electrical transformers.
Building 3-353 Area**:**											
● Soil Boring, Vapor Point (Fig 7.1-42)	1	--	--	1	2	3	--	2	Medium (Soil) High (VP)	PCBs, TPH, PAHs, BTEX; VOCs (vapor)	Sample soil north of building to confirm extent of PCBs, PAHs, and benzene in nearby samples; determine potential vapor intrusion concerns into Building 3-353 from nearby soil benzene and TPH-gas.
● Monitoring Wells (Fig 7.1-42)	--	1	1	--	1	2	8	--	High	PCBs, Metals, TPH, SVOCs, BTEX	Install and sample downgradient well that is also part of Site-wide monitoring network, and sample existing well GT-1114-2 to determine groundwater impacts near soil contamination.
Building 3-354 Area											No proposed RI activities.
Wind Tunnel Area											No proposed RI activities.
Green Hornet Area (7.1-46)	7	1	6	--	8	16	28	--	Medium (Soil) High (GW)	TPH, SVOCs, VOCs, and PCBs (soil only)	Determine extent of petroleum and SVOC soil contamination beyond the former excavation area; sample existing wells NGW101 through NGW106 to further evaluate groundwater contamination for COPCs in this area, and sample newly installed well downgradient of soil hot spot.
NBF -- North Flightline Area (Section 7.1.5)											
Former Buildings 3-360 and 3-361 Area (Fig 7.1-50)	--	1	--	--	1	2	4	--	High	VOCs	Install and sample well on upgradient margin of AOC, to determine VOC concentrations of groundwater potentially migrating from offsite. Ongoing evaluation of Boeing groundwater monitorng data to determine long-term effect of bioremediation in this area.
Building 3-380 Storm Drain Area**:**											
● Near Building 3-350 (Fig 7.1-52)	2	--	--	--	2	4	--	--	Medium	PCBs, Metals	Identify potential presence of PCBs within soil in areas of historical transformers.
● South end, north Markov area (Fig 7.1-52)	2	--	--	--	2	4	--	--	Low	PCBs, TPH, SVOCs, VOCs	Determine if petroleum-contaminated soil remains in this area, based on elevated concentrations of TPH and VOCs in poorly documented data from 2002 excavation.
Building 7-27-1 Area (Fig 7.1-54)	--	--	2	--	--	--	8	--	High (GW)	PCBs, TPH, cVOCs	Confirm presence/absence of contamination in existing downgradient wells NGW252 and NGW253.
Building 3-380 Area (Fig 7.1-57)	--	2	--	--	2	4	8	--	Low (Soil) High (GW)	PCBs, Metals, SVOCs	Install two wells (and soil borings) up & downgradient to confirm presence and extent of significantly elevated metals contamination previously identified in area wells, and to form part of Site-wide groundwater monitoring network.
Buildings 3-369 and 3-374 Area (Fig 7.1-59)	--	--	3	--	--	--	12	--	Medium	PCBs, Metals, TPH, SVOCs	Monitor three existing wells (GT88-1, GT88-2, and DW-1-370) near Bldg 3-369 to confirm presence and extent of significant metals contamination previously identified in area wells.
Building 3-390 Area (Fig 7.1-59)	--	1	--	--	1	2	4	--	Low (Soil) High (GW)	PCBs, Metals, TPH, SVOCs, VOCs	Install well (and soil boring) to form part of Site-wide groundwater monitoring network, which also acts as downgradient well for two former fuel tank basins and upgradient well to Building 3-369 Area.
Concourse A Area (Fig 7.1-62)	5	2	--	--	7	14	8	--	Med to High (Soil) High (GW)	PCBs, Metals, TPH, SVOCs, VOCs	Assess a large area with identified contamination along the utilidor, in areas with historical electrical transformers, and near a SD replacement with soil removal, to confirm many COPC exceedances; install two wells, which also form part of Site-wide groundwater monitoring network.

Table 7.1-14
Summary of Proposed RI Activities for Soil, Groundwater, and Soil Vapor

Site Sub-Area/ Area of Concern	Number of Individual Sampling Locations: Proposed Soil Borings	Proposed GW Monitoring Wells	Existing GW Monitoring Wells for RI Sampling	Proposed Soil Vapor Points	Total Number of Boring Locations*	Number of Samples: Minimum Number of Soil Samples*	Minimum Number of GW Samples	Minimum Number of Soil Vapor Samples^	Priority	Analyses	Rationale for Activity
NBF -- Central Flightline Area (Section 7.1.6)											
Building 3-800 Area**:**											
● Vapor Point (Fig 7.1-66)	--	--	--	1	1	1	--	4	High	VOCs	Determine potential vapor intrusion concerns into Building 3-800 due to chlorinated VOCs in soil and groundwater.
● Monitoring Wells (Fig 7.1-66)	--	1	2	--	1	2	8	--	Low (Soil) High (GW)	Metals, SVOCs, VOCs	Install downgradient well in the middle of VOC plume, to determine extent of plume and long-term effect of bioremediation in this area, in conjunction with ongoing evaluation of Boeing groundwater monitoring data. Monitor two existing wells (NGW307 and NGW309) for vapor intrusion concerns.
Building 3-801 Area**:**											
● Soil Borings, Vapor Point (Fig 7.1-66)	2	--	--	1	3	5	--	4	Low (Soil) High (VP)	TPH, VOCs; VOCs only (VP)	Confirm extent of elevated levels of TPH identified in confirmation soil samples for 1992 excavation; determine potential vapor intrusion concerns into Building 3-801 due to soil TCE.
● Monitoring Well (Fig 7.1-66)	--	1	--	--	1	2	4	--	Low (Soil) High (GW)	Metals, VOCs, SVOCs (soil only)	Install well downgradient of the area of concern; also part of Site-wide groundwater monitoring network.
Building 3-818 Area											No proposed RI activities.
Main Fuel Farm Area (Fig 7.1-69)	3	3	9	1	7	13	48	2	High	TPH, PAHs, BTEX; VOCs (vapor only)	Characterization to confirm extent of elevated TPH and PAH contamination identified in 1992 excavation; install downgradient wells to determine extent of groundwater plume; determine potential vapor intrusion concerns into Building 3-818 due to benzene in groundwater. Existing wells include NGW351 through NGW359.
Concourse C Area											No proposed RI activities.
Concourse B Area**:**											
● Wells near MH461, MH249 (Figs 7.1-73, 74)	--	2	--	--	2	4	8	--	Medium - High	PCBs, Metals, SVOCs, VOCs	Determine groundwater quality near areas of contamination for metals and other COPCs; also part of Site-wide groundwater monitoring network.
● Soil Near MH249 (Fig 7.1-74)	1	--	--	--	1	2	--	--	Medium	PCBs, Metals	To determine concentrations and extent of COPCs in this area of concourse, based on previous stockpile soil sampling.
Central Flightline Transformer Areas (Fig 7.1-75)	9	--	--	--	9	18	--	--	Medium	PCBs, Metals	Soil sampling at three areas of historical electrical transformer to confirm presence/absence of PCBs in soil.
NBF -- South Flightline Area (Section 7.1.7)											
UBF-61 Area (Fig 7.1-77)											No proposed RI activities.
Buildings 3-830, 3-831, and 3-832 Area (Fig 7.1-77)	--	1	--	--	1	2	4	--	Medium	PCBs, TPH	Install well downgradient of former Buildings 3-830, 3-831, 3-832 Area, to form part of Site-wide groundwater monitoring network; no other proposed RI activities.
NBF-OWS-B11-MW1 Area											No proposed RI activities.
Tent Hangar Area											No proposed RI activities.
Site-Wide Groundwater Investigation (Section 7.1.8)											
● Monitoring Wells (Fig 7.1-80)	--	5	--	--	5	0 (TBD)	20	--	Low (Soil) High (GW)	PCBs, Metals, TPH, SVOCs	Install up/downgradient wells as part of Site-wide groundwater monitoring network; soil sampling during well installation performed only if field indication of contamination.
RI Total Samples:	**55**	**25**	**35**	**10**	**90**	**160**	**236**	**24**			

The numbers in this table apply to the primary phase of RI activities, which will likely be followed by one or more additional phases of RI activities, depending on the findings of the first phase.
* Includes all borings for soil samples, for proposed monitoring wells, and for vapor points
^ = Soil vapor samples include two seasonal samples per vapor point
-- = Not applicable
GW - Groundwater
VP - Vapor point for soil vapor

Table 7.2-1
Data Summary: Storm Drain Solids
NBF Site-Wide

Chemical Class	Chemical	Frequency of Detection	Maximum Detect (mg/kg DW)	Average Detect (mg/kg DW)	RISL (mg/kg DW)	Fraction of Detections Above SL	Maximum Exceedance Factor*	Average Exceedance Factor*
Metals	Arsenic	286 / 469	150	22	7.3	276 / 286	21 (a)	3.0
	Cadmium	387 / 391	110	13	5.1	248 / 387	22	2.6
	Chromium	391 / 391	3,140	120	260	16 / 391	12	<1
	Copper	469 / 469	3,270	238	390	60 / 469	8.4	<1
	Lead	463 / 469	2,780	222	450	32 / 463	6.2	<1
	Mercury**	439 / 484	173	1.9	0.41	133 / 439	420	4.6
	Silver	117 / 391	160	3.8	6.1	8 / 117	26	<1
	Zinc	469 / 469	22,900	1,291	410	398 / 469	56	3.1
Polychlorinated Aromatic Compounds	Total PCBs	752 / 761	1,310	16	0.13	716 / 752	**10,000**	123
	Total dioxins/furans (ng/kg)	47 / 47	170	42	13	35 / 47	13	3.2
PAHs	2-Methylnaphthalene	52 / 150	4.8	0.40	0.67	4 / 52	7.2	<1
	Acenaphthene	49 / 150	2.5	0.30	0.50	6 / 49	5.0 (b)	<1
	Anthracene	80 / 149	2.7	0.47	0.96	10 / 80	2.8 (c)	<1
	Fluorene	70 / 149	3.1	0.33	0.54	8 / 70	5.7 (d)	<1
	Phenanthrene	144 / 150	27	3.4	1.5	90 / 144	18	2.3
	Total LPAH	148 / 154	31	3.9	5.2	27 / 148	6.0	<1
	Benzo(a)anthracene	131 / 147	20	1.9	1.3	56 / 131	15	1.5
	Benzo(a)pyrene	137 / 147	29	2.8	0.15	129 / 137	190	19
	Benzofluoranthenes	146 / 148	76	7.8	3.2	89 / 146	24	2.4
	Benzo(g,h,i)perylene	130 / 130	29	2.6	0.67	90 / 130	43	3.9
	Chrysene	147 / 148	45	4.6	1.4	96 / 147	32	3.3
	Dibenz(a,h)anthracene	87 / 147	9.9	1.0	0.23	68 / 87	43	4.3
	Fluoranthene	145 / 147	100	8.2	1.7	108 / 145	59	4.8
	Indeno(1,2,3-cd)pyrene	132 / 148	26	2.5	0.60	96 / 132	43	4.2
	Pyrene	149 / 150	39	4.6	2.6	79 / 149	15	1.8
	Total HPAH	154 / 155	363	34.0	12	103 / 154	30	2.8
	Total cPAH	147 / 148	43	4.0	0.15	141 / 147	280	27
Phthalates	Bis(2-ethylhexyl) phthalate	81 / 81	48	9.2	1.3	66 / 81	37	7.1
	Butyl benzyl phthalate	40 / 81	1.7	0.58	0.067	39 / 40	25 (e)	8.7
Other SVOCs	p-Cresol (4-methylphenol)	37 / 81	15	2.3	0.67	20 / 37	22	3.4
	Dibenzofuran	64 / 150	1.8	0.27	0.54	5 / 64	3.3 (f)	<1
	Phenol	19 / 79	1.9	0.53	0.42	9 / 19	4.5 (g)	1.3

EF Colors	EF Ranges
white	< 5.0
yellow	> 5.0 - 25
light orange	> 25 - 125
rose	> 125 - 625
dark red	> 625

Dioxin/furan concentrations are in units of ng/kg TEQ.
* Maximum and average exceedance factor for detected values only.

**Excludes grab sample collected on 3/31/2010 from MH652; sample contained a paint chip and is therefore not representative storm drain solids concentrations.

For some chemicals, the highest nondetect value was greater than the highest detected value:
(a) 159 nondetected samples exceeded the RISL for arsenic, with a maximum EF of 22.
(b) 24 nondetected samples exceeded the RISL for acenaphthene, with a maximum EF of 9.2.
(c) 9 nondetected samples exceeded the RISL for anthracene, with a maximum EF of 4.8.
(d) 20 nondetected samples exceeded the RISL for fluorene, with a maximum EF of 8.5.
(e) 32 nondetected samples exceeded the RISL for butyl benzyl phthalate (BBP), with a maximum EF of 84.
(f) 22 nondetected samples exceeded the RISL for dibenzofuran, with a maximum EF of 8.5.
(g) 21 nondetected samples exceeded the RISL for phenol, with a maximum EF of 11.

Table 7.2-2
Data Summary: Storm Drain Water
NBF Site-Wide

Chemical Class	Chemical	Frequency of Detection	Minimum Detect (ug/L)	Maximum Detect (ug/L)	Average Detect (ug/L)	RISL (ug/L)	Fraction of Detections Above SL	Maximum Exceedance Factor*	Average Exceedance Factor*
Metals	Arsenic	130 / 144	0.20	9.8	1.0	0.87	47 / 130	11	1.1
	Cadmium	76 / 144	0.10	17	1.2	0.43	25 / 76	38	2.8
	Copper	136 / 144	0.90	94	7.8	2.4	97 / 136	39	3.3
	Lead	94 / 144	0.10	236	8.5	8.1	15 / 94	29	1.0
	Nickel	120 / 132	0.50	12	1.6	8.2	2 / 120	1.4	<1
	Zinc	141 / 144	6.0	1,590	72	33	76 / 141	48	2.2
PCBs	Total PCBs	57 / 79	0.006	0.74	0.007	0.010	56 / 57	74	<1
PAHs	Benzo(a)pyrene	53 / 66	0.0059	3.6	0.27	0.010	50 / 53	360	27
	Benzo(g,h,i)perylene	53 / 66	0.0055	3.2	0.28	0.012	49 / 53	270	23
	Fluoranthene	64 / 66	0.015	9.0	0.56	2.3	3 / 64	3.9	<1
	Total cPAH	63 / 66	0.0071	5.0	0.34	0.010	56 / 63	500	34
Phthalates	Bis(2-ethylhexyl) phthalate	9 / 62	0.80	3.2	1.5	1.4	4 / 9	2.3	1.1
	Di-n-octyl phthalate	5 / 65	0.90	2.1	1.4	1.0	3 / 5	2.1	1.4

EF Colors	EF Ranges
	< 5.0
	> 5.0 - 25
	> 25 - 125
	> 125 - 625

* Maximum and average exceedance factor for detected values only.

Table 7.2-3
Maximum RISL Exceedance Factors in Storm Drain Solids, by Drainage Area

Chemical Class	Chemical	Lift Station	North Lateral Upstream of MH130	North Lateral Downstream of MH130	North-Central Lateral	South-Central Lateral	South Lateral	Bldg 3-380 Area	Parking Lot Area
Metals	Arsenic	2.7	21	9.6	9.6	3.8	15	2.7	20
	Cadmium	2.2	21	19	22	6.8	11	3.2	1.6
	Chromium	<1	2.4	<1	1.4	<1	12	<1	1.6
	Copper	<1	8.4	2.0	1.2	2.2	3.1	<1	<1
	Lead	<1	6.2	1.0	1.6	2.4	1.9	1.6	1.9
	Mercury	14	420	12	20	<1	35	<1	<1
	Silver	<1	26	8.1	<1	<1	<1	<1	<1
	Zinc	2.9	56	23	8.0	6.6	7.3	7.2	3.7
Polychlorinated Aromatic Compounds	Total PCBs	25	10,000	6,200	3,200	800	850	14	16
	Total dioxins/furans (pg/g)	5.2	13	12	6.8	3.8	6.5	3.4	4.8
PAHs	2-Methylnaphthalene	<1	<1	<1	6.0	<1	7.2	<1	<1
	Acenaphthene	1.1	2.4	2.2	2.6	<1	5.0	<1	<1
	Anthracene	<1	2.3	1.9	1.6	<1	2.8	<1	<1
	Dibenzofuran	<1	<1	1.1	1.4	<1	3.3	<1	<1
	Fluorene	<1	2.6	2.4	2.0	<1	5.7	<1	<1
	Phenanthrene	2.1	8.7	6.1	16	4.0	18	<1	1.4
	Total LPAH	<1	3.4	2.6	4.6	1.4	6.0	<1	<1
	Benzo(a)anthracene	1.3	6.4	3.1	6.8	2.8	15	<1	<1
	Benzo(a)pyrene	17	65	36	150	31	190	4.7	10
	Benzofluoranthenes	1.9	6.2	3.4	21	3.9	24	<1	1.3
	Benzo(g,h,i)perylene	3.7	10	5.1	43	3.3	36	<1	2.5
	Chrysene	3.1	8.6	5.0	26	4.9	32	<1	1.6
	Dibenz(a,h)anthracene	4.3	16	6.5	31	2.6	43	<1	2.2
	Fluoranthene	4.6	13	8.2	39	7.1	59	1.6	2.5
	Indeno(1,2,3-cd)pyrene	3.8	10	18	40	4.2	43	<1	2.2
	Pyrene	1.6	5.4	3.8	15	3.2	13	<1	1.2
	Total HPAH	2.5	8.1	5.0	25	4.4	30	<1	1.6
	Total cPAH	24	89	50	230	44	280	7.1	1.5
Phthalates	Bis(2-ethylhexyl) phthalate	--	18	26	23	4.4	37	12	1.2
	Butyl benzyl phthalate	--	25	19	18	8.1	24	13	<1
Other SVOCs	p-Cresol (4-methylphenol)	--	22	16	1.8	9.0	3.1	--	--
	Phenol	--	2.6	4.5	1.1	1.5	1.7	--	--

EF Colors	EF Ranges
	> 1.0 - 5.0
	> 5.0 - 25
	> 25 - 125
	> 125 - 625
	> 625

Table 7.2-4
Maximum RISL Exceedance Factors in Storm Drain Water, by Drainage Area

Chemical Class	Chemical	Lift Station	North Lateral	North-Central Lateral	South-Central Lateral	South Lateral	Bldg 3-380 Area	Parking Lot Area
Metals	Arsenic	5.3	11	<1	1.7	2.2	--	--
	Cadmium	38	37	<1	<1	1.4	--	--
	Copper	7.3	39	1.5	1.8	4.8	--	--
	Lead	3.8	29	<1	<1	1.2	--	--
	Nickel	<1	1.4	<1	<1	<1	--	--
	Zinc	3.0	48	1.2	1.1	2.2	--	--
PCBs	Total PCBs	17	74	2.4	1.5	2.4	--	--
PAHs	Benzo(a)pyrene	65	360	6.6	1.7	48	--	--
	Benzo(g,h,i)perylene	61	270	7.8	1.9	53	--	--
	Fluoranthene	<1	3.9	<1	<1	<1	--	--
	Total cPAH	92	500	11	2.7	74	--	--
Phthalates	Bis(2-ethylhexyl)phthalate	1.4	2.3	<1	<1	<1	--	--
	Di-n-octyl phthalate	2.1	<1	<1	<1	<1	--	--

EF Colors	EF Ranges
Green	> 1.0 - 5.0
Yellow	> 5.0 - 25
Orange	> 25 - 125
Red	> 125 - 625

-- = indicates no water samples were collected

Table 7.2-5a
Chemicals Detected Above RISLs in Storm Drain Solids
North Lateral Drainage Area (Upstream of MH130A)

Chemical Class	Chemical	Frequency of Detection	Min Detect (mg/kg DW)	Max Detect (mg/kg DW)	Average Detect (mg/kg DW)	RISL (mg/kg DW)	Fraction of Detections Above SL	Maximum Exceedance Factor*	Average Exceedance Factor*
Metals	Arsenic	115 / 167	3.5	150	24	7.3	110 / 115	21	3.3
	Cadmium	153 / 153	0.50	108	12	5.1	97 / 153	21	2.4
	Chromium	153 / 153	12	629	117	260	8 / 153	2.4	<1
	Copper	167 / 167	24	3,270	280	390	31 / 167	8.4	<1
	Lead	167 / 167	8.0	2,780	242	450	13 / 167	6.2	<1
	Mercury	169 / 174	0.050	173	4.0	0.41	73 / 169	420**	9.8
	Silver	49 / 153	0.14	160	6.0	6.1	6 / 49	26	<1
	Zinc	167 / 167	69	22,900	1,658	410	147 / 167	56	4.0
Polychlorinated Aromatic Compounds	Total PCBs	281 / 282	0.037	1,310	25	0.13	268 / 281	10,000	192
	Total dioxins/furans (ng/kg)	17 / 17	4.1	170	45	13	15 / 17	13	3.5
PAHs	Acenaphthene	12 / 40	0.016	1.2	0.24	0.50	1 / 12	2.4	<1
	Anthracene	17 / 39	0.023	2.2	0.40	0.96	1 / 17	2.3	<1
	Fluorene	16 / 39	0.020	1.4	0.26	0.54	1 / 16	2.6	<1
	Phenanthrene	35 / 39	0.097	13	2.5	1.5	21 / 35	8.7	1.7
	Total LPAH	35 / 39	0.14	18	2.9	5.2	3 / 35	3.4	<1
	Benzo(a)anthracene	31 / 38	0.086	8.3	1.5	1.3	12 / 31	6.4	1.2
	Benzo(a)pyrene	32 / 38	0.11	9.8	2.0	0.15	31 / 32	65	13
	Benzofluoranthenes	37 / 38	0.052	20	4.4	3.2	16 / 37	6.2	1.4
	Benzo(g,h,i)perylene	32 / 37	0.041	6.8	1.6	0.67	21 / 32	10	2.4
	Chrysene	37 / 38	0.059	12	2.9	1.4	20 / 37	8.6	2.1
	Dibenz(a,h)anthracene	22 / 38	0.016	3.6	0.77	0.23	15 / 22	16	3.3
	Fluoranthene	37 / 39	0.17	22	5.4	1.7	25 / 37	13	3.2
	Indeno(1,2,3-cd)pyrene	31 / 38	0.062	6.2	1.6	0.60	20 / 31	10	2.7
	Pyrene	38 / 39	0.044	14	3.2	2.6	17 / 38	5.4	1.2
	Total HPAH	39 / 40	0.20	97	21	12	21 / 39	8.1	1.8
	Total cPAH	37 / 38	0.054	13	2.6	0.15	36 / 37	89	17
Phthalates	Bis(2-ethylhexyl) phthalate	18 / 18	0.76	24	9.1	1.3	16 / 18	18	7.0
	Butyl benzyl phthalate	7 / 18	0.19	1.7	0.58	0.067	7 / 7	25	8.7
Other SVOCs	p-Cresol (4-methylphenol)	13 / 18	0.41	15	3.8	0.67	10 / 13	22	5.7
	Phenol	6 / 18	0.062	1.1	0.57	0.42	4 / 6	2.6	1.4

EF Colors	EF Ranges
	< 5.0
	> 5.0 - 25
	> 25 - 125
	> 125 - 625
	> 625

Dioxin/furan concentrations are in units of ng/kg TEQ.
* Maximum and average exceedance factor for detected values only.
**Excludes grab sample collected on 3/31/2010 from MH652; sample contained a paint chip and is therefore not representative storm drain solids concentrations.

Table 7.2-5b
Chemicals Detected Above RISLs in Storm Drain Solids
North Lateral Drainage Area (Downstream of MH130A)

Chemical Class	Chemical	Frequency of Detection	Min Detect (mg/kg DW)	Max Detect (mg/kg DW)	Average Detect (mg/kg DW)	RISL (mg/kg DW)	Fraction of Detections Above SL	Maximum Exceedance Factor*	Average Exceedance Factor*
Metals	Arsenic	34 / 62	6.0	70	18	7.3	32 / 34	9.6	2.5
	Cadmium	46 / 47	1.1	98	11	5.1	28 / 46	19	2.2
	Chromium	47 / 47	22.0	204	88	260	0 / 47	<1	<1
	Copper	62 / 62	33	764	235	390	6 / 62	2.0	<1
	Lead	61 / 62	25.0	452	191	450	1 / 61	1.0	<1
	Mercury	62 / 64	0.040	5.1	0.70	0.41	25 / 62	12	1.7
	Silver	20 / 47	0.86	49	4.7	6.1	2 / 20	8.1	<1
	Zinc	62 / 62	219	9,570	1,237	410	55 / 62	23	3.0
Polychlorinated Aromatic Compounds	Total PCBs	82 / 83	0.042	800	24	0.13	81 / 82	6,200	185
	Total dioxins/furans (ng/kg)	8 / 8	5.7	157	61	13	6 / 8	12	4.7
PAHs	Acenaphthene	5 / 21	0.049	1.1	0.29	0.50	1 / 5	2.2	<1
	Anthracene	11 /21	0.041	1.8	0.35	0.96	1 / 11	1.9	<1
	Dibenzofuran	7 / 21	0.041	0.6	0.22	0.54	1 / 7	1.1	<1
	Fluorene	8 / 21	0.05	1.3	0.29	0.54	1 / 8	2.4	<1
	Phenanthrene	21 / 21	0.10	9.2	2.0	1.5	12 / 21	6.1	1.3
	Total LPAH	22 / 22	0.10	13	2.5	5.2	1 / 22	2.6	<1
	Benzo(a)anthracene	21 / 21	0.098	4.0	1.1	1.3	6 / 21	3.1	<1
	Benzo(a)pyrene	21 / 21	0.13	5.4	1.6	0.15	20 / 21	36	11
	Benzofluoranthenes	21 / 21	0.28	11	4.1	3.2	12 / 21	3.4	1.3
	Benzo(g,h,i)perylene	18 / 19	0.10	3.4	1.3	0.67	11 / 18	5.1	1.9
	Chrysene	21 / 21	0.17	7.0	2.5	1.4	12 / 21	5.0	1.8
	Dibenz(a,h)anthracene	11 / 21	0.017	1.5	0.54	0.23	9 / 11	6.5	2.3
	Fluoranthene	20 / 20	0.30	14	4.3	1.7	15 / 20	8.2	2.5
	Indeno(1,2,3-cd)pyrene	21 / 21	0.091	11	1.6	0.60	15 / 21	18	2.7
	Pyrene	21 / 21	0.18	9.9	2.8	2.6	10 / 21	3.8	1.1
	Total HPAH	22 / 22	1.3	60	20	12	14 / 22	5.0	1.7
	Total cPAH	21 / 21	0.18	7.5	2.4	0.15	21 / 21	50	16
Phthalates	Bis(2-ethylhexyl) phthalate	14 / 14	0.39	34	9.7	1.3	12 / 14	26	7.5
	Butyl benzyl phthalate	9 / 14	0.14	1.3	0.63	0.067	9 / 9	19	9.4
Other SVOCs	p-Cresol (4-methylphenol)	10 / 14	0.28	11	2.1	0.67	5 / 10	16	3.1
	Phenol	4 / 14	0.30	1.9	0.72	0.42	1 / 4	4.5	1.7

EF Colors	EF Ranges
	< 5.0
	> 5.0 - 25
	> 25 - 125
	> 125 - 625
	> 625

Dioxin/furan concentrations are in units of ng/kg TEQ.

* Maximum and average exceedance factor for detected values only.

Table 7.2-6
Chemicals Detected Above RISLs in Storm Drain Water
North Lateral Drainage Area

Chemical Class	Chemical	Frequency of Detection	Minimum Detect (ug/L)	Maximum Detect (ug/L)	Average Detect (ug/L)	RISL (ug/L)	Fraction of Detections Above SL	Maximum Exceedance Factor*	Average Exceedance Factor*
Metals	Arsenic	43 / 46	0.30	4.6	0.93	0.87	17 / 43	5.3	1.1
	Cadmium	20 / 46	0.20	17	1.5	0.43	10 / 20	38	3.5
	Copper	40 / 46	1.00	18	5.2	2.4	26 / 40	7.3	2.2
	Lead	25 / 46	0.20	31	4.7	8.1	4 / 25	3.8	0.6
	Zinc	44 / 46	7.0	99	36	33	19 / 44	3	1.1
PCBs	Total PCBs	29 / 38	0.011	0.74	0.10	0.010	29 / 29	74	10
PAHs	Benzo(a)pyrene	15 / 25	0.011	3.6	0.68	0.010	15 / 15	360	68
	Benzo(g,h,i)perylene	15 / 25	0.012	3.2	0.65	0.012	15 / 15	270	54
	Fluoranthene	23 / 25	0.030	9.0	1.0	2.3	3 / 23	3.9	<1
	Total cPAH	23 / 25	0.0071	5.0	0.64	0.010	16 / 23	500	64
Phthalates	Bis(2-ethylhexyl) phthalate	4 / 22	0.8	3.2	1.8	1.4	2 / 4	2.3	1.3
	Di-n-octyl phthalate	4 / 23	0.8	3.2	1.8	1.4	2 / 4	2.3	1.3

EF Colors	EF Ranges
(white)	< 5.0
(yellow)	> 5.0 - 25
(light orange)	> 25 - 125
(red)	> 125 - 625

* Maximum and average exceedance factor for detected values only.

Table 7.2-7
Maximum RISL Exceedance Factors in Storm Drain Solids, by Subdrainage
North Lateral Drainage Area

Chemical Class	Chemical	N1-down*	N2	N3	N4	N1-up**	N5	N6	N7	N8	N9	N10	N11	N12
	Subdrainage:													
Metals	Arsenic	9.6	ND	1.4	2.7	11	21	4.8	21	8.6	4.1	4.1	12	1.5
	Cadmium	3.3	1.9	19	4.3	1.4	20	4.5	10	21	12	2.5	6.1	2.2
	Chromium	<1	<1	<1	<1	<1	1.1	<1	2.4	1.8	1.3	<1	1.4	<1
	Copper	2.0	<1	<1	1.1	2.1	<1	2.0	2.0	2.1	1.2	<1	8.4	<1
	Lead	1.0	<1	<1	<1	2.1	<1	<1	2.7	1.4	6.2	1.3	1.3	<1
	Mercury	12	<1	<1	2.2	39	93	1.5	17	1.4	420	30	48	1.7
	Silver	<1	<1	<1	8.1	1.3	<1	<1	<1	3.9	<1	26	<1	<1
	Zinc	3.7	3.3	23	7.7	3.4	9.0	7.0	12	56	10	12	14	1.9
Polychlorinated Aromatic Compounds	Total PCBs	6,200	8.0	5.5	220	440	38	110	150	9.7	130	170	10,000	56
	Total dioxins/furans	12	--	--	--	3.7	2.6	--	3.9	--	--	3.7	13	--
PAHs	2-Methylnaphthalene	<1	--	--	--	<1	ND	--	ND	--	--	<1	<1	--
	Acenaphthene	2.2	--	--	--	<1	2.4	--	ND	--	--	<1	<1	--
	Anthracene	1.9	--	--	--	<1	2.3	--	ND	--	--	<1	<1	--
	Dibenzofuran	1.1	--	--	--	<1	ND	--	ND	--	--	<1	<1	
	Fluorene	2.4	--	--	--	<1	2.6	--	ND	--	--	<1	<1	--
	Phenanthrene	6.1	--	--	--	5.2	8.7	--	1.2	--	--	<1	1.7	--
	Total LPAH	2.6	--	--	--	1.8	3.4	--	<1	--	--	<1	<1	--
	Benzo(a)anthracene	3.1	--	--	--	4.0	6.4	--	<1	--	--	<1	<1	--
	Benzo(a)pyrene	36	--	--	--	56	65	--	8.7	--	--	3.8	8.7	--
	Benzofluoranthenes	3.4	--	--	--	6.2	5.2	--	<1	--	--	<1	<1	--
	Benzo(g,h,i)perylene	5.1	--	--	--	6.9	10	--	2.2	--	--	1.2	2.4	--
	Chrysene	5.0	--	--	--	8.6	7.9	--	1.4	--	--	<1	1.4	--
	Dibenzo(a,h)anthracene	6.5	--	--	--	16	12	--	<1	--	--	1.3	2.0	--
	Fluoranthene	8.2	--	--	--	12	13	--	2.4	--	--	<1	1.9	--
	Indeno(1,2,3-cd)pyrene	18	--	--	--	7.8	10	--	1.8	--	--	<1	1.7	--
	Pyrene	3.8	--	--	--	4.2	5.4	--	1.3	--	--	<1	1.0	--
	Total HPAHs	5.0	--	--	--	7.3	8.1	--	1.3	--	--	<1	1.3	--
	Total cPAHs	50	--	--	--	78	89	--	12	--	--	5.3	12	--
Phthalates	Bis(2-ethylhexyl) phthalate	26	--	--	--	18	--	--	--	--	--	4.4	13	--
	Butyl benzyl phthalate	19	--	--	--	9.7	--	--	--	--	--	4.3	25	--
Other SVOCs	p-Cresol (4-methylphenol)	16	--	--	--	22	--	--	--	--	--	12	1.6	--
	Phenol	4.5	--	--	--	3.1	--	--	--	--	--	1.8	1.6	--

EF Colors	EF Ranges
(green)	> 1.0 - 5.0
(yellow)	> 5.0 - 25
(orange)	> 25 - 125
(red)	> 125 - 625
(dark red)	> 625

-- = sample not analyzed for this parameter
ND = not detected

Table shows maximum exceedance factors for detected chemicals only.
Samples from abandoned structures are not included.
Subdrainage locations are shown in Figure 7.2-4.

* N1-down = main line downstream of MH130A
** N1-up = main line upstream of MH130A

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB108A	N1-DOWN	7/19/2012	Grab	Total PCBs	0.45	mg/kg	0.13	3.5
CB108A	N1-DOWN	8/24/2011	Grab	Total PCBs	2.9	mg/kg	0.13	22
CB108A	N1-DOWN	6/16/2009	Grab	Total PCBs	4.8	mg/kg	0.13	37
CB108A	N1-DOWN	7/19/2012	Grab	Arsenic	7.5	mg/kg	7.3	1.0
CB108A	N1-DOWN	7/19/2012	Grab	Cadmium	7.2	mg/kg	5.1	1.4
CB108A	N1-DOWN	7/19/2012	Grab	Chromium	204	mg/kg	260	0.78
CB108A	N1-DOWN	7/19/2012	Grab	Copper	280	mg/kg	390	0.72
CB108A	N1-DOWN	7/19/2012	Grab	Lead	228	mg/kg	450	0.51
CB108A	N1-DOWN	7/19/2012	Grab	Mercury	0.22 U	mg/kg	0.41	0.52
CB108A	N1-DOWN	7/19/2012	Grab	Silver	1.2	mg/kg	6.1	0.20
CB108A	N1-DOWN	7/19/2012	Grab	Zinc	1,420	mg/kg	410	3.5
CB363	N1-DOWN	7/19/2012	Grab	Total PCBs	3.7	mg/kg	0.13	28
CB363	N1-DOWN	4/24/2012	Sediment Trap	Total PCBs	3.6	mg/kg	0.13	27
CB363	N1-DOWN	8/24/2011	Grab	Total PCBs	3.0	mg/kg	0.13	23
CB363	N1-DOWN	4/5/2011	Sediment Trap	Total PCBs	3.6	mg/kg	0.13	28
CB363	N1-DOWN	4/8/2010	Sediment Trap	Total PCBs	2.6	mg/kg	0.13	20
CB363	N1-DOWN	6/9/2009	Grab	Total PCBs	6.8	mg/kg	0.13	52
CB363	N1-DOWN	4/6/2009	Sediment Trap	Total PCBs	2.1	mg/kg	0.13	16
CB363	N1-DOWN	12/3/2008	Sediment Trap	Total PCBs	3.1	mg/kg	0.13	24
CB363	N1-DOWN	3/18/2008	Sediment Trap	Total PCBs	16	mg/kg	0.13	120
CB363	N1-DOWN	10/29/2007	Sediment Trap	Total PCBs	62	mg/kg	0.13	480
CB363	N1-DOWN	5/14/2007	Sediment Trap	Total PCBs	183	mg/kg	0.13	1,400
CB363	N1-DOWN	3/14/2007	Grab	Total PCBs	230	mg/kg	0.13	1,800
CB363	N1-DOWN	1/8/2007	Sediment Trap	Total PCBs	200	mg/kg	0.13	1,500
CB363	N1-DOWN	12/8/2006	Grab	Total PCBs	107	mg/kg	0.13	820
CB363	N1-DOWN	10/11/2006	Sediment Trap	Total PCBs	800	mg/kg	0.13	6,200
CB363	N1-DOWN	3/16/2006	Sediment Trap	Total PCBs	114	mg/kg	0.13	880
CB363	N1-DOWN	8/11/2005	Sediment Trap	Total PCBs	24	mg/kg	0.13	180
CB363	N1-DOWN	2/16/2005	Grab	Total PCBs	7	mg/kg	0.13	54
CB363	N1-DOWN	7/19/2012	Grab	Arsenic	6.6	mg/kg	7.3	0.90
CB363	N1-DOWN	4/24/2012	Sediment Trap	Arsenic	10	mg/kg	7.3	1.4
CB363	N1-DOWN	4/5/2011	Sediment Trap	Arsenic	20	mg/kg	7.3	2.7
CB363	N1-DOWN	4/8/2010	Sediment Trap	Arsenic	15	mg/kg	7.3	2.1
CB363	N1-DOWN	6/9/2009	Grab	Arsenic	9.0	mg/kg	7.3	1.2
CB363	N1-DOWN	4/6/2009	Sediment Trap	Arsenic	20	mg/kg	7.3	2.7
CB363	N1-DOWN	12/3/2008	Sediment Trap	Arsenic	20	mg/kg	7.3	2.7
CB363	N1-DOWN	7/30/2008	Sediment Trap	Arsenic	20	mg/kg	7.3	2.7
CB363	N1-DOWN	3/18/2008	Sediment Trap	Arsenic	10	mg/kg	7.3	1.4
CB363	N1-DOWN	10/29/2007	Sediment Trap	Arsenic	40 U	mg/kg	7.3	5.5
CB363	N1-DOWN	5/14/2007	Sediment Trap	Arsenic	40 U	mg/kg	7.3	5.5
CB363	N1-DOWN	1/8/2007	Sediment Trap	Arsenic	10	mg/kg	7.3	1.4
CB363	N1-DOWN	10/11/2006	Sediment Trap	Arsenic	40	mg/kg	7.3	5.5
CB363	N1-DOWN	3/16/2006	Sediment Trap	Arsenic	20 U	mg/kg	7.3	2.7
CB363	N1-DOWN	8/11/2005	Sediment Trap	Arsenic	21	mg/kg	7.3	2.9
CB363	N1-DOWN	2/16/2005	Grab	Arsenic	8.0	mg/kg	7.3	1.1
CB363	N1-DOWN	7/19/2012	Grab	Cadmium	1.9	mg/kg	5.1	0.36
CB363	N1-DOWN	7/19/2012	Grab	Chromium	61	mg/kg	260	0.24
CB363	N1-DOWN	7/19/2012	Grab	Copper	88	mg/kg	390	0.22
CB363	N1-DOWN	4/24/2012	Sediment Trap	Copper	173	mg/kg	390	0.44
CB363	N1-DOWN	4/5/2011	Sediment Trap	Copper	560	mg/kg	390	1.4
CB363	N1-DOWN	4/8/2010	Sediment Trap	Copper	287	mg/kg	390	0.74
CB363	N1-DOWN	6/9/2009	Grab	Copper	33	mg/kg	390	0.084
CB363	N1-DOWN	4/6/2009	Sediment Trap	Copper	764	mg/kg	390	2.0
CB363	N1-DOWN	12/3/2008	Sediment Trap	Copper	556	mg/kg	390	1.4
CB363	N1-DOWN	7/30/2008	Sediment Trap	Copper	328	mg/kg	390	0.84
CB363	N1-DOWN	3/18/2008	Sediment Trap	Copper	257	mg/kg	390	0.66
CB363	N1-DOWN	10/29/2007	Sediment Trap	Copper	366	mg/kg	390	0.94
CB363	N1-DOWN	5/14/2007	Sediment Trap	Copper	251	mg/kg	390	0.64
CB363	N1-DOWN	1/8/2007	Sediment Trap	Copper	140	mg/kg	390	0.36
CB363	N1-DOWN	10/11/2006	Sediment Trap	Copper	640	mg/kg	390	1.6
CB363	N1-DOWN	3/16/2006	Sediment Trap	Copper	297	mg/kg	390	0.76
CB363	N1-DOWN	8/11/2005	Sediment Trap	Copper	148	mg/kg	390	0.38
CB363	N1-DOWN	2/16/2005	Grab	Copper	45	mg/kg	390	0.12
CB363	N1-DOWN	7/19/2012	Grab	Lead	204	mg/kg	450	0.45
CB363	N1-DOWN	4/24/2012	Sediment Trap	Lead	149	mg/kg	450	0.33
CB363	N1-DOWN	4/5/2011	Sediment Trap	Lead	151	mg/kg	450	0.34
CB363	N1-DOWN	4/8/2010	Sediment Trap	Lead	277	mg/kg	450	0.62
CB363	N1-DOWN	6/9/2009	Grab	Lead	25 J	mg/kg	450	0.056

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB363	N1-DOWN	4/6/2009	Sediment Trap	Lead	275	mg/kg	450	0.61
CB363	N1-DOWN	12/3/2008	Sediment Trap	Lead	273	mg/kg	450	0.61
CB363	N1-DOWN	7/30/2008	Sediment Trap	Lead	199	mg/kg	450	0.44
CB363	N1-DOWN	3/18/2008	Sediment Trap	Lead	186	mg/kg	450	0.41
CB363	N1-DOWN	10/29/2007	Sediment Trap	Lead	240	mg/kg	450	0.53
CB363	N1-DOWN	5/14/2007	Sediment Trap	Lead	210	mg/kg	450	0.47
CB363	N1-DOWN	1/8/2007	Sediment Trap	Lead	102	mg/kg	450	0.23
CB363	N1-DOWN	10/11/2006	Sediment Trap	Lead	310	mg/kg	450	0.69
CB363	N1-DOWN	3/16/2006	Sediment Trap	Lead	184	mg/kg	450	0.41
CB363	N1-DOWN	8/11/2005	Sediment Trap	Lead	109	mg/kg	450	0.24
CB363	N1-DOWN	2/16/2005	Grab	Lead	110	mg/kg	450	0.24
CB363	N1-DOWN	7/19/2012	Grab	Mercury	0.87	mg/kg	0.41	2.1
CB363	N1-DOWN	4/24/2012	Sediment Trap	Mercury	0.40	mg/kg	0.41	0.98
CB363	N1-DOWN	4/5/2011	Sediment Trap	Mercury	0.85	mg/kg	0.41	2.1
CB363	N1-DOWN	4/8/2010	Sediment Trap	Mercury	0.34	mg/kg	0.41	0.83
CB363	N1-DOWN	6/9/2009	Grab	Mercury	0.18 J	mg/kg	0.41	0.44
CB363	N1-DOWN	4/6/2009	Sediment Trap	Mercury	0.70	mg/kg	0.41	1.7
CB363	N1-DOWN	12/3/2008	Sediment Trap	Mercury	1.0	mg/kg	0.41	2.4
CB363	N1-DOWN	7/30/2008	Sediment Trap	Mercury	0.60	mg/kg	0.41	1.5
CB363	N1-DOWN	3/18/2008	Sediment Trap	Mercury	1.1	mg/kg	0.41	2.6
CB363	N1-DOWN	10/29/2007	Sediment Trap	Mercury	4.4	mg/kg	0.41	11
CB363	N1-DOWN	5/14/2007	Sediment Trap	Mercury	1.8	mg/kg	0.41	4.4
CB363	N1-DOWN	1/8/2007	Sediment Trap	Mercury	5.1	mg/kg	0.41	12
CB363	N1-DOWN	10/11/2006	Sediment Trap	Mercury	2.9	mg/kg	0.41	7.1
CB363	N1-DOWN	3/16/2006	Sediment Trap	Mercury	2.0	mg/kg	0.41	4.9
CB363	N1-DOWN	8/11/2005	Sediment Trap	Mercury	1.1	mg/kg	0.41	2.7
CB363	N1-DOWN	2/16/2005	Grab	Mercury	0.70	mg/kg	0.41	1.7
CB363	N1-DOWN	7/19/2012	Grab	Silver	3.0	mg/kg	6.1	0.50
CB363	N1-DOWN	7/19/2012	Grab	Zinc	439	mg/kg	410	1.1
CB363	N1-DOWN	4/24/2012	Sediment Trap	Zinc	1,040	mg/kg	410	2.5
CB363	N1-DOWN	4/5/2011	Sediment Trap	Zinc	670	mg/kg	410	1.6
CB363	N1-DOWN	4/8/2010	Sediment Trap	Zinc	705	mg/kg	410	1.7
CB363	N1-DOWN	6/9/2009	Grab	Zinc	219 J	mg/kg	410	0.53
CB363	N1-DOWN	4/6/2009	Sediment Trap	Zinc	1,280	mg/kg	410	3.1
CB363	N1-DOWN	12/3/2008	Sediment Trap	Zinc	1,510	mg/kg	410	3.7
CB363	N1-DOWN	7/30/2008	Sediment Trap	Zinc	933	mg/kg	410	2.3
CB363	N1-DOWN	3/18/2008	Sediment Trap	Zinc	611	mg/kg	410	1.5
CB363	N1-DOWN	10/29/2007	Sediment Trap	Zinc	1,120	mg/kg	410	2.7
CB363	N1-DOWN	5/14/2007	Sediment Trap	Zinc	751	mg/kg	410	1.8
CB363	N1-DOWN	1/8/2007	Sediment Trap	Zinc	428	mg/kg	410	1.0
CB363	N1-DOWN	10/11/2006	Sediment Trap	Zinc	1,370	mg/kg	410	3.3
CB363	N1-DOWN	3/16/2006	Sediment Trap	Zinc	717	mg/kg	410	1.7
CB363	N1-DOWN	8/11/2005	Sediment Trap	Zinc	553	mg/kg	410	1.3
CB363	N1-DOWN	2/16/2005	Grab	Zinc	272	mg/kg	410	0.66
CB363	N1-DOWN	4/24/2012	Sediment Trap	p-Cresol (4-Methylphenol)	1.9	mg/kg	0.67	2.8
CB363	N1-DOWN	4/5/2011	Sediment Trap	p-Cresol (4-Methylphenol)	0.72	mg/kg	0.67	1.1
CB363	N1-DOWN	4/8/2010	Sediment Trap	p-Cresol (4-Methylphenol)	0.66	mg/kg	0.67	0.99
CB363	N1-DOWN	6/9/2009	Grab	p-Cresol (4-Methylphenol)	0.064 U	mg/kg	0.67	0.096
CB363	N1-DOWN	4/6/2009	Sediment Trap	p-Cresol (4-Methylphenol)	11	mg/kg	0.67	16
CB363	N1-DOWN	12/3/2008	Sediment Trap	p-Cresol (4-Methylphenol)	0.34	mg/kg	0.67	0.51
CB363	N1-DOWN	3/18/2008	Sediment Trap	p-Cresol (4-Methylphenol)	0.76	mg/kg	0.67	1.1
CB363	N1-DOWN	10/29/2007	Sediment Trap	p-Cresol (4-Methylphenol)	0.28	mg/kg	0.67	0.42
CB363	N1-DOWN	5/14/2007	Sediment Trap	p-Cresol (4-Methylphenol)	8.1 U	mg/kg	0.67	12
CB363	N1-DOWN	1/8/2007	Sediment Trap	p-Cresol (4-Methylphenol)	4.6	mg/kg	0.67	6.9
CB363	N1-DOWN	10/11/2006	Sediment Trap	p-Cresol (4-Methylphenol)	0.59	mg/kg	0.67	0.88
CB363	N1-DOWN	3/16/2006	Sediment Trap	p-Cresol (4-Methylphenol)	1.2 U	mg/kg	0.67	1.8
CB363	N1-DOWN	8/11/2005	Sediment Trap	p-Cresol (4-Methylphenol)	0.36	mg/kg	0.67	0.54
CB363	N1-DOWN	2/16/2005	Grab	p-Cresol (4-Methylphenol)	0.059 U	mg/kg	0.67	0.088
CB363	N1-DOWN	4/24/2012	Sediment Trap	Phenol	0.36	mg/kg	0.42	0.86
CB363	N1-DOWN	4/5/2011	Sediment Trap	Phenol	0.27 U	mg/kg	0.42	0.64
CB363	N1-DOWN	4/8/2010	Sediment Trap	Phenol	0.25 U	mg/kg	0.42	0.60
CB363	N1-DOWN	6/9/2009	Grab	Phenol	0.064 U	mg/kg	0.42	0.15
CB363	N1-DOWN	4/6/2009	Sediment Trap	Phenol	1.9	mg/kg	0.42	4.5
CB363	N1-DOWN	12/3/2008	Sediment Trap	Phenol	0.23 U	mg/kg	0.42	0.55
CB363	N1-DOWN	3/18/2008	Sediment Trap	Phenol	0.45 U	mg/kg	0.42	1.1
CB363	N1-DOWN	10/29/2007	Sediment Trap	Phenol	0.12 UJ	mg/kg	0.42	0.29
CB363	N1-DOWN	5/14/2007	Sediment Trap	Phenol	0.86 U	mg/kg	0.42	2.0
CB363	N1-DOWN	1/8/2007	Sediment Trap	Phenol	0.33	mg/kg	0.42	0.79

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
CB363	N1-DOWN	10/11/2006	Sediment Trap	Phenol	0.30		mg/kg	0.42	0.71
CB363	N1-DOWN	3/16/2006	Sediment Trap	Phenol	1.2	U	mg/kg	0.42	2.9
CB363	N1-DOWN	8/11/2005	Sediment Trap	Phenol	0.13	U	mg/kg	0.42	0.31
CB363	N1-DOWN	2/16/2005	Grab	Phenol	0.059	U	mg/kg	0.42	0.14
CB363	N1-DOWN	4/24/2012	Sediment Trap	Bis(2-ethylhexyl) phthalate	9.0		mg/kg	1.3	6.9
CB363	N1-DOWN	4/5/2011	Sediment Trap	Bis(2-ethylhexyl) phthalate	2.1		mg/kg	1.3	1.6
CB363	N1-DOWN	4/8/2010	Sediment Trap	Bis(2-ethylhexyl) phthalate	10		mg/kg	1.3	7.7
CB363	N1-DOWN	6/9/2009	Grab	Bis(2-ethylhexyl) phthalate	0.39		mg/kg	1.3	0.30
CB363	N1-DOWN	4/6/2009	Sediment Trap	Bis(2-ethylhexyl) phthalate	34		mg/kg	1.3	26
CB363	N1-DOWN	12/3/2008	Sediment Trap	Bis(2-ethylhexyl) phthalate	5.9		mg/kg	1.3	4.5
CB363	N1-DOWN	3/18/2008	Sediment Trap	Bis(2-ethylhexyl) phthalate	13		mg/kg	1.3	10
CB363	N1-DOWN	10/29/2007	Sediment Trap	Bis(2-ethylhexyl) phthalate	8.0	J	mg/kg	1.3	6.2
CB363	N1-DOWN	5/14/2007	Sediment Trap	Bis(2-ethylhexyl) phthalate	15		mg/kg	1.3	12
CB363	N1-DOWN	1/8/2007	Sediment Trap	Bis(2-ethylhexyl) phthalate	7.3		mg/kg	1.3	5.6
CB363	N1-DOWN	10/11/2006	Sediment Trap	Bis(2-ethylhexyl) phthalate	19		mg/kg	1.3	15
CB363	N1-DOWN	3/16/2006	Sediment Trap	Bis(2-ethylhexyl) phthalate	8.3		mg/kg	1.3	6.4
CB363	N1-DOWN	8/11/2005	Sediment Trap	Bis(2-ethylhexyl) phthalate	2.7		mg/kg	1.3	2.1
CB363	N1-DOWN	2/16/2005	Grab	Bis(2-ethylhexyl) phthalate	0.50		mg/kg	1.3	0.38
CB363	N1-DOWN	4/24/2012	Sediment Trap	Butyl benzyl phthalate	0.55	J	mg/kg	0.067	8.2
CB363	N1-DOWN	4/5/2011	Sediment Trap	Butyl benzyl phthalate	0.27	U	mg/kg	0.067	4.0
CB363	N1-DOWN	4/8/2010	Sediment Trap	Butyl benzyl phthalate	0.28	J	mg/kg	0.067	4.2
CB363	N1-DOWN	6/9/2009	Grab	Butyl benzyl phthalate	0.064	U	mg/kg	0.067	0.96
CB363	N1-DOWN	4/6/2009	Sediment Trap	Butyl benzyl phthalate	1.3		mg/kg	0.067	19
CB363	N1-DOWN	12/3/2008	Sediment Trap	Butyl benzyl phthalate	0.86		mg/kg	0.067	13
CB363	N1-DOWN	3/18/2008	Sediment Trap	Butyl benzyl phthalate	1.2		mg/kg	0.067	18
CB363	N1-DOWN	10/29/2007	Sediment Trap	Butyl benzyl phthalate	0.69	J	mg/kg	0.067	10
CB363	N1-DOWN	5/14/2007	Sediment Trap	Butyl benzyl phthalate	0.42	U	mg/kg	0.067	6.3
CB363	N1-DOWN	1/8/2007	Sediment Trap	Butyl benzyl phthalate	0.23		mg/kg	0.067	3.4
CB363	N1-DOWN	10/11/2006	Sediment Trap	Butyl benzyl phthalate	0.44		mg/kg	0.067	6.6
CB363	N1-DOWN	3/16/2006	Sediment Trap	Butyl benzyl phthalate	1.2	U	mg/kg	0.067	18
CB363	N1-DOWN	8/11/2005	Sediment Trap	Butyl benzyl phthalate	0.14		mg/kg	0.067	2.1
CB363	N1-DOWN	2/16/2005	Grab	Butyl benzyl phthalate	0.059	U	mg/kg	0.067	0.88
CB363	N1-DOWN	4/24/2012	Sediment Trap	Acenaphthene	0.24	U	mg/kg	0.50	0.48
CB363	N1-DOWN	4/5/2011	Sediment Trap	Acenaphthene	0.27	U	mg/kg	0.50	0.54
CB363	N1-DOWN	4/8/2010	Sediment Trap	Acenaphthene	0.14	J	mg/kg	0.50	0.28
CB363	N1-DOWN	6/9/2009	Grab	Acenaphthene	0.064	U	mg/kg	0.50	0.13
CB363	N1-DOWN	4/6/2009	Sediment Trap	Acenaphthene	0.47	U	mg/kg	0.50	0.94
CB363	N1-DOWN	12/3/2008	Sediment Trap	Acenaphthene	0.23	U	mg/kg	0.50	0.46
CB363	N1-DOWN	3/18/2008	Sediment Trap	Acenaphthene	1.1		mg/kg	0.50	2.2
CB363	N1-DOWN	10/29/2007	Sediment Trap	Acenaphthene	0.12	UJ	mg/kg	0.50	0.24
CB363	N1-DOWN	5/14/2007	Sediment Trap	Acenaphthene	0.42	U	mg/kg	0.50	0.84
CB363	N1-DOWN	1/8/2007	Sediment Trap	Acenaphthene	0.22	U	mg/kg	0.50	0.44
CB363	N1-DOWN	10/11/2006	Sediment Trap	Acenaphthene	0.26	U	mg/kg	0.50	0.52
CB363	N1-DOWN	3/16/2006	Sediment Trap	Acenaphthene	1.2	U	mg/kg	0.50	2.4
CB363	N1-DOWN	8/11/2005	Sediment Trap	Acenaphthene	0.13	U	mg/kg	0.50	0.26
CB363	N1-DOWN	2/16/2005	Grab	Acenaphthene	0.059	U	mg/kg	0.50	0.12
CB363	N1-DOWN	4/24/2012	Sediment Trap	Anthracene	0.24	U	mg/kg	0.96	0.25
CB363	N1-DOWN	4/5/2011	Sediment Trap	Anthracene	0.10	J	mg/kg	0.96	0.10
CB363	N1-DOWN	4/8/2010	Sediment Trap	Anthracene	0.54		mg/kg	0.96	0.56
CB363	N1-DOWN	6/9/2009	Grab	Anthracene	0.064	U	mg/kg	0.96	0.067
CB363	N1-DOWN	4/6/2009	Sediment Trap	Anthracene	0.25	J	mg/kg	0.96	0.26
CB363	N1-DOWN	12/3/2008	Sediment Trap	Anthracene	0.23	U	mg/kg	0.96	0.24
CB363	N1-DOWN	3/18/2008	Sediment Trap	Anthracene	1.8		mg/kg	0.96	1.9
CB363	N1-DOWN	10/29/2007	Sediment Trap	Anthracene	0.12	UJ	mg/kg	0.96	0.13
CB363	N1-DOWN	5/14/2007	Sediment Trap	Anthracene	0.42	U	mg/kg	0.96	0.44
CB363	N1-DOWN	1/8/2007	Sediment Trap	Anthracene	0.27		mg/kg	0.96	0.28
CB363	N1-DOWN	10/11/2006	Sediment Trap	Anthracene	0.26	U	mg/kg	0.96	0.27
CB363	N1-DOWN	3/16/2006	Sediment Trap	Anthracene	1.2	U	mg/kg	0.96	1.3
CB363	N1-DOWN	8/11/2005	Sediment Trap	Anthracene	0.21		mg/kg	0.96	0.22
CB363	N1-DOWN	2/16/2005	Grab	Anthracene	0.059	U	mg/kg	0.96	0.061
CB363	N1-DOWN	4/24/2012	Sediment Trap	Benzo(a)anthracene	0.46		mg/kg	1.3	0.35
CB363	N1-DOWN	4/5/2011	Sediment Trap	Benzo(a)anthracene	0.60		mg/kg	1.3	0.46
CB363	N1-DOWN	4/8/2010	Sediment Trap	Benzo(a)anthracene	2.8		mg/kg	1.3	2.2
CB363	N1-DOWN	6/9/2009	Grab	Benzo(a)anthracene	0.098		mg/kg	1.3	0.075
CB363	N1-DOWN	4/6/2009	Sediment Trap	Benzo(a)anthracene	1.5		mg/kg	1.3	1.2
CB363	N1-DOWN	12/3/2008	Sediment Trap	Benzo(a)anthracene	0.90		mg/kg	1.3	0.69
CB363	N1-DOWN	3/18/2008	Sediment Trap	Benzo(a)anthracene	4.0		mg/kg	1.3	3.1
CB363	N1-DOWN	10/29/2007	Sediment Trap	Benzo(a)anthracene	0.44	J	mg/kg	1.3	0.34

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB363	N1-DOWN	5/14/2007	Sediment Trap	Benzo(a)anthracene	1.1	mg/kg	1.3	0.85
CB363	N1-DOWN	1/8/2007	Sediment Trap	Benzo(a)anthracene	1.4	mg/kg	1.3	1.1
CB363	N1-DOWN	10/11/2006	Sediment Trap	Benzo(a)anthracene	1.3	mg/kg	1.3	1.0
CB363	N1-DOWN	3/16/2006	Sediment Trap	Benzo(a)anthracene	2.5	mg/kg	1.3	1.9
CB363	N1-DOWN	8/11/2005	Sediment Trap	Benzo(a)anthracene	0.94	mg/kg	1.3	0.72
CB363	N1-DOWN	2/16/2005	Grab	Benzo(a)anthracene	0.28	mg/kg	1.3	0.22
CB363	N1-DOWN	4/24/2012	Sediment Trap	Total Benzofluoranthenes	1.3	mg/kg	3.2	0.41
CB363	N1-DOWN	4/5/2011	Sediment Trap	Total Benzofluoranthenes	2.0	mg/kg	3.2	0.63
CB363	N1-DOWN	4/8/2010	Sediment Trap	Total Benzofluoranthenes	8.8	mg/kg	3.2	2.8
CB363	N1-DOWN	6/9/2009	Grab	Total Benzofluoranthenes	0.28	mg/kg	3.2	0.088
CB363	N1-DOWN	4/6/2009	Sediment Trap	Total Benzofluoranthenes	6.4	mg/kg	3.2	2.0
CB363	N1-DOWN	12/3/2008	Sediment Trap	Total Benzofluoranthenes	3.4	mg/kg	3.2	1.1
CB363	N1-DOWN	3/18/2008	Sediment Trap	Total Benzofluoranthenes	11	mg/kg	3.2	3.4
CB363	N1-DOWN	10/29/2007	Sediment Trap	Total Benzofluoranthenes	2.6	mg/kg	3.2	0.81
CB363	N1-DOWN	5/14/2007	Sediment Trap	Total Benzofluoranthenes	5.1	mg/kg	3.2	1.6
CB363	N1-DOWN	1/8/2007	Sediment Trap	Total Benzofluoranthenes	5.9	mg/kg	3.2	1.8
CB363	N1-DOWN	10/11/2006	Sediment Trap	Total Benzofluoranthenes	6.1	mg/kg	3.2	1.9
CB363	N1-DOWN	3/16/2006	Sediment Trap	Total Benzofluoranthenes	7.4	mg/kg	3.2	2.3
CB363	N1-DOWN	8/11/2005	Sediment Trap	Total Benzofluoranthenes	2.7	mg/kg	3.2	0.83
CB363	N1-DOWN	2/16/2005	Grab	Total Benzofluoranthenes	0.76	mg/kg	3.2	0.24
CB363	N1-DOWN	4/24/2012	Sediment Trap	Benzo(g,h,i)perylene	0.53	mg/kg	0.67	0.79
CB363	N1-DOWN	4/5/2011	Sediment Trap	Benzo(g,h,i)perylene	0.85	mg/kg	0.67	1.3
CB363	N1-DOWN	4/8/2010	Sediment Trap	Benzo(g,h,i)perylene	3.0	mg/kg	0.67	4.5
CB363	N1-DOWN	6/9/2009	Grab	Benzo(g,h,i)perylene	0.10	mg/kg	0.67	0.15
CB363	N1-DOWN	4/6/2009	Sediment Trap	Benzo(g,h,i)perylene	2.2	mg/kg	0.67	3.3
CB363	N1-DOWN	12/3/2008	Sediment Trap	Benzo(g,h,i)perylene	1.2	mg/kg	0.67	1.8
CB363	N1-DOWN	3/18/2008	Sediment Trap	Benzo(g,h,i)perylene	3.4	mg/kg	0.67	5.1
CB363	N1-DOWN	10/29/2007	Sediment Trap	Benzo(g,h,i)perylene	0.12 UJ	mg/kg	0.67	0.18
CB363	N1-DOWN	5/14/2007	Sediment Trap	Benzo(g,h,i)perylene	1.1	mg/kg	0.67	1.6
CB363	N1-DOWN	3/16/2006	Sediment Trap	Benzo(g,h,i)perylene	1.5	mg/kg	0.67	2.2
CB363	N1-DOWN	8/11/2005	Sediment Trap	Benzo(g,h,i)perylene	0.60	mg/kg	0.67	0.90
CB363	N1-DOWN	2/16/2005	Grab	Benzo(g,h,i)perylene	0.17	mg/kg	0.67	0.25
CB363	N1-DOWN	4/24/2012	Sediment Trap	Benzo(a)pyrene	0.51	mg/kg	0.15	3.4
CB363	N1-DOWN	4/5/2011	Sediment Trap	Benzo(a)pyrene	0.86	mg/kg	0.15	5.7
CB363	N1-DOWN	4/8/2010	Sediment Trap	Benzo(a)pyrene	4.5	mg/kg	0.15	30
CB363	N1-DOWN	6/9/2009	Grab	Benzo(a)pyrene	0.13	mg/kg	0.15	0.87
CB363	N1-DOWN	4/6/2009	Sediment Trap	Benzo(a)pyrene	2.2	mg/kg	0.15	15
CB363	N1-DOWN	12/3/2008	Sediment Trap	Benzo(a)pyrene	1.4	mg/kg	0.15	9.3
CB363	N1-DOWN	3/18/2008	Sediment Trap	Benzo(a)pyrene	5.4	mg/kg	0.15	36
CB363	N1-DOWN	10/29/2007	Sediment Trap	Benzo(a)pyrene	0.39 J	mg/kg	0.15	2.6
CB363	N1-DOWN	5/14/2007	Sediment Trap	Benzo(a)pyrene	1.7	mg/kg	0.15	11
CB363	N1-DOWN	1/8/2007	Sediment Trap	Benzo(a)pyrene	2.2	mg/kg	0.15	15
CB363	N1-DOWN	10/11/2006	Sediment Trap	Benzo(a)pyrene	2.3	mg/kg	0.15	15
CB363	N1-DOWN	3/16/2006	Sediment Trap	Benzo(a)pyrene	3.0	mg/kg	0.15	20
CB363	N1-DOWN	8/11/2005	Sediment Trap	Benzo(a)pyrene	1.2	mg/kg	0.15	8.0
CB363	N1-DOWN	2/16/2005	Grab	Benzo(a)pyrene	0.30	mg/kg	0.15	2.0
CB363	N1-DOWN	4/24/2012	Sediment Trap	Chrysene	0.97	mg/kg	1.4	0.69
CB363	N1-DOWN	4/5/2011	Sediment Trap	Chrysene	1.2	mg/kg	1.4	0.86
CB363	N1-DOWN	4/8/2010	Sediment Trap	Chrysene	5.5	mg/kg	1.4	3.9
CB363	N1-DOWN	6/9/2009	Grab	Chrysene	0.17	mg/kg	1.4	0.12
CB363	N1-DOWN	4/6/2009	Sediment Trap	Chrysene	3.7	mg/kg	1.4	2.6
CB363	N1-DOWN	12/3/2008	Sediment Trap	Chrysene	2.1	mg/kg	1.4	1.5
CB363	N1-DOWN	3/18/2008	Sediment Trap	Chrysene	7.0	mg/kg	1.4	5.0
CB363	N1-DOWN	10/29/2007	Sediment Trap	Chrysene	1.2 J	mg/kg	1.4	0.86
CB363	N1-DOWN	5/14/2007	Sediment Trap	Chrysene	2.1	mg/kg	1.4	1.5
CB363	N1-DOWN	1/8/2007	Sediment Trap	Chrysene	2.7	mg/kg	1.4	1.9
CB363	N1-DOWN	10/11/2006	Sediment Trap	Chrysene	3.7	mg/kg	1.4	2.6
CB363	N1-DOWN	3/16/2006	Sediment Trap	Chrysene	4.3	mg/kg	1.4	3.1
CB363	N1-DOWN	8/11/2005	Sediment Trap	Chrysene	1.4	mg/kg	1.4	1.0
CB363	N1-DOWN	2/16/2005	Grab	Chrysene	0.40	mg/kg	1.4	0.29
CB363	N1-DOWN	4/24/2012	Sediment Trap	Dibenz(a,h)anthracene	0.24 U	mg/kg	0.23	1.0
CB363	N1-DOWN	4/5/2011	Sediment Trap	Dibenz(a,h)anthracene	0.31	mg/kg	0.23	1.3
CB363	N1-DOWN	4/8/2010	Sediment Trap	Dibenz(a,h)anthracene	1.1	mg/kg	0.23	4.8
CB363	N1-DOWN	6/9/2009	Grab	Dibenz(a,h)anthracene	0.064 U	mg/kg	0.23	0.28
CB363	N1-DOWN	4/6/2009	Sediment Trap	Dibenz(a,h)anthracene	0.38 J	mg/kg	0.23	1.7
CB363	N1-DOWN	12/3/2008	Sediment Trap	Dibenz(a,h)anthracene	0.39	mg/kg	0.23	1.7
CB363	N1-DOWN	3/18/2008	Sediment Trap	Dibenz(a,h)anthracene	1.5	mg/kg	0.23	6.5
CB363	N1-DOWN	10/29/2007	Sediment Trap	Dibenz(a,h)anthracene	0.12 UJ	mg/kg	0.23	0.52

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB363	N1-DOWN	5/14/2007	Sediment Trap	Dibenz(a,h)anthracene	0.42 U	mg/kg	0.23	1.8
CB363	N1-DOWN	1/8/2007	Sediment Trap	Dibenz(a,h)anthracene	0.22 U	mg/kg	0.23	0.96
CB363	N1-DOWN	10/11/2006	Sediment Trap	Dibenz(a,h)anthracene	0.48	mg/kg	0.23	2.1
CB363	N1-DOWN	3/16/2006	Sediment Trap	Dibenz(a,h)anthracene	1.2 U	mg/kg	0.23	5.2
CB363	N1-DOWN	8/11/2005	Sediment Trap	Dibenz(a,h)anthracene	0.13 U	mg/kg	0.23	0.57
CB363	N1-DOWN	2/16/2005	Grab	Dibenz(a,h)anthracene	0.059 U	mg/kg	0.23	0.26
CB363	N1-DOWN	4/24/2012	Sediment Trap	Dibenzofuran	0.24 U	mg/kg	0.54	0.44
CB363	N1-DOWN	4/5/2011	Sediment Trap	Dibenzofuran	0.27 U	mg/kg	0.54	0.50
CB363	N1-DOWN	4/8/2010	Sediment Trap	Dibenzofuran	0.20 J	mg/kg	0.54	0.37
CB363	N1-DOWN	6/9/2009	Grab	Dibenzofuran	0.064 U	mg/kg	0.54	0.12
CB363	N1-DOWN	4/6/2009	Sediment Trap	Dibenzofuran	0.47 U	mg/kg	0.54	0.87
CB363	N1-DOWN	12/3/2008	Sediment Trap	Dibenzofuran	0.23 U	mg/kg	0.54	0.43
CB363	N1-DOWN	3/18/2008	Sediment Trap	Dibenzofuran	0.60	mg/kg	0.54	1.1
CB363	N1-DOWN	10/29/2007	Sediment Trap	Dibenzofuran	0.12 UJ	mg/kg	0.54	0.22
CB363	N1-DOWN	5/14/2007	Sediment Trap	Dibenzofuran	0.42 U	mg/kg	0.54	0.78
CB363	N1-DOWN	1/8/2007	Sediment Trap	Dibenzofuran	0.22 U	mg/kg	0.54	0.41
CB363	N1-DOWN	10/11/2006	Sediment Trap	Dibenzofuran	0.26 U	mg/kg	0.54	0.48
CB363	N1-DOWN	3/16/2006	Sediment Trap	Dibenzofuran	1.2 U	mg/kg	0.54	2.2
CB363	N1-DOWN	8/11/2005	Sediment Trap	Dibenzofuran	0.13 U	mg/kg	0.54	0.24
CB363	N1-DOWN	2/16/2005	Grab	Dibenzofuran	0.059 U	mg/kg	0.54	0.11
CB363	N1-DOWN	4/24/2012	Sediment Trap	Fluoranthene	1.4	mg/kg	1.7	0.82
CB363	N1-DOWN	4/5/2011	Sediment Trap	Fluoranthene	2.4	mg/kg	1.7	1.4
CB363	N1-DOWN	4/8/2010	Sediment Trap	Fluoranthene	10	mg/kg	1.7	5.9
CB363	N1-DOWN	6/9/2009	Grab	Fluoranthene	0.30 J	mg/kg	1.7	0.18
CB363	N1-DOWN	4/6/2009	Sediment Trap	Fluoranthene	5.8	mg/kg	1.7	3.4
CB363	N1-DOWN	12/3/2008	Sediment Trap	Fluoranthene	3.7	mg/kg	1.7	2.2
CB363	N1-DOWN	3/18/2008	Sediment Trap	Fluoranthene	14	mg/kg	1.7	8.2
CB363	N1-DOWN	10/29/2007	Sediment Trap	Fluoranthene	2.2 J	mg/kg	1.7	1.3
CB363	N1-DOWN	5/14/2007	Sediment Trap	Fluoranthene	3.9	mg/kg	1.7	2.3
CB363	N1-DOWN	1/8/2007	Sediment Trap	Fluoranthene	3.7	mg/kg	1.7	2.2
CB363	N1-DOWN	10/11/2006	Sediment Trap	Fluoranthene	6.5	mg/kg	1.7	3.8
CB363	N1-DOWN	3/16/2006	Sediment Trap	Fluoranthene	9.7	mg/kg	1.7	5.7
CB363	N1-DOWN	8/11/2005	Sediment Trap	Fluoranthene	2.9	mg/kg	1.7	1.7
CB363	N1-DOWN	2/16/2005	Grab	Fluoranthene	0.75	mg/kg	1.7	0.44
CB363	N1-DOWN	4/24/2012	Sediment Trap	Fluorene	0.24 U	mg/kg	0.54	0.44
CB363	N1-DOWN	4/5/2011	Sediment Trap	Fluorene	0.27 U	mg/kg	0.54	0.50
CB363	N1-DOWN	4/8/2010	Sediment Trap	Fluorene	0.25	mg/kg	0.54	0.46
CB363	N1-DOWN	6/9/2009	Grab	Fluorene	0.064 U	mg/kg	0.54	0.12
CB363	N1-DOWN	4/6/2009	Sediment Trap	Fluorene	0.47 U	mg/kg	0.54	0.87
CB363	N1-DOWN	12/3/2008	Sediment Trap	Fluorene	0.23 U	mg/kg	0.54	0.43
CB363	N1-DOWN	3/18/2008	Sediment Trap	Fluorene	1.3	mg/kg	0.54	2.4
CB363	N1-DOWN	10/29/2007	Sediment Trap	Fluorene	0.12 UJ	mg/kg	0.54	0.22
CB363	N1-DOWN	5/14/2007	Sediment Trap	Fluorene	0.42 U	mg/kg	0.54	0.78
CB363	N1-DOWN	1/8/2007	Sediment Trap	Fluorene	0.22 U	mg/kg	0.54	0.41
CB363	N1-DOWN	10/11/2006	Sediment Trap	Fluorene	0.26 U	mg/kg	0.54	0.48
CB363	N1-DOWN	3/16/2006	Sediment Trap	Fluorene	1.2 U	mg/kg	0.54	2.2
CB363	N1-DOWN	8/11/2005	Sediment Trap	Fluorene	0.13 U	mg/kg	0.54	0.24
CB363	N1-DOWN	2/16/2005	Grab	Fluorene	0.059 U	mg/kg	0.54	0.11
CB363	N1-DOWN	4/24/2012	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.43	mg/kg	0.60	0.72
CB363	N1-DOWN	4/5/2011	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.74	mg/kg	0.60	1.2
CB363	N1-DOWN	4/8/2010	Sediment Trap	Indeno(1,2,3-cd)pyrene	2.7	mg/kg	0.60	4.5
CB363	N1-DOWN	6/9/2009	Grab	Indeno(1,2,3-cd)pyrene	0.091	mg/kg	0.60	0.15
CB363	N1-DOWN	4/6/2009	Sediment Trap	Indeno(1,2,3-cd)pyrene	2.0	mg/kg	0.60	3.3
CB363	N1-DOWN	12/3/2008	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.1	mg/kg	0.60	1.8
CB363	N1-DOWN	3/18/2008	Sediment Trap	Indeno(1,2,3-cd)pyrene	3.3	mg/kg	0.60	5.5
CB363	N1-DOWN	10/29/2007	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.17 J	mg/kg	0.60	0.28
CB363	N1-DOWN	5/14/2007	Sediment Trap	Indeno(1,2,3-cd)pyrene	11	mg/kg	0.60	18
CB363	N1-DOWN	1/8/2007	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.84	mg/kg	0.60	1.4
CB363	N1-DOWN	10/11/2006	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.4	mg/kg	0.60	2.3
CB363	N1-DOWN	3/16/2006	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.6	mg/kg	0.60	2.7
CB363	N1-DOWN	8/11/2005	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.68	mg/kg	0.60	1.1
CB363	N1-DOWN	2/16/2005	Grab	Indeno(1,2,3-cd)pyrene	0.18	mg/kg	0.60	0.30
CB363	N1-DOWN	4/24/2012	Sediment Trap	Phenanthrene	0.83	mg/kg	1.5	0.55
CB363	N1-DOWN	4/5/2011	Sediment Trap	Phenanthrene	0.95	mg/kg	1.5	0.63
CB363	N1-DOWN	4/8/2010	Sediment Trap	Phenanthrene	4.2	mg/kg	1.5	2.8
CB363	N1-DOWN	6/9/2009	Grab	Phenanthrene	0.099	mg/kg	1.5	0.066
CB363	N1-DOWN	4/6/2009	Sediment Trap	Phenanthrene	2.6	mg/kg	1.5	1.7
CB363	N1-DOWN	12/3/2008	Sediment Trap	Phenanthrene	1.4	mg/kg	1.5	0.93

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB363	N1-DOWN	3/18/2008	Sediment Trap	Phenanthrene	9.2	mg/kg	1.5	6.1
CB363	N1-DOWN	10/29/2007	Sediment Trap	Phenanthrene	0.84 J	mg/kg	1.5	0.56
CB363	N1-DOWN	5/14/2007	Sediment Trap	Phenanthrene	1.6	mg/kg	1.5	1.1
CB363	N1-DOWN	1/8/2007	Sediment Trap	Phenanthrene	1.8	mg/kg	1.5	1.2
CB363	N1-DOWN	10/11/2006	Sediment Trap	Phenanthrene	2.4	mg/kg	1.5	1.6
CB363	N1-DOWN	3/16/2006	Sediment Trap	Phenanthrene	3.7	mg/kg	1.5	2.5
CB363	N1-DOWN	8/11/2005	Sediment Trap	Phenanthrene	1.6	mg/kg	1.5	1.1
CB363	N1-DOWN	2/16/2005	Grab	Phenanthrene	0.26	mg/kg	1.5	0.17
CB363	N1-DOWN	4/24/2012	Sediment Trap	Pyrene	1.2	mg/kg	2.6	0.46
CB363	N1-DOWN	4/5/2011	Sediment Trap	Pyrene	1.3	mg/kg	2.6	0.50
CB363	N1-DOWN	4/8/2010	Sediment Trap	Pyrene	5.5	mg/kg	2.6	2.1
CB363	N1-DOWN	6/9/2009	Grab	Pyrene	0.18	mg/kg	2.6	0.069
CB363	N1-DOWN	4/6/2009	Sediment Trap	Pyrene	4.2	mg/kg	2.6	1.6
CB363	N1-DOWN	12/3/2008	Sediment Trap	Pyrene	2.3	mg/kg	2.6	0.88
CB363	N1-DOWN	3/18/2008	Sediment Trap	Pyrene	9.9	mg/kg	2.6	3.8
CB363	N1-DOWN	10/29/2007	Sediment Trap	Pyrene	1.1 J	mg/kg	2.6	0.42
CB363	N1-DOWN	5/14/2007	Sediment Trap	Pyrene	1.8	mg/kg	2.6	0.69
CB363	N1-DOWN	1/8/2007	Sediment Trap	Pyrene	3.4	mg/kg	2.6	1.3
CB363	N1-DOWN	10/11/2006	Sediment Trap	Pyrene	4.1	mg/kg	2.6	1.6
CB363	N1-DOWN	3/16/2006	Sediment Trap	Pyrene	5.1	mg/kg	2.6	2.0
CB363	N1-DOWN	8/11/2005	Sediment Trap	Pyrene	2.0	mg/kg	2.6	0.77
CB363	N1-DOWN	2/16/2005	Grab	Pyrene	0.66	mg/kg	2.6	0.25
CB363	N1-DOWN	4/24/2012	Sediment Trap	Total HPAHs	6.8	mg/kg	12	0.57
CB363	N1-DOWN	4/5/2011	Sediment Trap	Total HPAHs	10	mg/kg	12	0.86
CB363	N1-DOWN	4/8/2010	Sediment Trap	Total HPAHs	44	mg/kg	12	3.7
CB363	N1-DOWN	6/9/2009	Grab	Total HPAHs	1.3	mg/kg	12	0.11
CB363	N1-DOWN	4/6/2009	Sediment Trap	Total HPAHs	28	mg/kg	12	2.4
CB363	N1-DOWN	12/3/2008	Sediment Trap	Total HPAHs	16	mg/kg	12	1.4
CB363	N1-DOWN	3/18/2008	Sediment Trap	Total HPAHs	60	mg/kg	12	5.0
CB363	N1-DOWN	10/29/2007	Sediment Trap	Total HPAHs	8.1	mg/kg	12	0.68
CB363	N1-DOWN	5/14/2007	Sediment Trap	Total HPAHs	28	mg/kg	12	2.3
CB363	N1-DOWN	1/8/2007	Sediment Trap	Total HPAHs	20	mg/kg	12	1.7
CB363	N1-DOWN	10/11/2006	Sediment Trap	Total HPAHs	26	mg/kg	12	2.2
CB363	N1-DOWN	3/16/2006	Sediment Trap	Total HPAHs	35	mg/kg	12	2.9
CB363	N1-DOWN	8/11/2005	Sediment Trap	Total HPAHs	12	mg/kg	12	1.0
CB363	N1-DOWN	3/15/2005	Sediment Trap	Total HPAHs	35	mg/kg	12	2.9
CB363	N1-DOWN	2/16/2005	Grab	Total HPAHs	3.5	mg/kg	12	0.29
CB363	N1-DOWN	4/24/2012	Sediment Trap	Total LPAHs	0.83	mg/kg	5.2	0.16
CB363	N1-DOWN	4/5/2011	Sediment Trap	Total LPAHs	1.1	mg/kg	5.2	0.20
CB363	N1-DOWN	4/8/2010	Sediment Trap	Total LPAHs	5.1	mg/kg	5.2	0.99
CB363	N1-DOWN	6/9/2009	Grab	Total LPAHs	0.099	mg/kg	5.2	0.019
CB363	N1-DOWN	4/6/2009	Sediment Trap	Total LPAHs	2.9	mg/kg	5.2	0.55
CB363	N1-DOWN	12/3/2008	Sediment Trap	Total LPAHs	1.4	mg/kg	5.2	0.27
CB363	N1-DOWN	3/18/2008	Sediment Trap	Total LPAHs	13	mg/kg	5.2	2.6
CB363	N1-DOWN	10/29/2007	Sediment Trap	Total LPAHs	0.84	mg/kg	5.2	0.16
CB363	N1-DOWN	5/14/2007	Sediment Trap	Total LPAHs	1.6	mg/kg	5.2	0.31
CB363	N1-DOWN	1/8/2007	Sediment Trap	Total LPAHs	2.1	mg/kg	5.2	0.40
CB363	N1-DOWN	10/11/2006	Sediment Trap	Total LPAHs	2.4	mg/kg	5.2	0.46
CB363	N1-DOWN	3/16/2006	Sediment Trap	Total LPAHs	3.7	mg/kg	5.2	0.71
CB363	N1-DOWN	8/11/2005	Sediment Trap	Total LPAHs	1.8	mg/kg	5.2	0.35
CB363	N1-DOWN	3/15/2005	Sediment Trap	Total LPAHs	3.7	mg/kg	5.2	0.71
CB363	N1-DOWN	2/16/2005	Grab	Total LPAHs	0.26	mg/kg	5.2	0.050
CB363	N1-DOWN	4/24/2012	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	0.75	mg/kg	0.15	5.0
CB363	N1-DOWN	4/5/2011	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	1.2	mg/kg	0.15	8.2
CB363	N1-DOWN	4/8/2010	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	6.1	mg/kg	0.15	41
CB363	N1-DOWN	6/9/2009	Grab	Total cPAHs (TEQ, NDx0.5)	0.18	mg/kg	0.15	1.2
CB363	N1-DOWN	4/6/2009	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	3.3	mg/kg	0.15	22
CB363	N1-DOWN	12/3/2008	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	2.0	mg/kg	0.15	13
CB363	N1-DOWN	3/18/2008	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	7.5	mg/kg	0.15	50
CB363	N1-DOWN	10/29/2007	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	0.73	mg/kg	0.15	4.9
CB363	N1-DOWN	5/14/2007	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	3.5	mg/kg	0.15	23
CB363	N1-DOWN	1/8/2007	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	3.1	mg/kg	0.15	20
CB363	N1-DOWN	10/11/2006	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	3.3	mg/kg	0.15	22
CB363	N1-DOWN	3/16/2006	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	4.3	mg/kg	0.15	28
CB363	N1-DOWN	8/11/2005	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	1.6	mg/kg	0.15	11
CB363	N1-DOWN	2/16/2005	Grab	Total cPAHs (TEQ, NDx0.5)	0.43	mg/kg	0.15	2.9
MH108	N1-DOWN	4/27/2011	Filter/Stormwater	Total PCBs	1.5	mg/kg	0.13	12
MH108	N1-DOWN	4/25/2011	Filter/Stormwater	Total PCBs	4.4	mg/kg	0.13	34

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Total PCBs	2.0		mg/kg	0.13	15
MH108	N1-DOWN	1/21/2011	Filter/Stormwater	Total PCBs	2.9		mg/kg	0.13	22
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Total PCBs	2.5		mg/kg	0.13	19
MH108	N1-DOWN	11/30/2010	Filter/Stormwater	Total PCBs	4.4		mg/kg	0.13	34
MH108	N1-DOWN	6/30/2010	Filter/Baseflow	Total PCBs	22		mg/kg	0.13	170
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Total PCBs	5.0		mg/kg	0.13	38
MH108	N1-DOWN	5/20/2010	Filter/Stormwater	Total PCBs	1.3		mg/kg	0.13	10
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Total PCBs	4.0		mg/kg	0.13	31
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Total PCBs	3.6		mg/kg	0.13	28
MH108	N1-DOWN	2/23/2010	Filter/Baseflow	Total PCBs	25		mg/kg	0.13	190
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Total PCBs	18		mg/kg	0.13	140
MH108	N1-DOWN	2/5/2010	Filter/Stormwater	Total PCBs	18		mg/kg	0.13	140
MH108	N1-DOWN	12/15/2009	Filter/Stormwater	Total PCBs	3.3		mg/kg	0.13	26
MH108	N1-DOWN	12/14/2009	Filter/Stormwater	Total PCBs	3.1		mg/kg	0.13	24
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Total PCBs	5.6		mg/kg	0.13	43
MH108	N1-DOWN	10/29/2009	Filter/Stormwater	Total PCBs	6.1		mg/kg	0.13	47
MH108	N1-DOWN	10/17/2009	Filter/Stormwater	Total PCBs	2.2		mg/kg	0.13	17
MH108	N1-DOWN	3/9/2007	Filter/Undifferentiated	Total PCBs	18		mg/kg	0.13	140
MH108	N1-DOWN	7/25/2006	Grab	Total PCBs	6.6		mg/kg	0.13	51
MH108	N1-DOWN	4/27/2011	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	34		ng/kg	13	2.6
MH108	N1-DOWN	4/25/2011	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	48		ng/kg	13	3.7
MH108	N1-DOWN	1/21/2011	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	69		ng/kg	13	5.3
MH108	N1-DOWN	6/30/2010	Filter/Baseflow	Total Dioxins/Furans (TEQ, NDx0.5)	5.7		ng/kg	13	0.44
MH108	N1-DOWN	5/20/2010	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	12		ng/kg	13	0.96
MH108	N1-DOWN	2/23/2010	Filter/Baseflow	Total Dioxins/Furans (TEQ, NDx0.5)	16		ng/kg	13	1.2
MH108	N1-DOWN	12/15/2009	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	157		ng/kg	13	12
MH108	N1-DOWN	10/29/2009	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	144		ng/kg	13	11
MH108	N1-DOWN	4/27/2011	Filter/Stormwater	Arsenic	30		mg/kg	7.3	4.1
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Arsenic	10		mg/kg	7.3	1.4
MH108	N1-DOWN	1/21/2011	Filter/Stormwater	Arsenic	20	U	mg/kg	7.3	2.7
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Arsenic	10	U	mg/kg	7.3	1.4
MH108	N1-DOWN	11/30/2010	Filter/Stormwater	Arsenic	30		mg/kg	7.3	4.1
MH108	N1-DOWN	6/30/2010	Filter/Baseflow	Arsenic	70		mg/kg	7.3	9.6
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Arsenic	30		mg/kg	7.3	4.1
MH108	N1-DOWN	5/20/2010	Filter/Stormwater	Arsenic	30		mg/kg	7.3	4.1
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Arsenic	60	U	mg/kg	7.3	8.2
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Arsenic	20		mg/kg	7.3	2.7
MH108	N1-DOWN	2/23/2010	Filter/Baseflow	Arsenic	120	U	mg/kg	7.3	16
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Arsenic	80	U	mg/kg	7.3	11
MH108	N1-DOWN	12/15/2009	Filter/Stormwater	Arsenic	20	U	mg/kg	7.3	2.7
MH108	N1-DOWN	12/14/2009	Filter/Stormwater	Arsenic	100	U	mg/kg	7.3	14
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Arsenic	30		mg/kg	7.3	4.1
MH108	N1-DOWN	10/29/2009	Filter/Stormwater	Arsenic	20	U	mg/kg	7.3	2.7
MH108	N1-DOWN	10/17/2009	Filter/Stormwater	Arsenic	20		mg/kg	7.3	2.7
MH108	N1-DOWN	4/27/2011	Filter/Stormwater	Cadmium	9.5		mg/kg	5.1	1.9
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Cadmium	3.1		mg/kg	5.1	0.61
MH108	N1-DOWN	1/21/2011	Filter/Stormwater	Cadmium	6.0		mg/kg	5.1	1.2
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Cadmium	6.7		mg/kg	5.1	1.3
MH108	N1-DOWN	11/30/2010	Filter/Stormwater	Cadmium	11		mg/kg	5.1	2.2
MH108	N1-DOWN	6/30/2010	Filter/Baseflow	Cadmium	4.0		mg/kg	5.1	0.78
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Cadmium	7.0		mg/kg	5.1	1.4
MH108	N1-DOWN	5/20/2010	Filter/Stormwater	Cadmium	9.1		mg/kg	5.1	1.8
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Cadmium	10		mg/kg	5.1	2.0
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Cadmium	6.1		mg/kg	5.1	1.2
MH108	N1-DOWN	2/23/2010	Filter/Baseflow	Cadmium	5	U	mg/kg	5.1	0.98
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Cadmium	6.0		mg/kg	5.1	1.2
MH108	N1-DOWN	12/15/2009	Filter/Stormwater	Cadmium	6.5		mg/kg	5.1	1.3
MH108	N1-DOWN	12/14/2009	Filter/Stormwater	Cadmium	9.0		mg/kg	5.1	1.8
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Cadmium	9.8		mg/kg	5.1	1.9
MH108	N1-DOWN	10/29/2009	Filter/Stormwater	Cadmium	4.5		mg/kg	5.1	0.88
MH108	N1-DOWN	10/17/2009	Filter/Stormwater	Cadmium	17		mg/kg	5.1	3.3
MH108	N1-DOWN	4/27/2011	Filter/Stormwater	Chromium	87		mg/kg	260	0.33
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Chromium	41		mg/kg	260	0.16
MH108	N1-DOWN	1/21/2011	Filter/Stormwater	Chromium	58		mg/kg	260	0.22
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Chromium	68		mg/kg	260	0.26
MH108	N1-DOWN	11/30/2010	Filter/Stormwater	Chromium	66		mg/kg	260	0.25
MH108	N1-DOWN	6/30/2010	Filter/Baseflow	Chromium	22		mg/kg	260	0.085
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Chromium	59		mg/kg	260	0.23

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH108	N1-DOWN	5/20/2010	Filter/Stormwater	Chromium	76	mg/kg	260	0.29
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Chromium	53 J	mg/kg	260	0.20
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Chromium	65	mg/kg	260	0.25
MH108	N1-DOWN	2/23/2010	Filter/Baseflow	Chromium	30	mg/kg	260	0.12
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Chromium	52	mg/kg	260	0.20
MH108	N1-DOWN	12/15/2009	Filter/Stormwater	Chromium	110	mg/kg	260	0.42
MH108	N1-DOWN	12/14/2009	Filter/Stormwater	Chromium	70	mg/kg	260	0.27
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Chromium	111	mg/kg	260	0.43
MH108	N1-DOWN	10/29/2009	Filter/Stormwater	Chromium	63	mg/kg	260	0.24
MH108	N1-DOWN	10/17/2009	Filter/Stormwater	Chromium	116	mg/kg	260	0.45
MH108	N1-DOWN	4/27/2011	Filter/Stormwater	Copper	190	mg/kg	390	0.49
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Copper	139	mg/kg	390	0.36
MH108	N1-DOWN	1/21/2011	Filter/Stormwater	Copper	213	mg/kg	390	0.55
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Copper	187	mg/kg	390	0.48
MH108	N1-DOWN	11/30/2010	Filter/Stormwater	Copper	227	mg/kg	390	0.58
MH108	N1-DOWN	6/30/2010	Filter/Baseflow	Copper	71	mg/kg	390	0.18
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Copper	247	mg/kg	390	0.63
MH108	N1-DOWN	5/20/2010	Filter/Stormwater	Copper	386 J	mg/kg	390	0.99
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Copper	329	mg/kg	390	0.84
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Copper	319	mg/kg	390	0.82
MH108	N1-DOWN	2/23/2010	Filter/Baseflow	Copper	165	mg/kg	390	0.42
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Copper	311	mg/kg	390	0.80
MH108	N1-DOWN	12/15/2009	Filter/Stormwater	Copper	421	mg/kg	390	1.1
MH108	N1-DOWN	12/14/2009	Filter/Stormwater	Copper	264	mg/kg	390	0.68
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Copper	301	mg/kg	390	0.77
MH108	N1-DOWN	10/29/2009	Filter/Stormwater	Copper	298	mg/kg	390	0.76
MH108	N1-DOWN	10/17/2009	Filter/Stormwater	Copper	311	mg/kg	390	0.80
MH108	N1-DOWN	4/27/2011	Filter/Stormwater	Lead	178	mg/kg	450	0.40
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Lead	134	mg/kg	450	0.30
MH108	N1-DOWN	1/21/2011	Filter/Stormwater	Lead	140	mg/kg	450	0.31
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Lead	272	mg/kg	450	0.60
MH108	N1-DOWN	11/30/2010	Filter/Stormwater	Lead	187	mg/kg	450	0.42
MH108	N1-DOWN	6/30/2010	Filter/Baseflow	Lead	30	mg/kg	450	0.067
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Lead	170	mg/kg	450	0.38
MH108	N1-DOWN	5/20/2010	Filter/Stormwater	Lead	239	mg/kg	450	0.53
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Lead	120	mg/kg	450	0.27
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Lead	210	mg/kg	450	0.47
MH108	N1-DOWN	2/23/2010	Filter/Baseflow	Lead	50 U	mg/kg	450	0.11
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Lead	90	mg/kg	450	0.20
MH108	N1-DOWN	12/15/2009	Filter/Stormwater	Lead	452	mg/kg	450	1.0
MH108	N1-DOWN	12/14/2009	Filter/Stormwater	Lead	150	mg/kg	450	0.33
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Lead	253	mg/kg	450	0.56
MH108	N1-DOWN	10/29/2009	Filter/Stormwater	Lead	163	mg/kg	450	0.36
MH108	N1-DOWN	10/17/2009	Filter/Stormwater	Lead	406	mg/kg	450	0.90
MH108	N1-DOWN	4/27/2011	Filter/Stormwater	Mercury	0.37	mg/kg	0.41	0.90
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Mercury	0.54	mg/kg	0.41	1.3
MH108	N1-DOWN	1/21/2011	Filter/Stormwater	Mercury	0.40	mg/kg	0.41	0.98
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Mercury	0.27	mg/kg	0.41	0.66
MH108	N1-DOWN	11/30/2010	Filter/Stormwater	Mercury	0.39	mg/kg	0.41	0.95
MH108	N1-DOWN	6/30/2010	Filter/Baseflow	Mercury	0.20	mg/kg	0.41	0.49
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Mercury	0.60 J	mg/kg	0.41	1.5
MH108	N1-DOWN	5/20/2010	Filter/Stormwater	Mercury	0.55 J	mg/kg	0.41	1.3
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Mercury	1.4 J	mg/kg	0.41	3.4
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Mercury	0.75 J	mg/kg	0.41	1.8
MH108	N1-DOWN	2/23/2010	Filter/Baseflow	Mercury	2.3	mg/kg	0.41	5.6
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Mercury	1.7	mg/kg	0.41	4.1
MH108	N1-DOWN	2/5/2010	Filter/Stormwater	Mercury	0.20	mg/kg	0.41	0.49
MH108	N1-DOWN	12/15/2009	Filter/Stormwater	Mercury	2.7	mg/kg	0.41	6.5
MH108	N1-DOWN	12/14/2009	Filter/Stormwater	Mercury	0.70	mg/kg	0.41	1.7
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Mercury	0.50	mg/kg	0.41	1.2
MH108	N1-DOWN	10/29/2009	Filter/Stormwater	Mercury	0.35 J	mg/kg	0.41	0.85
MH108	N1-DOWN	10/17/2009	Filter/Stormwater	Mercury	0.34	mg/kg	0.41	0.83
MH108	N1-DOWN	3/9/2007	Filter/Undifferentiated	Mercury	0.09	mg/kg	0.41	0.22
MH108	N1-DOWN	4/27/2011	Filter/Stormwater	Silver	1.6	mg/kg	6.1	0.26
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Silver	1.2	mg/kg	6.1	0.20
MH108	N1-DOWN	1/21/2011	Filter/Stormwater	Silver	1 U	mg/kg	6.1	0.16
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Silver	3.6	mg/kg	6.1	0.59
MH108	N1-DOWN	11/30/2010	Filter/Stormwater	Silver	1 U	mg/kg	6.1	0.16

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH108	N1-DOWN	6/30/2010	Filter/Baseflow	Silver	4 U	mg/kg	6.1	0.66
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Silver	1 U	mg/kg	6.1	0.16
MH108	N1-DOWN	5/20/2010	Filter/Stormwater	Silver	1 U	mg/kg	6.1	0.16
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Silver	4 U	mg/kg	6.1	0.66
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Silver	1.2	mg/kg	6.1	0.20
MH108	N1-DOWN	2/23/2010	Filter/Baseflow	Silver	7 U	mg/kg	6.1	1.1
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Silver	5 U	mg/kg	6.1	0.82
MH108	N1-DOWN	12/15/2009	Filter/Stormwater	Silver	2.0	mg/kg	6.1	0.33
MH108	N1-DOWN	12/14/2009	Filter/Stormwater	Silver	6 U	mg/kg	6.1	0.98
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Silver	5.0	mg/kg	6.1	0.82
MH108	N1-DOWN	10/29/2009	Filter/Stormwater	Silver	2.0	mg/kg	6.1	0.33
MH108	N1-DOWN	10/17/2009	Filter/Stormwater	Silver	2.0	mg/kg	6.1	0.33
MH108	N1-DOWN	4/27/2011	Filter/Stormwater	Zinc	952	mg/kg	410	2.3
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Zinc	465	mg/kg	410	1.1
MH108	N1-DOWN	1/21/2011	Filter/Stormwater	Zinc	765	mg/kg	410	1.9
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Zinc	846	mg/kg	410	2.1
MH108	N1-DOWN	11/30/2010	Filter/Stormwater	Zinc	1,370	mg/kg	410	3.3
MH108	N1-DOWN	6/30/2010	Filter/Baseflow	Zinc	320	mg/kg	410	0.78
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Zinc	901	mg/kg	410	2.2
MH108	N1-DOWN	5/20/2010	Filter/Stormwater	Zinc	1,230	mg/kg	410	3.0
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Zinc	950 J	mg/kg	410	2.3
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Zinc	921	mg/kg	410	2.2
MH108	N1-DOWN	2/23/2010	Filter/Baseflow	Zinc	310	mg/kg	410	0.76
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Zinc	880	mg/kg	410	2.1
MH108	N1-DOWN	12/15/2009	Filter/Stormwater	Zinc	1,100	mg/kg	410	2.7
MH108	N1-DOWN	12/14/2009	Filter/Stormwater	Zinc	1,510	mg/kg	410	3.7
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Zinc	1,310	mg/kg	410	3.2
MH108	N1-DOWN	10/29/2009	Filter/Stormwater	Zinc	785	mg/kg	410	1.9
MH108	N1-DOWN	10/17/2009	Filter/Stormwater	Zinc	1,360	mg/kg	410	3.3
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Acenaphthene	0.0093 U	mg/kg	0.50	0.019
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Acenaphthene	0.049	mg/kg	0.50	0.098
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Acenaphthene	0.21 U	mg/kg	0.50	0.42
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Acenaphthene	0.054	mg/kg	0.50	0.11
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Acenaphthene	0.084	mg/kg	0.50	0.17
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Acenaphthene	0.13 U	mg/kg	0.50	0.26
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Acenaphthene	0.079 UJ	mg/kg	0.50	0.16
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Anthracene	0.041	mg/kg	0.96	0.043
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Anthracene	0.15	mg/kg	0.96	0.16
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Anthracene	0.21 U	mg/kg	0.96	0.22
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Anthracene	0.065	mg/kg	0.96	0.068
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Anthracene	0.23	mg/kg	0.96	0.24
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Anthracene	0.13 U	mg/kg	0.96	0.14
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Anthracene	0.19 J	mg/kg	0.96	0.20
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Benzo(a)anthracene	0.28	mg/kg	1.3	0.22
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Benzo(a)anthracene	1.5	mg/kg	1.3	1.2
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Benzo(a)anthracene	0.83	mg/kg	1.3	0.64
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Benzo(a)anthracene	0.27	mg/kg	1.3	0.21
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Benzo(a)anthracene	1.1	mg/kg	1.3	0.85
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Benzo(a)anthracene	0.24	mg/kg	1.3	0.18
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Benzo(a)anthracene	1.1 J	mg/kg	1.3	0.85
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Total Benzofluoranthenes	1.4	mg/kg	3.2	0.44
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Total Benzofluoranthenes	3.7	mg/kg	3.2	1.2
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Total Benzofluoranthenes	4.6	mg/kg	3.2	1.4
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Total Benzofluoranthenes	1.6	mg/kg	3.2	0.50
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Total Benzofluoranthenes	4.6	mg/kg	3.2	1.4
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Total Benzofluoranthenes	1.4	mg/kg	3.2	0.44
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Total Benzofluoranthenes	4.4	mg/kg	3.2	1.4
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Benzo(g,h,i)perylene	0.39	mg/kg	0.67	0.58
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Benzo(g,h,i)perylene	0.81	mg/kg	0.67	1.2
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Benzo(g,h,i)perylene	1.7	mg/kg	0.67	2.5
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Benzo(g,h,i)perylene	0.67	mg/kg	0.67	1.0
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Benzo(g,h,i)perylene	1.8	mg/kg	0.67	2.7
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Benzo(g,h,i)perylene	0.55	mg/kg	0.67	0.82
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Benzo(g,h,i)perylene	2.1 J	mg/kg	0.67	3.1
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Benzo(a)pyrene	0.50	mg/kg	0.15	3.3
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Benzo(a)pyrene	1.0	mg/kg	0.15	6.7
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Benzo(a)pyrene	1.4	mg/kg	0.15	9.3
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Benzo(a)pyrene	0.43	mg/kg	0.15	2.9

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Benzo(a)pyrene	2.5	mg/kg	0.15	17
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Benzo(a)pyrene	0.47	mg/kg	0.15	3.1
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Benzo(a)pyrene	2.0 J	mg/kg	0.15	13
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Chrysene	0.87	mg/kg	1.4	0.62
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Chrysene	2.1	mg/kg	1.4	1.5
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Chrysene	3.4	mg/kg	1.4	2.4
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Chrysene	1.4	mg/kg	1.4	1.0
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Chrysene	3.4	mg/kg	1.4	2.4
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Chrysene	1.0	mg/kg	1.4	0.71
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Chrysene	3.1 J	mg/kg	1.4	2.2
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Dibenz(a,h)anthracene	0.017	mg/kg	0.23	0.074
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.043 U	mg/kg	0.23	0.19
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.40	mg/kg	0.23	1.7
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.19	mg/kg	0.23	0.83
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.53	mg/kg	0.23	2.3
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.13 U	mg/kg	0.23	0.57
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Dibenz(a,h)anthracene	0.69 J	mg/kg	0.23	3.0
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Dibenzofuran	0.041	mg/kg	0.54	0.076
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Dibenzofuran	0.11	mg/kg	0.54	0.20
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Dibenzofuran	0.21 U	mg/kg	0.54	0.39
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Dibenzofuran	0.17	mg/kg	0.54	0.31
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Dibenzofuran	0.14	mg/kg	0.54	0.26
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Dibenzofuran	0.13 U	mg/kg	0.54	0.24
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Dibenzofuran	0.28 J	mg/kg	0.54	0.52
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Fluoranthene	1.2	mg/kg	1.7	0.71
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Fluoranthene	3.5	mg/kg	1.7	2.1
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Fluoranthene	5.9	mg/kg	1.7	3.5
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Fluoranthene	2.7	mg/kg	1.7	1.6
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Fluoranthene	1.5	mg/kg	1.7	0.88
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Fluoranthene	4.9 J	mg/kg	1.7	2.9
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Fluorene	0.045	mg/kg	0.54	0.083
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Fluorene	0.084	mg/kg	0.54	0.16
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Fluorene	0.21 U	mg/kg	0.54	0.39
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Fluorene	0.17	mg/kg	0.54	0.31
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Fluorene	0.11	mg/kg	0.54	0.20
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Fluorene	0.13	mg/kg	0.54	0.24
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Fluorene	0.23 J	mg/kg	0.54	0.43
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.35	mg/kg	0.60	0.58
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.75	mg/kg	0.60	1.3
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	1.4	mg/kg	0.60	2.3
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.62	mg/kg	0.60	1.0
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	1.7	mg/kg	0.60	2.8
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.39	mg/kg	0.60	0.65
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	1.7 J	mg/kg	0.60	2.8
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Phenanthrene	0.60	mg/kg	1.5	0.40
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Phenanthrene	1.6	mg/kg	1.5	1.1
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Phenanthrene	2.6	mg/kg	1.5	1.7
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Phenanthrene	1.3	mg/kg	1.5	0.87
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Phenanthrene	2.3	mg/kg	1.5	1.5
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Phenanthrene	0.61	mg/kg	1.5	0.41
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Phenanthrene	2.4 J	mg/kg	1.5	1.6
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Pyrene	0.95	mg/kg	2.6	0.37
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Pyrene	3.2	mg/kg	2.6	1.2
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Pyrene	3.4	mg/kg	2.6	1.3
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Pyrene	1.7	mg/kg	2.6	0.65
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Pyrene	2.7	mg/kg	2.6	1.0
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Pyrene	0.92	mg/kg	2.6	0.35
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Pyrene	3.6 J	mg/kg	2.6	1.4
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Total HPAHs	6.0	mg/kg	12	0.50
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Total HPAHs	17	mg/kg	12	1.4
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Total HPAHs	23	mg/kg	12	1.9
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Total HPAHs	9.6	mg/kg	12	0.80
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Total HPAHs	18	mg/kg	12	1.5
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Total HPAHs	6.5	mg/kg	12	0.54
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Total HPAHs	24	mg/kg	12	2.0
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Total LPAHs	0.77	mg/kg	5.2	0.15
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Total LPAHs	2.0	mg/kg	5.2	0.38
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Total LPAHs	2.8	mg/kg	5.2	0.54

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Total LPAHs	1.8	mg/kg	5.2	0.34
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Total LPAHs	2.8	mg/kg	5.2	0.54
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Total LPAHs	1.1	mg/kg	5.2	0.20
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Total LPAHs	3.1	mg/kg	5.2	0.59
MH108	N1-DOWN	3/9/2011	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.71	mg/kg	0.15	4.8
MH108	N1-DOWN	12/12/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	1.6	mg/kg	0.15	11
MH108	N1-DOWN	6/2/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	2.2	mg/kg	0.15	14
MH108	N1-DOWN	4/27/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.71	mg/kg	0.15	4.7
MH108	N1-DOWN	3/29/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	3.3	mg/kg	0.15	22
MH108	N1-DOWN	2/11/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.69	mg/kg	0.15	4.6
MH108	N1-DOWN	11/6/2009	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	2.8	mg/kg	0.15	19
CB108B	N2	6/15/2011	Grab	Total PCBs	0.042	mg/kg	0.13	0.32
CB108B	N2	4/6/2010	Grab	Total PCBs	1.0	mg/kg	0.13	8.0
CB108B	N2	4/6/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB108B	N2	4/6/2010	Grab	Cadmium	9.5	mg/kg	5.1	1.9
CB108B	N2	4/6/2010	Grab	Chromium	196	mg/kg	260	0.75
CB108B	N2	4/6/2010	Grab	Copper	234	mg/kg	390	0.60
CB108B	N2	4/6/2010	Grab	Lead	241	mg/kg	450	0.54
CB108B	N2	4/6/2010	Grab	Mercury	0.16	mg/kg	0.41	0.39
CB108B	N2	4/6/2010	Grab	Silver	1.6	mg/kg	6.1	0.26
CB108B	N2	4/6/2010	Grab	Zinc	1,340	mg/kg	410	3.3
CB110	N3	8/24/2011	Grab	Total PCBs	0.53	mg/kg	0.13	4.1
CB110	N3	4/7/2010	Grab	Total PCBs	0.30	mg/kg	0.13	2.3
CB110	N3	4/7/2010	Grab	Arsenic	7 U	mg/kg	7.3	0.96
CB110	N3	4/7/2010	Grab	Cadmium	2.3	mg/kg	5.1	0.45
CB110	N3	4/7/2010	Grab	Chromium	78	mg/kg	260	0.30
CB110	N3	4/7/2010	Grab	Copper	73 J	mg/kg	390	0.19
CB110	N3	4/7/2010	Grab	Lead	257 J	mg/kg	450	0.57
CB110	N3	4/7/2010	Grab	Mercury	0.10 J	mg/kg	0.41	0.24
CB110	N3	4/7/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB110	N3	4/7/2010	Grab	Zinc	863 J	mg/kg	410	2.1
CB809	N3	8/24/2011	Grab	Total PCBs	0.30	mg/kg	0.13	2.3
D109B	N3	5/4/2010	Grab	Total PCBs	0.45	mg/kg	0.13	3.5
D109B	N3	5/4/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
D109B	N3	5/4/2010	Grab	Cadmium	91	mg/kg	5.1	18
D109B	N3	5/4/2010	Grab	Chromium	115	mg/kg	260	0.44
D109B	N3	5/4/2010	Grab	Copper	211	mg/kg	390	0.54
D109B	N3	5/4/2010	Grab	Lead	164	mg/kg	450	0.36
D109B	N3	5/4/2010	Grab	Mercury	0.08	mg/kg	0.41	0.20
D109B	N3	5/4/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
D109B	N3	5/4/2010	Grab	Zinc	4,820	mg/kg	410	12
MH111	N3	8/24/2011	Grab	Total PCBs	0.65	mg/kg	0.13	5.0
MH111	N3	4/7/2010	Grab	Total PCBs	0.51	mg/kg	0.13	3.9
MH111	N3	4/7/2010	Grab	Arsenic	9.0	mg/kg	7.3	1.2
MH111	N3	4/7/2010	Grab	Cadmium	3.8	mg/kg	5.1	0.75
MH111	N3	4/7/2010	Grab	Chromium	105	mg/kg	260	0.40
MH111	N3	4/7/2010	Grab	Copper	134	mg/kg	390	0.34
MH111	N3	4/7/2010	Grab	Lead	245	mg/kg	450	0.54
MH111	N3	4/7/2010	Grab	Mercury	0.26	mg/kg	0.41	0.63
MH111	N3	4/7/2010	Grab	Silver	1.4	mg/kg	6.1	0.23
MH111	N3	4/7/2010	Grab	Zinc	879	mg/kg	410	2.1
OWS109A	N3	4/6/2010	Grab	Total PCBs	0.72	mg/kg	0.13	5.5
OWS109A	N3	4/6/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
OWS109A	N3	4/6/2010	Grab	Cadmium	98	mg/kg	5.1	19
OWS109A	N3	4/6/2010	Grab	Chromium	106	mg/kg	260	0.41
OWS109A	N3	4/6/2010	Grab	Copper	179	mg/kg	390	0.46
OWS109A	N3	4/6/2010	Grab	Lead	242	mg/kg	450	0.54
OWS109A	N3	4/6/2010	Grab	Mercury	0.13	mg/kg	0.41	0.32
OWS109A	N3	4/6/2010	Grab	Silver	0.7 U	mg/kg	6.1	0.11
OWS109A	N3	4/6/2010	Grab	Zinc	9,570	mg/kg	410	23
CB113	N4	7/19/2012	Grab	Total PCBs	2.3	mg/kg	0.13	18
CB113	N4	8/24/2011	Grab	Total PCBs	1.6	mg/kg	0.13	12
CB113	N4	4/7/2010	Grab	Total PCBs	3.0	mg/kg	0.13	23
CB113	N4	6/9/2009	Grab	Total PCBs	6.5	mg/kg	0.13	50
CB113	N4	3/13/2007	Grab	Total PCBs	8.0	mg/kg	0.13	62
CB113	N4	7/25/2006	Grab	Total PCBs	15 U	mg/kg	0.13	120
CB113	N4	9/26/2005	Grab	Total PCBs	28	mg/kg	0.13	220
CB113	N4	7/19/2012	Grab	Arsenic	14	mg/kg	7.3	2.0

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
CB113	N4	4/7/2010	Grab	Arsenic	20	U	mg/kg	7.3	2.7
CB113	N4	7/19/2012	Grab	Cadmium	18		mg/kg	5.1	3.4
CB113	N4	4/7/2010	Grab	Cadmium	21		mg/kg	5.1	4.1
CB113	N4	7/19/2012	Grab	Chromium	154		mg/kg	260	0.59
CB113	N4	4/7/2010	Grab	Chromium	169		mg/kg	260	0.65
CB113	N4	7/19/2012	Grab	Copper	218		mg/kg	390	0.56
CB113	N4	4/7/2010	Grab	Copper	225		mg/kg	390	0.58
CB113	N4	7/19/2012	Grab	Lead	258		mg/kg	450	0.57
CB113	N4	4/7/2010	Grab	Lead	280		mg/kg	450	0.62
CB113	N4	7/19/2012	Grab	Mercury	0.26	U	mg/kg	0.41	0.62
CB113	N4	4/7/2010	Grab	Mercury	0.17		mg/kg	0.41	0.41
CB113	N4	7/19/2012	Grab	Silver	0.86		mg/kg	6.1	0.14
CB113	N4	4/7/2010	Grab	Silver	1	U	mg/kg	6.1	0.16
CB113	N4	7/19/2012	Grab	Zinc	1,300		mg/kg	410	3.2
CB113	N4	4/7/2010	Grab	Zinc	1,360		mg/kg	410	3.3
CB114	N4	8/24/2011	Grab	Total PCBs	0.20		mg/kg	0.13	1.5
CB114	N4	4/5/2010	Grab	Total PCBs	0.95		mg/kg	0.13	7.3
CB114	N4	10/19/2005	Filter/Undifferentiated	Total PCBs	1.2		mg/kg	0.13	9.0
CB114	N4	9/26/2005	Grab	Total PCBs	0.87		mg/kg	0.13	6.7
CB114	N4	4/5/2010	Grab	Arsenic	8.0		mg/kg	7.3	1.1
CB114	N4	4/5/2010	Grab	Cadmium	2.5		mg/kg	5.1	0.49
CB114	N4	4/5/2010	Grab	Chromium	80		mg/kg	260	0.31
CB114	N4	4/5/2010	Grab	Copper	96		mg/kg	390	0.25
CB114	N4	4/5/2010	Grab	Lead	146		mg/kg	450	0.32
CB114	N4	4/5/2010	Grab	Mercury	0.26		mg/kg	0.41	0.63
CB114	N4	4/5/2010	Grab	Silver	12		mg/kg	6.1	2.0
CB114	N4	4/5/2010	Grab	Zinc	773		mg/kg	410	1.9
CB116	N4	4/5/2010	Grab	Total PCBs	0.56		mg/kg	0.13	4.3
CB116	N4	4/5/2010	Grab	Arsenic	15		mg/kg	7.3	2.1
CB116	N4	4/5/2010	Grab	Cadmium	3.4		mg/kg	5.1	0.67
CB116	N4	4/5/2010	Grab	Chromium	163	J	mg/kg	260	0.63
CB116	N4	4/5/2010	Grab	Copper	161		mg/kg	390	0.41
CB116	N4	4/5/2010	Grab	Lead	339	J	mg/kg	450	0.75
CB116	N4	4/5/2010	Grab	Mercury	0.91	J	mg/kg	0.41	2.2
CB116	N4	4/5/2010	Grab	Silver	1.6		mg/kg	6.1	0.26
CB116	N4	4/5/2010	Grab	Zinc	1,160		mg/kg	410	2.8
CB117	N4	4/5/2010	Grab	Total PCBs	2.4		mg/kg	0.13	18
CB117	N4	4/5/2010	Grab	Arsenic	20		mg/kg	7.3	2.7
CB117	N4	4/5/2010	Grab	Cadmium	8.1		mg/kg	5.1	1.6
CB117	N4	4/5/2010	Grab	Chromium	165		mg/kg	260	0.63
CB117	N4	4/5/2010	Grab	Copper	247		mg/kg	390	0.63
CB117	N4	4/5/2010	Grab	Lead	375		mg/kg	450	0.83
CB117	N4	4/5/2010	Grab	Mercury	0.51		mg/kg	0.41	1.2
CB117	N4	4/5/2010	Grab	Silver	1.9		mg/kg	6.1	0.31
CB117	N4	4/5/2010	Grab	Zinc	3,150		mg/kg	410	7.7
CB118	N4	4/12/2010	Grab	Total PCBs	0.54		mg/kg	0.13	4.2
CB118	N4	4/12/2010	Grab	Arsenic	8	U	mg/kg	7.3	1.1
CB118	N4	4/12/2010	Grab	Cadmium	3.0		mg/kg	5.1	0.59
CB118	N4	4/12/2010	Grab	Chromium	48		mg/kg	260	0.19
CB118	N4	4/12/2010	Grab	Copper	90		mg/kg	390	0.23
CB118	N4	4/12/2010	Grab	Lead	73		mg/kg	450	0.16
CB118	N4	4/12/2010	Grab	Mercury	0.13		mg/kg	0.41	0.32
CB118	N4	4/12/2010	Grab	Silver	0.5	U	mg/kg	6.1	0.082
CB118	N4	4/12/2010	Grab	Zinc	449		mg/kg	410	1.1
CB118A	N4	4/6/2010	Grab	Total PCBs	0.19		mg/kg	0.13	1.4
CB118A	N4	4/6/2010	Grab	Arsenic	7	U	mg/kg	7.3	0.96
CB118A	N4	4/6/2010	Grab	Cadmium	2.7		mg/kg	5.1	0.53
CB118A	N4	4/6/2010	Grab	Chromium	59		mg/kg	260	0.23
CB118A	N4	4/6/2010	Grab	Copper	46		mg/kg	390	0.12
CB118A	N4	4/6/2010	Grab	Lead	47		mg/kg	450	0.10
CB118A	N4	4/6/2010	Grab	Mercury	0.11		mg/kg	0.41	0.27
CB118A	N4	4/6/2010	Grab	Silver	49		mg/kg	6.1	8.1
CB118A	N4	4/6/2010	Grab	Zinc	359		mg/kg	410	0.88
CB118B	N4	4/6/2010	Grab	Total PCBs	0.59		mg/kg	0.13	4.5
CB118B	N4	4/6/2010	Grab	Arsenic	9	U	mg/kg	7.3	1.2
CB118B	N4	4/6/2010	Grab	Cadmium	3.8	J	mg/kg	5.1	0.75
CB118B	N4	4/6/2010	Grab	Chromium	72		mg/kg	260	0.28
CB118B	N4	4/6/2010	Grab	Copper	128		mg/kg	390	0.33

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB118B	N4	4/6/2010	Grab	Lead	154	mg/kg	450	0.34
CB118B	N4	4/6/2010	Grab	Mercury	0.09	mg/kg	0.41	0.22
CB118B	N4	4/6/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB118B	N4	4/6/2010	Grab	Zinc	2,590	mg/kg	410	6.3
CB118C	N4	4/6/2010	Grab	Total PCBs	0.20	mg/kg	0.13	1.6
CB118C	N4	4/6/2010	Grab	Arsenic	7 U	mg/kg	7.3	0.96
CB118C	N4	4/6/2010	Grab	Cadmium	1.8	mg/kg	5.1	0.35
CB118C	N4	4/6/2010	Grab	Chromium	34	mg/kg	260	0.13
CB118C	N4	4/6/2010	Grab	Copper	62	mg/kg	390	0.16
CB118C	N4	4/6/2010	Grab	Lead	48	mg/kg	450	0.11
CB118C	N4	4/6/2010	Grab	Mercury	0.04	mg/kg	0.41	0.098
CB118C	N4	4/6/2010	Grab	Silver	0.90	mg/kg	6.1	0.15
CB118C	N4	4/6/2010	Grab	Zinc	1,040	mg/kg	410	2.5
CB118D	N4	4/6/2010	Grab	Total PCBs	1.0	mg/kg	0.13	7.8
CB118D	N4	4/6/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB118D	N4	4/6/2010	Grab	Cadmium	3.5	mg/kg	5.1	0.69
CB118D	N4	4/6/2010	Grab	Chromium	93	mg/kg	260	0.36
CB118D	N4	4/6/2010	Grab	Copper	175	mg/kg	390	0.45
CB118D	N4	4/6/2010	Grab	Lead	221	mg/kg	450	0.49
CB118D	N4	4/6/2010	Grab	Mercury	0.18	mg/kg	0.41	0.44
CB118D	N4	4/6/2010	Grab	Silver	0.90	mg/kg	6.1	0.15
CB118D	N4	4/6/2010	Grab	Zinc	1,560	mg/kg	410	3.8
CB118E	N4	4/6/2010	Grab	Total PCBs	0.90	mg/kg	0.13	6.9
CB118E	N4	4/6/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB118E	N4	4/6/2010	Grab	Cadmium	3.2	mg/kg	5.1	0.63
CB118E	N4	4/6/2010	Grab	Chromium	75	mg/kg	260	0.29
CB118E	N4	4/6/2010	Grab	Copper	156	mg/kg	390	0.40
CB118E	N4	4/6/2010	Grab	Lead	173	mg/kg	450	0.38
CB118E	N4	4/6/2010	Grab	Mercury	0.12	mg/kg	0.41	0.29
CB118E	N4	4/6/2010	Grab	Silver	0.90	mg/kg	6.1	0.15
CB118E	N4	4/6/2010	Grab	Zinc	1,240	mg/kg	410	3.0
CB118F	N4	4/6/2010	Grab	Total PCBs	0.24	mg/kg	0.13	1.8
CB118F	N4	4/6/2010	Grab	Arsenic	7 U	mg/kg	7.3	0.96
CB118F	N4	4/6/2010	Grab	Cadmium	1.3	mg/kg	5.1	0.25
CB118F	N4	4/6/2010	Grab	Chromium	42	mg/kg	260	0.16
CB118F	N4	4/6/2010	Grab	Copper	79	mg/kg	390	0.20
CB118F	N4	4/6/2010	Grab	Lead	74	mg/kg	450	0.16
CB118F	N4	4/6/2010	Grab	Mercury	0.05	mg/kg	0.41	0.12
CB118F	N4	4/6/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB118F	N4	4/6/2010	Grab	Zinc	693	mg/kg	410	1.7
CB118G	N4	4/6/2010	Grab	Total PCBs	0.15	mg/kg	0.13	1.2
CB118G	N4	4/6/2010	Grab	Arsenic	7 U	mg/kg	7.3	0.96
CB118G	N4	4/6/2010	Grab	Cadmium	1.1	mg/kg	5.1	0.22
CB118G	N4	4/6/2010	Grab	Chromium	31	mg/kg	260	0.12
CB118G	N4	4/6/2010	Grab	Copper	73	mg/kg	390	0.19
CB118G	N4	4/6/2010	Grab	Lead	65	mg/kg	450	0.14
CB118G	N4	4/6/2010	Grab	Mercury	0.06	mg/kg	0.41	0.15
CB118G	N4	4/6/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB118G	N4	4/6/2010	Grab	Zinc	280	mg/kg	410	0.68
CB120	N4	4/5/2010	Grab	Total PCBs	0.44	mg/kg	0.13	3.4
CB120	N4	4/5/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB120	N4	4/5/2010	Grab	Cadmium	17	mg/kg	5.1	3.3
CB120	N4	4/5/2010	Grab	Chromium	130	mg/kg	260	0.50
CB120	N4	4/5/2010	Grab	Copper	185	mg/kg	390	0.47
CB120	N4	4/5/2010	Grab	Lead	240	mg/kg	450	0.53
CB120	N4	4/5/2010	Grab	Mercury	0.27	mg/kg	0.41	0.66
CB120	N4	4/5/2010	Grab	Silver	0.7 U	mg/kg	6.1	0.11
CB120	N4	4/5/2010	Grab	Zinc	1,110	mg/kg	410	2.7
CB120A	N4	4/5/2010	Grab	Total PCBs	0.48	mg/kg	0.13	3.7
CB120A	N4	4/5/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB120A	N4	4/5/2010	Grab	Cadmium	16	mg/kg	5.1	3.1
CB120A	N4	4/5/2010	Grab	Chromium	101	mg/kg	260	0.39
CB120A	N4	4/5/2010	Grab	Copper	168	mg/kg	390	0.43
CB120A	N4	4/5/2010	Grab	Lead	223	mg/kg	450	0.50
CB120A	N4	4/5/2010	Grab	Mercury	0.19	mg/kg	0.41	0.46
CB120A	N4	4/5/2010	Grab	Silver	0.8 U	mg/kg	6.1	0.13
CB120A	N4	4/5/2010	Grab	Zinc	1,370	mg/kg	410	3.3
CB120C	N4	4/5/2010	Grab	Total PCBs	0.18	mg/kg	0.13	1.4

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB120C	N4	4/5/2010	Grab	Arsenic	7 U	mg/kg	7.3	0.96
CB120C	N4	4/5/2010	Grab	Cadmium	3.5	mg/kg	5.1	0.69
CB120C	N4	4/5/2010	Grab	Chromium	36	mg/kg	260	0.14
CB120C	N4	4/5/2010	Grab	Copper	145	mg/kg	390	0.37
CB120C	N4	4/5/2010	Grab	Lead	73	mg/kg	450	0.16
CB120C	N4	4/5/2010	Grab	Mercury	0.08	mg/kg	0.41	0.20
CB120C	N4	4/5/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB120C	N4	4/5/2010	Grab	Zinc	449	mg/kg	410	1.1
CB120D	N4	4/5/2010	Grab	Total PCBs	0.16	mg/kg	0.13	1.2
CB120D	N4	4/5/2010	Grab	Arsenic	6.0	mg/kg	7.3	0.82
CB120D	N4	4/5/2010	Grab	Cadmium	2.3	mg/kg	5.1	0.45
CB120D	N4	4/5/2010	Grab	Chromium	30	mg/kg	260	0.12
CB120D	N4	4/5/2010	Grab	Copper	113	mg/kg	390	0.29
CB120D	N4	4/5/2010	Grab	Lead	36	mg/kg	450	0.080
CB120D	N4	4/5/2010	Grab	Mercury	0.07	mg/kg	0.41	0.17
CB120D	N4	4/5/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB120D	N4	4/5/2010	Grab	Zinc	284	mg/kg	410	0.69
CB120E	N4	4/5/2010	Grab	Total PCBs	0.40	mg/kg	0.13	3.1
CB120E	N4	4/5/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB120E	N4	4/5/2010	Grab	Cadmium	10	mg/kg	5.1	2.0
CB120E	N4	4/5/2010	Grab	Chromium	92	mg/kg	260	0.35
CB120E	N4	4/5/2010	Grab	Copper	186	mg/kg	390	0.48
CB120E	N4	4/5/2010	Grab	Lead	183	mg/kg	450	0.41
CB120E	N4	4/5/2010	Grab	Mercury	0.33	mg/kg	0.41	0.80
CB120E	N4	4/5/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB120E	N4	4/5/2010	Grab	Zinc	1,400	mg/kg	410	3.4
CB121	N4	4/5/2010	Grab	Total PCBs	0.26	mg/kg	0.13	2.0
CB121	N4	4/5/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB121	N4	4/5/2010	Grab	Cadmium	9.1	mg/kg	5.1	1.8
CB121	N4	4/5/2010	Grab	Chromium	127	mg/kg	260	0.49
CB121	N4	4/5/2010	Grab	Copper	283	mg/kg	390	0.73
CB121	N4	4/5/2010	Grab	Lead	271	mg/kg	450	0.60
CB121	N4	4/5/2010	Grab	Mercury	0.13	mg/kg	0.41	0.32
CB121	N4	4/5/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB121	N4	4/5/2010	Grab	Zinc	1,160	mg/kg	410	2.8
CB121A	N4	4/5/2010	Grab	Total PCBs	0.42	mg/kg	0.13	3.2
CB121A	N4	4/10/2007	Grab	Total PCBs	0.82	mg/kg	0.13	6.3
CB121A	N4	4/5/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB121A	N4	4/5/2010	Grab	Cadmium	8.9	mg/kg	5.1	1.7
CB121A	N4	4/5/2010	Grab	Chromium	95	mg/kg	260	0.37
CB121A	N4	4/5/2010	Grab	Copper	436	mg/kg	390	1.1
CB121A	N4	4/5/2010	Grab	Lead	177	mg/kg	450	0.39
CB121A	N4	4/5/2010	Grab	Mercury	0.15	mg/kg	0.41	0.37
CB121A	N4	4/5/2010	Grab	Silver	0.7 U	mg/kg	6.1	0.11
CB121A	N4	4/5/2010	Grab	Zinc	3,030	mg/kg	410	7.4
CB121B	N4	4/5/2010	Grab	Total PCBs	0.56	mg/kg	0.13	4.3
CB121B	N4	4/5/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB121B	N4	4/5/2010	Grab	Cadmium	13	mg/kg	5.1	2.5
CB121B	N4	4/5/2010	Grab	Chromium	108	mg/kg	260	0.42
CB121B	N4	4/5/2010	Grab	Copper	287	mg/kg	390	0.74
CB121B	N4	4/5/2010	Grab	Lead	223	mg/kg	450	0.50
CB121B	N4	4/5/2010	Grab	Mercury	0.14	mg/kg	0.41	0.34
CB121B	N4	4/5/2010	Grab	Silver	0.7 U	mg/kg	6.1	0.11
CB121B	N4	4/5/2010	Grab	Zinc	1,310	mg/kg	410	3.2
CB122	N4	4/5/2010	Grab	Total PCBs	0.24	mg/kg	0.13	1.8
CB122	N4	4/5/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB122	N4	4/5/2010	Grab	Cadmium	9.1	mg/kg	5.1	1.8
CB122	N4	4/5/2010	Grab	Chromium	90	mg/kg	260	0.35
CB122	N4	4/5/2010	Grab	Copper	238	mg/kg	390	0.61
CB122	N4	4/5/2010	Grab	Lead	156	mg/kg	450	0.35
CB122	N4	4/5/2010	Grab	Mercury	0.14	mg/kg	0.41	0.34
CB122	N4	4/5/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB122	N4	4/5/2010	Grab	Zinc	1,450	mg/kg	410	3.5
CB124	N4	4/5/2010	Grab	Total PCBs	0.26	mg/kg	0.13	2.0
CB124	N4	4/5/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB124	N4	4/5/2010	Grab	Cadmium	22	mg/kg	5.1	4.3
CB124	N4	4/5/2010	Grab	Chromium	116	mg/kg	260	0.45
CB124	N4	4/5/2010	Grab	Copper	324	mg/kg	390	0.83

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB124	N4	4/5/2010	Grab	Lead	228	mg/kg	450	0.51
CB124	N4	4/5/2010	Grab	Mercury	0.16	mg/kg	0.41	0.39
CB124	N4	4/5/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB124	N4	4/5/2010	Grab	Zinc	1,690	mg/kg	410	4.1
CB171	N1-UP	3/30/2010	Grab	Total PCBs	0.28	mg/kg	0.13	2.2
CB171	N1-UP	3/30/2010	Grab	Arsenic	8 U	mg/kg	7.3	1.1
CB171	N1-UP	3/30/2010	Grab	Cadmium	4.5	mg/kg	5.1	0.88
CB171	N1-UP	3/30/2010	Grab	Chromium	120	mg/kg	260	0.46
CB171	N1-UP	3/30/2010	Grab	Copper	120	mg/kg	390	0.31
CB171	N1-UP	3/30/2010	Grab	Lead	335	mg/kg	450	0.74
CB171	N1-UP	3/30/2010	Grab	Mercury	0.07	mg/kg	0.41	0.17
CB171	N1-UP	3/30/2010	Grab	Silver	0.60	mg/kg	6.1	0.098
CB171	N1-UP	3/30/2010	Grab	Zinc	1,010	mg/kg	410	2.5
CB197	N1-UP	4/7/2010	Grab	Total PCBs	0.20	mg/kg	0.13	1.5
CB197	N1-UP	4/7/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB197	N1-UP	4/7/2010	Grab	Cadmium	4.5	mg/kg	5.1	0.88
CB197	N1-UP	4/7/2010	Grab	Chromium	69	mg/kg	260	0.26
CB197	N1-UP	4/7/2010	Grab	Copper	189	mg/kg	390	0.48
CB197	N1-UP	4/7/2010	Grab	Lead	52	mg/kg	450	0.12
CB197	N1-UP	4/7/2010	Grab	Mercury	0.06	mg/kg	0.41	0.15
CB197	N1-UP	4/7/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB197	N1-UP	4/7/2010	Grab	Zinc	492	mg/kg	410	1.2
CB200	N1-UP	3/30/2010	Grab	Total PCBs	0.24	mg/kg	0.13	1.8
CB200	N1-UP	3/30/2010	Grab	Arsenic	12	mg/kg	7.3	1.6
CB200	N1-UP	3/30/2010	Grab	Cadmium	3.5	mg/kg	5.1	0.69
CB200	N1-UP	3/30/2010	Grab	Chromium	67	mg/kg	260	0.26
CB200	N1-UP	3/30/2010	Grab	Copper	107	mg/kg	390	0.27
CB200	N1-UP	3/30/2010	Grab	Lead	139	mg/kg	450	0.31
CB200	N1-UP	3/30/2010	Grab	Mercury	0.05	mg/kg	0.41	0.12
CB200	N1-UP	3/30/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB200	N1-UP	3/30/2010	Grab	Zinc	686	mg/kg	410	1.7
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Total PCBs	0.41	mg/kg	0.13	3.2
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Arsenic	30 U	mg/kg	7.3	4.1
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Copper	283	mg/kg	390	0.73
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Lead	270	mg/kg	450	0.60
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Mercury	0.20	mg/kg	0.41	0.49
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Zinc	790 J	mg/kg	410	1.9
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	p-Cresol (4-Methylphenol)	15	mg/kg	0.67	22
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Phenol	1.1	mg/kg	0.42	2.6
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Bis(2-ethylhexyl) phthalate	23	mg/kg	1.3	18
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Butyl benzyl phthalate	0.65 J	mg/kg	0.067	9.7
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Acenaphthene	0.3 U	mg/kg	0.50	0.60
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Anthracene	0.34	mg/kg	0.96	0.35
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Benzo(a)anthracene	2.2	mg/kg	1.3	1.7
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Total Benzofluoranthenes	9.8	mg/kg	3.2	3.1
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Benzo(g,h,i)perylene	3.9	mg/kg	0.67	5.8
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Benzo(a)pyrene	3.7	mg/kg	0.15	25
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Chrysene	5.4	mg/kg	1.4	3.9
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Dibenz(a,h)anthracene	1.4	mg/kg	0.23	6.1
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Dibenzofuran	0.18 J	mg/kg	0.54	0.33
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Fluoranthene	9.8	mg/kg	1.7	5.8
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Fluorene	0.16 J	mg/kg	0.54	0.30
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Indeno(1,2,3-cd)pyrene	3.3	mg/kg	0.60	5.5
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	2-Methylnaphthalene	0.3 U	mg/kg	0.67	0.45
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Phenanthrene	3.7	mg/kg	1.5	2.5
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Pyrene	6.3	mg/kg	2.6	2.4
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Total HPAHs	46	mg/kg	12	3.8
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Total LPAHs	4.2	mg/kg	5.2	0.81
KC Wet Well	N1-UP	4/24/2012	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	5.4	mg/kg	0.15	36
MH130	N1-UP	3/13/2007	Grab	Total PCBs	57	mg/kg	0.13	440
MH130	N1-UP	10/11/2005	Filter/Undifferentiated	Total PCBs	1.4	mg/kg	0.13	11
MH130	N1-UP	9/26/2005	Grab	Total PCBs	2.3	mg/kg	0.13	18
MH152	N1-UP	6/2/2010	Filter/Stormwater	Total PCBs	3.7	mg/kg	0.13	28
MH152	N1-UP	5/20/2010	Filter/Stormwater	Total PCBs	0.99	mg/kg	0.13	7.6
MH152	N1-UP	4/27/2010	Filter/Stormwater	Total PCBs	2.9	mg/kg	0.13	23
MH152	N1-UP	1/26/2007	Filter/Undifferentiated	Total PCBs	25	mg/kg	0.13	190
MH152	N1-UP	1/22/2007	Filter/Undifferentiated	Total PCBs	23	mg/kg	0.13	180
MH152	N1-UP	5/20/2010	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	48	ng/kg	13	3.7

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
MH152	N1-UP	6/2/2010	Filter/Stormwater	Arsenic	50		mg/kg	7.3	6.8
MH152	N1-UP	5/20/2010	Filter/Stormwater	Arsenic	20		mg/kg	7.3	2.7
MH152	N1-UP	4/27/2010	Filter/Stormwater	Arsenic	30	U	mg/kg	7.3	4.1
MH152	N1-UP	6/2/2010	Filter/Stormwater	Cadmium	6.0		mg/kg	5.1	1.2
MH152	N1-UP	5/20/2010	Filter/Stormwater	Cadmium	4.6		mg/kg	5.1	0.90
MH152	N1-UP	4/27/2010	Filter/Stormwater	Cadmium	7.0		mg/kg	5.1	1.4
MH152	N1-UP	6/2/2010	Filter/Stormwater	Chromium	58		mg/kg	260	0.22
MH152	N1-UP	5/20/2010	Filter/Stormwater	Chromium	56		mg/kg	260	0.22
MH152	N1-UP	4/27/2010	Filter/Stormwater	Chromium	59	J	mg/kg	260	0.23
MH152	N1-UP	6/2/2010	Filter/Stormwater	Copper	419		mg/kg	390	1.1
MH152	N1-UP	5/20/2010	Filter/Stormwater	Copper	328	J	mg/kg	390	0.84
MH152	N1-UP	4/27/2010	Filter/Stormwater	Copper	393		mg/kg	390	1.0
MH152	N1-UP	6/2/2010	Filter/Stormwater	Lead	210		mg/kg	450	0.47
MH152	N1-UP	5/20/2010	Filter/Stormwater	Lead	189		mg/kg	450	0.42
MH152	N1-UP	4/27/2010	Filter/Stormwater	Lead	190		mg/kg	450	0.42
MH152	N1-UP	6/2/2010	Filter/Stormwater	Mercury	0.40	J	mg/kg	0.41	0.98
MH152	N1-UP	5/20/2010	Filter/Stormwater	Mercury	0.52	J	mg/kg	0.41	1.3
MH152	N1-UP	4/27/2010	Filter/Stormwater	Mercury	1.3	J	mg/kg	0.41	3.2
MH152	N1-UP	1/26/2007	Filter/Undifferentiated	Mercury	0.29		mg/kg	0.41	0.71
MH152	N1-UP	6/2/2010	Filter/Stormwater	Silver	2	U	mg/kg	6.1	0.33
MH152	N1-UP	5/20/2010	Filter/Stormwater	Silver	1	U	mg/kg	6.1	0.16
MH152	N1-UP	4/27/2010	Filter/Stormwater	Silver	2	U	mg/kg	6.1	0.33
MH152	N1-UP	6/2/2010	Filter/Stormwater	Zinc	1,160		mg/kg	410	2.8
MH152	N1-UP	5/20/2010	Filter/Stormwater	Zinc	686		mg/kg	410	1.7
MH152	N1-UP	4/27/2010	Filter/Stormwater	Zinc	869	J	mg/kg	410	2.1
MH152	N1-UP	6/2/2010	Filter/Stormwater	Acenaphthene	0.1	U	mg/kg	0.50	0.20
MH152	N1-UP	4/27/2010	Filter/Stormwater	Acenaphthene	0.043		mg/kg	0.50	0.086
MH152	N1-UP	6/2/2010	Filter/Stormwater	Anthracene	0.1	U	mg/kg	0.96	0.10
MH152	N1-UP	4/27/2010	Filter/Stormwater	Anthracene	0.086		mg/kg	0.96	0.090
MH152	N1-UP	6/2/2010	Filter/Stormwater	Benzo(a)anthracene	0.50		mg/kg	1.3	0.38
MH152	N1-UP	6/2/2010	Filter/Stormwater	Total Benzofluoranthenes	3.8		mg/kg	3.2	1.2
MH152	N1-UP	6/2/2010	Filter/Stormwater	Benzo(g,h,i)perylene	1.6		mg/kg	0.67	2.4
MH152	N1-UP	6/2/2010	Filter/Stormwater	Benzo(a)pyrene	0.93		mg/kg	0.15	6.2
MH152	N1-UP	6/2/2010	Filter/Stormwater	Chrysene	3.0		mg/kg	1.4	2.1
MH152	N1-UP	6/2/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.34		mg/kg	0.23	1.5
MH152	N1-UP	6/2/2010	Filter/Stormwater	Dibenzofuran	0.20		mg/kg	0.54	0.37
MH152	N1-UP	4/27/2010	Filter/Stormwater	Dibenzofuran	0.24		mg/kg	0.54	0.44
MH152	N1-UP	6/2/2010	Filter/Stormwater	Fluoranthene	4.8		mg/kg	1.7	2.8
MH152	N1-UP	4/27/2010	Filter/Stormwater	Fluoranthene	12		mg/kg	1.7	7.1
MH152	N1-UP	6/2/2010	Filter/Stormwater	Fluorene	0.10		mg/kg	0.54	0.19
MH152	N1-UP	4/27/2010	Filter/Stormwater	Fluorene	0.16		mg/kg	0.54	0.30
MH152	N1-UP	6/2/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	1.3		mg/kg	0.60	2.2
MH152	N1-UP	6/2/2010	Filter/Stormwater	Phenanthrene	2.2		mg/kg	1.5	1.5
MH152	N1-UP	4/27/2010	Filter/Stormwater	Phenanthrene	2.8		mg/kg	1.5	1.9
MH152	N1-UP	6/2/2010	Filter/Stormwater	Pyrene	2.8		mg/kg	2.6	1.1
MH152	N1-UP	4/27/2010	Filter/Stormwater	Pyrene	2.3	J	mg/kg	2.6	0.88
MH152	N1-UP	6/2/2010	Filter/Stormwater	Total HPAHs	19		mg/kg	12	1.6
MH152	N1-UP	4/27/2010	Filter/Stormwater	Total HPAHs	14		mg/kg	12	1.2
MH152	N1-UP	6/2/2010	Filter/Stormwater	Total LPAHs	2.5		mg/kg	5.2	0.47
MH152	N1-UP	4/27/2010	Filter/Stormwater	Total LPAHs	3.3		mg/kg	5.2	0.63
MH152	N1-UP	6/2/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	1.6		mg/kg	0.15	10
MH163	N1-UP	6/8/2009	Grab	Total PCBs	2.3		mg/kg	0.13	18
MH169	N1-UP	1/26/2007	Filter/Undifferentiated	Total PCBs	37		mg/kg	0.13	280
MH169	N1-UP	1/22/2007	Filter/Undifferentiated	Total PCBs	18		mg/kg	0.13	140
MH169	N1-UP	1/26/2007	Filter/Undifferentiated	Mercury	0.09		mg/kg	0.41	0.22
MH172	N1-UP	11/16/2011	Filter/Stormwater	Total PCBs	7.6		mg/kg	0.13	58
MH172	N1-UP	9/26/2011	Filter/Stormwater	Total PCBs	2.2		mg/kg	0.13	17
MH172	N1-UP	3/29/2010	Grab	Total PCBs	1.1		mg/kg	0.13	8.5
MH172	N1-UP	11/16/2011	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	31		ng/kg	13	2.4
MH172	N1-UP	11/16/2011	Filter/Stormwater	Arsenic	30		mg/kg	7.3	4.1
MH172	N1-UP	9/26/2011	Filter/Stormwater	Arsenic	20	U	mg/kg	7.3	2.7
MH172	N1-UP	3/29/2010	Grab	Arsenic	6	U	mg/kg	7.3	0.82
MH172	N1-UP	11/16/2011	Filter/Stormwater	Cadmium	4.0	J	mg/kg	5.1	0.78
MH172	N1-UP	9/26/2011	Filter/Stormwater	Cadmium	5.4		mg/kg	5.1	1.1
MH172	N1-UP	3/29/2010	Grab	Cadmium	0.50		mg/kg	5.1	0.098
MH172	N1-UP	11/16/2011	Filter/Stormwater	Chromium	42		mg/kg	260	0.16
MH172	N1-UP	9/26/2011	Filter/Stormwater	Chromium	52		mg/kg	260	0.20
MH172	N1-UP	3/29/2010	Grab	Chromium	12		mg/kg	260	0.045

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH172	N1-UP	11/16/2011	Filter/Stormwater	Copper	136	mg/kg	390	0.35
MH172	N1-UP	9/26/2011	Filter/Stormwater	Copper	284	mg/kg	390	0.73
MH172	N1-UP	3/29/2010	Grab	Copper	24	mg/kg	390	0.062
MH172	N1-UP	11/16/2011	Filter/Stormwater	Lead	149 J	mg/kg	450	0.33
MH172	N1-UP	9/26/2011	Filter/Stormwater	Lead	232	mg/kg	450	0.52
MH172	N1-UP	3/29/2010	Grab	Lead	25	mg/kg	450	0.056
MH172	N1-UP	11/16/2011	Filter/Stormwater	Mercury	0.40 J	mg/kg	0.41	0.98
MH172	N1-UP	9/26/2011	Filter/Stormwater	Mercury	0.40	mg/kg	0.41	0.98
MH172	N1-UP	3/29/2010	Grab	Mercury	0.07	mg/kg	0.41	0.17
MH172	N1-UP	11/16/2011	Filter/Stormwater	Silver	0.7 U	mg/kg	6.1	0.11
MH172	N1-UP	9/26/2011	Filter/Stormwater	Silver	1 U	mg/kg	6.1	0.16
MH172	N1-UP	3/29/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
MH172	N1-UP	11/16/2011	Filter/Stormwater	Zinc	594	mg/kg	410	1.4
MH172	N1-UP	9/26/2011	Filter/Stormwater	Zinc	835	mg/kg	410	2.0
MH172	N1-UP	3/29/2010	Grab	Zinc	69	mg/kg	410	0.17
MH172	N1-UP	9/26/2011	Filter/Stormwater	Acenaphthene	0.11 U	mg/kg	0.50	0.22
MH172	N1-UP	9/26/2011	Filter/Stormwater	Anthracene	0.14	mg/kg	0.96	0.15
MH172	N1-UP	9/26/2011	Filter/Stormwater	Benzo(a)anthracene	1.0	mg/kg	1.3	0.77
MH172	N1-UP	9/26/2011	Filter/Stormwater	Total Benzofluoranthenes	7.7	mg/kg	3.2	2.4
MH172	N1-UP	9/26/2011	Filter/Stormwater	Benzo(g,h,i)perylene	2.6	mg/kg	0.67	3.9
MH172	N1-UP	9/26/2011	Filter/Stormwater	Benzo(a)pyrene	1.8	mg/kg	0.15	12
MH172	N1-UP	9/26/2011	Filter/Stormwater	Chrysene	5.6	mg/kg	1.4	4.0
MH172	N1-UP	9/26/2011	Filter/Stormwater	Dibenz(a,h)anthracene	0.43	mg/kg	0.23	1.9
MH172	N1-UP	9/26/2011	Filter/Stormwater	Dibenzofuran	0.17	mg/kg	0.54	0.31
MH172	N1-UP	9/26/2011	Filter/Stormwater	Fluoranthene	7.7	mg/kg	1.7	4.5
MH172	N1-UP	9/26/2011	Filter/Stormwater	Fluorene	0.11 U	mg/kg	0.54	0.20
MH172	N1-UP	9/26/2011	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	2.3	mg/kg	0.60	3.8
MH172	N1-UP	9/26/2011	Filter/Stormwater	Phenanthrene	2.3	mg/kg	1.5	1.5
MH172	N1-UP	9/26/2011	Filter/Stormwater	Pyrene	4.7	mg/kg	2.6	1.8
MH172	N1-UP	9/26/2011	Filter/Stormwater	Total HPAHs	34	mg/kg	12	2.8
MH172	N1-UP	9/26/2011	Filter/Stormwater	Total LPAHs	2.6	mg/kg	5.2	0.50
MH172	N1-UP	9/26/2011	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	3.0	mg/kg	0.15	20
MH178	N1-UP	11/3/2011	Sediment Trap	Total PCBs	0.37	mg/kg	0.13	2.8
MH178	N1-UP	5/25/2011	Filter/Stormwater	Total PCBs	5.3	mg/kg	0.13	41
MH178	N1-UP	5/15/2011	Filter/Stormwater	Total PCBs	0.47	mg/kg	0.13	3.6
MH178	N1-UP	4/27/2011	Filter/Stormwater	Total PCBs	0.56	mg/kg	0.13	4.3
MH178	N1-UP	4/25/2011	Filter/Stormwater	Total PCBs	0.61	mg/kg	0.13	4.7
MH178	N1-UP	4/21/2011	Filter/Baseflow	Total PCBs	0.57	mg/kg	0.13	4.4
MH178	N1-UP	4/5/2011	Sediment Trap	Total PCBs	0.33	mg/kg	0.13	2.6
MH178	N1-UP	3/21/2011	Filter/Baseflow	Total PCBs	0.99	mg/kg	0.13	7.6
MH178	N1-UP	3/9/2011	Filter/Stormwater	Total PCBs	0.21	mg/kg	0.13	1.6
MH178	N1-UP	6/2/2010	Filter/Stormwater	Total PCBs	1.3	mg/kg	0.13	10
MH178	N1-UP	5/20/2010	Filter/Stormwater	Total PCBs	0.12	mg/kg	0.13	0.89
MH178	N1-UP	4/27/2010	Filter/Stormwater	Total PCBs	0.59	mg/kg	0.13	4.5
MH178	N1-UP	4/8/2010	Sediment Trap	Total PCBs	0.44	mg/kg	0.13	3.4
MH178	N1-UP	3/29/2010	Grab	Total PCBs	0.33	mg/kg	0.13	2.5
MH178	N1-UP	4/6/2009	Sediment Trap	Total PCBs	0.13	mg/kg	0.13	1.0
MH178	N1-UP	12/3/2008	Sediment Trap	Total PCBs	0.31	mg/kg	0.13	2.4
MH178	N1-UP	3/18/2008	Sediment Trap	Total PCBs	0.12	mg/kg	0.13	0.93
MH178	N1-UP	10/29/2007	Sediment Trap	Total PCBs	0.67	mg/kg	0.13	5.2
MH178	N1-UP	5/14/2007	Sediment Trap	Total PCBs	0.39	mg/kg	0.13	3.0
MH178	N1-UP	2/1/2007	Filter/Undifferentiated	Total PCBs	0.72	mg/kg	0.13	5.5
MH178	N1-UP	1/8/2007	Sediment Trap	Total PCBs	0.086	mg/kg	0.13	0.66
MH178	N1-UP	10/11/2006	Sediment Trap	Total PCBs	0.60	mg/kg	0.13	4.6
MH178	N1-UP	10/6/2006	Sediment Trap	Total PCBs	0.60	mg/kg	0.13	4.6
MH178	N1-UP	3/16/2006	Sediment Trap	Total PCBs	0.65	mg/kg	0.13	5.0
MH178	N1-UP	8/11/2005	Sediment Trap	Total PCBs	0.11	mg/kg	0.13	0.82
MH178	N1-UP	11/5/2004	Filter/Undifferentiated	Total PCBs	0.09	mg/kg	0.13	0.69
MH178	N1-UP	4/27/2011	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	17	ng/kg	13	1.3
MH178	N1-UP	4/25/2011	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	18	ng/kg	13	1.4
MH178	N1-UP	3/21/2011	Filter/Baseflow	Total Dioxins/Furans (TEQ, NDx0.5)	4.1	ng/kg	13	0.31
MH178	N1-UP	5/20/2010	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	24	ng/kg	13	1.8
MH178	N1-UP	11/3/2011	Sediment Trap	Arsenic	20	mg/kg	7.3	2.7
MH178	N1-UP	5/25/2011	Filter/Stormwater	Arsenic	80 U	mg/kg	7.3	11
MH178	N1-UP	5/15/2011	Filter/Stormwater	Arsenic	40 U	mg/kg	7.3	5.5
MH178	N1-UP	4/27/2011	Filter/Stormwater	Arsenic	30	mg/kg	7.3	4.1
MH178	N1-UP	4/25/2011	Filter/Stormwater	Arsenic	50	mg/kg	7.3	6.8
MH178	N1-UP	4/21/2011	Filter/Baseflow	Arsenic	30 U	mg/kg	7.3	4.1

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH178	N1-UP	4/5/2011	Sediment Trap	Arsenic	14	mg/kg	7.3	1.9
MH178	N1-UP	3/21/2011	Filter/Baseflow	Arsenic	20	mg/kg	7.3	2.7
MH178	N1-UP	3/9/2011	Filter/Stormwater	Arsenic	10	mg/kg	7.3	1.4
MH178	N1-UP	6/2/2010	Filter/Stormwater	Arsenic	40	mg/kg	7.3	5.5
MH178	N1-UP	5/20/2010	Filter/Stormwater	Arsenic	20	mg/kg	7.3	2.7
MH178	N1-UP	4/27/2010	Filter/Stormwater	Arsenic	20	mg/kg	7.3	2.7
MH178	N1-UP	4/8/2010	Sediment Trap	Arsenic	20	mg/kg	7.3	2.7
MH178	N1-UP	3/29/2010	Grab	Arsenic	6 U	mg/kg	7.3	0.82
MH178	N1-UP	4/6/2009	Sediment Trap	Arsenic	10 U	mg/kg	7.3	1.4
MH178	N1-UP	12/3/2008	Sediment Trap	Arsenic	20	mg/kg	7.3	2.7
MH178	N1-UP	7/30/2008	Sediment Trap	Arsenic	10	mg/kg	7.3	1.4
MH178	N1-UP	3/18/2008	Sediment Trap	Arsenic	7 U	mg/kg	7.3	0.96
MH178	N1-UP	10/29/2007	Sediment Trap	Arsenic	20 U	mg/kg	7.3	2.7
MH178	N1-UP	5/14/2007	Sediment Trap	Arsenic	20	mg/kg	7.3	2.7
MH178	N1-UP	1/8/2007	Sediment Trap	Arsenic	7 U	mg/kg	7.3	0.96
MH178	N1-UP	10/11/2006	Sediment Trap	Arsenic	20	mg/kg	7.3	2.7
MH178	N1-UP	3/16/2006	Sediment Trap	Arsenic	20	mg/kg	7.3	2.7
MH178	N1-UP	8/11/2005	Sediment Trap	Arsenic	14	mg/kg	7.3	1.9
MH178	N1-UP	5/25/2011	Filter/Stormwater	Cadmium	6.0	mg/kg	5.1	1.2
MH178	N1-UP	5/15/2011	Filter/Stormwater	Cadmium	6.0	mg/kg	5.1	1.2
MH178	N1-UP	4/27/2011	Filter/Stormwater	Cadmium	3.1	mg/kg	5.1	0.61
MH178	N1-UP	4/25/2011	Filter/Stormwater	Cadmium	3.0	mg/kg	5.1	0.59
MH178	N1-UP	4/21/2011	Filter/Baseflow	Cadmium	4.0	mg/kg	5.1	0.78
MH178	N1-UP	3/21/2011	Filter/Baseflow	Cadmium	1.2	mg/kg	5.1	0.24
MH178	N1-UP	3/9/2011	Filter/Stormwater	Cadmium	2.1	mg/kg	5.1	0.41
MH178	N1-UP	6/2/2010	Filter/Stormwater	Cadmium	4.0	mg/kg	5.1	0.78
MH178	N1-UP	5/20/2010	Filter/Stormwater	Cadmium	4.5	mg/kg	5.1	0.88
MH178	N1-UP	4/27/2010	Filter/Stormwater	Cadmium	6.2	mg/kg	5.1	1.2
MH178	N1-UP	3/29/2010	Grab	Cadmium	1.2	mg/kg	5.1	0.24
MH178	N1-UP	5/25/2011	Filter/Stormwater	Chromium	45	mg/kg	260	0.17
MH178	N1-UP	5/15/2011	Filter/Stormwater	Chromium	54	mg/kg	260	0.21
MH178	N1-UP	4/27/2011	Filter/Stormwater	Chromium	40	mg/kg	260	0.15
MH178	N1-UP	4/25/2011	Filter/Stormwater	Chromium	39	mg/kg	260	0.15
MH178	N1-UP	4/21/2011	Filter/Baseflow	Chromium	27	mg/kg	260	0.10
MH178	N1-UP	3/21/2011	Filter/Baseflow	Chromium	23	mg/kg	260	0.088
MH178	N1-UP	3/9/2011	Filter/Stormwater	Chromium	88	mg/kg	260	0.34
MH178	N1-UP	6/2/2010	Filter/Stormwater	Chromium	55	mg/kg	260	0.21
MH178	N1-UP	5/20/2010	Filter/Stormwater	Chromium	63	mg/kg	260	0.24
MH178	N1-UP	4/27/2010	Filter/Stormwater	Chromium	57 J	mg/kg	260	0.22
MH178	N1-UP	3/29/2010	Grab	Chromium	21	mg/kg	260	0.082
MH178	N1-UP	11/3/2011	Sediment Trap	Copper	196	mg/kg	390	0.50
MH178	N1-UP	5/25/2011	Filter/Stormwater	Copper	362	mg/kg	390	0.93
MH178	N1-UP	5/15/2011	Filter/Stormwater	Copper	244	mg/kg	390	0.63
MH178	N1-UP	4/27/2011	Filter/Stormwater	Copper	181	mg/kg	390	0.46
MH178	N1-UP	4/25/2011	Filter/Stormwater	Copper	175	mg/kg	390	0.45
MH178	N1-UP	4/21/2011	Filter/Baseflow	Copper	126	mg/kg	390	0.32
MH178	N1-UP	4/5/2011	Sediment Trap	Copper	144	mg/kg	390	0.37
MH178	N1-UP	3/21/2011	Filter/Baseflow	Copper	92	mg/kg	390	0.24
MH178	N1-UP	3/9/2011	Filter/Stormwater	Copper	155	mg/kg	390	0.40
MH178	N1-UP	6/2/2010	Filter/Stormwater	Copper	413	mg/kg	390	1.1
MH178	N1-UP	5/20/2010	Filter/Stormwater	Copper	397 J	mg/kg	390	1.0
MH178	N1-UP	4/27/2010	Filter/Stormwater	Copper	352	mg/kg	390	0.90
MH178	N1-UP	4/8/2010	Sediment Trap	Copper	248	mg/kg	390	0.64
MH178	N1-UP	3/29/2010	Grab	Copper	71	mg/kg	390	0.18
MH178	N1-UP	4/6/2009	Sediment Trap	Copper	759	mg/kg	390	1.9
MH178	N1-UP	12/3/2008	Sediment Trap	Copper	316 J	mg/kg	390	0.81
MH178	N1-UP	7/30/2008	Sediment Trap	Copper	206	mg/kg	390	0.53
MH178	N1-UP	3/18/2008	Sediment Trap	Copper	77	mg/kg	390	0.20
MH178	N1-UP	10/29/2007	Sediment Trap	Copper	359	mg/kg	390	0.92
MH178	N1-UP	5/14/2007	Sediment Trap	Copper	227	mg/kg	390	0.58
MH178	N1-UP	1/8/2007	Sediment Trap	Copper	103	mg/kg	390	0.26
MH178	N1-UP	10/11/2006	Sediment Trap	Copper	818	mg/kg	390	2.1
MH178	N1-UP	3/16/2006	Sediment Trap	Copper	541	mg/kg	390	1.4
MH178	N1-UP	8/11/2005	Sediment Trap	Copper	113	mg/kg	390	0.29
MH178	N1-UP	11/3/2011	Sediment Trap	Lead	227 J	mg/kg	450	0.50
MH178	N1-UP	5/25/2011	Filter/Stormwater	Lead	430	mg/kg	450	0.96
MH178	N1-UP	5/15/2011	Filter/Stormwater	Lead	250	mg/kg	450	0.56
MH178	N1-UP	4/27/2011	Filter/Stormwater	Lead	297	mg/kg	450	0.66

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH178	N1-UP	4/25/2011	Filter/Stormwater	Lead	190	mg/kg	450	0.42
MH178	N1-UP	4/21/2011	Filter/Baseflow	Lead	160	mg/kg	450	0.36
MH178	N1-UP	4/5/2011	Sediment Trap	Lead	716 J	mg/kg	450	1.6
MH178	N1-UP	3/21/2011	Filter/Baseflow	Lead	92	mg/kg	450	0.20
MH178	N1-UP	3/9/2011	Filter/Stormwater	Lead	125	mg/kg	450	0.28
MH178	N1-UP	6/2/2010	Filter/Stormwater	Lead	240	mg/kg	450	0.53
MH178	N1-UP	5/20/2010	Filter/Stormwater	Lead	230	mg/kg	450	0.51
MH178	N1-UP	4/27/2010	Filter/Stormwater	Lead	237	mg/kg	450	0.53
MH178	N1-UP	4/8/2010	Sediment Trap	Lead	342	mg/kg	450	0.76
MH178	N1-UP	3/29/2010	Grab	Lead	135	mg/kg	450	0.30
MH178	N1-UP	4/6/2009	Sediment Trap	Lead	257	mg/kg	450	0.57
MH178	N1-UP	12/3/2008	Sediment Trap	Lead	687 J	mg/kg	450	1.5
MH178	N1-UP	7/30/2008	Sediment Trap	Lead	172	mg/kg	450	0.38
MH178	N1-UP	3/18/2008	Sediment Trap	Lead	92	mg/kg	450	0.20
MH178	N1-UP	10/29/2007	Sediment Trap	Lead	486	mg/kg	450	1.1
MH178	N1-UP	5/14/2007	Sediment Trap	Lead	194	mg/kg	450	0.43
MH178	N1-UP	1/8/2007	Sediment Trap	Lead	100	mg/kg	450	0.22
MH178	N1-UP	10/11/2006	Sediment Trap	Lead	381	mg/kg	450	0.85
MH178	N1-UP	3/16/2006	Sediment Trap	Lead	233	mg/kg	450	0.52
MH178	N1-UP	8/11/2005	Sediment Trap	Lead	962	mg/kg	450	2.1
MH178	N1-UP	11/3/2011	Sediment Trap	Mercury	0.31 J	mg/kg	0.41	0.76
MH178	N1-UP	5/25/2011	Filter/Stormwater	Mercury	0.60	mg/kg	0.41	1.5
MH178	N1-UP	5/15/2011	Filter/Stormwater	Mercury	2.5	mg/kg	0.41	6.1
MH178	N1-UP	4/27/2011	Filter/Stormwater	Mercury	15	mg/kg	0.41	36
MH178	N1-UP	4/25/2011	Filter/Stormwater	Mercury	3.7	mg/kg	0.41	9.0
MH178	N1-UP	4/21/2011	Filter/Baseflow	Mercury	2.6	mg/kg	0.41	6.4
MH178	N1-UP	4/5/2011	Sediment Trap	Mercury	0.21 J	mg/kg	0.41	0.51
MH178	N1-UP	3/21/2011	Filter/Baseflow	Mercury	16	mg/kg	0.41	39
MH178	N1-UP	3/9/2011	Filter/Stormwater	Mercury	1.7	mg/kg	0.41	4.1
MH178	N1-UP	6/2/2010	Filter/Stormwater	Mercury	0.30 J	mg/kg	0.41	0.73
MH178	N1-UP	5/20/2010	Filter/Stormwater	Mercury	0.25 J	mg/kg	0.41	0.61
MH178	N1-UP	4/27/2010	Filter/Stormwater	Mercury	0.36 J	mg/kg	0.41	0.88
MH178	N1-UP	4/8/2010	Sediment Trap	Mercury	0.31	mg/kg	0.41	0.76
MH178	N1-UP	3/29/2010	Grab	Mercury	0.13	mg/kg	0.41	0.32
MH178	N1-UP	4/6/2009	Sediment Trap	Mercury	0.42	mg/kg	0.41	1.0
MH178	N1-UP	12/3/2008	Sediment Trap	Mercury	0.58 J	mg/kg	0.41	1.4
MH178	N1-UP	7/30/2008	Sediment Trap	Mercury	0.21	mg/kg	0.41	0.51
MH178	N1-UP	3/18/2008	Sediment Trap	Mercury	0.14	mg/kg	0.41	0.34
MH178	N1-UP	10/29/2007	Sediment Trap	Mercury	0.40	mg/kg	0.41	0.98
MH178	N1-UP	5/14/2007	Sediment Trap	Mercury	0.38	mg/kg	0.41	0.93
MH178	N1-UP	2/1/2007	Filter/Undifferentiated	Mercury	0.09	mg/kg	0.41	0.22
MH178	N1-UP	1/8/2007	Sediment Trap	Mercury	0.15	mg/kg	0.41	0.37
MH178	N1-UP	10/11/2006	Sediment Trap	Mercury	0.40	mg/kg	0.41	0.98
MH178	N1-UP	3/16/2006	Sediment Trap	Mercury	0.27	mg/kg	0.41	0.66
MH178	N1-UP	8/11/2005	Sediment Trap	Mercury	0.86	mg/kg	0.41	2.1
MH178	N1-UP	5/25/2011	Filter/Stormwater	Silver	5 U	mg/kg	6.1	0.82
MH178	N1-UP	5/15/2011	Filter/Stormwater	Silver	3 U	mg/kg	6.1	0.49
MH178	N1-UP	4/27/2011	Filter/Stormwater	Silver	8.2	mg/kg	6.1	1.3
MH178	N1-UP	4/25/2011	Filter/Stormwater	Silver	2 U	mg/kg	6.1	0.33
MH178	N1-UP	4/21/2011	Filter/Baseflow	Silver	2 U	mg/kg	6.1	0.33
MH178	N1-UP	3/21/2011	Filter/Baseflow	Silver	1.3	mg/kg	6.1	0.21
MH178	N1-UP	3/9/2011	Filter/Stormwater	Silver	0.6 U	mg/kg	6.1	0.098
MH178	N1-UP	6/2/2010	Filter/Stormwater	Silver	2 U	mg/kg	6.1	0.33
MH178	N1-UP	5/20/2010	Filter/Stormwater	Silver	1 U	mg/kg	6.1	0.16
MH178	N1-UP	4/27/2010	Filter/Stormwater	Silver	1 U	mg/kg	6.1	0.16
MH178	N1-UP	3/29/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
MH178	N1-UP	11/3/2011	Sediment Trap	Zinc	555	mg/kg	410	1.4
MH178	N1-UP	5/25/2011	Filter/Stormwater	Zinc	640	mg/kg	410	1.6
MH178	N1-UP	5/15/2011	Filter/Stormwater	Zinc	508	mg/kg	410	1.2
MH178	N1-UP	4/27/2011	Filter/Stormwater	Zinc	397	mg/kg	410	0.97
MH178	N1-UP	4/25/2011	Filter/Stormwater	Zinc	349	mg/kg	410	0.85
MH178	N1-UP	4/21/2011	Filter/Baseflow	Zinc	250	mg/kg	410	0.61
MH178	N1-UP	4/5/2011	Sediment Trap	Zinc	356	mg/kg	410	0.87
MH178	N1-UP	3/21/2011	Filter/Baseflow	Zinc	122	mg/kg	410	0.30
MH178	N1-UP	3/9/2011	Filter/Stormwater	Zinc	255	mg/kg	410	0.62
MH178	N1-UP	6/2/2010	Filter/Stormwater	Zinc	565	mg/kg	410	1.4
MH178	N1-UP	5/20/2010	Filter/Stormwater	Zinc	812	mg/kg	410	2.0
MH178	N1-UP	4/27/2010	Filter/Stormwater	Zinc	652 J	mg/kg	410	1.6

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH178	N1-UP	4/8/2010	Sediment Trap	Zinc	1,380	mg/kg	410	3.4
MH178	N1-UP	3/29/2010	Grab	Zinc	126	mg/kg	410	0.31
MH178	N1-UP	4/6/2009	Sediment Trap	Zinc	1,000	mg/kg	410	2.4
MH178	N1-UP	12/3/2008	Sediment Trap	Zinc	691	mg/kg	410	1.7
MH178	N1-UP	7/30/2008	Sediment Trap	Zinc	374	mg/kg	410	0.91
MH178	N1-UP	3/18/2008	Sediment Trap	Zinc	201	mg/kg	410	0.49
MH178	N1-UP	10/29/2007	Sediment Trap	Zinc	781	mg/kg	410	1.9
MH178	N1-UP	5/14/2007	Sediment Trap	Zinc	464	mg/kg	410	1.1
MH178	N1-UP	1/8/2007	Sediment Trap	Zinc	209	mg/kg	410	0.51
MH178	N1-UP	10/11/2006	Sediment Trap	Zinc	945	mg/kg	410	2.3
MH178	N1-UP	3/16/2006	Sediment Trap	Zinc	597	mg/kg	410	1.5
MH178	N1-UP	8/11/2005	Sediment Trap	Zinc	220	mg/kg	410	0.54
MH178	N1-UP	11/3/2011	Sediment Trap	p-Cresol (4-Methylphenol)	5.1	mg/kg	0.67	7.6
MH178	N1-UP	4/5/2011	Sediment Trap	p-Cresol (4-Methylphenol)	1.0	mg/kg	0.67	1.5
MH178	N1-UP	4/8/2010	Sediment Trap	p-Cresol (4-Methylphenol)	0.36 U	mg/kg	0.67	0.54
MH178	N1-UP	4/6/2009	Sediment Trap	p-Cresol (4-Methylphenol)	12	mg/kg	0.67	18
MH178	N1-UP	12/3/2008	Sediment Trap	p-Cresol (4-Methylphenol)	1.3	mg/kg	0.67	1.9
MH178	N1-UP	3/18/2008	Sediment Trap	p-Cresol (4-Methylphenol)	0.16 U	mg/kg	0.67	0.24
MH178	N1-UP	10/29/2007	Sediment Trap	p-Cresol (4-Methylphenol)	1.6 J	mg/kg	0.67	2.4
MH178	N1-UP	5/14/2007	Sediment Trap	p-Cresol (4-Methylphenol)	9.4 U	mg/kg	0.67	14
MH178	N1-UP	1/8/2007	Sediment Trap	p-Cresol (4-Methylphenol)	1.9	mg/kg	0.67	2.8
MH178	N1-UP	10/11/2006	Sediment Trap	p-Cresol (4-Methylphenol)	0.53	mg/kg	0.67	0.79
MH178	N1-UP	3/16/2006	Sediment Trap	p-Cresol (4-Methylphenol)	0.83	mg/kg	0.67	1.2
MH178	N1-UP	8/11/2005	Sediment Trap	p-Cresol (4-Methylphenol)	0.41	mg/kg	0.67	0.61
MH178	N1-UP	11/3/2011	Sediment Trap	Phenol	1.3 U	mg/kg	0.42	3.1
MH178	N1-UP	4/5/2011	Sediment Trap	Phenol	0.32 U	mg/kg	0.42	0.76
MH178	N1-UP	4/8/2010	Sediment Trap	Phenol	0.36 U	mg/kg	0.42	0.86
MH178	N1-UP	4/6/2009	Sediment Trap	Phenol	0.64	mg/kg	0.42	1.5
MH178	N1-UP	12/3/2008	Sediment Trap	Phenol	0.23 U	mg/kg	0.42	0.55
MH178	N1-UP	3/18/2008	Sediment Trap	Phenol	0.16 U	mg/kg	0.42	0.38
MH178	N1-UP	10/29/2007	Sediment Trap	Phenol	0.56 UJ	mg/kg	0.42	1.3
MH178	N1-UP	5/14/2007	Sediment Trap	Phenol	1.1 U	mg/kg	0.42	2.6
MH178	N1-UP	1/8/2007	Sediment Trap	Phenol	0.5 U	mg/kg	0.42	1.2
MH178	N1-UP	10/11/2006	Sediment Trap	Phenol	0.38 U	mg/kg	0.42	0.90
MH178	N1-UP	10/6/2006	Sediment Trap	Phenol	0.38 U	mg/kg	0.42	0.90
MH178	N1-UP	3/16/2006	Sediment Trap	Phenol	0.68 U	mg/kg	0.42	1.6
MH178	N1-UP	8/11/2005	Sediment Trap	Phenol	0.11 U	mg/kg	0.42	0.26
MH178	N1-UP	11/3/2011	Sediment Trap	Bis(2-ethylhexyl) phthalate	9.0	mg/kg	1.3	6.9
MH178	N1-UP	4/5/2011	Sediment Trap	Bis(2-ethylhexyl) phthalate	2.0	mg/kg	1.3	1.5
MH178	N1-UP	4/8/2010	Sediment Trap	Bis(2-ethylhexyl) phthalate	16	mg/kg	1.3	12
MH178	N1-UP	4/6/2009	Sediment Trap	Bis(2-ethylhexyl) phthalate	24	mg/kg	1.3	18
MH178	N1-UP	12/3/2008	Sediment Trap	Bis(2-ethylhexyl) phthalate	9.8	mg/kg	1.3	7.5
MH178	N1-UP	3/18/2008	Sediment Trap	Bis(2-ethylhexyl) phthalate	0.99	mg/kg	1.3	0.76
MH178	N1-UP	10/29/2007	Sediment Trap	Bis(2-ethylhexyl) phthalate	13 J	mg/kg	1.3	10
MH178	N1-UP	5/14/2007	Sediment Trap	Bis(2-ethylhexyl) phthalate	13	mg/kg	1.3	10
MH178	N1-UP	1/8/2007	Sediment Trap	Bis(2-ethylhexyl) phthalate	3.6	mg/kg	1.3	2.8
MH178	N1-UP	10/11/2006	Sediment Trap	Bis(2-ethylhexyl) phthalate	10	mg/kg	1.3	7.7
MH178	N1-UP	10/6/2006	Sediment Trap	Bis(2-ethylhexyl) phthalate	10	mg/kg	1.3	7.7
MH178	N1-UP	3/16/2006	Sediment Trap	Bis(2-ethylhexyl) phthalate	10	mg/kg	1.3	7.7
MH178	N1-UP	8/11/2005	Sediment Trap	Bis(2-ethylhexyl) phthalate	1.8	mg/kg	1.3	1.4
MH178	N1-UP	11/3/2011	Sediment Trap	Butyl benzyl phthalate	1.3 U	mg/kg	0.067	19
MH178	N1-UP	4/5/2011	Sediment Trap	Butyl benzyl phthalate	0.32 U	mg/kg	0.067	4.8
MH178	N1-UP	4/8/2010	Sediment Trap	Butyl benzyl phthalate	0.30 J	mg/kg	0.067	4.5
MH178	N1-UP	4/6/2009	Sediment Trap	Butyl benzyl phthalate	0.24 J	mg/kg	0.067	3.6
MH178	N1-UP	12/3/2008	Sediment Trap	Butyl benzyl phthalate	0.37	mg/kg	0.067	5.5
MH178	N1-UP	3/18/2008	Sediment Trap	Butyl benzyl phthalate	0.16 U	mg/kg	0.067	2.4
MH178	N1-UP	10/29/2007	Sediment Trap	Butyl benzyl phthalate	5.6 UJ	mg/kg	0.067	84
MH178	N1-UP	5/14/2007	Sediment Trap	Butyl benzyl phthalate	0.37 U	mg/kg	0.067	5.5
MH178	N1-UP	1/8/2007	Sediment Trap	Butyl benzyl phthalate	0.5 U	mg/kg	0.067	7.5
MH178	N1-UP	10/11/2006	Sediment Trap	Butyl benzyl phthalate	0.58	mg/kg	0.067	8.7
MH178	N1-UP	10/6/2006	Sediment Trap	Butyl benzyl phthalate	0.58	mg/kg	0.067	8.7
MH178	N1-UP	3/16/2006	Sediment Trap	Butyl benzyl phthalate	0.68 U	mg/kg	0.067	10
MH178	N1-UP	8/11/2005	Sediment Trap	Butyl benzyl phthalate	0.11 U	mg/kg	0.067	1.6
MH178	N1-UP	11/3/2011	Sediment Trap	Acenaphthene	1.3 U	mg/kg	0.50	2.6
MH178	N1-UP	5/25/2011	Filter/Stormwater	Acenaphthene	0.32	mg/kg	0.50	0.64
MH178	N1-UP	5/15/2011	Filter/Stormwater	Acenaphthene	0.077 U	mg/kg	0.50	0.15
MH178	N1-UP	4/21/2011	Filter/Baseflow	Acenaphthene	0.042	mg/kg	0.50	0.084
MH178	N1-UP	4/5/2011	Sediment Trap	Acenaphthene	0.32 U	mg/kg	0.50	0.64

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
MH178	N1-UP	3/9/2011	Filter/Stormwater	Acenaphthene	0.016		mg/kg	0.50	0.032
MH178	N1-UP	6/2/2010	Filter/Stormwater	Acenaphthene	0.39	U	mg/kg	0.50	0.78
MH178	N1-UP	4/27/2010	Filter/Stormwater	Acenaphthene	0.077		mg/kg	0.50	0.15
MH178	N1-UP	4/8/2010	Sediment Trap	Acenaphthene	0.35	J	mg/kg	0.50	0.70
MH178	N1-UP	4/6/2009	Sediment Trap	Acenaphthene	0.15	J	mg/kg	0.50	0.30
MH178	N1-UP	12/3/2008	Sediment Trap	Acenaphthene	0.23	U	mg/kg	0.50	0.46
MH178	N1-UP	3/18/2008	Sediment Trap	Acenaphthene	0.16	U	mg/kg	0.50	0.32
MH178	N1-UP	10/29/2007	Sediment Trap	Acenaphthene	0.56	UJ	mg/kg	0.50	1.1
MH178	N1-UP	5/14/2007	Sediment Trap	Acenaphthene	0.37	U	mg/kg	0.50	0.74
MH178	N1-UP	1/8/2007	Sediment Trap	Acenaphthene	0.5	U	mg/kg	0.50	1.0
MH178	N1-UP	10/11/2006	Sediment Trap	Acenaphthene	0.38	U	mg/kg	0.50	0.76
MH178	N1-UP	10/6/2006	Sediment Trap	Acenaphthene	0.38	U	mg/kg	0.50	0.76
MH178	N1-UP	3/16/2006	Sediment Trap	Acenaphthene	0.68	U	mg/kg	0.50	1.4
MH178	N1-UP	8/11/2005	Sediment Trap	Acenaphthene	0.11	U	mg/kg	0.50	0.22
MH178	N1-UP	11/3/2011	Sediment Trap	Anthracene	1.3	U	mg/kg	0.96	1.4
MH178	N1-UP	5/25/2011	Filter/Stormwater	Anthracene	0.26	U	mg/kg	0.96	0.27
MH178	N1-UP	5/15/2011	Filter/Stormwater	Anthracene	0.077	U	mg/kg	0.96	0.080
MH178	N1-UP	4/21/2011	Filter/Baseflow	Anthracene	0.071		mg/kg	0.96	0.074
MH178	N1-UP	4/5/2011	Sediment Trap	Anthracene	0.22	J	mg/kg	0.96	0.23
MH178	N1-UP	3/9/2011	Filter/Stormwater	Anthracene	0.023		mg/kg	0.96	0.024
MH178	N1-UP	6/2/2010	Filter/Stormwater	Anthracene	0.39	U	mg/kg	0.96	0.41
MH178	N1-UP	4/27/2010	Filter/Stormwater	Anthracene	0.14		mg/kg	0.96	0.15
MH178	N1-UP	4/8/2010	Sediment Trap	Anthracene	0.83		mg/kg	0.96	0.86
MH178	N1-UP	4/6/2009	Sediment Trap	Anthracene	0.36		mg/kg	0.96	0.38
MH178	N1-UP	12/3/2008	Sediment Trap	Anthracene	0.48		mg/kg	0.96	0.50
MH178	N1-UP	3/18/2008	Sediment Trap	Anthracene	0.20		mg/kg	0.96	0.21
MH178	N1-UP	10/29/2007	Sediment Trap	Anthracene	0.56	UJ	mg/kg	0.96	0.58
MH178	N1-UP	5/14/2007	Sediment Trap	Anthracene	0.37	U	mg/kg	0.96	0.39
MH178	N1-UP	1/8/2007	Sediment Trap	Anthracene	0.5	U	mg/kg	0.96	0.52
MH178	N1-UP	10/11/2006	Sediment Trap	Anthracene	0.38	U	mg/kg	0.96	0.40
MH178	N1-UP	10/6/2006	Sediment Trap	Anthracene	0.38	U	mg/kg	0.96	0.40
MH178	N1-UP	3/16/2006	Sediment Trap	Anthracene	0.68	U	mg/kg	0.96	0.71
MH178	N1-UP	8/11/2005	Sediment Trap	Anthracene	0.15		mg/kg	0.96	0.16
MH178	N1-UP	11/3/2011	Sediment Trap	Benzo(a)anthracene	1.4		mg/kg	1.3	1.1
MH178	N1-UP	5/25/2011	Filter/Stormwater	Benzo(a)anthracene	2.3		mg/kg	1.3	1.8
MH178	N1-UP	5/15/2011	Filter/Stormwater	Benzo(a)anthracene	0.22		mg/kg	1.3	0.17
MH178	N1-UP	4/21/2011	Filter/Baseflow	Benzo(a)anthracene	0.42		mg/kg	1.3	0.32
MH178	N1-UP	4/5/2011	Sediment Trap	Benzo(a)anthracene	1.2		mg/kg	1.3	0.92
MH178	N1-UP	3/9/2011	Filter/Stormwater	Benzo(a)anthracene	0.16		mg/kg	1.3	0.12
MH178	N1-UP	6/2/2010	Filter/Stormwater	Benzo(a)anthracene	1.3		mg/kg	1.3	1.0
MH178	N1-UP	4/27/2010	Filter/Stormwater	Benzo(a)anthracene	0.72		mg/kg	1.3	0.55
MH178	N1-UP	4/8/2010	Sediment Trap	Benzo(a)anthracene	5.2		mg/kg	1.3	4.0
MH178	N1-UP	4/6/2009	Sediment Trap	Benzo(a)anthracene	2.2		mg/kg	1.3	1.7
MH178	N1-UP	12/3/2008	Sediment Trap	Benzo(a)anthracene	2.7		mg/kg	1.3	2.1
MH178	N1-UP	3/18/2008	Sediment Trap	Benzo(a)anthracene	0.95		mg/kg	1.3	0.73
MH178	N1-UP	10/29/2007	Sediment Trap	Benzo(a)anthracene	1.5	J	mg/kg	1.3	1.2
MH178	N1-UP	5/14/2007	Sediment Trap	Benzo(a)anthracene	1.4		mg/kg	1.3	1.1
MH178	N1-UP	1/8/2007	Sediment Trap	Benzo(a)anthracene	1.8		mg/kg	1.3	1.4
MH178	N1-UP	10/11/2006	Sediment Trap	Benzo(a)anthracene	2.0		mg/kg	1.3	1.5
MH178	N1-UP	10/6/2006	Sediment Trap	Benzo(a)anthracene	2.0		mg/kg	1.3	1.5
MH178	N1-UP	3/16/2006	Sediment Trap	Benzo(a)anthracene	3.2		mg/kg	1.3	2.5
MH178	N1-UP	8/11/2005	Sediment Trap	Benzo(a)anthracene	0.84		mg/kg	1.3	0.65
MH178	N1-UP	11/3/2011	Sediment Trap	Total Benzofluoranthenes	5.5		mg/kg	3.2	1.7
MH178	N1-UP	5/25/2011	Filter/Stormwater	Total Benzofluoranthenes	1.1		mg/kg	3.2	0.34
MH178	N1-UP	5/15/2011	Filter/Stormwater	Total Benzofluoranthenes	1.1		mg/kg	3.2	0.34
MH178	N1-UP	4/21/2011	Filter/Baseflow	Total Benzofluoranthenes	1.6		mg/kg	3.2	0.50
MH178	N1-UP	4/5/2011	Sediment Trap	Total Benzofluoranthenes	4.0		mg/kg	3.2	1.3
MH178	N1-UP	3/9/2011	Filter/Stormwater	Total Benzofluoranthenes	0.69		mg/kg	3.2	0.22
MH178	N1-UP	6/2/2010	Filter/Stormwater	Total Benzofluoranthenes	9.2		mg/kg	3.2	2.9
MH178	N1-UP	4/27/2010	Filter/Stormwater	Total Benzofluoranthenes	3.8		mg/kg	3.2	1.2
MH178	N1-UP	4/8/2010	Sediment Trap	Total Benzofluoranthenes	20		mg/kg	3.2	6.2
MH178	N1-UP	4/6/2009	Sediment Trap	Total Benzofluoranthenes	9.5		mg/kg	3.2	3.0
MH178	N1-UP	12/3/2008	Sediment Trap	Total Benzofluoranthenes	9.0		mg/kg	3.2	2.8
MH178	N1-UP	3/18/2008	Sediment Trap	Total Benzofluoranthenes	2.9		mg/kg	3.2	0.91
MH178	N1-UP	10/29/2007	Sediment Trap	Total Benzofluoranthenes	6.9		mg/kg	3.2	2.2
MH178	N1-UP	5/14/2007	Sediment Trap	Total Benzofluoranthenes	6.7		mg/kg	3.2	2.1
MH178	N1-UP	1/8/2007	Sediment Trap	Total Benzofluoranthenes	5.6		mg/kg	3.2	1.8
MH178	N1-UP	10/11/2006	Sediment Trap	Total Benzofluoranthenes	7.7		mg/kg	3.2	2.4

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH178	N1-UP	10/6/2006	Sediment Trap	Total Benzofluoranthenes	7.7	mg/kg	3.2	2.4
MH178	N1-UP	3/16/2006	Sediment Trap	Total Benzofluoranthenes	12	mg/kg	3.2	3.7
MH178	N1-UP	8/11/2005	Sediment Trap	Total Benzofluoranthenes	2.4	mg/kg	3.2	0.75
MH178	N1-UP	11/3/2011	Sediment Trap	Benzo(g,h,i)perylene	2.2	mg/kg	0.67	3.3
MH178	N1-UP	5/25/2011	Filter/Stormwater	Benzo(g,h,i)perylene	0.69	mg/kg	0.67	1.0
MH178	N1-UP	5/15/2011	Filter/Stormwater	Benzo(g,h,i)perylene	0.45	mg/kg	0.67	0.67
MH178	N1-UP	4/21/2011	Filter/Baseflow	Benzo(g,h,i)perylene	0.62	mg/kg	0.67	0.93
MH178	N1-UP	4/5/2011	Sediment Trap	Benzo(g,h,i)perylene	1.5	mg/kg	0.67	2.2
MH178	N1-UP	3/9/2011	Filter/Stormwater	Benzo(g,h,i)perylene	0.20	mg/kg	0.67	0.30
MH178	N1-UP	6/2/2010	Filter/Stormwater	Benzo(g,h,i)perylene	2.9	mg/kg	0.67	4.3
MH178	N1-UP	4/27/2010	Filter/Stormwater	Benzo(g,h,i)perylene	1.7	mg/kg	0.67	2.5
MH178	N1-UP	4/8/2010	Sediment Trap	Benzo(g,h,i)perylene	4.6	mg/kg	0.67	6.9
MH178	N1-UP	4/6/2009	Sediment Trap	Benzo(g,h,i)perylene	2.2	mg/kg	0.67	3.3
MH178	N1-UP	12/3/2008	Sediment Trap	Benzo(g,h,i)perylene	2.5	mg/kg	0.67	3.7
MH178	N1-UP	3/18/2008	Sediment Trap	Benzo(g,h,i)perylene	0.85	mg/kg	0.67	1.3
MH178	N1-UP	10/29/2007	Sediment Trap	Benzo(g,h,i)perylene	0.56 UJ	mg/kg	0.67	0.84
MH178	N1-UP	5/14/2007	Sediment Trap	Benzo(g,h,i)perylene	1.2	mg/kg	0.67	1.8
MH178	N1-UP	10/6/2006	Sediment Trap	Benzo(g,h,i)perylene	2.0	mg/kg	0.67	3.0
MH178	N1-UP	3/16/2006	Sediment Trap	Benzo(g,h,i)perylene	2.1	mg/kg	0.67	3.1
MH178	N1-UP	8/11/2005	Sediment Trap	Benzo(g,h,i)perylene	0.45	mg/kg	0.67	0.67
MH178	N1-UP	11/3/2011	Sediment Trap	Benzo(a)pyrene	2.2	mg/kg	0.15	15
MH178	N1-UP	5/25/2011	Filter/Stormwater	Benzo(a)pyrene	2.7	mg/kg	0.15	18
MH178	N1-UP	5/15/2011	Filter/Stormwater	Benzo(a)pyrene	0.36	mg/kg	0.15	2.4
MH178	N1-UP	4/21/2011	Filter/Baseflow	Benzo(a)pyrene	0.67	mg/kg	0.15	4.5
MH178	N1-UP	4/5/2011	Sediment Trap	Benzo(a)pyrene	1.7	mg/kg	0.15	11
MH178	N1-UP	3/9/2011	Filter/Stormwater	Benzo(a)pyrene	0.27	mg/kg	0.15	1.8
MH178	N1-UP	6/2/2010	Filter/Stormwater	Benzo(a)pyrene	2.3	mg/kg	0.15	15
MH178	N1-UP	4/27/2010	Filter/Stormwater	Benzo(a)pyrene	1.3	mg/kg	0.15	8.7
MH178	N1-UP	4/8/2010	Sediment Trap	Benzo(a)pyrene	8.4	mg/kg	0.15	56
MH178	N1-UP	4/6/2009	Sediment Trap	Benzo(a)pyrene	3.5	mg/kg	0.15	23
MH178	N1-UP	12/3/2008	Sediment Trap	Benzo(a)pyrene	4.0	mg/kg	0.15	27
MH178	N1-UP	3/18/2008	Sediment Trap	Benzo(a)pyrene	1.3	mg/kg	0.15	8.7
MH178	N1-UP	10/29/2007	Sediment Trap	Benzo(a)pyrene	1.2 J	mg/kg	0.15	8.0
MH178	N1-UP	5/14/2007	Sediment Trap	Benzo(a)pyrene	2.2	mg/kg	0.15	15
MH178	N1-UP	1/8/2007	Sediment Trap	Benzo(a)pyrene	2.3	mg/kg	0.15	15
MH178	N1-UP	10/11/2006	Sediment Trap	Benzo(a)pyrene	3.0	mg/kg	0.15	20
MH178	N1-UP	10/6/2006	Sediment Trap	Benzo(a)pyrene	3.0	mg/kg	0.15	20
MH178	N1-UP	3/16/2006	Sediment Trap	Benzo(a)pyrene	4.5	mg/kg	0.15	30
MH178	N1-UP	8/11/2005	Sediment Trap	Benzo(a)pyrene	1.1	mg/kg	0.15	7.3
MH178	N1-UP	11/3/2011	Sediment Trap	Chrysene	3.2	mg/kg	1.4	2.3
MH178	N1-UP	5/25/2011	Filter/Stormwater	Chrysene	6.9	mg/kg	1.4	4.9
MH178	N1-UP	5/15/2011	Filter/Stormwater	Chrysene	0.72	mg/kg	1.4	0.51
MH178	N1-UP	4/21/2011	Filter/Baseflow	Chrysene	0.83	mg/kg	1.4	0.59
MH178	N1-UP	4/5/2011	Sediment Trap	Chrysene	2.3	mg/kg	1.4	1.6
MH178	N1-UP	3/9/2011	Filter/Stormwater	Chrysene	0.39	mg/kg	1.4	0.28
MH178	N1-UP	6/2/2010	Filter/Stormwater	Chrysene	6.8	mg/kg	1.4	4.9
MH178	N1-UP	4/27/2010	Filter/Stormwater	Chrysene	2.9	mg/kg	1.4	2.1
MH178	N1-UP	4/8/2010	Sediment Trap	Chrysene	12	mg/kg	1.4	8.6
MH178	N1-UP	4/6/2009	Sediment Trap	Chrysene	5.0	mg/kg	1.4	3.6
MH178	N1-UP	12/3/2008	Sediment Trap	Chrysene	4.7	mg/kg	1.4	3.4
MH178	N1-UP	3/18/2008	Sediment Trap	Chrysene	1.4	mg/kg	1.4	1.0
MH178	N1-UP	10/29/2007	Sediment Trap	Chrysene	3.1 J	mg/kg	1.4	2.2
MH178	N1-UP	5/14/2007	Sediment Trap	Chrysene	2.8	mg/kg	1.4	2.0
MH178	N1-UP	1/8/2007	Sediment Trap	Chrysene	2.9	mg/kg	1.4	2.1
MH178	N1-UP	10/11/2006	Sediment Trap	Chrysene	4.4	mg/kg	1.4	3.1
MH178	N1-UP	10/6/2006	Sediment Trap	Chrysene	4.4	mg/kg	1.4	3.1
MH178	N1-UP	3/16/2006	Sediment Trap	Chrysene	6.3	mg/kg	1.4	4.5
MH178	N1-UP	8/11/2005	Sediment Trap	Chrysene	1.2	mg/kg	1.4	0.86
MH178	N1-UP	11/3/2011	Sediment Trap	Dibenz(a,h)anthracene	0.71 J	mg/kg	0.23	3.1
MH178	N1-UP	5/25/2011	Filter/Stormwater	Dibenz(a,h)anthracene	3.6	mg/kg	0.23	16
MH178	N1-UP	5/15/2011	Filter/Stormwater	Dibenz(a,h)anthracene	0.13	mg/kg	0.23	0.57
MH178	N1-UP	4/21/2011	Filter/Baseflow	Dibenz(a,h)anthracene	0.021 U	mg/kg	0.23	0.091
MH178	N1-UP	4/5/2011	Sediment Trap	Dibenz(a,h)anthracene	0.61	mg/kg	0.23	2.7
MH178	N1-UP	3/9/2011	Filter/Stormwater	Dibenz(a,h)anthracene	0.016	mg/kg	0.23	0.070
MH178	N1-UP	6/2/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.70	mg/kg	0.23	3.0
MH178	N1-UP	4/27/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.63	mg/kg	0.23	2.7
MH178	N1-UP	4/8/2010	Sediment Trap	Dibenz(a,h)anthracene	2.0	mg/kg	0.23	8.7
MH178	N1-UP	4/6/2009	Sediment Trap	Dibenz(a,h)anthracene	0.63	mg/kg	0.23	2.7

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH178	N1-UP	12/3/2008	Sediment Trap	Dibenz(a,h)anthracene	0.89	mg/kg	0.23	3.9
MH178	N1-UP	3/18/2008	Sediment Trap	Dibenz(a,h)anthracene	0.29	mg/kg	0.23	1.3
MH178	N1-UP	10/29/2007	Sediment Trap	Dibenz(a,h)anthracene	0.56 UJ	mg/kg	0.23	2.4
MH178	N1-UP	5/14/2007	Sediment Trap	Dibenz(a,h)anthracene	0.37 U	mg/kg	0.23	1.6
MH178	N1-UP	1/8/2007	Sediment Trap	Dibenz(a,h)anthracene	0.5 U	mg/kg	0.23	2.2
MH178	N1-UP	10/11/2006	Sediment Trap	Dibenz(a,h)anthracene	0.64	mg/kg	0.23	2.8
MH178	N1-UP	10/6/2006	Sediment Trap	Dibenz(a,h)anthracene	0.64	mg/kg	0.23	2.8
MH178	N1-UP	3/16/2006	Sediment Trap	Dibenz(a,h)anthracene	0.68 U	mg/kg	0.23	3.0
MH178	N1-UP	8/11/2005	Sediment Trap	Dibenz(a,h)anthracene	0.11 U	mg/kg	0.23	0.48
MH178	N1-UP	11/3/2011	Sediment Trap	Dibenzofuran	1.3 U	mg/kg	0.54	2.4
MH178	N1-UP	5/25/2011	Filter/Stormwater	Dibenzofuran	0.32	mg/kg	0.54	0.59
MH178	N1-UP	5/15/2011	Filter/Stormwater	Dibenzofuran	0.077 UJ	mg/kg	0.54	0.14
MH178	N1-UP	4/21/2011	Filter/Baseflow	Dibenzofuran	0.071	mg/kg	0.54	0.13
MH178	N1-UP	4/5/2011	Sediment Trap	Dibenzofuran	0.32 U	mg/kg	0.54	0.59
MH178	N1-UP	3/9/2011	Filter/Stormwater	Dibenzofuran	0.016	mg/kg	0.54	0.030
MH178	N1-UP	6/2/2010	Filter/Stormwater	Dibenzofuran	0.39 U	mg/kg	0.54	0.72
MH178	N1-UP	4/27/2010	Filter/Stormwater	Dibenzofuran	0.18	mg/kg	0.54	0.33
MH178	N1-UP	4/8/2010	Sediment Trap	Dibenzofuran	0.28 J	mg/kg	0.54	0.52
MH178	N1-UP	4/6/2009	Sediment Trap	Dibenzofuran	0.20 J	mg/kg	0.54	0.37
MH178	N1-UP	12/3/2008	Sediment Trap	Dibenzofuran	0.23 U	mg/kg	0.54	0.43
MH178	N1-UP	3/18/2008	Sediment Trap	Dibenzofuran	0.16 U	mg/kg	0.54	0.30
MH178	N1-UP	10/29/2007	Sediment Trap	Dibenzofuran	0.56 UJ	mg/kg	0.54	1.0
MH178	N1-UP	5/14/2007	Sediment Trap	Dibenzofuran	0.37 U	mg/kg	0.54	0.69
MH178	N1-UP	1/8/2007	Sediment Trap	Dibenzofuran	0.5 U	mg/kg	0.54	0.93
MH178	N1-UP	10/11/2006	Sediment Trap	Dibenzofuran	0.38 U	mg/kg	0.54	0.70
MH178	N1-UP	3/16/2006	Sediment Trap	Dibenzofuran	0.68 U	mg/kg	0.54	1.3
MH178	N1-UP	8/11/2005	Sediment Trap	Dibenzofuran	0.11 U	mg/kg	0.54	0.20
MH178	N1-UP	11/3/2011	Sediment Trap	Fluoranthene	5.0	mg/kg	1.7	2.9
MH178	N1-UP	5/25/2011	Filter/Stormwater	Fluoranthene	14	mg/kg	1.7	8.2
MH178	N1-UP	5/15/2011	Filter/Stormwater	Fluoranthene	1.8	mg/kg	1.7	1.1
MH178	N1-UP	4/21/2011	Filter/Baseflow	Fluoranthene	1.3	mg/kg	1.7	0.76
MH178	N1-UP	4/5/2011	Sediment Trap	Fluoranthene	4.8	mg/kg	1.7	2.8
MH178	N1-UP	3/9/2011	Filter/Stormwater	Fluoranthene	0.63	mg/kg	1.7	0.37
MH178	N1-UP	6/2/2010	Filter/Stormwater	Fluoranthene	12	mg/kg	1.7	7.1
MH178	N1-UP	4/27/2010	Filter/Stormwater	Fluoranthene	3.7	mg/kg	1.7	2.2
MH178	N1-UP	4/8/2010	Sediment Trap	Fluoranthene	20	mg/kg	1.7	12
MH178	N1-UP	4/6/2009	Sediment Trap	Fluoranthene	8.1	mg/kg	1.7	4.8
MH178	N1-UP	12/3/2008	Sediment Trap	Fluoranthene	9.5	mg/kg	1.7	5.6
MH178	N1-UP	3/18/2008	Sediment Trap	Fluoranthene	3.1	mg/kg	1.7	1.8
MH178	N1-UP	10/29/2007	Sediment Trap	Fluoranthene	5.8 J	mg/kg	1.7	3.4
MH178	N1-UP	5/14/2007	Sediment Trap	Fluoranthene	5.6	mg/kg	1.7	3.3
MH178	N1-UP	1/8/2007	Sediment Trap	Fluoranthene	5.9	mg/kg	1.7	3.5
MH178	N1-UP	10/11/2006	Sediment Trap	Fluoranthene	6.9	mg/kg	1.7	4.1
MH178	N1-UP	10/6/2006	Sediment Trap	Fluoranthene	6.9	mg/kg	1.7	4.1
MH178	N1-UP	3/16/2006	Sediment Trap	Fluoranthene	13	mg/kg	1.7	7.6
MH178	N1-UP	8/11/2005	Sediment Trap	Fluoranthene	2.4	mg/kg	1.7	1.4
MH178	N1-UP	11/3/2011	Sediment Trap	Fluorene	1.3 U	mg/kg	0.54	2.4
MH178	N1-UP	5/25/2011	Filter/Stormwater	Fluorene	0.32	mg/kg	0.54	0.59
MH178	N1-UP	5/15/2011	Filter/Stormwater	Fluorene	0.077 U	mg/kg	0.54	0.14
MH178	N1-UP	4/21/2011	Filter/Baseflow	Fluorene	0.058	mg/kg	0.54	0.11
MH178	N1-UP	4/5/2011	Sediment Trap	Fluorene	0.32 U	mg/kg	0.54	0.59
MH178	N1-UP	3/9/2011	Filter/Stormwater	Fluorene	0.02	mg/kg	0.54	0.037
MH178	N1-UP	6/2/2010	Filter/Stormwater	Fluorene	0.39 U	mg/kg	0.54	0.72
MH178	N1-UP	4/27/2010	Filter/Stormwater	Fluorene	0.17	mg/kg	0.54	0.31
MH178	N1-UP	4/8/2010	Sediment Trap	Fluorene	0.40	mg/kg	0.54	0.74
MH178	N1-UP	4/6/2009	Sediment Trap	Fluorene	0.19 J	mg/kg	0.54	0.35
MH178	N1-UP	12/3/2008	Sediment Trap	Fluorene	0.23	mg/kg	0.54	0.43
MH178	N1-UP	3/18/2008	Sediment Trap	Fluorene	0.16 U	mg/kg	0.54	0.30
MH178	N1-UP	10/29/2007	Sediment Trap	Fluorene	0.56 UJ	mg/kg	0.54	1.0
MH178	N1-UP	5/14/2007	Sediment Trap	Fluorene	0.37 U	mg/kg	0.54	0.69
MH178	N1-UP	1/8/2007	Sediment Trap	Fluorene	0.5 U	mg/kg	0.54	0.93
MH178	N1-UP	10/11/2006	Sediment Trap	Fluorene	0.38 U	mg/kg	0.54	0.70
MH178	N1-UP	10/6/2006	Sediment Trap	Fluorene	0.38 U	mg/kg	0.54	0.70
MH178	N1-UP	3/16/2006	Sediment Trap	Fluorene	0.68 U	mg/kg	0.54	1.3
MH178	N1-UP	8/11/2005	Sediment Trap	Fluorene	0.11 U	mg/kg	0.54	0.20
MH178	N1-UP	11/3/2011	Sediment Trap	Indeno(1,2,3-cd)pyrene	2.2	mg/kg	0.60	3.7
MH178	N1-UP	5/25/2011	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	4.1	mg/kg	0.60	6.8
MH178	N1-UP	5/15/2011	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.37	mg/kg	0.60	0.62

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH178	N1-UP	4/21/2011	Filter/Baseflow	Indeno(1,2,3-cd)pyrene	0.54	mg/kg	0.60	0.90
MH178	N1-UP	4/5/2011	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.4	mg/kg	0.60	2.3
MH178	N1-UP	3/9/2011	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.18	mg/kg	0.60	0.30
MH178	N1-UP	6/2/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	2.6	mg/kg	0.60	4.3
MH178	N1-UP	4/27/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	1.7	mg/kg	0.60	2.8
MH178	N1-UP	4/8/2010	Sediment Trap	Indeno(1,2,3-cd)pyrene	4.7	mg/kg	0.60	7.8
MH178	N1-UP	4/6/2009	Sediment Trap	Indeno(1,2,3-cd)pyrene	2.4	mg/kg	0.60	4.0
MH178	N1-UP	12/3/2008	Sediment Trap	Indeno(1,2,3-cd)pyrene	2.4	mg/kg	0.60	4.0
MH178	N1-UP	3/18/2008	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.81	mg/kg	0.60	1.4
MH178	N1-UP	10/29/2007	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.56 UJ	mg/kg	0.60	0.93
MH178	N1-UP	5/14/2007	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.2	mg/kg	0.60	2.0
MH178	N1-UP	1/8/2007	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.1	mg/kg	0.60	1.8
MH178	N1-UP	10/11/2006	Sediment Trap	Indeno(1,2,3-cd)pyrene	2.0	mg/kg	0.60	3.3
MH178	N1-UP	10/6/2006	Sediment Trap	Indeno(1,2,3-cd)pyrene	2.0	mg/kg	0.60	3.3
MH178	N1-UP	3/16/2006	Sediment Trap	Indeno(1,2,3-cd)pyrene	2.2	mg/kg	0.60	3.7
MH178	N1-UP	8/11/2005	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.52	mg/kg	0.60	0.87
MH178	N1-UP	11/3/2011	Sediment Trap	Phenanthrene	2.4	mg/kg	1.5	1.6
MH178	N1-UP	5/25/2011	Filter/Stormwater	Phenanthrene	5.8	mg/kg	1.5	3.9
MH178	N1-UP	5/15/2011	Filter/Stormwater	Phenanthrene	0.67	mg/kg	1.5	0.45
MH178	N1-UP	4/21/2011	Filter/Baseflow	Phenanthrene	0.62	mg/kg	1.5	0.41
MH178	N1-UP	4/5/2011	Sediment Trap	Phenanthrene	1.7	mg/kg	1.5	1.1
MH178	N1-UP	3/9/2011	Filter/Stormwater	Phenanthrene	0.28	mg/kg	1.5	0.19
MH178	N1-UP	6/2/2010	Filter/Stormwater	Phenanthrene	4.8	mg/kg	1.5	3.2
MH178	N1-UP	4/27/2010	Filter/Stormwater	Phenanthrene	2.0	mg/kg	1.5	1.3
MH178	N1-UP	4/8/2010	Sediment Trap	Phenanthrene	7.8	mg/kg	1.5	5.2
MH178	N1-UP	4/6/2009	Sediment Trap	Phenanthrene	3.5	mg/kg	1.5	2.3
MH178	N1-UP	12/3/2008	Sediment Trap	Phenanthrene	3.8	mg/kg	1.5	2.5
MH178	N1-UP	3/18/2008	Sediment Trap	Phenanthrene	1.3	mg/kg	1.5	0.87
MH178	N1-UP	10/29/2007	Sediment Trap	Phenanthrene	2.3 J	mg/kg	1.5	1.5
MH178	N1-UP	5/14/2007	Sediment Trap	Phenanthrene	2.1	mg/kg	1.5	1.4
MH178	N1-UP	1/8/2007	Sediment Trap	Phenanthrene	2.2	mg/kg	1.5	1.5
MH178	N1-UP	10/11/2006	Sediment Trap	Phenanthrene	2.9	mg/kg	1.5	1.9
MH178	N1-UP	10/6/2006	Sediment Trap	Phenanthrene	2.9	mg/kg	1.5	1.9
MH178	N1-UP	3/16/2006	Sediment Trap	Phenanthrene	4.6	mg/kg	1.5	3.1
MH178	N1-UP	8/11/2005	Sediment Trap	Phenanthrene	1.3	mg/kg	1.5	0.87
MH178	N1-UP	11/3/2011	Sediment Trap	Pyrene	3.7	mg/kg	2.6	1.4
MH178	N1-UP	5/25/2011	Filter/Stormwater	Pyrene	7.9	mg/kg	2.6	3.0
MH178	N1-UP	5/15/2011	Filter/Stormwater	Pyrene	0.77	mg/kg	2.6	0.30
MH178	N1-UP	4/21/2011	Filter/Baseflow	Pyrene	1.0	mg/kg	2.6	0.38
MH178	N1-UP	4/5/2011	Sediment Trap	Pyrene	2.5	mg/kg	2.6	0.96
MH178	N1-UP	3/9/2011	Filter/Stormwater	Pyrene	0.46	mg/kg	2.6	0.18
MH178	N1-UP	6/2/2010	Filter/Stormwater	Pyrene	6.0	mg/kg	2.6	2.3
MH178	N1-UP	4/27/2010	Filter/Stormwater	Pyrene	3.1	mg/kg	2.6	1.2
MH178	N1-UP	4/8/2010	Sediment Trap	Pyrene	11	mg/kg	2.6	4.2
MH178	N1-UP	4/6/2009	Sediment Trap	Pyrene	5.8	mg/kg	2.6	2.2
MH178	N1-UP	12/3/2008	Sediment Trap	Pyrene	5.5	mg/kg	2.6	2.1
MH178	N1-UP	3/18/2008	Sediment Trap	Pyrene	2.0	mg/kg	2.6	0.77
MH178	N1-UP	10/29/2007	Sediment Trap	Pyrene	3.0 J	mg/kg	2.6	1.2
MH178	N1-UP	5/14/2007	Sediment Trap	Pyrene	2.7	mg/kg	2.6	1.0
MH178	N1-UP	1/8/2007	Sediment Trap	Pyrene	3.4	mg/kg	2.6	1.3
MH178	N1-UP	10/11/2006	Sediment Trap	Pyrene	5.2	mg/kg	2.6	2.0
MH178	N1-UP	10/6/2006	Sediment Trap	Pyrene	5.2	mg/kg	2.6	2.0
MH178	N1-UP	3/16/2006	Sediment Trap	Pyrene	6.0	mg/kg	2.6	2.3
MH178	N1-UP	8/11/2005	Sediment Trap	Pyrene	1.7	mg/kg	2.6	0.65
MH178	N1-UP	11/3/2011	Sediment Trap	Total HPAHs	26	mg/kg	12	2.2
MH178	N1-UP	5/25/2011	Filter/Stormwater	Total HPAHs	43	mg/kg	12	3.6
MH178	N1-UP	5/15/2011	Filter/Stormwater	Total HPAHs	5.9	mg/kg	12	0.49
MH178	N1-UP	4/21/2011	Filter/Baseflow	Total HPAHs	7.0	mg/kg	12	0.58
MH178	N1-UP	4/5/2011	Sediment Trap	Total HPAHs	20	mg/kg	12	1.7
MH178	N1-UP	3/9/2011	Filter/Stormwater	Total HPAHs	3.0	mg/kg	12	0.25
MH178	N1-UP	6/2/2010	Filter/Stormwater	Total HPAHs	44	mg/kg	12	3.7
MH178	N1-UP	4/27/2010	Filter/Stormwater	Total HPAHs	20	mg/kg	12	1.6
MH178	N1-UP	4/8/2010	Sediment Trap	Total HPAHs	88	mg/kg	12	7.3
MH178	N1-UP	4/6/2009	Sediment Trap	Total HPAHs	39	mg/kg	12	3.3
MH178	N1-UP	12/3/2008	Sediment Trap	Total HPAHs	41	mg/kg	12	3.4
MH178	N1-UP	3/18/2008	Sediment Trap	Total HPAHs	14	mg/kg	12	1.1
MH178	N1-UP	10/29/2007	Sediment Trap	Total HPAHs	22	mg/kg	12	1.8
MH178	N1-UP	5/14/2007	Sediment Trap	Total HPAHs	24	mg/kg	12	2.0

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
MH178	N1-UP	1/8/2007	Sediment Trap	Total HPAHs	23		mg/kg	12	1.9
MH178	N1-UP	10/6/2006	Sediment Trap	Total HPAHs	34		mg/kg	12	2.8
MH178	N1-UP	3/16/2006	Sediment Trap	Total HPAHs	49		mg/kg	12	4.1
MH178	N1-UP	8/11/2005	Sediment Trap	Total HPAHs	11		mg/kg	12	0.88
MH178	N1-UP	11/3/2011	Sediment Trap	Total LPAHs	2.4		mg/kg	5.2	0.46
MH178	N1-UP	5/25/2011	Filter/Stormwater	Total LPAHs	6.8		mg/kg	5.2	1.3
MH178	N1-UP	5/15/2011	Filter/Stormwater	Total LPAHs	0.67		mg/kg	5.2	0.13
MH178	N1-UP	4/21/2011	Filter/Baseflow	Total LPAHs	0.82		mg/kg	5.2	0.16
MH178	N1-UP	4/5/2011	Sediment Trap	Total LPAHs	1.9		mg/kg	5.2	0.37
MH178	N1-UP	3/9/2011	Filter/Stormwater	Total LPAHs	0.38		mg/kg	5.2	0.073
MH178	N1-UP	6/2/2010	Filter/Stormwater	Total LPAHs	4.8		mg/kg	5.2	0.92
MH178	N1-UP	4/27/2010	Filter/Stormwater	Total LPAHs	2.5		mg/kg	5.2	0.49
MH178	N1-UP	4/8/2010	Sediment Trap	Total LPAHs	9.4		mg/kg	5.2	1.8
MH178	N1-UP	4/6/2009	Sediment Trap	Total LPAHs	4.2		mg/kg	5.2	0.81
MH178	N1-UP	12/3/2008	Sediment Trap	Total LPAHs	4.5		mg/kg	5.2	0.87
MH178	N1-UP	3/18/2008	Sediment Trap	Total LPAHs	1.5		mg/kg	5.2	0.29
MH178	N1-UP	10/29/2007	Sediment Trap	Total LPAHs	2.3		mg/kg	5.2	0.44
MH178	N1-UP	5/14/2007	Sediment Trap	Total LPAHs	2.1		mg/kg	5.2	0.40
MH178	N1-UP	1/8/2007	Sediment Trap	Total LPAHs	2.2		mg/kg	5.2	0.42
MH178	N1-UP	10/11/2006	Sediment Trap	Total LPAHs	2.9		mg/kg	5.2	0.56
MH178	N1-UP	10/6/2006	Sediment Trap	Total LPAHs	2.9		mg/kg	5.2	0.56
MH178	N1-UP	3/16/2006	Sediment Trap	Total LPAHs	4.6		mg/kg	5.2	0.88
MH178	N1-UP	8/11/2005	Sediment Trap	Total LPAHs	1.5		mg/kg	5.2	0.28
MH178	N1-UP	11/3/2011	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	3.2		mg/kg	0.15	21
MH178	N1-UP	5/25/2011	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	3.9		mg/kg	0.15	26
MH178	N1-UP	5/15/2011	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.55		mg/kg	0.15	3.7
MH178	N1-UP	4/21/2011	Filter/Baseflow	Total cPAHs (TEQ, NDx0.5)	0.94		mg/kg	0.15	6.2
MH178	N1-UP	4/5/2011	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	2.4		mg/kg	0.15	16
MH178	N1-UP	3/9/2011	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.38		mg/kg	0.15	2.5
MH178	N1-UP	6/2/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	3.7		mg/kg	0.15	25
MH178	N1-UP	4/27/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	2.0		mg/kg	0.15	13
MH178	N1-UP	4/8/2010	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	12		mg/kg	0.15	78
MH178	N1-UP	4/6/2009	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	5.0		mg/kg	0.15	33
MH178	N1-UP	12/3/2008	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	5.5		mg/kg	0.15	37
MH178	N1-UP	3/18/2008	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	1.8		mg/kg	0.15	12
MH178	N1-UP	10/29/2007	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	2.1		mg/kg	0.15	14
MH178	N1-UP	5/14/2007	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	3.2		mg/kg	0.15	21
MH178	N1-UP	1/8/2007	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	3.2		mg/kg	0.15	21
MH178	N1-UP	10/11/2006	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	4.3		mg/kg	0.15	29
MH178	N1-UP	10/6/2006	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	4.3		mg/kg	0.15	29
MH178	N1-UP	3/16/2006	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	6.3		mg/kg	0.15	42
MH178	N1-UP	8/11/2005	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	1.5		mg/kg	0.15	10
CB133B	N5	4/1/2010	Grab	Total PCBs	0.52		mg/kg	0.13	4.0
CB133B	N5	4/1/2010	Grab	Arsenic	20	U	mg/kg	7.3	2.7
CB133B	N5	4/1/2010	Grab	Cadmium	9.5		mg/kg	5.1	1.9
CB133B	N5	4/1/2010	Grab	Chromium	105		mg/kg	260	0.40
CB133B	N5	4/1/2010	Grab	Copper	192		mg/kg	390	0.49
CB133B	N5	4/1/2010	Grab	Lead	130		mg/kg	450	0.29
CB133B	N5	4/1/2010	Grab	Mercury	0.07		mg/kg	0.41	0.17
CB133B	N5	4/1/2010	Grab	Silver	1	U	mg/kg	6.1	0.16
CB133B	N5	4/1/2010	Grab	Zinc	976		mg/kg	410	2.4
CB134	N5	4/1/2010	Grab	Total PCBs	0.83		mg/kg	0.13	6.4
CB134	N5	4/1/2010	Grab	Arsenic	20		mg/kg	7.3	2.7
CB134	N5	4/1/2010	Grab	Cadmium	46		mg/kg	5.1	9.0
CB134	N5	4/1/2010	Grab	Chromium	161		mg/kg	260	0.62
CB134	N5	4/1/2010	Grab	Copper	246		mg/kg	390	0.63
CB134	N5	4/1/2010	Grab	Lead	327		mg/kg	450	0.73
CB134	N5	4/1/2010	Grab	Mercury	1.1		mg/kg	0.41	2.6
CB134	N5	4/1/2010	Grab	Silver	0.90		mg/kg	6.1	0.15
CB134	N5	4/1/2010	Grab	Zinc	1,480		mg/kg	410	3.6
CB135	N5	4/1/2010	Grab	Total PCBs	1.1		mg/kg	0.13	8.5
CB135	N5	4/1/2010	Grab	Arsenic	40		mg/kg	7.3	5.5
CB135	N5	4/1/2010	Grab	Cadmium	19		mg/kg	5.1	3.6
CB135	N5	4/1/2010	Grab	Chromium	115		mg/kg	260	0.44
CB135	N5	4/1/2010	Grab	Copper	166		mg/kg	390	0.43
CB135	N5	4/1/2010	Grab	Lead	298		mg/kg	450	0.66
CB135	N5	4/1/2010	Grab	Mercury	7.8		mg/kg	0.41	19
CB135	N5	4/1/2010	Grab	Silver	1	U	mg/kg	6.1	0.16

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB135	N5	4/1/2010	Grab	Zinc	1,580	mg/kg	410	3.9
CB136	N5	4/1/2010	Grab	Total PCBs	1.7	mg/kg	0.13	13
CB136	N5	4/1/2010	Grab	Arsenic	15	mg/kg	7.3	2.1
CB136	N5	4/1/2010	Grab	Cadmium	36	mg/kg	5.1	7.1
CB136	N5	4/1/2010	Grab	Chromium	119	mg/kg	260	0.46
CB136	N5	4/1/2010	Grab	Copper	193	mg/kg	390	0.49
CB136	N5	4/1/2010	Grab	Lead	258	mg/kg	450	0.57
CB136	N5	4/1/2010	Grab	Mercury	38	mg/kg	0.41	93
CB136	N5	4/1/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB136	N5	4/1/2010	Grab	Zinc	2,460	mg/kg	410	6.0
CB137A	N5	4/1/2010	Grab	Total PCBs	0.78	mg/kg	0.13	6.0
CB137A	N5	4/1/2010	Grab	Arsenic	13	mg/kg	7.3	1.8
CB137A	N5	4/1/2010	Grab	Cadmium	25	mg/kg	5.1	4.9
CB137A	N5	4/1/2010	Grab	Chromium	119	mg/kg	260	0.46
CB137A	N5	4/1/2010	Grab	Copper	219	mg/kg	390	0.56
CB137A	N5	4/1/2010	Grab	Lead	186	mg/kg	450	0.41
CB137A	N5	4/1/2010	Grab	Mercury	0.12	mg/kg	0.41	0.29
CB137A	N5	4/1/2010	Grab	Silver	0.50	mg/kg	6.1	0.082
CB137A	N5	4/1/2010	Grab	Zinc	1,810	mg/kg	410	4.4
CB141	N5	4/1/2010	Grab	Total PCBs	0.56	mg/kg	0.13	4.3
CB141	N5	4/1/2010	Grab	Arsenic	80	mg/kg	7.3	11
CB141	N5	4/1/2010	Grab	Cadmium	24	mg/kg	5.1	4.7
CB141	N5	4/1/2010	Grab	Chromium	68	mg/kg	260	0.26
CB141	N5	4/1/2010	Grab	Copper	102	mg/kg	390	0.26
CB141	N5	4/1/2010	Grab	Lead	160	mg/kg	450	0.36
CB141	N5	4/1/2010	Grab	Mercury	11	mg/kg	0.41	26
CB141	N5	4/1/2010	Grab	Silver	2 U	mg/kg	6.1	0.33
CB141	N5	4/1/2010	Grab	Zinc	1,120	mg/kg	410	2.7
CB142B	N5	4/1/2010	Grab	Total PCBs	0.33	mg/kg	0.13	2.5
CB142B	N5	4/1/2010	Grab	Arsenic	150	mg/kg	7.3	21
CB142B	N5	4/1/2010	Grab	Cadmium	31	mg/kg	5.1	6.1
CB142B	N5	4/1/2010	Grab	Chromium	95	mg/kg	260	0.37
CB142B	N5	4/1/2010	Grab	Copper	147	mg/kg	390	0.38
CB142B	N5	4/1/2010	Grab	Lead	220	mg/kg	450	0.49
CB142B	N5	4/1/2010	Grab	Mercury	26	mg/kg	0.41	63
CB142B	N5	4/1/2010	Grab	Silver	3 U	mg/kg	6.1	0.49
CB142B	N5	4/1/2010	Grab	Zinc	1,200	mg/kg	410	2.9
D133C	N5	5/4/2010	Grab	Total PCBs	0.92	mg/kg	0.13	7.1
D133C	N5	5/4/2010	Grab	Arsenic	20 U	mg/kg	7.3	2.7
D133C	N5	5/4/2010	Grab	Cadmium	7.7	mg/kg	5.1	1.5
D133C	N5	5/4/2010	Grab	Chromium	193	mg/kg	260	0.74
D133C	N5	5/4/2010	Grab	Copper	123	mg/kg	390	0.32
D133C	N5	5/4/2010	Grab	Lead	324	mg/kg	450	0.72
D133C	N5	5/4/2010	Grab	Mercury	0.20	mg/kg	0.41	0.49
D133C	N5	5/4/2010	Grab	Silver	1 U	mg/kg	6.1	0.16
D133C	N5	5/4/2010	Grab	Zinc	3,680	mg/kg	410	9.0
MH133D	N5	6/2/2010	Filter/Stormwater	Total PCBs	1.3	mg/kg	0.13	9.7
MH133D	N5	5/20/2010	Filter/Stormwater	Total PCBs	0.27	mg/kg	0.13	2.1
MH133D	N5	4/7/2010	Grab	Total PCBs	0.037	mg/kg	0.13	0.28
MH133D	N5	9/26/2005	Grab	Total PCBs	0.11	mg/kg	0.13	0.85
MH133D	N5	5/20/2010	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	34	ng/kg	13	2.6
MH133D	N5	6/2/2010	Filter/Stormwater	Arsenic	110	mg/kg	7.3	15
MH133D	N5	5/20/2010	Filter/Stormwater	Arsenic	90	mg/kg	7.3	12
MH133D	N5	4/7/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
MH133D	N5	6/2/2010	Filter/Stormwater	Cadmium	102	mg/kg	5.1	20
MH133D	N5	5/20/2010	Filter/Stormwater	Cadmium	78	mg/kg	5.1	15
MH133D	N5	4/7/2010	Grab	Cadmium	4.6	mg/kg	5.1	0.90
MH133D	N5	6/2/2010	Filter/Stormwater	Chromium	274	mg/kg	260	1.1
MH133D	N5	5/20/2010	Filter/Stormwater	Chromium	78	mg/kg	260	0.30
MH133D	N5	4/7/2010	Grab	Chromium	38	mg/kg	260	0.15
MH133D	N5	6/2/2010	Filter/Stormwater	Copper	134	mg/kg	390	0.34
MH133D	N5	5/20/2010	Filter/Stormwater	Copper	125 J	mg/kg	390	0.32
MH133D	N5	4/7/2010	Grab	Copper	63	mg/kg	390	0.16
MH133D	N5	6/2/2010	Filter/Stormwater	Lead	230	mg/kg	450	0.51
MH133D	N5	5/20/2010	Filter/Stormwater	Lead	120	mg/kg	450	0.27
MH133D	N5	4/7/2010	Grab	Lead	75	mg/kg	450	0.17
MH133D	N5	6/2/2010	Filter/Stormwater	Mercury	3.5 J	mg/kg	0.41	8.4
MH133D	N5	5/20/2010	Filter/Stormwater	Mercury	3.2 J	mg/kg	0.41	7.9

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
MH133D	N5	4/7/2010	Grab	Mercury	1.4		mg/kg	0.41	3.4
MH133D	N5	6/2/2010	Filter/Stormwater	Silver	4	U	mg/kg	6.1	0.66
MH133D	N5	5/20/2010	Filter/Stormwater	Silver	4	U	mg/kg	6.1	0.66
MH133D	N5	4/7/2010	Grab	Silver	0.8	U	mg/kg	6.1	0.13
MH133D	N5	6/2/2010	Filter/Stormwater	Zinc	2,650		mg/kg	410	6.5
MH133D	N5	5/20/2010	Filter/Stormwater	Zinc	2,200		mg/kg	410	5.4
MH133D	N5	4/7/2010	Grab	Zinc	309		mg/kg	410	0.75
MH133D	N5	6/2/2010	Filter/Stormwater	Acenaphthene	1.2		mg/kg	0.50	2.4
MH133D	N5	6/2/2010	Filter/Stormwater	Anthracene	2.2		mg/kg	0.96	2.3
MH133D	N5	6/2/2010	Filter/Stormwater	Benzo(a)anthracene	8.3		mg/kg	1.3	6.4
MH133D	N5	6/2/2010	Filter/Stormwater	Total Benzofluoranthenes	17		mg/kg	3.2	5.2
MH133D	N5	6/2/2010	Filter/Stormwater	Benzo(g,h,i)perylene	6.8		mg/kg	0.67	10
MH133D	N5	6/2/2010	Filter/Stormwater	Benzo(a)pyrene	9.8		mg/kg	0.15	65
MH133D	N5	6/2/2010	Filter/Stormwater	Chrysene	11		mg/kg	1.4	7.9
MH133D	N5	6/2/2010	Filter/Stormwater	Dibenz(a,h)anthracene	2.7		mg/kg	0.23	12
MH133D	N5	6/2/2010	Filter/Stormwater	Dibenzofuran	0.91	U	mg/kg	0.54	1.7
MH133D	N5	6/2/2010	Filter/Stormwater	Fluoranthene	22		mg/kg	1.7	13
MH133D	N5	6/2/2010	Filter/Stormwater	Fluorene	1.4		mg/kg	0.54	2.6
MH133D	N5	6/2/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	6.2		mg/kg	0.60	10
MH133D	N5	6/2/2010	Filter/Stormwater	Phenanthrene	13		mg/kg	1.5	8.7
MH133D	N5	6/2/2010	Filter/Stormwater	Pyrene	14		mg/kg	2.6	5.4
MH133D	N5	6/2/2010	Filter/Stormwater	Total HPAHs	97		mg/kg	12	8.1
MH133D	N5	6/2/2010	Filter/Stormwater	Total LPAHs	18		mg/kg	5.2	3.4
MH133D	N5	6/2/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	13		mg/kg	0.15	89
OWS137	N5	6/9/2009	Grab	Total PCBs	4.9		mg/kg	0.13	38
CB127	N6	4/7/2010	Grab	Total PCBs	0.61		mg/kg	0.13	4.7
CB127	N6	4/7/2010	Grab	Arsenic	8	U	mg/kg	7.3	1.1
CB127	N6	4/7/2010	Grab	Cadmium	4.1		mg/kg	5.1	0.80
CB127	N6	4/7/2010	Grab	Chromium	96		mg/kg	260	0.37
CB127	N6	4/7/2010	Grab	Copper	135		mg/kg	390	0.35
CB127	N6	4/7/2010	Grab	Lead	177		mg/kg	450	0.39
CB127	N6	4/7/2010	Grab	Mercury	0.17		mg/kg	0.41	0.41
CB127	N6	4/7/2010	Grab	Silver	0.5	U	mg/kg	6.1	0.082
CB127	N6	4/7/2010	Grab	Zinc	923		mg/kg	410	2.3
CB128	N6	4/7/2010	Grab	Total PCBs	0.35		mg/kg	0.13	2.7
CB128	N6	4/7/2010	Grab	Arsenic	23		mg/kg	7.3	3.2
CB128	N6	4/7/2010	Grab	Cadmium	1.9		mg/kg	5.1	0.37
CB128	N6	4/7/2010	Grab	Chromium	48		mg/kg	260	0.18
CB128	N6	4/7/2010	Grab	Copper	141		mg/kg	390	0.36
CB128	N6	4/7/2010	Grab	Lead	45		mg/kg	450	0.10
CB128	N6	4/7/2010	Grab	Mercury	0.05		mg/kg	0.41	0.12
CB128	N6	4/7/2010	Grab	Silver	0.5	U	mg/kg	6.1	0.082
CB128	N6	4/7/2010	Grab	Zinc	268		mg/kg	410	0.65
CB131	N6	7/20/2012	Grab	Total PCBs	2.7		mg/kg	0.13	21
CB131	N6	4/1/2010	Grab	Total PCBs	1.5		mg/kg	0.13	12
CB131	N6	6/8/2009	Grab	Total PCBs	1.4		mg/kg	0.13	11
CB131	N6	7/20/2012	Grab	Arsenic	13		mg/kg	7.3	1.8
CB131	N6	4/1/2010	Grab	Arsenic	21		mg/kg	7.3	2.9
CB131	N6	7/20/2012	Grab	Cadmium	9.6		mg/kg	5.1	1.9
CB131	N6	4/1/2010	Grab	Cadmium	8.3		mg/kg	5.1	1.6
CB131	N6	7/20/2012	Grab	Chromium	142		mg/kg	260	0.55
CB131	N6	4/1/2010	Grab	Chromium	151		mg/kg	260	0.58
CB131	N6	7/20/2012	Grab	Copper	251		mg/kg	390	0.64
CB131	N6	4/1/2010	Grab	Copper	351		mg/kg	390	0.90
CB131	N6	7/20/2012	Grab	Lead	223		mg/kg	450	0.50
CB131	N6	4/1/2010	Grab	Lead	208		mg/kg	450	0.46
CB131	N6	7/20/2012	Grab	Mercury	0.43		mg/kg	0.41	1.1
CB131	N6	4/1/2010	Grab	Mercury	0.62		mg/kg	0.41	1.5
CB131	N6	7/20/2012	Grab	Silver	1.2		mg/kg	6.1	0.20
CB131	N6	4/1/2010	Grab	Silver	0.6	U	mg/kg	6.1	0.098
CB131	N6	7/20/2012	Grab	Zinc	1,370		mg/kg	410	3.3
CB131	N6	4/1/2010	Grab	Zinc	1,130		mg/kg	410	2.8
CB133	N6	4/7/2010	Grab	Total PCBs	1.2		mg/kg	0.13	8.9
CB133	N6	4/7/2010	Grab	Arsenic	11		mg/kg	7.3	1.5
CB133	N6	4/7/2010	Grab	Cadmium	5.3		mg/kg	5.1	1.0
CB133	N6	4/7/2010	Grab	Chromium	120		mg/kg	260	0.46
CB133	N6	4/7/2010	Grab	Copper	192		mg/kg	390	0.49
CB133	N6	4/7/2010	Grab	Lead	138		mg/kg	450	0.31

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB133	N6	4/7/2010	Grab	Mercury	0.36	mg/kg	0.41	0.88
CB133	N6	4/7/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB133	N6	4/7/2010	Grab	Zinc	966	mg/kg	410	2.4
CB620	N6	4/5/2010	Grab	Total PCBs	0.46	mg/kg	0.13	3.5
CB620	N6	4/5/2010	Grab	Arsenic	20 U	mg/kg	7.3	2.7
CB620	N6	4/5/2010	Grab	Cadmium	4.1	mg/kg	5.1	0.80
CB620	N6	4/5/2010	Grab	Chromium	102	mg/kg	260	0.39
CB620	N6	4/5/2010	Grab	Copper	166	mg/kg	390	0.43
CB620	N6	4/5/2010	Grab	Lead	249	mg/kg	450	0.55
CB620	N6	4/5/2010	Grab	Mercury	0.21	mg/kg	0.41	0.51
CB620	N6	4/5/2010	Grab	Silver	1.0 U	mg/kg	6.1	0.16
CB620	N6	4/5/2010	Grab	Zinc	954	mg/kg	410	2.3
CB621	N6	4/12/2010	Grab	Total PCBs	0.36	mg/kg	0.13	2.8
CB621	N6	4/12/2010	Grab	Arsenic	30	mg/kg	7.3	4.1
CB621	N6	4/12/2010	Grab	Cadmium	23	mg/kg	5.1	4.5
CB621	N6	4/12/2010	Grab	Chromium	159	mg/kg	260	0.61
CB621	N6	4/12/2010	Grab	Copper	426	mg/kg	390	1.1
CB621	N6	4/12/2010	Grab	Lead	337	mg/kg	450	0.75
CB621	N6	4/12/2010	Grab	Mercury	0.44	mg/kg	0.41	1.1
CB621	N6	4/12/2010	Grab	Silver	1.5	mg/kg	6.1	0.25
CB621	N6	4/12/2010	Grab	Zinc	1,380	mg/kg	410	3.4
CB622	N6	4/5/2010	Grab	Total PCBs	0.36	mg/kg	0.13	2.8
CB622	N6	4/5/2010	Grab	Arsenic	35	mg/kg	7.3	4.8
CB622	N6	4/5/2010	Grab	Cadmium	17	mg/kg	5.1	3.3
CB622	N6	4/5/2010	Grab	Chromium	193	mg/kg	260	0.74
CB622	N6	4/5/2010	Grab	Copper	502	mg/kg	390	1.3
CB622	N6	4/5/2010	Grab	Lead	282	mg/kg	450	0.63
CB622	N6	4/5/2010	Grab	Mercury	0.39	mg/kg	0.41	0.95
CB622	N6	4/5/2010	Grab	Silver	1.2	mg/kg	6.1	0.20
CB622	N6	4/5/2010	Grab	Zinc	2,860	mg/kg	410	7.0
CB623	N6	4/12/2010	Grab	Total PCBs	0.13	mg/kg	0.13	0.96
CB623	N6	4/12/2010	Grab	Arsenic	7.0	mg/kg	7.3	0.96
CB623	N6	4/12/2010	Grab	Cadmium	3.5	mg/kg	5.1	0.69
CB623	N6	4/12/2010	Grab	Chromium	65	mg/kg	260	0.25
CB623	N6	4/12/2010	Grab	Copper	132	mg/kg	390	0.34
CB623	N6	4/12/2010	Grab	Lead	66	mg/kg	450	0.15
CB623	N6	4/12/2010	Grab	Mercury	0.08	mg/kg	0.41	0.20
CB623	N6	4/12/2010	Grab	Silver	0.3 U	mg/kg	6.1	0.049
CB623	N6	4/12/2010	Grab	Zinc	609	mg/kg	410	1.5
CB623A	N6	4/5/2010	Grab	Total PCBs	0.30	mg/kg	0.13	2.3
CB623A	N6	4/5/2010	Grab	Arsenic	11	mg/kg	7.3	1.5
CB623A	N6	4/5/2010	Grab	Cadmium	7.6	mg/kg	5.1	1.5
CB623A	N6	4/5/2010	Grab	Chromium	91	mg/kg	260	0.35
CB623A	N6	4/5/2010	Grab	Copper	201	mg/kg	390	0.52
CB623A	N6	4/5/2010	Grab	Lead	111	mg/kg	450	0.25
CB623A	N6	4/5/2010	Grab	Mercury	0.16	mg/kg	0.41	0.39
CB623A	N6	4/5/2010	Grab	Silver	0.50	mg/kg	6.1	0.082
CB623A	N6	4/5/2010	Grab	Zinc	1,310	mg/kg	410	3.2
CB625	N6	3/31/2010	Grab	Total PCBs	0.25	mg/kg	0.13	1.9
CB625	N6	5/14/2007	Grab	Total PCBs	0.25	mg/kg	0.13	1.9
CB625	N6	3/31/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB625	N6	3/31/2010	Grab	Cadmium	4.9	mg/kg	5.1	0.96
CB625	N6	3/31/2010	Grab	Chromium	126	mg/kg	260	0.48
CB625	N6	3/31/2010	Grab	Copper	777	mg/kg	390	2.0
CB625	N6	3/31/2010	Grab	Lead	303	mg/kg	450	0.67
CB625	N6	3/31/2010	Grab	Mercury	0.10	mg/kg	0.41	0.24
CB625	N6	3/31/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB625	N6	3/31/2010	Grab	Zinc	1,330	mg/kg	410	3.2
CB625A	N6	3/31/2010	Grab	Total PCBs	0.27	mg/kg	0.13	2.1
CB625A	N6	5/14/2007	Grab	Total PCBs	0.39	mg/kg	0.13	3.0
CB625A	N6	3/31/2010	Grab	Arsenic	11	mg/kg	7.3	1.5
CB625A	N6	3/31/2010	Grab	Cadmium	2.8	mg/kg	5.1	0.55
CB625A	N6	3/31/2010	Grab	Chromium	70	mg/kg	260	0.27
CB625A	N6	3/31/2010	Grab	Copper	528	mg/kg	390	1.4
CB625A	N6	3/31/2010	Grab	Lead	134	mg/kg	450	0.30
CB625A	N6	3/31/2010	Grab	Mercury	0.07	mg/kg	0.41	0.17
CB625A	N6	3/31/2010	Grab	Silver	0.50	mg/kg	6.1	0.082
CB625A	N6	3/31/2010	Grab	Zinc	1,200	mg/kg	410	2.9

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB625B	N6	3/31/2010	Grab	Total PCBs	0.32	mg/kg	0.13	2.5
CB625B	N6	5/14/2007	Grab	Total PCBs	0.92	mg/kg	0.13	7.1
CB625B	N6	3/31/2010	Grab	Arsenic	15	mg/kg	7.3	2.1
CB625B	N6	3/31/2010	Grab	Cadmium	7.4	mg/kg	5.1	1.5
CB625B	N6	3/31/2010	Grab	Chromium	91	mg/kg	260	0.35
CB625B	N6	3/31/2010	Grab	Copper	221	mg/kg	390	0.57
CB625B	N6	3/31/2010	Grab	Lead	161	mg/kg	450	0.36
CB625B	N6	3/31/2010	Grab	Mercury	0.10	mg/kg	0.41	0.24
CB625B	N6	3/31/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB625B	N6	3/31/2010	Grab	Zinc	766	mg/kg	410	1.9
CB625C	N6	4/7/2010	Grab	Total PCBs	0.25	mg/kg	0.13	1.9
CB625C	N6	4/7/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB625C	N6	4/7/2010	Grab	Cadmium	6.8	mg/kg	5.1	1.3
CB625C	N6	4/7/2010	Grab	Chromium	76	mg/kg	260	0.29
CB625C	N6	4/7/2010	Grab	Copper	143	mg/kg	390	0.37
CB625C	N6	4/7/2010	Grab	Lead	189	mg/kg	450	0.42
CB625C	N6	4/7/2010	Grab	Mercury	0.10	mg/kg	0.41	0.24
CB625C	N6	4/7/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB625C	N6	4/7/2010	Grab	Zinc	2,090	mg/kg	410	5.1
CB625D	N6	4/7/2010	Grab	Total PCBs	0.37	mg/kg	0.13	2.8
CB625D	N6	4/7/2010	Grab	Arsenic	8 U	mg/kg	7.3	1.1
CB625D	N6	4/7/2010	Grab	Cadmium	5.7	mg/kg	5.1	1.1
CB625D	N6	4/7/2010	Grab	Chromium	82	mg/kg	260	0.32
CB625D	N6	4/7/2010	Grab	Copper	127	mg/kg	390	0.33
CB625D	N6	4/7/2010	Grab	Lead	199	mg/kg	450	0.44
CB625D	N6	4/7/2010	Grab	Mercury	0.12	mg/kg	0.41	0.29
CB625D	N6	4/7/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB625D	N6	4/7/2010	Grab	Zinc	1,030	mg/kg	410	2.5
CB626	N6	3/31/2010	Grab	Total PCBs	0.09	mg/kg	0.13	0.69
CB626	N6	5/14/2007	Grab	Total PCBs	0.11	mg/kg	0.13	0.81
CB626	N6	3/31/2010	Grab	Arsenic	13	mg/kg	7.3	1.8
CB626	N6	3/31/2010	Grab	Cadmium	3.8	mg/kg	5.1	0.75
CB626	N6	3/31/2010	Grab	Chromium	44	mg/kg	260	0.17
CB626	N6	3/31/2010	Grab	Copper	276	mg/kg	390	0.71
CB626	N6	3/31/2010	Grab	Lead	44	mg/kg	450	0.098
CB626	N6	3/31/2010	Grab	Mercury	0.05	mg/kg	0.41	0.12
CB626	N6	3/31/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB626	N6	3/31/2010	Grab	Zinc	828	mg/kg	410	2.0
CB627	N6	3/31/2010	Grab	Total PCBs	1.0	mg/kg	0.13	7.8
CB627	N6	3/31/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB627	N6	3/31/2010	Grab	Cadmium	10	mg/kg	5.1	2.0
CB627	N6	3/31/2010	Grab	Chromium	140	mg/kg	260	0.54
CB627	N6	3/31/2010	Grab	Copper	367	mg/kg	390	0.94
CB627	N6	3/31/2010	Grab	Lead	287	mg/kg	450	0.64
CB627	N6	3/31/2010	Grab	Mercury	0.27	mg/kg	0.41	0.66
CB627	N6	3/31/2010	Grab	Silver	0.7 U	mg/kg	6.1	0.11
CB627	N6	3/31/2010	Grab	Zinc	1,900	mg/kg	410	4.6
CB628	N6	4/5/2010	Grab	Total PCBs	0.82	mg/kg	0.13	6.3
CB628	N6	4/5/2010	Grab	Arsenic	6 U	mg/kg	7.3	0.82
CB628	N6	4/5/2010	Grab	Cadmium	1.7	mg/kg	5.1	0.33
CB628	N6	4/5/2010	Grab	Chromium	38	mg/kg	260	0.15
CB628	N6	4/5/2010	Grab	Copper	113	mg/kg	390	0.29
CB628	N6	4/5/2010	Grab	Lead	78	mg/kg	450	0.17
CB628	N6	4/5/2010	Grab	Mercury	0.21	mg/kg	0.41	0.51
CB628	N6	4/5/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB628	N6	4/5/2010	Grab	Zinc	349	mg/kg	410	0.85
OWS132	N6	6/8/2009	Grab	Total PCBs	6.3	mg/kg	0.13	48
OWS132	N6	3/15/2007	Grab	Total PCBs	14	mg/kg	0.13	110
OWS132	N6	1/5/2006	Grab	Total PCBs	7.3	mg/kg	0.13	56
OWS132	N6	9/26/2005	Grab	Total PCBs	12	mg/kg	0.13	92
OWS153	N6	3/3/2011	Grab	Total PCBs	1.1	mg/kg	0.13	8.7
OWS153	N6	1/5/2006	Grab	Total PCBs	1.0	mg/kg	0.13	7.7
CB140	N7	4/1/2010	Grab	Total PCBs	0.50	mg/kg	0.13	3.8
CB140	N7	4/1/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB140	N7	4/1/2010	Grab	Cadmium	7.5	mg/kg	5.1	1.5
CB140	N7	4/1/2010	Grab	Chromium	161	mg/kg	260	0.62
CB140	N7	4/1/2010	Grab	Copper	381	mg/kg	390	0.98
CB140	N7	4/1/2010	Grab	Lead	165	mg/kg	450	0.37

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB140	N7	4/1/2010	Grab	Mercury	0.18	mg/kg	0.41	0.44
CB140	N7	4/1/2010	Grab	Silver	1.3	mg/kg	6.1	0.21
CB140	N7	4/1/2010	Grab	Zinc	953	mg/kg	410	2.3
CB142	N7	4/1/2010	Grab	Total PCBs	0.63	mg/kg	0.13	4.8
CB142	N7	4/1/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB142	N7	4/1/2010	Grab	Cadmium	27	mg/kg	5.1	5.2
CB142	N7	4/1/2010	Grab	Chromium	380	mg/kg	260	1.5
CB142	N7	4/1/2010	Grab	Copper	759	mg/kg	390	1.9
CB142	N7	4/1/2010	Grab	Lead	335	mg/kg	450	0.74
CB142	N7	4/1/2010	Grab	Mercury	0.14	mg/kg	0.41	0.34
CB142	N7	4/1/2010	Grab	Silver	1.1	mg/kg	6.1	0.18
CB142	N7	4/1/2010	Grab	Zinc	2,820	mg/kg	410	6.9
CB142A	N7	4/1/2010	Grab	Total PCBs	1.1	mg/kg	0.13	8.4
CB142A	N7	4/1/2010	Grab	Arsenic	20 U	mg/kg	7.3	2.7
CB142A	N7	4/1/2010	Grab	Cadmium	33	mg/kg	5.1	6.5
CB142A	N7	4/1/2010	Grab	Chromium	316	mg/kg	260	1.2
CB142A	N7	4/1/2010	Grab	Copper	295	mg/kg	390	0.76
CB142A	N7	4/1/2010	Grab	Lead	310	mg/kg	450	0.69
CB142A	N7	4/1/2010	Grab	Mercury	0.20	mg/kg	0.41	0.49
CB142A	N7	4/1/2010	Grab	Silver	3.0	mg/kg	6.1	0.49
CB142A	N7	4/1/2010	Grab	Zinc	5,080	mg/kg	410	12
CB142C	N7	4/1/2010	Grab	Total PCBs	0.45	mg/kg	0.13	3.5
CB142C	N7	4/1/2010	Grab	Arsenic	20 U	mg/kg	7.3	2.7
CB142C	N7	4/1/2010	Grab	Cadmium	4.2	mg/kg	5.1	0.82
CB142C	N7	4/1/2010	Grab	Chromium	192	mg/kg	260	0.74
CB142C	N7	4/1/2010	Grab	Copper	414	mg/kg	390	1.1
CB142C	N7	4/1/2010	Grab	Lead	343	mg/kg	450	0.76
CB142C	N7	4/1/2010	Grab	Mercury	0.25	mg/kg	0.41	0.61
CB142C	N7	4/1/2010	Grab	Silver	1 U	mg/kg	6.1	0.16
CB142C	N7	4/1/2010	Grab	Zinc	3,290	mg/kg	410	8.0
CB144	N7	4/1/2010	Grab	Total PCBs	1.3	mg/kg	0.13	9.9
CB144	N7	4/1/2010	Grab	Arsenic	11	mg/kg	7.3	1.5
CB144	N7	4/1/2010	Grab	Cadmium	6.7	mg/kg	5.1	1.3
CB144	N7	4/1/2010	Grab	Chromium	122	mg/kg	260	0.47
CB144	N7	4/1/2010	Grab	Copper	233	mg/kg	390	0.60
CB144	N7	4/1/2010	Grab	Lead	179	mg/kg	450	0.40
CB144	N7	4/1/2010	Grab	Mercury	0.12	mg/kg	0.41	0.29
CB144	N7	4/1/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB144	N7	4/1/2010	Grab	Zinc	1,150	mg/kg	410	2.8
CB145A	N7	4/1/2010	Grab	Total PCBs	0.54	mg/kg	0.13	4.2
CB145A	N7	4/1/2010	Grab	Arsenic	11	mg/kg	7.3	1.5
CB145A	N7	4/1/2010	Grab	Cadmium	3.7	mg/kg	5.1	0.73
CB145A	N7	4/1/2010	Grab	Chromium	255	mg/kg	260	0.98
CB145A	N7	4/1/2010	Grab	Copper	145	mg/kg	390	0.37
CB145A	N7	4/1/2010	Grab	Lead	818	mg/kg	450	1.8
CB145A	N7	4/1/2010	Grab	Mercury	0.08	mg/kg	0.41	0.20
CB145A	N7	4/1/2010	Grab	Silver	0.60	mg/kg	6.1	0.098
CB145A	N7	4/1/2010	Grab	Zinc	983	mg/kg	410	2.4
CB146	N7	4/1/2010	Grab	Total PCBs	1.4	mg/kg	0.13	11
CB146	N7	4/1/2010	Grab	Arsenic	30	mg/kg	7.3	4.1
CB146	N7	4/1/2010	Grab	Cadmium	12	mg/kg	5.1	2.3
CB146	N7	4/1/2010	Grab	Chromium	165 J	mg/kg	260	0.63
CB146	N7	4/1/2010	Grab	Copper	269 J	mg/kg	390	0.69
CB146	N7	4/1/2010	Grab	Lead	345	mg/kg	450	0.77
CB146	N7	4/1/2010	Grab	Mercury	1.4 J	mg/kg	0.41	3.4
CB146	N7	4/1/2010	Grab	Silver	1 U	mg/kg	6.1	0.16
CB146	N7	4/1/2010	Grab	Zinc	1,810	mg/kg	410	4.4
CB147	N7	4/1/2010	Grab	Total PCBs	19	mg/kg	0.13	150
CB147	N7	4/1/2010	Grab	Arsenic	150	mg/kg	7.3	21
CB147	N7	4/1/2010	Grab	Cadmium	52	mg/kg	5.1	10
CB147	N7	4/1/2010	Grab	Chromium	629	mg/kg	260	2.4
CB147	N7	4/1/2010	Grab	Copper	798	mg/kg	390	2.0
CB147	N7	4/1/2010	Grab	Lead	1,220	mg/kg	450	2.7
CB147	N7	4/1/2010	Grab	Mercury	6.9	mg/kg	0.41	17
CB147	N7	4/1/2010	Grab	Silver	2.0	mg/kg	6.1	0.33
CB147	N7	4/1/2010	Grab	Zinc	4,960	mg/kg	410	12
MH138	N7	11/16/2011	Filter/Stormwater	Total PCBs	3.6	mg/kg	0.13	28
MH138	N7	9/26/2011	Filter/Stormwater	Total PCBs	1.0	mg/kg	0.13	7.7

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
MH138	N7	6/2/2010	Filter/Stormwater	Total PCBs	13		mg/kg	0.13	98
MH138	N7	5/20/2010	Filter/Stormwater	Total PCBs	0.77		mg/kg	0.13	5.9
MH138	N7	1/26/2007	Filter/Undifferentiated	Total PCBs	17		mg/kg	0.13	130
MH138	N7	1/22/2007	Filter/Undifferentiated	Total PCBs	9.4		mg/kg	0.13	72
MH138	N7	11/16/2011	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	50		ng/kg	13	3.9
MH138	N7	5/20/2010	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	17		ng/kg	13	1.3
MH138	N7	9/26/2011	Filter/Stormwater	Arsenic	50	U	mg/kg	7.3	6.8
MH138	N7	6/2/2010	Filter/Stormwater	Arsenic	30		mg/kg	7.3	4.1
MH138	N7	5/20/2010	Filter/Stormwater	Arsenic	90		mg/kg	7.3	12
MH138	N7	9/26/2011	Filter/Stormwater	Cadmium	6.0		mg/kg	5.1	1.2
MH138	N7	6/2/2010	Filter/Stormwater	Cadmium	11		mg/kg	5.1	2.2
MH138	N7	5/20/2010	Filter/Stormwater	Cadmium	10		mg/kg	5.1	2.0
MH138	N7	9/26/2011	Filter/Stormwater	Chromium	116		mg/kg	260	0.45
MH138	N7	6/2/2010	Filter/Stormwater	Chromium	78		mg/kg	260	0.30
MH138	N7	5/20/2010	Filter/Stormwater	Chromium	100		mg/kg	260	0.38
MH138	N7	9/26/2011	Filter/Stormwater	Copper	454		mg/kg	390	1.2
MH138	N7	6/2/2010	Filter/Stormwater	Copper	149		mg/kg	390	0.38
MH138	N7	5/20/2010	Filter/Stormwater	Copper	126	J	mg/kg	390	0.32
MH138	N7	9/26/2011	Filter/Stormwater	Lead	110		mg/kg	450	0.24
MH138	N7	6/2/2010	Filter/Stormwater	Lead	90		mg/kg	450	0.20
MH138	N7	5/20/2010	Filter/Stormwater	Lead	120		mg/kg	450	0.27
MH138	N7	9/26/2011	Filter/Stormwater	Mercury	0.34		mg/kg	0.41	0.83
MH138	N7	6/2/2010	Filter/Stormwater	Mercury	0.37	J	mg/kg	0.41	0.90
MH138	N7	5/20/2010	Filter/Stormwater	Mercury	0.40	J	mg/kg	0.41	0.98
MH138	N7	1/26/2007	Filter/Undifferentiated	Mercury	0.27		mg/kg	0.41	0.66
MH138	N7	9/26/2011	Filter/Stormwater	Silver	3	U	mg/kg	6.1	0.49
MH138	N7	6/2/2010	Filter/Stormwater	Silver	1	U	mg/kg	6.1	0.16
MH138	N7	5/20/2010	Filter/Stormwater	Silver	4	U	mg/kg	6.1	0.66
MH138	N7	9/26/2011	Filter/Stormwater	Zinc	1,330		mg/kg	410	3.2
MH138	N7	6/2/2010	Filter/Stormwater	Zinc	1,250		mg/kg	410	3.0
MH138	N7	5/20/2010	Filter/Stormwater	Zinc	2,890		mg/kg	410	7.0
MH138	N7	9/26/2011	Filter/Stormwater	Acenaphthene	0.17	U	mg/kg	0.50	0.34
MH138	N7	6/2/2010	Filter/Stormwater	Acenaphthene	0.83	U	mg/kg	0.50	1.7
MH138	N7	9/26/2011	Filter/Stormwater	Anthracene	0.17	U	mg/kg	0.96	0.18
MH138	N7	6/2/2010	Filter/Stormwater	Anthracene	0.83	U	mg/kg	0.96	0.86
MH138	N7	9/26/2011	Filter/Stormwater	Benzo(a)anthracene	0.51		mg/kg	1.3	0.39
MH138	N7	6/2/2010	Filter/Stormwater	Benzo(a)anthracene	0.83	U	mg/kg	1.3	0.64
MH138	N7	9/26/2011	Filter/Stormwater	Total Benzofluoranthenes	2.8		mg/kg	3.2	0.88
MH138	N7	6/2/2010	Filter/Stormwater	Total Benzofluoranthenes	2.4		mg/kg	3.2	0.75
MH138	N7	9/26/2011	Filter/Stormwater	Benzo(g,h,i)perylene	1.1		mg/kg	0.67	1.6
MH138	N7	6/2/2010	Filter/Stormwater	Benzo(g,h,i)perylene	1.5		mg/kg	0.67	2.2
MH138	N7	9/26/2011	Filter/Stormwater	Benzo(a)pyrene	0.76		mg/kg	0.15	5.1
MH138	N7	6/2/2010	Filter/Stormwater	Benzo(a)pyrene	1.3		mg/kg	0.15	8.7
MH138	N7	9/26/2011	Filter/Stormwater	Chrysene	1.7		mg/kg	1.4	1.2
MH138	N7	6/2/2010	Filter/Stormwater	Chrysene	2.0		mg/kg	1.4	1.4
MH138	N7	9/26/2011	Filter/Stormwater	Dibenz(a,h)anthracene	0.19		mg/kg	0.23	0.83
MH138	N7	6/2/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.83	U	mg/kg	0.23	3.6
MH138	N7	9/26/2011	Filter/Stormwater	Dibenzofuran	0.17	U	mg/kg	0.54	0.31
MH138	N7	6/2/2010	Filter/Stormwater	Dibenzofuran	0.83	U	mg/kg	0.54	1.5
MH138	N7	9/26/2011	Filter/Stormwater	Fluoranthene	2.5		mg/kg	1.7	1.5
MH138	N7	6/2/2010	Filter/Stormwater	Fluoranthene	4.0		mg/kg	1.7	2.4
MH138	N7	9/26/2011	Filter/Stormwater	Fluorene	0.17	U	mg/kg	0.54	0.31
MH138	N7	6/2/2010	Filter/Stormwater	Fluorene	0.83	U	mg/kg	0.54	1.5
MH138	N7	9/26/2011	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.83		mg/kg	0.60	1.4
MH138	N7	6/2/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	1.1		mg/kg	0.60	1.8
MH138	N7	9/26/2011	Filter/Stormwater	Phenanthrene	0.85		mg/kg	1.5	0.57
MH138	N7	6/2/2010	Filter/Stormwater	Phenanthrene	1.8		mg/kg	1.5	1.2
MH138	N7	9/26/2011	Filter/Stormwater	Pyrene	1.6		mg/kg	2.6	0.62
MH138	N7	6/2/2010	Filter/Stormwater	Pyrene	3.5		mg/kg	2.6	1.3
MH138	N7	9/26/2011	Filter/Stormwater	Total HPAHs	12		mg/kg	12	1.0
MH138	N7	6/2/2010	Filter/Stormwater	Total HPAHs	16		mg/kg	12	1.3
MH138	N7	9/26/2011	Filter/Stormwater	Total LPAHs	0.85		mg/kg	5.2	0.16
MH138	N7	6/2/2010	Filter/Stormwater	Total LPAHs	1.8		mg/kg	5.2	0.35
MH138	N7	9/26/2011	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	1.2		mg/kg	0.15	8.1
MH138	N7	6/2/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	1.8		mg/kg	0.15	12
MH612A	N7	4/1/2010	Grab	Total PCBs	1.8		mg/kg	0.13	14
MH612A	N7	4/1/2010	Grab	Arsenic	20	U	mg/kg	7.3	2.7
MH612A	N7	4/1/2010	Grab	Cadmium	11		mg/kg	5.1	2.1

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH612A	N7	4/1/2010	Grab	Chromium	247	mg/kg	260	0.95
MH612A	N7	4/1/2010	Grab	Copper	263	mg/kg	390	0.67
MH612A	N7	4/1/2010	Grab	Lead	166	mg/kg	450	0.37
MH612A	N7	4/1/2010	Grab	Mercury	0.55	mg/kg	0.41	1.3
MH612A	N7	4/1/2010	Grab	Silver	1 U	mg/kg	6.1	0.16
MH612A	N7	4/1/2010	Grab	Zinc	1,550	mg/kg	410	3.8
MH612B	N7	4/1/2010	Grab	Total PCBs	1.7	mg/kg	0.13	13
MH612B	N7	4/1/2010	Grab	Arsenic	12	mg/kg	7.3	1.6
MH612B	N7	4/1/2010	Grab	Cadmium	11	mg/kg	5.1	2.1
MH612B	N7	4/1/2010	Grab	Chromium	154	mg/kg	260	0.59
MH612B	N7	4/1/2010	Grab	Copper	199	mg/kg	390	0.51
MH612B	N7	4/1/2010	Grab	Lead	175	mg/kg	450	0.39
MH612B	N7	4/1/2010	Grab	Mercury	0.40	mg/kg	0.41	0.98
MH612B	N7	4/1/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
MH612B	N7	4/1/2010	Grab	Zinc	1,540	mg/kg	410	3.8
OWS612-2	N7	4/1/2010	Grab	Total PCBs	4.6	mg/kg	0.13	35
OWS612-2	N7	4/1/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
OWS612-2	N7	4/1/2010	Grab	Cadmium	17	mg/kg	5.1	3.3
OWS612-2	N7	4/1/2010	Grab	Chromium	170	mg/kg	260	0.65
OWS612-2	N7	4/1/2010	Grab	Copper	323	mg/kg	390	0.83
OWS612-2	N7	4/1/2010	Grab	Lead	272	mg/kg	450	0.60
OWS612-2	N7	4/1/2010	Grab	Mercury	0.34	mg/kg	0.41	0.83
OWS612-2	N7	4/1/2010	Grab	Silver	1.0	mg/kg	6.1	0.16
OWS612-2	N7	4/1/2010	Grab	Zinc	2,660	mg/kg	410	6.5
UNKCB10	N7	4/1/2010	Grab	Total PCBs	1.2	mg/kg	0.13	9.2
UNKCB10	N7	4/1/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
UNKCB10	N7	4/1/2010	Grab	Cadmium	8.2	mg/kg	5.1	1.6
UNKCB10	N7	4/1/2010	Grab	Chromium	133	mg/kg	260	0.51
UNKCB10	N7	4/1/2010	Grab	Copper	162	mg/kg	390	0.42
UNKCB10	N7	4/1/2010	Grab	Lead	133	mg/kg	450	0.30
UNKCB10	N7	4/1/2010	Grab	Mercury	0.09	mg/kg	0.41	0.22
UNKCB10	N7	4/1/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
UNKCB10	N7	4/1/2010	Grab	Zinc	1,050	mg/kg	410	2.6
CB154	N8	4/12/2010	Grab	Total PCBs	0.16	mg/kg	0.13	1.2
CB154	N8	5/15/2007	Grab	Total PCBs	0.70	mg/kg	0.13	5.4
CB154	N8	5/14/2007	Grab	Total PCBs	0.43	mg/kg	0.13	3.3
CB154	N8	4/12/2010	Grab	Arsenic	7 U	mg/kg	7.3	0.96
CB154	N8	4/12/2010	Grab	Cadmium	2.0	mg/kg	5.1	0.39
CB154	N8	4/12/2010	Grab	Chromium	76	mg/kg	260	0.29
CB154	N8	4/12/2010	Grab	Copper	147	mg/kg	390	0.38
CB154	N8	4/12/2010	Grab	Lead	88	mg/kg	450	0.20
CB154	N8	4/12/2010	Grab	Mercury	0.05	mg/kg	0.41	0.12
CB154	N8	4/12/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB154	N8	4/12/2010	Grab	Zinc	586	mg/kg	410	1.4
CB154A	N8	3/31/2010	Grab	Total PCBs	0.40	mg/kg	0.13	3.1
CB154A	N8	3/31/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB154A	N8	3/31/2010	Grab	Cadmium	4.3	mg/kg	5.1	0.84
CB154A	N8	3/31/2010	Grab	Chromium	97	mg/kg	260	0.37
CB154A	N8	3/31/2010	Grab	Copper	338	mg/kg	390	0.87
CB154A	N8	3/31/2010	Grab	Lead	174	mg/kg	450	0.39
CB154A	N8	3/31/2010	Grab	Mercury	0.15	mg/kg	0.41	0.37
CB154A	N8	3/31/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB154A	N8	3/31/2010	Grab	Zinc	914	mg/kg	410	2.2
CB173A	N8	3/30/2010	Grab	Total PCBs	0.65	mg/kg	0.13	5.0
CB173A	N8	3/30/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB173A	N8	3/30/2010	Grab	Cadmium	6.2	mg/kg	5.1	1.2
CB173A	N8	3/30/2010	Grab	Chromium	148	mg/kg	260	0.57
CB173A	N8	3/30/2010	Grab	Copper	214	mg/kg	390	0.55
CB173A	N8	3/30/2010	Grab	Lead	368	mg/kg	450	0.82
CB173A	N8	3/30/2010	Grab	Mercury	0.18	mg/kg	0.41	0.44
CB173A	N8	3/30/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB173A	N8	3/30/2010	Grab	Zinc	1,730	mg/kg	410	4.2
CB201	N8	3/31/2010	Grab	Total PCBs	0.42	mg/kg	0.13	3.2
CB201	N8	6/9/2009	Grab	Total PCBs	0.48	mg/kg	0.13	3.7
CB201	N8	3/31/2010	Grab	Arsenic	63	mg/kg	7.3	8.6
CB201	N8	3/31/2010	Grab	Cadmium	6.9	mg/kg	5.1	1.4
CB201	N8	3/31/2010	Grab	Chromium	231	mg/kg	260	0.89
CB201	N8	3/31/2010	Grab	Copper	223	mg/kg	390	0.57

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB201	N8	3/31/2010	Grab	Lead	631	mg/kg	450	1.4
CB201	N8	3/31/2010	Grab	Mercury	0.13	mg/kg	0.41	0.32
CB201	N8	3/31/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB201	N8	3/31/2010	Grab	Zinc	1,230	mg/kg	410	3.0
CB203	N8	3/31/2010	Grab	Total PCBs	0.66	mg/kg	0.13	5.1
CB203	N8	3/31/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB203	N8	3/31/2010	Grab	Cadmium	4.6	mg/kg	5.1	0.90
CB203	N8	3/31/2010	Grab	Chromium	38	mg/kg	260	0.14
CB203	N8	3/31/2010	Grab	Copper	73	mg/kg	390	0.19
CB203	N8	3/31/2010	Grab	Lead	32	mg/kg	450	0.071
CB203	N8	3/31/2010	Grab	Mercury	0.05	mg/kg	0.41	0.12
CB203	N8	3/31/2010	Grab	Silver	0.3 U	mg/kg	6.1	0.049
CB203	N8	3/31/2010	Grab	Zinc	666	mg/kg	410	1.6
CB209B	N8	3/3/2011	Grab	Total PCBs	0.37	mg/kg	0.13	2.8
CB209B	N8	3/31/2010	Grab	Total PCBs	0.47	mg/kg	0.13	3.6
CB209B	N8	9/26/2005	Grab	Total PCBs	0.066	mg/kg	0.13	0.51
CB209B	N8	3/31/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB209B	N8	3/31/2010	Grab	Cadmium	7.2	mg/kg	5.1	1.4
CB209B	N8	3/31/2010	Grab	Chromium	95	mg/kg	260	0.36
CB209B	N8	3/31/2010	Grab	Copper	166	mg/kg	390	0.43
CB209B	N8	3/31/2010	Grab	Lead	149	mg/kg	450	0.33
CB209B	N8	3/31/2010	Grab	Mercury	0.1	mg/kg	0.41	0.24
CB209B	N8	3/31/2010	Grab	Silver	0.7	mg/kg	6.1	0.11
CB209B	N8	3/31/2010	Grab	Zinc	936	mg/kg	410	2.3
CB53	N8	3/31/2010	Grab	Total PCBs	1.3	mg/kg	0.13	9.7
CB53	N8	3/31/2010	Grab	Arsenic	30	mg/kg	7.3	4.1
CB53	N8	3/31/2010	Grab	Cadmium	41	mg/kg	5.1	8.1
CB53	N8	3/31/2010	Grab	Chromium	410	mg/kg	260	1.6
CB53	N8	3/31/2010	Grab	Copper	555	mg/kg	390	1.4
CB53	N8	3/31/2010	Grab	Lead	193	mg/kg	450	0.43
CB53	N8	3/31/2010	Grab	Mercury	0.21	mg/kg	0.41	0.51
CB53	N8	3/31/2010	Grab	Silver	7.4	mg/kg	6.1	1.2
CB53	N8	3/31/2010	Grab	Zinc	2,760	mg/kg	410	6.7
CB54A	N8	3/30/2010	Grab	Total PCBs	0.92	mg/kg	0.13	7.1
CB54A	N8	3/30/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB54A	N8	3/30/2010	Grab	Cadmium	35	mg/kg	5.1	6.8
CB54A	N8	3/30/2010	Grab	Chromium	193	mg/kg	260	0.74
CB54A	N8	3/30/2010	Grab	Copper	500	mg/kg	390	1.3
CB54A	N8	3/30/2010	Grab	Lead	244	mg/kg	450	0.54
CB54A	N8	3/30/2010	Grab	Mercury	0.31	mg/kg	0.41	0.76
CB54A	N8	3/30/2010	Grab	Silver	3.0	mg/kg	6.1	0.49
CB54A	N8	3/30/2010	Grab	Zinc	3,240	mg/kg	410	7.9
CB55	N8	3/30/2010	Grab	Total PCBs	0.73	mg/kg	0.13	5.6
CB55	N8	3/30/2010	Grab	Arsenic	20 U	mg/kg	7.3	2.7
CB55	N8	3/30/2010	Grab	Cadmium	30	mg/kg	5.1	5.9
CB55	N8	3/30/2010	Grab	Chromium	141	mg/kg	260	0.54
CB55	N8	3/30/2010	Grab	Copper	450	mg/kg	390	1.2
CB55	N8	3/30/2010	Grab	Lead	197	mg/kg	450	0.44
CB55	N8	3/30/2010	Grab	Mercury	0.21	mg/kg	0.41	0.51
CB55	N8	3/30/2010	Grab	Silver	6.0	mg/kg	6.1	0.98
CB55	N8	3/30/2010	Grab	Zinc	4,800	mg/kg	410	12
CB55A	N8	3/30/2010	Grab	Total PCBs	0.74	mg/kg	0.13	5.7
CB55A	N8	3/30/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB55A	N8	3/30/2010	Grab	Cadmium	17	mg/kg	5.1	3.3
CB55A	N8	3/30/2010	Grab	Chromium	167	mg/kg	260	0.64
CB55A	N8	3/30/2010	Grab	Copper	492	mg/kg	390	1.3
CB55A	N8	3/30/2010	Grab	Lead	231	mg/kg	450	0.51
CB55A	N8	3/30/2010	Grab	Mercury	0.21	mg/kg	0.41	0.51
CB55A	N8	3/30/2010	Grab	Silver	21	mg/kg	6.1	3.4
CB55A	N8	3/30/2010	Grab	Zinc	3,010	mg/kg	410	7.3
CB56A	N8	3/30/2010	Grab	Total PCBs	0.59	mg/kg	0.13	4.5
CB56A	N8	3/30/2010	Grab	Arsenic	30	mg/kg	7.3	4.1
CB56A	N8	3/30/2010	Grab	Cadmium	14	mg/kg	5.1	2.8
CB56A	N8	3/30/2010	Grab	Chromium	205	mg/kg	260	0.79
CB56A	N8	3/30/2010	Grab	Copper	508	mg/kg	390	1.3
CB56A	N8	3/30/2010	Grab	Lead	359	mg/kg	450	0.80
CB56A	N8	3/30/2010	Grab	Mercury	0.33	mg/kg	0.41	0.80
CB56A	N8	3/30/2010	Grab	Silver	2.5	mg/kg	6.1	0.41

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB56A	N8	3/30/2010	Grab	Zinc	2,540	mg/kg	410	6.2
CB626A	N8	3/31/2010	Grab	Total PCBs	0.38	mg/kg	0.13	2.9
CB626A	N8	3/31/2010	Grab	Arsenic	9.0	mg/kg	7.3	1.2
CB626A	N8	3/31/2010	Grab	Cadmium	2.9	mg/kg	5.1	0.57
CB626A	N8	3/31/2010	Grab	Chromium	73	mg/kg	260	0.28
CB626A	N8	3/31/2010	Grab	Copper	188	mg/kg	390	0.48
CB626A	N8	3/31/2010	Grab	Lead	128	mg/kg	450	0.28
CB626A	N8	3/31/2010	Grab	Mercury	0.12	mg/kg	0.41	0.29
CB626A	N8	3/31/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB626A	N8	3/31/2010	Grab	Zinc	951	mg/kg	410	2.3
CB626B	N8	4/12/2010	Grab	Total PCBs	0.20	mg/kg	0.13	1.5
CB626B	N8	4/12/2010	Grab	Arsenic	8 U	mg/kg	7.3	1.1
CB626B	N8	4/12/2010	Grab	Cadmium	1.8	mg/kg	5.1	0.35
CB626B	N8	4/12/2010	Grab	Chromium	53	mg/kg	260	0.20
CB626B	N8	4/12/2010	Grab	Copper	105	mg/kg	390	0.27
CB626B	N8	4/12/2010	Grab	Lead	73	mg/kg	450	0.16
CB626B	N8	4/12/2010	Grab	Mercury	0.09	mg/kg	0.41	0.22
CB626B	N8	4/12/2010	Grab	Silver	20	mg/kg	6.1	3.3
CB626B	N8	4/12/2010	Grab	Zinc	718	mg/kg	410	1.8
CB74A	N8	3/31/2010	Grab	Total PCBs	0.24	mg/kg	0.13	1.9
CB74A	N8	3/31/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB74A	N8	3/31/2010	Grab	Cadmium	2.7	mg/kg	5.1	0.53
CB74A	N8	3/31/2010	Grab	Chromium	61	mg/kg	260	0.24
CB74A	N8	3/31/2010	Grab	Copper	106	mg/kg	390	0.27
CB74A	N8	3/31/2010	Grab	Lead	110	mg/kg	450	0.24
CB74A	N8	3/31/2010	Grab	Mercury	0.08	mg/kg	0.41	0.20
CB74A	N8	3/31/2010	Grab	Silver	0.80	mg/kg	6.1	0.13
CB74A	N8	3/31/2010	Grab	Zinc	608	mg/kg	410	1.5
D153B	N8	5/10/2010	Grab	Total PCBs	0.80	mg/kg	0.13	6.2
D153B	N8	5/10/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
D153B	N8	5/10/2010	Grab	Cadmium	108	mg/kg	5.1	21
D153B	N8	5/10/2010	Grab	Chromium	119	mg/kg	260	0.46
D153B	N8	5/10/2010	Grab	Copper	339	mg/kg	390	0.87
D153B	N8	5/10/2010	Grab	Lead	308	mg/kg	450	0.68
D153B	N8	5/10/2010	Grab	Mercury	0.17	mg/kg	0.41	0.41
D153B	N8	5/10/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
D153B	N8	5/10/2010	Grab	Zinc	12,000	mg/kg	410	29
D153C	N8	5/4/2010	Grab	Total PCBs	0.49	mg/kg	0.13	3.8
D153C	N8	5/4/2010	Grab	Arsenic	20 U	mg/kg	7.3	2.7
D153C	N8	5/4/2010	Grab	Cadmium	90	mg/kg	5.1	18
D153C	N8	5/4/2010	Grab	Chromium	192	mg/kg	260	0.74
D153C	N8	5/4/2010	Grab	Copper	596	mg/kg	390	1.5
D153C	N8	5/4/2010	Grab	Lead	447	mg/kg	450	0.99
D153C	N8	5/4/2010	Grab	Mercury	0.26	mg/kg	0.41	0.63
D153C	N8	5/4/2010	Grab	Silver	1 U	mg/kg	6.1	0.16
D153C	N8	5/4/2010	Grab	Zinc	22,900	mg/kg	410	56
D333A	N8	5/4/2010	Grab	Total PCBs	0.30	mg/kg	0.13	2.3
D333A	N8	5/4/2010	Grab	Arsenic	20 U	mg/kg	7.3	2.7
D333A	N8	5/4/2010	Grab	Cadmium	2.0	mg/kg	5.1	0.39
D333A	N8	5/4/2010	Grab	Chromium	69	mg/kg	260	0.27
D333A	N8	5/4/2010	Grab	Copper	208	mg/kg	390	0.53
D333A	N8	5/4/2010	Grab	Lead	127	mg/kg	450	0.28
D333A	N8	5/4/2010	Grab	Mercury	0.08	mg/kg	0.41	0.20
D333A	N8	5/4/2010	Grab	Silver	1.0	mg/kg	6.1	0.16
D333A	N8	5/4/2010	Grab	Zinc	385	mg/kg	410	0.94
D333B	N8	5/4/2010	Grab	Total PCBs	0.3	mg/kg	0.13	2.3
D333B	N8	5/4/2010	Grab	Arsenic	20 U	mg/kg	7.3	2.7
D333B	N8	5/4/2010	Grab	Cadmium	5.1	mg/kg	5.1	1.0
D333B	N8	5/4/2010	Grab	Chromium	463	mg/kg	260	1.8
D333B	N8	5/4/2010	Grab	Copper	830	mg/kg	390	2.1
D333B	N8	5/4/2010	Grab	Lead	157	mg/kg	450	0.35
D333B	N8	5/4/2010	Grab	Mercury	0.15	mg/kg	0.41	0.37
D333B	N8	5/4/2010	Grab	Silver	24	mg/kg	6.1	3.9
D333B	N8	5/4/2010	Grab	Zinc	1,270	mg/kg	410	3.1
D333C	N8	5/4/2010	Grab	Total PCBs	0.45	mg/kg	0.13	3.5
D333C	N8	5/4/2010	Grab	Arsenic	12	mg/kg	7.3	1.6
D333C	N8	5/4/2010	Grab	Cadmium	6.8	mg/kg	5.1	1.3
D333C	N8	5/4/2010	Grab	Chromium	97	mg/kg	260	0.37

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
D333C	N8	5/4/2010	Grab	Copper	219	mg/kg	390	0.56
D333C	N8	5/4/2010	Grab	Lead	204	mg/kg	450	0.45
D333C	N8	5/4/2010	Grab	Mercury	0.11	mg/kg	0.41	0.27
D333C	N8	5/4/2010	Grab	Silver	1.6	mg/kg	6.1	0.26
D333C	N8	5/4/2010	Grab	Zinc	2,370	mg/kg	410	5.8
D333D	N8	5/4/2010	Grab	Total PCBs	0.22	mg/kg	0.13	1.7
D333D	N8	5/4/2010	Grab	Arsenic	7 U	mg/kg	7.3	0.96
D333D	N8	5/4/2010	Grab	Cadmium	6.2	mg/kg	5.1	1.2
D333D	N8	5/4/2010	Grab	Chromium	126	mg/kg	260	0.48
D333D	N8	5/4/2010	Grab	Copper	148	mg/kg	390	0.38
D333D	N8	5/4/2010	Grab	Lead	123	mg/kg	450	0.27
D333D	N8	5/4/2010	Grab	Mercury	0.05	mg/kg	0.41	0.12
D333D	N8	5/4/2010	Grab	Silver	0.60	mg/kg	6.1	0.098
D333D	N8	5/4/2010	Grab	Zinc	834	mg/kg	410	2.0
UNKCB12	N8	3/31/2010	Grab	Total PCBs	0.66	mg/kg	0.13	5.1
UNKCB12	N8	3/31/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
UNKCB12	N8	3/31/2010	Grab	Cadmium	23	mg/kg	5.1	4.5
UNKCB12	N8	3/31/2010	Grab	Chromium	113	mg/kg	260	0.43
UNKCB12	N8	3/31/2010	Grab	Copper	427	mg/kg	390	1.1
UNKCB12	N8	3/31/2010	Grab	Lead	162	mg/kg	450	0.36
UNKCB12	N8	3/31/2010	Grab	Mercury	0.18	mg/kg	0.41	0.44
UNKCB12	N8	3/31/2010	Grab	Silver	1.0	mg/kg	6.1	0.16
UNKCB12	N8	3/31/2010	Grab	Zinc	2,290	mg/kg	410	5.6
UNKCB15	N8	4/7/2010	Grab	Total PCBs	0.35	mg/kg	0.13	2.7
UNKCB15	N8	4/7/2010	Grab	Arsenic	16	mg/kg	7.3	2.2
UNKCB15	N8	4/7/2010	Grab	Cadmium	9.4	mg/kg	5.1	1.8
UNKCB15	N8	4/7/2010	Grab	Chromium	109	mg/kg	260	0.42
UNKCB15	N8	4/7/2010	Grab	Copper	231	mg/kg	390	0.59
UNKCB15	N8	4/7/2010	Grab	Lead	160	mg/kg	450	0.36
UNKCB15	N8	4/7/2010	Grab	Mercury	0.59	mg/kg	0.41	1.4
UNKCB15	N8	4/7/2010	Grab	Silver	1.3	mg/kg	6.1	0.21
UNKCB15	N8	4/7/2010	Grab	Zinc	1,400	mg/kg	410	3.4
UNKCB20	N8	3/30/2010	Grab	Total PCBs	0.85	mg/kg	0.13	6.5
UNKCB20	N8	3/30/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
UNKCB20	N8	3/30/2010	Grab	Cadmium	6.7	mg/kg	5.1	1.3
UNKCB20	N8	3/30/2010	Grab	Chromium	163	mg/kg	260	0.63
UNKCB20	N8	3/30/2010	Grab	Copper	183	mg/kg	390	0.47
UNKCB20	N8	3/30/2010	Grab	Lead	473	mg/kg	450	1.1
UNKCB20	N8	3/30/2010	Grab	Mercury	0.16	mg/kg	0.41	0.39
UNKCB20	N8	3/30/2010	Grab	Silver	0.90	mg/kg	6.1	0.15
UNKCB20	N8	3/30/2010	Grab	Zinc	1,320	mg/kg	410	3.2
CB159	N9	3/31/2010	Grab	Total PCBs	17	mg/kg	0.13	130
CB159	N9	3/31/2010	Grab	Arsenic	30	mg/kg	7.3	4.1
CB159	N9	3/31/2010	Grab	Cadmium	58	mg/kg	5.1	11
CB159	N9	3/31/2010	Grab	Chromium	347	mg/kg	260	1.3
CB159	N9	3/31/2010	Grab	Copper	470	mg/kg	390	1.2
CB159	N9	3/31/2010	Grab	Lead	201	mg/kg	450	0.45
CB159	N9	3/31/2010	Grab	Mercury	2.0	mg/kg	0.41	4.8
CB159	N9	3/31/2010	Grab	Silver	0.9 U	mg/kg	6.1	0.15
CB159	N9	3/31/2010	Grab	Zinc	2,950	mg/kg	410	7.2
CB161	N9	3/31/2010	Grab	Total PCBs	2.4	mg/kg	0.13	18
CB161	N9	3/31/2010	Grab	Arsenic	25	mg/kg	7.3	3.4
CB161	N9	3/31/2010	Grab	Cadmium	40	mg/kg	5.1	7.8
CB161	N9	3/31/2010	Grab	Chromium	130	mg/kg	260	0.50
CB161	N9	3/31/2010	Grab	Copper	341	mg/kg	390	0.87
CB161	N9	3/31/2010	Grab	Lead	189	mg/kg	450	0.42
CB161	N9	3/31/2010	Grab	Mercury	0.61	mg/kg	0.41	1.5
CB161	N9	3/31/2010	Grab	Silver	0.90	mg/kg	6.1	0.15
CB161	N9	3/31/2010	Grab	Zinc	3,580	mg/kg	410	8.7
CB162	N9	4/7/2010	Grab	Total PCBs	2.9	mg/kg	0.13	22
CB162	N9	4/7/2010	Grab	Arsenic	9 U	mg/kg	7.3	1.2
CB162	N9	4/7/2010	Grab	Cadmium	10	mg/kg	5.1	2.0
CB162	N9	4/7/2010	Grab	Chromium	89	mg/kg	260	0.34
CB162	N9	4/7/2010	Grab	Copper	245	mg/kg	390	0.63
CB162	N9	4/7/2010	Grab	Lead	155	mg/kg	450	0.34
CB162	N9	4/7/2010	Grab	Mercury	4.7	mg/kg	0.41	11
CB162	N9	4/7/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB162	N9	4/7/2010	Grab	Zinc	871	mg/kg	410	2.1

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB647	N9	3/31/2010	Grab	Total PCBs	1.6	mg/kg	0.13	12
CB647	N9	3/31/2010	Grab	Arsenic	20 U	mg/kg	7.3	2.7
CB647	N9	3/31/2010	Grab	Cadmium	9.5	mg/kg	5.1	1.9
CB647	N9	3/31/2010	Grab	Chromium	109	mg/kg	260	0.42
CB647	N9	3/31/2010	Grab	Copper	318	mg/kg	390	0.82
CB647	N9	3/31/2010	Grab	Lead	230	mg/kg	450	0.51
CB647	N9	3/31/2010	Grab	Mercury	5.6	mg/kg	0.41	14
CB647	N9	3/31/2010	Grab	Silver	1 U	mg/kg	6.1	0.16
CB647	N9	3/31/2010	Grab	Zinc	4,290	mg/kg	410	10
CB648	N9	3/31/2010	Grab	Total PCBs	0.75	mg/kg	0.13	5.8
CB648	N9	3/31/2010	Grab	Arsenic	30	mg/kg	7.3	4.1
CB648	N9	3/31/2010	Grab	Cadmium	14	mg/kg	5.1	2.8
CB648	N9	3/31/2010	Grab	Chromium	104	mg/kg	260	0.40
CB648	N9	3/31/2010	Grab	Copper	216	mg/kg	390	0.55
CB648	N9	3/31/2010	Grab	Lead	163	mg/kg	450	0.36
CB648	N9	3/31/2010	Grab	Mercury	1.5	mg/kg	0.41	3.7
CB648	N9	3/31/2010	Grab	Silver	0.70	mg/kg	6.1	0.11
CB648	N9	3/31/2010	Grab	Zinc	2,110	mg/kg	410	5.1
CB649	N9	3/31/2010	Grab	Total PCBs	1.5	mg/kg	0.13	12
CB649	N9	3/31/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB649	N9	3/31/2010	Grab	Cadmium	14	mg/kg	5.1	2.7
CB649	N9	3/31/2010	Grab	Chromium	133 J	mg/kg	260	0.51
CB649	N9	3/31/2010	Grab	Copper	290	mg/kg	390	0.74
CB649	N9	3/31/2010	Grab	Lead	257	mg/kg	450	0.57
CB649	N9	3/31/2010	Grab	Mercury	0.75	mg/kg	0.41	1.8
CB649	N9	3/31/2010	Grab	Silver	3.5	mg/kg	6.1	0.57
CB649	N9	3/31/2010	Grab	Zinc	1,680	mg/kg	410	4.1
CB652A	N9	3/31/2010	Grab	Total PCBs	2.7	mg/kg	0.13	21
CB652A	N9	3/31/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB652A	N9	3/31/2010	Grab	Cadmium	13	mg/kg	5.1	2.6
CB652A	N9	3/31/2010	Grab	Chromium	122	mg/kg	260	0.47
CB652A	N9	3/31/2010	Grab	Copper	256	mg/kg	390	0.66
CB652A	N9	3/31/2010	Grab	Lead	635	mg/kg	450	1.4
CB652A	N9	3/31/2010	Grab	Mercury	0.18	mg/kg	0.41	0.44
CB652A	N9	3/31/2010	Grab	Silver	0.70	mg/kg	6.1	0.11
CB652A	N9	3/31/2010	Grab	Zinc	2,030	mg/kg	410	5.0
MH651	N9	4/7/2010	Grab	Total PCBs	1.1	mg/kg	0.13	8.2
MH651	N9	4/7/2010	Grab	Arsenic	7.0	mg/kg	7.3	0.96
MH651	N9	4/7/2010	Grab	Cadmium	7.1	mg/kg	5.1	1.4
MH651	N9	4/7/2010	Grab	Chromium	47	mg/kg	260	0.18
MH651	N9	4/7/2010	Grab	Copper	228	mg/kg	390	0.58
MH651	N9	4/7/2010	Grab	Lead	90	mg/kg	450	0.20
MH651	N9	4/7/2010	Grab	Mercury	61	mg/kg	0.41	150
MH651	N9	4/7/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
MH651	N9	4/7/2010	Grab	Zinc	1,420	mg/kg	410	3.5
MH652	N9	7/16/2012	Grab	Total PCBs	2.9	mg/kg	0.13	22
MH652	N9	3/31/2010	Grab	Total PCBs	4.3	mg/kg	0.13	33
MH652	N9	6/17/2009	Grab	Total PCBs	10	mg/kg	0.13	78
MH652	N9	2/26/2007	Grab	Total PCBs	8.2	mg/kg	0.13	63
MH652	N9	7/16/2012	Grab	Arsenic	19	mg/kg	7.3	2.6
MH652	N9	4/14/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
MH652	N9	3/31/2010	Grab	Arsenic	11	mg/kg	7.3	1.5
MH652	N9	7/16/2012	Grab	Cadmium	32	mg/kg	5.1	6.2
MH652	N9	4/14/2010	Grab	Cadmium	15	mg/kg	5.1	2.9
MH652	N9	3/31/2010	Grab	Cadmium	11	mg/kg	5.1	2.1
MH652	N9	7/16/2012	Grab	Chromium	168	mg/kg	260	0.65
MH652	N9	4/14/2010	Grab	Chromium	119	mg/kg	260	0.46
MH652	N9	3/31/2010	Grab	Chromium	74.3	mg/kg	260	0.29
MH652	N9	7/16/2012	Grab	Copper	332	mg/kg	390	0.85
MH652	N9	4/14/2010	Grab	Copper	295	mg/kg	390	0.76
MH652	N9	3/31/2010	Grab	Copper	205	mg/kg	390	0.53
MH652	N9	7/16/2012	Grab	Lead	455	mg/kg	450	1.0
MH652	N9	4/14/2010	Grab	Lead	2,780	mg/kg	450	6.2
MH652	N9	3/31/2010	Grab	Lead	391	mg/kg	450	0.87
MH652	N9	7/16/2012	Grab	Mercury	145	mg/kg	0.41	350
MH652	N9	4/14/2010	Grab	Mercury	173	mg/kg	0.41	420
MH652	N9	3/31/2010	Grab	Mercury	305 (a)	mg/kg	0.41	740
MH652	N9	7/16/2012	Grab	Silver	2.2	mg/kg	6.1	0.37

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
MH652	N9	4/14/2010	Grab	Silver	3.1		mg/kg	6.1	0.51
MH652	N9	3/31/2010	Grab	Silver	1.0		mg/kg	6.1	0.16
MH652	N9	7/16/2012	Grab	Zinc	3,010		mg/kg	410	7.3
MH652	N9	4/14/2010	Grab	Zinc	1,970		mg/kg	410	4.8
MH652	N9	3/31/2010	Grab	Zinc	1,370		mg/kg	410	3.3
CB165	N10	5/17/2012	Grab	Total PCBs	0.45		mg/kg	0.13	3.5
CB165	N10	6/2/2010	Filter/Stormwater	Total PCBs	2.6		mg/kg	0.13	20
CB165	N10	5/20/2010	Filter/Stormwater	Total PCBs	1.3		mg/kg	0.13	10
CB165	N10	4/27/2010	Filter/Stormwater	Total PCBs	7.5		mg/kg	0.13	57
CB165	N10	3/30/2010	Grab	Total PCBs	3.2		mg/kg	0.13	25
CB165	N10	8/5/2009	Grab	Total PCBs	1.1		mg/kg	0.13	8.8
CB165	N10	11/18/2008	Grab	Total PCBs	0.71		mg/kg	0.13	5.5
CB165	N10	3/13/2007	Grab	Total PCBs	5.7		mg/kg	0.13	44
CB165	N10	1/26/2007	Filter/Undifferentiated	Total PCBs	14		mg/kg	0.13	110
CB165	N10	1/22/2007	Filter/Undifferentiated	Total PCBs	22		mg/kg	0.13	170
CB165	N10	5/17/2012	Grab	Total Dioxins/Furans (TEQ, NDx0.5)	7.2		ng/kg	13	0.55
CB165	N10	5/20/2010	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	48		ng/kg	13	3.7
CB165	N10	5/17/2012	Grab	Arsenic	10	U	mg/kg	7.3	1.4
CB165	N10	6/2/2010	Filter/Stormwater	Arsenic	20		mg/kg	7.3	2.7
CB165	N10	5/20/2010	Filter/Stormwater	Arsenic	9.0		mg/kg	7.3	1.2
CB165	N10	4/27/2010	Filter/Stormwater	Arsenic	30		mg/kg	7.3	4.1
CB165	N10	3/30/2010	Grab	Arsenic	20		mg/kg	7.3	2.7
CB165	N10	5/17/2012	Grab	Cadmium	1.9	J	mg/kg	5.1	0.37
CB165	N10	6/2/2010	Filter/Stormwater	Cadmium	6.3		mg/kg	5.1	1.2
CB165	N10	5/20/2010	Filter/Stormwater	Cadmium	3.2		mg/kg	5.1	0.63
CB165	N10	4/27/2010	Filter/Stormwater	Cadmium	13		mg/kg	5.1	2.5
CB165	N10	3/30/2010	Grab	Cadmium	8.6		mg/kg	5.1	1.7
CB165	N10	5/17/2012	Grab	Chromium	118		mg/kg	260	0.45
CB165	N10	6/2/2010	Filter/Stormwater	Chromium	117		mg/kg	260	0.45
CB165	N10	5/20/2010	Filter/Stormwater	Chromium	79		mg/kg	260	0.30
CB165	N10	4/27/2010	Filter/Stormwater	Chromium	133	J	mg/kg	260	0.51
CB165	N10	3/30/2010	Grab	Chromium	121		mg/kg	260	0.47
CB165	N10	5/17/2012	Grab	Copper	78		mg/kg	390	0.20
CB165	N10	6/2/2010	Filter/Stormwater	Copper	150		mg/kg	390	0.38
CB165	N10	5/20/2010	Filter/Stormwater	Copper	87	J	mg/kg	390	0.22
CB165	N10	4/27/2010	Filter/Stormwater	Copper	278		mg/kg	390	0.71
CB165	N10	3/30/2010	Grab	Copper	242		mg/kg	390	0.62
CB165	N10	5/17/2012	Grab	Lead	372		mg/kg	450	0.83
CB165	N10	6/2/2010	Filter/Stormwater	Lead	332		mg/kg	450	0.74
CB165	N10	5/20/2010	Filter/Stormwater	Lead	205		mg/kg	450	0.46
CB165	N10	4/27/2010	Filter/Stormwater	Lead	320		mg/kg	450	0.71
CB165	N10	3/30/2010	Grab	Lead	284		mg/kg	450	0.63
CB165	N10	5/17/2012	Grab	Mercury	0.18	J	mg/kg	0.41	0.44
CB165	N10	6/2/2010	Filter/Stormwater	Mercury	2.2	J	mg/kg	0.41	5.3
CB165	N10	5/20/2010	Filter/Stormwater	Mercury	2.1	J	mg/kg	0.41	5.1
CB165	N10	4/27/2010	Filter/Stormwater	Mercury	12	J	mg/kg	0.41	30
CB165	N10	3/30/2010	Grab	Mercury	6.6		mg/kg	0.41	16
CB165	N10	11/18/2008	Grab	Mercury	2.4		mg/kg	0.41	5.9
CB165	N10	1/26/2007	Filter/Undifferentiated	Mercury	2.1		mg/kg	0.41	5.1
CB165	N10	5/17/2012	Grab	Silver	0.6	U	mg/kg	6.1	0.098
CB165	N10	6/2/2010	Filter/Stormwater	Silver	0.7	U	mg/kg	6.1	0.11
CB165	N10	5/20/2010	Filter/Stormwater	Silver	160		mg/kg	6.1	26
CB165	N10	4/27/2010	Filter/Stormwater	Silver	2	U	mg/kg	6.1	0.33
CB165	N10	3/30/2010	Grab	Silver	0.7	U	mg/kg	6.1	0.11
CB165	N10	5/17/2012	Grab	Zinc	1,760	J	mg/kg	410	4.3
CB165	N10	6/2/2010	Filter/Stormwater	Zinc	2,810		mg/kg	410	6.9
CB165	N10	5/20/2010	Filter/Stormwater	Zinc	1,640		mg/kg	410	4.0
CB165	N10	4/27/2010	Filter/Stormwater	Zinc	4,770	J	mg/kg	410	12
CB165	N10	3/30/2010	Grab	Zinc	3,160		mg/kg	410	7.7
CB165	N10	5/17/2012	Grab	p-Cresol (4-Methylphenol)	7.8		mg/kg	0.67	12
CB165	N10	5/17/2012	Grab	Phenol	0.74		mg/kg	0.42	1.8
CB165	N10	5/17/2012	Grab	Bis(2-ethylhexyl) phthalate	5.7		mg/kg	1.3	4.4
CB165	N10	5/17/2012	Grab	Butyl benzyl phthalate	0.29	U	mg/kg	0.067	4.3
CB165	N10	5/17/2012	Grab	Acenaphthene	0.29	U	mg/kg	0.50	0.58
CB165	N10	6/2/2010	Filter/Stormwater	Acenaphthene	0.12	U	mg/kg	0.50	0.24
CB165	N10	4/27/2010	Filter/Stormwater	Acenaphthene	0.048		mg/kg	0.50	0.096
CB165	N10	5/17/2012	Grab	Anthracene	0.29	U	mg/kg	0.96	0.30
CB165	N10	6/2/2010	Filter/Stormwater	Anthracene	0.12	U	mg/kg	0.96	0.13

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB165	N10	4/27/2010	Filter/Stormwater	Anthracene	0.091	mg/kg	0.96	0.095
CB165	N10	5/17/2012	Grab	Benzo(a)anthracene	0.29 U	mg/kg	1.3	0.22
CB165	N10	6/2/2010	Filter/Stormwater	Benzo(a)anthracene	0.43	mg/kg	1.3	0.33
CB165	N10	4/27/2010	Filter/Stormwater	Benzo(a)anthracene	0.44	mg/kg	1.3	0.34
CB165	N10	5/17/2012	Grab	Total Benzofluoranthenes	0.29	mg/kg	3.2	0.091
CB165	N10	6/2/2010	Filter/Stormwater	Total Benzofluoranthenes	1.1	mg/kg	3.2	0.36
CB165	N10	4/27/2010	Filter/Stormwater	Total Benzofluoranthenes	1.0	mg/kg	3.2	0.33
CB165	N10	5/17/2012	Grab	Benzo(g,h,i)perylene	0.29 U	mg/kg	0.67	0.43
CB165	N10	6/2/2010	Filter/Stormwater	Benzo(g,h,i)perylene	0.80	mg/kg	0.67	1.2
CB165	N10	4/27/2010	Filter/Stormwater	Benzo(g,h,i)perylene	0.48	mg/kg	0.67	0.72
CB165	N10	5/17/2012	Grab	Benzo(a)pyrene	0.29 U	mg/kg	0.15	1.9
CB165	N10	6/2/2010	Filter/Stormwater	Benzo(a)pyrene	0.57	mg/kg	0.15	3.8
CB165	N10	4/27/2010	Filter/Stormwater	Benzo(a)pyrene	0.52	mg/kg	0.15	3.5
CB165	N10	5/17/2012	Grab	Chrysene	0.35	mg/kg	1.4	0.25
CB165	N10	6/2/2010	Filter/Stormwater	Chrysene	1.0	mg/kg	1.4	0.71
CB165	N10	4/27/2010	Filter/Stormwater	Chrysene	0.87	mg/kg	1.4	0.62
CB165	N10	5/17/2012	Grab	Dibenz(a,h)anthracene	0.29 U	mg/kg	0.23	1.3
CB165	N10	6/2/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.17	mg/kg	0.23	0.74
CB165	N10	4/27/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.14	mg/kg	0.23	0.61
CB165	N10	5/17/2012	Grab	Dibenzofuran	0.29 U	mg/kg	0.54	0.54
CB165	N10	6/2/2010	Filter/Stormwater	Dibenzofuran	0.12 U	mg/kg	0.54	0.22
CB165	N10	4/27/2010	Filter/Stormwater	Dibenzofuran	0.071	mg/kg	0.54	0.13
CB165	N10	5/17/2012	Grab	Fluoranthene	0.36	mg/kg	1.7	0.21
CB165	N10	6/2/2010	Filter/Stormwater	Fluoranthene	1.6	mg/kg	1.7	0.94
CB165	N10	4/27/2010	Filter/Stormwater	Fluoranthene	1.3	mg/kg	1.7	0.76
CB165	N10	5/17/2012	Grab	Fluorene	0.29 U	mg/kg	0.54	0.54
CB165	N10	6/2/2010	Filter/Stormwater	Fluorene	0.12 U	mg/kg	0.54	0.22
CB165	N10	4/27/2010	Filter/Stormwater	Fluorene	0.083	mg/kg	0.54	0.15
CB165	N10	5/17/2012	Grab	Indeno(1,2,3-cd)pyrene	0.29 U	mg/kg	0.60	0.48
CB165	N10	6/2/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.44	mg/kg	0.60	0.73
CB165	N10	4/27/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.37	mg/kg	0.60	0.62
CB165	N10	5/17/2012	Grab	Phenanthrene	0.38	mg/kg	1.5	0.25
CB165	N10	6/2/2010	Filter/Stormwater	Phenanthrene	0.94	mg/kg	1.5	0.63
CB165	N10	4/27/2010	Filter/Stormwater	Phenanthrene	0.83	mg/kg	1.5	0.55
CB165	N10	5/17/2012	Grab	Pyrene	0.51	mg/kg	2.6	0.20
CB165	N10	6/2/2010	Filter/Stormwater	Pyrene	1.3	mg/kg	2.6	0.50
CB165	N10	4/27/2010	Filter/Stormwater	Pyrene	1.3	mg/kg	2.6	0.50
CB165	N10	5/17/2012	Grab	Total HPAHs	1.5	mg/kg	12	0.13
CB165	N10	6/2/2010	Filter/Stormwater	Total HPAHs	7.5	mg/kg	12	0.62
CB165	N10	4/27/2010	Filter/Stormwater	Total HPAHs	6.5	mg/kg	12	0.54
CB165	N10	5/17/2012	Grab	Total LPAHs	0.38	mg/kg	5.2	0.073
CB165	N10	6/2/2010	Filter/Stormwater	Total LPAHs	1.1	mg/kg	5.2	0.20
CB165	N10	4/27/2010	Filter/Stormwater	Total LPAHs	1.2	mg/kg	5.2	0.23
CB165	N10	5/17/2012	Grab	Total cPAHs (TEQ, NDx0.5)	0.22	mg/kg	0.15	1.5
CB165	N10	6/2/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.80	mg/kg	0.15	5.3
CB165	N10	4/27/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.73	mg/kg	0.15	4.9
CB165A	N10	3/30/2010	Grab	Total PCBs	1.2	mg/kg	0.13	9.4
CB165A	N10	8/5/2009	Grab	Total PCBs	0.17	mg/kg	0.13	1.3
CB165A	N10	3/30/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB165A	N10	3/30/2010	Grab	Cadmium	11	mg/kg	5.1	2.1
CB165A	N10	3/30/2010	Grab	Chromium	174	mg/kg	260	0.67
CB165A	N10	3/30/2010	Grab	Copper	162	mg/kg	390	0.42
CB165A	N10	3/30/2010	Grab	Lead	571	mg/kg	450	1.3
CB165A	N10	3/30/2010	Grab	Mercury	0.32	mg/kg	0.41	0.78
CB165A	N10	3/30/2010	Grab	Silver	0.7 U	mg/kg	6.1	0.11
CB165A	N10	3/30/2010	Grab	Zinc	810	mg/kg	410	2.0
CB165B	N10	8/5/2009	Grab	Total PCBs	0.20	mg/kg	0.13	1.5
CB167	N10	7/19/2012	Grab	Total PCBs	0.04 U	mg/kg	0.13	0.31
CB167	N10	3/30/2010	Grab	Total PCBs	2.1	mg/kg	0.13	16
CB167	N10	6/8/2009	Grab	Total PCBs	1.9	mg/kg	0.13	14
CB167	N10	11/18/2008	Grab	Total PCBs	0.81	mg/kg	0.13	6.2
CB167	N10	3/13/2007	Grab	Total PCBs	12	mg/kg	0.13	91
CB167	N10	7/19/2012	Grab	Arsenic	3.5 J	mg/kg	7.3	0.48
CB167	N10	3/30/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB167	N10	7/19/2012	Grab	Cadmium	1.9	mg/kg	5.1	0.36
CB167	N10	3/30/2010	Grab	Cadmium	3.5	mg/kg	5.1	0.69
CB167	N10	7/19/2012	Grab	Chromium	58	mg/kg	260	0.22
CB167	N10	3/30/2010	Grab	Chromium	75	mg/kg	260	0.29

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB167	N10	7/19/2012	Grab	Copper	55 J	mg/kg	390	0.14
CB167	N10	3/30/2010	Grab	Copper	197	mg/kg	390	0.51
CB167	N10	7/19/2012	Grab	Lead	113	mg/kg	450	0.25
CB167	N10	3/30/2010	Grab	Lead	106	mg/kg	450	0.24
CB167	N10	7/19/2012	Grab	Mercury	0.12 U	mg/kg	0.41	0.28
CB167	N10	3/30/2010	Grab	Mercury	1.7	mg/kg	0.41	4.0
CB167	N10	11/18/2008	Grab	Mercury	0.59	mg/kg	0.41	1.4
CB167	N10	7/19/2012	Grab	Silver	0.14	mg/kg	6.1	0.023
CB167	N10	3/30/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB167	N10	7/19/2012	Grab	Zinc	1,010	mg/kg	410	2.5
CB167	N10	3/30/2010	Grab	Zinc	3,280	mg/kg	410	8.0
CB184	N10	3/29/2010	Grab	Total PCBs	11	mg/kg	0.13	85
CB184	N10	6/8/2009	Grab	Total PCBs	8.0	mg/kg	0.13	62
CB184	N10	11/18/2008	Grab	Total PCBs	2.2	mg/kg	0.13	17
CB184	N10	3/13/2007	Grab	Total PCBs	320	mg/kg	0.13	2,500
CB184	N10	3/29/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB184	N10	3/29/2010	Grab	Cadmium	15	mg/kg	5.1	2.9
CB184	N10	3/29/2010	Grab	Chromium	85	mg/kg	260	0.33
CB184	N10	3/29/2010	Grab	Copper	275	mg/kg	390	0.71
CB184	N10	3/29/2010	Grab	Lead	240	mg/kg	450	0.53
CB184	N10	3/29/2010	Grab	Mercury	1.6	mg/kg	0.41	3.9
CB184	N10	11/18/2008	Grab	Mercury	1.1	mg/kg	0.41	2.7
CB184	N10	3/29/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB184	N10	3/29/2010	Grab	Zinc	2,640	mg/kg	410	6.4
CB184B	N10	3/29/2010	Grab	Total PCBs	9.7	mg/kg	0.13	75
CB184B	N10	7/15/2009	Grab	Total PCBs	11	mg/kg	0.13	82
CB184B	N10	3/29/2010	Grab	Arsenic	20 U	mg/kg	7.3	2.7
CB184B	N10	3/29/2010	Grab	Cadmium	27	mg/kg	5.1	5.3
CB184B	N10	3/29/2010	Grab	Chromium	72	mg/kg	260	0.28
CB184B	N10	3/29/2010	Grab	Copper	195	mg/kg	390	0.50
CB184B	N10	3/29/2010	Grab	Lead	169	mg/kg	450	0.38
CB184B	N10	3/29/2010	Grab	Mercury	0.50	mg/kg	0.41	1.2
CB184B	N10	3/29/2010	Grab	Silver	1 U	mg/kg	6.1	0.16
CB184B	N10	3/29/2010	Grab	Zinc	2,280	mg/kg	410	5.6
CB184C	N10	7/16/2012	Grab	Total PCBs	0.47	mg/kg	0.13	3.6
CB184C	N10	7/16/2012	Grab	Arsenic	7.4	mg/kg	7.3	1.0
CB184C	N10	7/16/2012	Grab	Cadmium	3.0	mg/kg	5.1	0.59
CB184C	N10	7/16/2012	Grab	Chromium	56	mg/kg	260	0.22
CB184C	N10	7/16/2012	Grab	Copper	166	mg/kg	390	0.43
CB184C	N10	7/16/2012	Grab	Lead	53	mg/kg	450	0.12
CB184C	N10	7/16/2012	Grab	Mercury	0.13 U	mg/kg	0.41	0.32
CB184C	N10	7/16/2012	Grab	Silver	0.20	mg/kg	6.1	0.033
CB184C	N10	7/16/2012	Grab	Zinc	3,590	mg/kg	410	8.8
CB184D	N10	7/16/2012	Grab	Total PCBs	0.34	mg/kg	0.13	2.6
CB184D	N10	7/16/2012	Grab	Arsenic	12 J	mg/kg	7.3	1.7
CB184D	N10	7/16/2012	Grab	Cadmium	0.73 J	mg/kg	5.1	0.14
CB184D	N10	7/16/2012	Grab	Chromium	46 J	mg/kg	260	0.18
CB184D	N10	7/16/2012	Grab	Copper	61	mg/kg	390	0.16
CB184D	N10	7/16/2012	Grab	Lead	24 J	mg/kg	450	0.052
CB184D	N10	7/16/2012	Grab	Mercury	0.12 U	mg/kg	0.41	0.29
CB184D	N10	7/16/2012	Grab	Silver	0.12 U	mg/kg	6.1	0.020
CB184D	N10	7/16/2012	Grab	Zinc	524	mg/kg	410	1.3
CB149	N11	4/1/2010	Grab	Total PCBs	0.55	mg/kg	0.13	4.2
CB149	N11	4/1/2010	Grab	Arsenic	14	mg/kg	7.3	1.9
CB149	N11	4/1/2010	Grab	Cadmium	12	mg/kg	5.1	2.3
CB149	N11	4/1/2010	Grab	Chromium	107	mg/kg	260	0.41
CB149	N11	4/1/2010	Grab	Copper	167	mg/kg	390	0.43
CB149	N11	4/1/2010	Grab	Lead	602	mg/kg	450	1.3
CB149	N11	4/1/2010	Grab	Mercury	0.15	mg/kg	0.41	0.37
CB149	N11	4/1/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB149	N11	4/1/2010	Grab	Zinc	1,060	mg/kg	410	2.6
CB150	N11	3/29/2010	Grab	Total PCBs	1.1	mg/kg	0.13	8.4
CB150	N11	3/29/2010	Grab	Arsenic	8 U	mg/kg	7.3	1.1
CB150	N11	3/29/2010	Grab	Cadmium	8.0	mg/kg	5.1	1.6
CB150	N11	3/29/2010	Grab	Chromium	104	mg/kg	260	0.40
CB150	N11	3/29/2010	Grab	Copper	138	mg/kg	390	0.35
CB150	N11	3/29/2010	Grab	Lead	245	mg/kg	450	0.54
CB150	N11	3/29/2010	Grab	Mercury	0.67	mg/kg	0.41	1.6

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
CB150	N11	3/29/2010	Grab	Silver	0.5	U	mg/kg	6.1	0.082
CB150	N11	3/29/2010	Grab	Zinc	883		mg/kg	410	2.2
CB173	N11	7/25/2012	Grab	Total PCBs	34		mg/kg	0.13	260
CB173	N11	5/17/2012	Grab	Total PCBs	50		mg/kg	0.13	380
CB173	N11	7/21/2011	Grab	Total PCBs	1.5		mg/kg	0.13	11
CB173	N11	4/21/2011	Filter/Baseflow	Total PCBs	98		mg/kg	0.13	750
CB173	N11	3/23/2011	Filter/Baseflow	Total PCBs	74		mg/kg	0.13	570
CB173	N11	1/21/2011	Filter/Stormwater	Total PCBs	9.7		mg/kg	0.13	75
CB173	N11	12/12/2010	Filter/Stormwater	Total PCBs	8.2		mg/kg	0.13	63
CB173	N11	11/30/2010	Filter/Stormwater	Total PCBs	6.9		mg/kg	0.13	53
CB173	N11	11/17/2010	Filter/Stormwater	Total PCBs	1.3		mg/kg	0.13	10
CB173	N11	6/30/2010	Filter/Baseflow	Total PCBs	43		mg/kg	0.13	330
CB173	N11	6/2/2010	Filter/Stormwater	Total PCBs	17		mg/kg	0.13	130
CB173	N11	5/20/2010	Filter/Stormwater	Total PCBs	10		mg/kg	0.13	77
CB173	N11	4/27/2010	Filter/Stormwater	Total PCBs	33		mg/kg	0.13	250
CB173	N11	3/29/2010	Grab	Total PCBs	14		mg/kg	0.13	110
CB173	N11	6/9/2009	Grab	Total PCBs	27		mg/kg	0.13	210
CB173	N11	3/13/2007	Grab	Total PCBs	94		mg/kg	0.13	720
CB173	N11	12/8/2006	Grab	Total PCBs	43		mg/kg	0.13	330
CB173	N11	6/22/2006	Grab	Total PCBs	26		mg/kg	0.13	200
CB173	N11	5/30/2006	Grab	Total PCBs	122		mg/kg	0.13	940
CB173	N11	4/26/2006	Grab	Total PCBs	29		mg/kg	0.13	220
CB173	N11	3/21/2006	Grab	Total PCBs	110		mg/kg	0.13	850
CB173	N11	11/15/2005	Filter/Undifferentiated	Total PCBs	510		mg/kg	0.13	3,900
CB173	N11	10/24/2005	Grab	Total PCBs	400		mg/kg	0.13	3,100
CB173	N11	9/26/2005	Grab	Total PCBs	1,310		mg/kg	0.13	10,000
CB173	N11	5/17/2012	Grab	Total Dioxins/Furans (TEQ, NDx0.5)	97		ng/kg	13	7.5
CB173	N11	3/23/2011	Filter/Baseflow	Total Dioxins/Furans (TEQ, NDx0.5)	51		ng/kg	13	3.9
CB173	N11	11/30/2010	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	170		ng/kg	13	13
CB173	N11	6/30/2010	Filter/Baseflow	Total Dioxins/Furans (TEQ, NDx0.5)	62		ng/kg	13	4.7
CB173	N11	5/20/2010	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	72		ng/kg	13	5.6
CB173	N11	5/17/2012	Grab	Arsenic	31		mg/kg	7.3	4.2
CB173	N11	4/21/2011	Filter/Baseflow	Arsenic	80		mg/kg	7.3	11
CB173	N11	3/23/2011	Filter/Baseflow	Arsenic	23		mg/kg	7.3	3.2
CB173	N11	1/27/2011	Filter/Baseflow	Arsenic	20	U	mg/kg	7.3	2.7
CB173	N11	1/21/2011	Filter/Stormwater	Arsenic	20		mg/kg	7.3	2.7
CB173	N11	12/12/2010	Filter/Stormwater	Arsenic	20		mg/kg	7.3	2.7
CB173	N11	11/30/2010	Filter/Stormwater	Arsenic	30	U	mg/kg	7.3	4.1
CB173	N11	11/17/2010	Filter/Stormwater	Arsenic	40	U	mg/kg	7.3	5.5
CB173	N11	6/30/2010	Filter/Baseflow	Arsenic	90		mg/kg	7.3	12
CB173	N11	6/2/2010	Filter/Stormwater	Arsenic	40	U	mg/kg	7.3	5.5
CB173	N11	5/20/2010	Filter/Stormwater	Arsenic	20	U	mg/kg	7.3	2.7
CB173	N11	4/27/2010	Filter/Stormwater	Arsenic	20	U	mg/kg	7.3	2.7
CB173	N11	3/29/2010	Grab	Arsenic	20		mg/kg	7.3	2.7
CB173	N11	5/17/2012	Grab	Cadmium	2.2	J	mg/kg	5.1	0.43
CB173	N11	4/21/2011	Filter/Baseflow	Cadmium	7.0		mg/kg	5.1	1.4
CB173	N11	3/23/2011	Filter/Baseflow	Cadmium	2.0		mg/kg	5.1	0.39
CB173	N11	1/27/2011	Filter/Baseflow	Cadmium	5.0		mg/kg	5.1	0.98
CB173	N11	1/21/2011	Filter/Stormwater	Cadmium	6.7		mg/kg	5.1	1.3
CB173	N11	12/12/2010	Filter/Stormwater	Cadmium	15		mg/kg	5.1	3.0
CB173	N11	11/30/2010	Filter/Stormwater	Cadmium	14		mg/kg	5.1	2.7
CB173	N11	11/17/2010	Filter/Stormwater	Cadmium	12		mg/kg	5.1	2.4
CB173	N11	6/30/2010	Filter/Baseflow	Cadmium	11		mg/kg	5.1	2.2
CB173	N11	6/2/2010	Filter/Stormwater	Cadmium	9.0		mg/kg	5.1	1.8
CB173	N11	5/20/2010	Filter/Stormwater	Cadmium	31		mg/kg	5.1	6.1
CB173	N11	4/27/2010	Filter/Stormwater	Cadmium	8.3		mg/kg	5.1	1.6
CB173	N11	3/29/2010	Grab	Cadmium	6.0		mg/kg	5.1	1.2
CB173	N11	5/17/2012	Grab	Chromium	37		mg/kg	260	0.14
CB173	N11	4/21/2011	Filter/Baseflow	Chromium	70		mg/kg	260	0.27
CB173	N11	3/23/2011	Filter/Baseflow	Chromium	43		mg/kg	260	0.16
CB173	N11	1/27/2011	Filter/Baseflow	Chromium	19		mg/kg	260	0.073
CB173	N11	1/21/2011	Filter/Stormwater	Chromium	43	J	mg/kg	260	0.17
CB173	N11	12/12/2010	Filter/Stormwater	Chromium	116	J	mg/kg	260	0.45
CB173	N11	11/30/2010	Filter/Stormwater	Chromium	82		mg/kg	260	0.32
CB173	N11	11/17/2010	Filter/Stormwater	Chromium	222		mg/kg	260	0.85
CB173	N11	6/30/2010	Filter/Baseflow	Chromium	74		mg/kg	260	0.28
CB173	N11	6/2/2010	Filter/Stormwater	Chromium	74		mg/kg	260	0.28
CB173	N11	5/20/2010	Filter/Stormwater	Chromium	81		mg/kg	260	0.31

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
CB173	N11	4/27/2010	Filter/Stormwater	Chromium	67	J	mg/kg	260	0.26
CB173	N11	3/29/2010	Grab	Chromium	94		mg/kg	260	0.36
CB173	N11	5/17/2012	Grab	Copper	119		mg/kg	390	0.31
CB173	N11	4/21/2011	Filter/Baseflow	Copper	466		mg/kg	390	1.2
CB173	N11	3/23/2011	Filter/Baseflow	Copper	125		mg/kg	390	0.32
CB173	N11	1/27/2011	Filter/Baseflow	Copper	102	J	mg/kg	390	0.26
CB173	N11	1/21/2011	Filter/Stormwater	Copper	165		mg/kg	390	0.42
CB173	N11	12/12/2010	Filter/Stormwater	Copper	268	J	mg/kg	390	0.69
CB173	N11	11/30/2010	Filter/Stormwater	Copper	231		mg/kg	390	0.59
CB173	N11	11/17/2010	Filter/Stormwater	Copper	320		mg/kg	390	0.82
CB173	N11	6/30/2010	Filter/Baseflow	Copper	382		mg/kg	390	0.98
CB173	N11	6/2/2010	Filter/Stormwater	Copper	311		mg/kg	390	0.80
CB173	N11	5/20/2010	Filter/Stormwater	Copper	278	J	mg/kg	390	0.71
CB173	N11	4/27/2010	Filter/Stormwater	Copper	245		mg/kg	390	0.63
CB173	N11	3/29/2010	Grab	Copper	295		mg/kg	390	0.76
CB173	N11	5/17/2012	Grab	Lead	97		mg/kg	450	0.22
CB173	N11	4/21/2011	Filter/Baseflow	Lead	130		mg/kg	450	0.29
CB173	N11	3/23/2011	Filter/Baseflow	Lead	51		mg/kg	450	0.11
CB173	N11	1/27/2011	Filter/Baseflow	Lead	42	J	mg/kg	450	0.093
CB173	N11	1/21/2011	Filter/Stormwater	Lead	131	J	mg/kg	450	0.29
CB173	N11	12/12/2010	Filter/Stormwater	Lead	335	J	mg/kg	450	0.74
CB173	N11	11/30/2010	Filter/Stormwater	Lead	210		mg/kg	450	0.47
CB173	N11	11/17/2010	Filter/Stormwater	Lead	160		mg/kg	450	0.36
CB173	N11	6/30/2010	Filter/Baseflow	Lead	211		mg/kg	450	0.47
CB173	N11	6/2/2010	Filter/Stormwater	Lead	210		mg/kg	450	0.47
CB173	N11	5/20/2010	Filter/Stormwater	Lead	202		mg/kg	450	0.45
CB173	N11	4/27/2010	Filter/Stormwater	Lead	142		mg/kg	450	0.32
CB173	N11	3/29/2010	Grab	Lead	158		mg/kg	450	0.35
CB173	N11	5/17/2012	Grab	Mercury	2.5	J	mg/kg	0.41	6.0
CB173	N11	4/21/2011	Filter/Baseflow	Mercury	1.8		mg/kg	0.41	4.4
CB173	N11	3/23/2011	Filter/Baseflow	Mercury	18		mg/kg	0.41	44
CB173	N11	1/27/2011	Filter/Baseflow	Mercury	0.40		mg/kg	0.41	0.98
CB173	N11	1/21/2011	Filter/Stormwater	Mercury	0.50	J	mg/kg	0.41	1.2
CB173	N11	12/12/2010	Filter/Stormwater	Mercury	0.78		mg/kg	0.41	1.9
CB173	N11	11/30/2010	Filter/Stormwater	Mercury	1.0		mg/kg	0.41	2.4
CB173	N11	11/17/2010	Filter/Stormwater	Mercury	1.2		mg/kg	0.41	2.9
CB173	N11	6/30/2010	Filter/Baseflow	Mercury	0.73		mg/kg	0.41	1.8
CB173	N11	6/2/2010	Filter/Stormwater	Mercury	0.80	J	mg/kg	0.41	2.0
CB173	N11	5/20/2010	Filter/Stormwater	Mercury	13	J	mg/kg	0.41	31
CB173	N11	4/27/2010	Filter/Stormwater	Mercury	0.57	J	mg/kg	0.41	1.4
CB173	N11	3/29/2010	Grab	Mercury	0.77		mg/kg	0.41	1.9
CB173	N11	5/17/2012	Grab	Silver	0.60		mg/kg	6.1	0.098
CB173	N11	4/21/2011	Filter/Baseflow	Silver	2	U	mg/kg	6.1	0.33
CB173	N11	3/23/2011	Filter/Baseflow	Silver	0.5	U	mg/kg	6.1	0.082
CB173	N11	1/27/2011	Filter/Baseflow	Silver	1	U	mg/kg	6.1	0.16
CB173	N11	1/21/2011	Filter/Stormwater	Silver	1	U	mg/kg	6.1	0.16
CB173	N11	12/12/2010	Filter/Stormwater	Silver	0.90		mg/kg	6.1	0.15
CB173	N11	11/30/2010	Filter/Stormwater	Silver	2	U	mg/kg	6.1	0.33
CB173	N11	11/17/2010	Filter/Stormwater	Silver	3	U	mg/kg	6.1	0.49
CB173	N11	6/30/2010	Filter/Baseflow	Silver	1	U	mg/kg	6.1	0.16
CB173	N11	6/2/2010	Filter/Stormwater	Silver	2	U	mg/kg	6.1	0.33
CB173	N11	5/20/2010	Filter/Stormwater	Silver	1	U	mg/kg	6.1	0.16
CB173	N11	4/27/2010	Filter/Stormwater	Silver	1	U	mg/kg	6.1	0.16
CB173	N11	3/29/2010	Grab	Silver	0.6	U	mg/kg	6.1	0.098
CB173	N11	5/17/2012	Grab	Zinc	415	J	mg/kg	410	1.0
CB173	N11	4/21/2011	Filter/Baseflow	Zinc	1,100		mg/kg	410	2.7
CB173	N11	3/23/2011	Filter/Baseflow	Zinc	342		mg/kg	410	0.83
CB173	N11	1/27/2011	Filter/Baseflow	Zinc	722	J	mg/kg	410	1.8
CB173	N11	1/21/2011	Filter/Stormwater	Zinc	1,050		mg/kg	410	2.6
CB173	N11	12/12/2010	Filter/Stormwater	Zinc	2,170		mg/kg	410	5.3
CB173	N11	11/30/2010	Filter/Stormwater	Zinc	2,230		mg/kg	410	5.4
CB173	N11	11/17/2010	Filter/Stormwater	Zinc	4,990		mg/kg	410	12
CB173	N11	6/30/2010	Filter/Baseflow	Zinc	2,320		mg/kg	410	5.7
CB173	N11	6/2/2010	Filter/Stormwater	Zinc	2,090		mg/kg	410	5.1
CB173	N11	5/20/2010	Filter/Stormwater	Zinc	1,910		mg/kg	410	4.7
CB173	N11	4/27/2010	Filter/Stormwater	Zinc	2,040	J	mg/kg	410	5.0
CB173	N11	3/29/2010	Grab	Zinc	1,320		mg/kg	410	3.2
CB173	N11	5/17/2012	Grab	p-Cresol (4-Methylphenol)	0.16	U	mg/kg	0.67	0.24

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
CB173	N11	5/17/2012	Grab	Phenol	0.062	J	mg/kg	0.42	0.15
CB173	N11	5/17/2012	Grab	Bis(2-ethylhexyl) phthalate	1.4		mg/kg	1.3	1.1
CB173	N11	5/17/2012	Grab	Butyl benzyl phthalate	0.078	U	mg/kg	0.067	1.2
CB173	N11	5/17/2012	Grab	Acenaphthene	0.078	U	mg/kg	0.50	0.16
CB173	N11	4/21/2011	Filter/Baseflow	Acenaphthene	0.33	U	mg/kg	0.50	0.66
CB173	N11	1/21/2011	Filter/Stormwater	Acenaphthene	1	U	mg/kg	0.50	2.0
CB173	N11	12/12/2010	Filter/Stormwater	Acenaphthene	0.037	U	mg/kg	0.50	0.074
CB173	N11	11/17/2010	Filter/Stormwater	Acenaphthene	1.4	U	mg/kg	0.50	2.8
CB173	N11	6/2/2010	Filter/Stormwater	Acenaphthene	0.14	U	mg/kg	0.50	0.28
CB173	N11	4/27/2010	Filter/Stormwater	Acenaphthene	0.072		mg/kg	0.50	0.14
CB173	N11	5/17/2012	Grab	Anthracene	0.078	U	mg/kg	0.96	0.081
CB173	N11	4/21/2011	Filter/Baseflow	Anthracene	0.33	U	mg/kg	0.96	0.34
CB173	N11	1/21/2011	Filter/Stormwater	Anthracene	1	U	mg/kg	0.96	1.0
CB173	N11	12/12/2010	Filter/Stormwater	Anthracene	0.037	U	mg/kg	0.96	0.039
CB173	N11	11/17/2010	Filter/Stormwater	Anthracene	1.4	U	mg/kg	0.96	1.5
CB173	N11	6/2/2010	Filter/Stormwater	Anthracene	0.14	U	mg/kg	0.96	0.15
CB173	N11	4/27/2010	Filter/Stormwater	Anthracene	0.097		mg/kg	0.96	0.10
CB173	N11	5/17/2012	Grab	Benzo(a)anthracene	0.086		mg/kg	1.3	0.066
CB173	N11	4/21/2011	Filter/Baseflow	Benzo(a)anthracene	0.33	U	mg/kg	1.3	0.25
CB173	N11	1/21/2011	Filter/Stormwater	Benzo(a)anthracene	1	U	mg/kg	1.3	0.77
CB173	N11	12/12/2010	Filter/Stormwater	Benzo(a)anthracene	0.29		mg/kg	1.3	0.22
CB173	N11	11/17/2010	Filter/Stormwater	Benzo(a)anthracene	1.4	U	mg/kg	1.3	1.1
CB173	N11	6/2/2010	Filter/Stormwater	Benzo(a)anthracene	0.17		mg/kg	1.3	0.13
CB173	N11	4/27/2010	Filter/Stormwater	Benzo(a)anthracene	0.27		mg/kg	1.3	0.21
CB173	N11	5/17/2012	Grab	Total Benzofluoranthenes	0.22		mg/kg	3.2	0.069
CB173	N11	4/21/2011	Filter/Baseflow	Total Benzofluoranthenes	0.53		mg/kg	3.2	0.17
CB173	N11	1/21/2011	Filter/Stormwater	Total Benzofluoranthenes	0.88	J	mg/kg	3.2	0.28
CB173	N11	12/12/2010	Filter/Stormwater	Total Benzofluoranthenes	0.78	J	mg/kg	3.2	0.24
CB173	N11	11/17/2010	Filter/Stormwater	Total Benzofluoranthenes	1.4	U	mg/kg	3.2	0.44
CB173	N11	6/2/2010	Filter/Stormwater	Total Benzofluoranthenes	0.72		mg/kg	3.2	0.23
CB173	N11	4/27/2010	Filter/Stormwater	Total Benzofluoranthenes	1.2		mg/kg	3.2	0.36
CB173	N11	5/17/2012	Grab	Benzo(g,h,i)perylene	0.074	J	mg/kg	0.67	0.11
CB173	N11	4/21/2011	Filter/Baseflow	Benzo(g,h,i)perylene	0.33	U	mg/kg	0.67	0.49
CB173	N11	1/21/2011	Filter/Stormwater	Benzo(g,h,i)perylene	1.2	J	mg/kg	0.67	1.8
CB173	N11	12/12/2010	Filter/Stormwater	Benzo(g,h,i)perylene	0.27		mg/kg	0.67	0.40
CB173	N11	11/17/2010	Filter/Stormwater	Benzo(g,h,i)perylene	1.4	U	mg/kg	0.67	2.1
CB173	N11	6/2/2010	Filter/Stormwater	Benzo(g,h,i)perylene	0.59		mg/kg	0.67	0.88
CB173	N11	4/27/2010	Filter/Stormwater	Benzo(g,h,i)perylene	0.58		mg/kg	0.67	0.87
CB173	N11	5/17/2012	Grab	Benzo(a)pyrene	0.11		mg/kg	0.15	0.73
CB173	N11	4/21/2011	Filter/Baseflow	Benzo(a)pyrene	0.33	U	mg/kg	0.15	2.2
CB173	N11	1/21/2011	Filter/Stormwater	Benzo(a)pyrene	1	U	mg/kg	0.15	6.7
CB173	N11	12/12/2010	Filter/Stormwater	Benzo(a)pyrene	0.29		mg/kg	0.15	1.9
CB173	N11	11/17/2010	Filter/Stormwater	Benzo(a)pyrene	1.4	U	mg/kg	0.15	9.3
CB173	N11	6/2/2010	Filter/Stormwater	Benzo(a)pyrene	0.24		mg/kg	0.15	1.6
CB173	N11	4/27/2010	Filter/Stormwater	Benzo(a)pyrene	0.44		mg/kg	0.15	2.9
CB173	N11	5/17/2012	Grab	Chrysene	0.15		mg/kg	1.4	0.11
CB173	N11	4/21/2011	Filter/Baseflow	Chrysene	0.35		mg/kg	1.4	0.25
CB173	N11	1/21/2011	Filter/Stormwater	Chrysene	0.95	J	mg/kg	1.4	0.68
CB173	N11	12/12/2010	Filter/Stormwater	Chrysene	0.51		mg/kg	1.4	0.36
CB173	N11	11/17/2010	Filter/Stormwater	Chrysene	1.4	U	mg/kg	1.4	1.0
CB173	N11	6/2/2010	Filter/Stormwater	Chrysene	0.76		mg/kg	1.4	0.54
CB173	N11	4/27/2010	Filter/Stormwater	Chrysene	1.0		mg/kg	1.4	0.71
CB173	N11	5/17/2012	Grab	Dibenz(a,h)anthracene	0.078	U	mg/kg	0.23	0.34
CB173	N11	4/21/2011	Filter/Baseflow	Dibenz(a,h)anthracene	0.33	U	mg/kg	0.23	1.4
CB173	N11	1/21/2011	Filter/Stormwater	Dibenz(a,h)anthracene	1	U	mg/kg	0.23	4.3
CB173	N11	12/12/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.037	UJ	mg/kg	0.23	0.16
CB173	N11	11/17/2010	Filter/Stormwater	Dibenz(a,h)anthracene	1.4	U	mg/kg	0.23	6.1
CB173	N11	6/2/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.14	U	mg/kg	0.23	0.61
CB173	N11	4/27/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.15		mg/kg	0.23	0.65
CB173	N11	5/17/2012	Grab	Dibenzofuran	0.078	U	mg/kg	0.54	0.14
CB173	N11	4/21/2011	Filter/Baseflow	Dibenzofuran	0.33	U	mg/kg	0.54	0.61
CB173	N11	1/21/2011	Filter/Stormwater	Dibenzofuran	1	U	mg/kg	0.54	1.9
CB173	N11	12/12/2010	Filter/Stormwater	Dibenzofuran	0.078		mg/kg	0.54	0.14
CB173	N11	11/17/2010	Filter/Stormwater	Dibenzofuran	1.4	U	mg/kg	0.54	2.6
CB173	N11	6/2/2010	Filter/Stormwater	Dibenzofuran	0.14	U	mg/kg	0.54	0.26
CB173	N11	4/27/2010	Filter/Stormwater	Dibenzofuran	0.13		mg/kg	0.54	0.24
CB173	N11	5/17/2012	Grab	Fluoranthene	0.17		mg/kg	1.7	0.10
CB173	N11	4/21/2011	Filter/Baseflow	Fluoranthene	0.43		mg/kg	1.7	0.25

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
CB173	N11	1/21/2011	Filter/Stormwater	Fluoranthene	1.1		mg/kg	1.7	0.65
CB173	N11	12/12/2010	Filter/Stormwater	Fluoranthene	0.73		mg/kg	1.7	0.43
CB173	N11	11/17/2010	Filter/Stormwater	Fluoranthene	1.4	U	mg/kg	1.7	0.82
CB173	N11	6/2/2010	Filter/Stormwater	Fluoranthene	0.86		mg/kg	1.7	0.51
CB173	N11	4/27/2010	Filter/Stormwater	Fluoranthene	1.2		mg/kg	1.7	0.71
CB173	N11	5/17/2012	Grab	Fluorene	0.078	U	mg/kg	0.54	0.14
CB173	N11	4/21/2011	Filter/Baseflow	Fluorene	0.33	U	mg/kg	0.54	0.61
CB173	N11	1/21/2011	Filter/Stormwater	Fluorene	1	U	mg/kg	0.54	1.9
CB173	N11	12/12/2010	Filter/Stormwater	Fluorene	0.066		mg/kg	0.54	0.12
CB173	N11	11/17/2010	Filter/Stormwater	Fluorene	1.4	U	mg/kg	0.54	2.6
CB173	N11	6/2/2010	Filter/Stormwater	Fluorene	0.14	U	mg/kg	0.54	0.26
CB173	N11	4/27/2010	Filter/Stormwater	Fluorene	0.14		mg/kg	0.54	0.26
CB173	N11	5/17/2012	Grab	Indeno(1,2,3-cd)pyrene	0.062	J	mg/kg	0.60	0.10
CB173	N11	4/21/2011	Filter/Baseflow	Indeno(1,2,3-cd)pyrene	0.33	U	mg/kg	0.60	0.55
CB173	N11	1/21/2011	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	1	U	mg/kg	0.60	1.7
CB173	N11	12/12/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.20		mg/kg	0.60	0.33
CB173	N11	11/17/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	1.4	U	mg/kg	0.60	2.3
CB173	N11	6/2/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.24		mg/kg	0.60	0.40
CB173	N11	4/27/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.40		mg/kg	0.60	0.67
CB173	N11	5/17/2012	Grab	Phenanthrene	0.097		mg/kg	1.5	0.065
CB173	N11	4/21/2011	Filter/Baseflow	Phenanthrene	0.33	U	mg/kg	1.5	0.22
CB173	N11	1/21/2011	Filter/Stormwater	Phenanthrene	1	U	mg/kg	1.5	0.67
CB173	N11	12/12/2010	Filter/Stormwater	Phenanthrene	0.58		mg/kg	1.5	0.39
CB173	N11	11/17/2010	Filter/Stormwater	Phenanthrene	1.4	U	mg/kg	1.5	0.93
CB173	N11	6/2/2010	Filter/Stormwater	Phenanthrene	0.48		mg/kg	1.5	0.32
CB173	N11	4/27/2010	Filter/Stormwater	Phenanthrene	0.92		mg/kg	1.5	0.61
CB173	N11	5/17/2012	Grab	Pyrene	0.23		mg/kg	2.6	0.088
CB173	N11	4/21/2011	Filter/Baseflow	Pyrene	0.52		mg/kg	2.6	0.20
CB173	N11	1/21/2011	Filter/Stormwater	Pyrene	1.5		mg/kg	2.6	0.58
CB173	N11	12/12/2010	Filter/Stormwater	Pyrene	1.0		mg/kg	2.6	0.38
CB173	N11	11/17/2010	Filter/Stormwater	Pyrene	1.4	U	mg/kg	2.6	0.54
CB173	N11	6/2/2010	Filter/Stormwater	Pyrene	0.76		mg/kg	2.6	0.29
CB173	N11	4/27/2010	Filter/Stormwater	Pyrene	1.4		mg/kg	2.6	0.54
CB173	N11	5/17/2012	Grab	Total HPAHs	1.1	J	mg/kg	12	0.092
CB173	N11	4/21/2011	Filter/Baseflow	Total HPAHs	1.8		mg/kg	12	0.15
CB173	N11	1/21/2011	Filter/Stormwater	Total HPAHs	5.6		mg/kg	12	0.47
CB173	N11	12/12/2010	Filter/Stormwater	Total HPAHs	4.1		mg/kg	12	0.34
CB173	N11	11/17/2010	Filter/Stormwater	Total HPAHs	1.4	U	mg/kg	12	0.12
CB173	N11	6/2/2010	Filter/Stormwater	Total HPAHs	4.3		mg/kg	12	0.36
CB173	N11	4/27/2010	Filter/Stormwater	Total HPAHs	6.6		mg/kg	12	0.55
CB173	N11	5/17/2012	Grab	Total LPAHs	0.14	J	mg/kg	5.2	0.027
CB173	N11	4/21/2011	Filter/Baseflow	Total LPAHs	0.33	U	mg/kg	5.2	0.063
CB173	N11	1/21/2011	Filter/Stormwater	Total LPAHs	1	U	mg/kg	5.2	0.19
CB173	N11	12/12/2010	Filter/Stormwater	Total LPAHs	0.76		mg/kg	5.2	0.15
CB173	N11	11/17/2010	Filter/Stormwater	Total LPAHs	1.4	U	mg/kg	5.2	0.27
CB173	N11	6/2/2010	Filter/Stormwater	Total LPAHs	0.48		mg/kg	5.2	0.092
CB173	N11	4/27/2010	Filter/Stormwater	Total LPAHs	1.5		mg/kg	5.2	0.28
CB173	N11	5/17/2012	Grab	Total cPAHs (TEQ, NDx0.5)	0.15		mg/kg	0.15	1.0
CB173	N11	4/21/2011	Filter/Baseflow	Total cPAHs (TEQ, NDx0.5)	0.27		mg/kg	0.15	1.8
CB173	N11	1/21/2011	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.75		mg/kg	0.15	5.0
CB173	N11	12/12/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.42		mg/kg	0.15	2.8
CB173	N11	11/17/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.987	U	mg/kg	0.15	6.6
CB173	N11	6/2/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.37		mg/kg	0.15	2.5
CB173	N11	4/27/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.65		mg/kg	0.15	4.3
CB174	N11	5/17/2012	Grab	Total PCBs	0.41		mg/kg	0.13	3.2
CB174	N11	3/29/2010	Grab	Total PCBs	1.89		mg/kg	0.13	15
CB174	N11	6/9/2009	Grab	Total PCBs	3.1		mg/kg	0.13	24
CB174	N11	3/13/2007	Grab	Total PCBs	7.2		mg/kg	0.13	55
CB174	N11	12/8/2006	Grab	Total PCBs	9.0		mg/kg	0.13	69
CB174	N11	10/24/2005	Grab	Total PCBs	14		mg/kg	0.13	110
CB174	N11	5/17/2012	Grab	Arsenic	8	U	mg/kg	7.3	1.1
CB174	N11	3/29/2010	Grab	Arsenic	20	U	mg/kg	7.3	2.7
CB174	N11	5/17/2012	Grab	Cadmium	2.1	J	mg/kg	5.1	0.41
CB174	N11	3/29/2010	Grab	Cadmium	5.7		mg/kg	5.1	1.1
CB174	N11	5/17/2012	Grab	Chromium	75		mg/kg	260	0.29
CB174	N11	3/29/2010	Grab	Chromium	180		mg/kg	260	0.69
CB174	N11	5/17/2012	Grab	Copper	76		mg/kg	390	0.20
CB174	N11	3/29/2010	Grab	Copper	376		mg/kg	390	0.96

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB174	N11	5/17/2012	Grab	Lead	93	mg/kg	450	0.21
CB174	N11	3/29/2010	Grab	Lead	287	mg/kg	450	0.64
CB174	N11	5/17/2012	Grab	Mercury	0.25 J	mg/kg	0.41	0.61
CB174	N11	3/29/2010	Grab	Mercury	0.61	mg/kg	0.41	1.5
CB174	N11	5/17/2012	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB174	N11	3/29/2010	Grab	Silver	1 U	mg/kg	6.1	0.16
CB174	N11	5/17/2012	Grab	Zinc	767 J	mg/kg	410	1.9
CB174	N11	3/29/2010	Grab	Zinc	1,920	mg/kg	410	4.7
CB174	N11	5/17/2012	Grab	p-Cresol (4-Methylphenol)	1.1	mg/kg	0.67	1.6
CB174	N11	5/17/2012	Grab	Phenol	0.21 J	mg/kg	0.42	0.50
CB174	N11	5/17/2012	Grab	Bis(2-ethylhexyl) phthalate	2.1	mg/kg	1.3	1.6
CB174	N11	5/17/2012	Grab	Butyl benzyl phthalate	0.19 J	mg/kg	0.067	2.8
CB174	N11	5/17/2012	Grab	Acenaphthene	0.32 U	mg/kg	0.50	0.64
CB174	N11	5/17/2012	Grab	Anthracene	0.32 U	mg/kg	0.96	0.33
CB174	N11	5/17/2012	Grab	Benzo(a)anthracene	0.32 U	mg/kg	1.3	0.25
CB174	N11	5/17/2012	Grab	Total Benzofluoranthenes	0.37	mg/kg	3.2	0.12
CB174	N11	5/17/2012	Grab	Benzo(g,h,i)perylene	0.32 U	mg/kg	0.67	0.48
CB174	N11	5/17/2012	Grab	Benzo(a)pyrene	0.32 U	mg/kg	0.15	2.1
CB174	N11	5/17/2012	Grab	Chrysene	0.43	mg/kg	1.4	0.31
CB174	N11	5/17/2012	Grab	Dibenz(a,h)anthracene	0.32 U	mg/kg	0.23	1.4
CB174	N11	5/17/2012	Grab	Dibenzofuran	0.32 U	mg/kg	0.54	0.59
CB174	N11	5/17/2012	Grab	Fluoranthene	0.68	mg/kg	1.7	0.40
CB174	N11	5/17/2012	Grab	Fluorene	0.32 U	mg/kg	0.54	0.59
CB174	N11	5/17/2012	Grab	Indeno(1,2,3-cd)pyrene	0.32 U	mg/kg	0.60	0.53
CB174	N11	5/17/2012	Grab	Phenanthrene	0.72	mg/kg	1.5	0.48
CB174	N11	5/17/2012	Grab	Pyrene	0.59	mg/kg	2.6	0.23
CB174	N11	5/17/2012	Grab	Total HPAHs	2.1	mg/kg	12	0.18
CB174	N11	5/17/2012	Grab	Total LPAHs	0.72	mg/kg	5.2	0.14
CB174	N11	5/17/2012	Grab	Total cPAHs (TEQ, NDx0.5)	0.25	mg/kg	0.15	1.7
CB174A	N11	3/30/2010	Grab	Total PCBs	0.70	mg/kg	0.13	5.4
CB174A	N11	6/9/2009	Grab	Total PCBs	0.86	mg/kg	0.13	6.6
CB174A	N11	3/13/2007	Grab	Total PCBs	0.72	mg/kg	0.13	5.5
CB174A	N11	10/24/2005	Grab	Total PCBs	7.2	mg/kg	0.13	55
CB174A	N11	3/30/2010	Grab	Arsenic	20 U	mg/kg	7.3	2.7
CB174A	N11	3/30/2010	Grab	Cadmium	6.2	mg/kg	5.1	1.2
CB174A	N11	3/30/2010	Grab	Chromium	84	mg/kg	260	0.32
CB174A	N11	3/30/2010	Grab	Copper	145	mg/kg	390	0.37
CB174A	N11	3/30/2010	Grab	Lead	183	mg/kg	450	0.41
CB174A	N11	3/30/2010	Grab	Mercury	0.27	mg/kg	0.41	0.66
CB174A	N11	3/30/2010	Grab	Silver	1 U	mg/kg	6.1	0.16
CB174A	N11	3/30/2010	Grab	Zinc	1,990	mg/kg	410	4.9
CB175	N11	11/16/2011	Filter/Stormwater	Total PCBs	3.9	mg/kg	0.13	30
CB175	N11	9/26/2011	Filter/Stormwater	Total PCBs	2.1	mg/kg	0.13	16
CB175	N11	3/29/2010	Grab	Total PCBs	1.4	mg/kg	0.13	11
CB175	N11	4/26/2006	Grab	Total PCBs	3.2	mg/kg	0.13	25
CB175	N11	10/24/2005	Grab	Total PCBs	2.9	mg/kg	0.13	22
CB175	N11	11/16/2011	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	14	ng/kg	13	1.1
CB175	N11	11/16/2011	Filter/Stormwater	Arsenic	8.0	mg/kg	7.3	1.1
CB175	N11	9/26/2011	Filter/Stormwater	Arsenic	9.0	mg/kg	7.3	1.2
CB175	N11	3/29/2010	Grab	Arsenic	9.0	mg/kg	7.3	1.2
CB175	N11	11/16/2011	Filter/Stormwater	Cadmium	3.2 J	mg/kg	5.1	0.63
CB175	N11	9/26/2011	Filter/Stormwater	Cadmium	2.1	mg/kg	5.1	0.41
CB175	N11	3/29/2010	Grab	Cadmium	1.1	mg/kg	5.1	0.22
CB175	N11	11/16/2011	Filter/Stormwater	Chromium	64	mg/kg	260	0.25
CB175	N11	9/26/2011	Filter/Stormwater	Chromium	84	mg/kg	260	0.32
CB175	N11	3/29/2010	Grab	Chromium	36	mg/kg	260	0.14
CB175	N11	11/16/2011	Filter/Stormwater	Copper	121	mg/kg	390	0.31
CB175	N11	9/26/2011	Filter/Stormwater	Copper	73	mg/kg	390	0.19
CB175	N11	3/29/2010	Grab	Copper	111	mg/kg	390	0.28
CB175	N11	11/16/2011	Filter/Stormwater	Lead	79 J	mg/kg	450	0.18
CB175	N11	9/26/2011	Filter/Stormwater	Lead	51	mg/kg	450	0.11
CB175	N11	3/29/2010	Grab	Lead	28	mg/kg	450	0.062
CB175	N11	11/16/2011	Filter/Stormwater	Mercury	0.51 J	mg/kg	0.41	1.2
CB175	N11	9/26/2011	Filter/Stormwater	Mercury	0.73	mg/kg	0.41	1.8
CB175	N11	3/29/2010	Grab	Mercury	0.31	mg/kg	0.41	0.76
CB175	N11	11/16/2011	Filter/Stormwater	Silver	0.4 U	mg/kg	6.1	0.066
CB175	N11	9/26/2011	Filter/Stormwater	Silver	0.5 U	mg/kg	6.1	0.082
CB175	N11	3/29/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB175	N11	11/16/2011	Filter/Stormwater	Zinc	594	mg/kg	410	1.4
CB175	N11	9/26/2011	Filter/Stormwater	Zinc	520	mg/kg	410	1.3
CB175	N11	3/29/2010	Grab	Zinc	251	mg/kg	410	0.61
CB175	N11	9/26/2011	Filter/Stormwater	Acenaphthene	0.19	mg/kg	0.50	0.38
CB175	N11	9/26/2011	Filter/Stormwater	Anthracene	0.84	mg/kg	0.96	0.88
CB175	N11	9/26/2011	Filter/Stormwater	Benzo(a)anthracene	1.1	mg/kg	1.3	0.85
CB175	N11	9/26/2011	Filter/Stormwater	Total Benzofluoranthenes	1.5	mg/kg	3.2	0.47
CB175	N11	9/26/2011	Filter/Stormwater	Benzo(g,h,i)perylene	0.53	mg/kg	0.67	0.79
CB175	N11	9/26/2011	Filter/Stormwater	Benzo(a)pyrene	0.73	mg/kg	0.15	4.9
CB175	N11	9/26/2011	Filter/Stormwater	Chrysene	1.4	mg/kg	1.4	1.0
CB175	N11	9/26/2011	Filter/Stormwater	Dibenz(a,h)anthracene	0.12	mg/kg	0.23	0.52
CB175	N11	9/26/2011	Filter/Stormwater	Dibenzofuran	0.12	mg/kg	0.54	0.22
CB175	N11	9/26/2011	Filter/Stormwater	Fluoranthene	3.3	mg/kg	1.7	1.9
CB175	N11	9/26/2011	Filter/Stormwater	Fluorene	0.28	mg/kg	0.54	0.52
CB175	N11	9/26/2011	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.37	mg/kg	0.60	0.62
CB175	N11	9/26/2011	Filter/Stormwater	Phenanthrene	2.5	mg/kg	1.5	1.7
CB175	N11	9/26/2011	Filter/Stormwater	Pyrene	2.6	mg/kg	2.6	1.0
CB175	N11	9/26/2011	Filter/Stormwater	Total HPAHs	12	mg/kg	12	1.0
CB175	N11	9/26/2011	Filter/Stormwater	Total LPAHs	3.8	mg/kg	5.2	0.73
CB175	N11	9/26/2011	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	1.1	mg/kg	0.15	7.0
CB175A	N11	3/29/2010	Grab	Total PCBs	0.70	mg/kg	0.13	5.4
CB175A	N11	8/5/2009	Grab	Total PCBs	0.29	mg/kg	0.13	2.2
CB175A	N11	3/29/2010	Grab	Arsenic	8.0	mg/kg	7.3	1.1
CB175A	N11	3/29/2010	Grab	Cadmium	4.2	mg/kg	5.1	0.82
CB175A	N11	3/29/2010	Grab	Chromium	62	mg/kg	260	0.24
CB175A	N11	3/29/2010	Grab	Copper	104	mg/kg	390	0.27
CB175A	N11	3/29/2010	Grab	Lead	70	mg/kg	450	0.16
CB175A	N11	3/29/2010	Grab	Mercury	0.11	mg/kg	0.41	0.27
CB175A	N11	3/29/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB175A	N11	3/29/2010	Grab	Zinc	804	mg/kg	410	2.0
CB179	N11	7/15/2009	Grab	Total PCBs	330	mg/kg	0.13	2,500
CB179	N11	3/13/2007	Grab	Total PCBs	0.70	mg/kg	0.13	5.4
CB179	N11	7/25/2006	Grab	Total PCBs	47	mg/kg	0.13	360
CB179	N11	4/26/2006	Grab	Total PCBs	34	mg/kg	0.13	260
CB179	N11	9/26/2005	Grab	Total PCBs	15	mg/kg	0.13	120
CB180	N11	3/29/2010	Grab	Total PCBs	2.1	mg/kg	0.13	16
CB180	N11	8/5/2009	Grab	Total PCBs	0.65	mg/kg	0.13	5.0
CB180	N11	6/8/2009	Grab	Total PCBs	1.8	mg/kg	0.13	14
CB180	N11	3/29/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB180	N11	3/29/2010	Grab	Cadmium	9.2	mg/kg	5.1	1.8
CB180	N11	3/29/2010	Grab	Chromium	147	mg/kg	260	0.57
CB180	N11	3/29/2010	Grab	Copper	357	mg/kg	390	0.92
CB180	N11	3/29/2010	Grab	Lead	295	mg/kg	450	0.66
CB180	N11	3/29/2010	Grab	Mercury	0.59	mg/kg	0.41	1.4
CB180	N11	3/29/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB180	N11	3/29/2010	Grab	Zinc	2,330	mg/kg	410	5.7
CB182	N11	3/29/2010	Grab	Total PCBs	3.1	mg/kg	0.13	24
CB182	N11	6/8/2009	Grab	Total PCBs	10	mg/kg	0.13	79
CB182	N11	12/8/2006	Grab	Total PCBs	9.2	mg/kg	0.13	71
CB182	N11	4/26/2006	Grab	Total PCBs	6.1	mg/kg	0.13	47
CB182	N11	3/29/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB182	N11	3/29/2010	Grab	Cadmium	16	mg/kg	5.1	3.0
CB182	N11	3/29/2010	Grab	Chromium	171	mg/kg	260	0.66
CB182	N11	3/29/2010	Grab	Copper	1,090	mg/kg	390	2.8
CB182	N11	3/29/2010	Grab	Lead	299	mg/kg	450	0.66
CB182	N11	3/29/2010	Grab	Mercury	1.0	mg/kg	0.41	2.5
CB182	N11	3/29/2010	Grab	Silver	0.80	mg/kg	6.1	0.13
CB182	N11	3/29/2010	Grab	Zinc	5,600	mg/kg	410	14
CB182A	N11	3/29/2010	Grab	Total PCBs	0.90	mg/kg	0.13	6.9
CB182A	N11	3/29/2010	Grab	Arsenic	7.0	mg/kg	7.3	0.96
CB182A	N11	3/29/2010	Grab	Cadmium	0.70	mg/kg	5.1	0.14
CB182A	N11	3/29/2010	Grab	Chromium	22	mg/kg	260	0.086
CB182A	N11	3/29/2010	Grab	Copper	33	mg/kg	390	0.083
CB182A	N11	3/29/2010	Grab	Lead	8.0	mg/kg	450	0.018
CB182A	N11	3/29/2010	Grab	Mercury	0.23	mg/kg	0.41	0.56
CB182A	N11	3/29/2010	Grab	Silver	0.3 U	mg/kg	6.1	0.049
CB182A	N11	3/29/2010	Grab	Zinc	246	mg/kg	410	0.60
CB185	N11	3/29/2010	Grab	Total PCBs	15	mg/kg	0.13	120

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB185	N11	6/8/2009	Grab	Total PCBs	24	mg/kg	0.13	180
CB185	N11	3/13/2007	Grab	Total PCBs	8.4	mg/kg	0.13	65
CB185	N11	12/8/2006	Grab	Total PCBs	11	mg/kg	0.13	85
CB185	N11	7/25/2006	Grab	Total PCBs	2.0	mg/kg	0.13	15
CB185	N11	4/26/2006	Grab	Total PCBs	11	mg/kg	0.13	85
CB185	N11	3/29/2010	Grab	Arsenic	9.0	mg/kg	7.3	1.2
CB185	N11	3/29/2010	Grab	Cadmium	6.1	mg/kg	5.1	1.2
CB185	N11	3/29/2010	Grab	Chromium	182	mg/kg	260	0.70
CB185	N11	3/29/2010	Grab	Copper	830	mg/kg	390	2.1
CB185	N11	3/29/2010	Grab	Lead	151	mg/kg	450	0.34
CB185	N11	3/29/2010	Grab	Mercury	20	mg/kg	0.41	48
CB185	N11	3/29/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB185	N11	3/29/2010	Grab	Zinc	1,490	mg/kg	410	3.6
CB187A	N11	7/15/2009	Grab	Total PCBs	7.5	mg/kg	0.13	58
CB188	N11	3/30/2010	Grab	Total PCBs	0.45	mg/kg	0.13	3.5
CB188	N11	7/15/2009	Grab	Total PCBs	0.46	mg/kg	0.13	3.5
CB188	N11	11/17/2006	Grab	Total PCBs	0.39	mg/kg	0.13	3.0
CB188	N11	3/30/2010	Grab	Arsenic	8.0	mg/kg	7.3	1.1
CB188	N11	3/30/2010	Grab	Cadmium	5.1	mg/kg	5.1	1.0
CB188	N11	3/30/2010	Grab	Chromium	89	mg/kg	260	0.34
CB188	N11	3/30/2010	Grab	Copper	157	mg/kg	390	0.40
CB188	N11	3/30/2010	Grab	Lead	131	mg/kg	450	0.29
CB188	N11	3/30/2010	Grab	Mercury	0.070	mg/kg	0.41	0.17
CB188	N11	3/30/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB188	N11	3/30/2010	Grab	Zinc	947	mg/kg	410	2.3
CB188B	N11	3/30/2010	Grab	Total PCBs	2.0	mg/kg	0.13	15
CB188B	N11	7/15/2009	Grab	Total PCBs	0.64	mg/kg	0.13	4.9
CB188B	N11	3/30/2010	Grab	Arsenic	20 U	mg/kg	7.3	2.7
CB188B	N11	3/30/2010	Grab	Cadmium	4.0	mg/kg	5.1	0.78
CB188B	N11	3/30/2010	Grab	Chromium	198 J	mg/kg	260	0.76
CB188B	N11	3/30/2010	Grab	Copper	3,270	mg/kg	390	8.4
CB188B	N11	3/30/2010	Grab	Lead	196 J	mg/kg	450	0.44
CB188B	N11	3/30/2010	Grab	Mercury	0.08	mg/kg	0.41	0.20
CB188B	N11	3/30/2010	Grab	Silver	1 U	mg/kg	6.1	0.16
CB188B	N11	3/30/2010	Grab	Zinc	1,680	mg/kg	410	4.1
CB189	N11	4/7/2010	Grab	Total PCBs	0.22	mg/kg	0.13	1.7
CB189	N11	3/30/2010	Grab	Total PCBs	0.19	mg/kg	0.13	1.5
CB189	N11	4/7/2010	Grab	Arsenic	6 U	mg/kg	7.3	0.82
CB189	N11	3/30/2010	Grab	Arsenic	6.0	mg/kg	7.3	0.82
CB189	N11	4/7/2010	Grab	Cadmium	4.5	mg/kg	5.1	0.88
CB189	N11	3/30/2010	Grab	Cadmium	4.3	mg/kg	5.1	0.84
CB189	N11	4/7/2010	Grab	Chromium	36	mg/kg	260	0.14
CB189	N11	3/30/2010	Grab	Chromium	49	mg/kg	260	0.19
CB189	N11	4/7/2010	Grab	Copper	58	mg/kg	390	0.15
CB189	N11	3/30/2010	Grab	Copper	69	mg/kg	390	0.18
CB189	N11	4/7/2010	Grab	Lead	59	mg/kg	450	0.13
CB189	N11	3/30/2010	Grab	Lead	87	mg/kg	450	0.19
CB189	N11	4/7/2010	Grab	Mercury	0.03 U	mg/kg	0.41	0.073
CB189	N11	3/30/2010	Grab	Mercury	0.03 U	mg/kg	0.41	0.073
CB189	N11	4/7/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB189	N11	3/30/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB189	N11	4/7/2010	Grab	Zinc	518	mg/kg	410	1.3
CB189	N11	3/30/2010	Grab	Zinc	575	mg/kg	410	1.4
CB189A	N11	11/17/2006	Grab	Total PCBs	0.57	mg/kg	0.13	4.4
CB191	N11	7/15/2009	Grab	Total PCBs	180	mg/kg	0.13	1,400
CB192	N11	3/29/2010	Grab	Total PCBs	8.0	mg/kg	0.13	62
CB192	N11	3/29/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB192	N11	3/29/2010	Grab	Cadmium	18	mg/kg	5.1	3.6
CB192	N11	3/29/2010	Grab	Chromium	235	mg/kg	260	0.90
CB192	N11	3/29/2010	Grab	Copper	306	mg/kg	390	0.78
CB192	N11	3/29/2010	Grab	Lead	313	mg/kg	450	0.70
CB192	N11	3/29/2010	Grab	Mercury	0.53	mg/kg	0.41	1.3
CB192	N11	3/29/2010	Grab	Silver	0.60	mg/kg	6.1	0.098
CB192	N11	3/29/2010	Grab	Zinc	1,420	mg/kg	410	3.5
CB193	N11	3/13/2007	Grab	Total PCBs	79	mg/kg	0.13	610
CB193	N11	12/8/2006	Grab	Total PCBs	1.2	mg/kg	0.13	9.2
CB193	N11	7/25/2006	Grab	Total PCBs	12	mg/kg	0.13	92
CB193	N11	10/27/2005	Grab	Total PCBs	17	mg/kg	0.13	130

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB193A	N11	3/30/2010	Grab	Total PCBs	6.0	mg/kg	0.13	46
CB193A	N11	3/30/2010	Grab	Arsenic	20 U	mg/kg	7.3	2.7
CB193A	N11	3/30/2010	Grab	Cadmium	16	mg/kg	5.1	3.1
CB193A	N11	3/30/2010	Grab	Chromium	179	mg/kg	260	0.69
CB193A	N11	3/30/2010	Grab	Copper	507	mg/kg	390	1.3
CB193A	N11	3/30/2010	Grab	Lead	430	mg/kg	450	0.96
CB193A	N11	3/30/2010	Grab	Mercury	0.70	mg/kg	0.41	1.7
CB193A	N11	3/30/2010	Grab	Silver	1 U	mg/kg	6.1	0.16
CB193A	N11	3/30/2010	Grab	Zinc	3,950	mg/kg	410	9.6
CB194	N11	7/16/2012	Grab	Total PCBs	3.6	mg/kg	0.13	28
CB194	N11	3/30/2010	Grab	Total PCBs	2.8	mg/kg	0.13	22
CB194	N11	8/5/2009	Grab	Total PCBs	2.2	mg/kg	0.13	17
CB194	N11	3/13/2007	Grab	Total PCBs	9.3	mg/kg	0.13	72
CB194	N11	12/8/2006	Grab	Total PCBs	28	mg/kg	0.13	220
CB194	N11	7/25/2006	Grab	Total PCBs	20	mg/kg	0.13	160
CB194	N11	10/24/2005	Grab	Total PCBs	14	mg/kg	0.13	110
CB194	N11	7/16/2012	Grab	Arsenic	16	mg/kg	7.3	2.2
CB194	N11	3/30/2010	Grab	Arsenic	9.0	mg/kg	7.3	1.2
CB194	N11	7/16/2012	Grab	Cadmium	17	mg/kg	5.1	3.4
CB194	N11	3/30/2010	Grab	Cadmium	9.9	mg/kg	5.1	1.9
CB194	N11	7/16/2012	Grab	Chromium	371	mg/kg	260	1.4
CB194	N11	3/30/2010	Grab	Chromium	100	mg/kg	260	0.38
CB194	N11	7/16/2012	Grab	Copper	357	mg/kg	390	0.92
CB194	N11	3/30/2010	Grab	Copper	85	mg/kg	390	0.22
CB194	N11	7/16/2012	Grab	Lead	196	mg/kg	450	0.44
CB194	N11	3/30/2010	Grab	Lead	100	mg/kg	450	0.22
CB194	N11	7/16/2012	Grab	Mercury	13	mg/kg	0.41	31
CB194	N11	3/30/2010	Grab	Mercury	3.1	mg/kg	0.41	7.6
CB194	N11	7/16/2012	Grab	Silver	0.40	mg/kg	6.1	0.066
CB194	N11	3/30/2010	Grab	Silver	0.70	mg/kg	6.1	0.11
CB194	N11	7/16/2012	Grab	Zinc	1,070	mg/kg	410	2.6
CB194	N11	3/30/2010	Grab	Zinc	651	mg/kg	410	1.6
MH166A	N11	7/15/2009	Grab	Total PCBs	18	mg/kg	0.13	140
MH179A	N11	9/26/2005	Grab	Total PCBs	3.7	mg/kg	0.13	28
MH179B	N11	5/17/2012	Grab	Total PCBs	4.6	mg/kg	0.13	35
MH179B	N11	3/29/2010	Grab	Total PCBs	8.1	mg/kg	0.13	62
MH179B	N11	5/17/2012	Grab	Arsenic	10	mg/kg	7.3	1.4
MH179B	N11	3/29/2010	Grab	Arsenic	13	mg/kg	7.3	1.8
MH179B	N11	5/17/2012	Grab	Cadmium	1.3 J	mg/kg	5.1	0.25
MH179B	N11	3/29/2010	Grab	Cadmium	1.4	mg/kg	5.1	0.27
MH179B	N11	5/17/2012	Grab	Chromium	19	mg/kg	260	0.073
MH179B	N11	3/29/2010	Grab	Chromium	28	mg/kg	260	0.11
MH179B	N11	5/17/2012	Grab	Copper	40	mg/kg	390	0.10
MH179B	N11	3/29/2010	Grab	Copper	60	mg/kg	390	0.15
MH179B	N11	5/17/2012	Grab	Lead	16	mg/kg	450	0.036
MH179B	N11	3/29/2010	Grab	Lead	23	mg/kg	450	0.051
MH179B	N11	5/17/2012	Grab	Mercury	0.10 J	mg/kg	0.41	0.24
MH179B	N11	3/29/2010	Grab	Mercury	0.10	mg/kg	0.41	0.24
MH179B	N11	5/17/2012	Grab	Silver	0.4 U	mg/kg	6.1	0.066
MH179B	N11	3/29/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
MH179B	N11	5/17/2012	Grab	Zinc	466 J	mg/kg	410	1.1
MH179B	N11	3/29/2010	Grab	Zinc	364	mg/kg	410	0.89
MH179B	N11	5/17/2012	Grab	p-Cresol (4-Methylphenol)	0.15 U	mg/kg	0.67	0.22
MH179B	N11	5/17/2012	Grab	Phenol	0.074 U	mg/kg	0.42	0.18
MH179B	N11	5/17/2012	Grab	Bis(2-ethylhexyl) phthalate	0.76	mg/kg	1.3	0.58
MH179B	N11	5/17/2012	Grab	Butyl benzyl phthalate	0.074 U	mg/kg	0.067	1.1
MH179B	N11	5/17/2012	Grab	Acenaphthene	0.074 U	mg/kg	0.50	0.15
MH179B	N11	5/17/2012	Grab	Anthracene	0.074 U	mg/kg	0.96	0.077
MH179B	N11	5/17/2012	Grab	Benzo(a)anthracene	0.074 U	mg/kg	1.3	0.057
MH179B	N11	5/17/2012	Grab	Total Benzofluoranthenes	0.052 J	mg/kg	3.2	0.016
MH179B	N11	5/17/2012	Grab	Benzo(g,h,i)perylene	0.041 J	mg/kg	0.67	0.061
MH179B	N11	5/17/2012	Grab	Benzo(a)pyrene	0.074 U	mg/kg	0.15	0.49
MH179B	N11	5/17/2012	Grab	Chrysene	0.059 J	mg/kg	1.4	0.042
MH179B	N11	5/17/2012	Grab	Dibenz(a,h)anthracene	0.074 U	mg/kg	0.23	0.32
MH179B	N11	5/17/2012	Grab	Dibenzofuran	0.074 U	mg/kg	0.54	0.14
MH179B	N11	5/17/2012	Grab	Fluoranthene	0.074 U	mg/kg	1.7	0.044
MH179B	N11	5/17/2012	Grab	Fluorene	0.074 U	mg/kg	0.54	0.14
MH179B	N11	5/17/2012	Grab	Indeno(1,2,3-cd)pyrene	0.074 U	mg/kg	0.60	0.12

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH179B	N11	5/17/2012	Grab	Phenanthrene	0.074 U	mg/kg	1.5	0.049
MH179B	N11	5/17/2012	Grab	Pyrene	0.044 J	mg/kg	2.6	0.017
MH179B	N11	5/17/2012	Grab	Total HPAHs	0.20 J	mg/kg	12	0.017
MH179B	N11	5/17/2012	Grab	Total LPAHs	0.074 U	mg/kg	5.2	0.014
MH179B	N11	5/17/2012	Grab	Total cPAHs (TEQ, NDx0.5)	0.054	mg/kg	0.15	0.36
MH181A	N11	7/25/2012	Grab	Total PCBs	29	mg/kg	0.13	220
MH181A	N11	5/17/2012	Grab	Total PCBs	54	mg/kg	0.13	420
MH181A	N11	3/29/2010	Grab	Total PCBs	4.2	mg/kg	0.13	32
MH181A	N11	7/15/2009	Grab	Total PCBs	15	mg/kg	0.13	120
MH181A	N11	3/13/2007	Grab	Total PCBs	13	mg/kg	0.13	98
MH181A	N11	12/8/2006	Grab	Total PCBs	18	mg/kg	0.13	140
MH181A	N11	5/17/2012	Grab	Arsenic	20	mg/kg	7.3	2.7
MH181A	N11	3/29/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
MH181A	N11	5/17/2012	Grab	Cadmium	8.5 J	mg/kg	5.1	1.7
MH181A	N11	3/29/2010	Grab	Cadmium	8.5	mg/kg	5.1	1.7
MH181A	N11	5/17/2012	Grab	Chromium	128	mg/kg	260	0.49
MH181A	N11	3/29/2010	Grab	Chromium	143	mg/kg	260	0.55
MH181A	N11	5/17/2012	Grab	Copper	466	mg/kg	390	1.2
MH181A	N11	3/29/2010	Grab	Copper	531	mg/kg	390	1.4
MH181A	N11	5/17/2012	Grab	Lead	296	mg/kg	450	0.66
MH181A	N11	3/29/2010	Grab	Lead	225	mg/kg	450	0.50
MH181A	N11	5/17/2012	Grab	Mercury	5.0 J	mg/kg	0.41	12
MH181A	N11	3/29/2010	Grab	Mercury	1.2	mg/kg	0.41	3.0
MH181A	N11	5/17/2012	Grab	Silver	1.2	mg/kg	6.1	0.20
MH181A	N11	3/29/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
MH181A	N11	5/17/2012	Grab	Zinc	1,770 J	mg/kg	410	4.3
MH181A	N11	3/29/2010	Grab	Zinc	1,860	mg/kg	410	4.5
MH181A	N11	5/17/2012	Grab	p-Cresol (4-Methylphenol)	0.52 J	mg/kg	0.67	0.78
MH181A	N11	5/17/2012	Grab	Phenol	0.69	mg/kg	0.42	1.6
MH181A	N11	5/17/2012	Grab	Bis(2-ethylhexyl) phthalate	17	mg/kg	1.3	13
MH181A	N11	5/17/2012	Grab	Butyl benzyl phthalate	1.7	mg/kg	0.067	25
MH181A	N11	5/17/2012	Grab	Acenaphthene	0.34 J	mg/kg	0.50	0.68
MH181A	N11	5/17/2012	Grab	Anthracene	0.48 J	mg/kg	0.96	0.50
MH181A	N11	5/17/2012	Grab	Benzo(a)anthracene	1.0	mg/kg	1.3	0.77
MH181A	N11	5/17/2012	Grab	Total Benzofluoranthenes	2.8	mg/kg	3.2	0.88
MH181A	N11	5/17/2012	Grab	Benzo(g,h,i)perylene	1.6	mg/kg	0.67	2.4
MH181A	N11	5/17/2012	Grab	Benzo(a)pyrene	1.3	mg/kg	0.15	8.7
MH181A	N11	5/17/2012	Grab	Chrysene	2.0	mg/kg	1.4	1.4
MH181A	N11	5/17/2012	Grab	Dibenz(a,h)anthracene	0.45 J	mg/kg	0.23	2.0
MH181A	N11	5/17/2012	Grab	Dibenzofuran	0.38 J	mg/kg	0.54	0.70
MH181A	N11	5/17/2012	Grab	Fluoranthene	2.5	mg/kg	1.7	1.5
MH181A	N11	5/17/2012	Grab	Fluorene	0.41 J	mg/kg	0.54	0.76
MH181A	N11	5/17/2012	Grab	Indeno(1,2,3-cd)pyrene	1.0	mg/kg	0.60	1.7
MH181A	N11	5/17/2012	Grab	Phenanthrene	1.7	mg/kg	1.5	1.1
MH181A	N11	5/17/2012	Grab	Pyrene	2.6	mg/kg	2.6	1.0
MH181A	N11	5/17/2012	Grab	Total HPAHs	15 J	mg/kg	12	1.3
MH181A	N11	5/17/2012	Grab	Total LPAHs	3.9 J	mg/kg	5.2	0.75
MH181A	N11	5/17/2012	Grab	Total cPAHs (TEQ, NDx0.5)	1.8	mg/kg	0.15	12
MH187	N11	3/13/2007	Grab	Total PCBs	100	mg/kg	0.13	770
MH187	N11	12/8/2006	Grab	Total PCBs	64	mg/kg	0.13	490
MH187	N11	10/4/2005	Grab	Total PCBs	9.2	mg/kg	0.13	71
MH193	N11	3/13/2007	Grab	Total PCBs	173	mg/kg	0.13	1,300
MH193	N11	1/8/2007	Grab	Total PCBs	24	mg/kg	0.13	180
MH193	N11	7/25/2006	Grab	Total PCBs	191	mg/kg	0.13	1,500
MH193	N11	9/26/2005	Grab	Total PCBs	84	mg/kg	0.13	650
OWS186	N11	3/13/2007	Grab	Total PCBs	105	mg/kg	0.13	810
OWS186	N11	7/25/2006	Grab	Total PCBs	1,200	mg/kg	0.13	9,200
OWS186	N11	9/26/2005	Grab	Total PCBs	49	mg/kg	0.13	380
OWS186	N11	5/13/2005	Grab	Total PCBs	33	mg/kg	0.13	250
UNKCB22	N11	3/30/2010	Grab	Total PCBs	0.90	mg/kg	0.13	6.9
UNKCB22	N11	3/30/2010	Grab	Arsenic	9.0	mg/kg	7.3	1.2
UNKCB22	N11	3/30/2010	Grab	Cadmium	13	mg/kg	5.1	2.6
UNKCB22	N11	3/30/2010	Grab	Chromium	97	mg/kg	260	0.37
UNKCB22	N11	3/30/2010	Grab	Copper	325	mg/kg	390	0.83
UNKCB22	N11	3/30/2010	Grab	Lead	132	mg/kg	450	0.29
UNKCB22	N11	3/30/2010	Grab	Mercury	0.3	mg/kg	0.41	0.73
UNKCB22	N11	3/30/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
UNKCB22	N11	3/30/2010	Grab	Zinc	1,180	mg/kg	410	2.9

Table 7.2-8
Storm Drain Solids Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB177	N12	3/29/2010	Grab	Total PCBs	1.4	mg/kg	0.13	11
CB177	N12	3/29/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB177	N12	3/29/2010	Grab	Cadmium	5.6	mg/kg	5.1	1.1
CB177	N12	3/29/2010	Grab	Chromium	142 J	mg/kg	260	0.55
CB177	N12	3/29/2010	Grab	Copper	139	mg/kg	390	0.36
CB177	N12	3/29/2010	Grab	Lead	443 J	mg/kg	450	0.98
CB177	N12	3/29/2010	Grab	Mercury	0.13	mg/kg	0.41	0.32
CB177	N12	3/29/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB177	N12	3/29/2010	Grab	Zinc	799	mg/kg	410	1.9
CB195	N12	3/24/2011	Grab	Total PCBs	0.12	mg/kg	0.13	0.95
CB195	N12	3/29/2010	Grab	Total PCBs	0.50	mg/kg	0.13	3.8
CB195	N12	3/29/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB195	N12	3/29/2010	Grab	Cadmium	1.9	mg/kg	5.1	0.37
CB195	N12	3/29/2010	Grab	Chromium	40	mg/kg	260	0.15
CB195	N12	3/29/2010	Grab	Copper	85	mg/kg	390	0.22
CB195	N12	3/29/2010	Grab	Lead	66	mg/kg	450	0.15
CB195	N12	3/29/2010	Grab	Mercury	0.12	mg/kg	0.41	0.29
CB195	N12	3/29/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB195	N12	3/29/2010	Grab	Zinc	424	mg/kg	410	1.0
CB196	N12	3/24/2011	Grab	Total PCBs	0.29	mg/kg	0.13	2.2
CB196	N12	4/7/2010	Grab	Total PCBs	7.2	mg/kg	0.13	56
CB196	N12	4/7/2010	Grab	Arsenic	9 U	mg/kg	7.3	1.2
CB196	N12	4/7/2010	Grab	Cadmium	11	mg/kg	5.1	2.2
CB196	N12	4/7/2010	Grab	Chromium	71	mg/kg	260	0.27
CB196	N12	4/7/2010	Grab	Copper	131	mg/kg	390	0.34
CB196	N12	4/7/2010	Grab	Lead	118	mg/kg	450	0.26
CB196	N12	4/7/2010	Grab	Mercury	0.70	mg/kg	0.41	1.7
CB196	N12	4/7/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB196	N12	4/7/2010	Grab	Zinc	633	mg/kg	410	1.5
CB199A/B	N12	3/30/2010	Grab	Total PCBs	0.55	mg/kg	0.13	4.2
CB199A/B	N12	3/30/2010	Grab	Arsenic	11	mg/kg	7.3	1.5
CB199A/B	N12	3/30/2010	Grab	Cadmium	4.9	mg/kg	5.1	0.96
CB199A/B	N12	3/30/2010	Grab	Chromium	88	mg/kg	260	0.34
CB199A/B	N12	3/30/2010	Grab	Copper	155	mg/kg	390	0.40
CB199A/B	N12	3/30/2010	Grab	Lead	239	mg/kg	450	0.53
CB199A/B	N12	3/30/2010	Grab	Mercury	0.13	mg/kg	0.41	0.32
CB199A/B	N12	3/30/2010	Grab	Silver	1.3	mg/kg	6.1	0.21
CB199A/B	N12	3/30/2010	Grab	Zinc	685	mg/kg	410	1.7

Indicates detected result exceeds the RISL.
Indicates nondetected result exceeds the RISL

All samples presented as dry weight concentrations.
Table includes only chemicals that exceed the screening level in at least one sample in this drainage area.
(a) Grab sample collected on 3/31/2010 from MH652 contained a paint chip and is therefore not representative of storm drain solids concentrations.
RISL = RI Screening Level

Table 7.2-9
Storm Drain Water Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Results	Units	RISL	RISL Exceedance Factor
MH108	N1-DOWN	4/27/2011	Composite	Total PCBs	0.090	ug/L	0.010	9.0
MH108	N1-DOWN	4/25/2011	Composite	Total PCBs	0.041	ug/L	0.010	4.1
MH108	N1-DOWN	3/9/2011	Composite	Total PCBs	0.10	ug/L	0.010	10
MH108	N1-DOWN	1/21/2011	Composite	Total PCBs	0.053	ug/L	0.010	5.3
MH108	N1-DOWN	12/12/2010	Composite	Total PCBs	0.017	ug/L	0.010	1.7
MH108	N1-DOWN	11/30/2010	Composite	Total PCBs	0.013	ug/L	0.010	1.3
MH108	N1-DOWN	11/17/2010	Composite	Total PCBs	0.050	ug/L	0.010	5.0
MH108	N1-DOWN	6/29/2010	Composite	Total PCBs	0.27	ug/L	0.010	27
MH108	N1-DOWN	6/2/2010	Composite	Total PCBs	0.046	ug/L	0.010	4.6
MH108	N1-DOWN	5/20/2010	Composite	Total PCBs	0.11	ug/L	0.010	11
MH108	N1-DOWN	4/27/2010	Composite	Total PCBs	0.027	ug/L	0.010	2.7
MH108	N1-DOWN	3/29/2010	Composite	Total PCBs	0.12	ug/L	0.010	12
MH108	N1-DOWN	2/23/2010	Composite	Total PCBs	0.22	ug/L	0.010	22
MH108	N1-DOWN	2/11/2010	Composite	Total PCBs	0.15	ug/L	0.010	15
MH108	N1-DOWN	2/5/2010	Composite	Total PCBs	0.028	ug/L	0.010	2.8
MH108	N1-DOWN	12/15/2009	Composite	Total PCBs	0.054	ug/L	0.010	5.4
MH108	N1-DOWN	11/6/2009	Composite	Total PCBs	0.036	ug/L	0.010	3.6
MH108	N1-DOWN	10/29/2009	Composite	Total PCBs	0.016	ug/L	0.010	1.6
MH108	N1-DOWN	10/17/2009	Composite	Total PCBs	0.036	ug/L	0.010	3.6
MH108	N1-DOWN	4/27/2011	Composite	Arsenic	1.4	ug/L	0.87	1.6
MH108	N1-DOWN	4/27/2011	Composite	Arsenic	0.50	ug/L	0.87	0.57
MH108	N1-DOWN	4/25/2011	Composite	Arsenic	0.70	ug/L	0.87	0.80
MH108	N1-DOWN	4/25/2011	Composite	Arsenic	0.50	ug/L	0.87	0.57
MH108	N1-DOWN	3/9/2011	Composite	Arsenic	1.4	ug/L	0.87	1.6
MH108	N1-DOWN	3/9/2011	Composite	Arsenic	0.40	ug/L	0.87	0.46
MH108	N1-DOWN	1/21/2011	Composite	Arsenic	0.60	ug/L	0.87	0.69
MH108	N1-DOWN	1/21/2011	Composite	Arsenic	0.40	ug/L	0.87	0.46
MH108	N1-DOWN	12/12/2010	Composite	Arsenic	0.40	ug/L	0.87	0.46
MH108	N1-DOWN	12/12/2010	Composite	Arsenic	0.2 U	ug/L	0.87	0.23
MH108	N1-DOWN	11/30/2010	Composite	Arsenic	0.60	ug/L	0.87	0.69
MH108	N1-DOWN	11/30/2010	Composite	Arsenic	0.40	ug/L	0.87	0.46
MH108	N1-DOWN	11/17/2010	Composite	Arsenic	2.0	ug/L	0.87	2.3
MH108	N1-DOWN	11/17/2010	Composite	Arsenic	1.3	ug/L	0.87	1.5
MH108	N1-DOWN	6/29/2010	Composite	Arsenic	3.0	ug/L	0.87	3.4
MH108	N1-DOWN	6/29/2010	Composite	Arsenic	0.90	ug/L	0.87	1.0
MH108	N1-DOWN	6/2/2010	Composite	Arsenic	1.0	ug/L	0.87	1.1
MH108	N1-DOWN	6/2/2010	Composite	Arsenic	0.40	ug/L	0.87	0.46
MH108	N1-DOWN	5/20/2010	Composite	Arsenic	1.6	ug/L	0.87	1.8
MH108	N1-DOWN	5/20/2010	Composite	Arsenic	0.60	ug/L	0.87	0.69
MH108	N1-DOWN	4/27/2010	Composite	Arsenic	0.90	ug/L	0.87	1.0
MH108	N1-DOWN	4/27/2010	Composite	Arsenic	0.50	ug/L	0.87	0.57
MH108	N1-DOWN	3/29/2010	Composite	Arsenic	1.6	ug/L	0.87	1.8
MH108	N1-DOWN	3/29/2010	Composite	Arsenic	0.40	ug/L	0.87	0.46
MH108	N1-DOWN	2/23/2010	Composite	Arsenic	3.1	ug/L	0.87	3.6
MH108	N1-DOWN	2/23/2010	Composite	Arsenic	0.95 U	ug/L	0.87	1.1
MH108	N1-DOWN	2/11/2010	Composite	Arsenic	1.6	ug/L	0.87	1.8
MH108	N1-DOWN	2/11/2010	Composite	Arsenic	0.95 U	ug/L	0.87	1.1
MH108	N1-DOWN	2/5/2010	Composite	Arsenic	0.90	ug/L	0.87	1.0
MH108	N1-DOWN	2/5/2010	Composite	Arsenic	0.60	ug/L	0.87	0.69
MH108	N1-DOWN	12/15/2009	Composite	Arsenic	1.6	ug/L	0.87	1.8
MH108	N1-DOWN	12/15/2009	Composite	Arsenic	0.40	ug/L	0.87	0.46
MH108	N1-DOWN	11/6/2009	Composite	Arsenic	0.90	ug/L	0.87	1.0
MH108	N1-DOWN	11/6/2009	Composite	Arsenic	0.50	ug/L	0.87	0.57
MH108	N1-DOWN	10/29/2009	Composite	Arsenic	0.60	ug/L	0.87	0.69
MH108	N1-DOWN	10/29/2009	Composite	Arsenic	0.50	ug/L	0.87	0.57
MH108	N1-DOWN	10/17/2009	Composite	Arsenic	0.60	ug/L	0.87	0.69
MH108	N1-DOWN	10/17/2009	Composite	Arsenic	0.60	ug/L	0.87	0.69
MH108	N1-DOWN	4/27/2011	Composite	Cadmium	0.40	ug/L	0.43	0.93
MH108	N1-DOWN	4/27/2011	Composite	Cadmium	0.20	ug/L	0.43	0.47
MH108	N1-DOWN	4/25/2011	Composite	Cadmium	0.20	ug/L	0.43	0.47
MH108	N1-DOWN	4/25/2011	Composite	Cadmium	0.10	ug/L	0.43	0.23
MH108	N1-DOWN	3/9/2011	Composite	Cadmium	0.40	ug/L	0.43	0.93
MH108	N1-DOWN	3/9/2011	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	1/21/2011	Composite	Cadmium	0.20	ug/L	0.43	0.47

Table 7.2-9
Storm Drain Water Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Results	Units	RISL	RISL Exceedance Factor
MH108	N1-DOWN	1/21/2011	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	12/12/2010	Composite	Cadmium	0.20	ug/L	0.43	0.47
MH108	N1-DOWN	12/12/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	11/30/2010	Composite	Cadmium	0.20	ug/L	0.43	0.47
MH108	N1-DOWN	11/30/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	11/17/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	11/17/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	6/29/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	6/29/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	6/2/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	6/2/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	5/20/2010	Composite	Cadmium	0.50	ug/L	0.43	1.2
MH108	N1-DOWN	5/20/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	4/27/2010	Composite	Cadmium	0.30	ug/L	0.43	0.70
MH108	N1-DOWN	4/27/2010	Composite	Cadmium	0.20	ug/L	0.43	0.47
MH108	N1-DOWN	3/29/2010	Composite	Cadmium	0.60	ug/L	0.43	1.4
MH108	N1-DOWN	3/29/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	2/23/2010	Composite	Cadmium	15	ug/L	0.43	35
MH108	N1-DOWN	2/23/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	2/11/2010	Composite	Cadmium	16	ug/L	0.43	37
MH108	N1-DOWN	2/11/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	2/5/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	2/5/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	12/15/2009	Composite	Cadmium	0.40	ug/L	0.43	0.93
MH108	N1-DOWN	12/15/2009	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	11/6/2009	Composite	Cadmium	0.60	ug/L	0.43	1.4
MH108	N1-DOWN	11/6/2009	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	10/29/2009	Composite	Cadmium	0.30	ug/L	0.43	0.70
MH108	N1-DOWN	10/29/2009	Composite	Cadmium	0.20	ug/L	0.43	0.47
MH108	N1-DOWN	10/17/2009	Composite	Cadmium	0.30	ug/L	0.43	0.70
MH108	N1-DOWN	10/17/2009	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH108	N1-DOWN	4/27/2011	Composite	Copper	10	ug/L	2.4	4.3
MH108	N1-DOWN	4/27/2011	Composite	Copper	3.5	ug/L	2.4	1.5
MH108	N1-DOWN	4/25/2011	Composite	Copper	3.1	ug/L	2.4	1.3
MH108	N1-DOWN	4/25/2011	Composite	Copper	2.4	ug/L	2.4	1.0
MH108	N1-DOWN	3/9/2011	Composite	Copper	20	ug/L	2.4	8.2
MH108	N1-DOWN	3/9/2011	Composite	Copper	2.4	ug/L	2.4	1.0
MH108	N1-DOWN	1/21/2011	Composite	Copper	3.3	ug/L	2.4	1.4
MH108	N1-DOWN	1/21/2011	Composite	Copper	1.4	ug/L	2.4	0.58
MH108	N1-DOWN	12/12/2010	Composite	Copper	4.6	ug/L	2.4	1.9
MH108	N1-DOWN	12/12/2010	Composite	Copper	0.90	ug/L	2.4	0.38
MH108	N1-DOWN	11/30/2010	Composite	Copper	3.7	ug/L	2.4	1.5
MH108	N1-DOWN	11/30/2010	Composite	Copper	1.9	ug/L	2.4	0.79
MH108	N1-DOWN	11/17/2010	Composite	Copper	2.7	ug/L	2.4	1.1
MH108	N1-DOWN	11/17/2010	Composite	Copper	2.0	ug/L	2.4	0.83
MH108	N1-DOWN	6/29/2010	Composite	Copper	1.3	ug/L	2.4	0.54
MH108	N1-DOWN	6/29/2010	Composite	Copper	3.9 U	ug/L	2.4	1.6
MH108	N1-DOWN	6/2/2010	Composite	Copper	9.7	ug/L	2.4	4.0
MH108	N1-DOWN	6/2/2010	Composite	Copper	7.5	ug/L	2.4	3.1
MH108	N1-DOWN	5/20/2010	Composite	Copper	28	ug/L	2.4	11
MH108	N1-DOWN	5/20/2010	Composite	Copper	11	ug/L	2.4	4.6
MH108	N1-DOWN	4/27/2010	Composite	Copper	12	ug/L	2.4	5.0
MH108	N1-DOWN	4/27/2010	Composite	Copper	7.7	ug/L	2.4	3.2
MH108	N1-DOWN	3/29/2010	Composite	Copper	33	ug/L	2.4	14
MH108	N1-DOWN	3/29/2010	Composite	Copper	3.7	ug/L	2.4	1.5
MH108	N1-DOWN	2/23/2010	Composite	Copper	8.9 J	ug/L	2.4	3.7
MH108	N1-DOWN	2/23/2010	Composite	Copper	2.6 UJ	ug/L	2.4	1.1
MH108	N1-DOWN	2/11/2010	Composite	Copper	9.4	ug/L	2.4	3.9
MH108	N1-DOWN	2/11/2010	Composite	Copper	8.8	ug/L	2.4	3.7
MH108	N1-DOWN	2/5/2010	Composite	Copper	7.2	ug/L	2.4	3.0
MH108	N1-DOWN	2/5/2010	Composite	Copper	4.3	ug/L	2.4	1.8
MH108	N1-DOWN	12/15/2009	Composite	Copper	17	ug/L	2.4	6.9
MH108	N1-DOWN	12/15/2009	Composite	Copper	5.5	ug/L	2.4	2.3
MH108	N1-DOWN	11/6/2009	Composite	Copper	27	ug/L	2.4	11

Table 7.2-9
Storm Drain Water Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Results	Units	RISL	RISL Exceedance Factor
MH108	N1-DOWN	11/6/2009	Composite	Copper	6.7	ug/L	2.4	2.8
MH108	N1-DOWN	10/29/2009	Composite	Copper	7.8	ug/L	2.4	3.3
MH108	N1-DOWN	10/29/2009	Composite	Copper	6.5	ug/L	2.4	2.7
MH108	N1-DOWN	10/17/2009	Composite	Copper	8.0	ug/L	2.4	3.3
MH108	N1-DOWN	10/17/2009	Composite	Copper	5.6	ug/L	2.4	2.3
MH108	N1-DOWN	4/27/2011	Composite	Lead	6.0	ug/L	8.1	0.74
MH108	N1-DOWN	4/27/2011	Composite	Lead	0.20	ug/L	8.1	0.025
MH108	N1-DOWN	4/25/2011	Composite	Lead	0.40	ug/L	8.1	0.049
MH108	N1-DOWN	4/25/2011	Composite	Lead	0.1 U	ug/L	8.1	0.012
MH108	N1-DOWN	3/9/2011	Composite	Lead	12	ug/L	8.1	1.5
MH108	N1-DOWN	3/9/2011	Composite	Lead	1 U	ug/L	8.1	0.12
MH108	N1-DOWN	1/21/2011	Composite	Lead	1.0	ug/L	8.1	0.12
MH108	N1-DOWN	1/21/2011	Composite	Lead	1 U	ug/L	8.1	0.12
MH108	N1-DOWN	12/12/2010	Composite	Lead	3.0	ug/L	8.1	0.37
MH108	N1-DOWN	12/12/2010	Composite	Lead	1 U	ug/L	8.1	0.12
MH108	N1-DOWN	11/30/2010	Composite	Lead	1.0	ug/L	8.1	0.12
MH108	N1-DOWN	11/30/2010	Composite	Lead	1 U	ug/L	8.1	0.12
MH108	N1-DOWN	11/17/2010	Composite	Lead	1 U	ug/L	8.1	0.12
MH108	N1-DOWN	11/17/2010	Composite	Lead	1 U	ug/L	8.1	0.12
MH108	N1-DOWN	6/29/2010	Composite	Lead	1.0	ug/L	8.1	0.12
MH108	N1-DOWN	6/29/2010	Composite	Lead	1 U	ug/L	8.1	0.12
MH108	N1-DOWN	6/2/2010	Composite	Lead	1.0	ug/L	8.1	0.12
MH108	N1-DOWN	6/2/2010	Composite	Lead	1 U	ug/L	8.1	0.12
MH108	N1-DOWN	5/20/2010	Composite	Lead	10	ug/L	8.1	1.2
MH108	N1-DOWN	5/20/2010	Composite	Lead	1 U	ug/L	8.1	0.12
MH108	N1-DOWN	4/27/2010	Composite	Lead	1.0	ug/L	8.1	0.12
MH108	N1-DOWN	4/27/2010	Composite	Lead	1 U	ug/L	8.1	0.12
MH108	N1-DOWN	3/29/2010	Composite	Lead	14	ug/L	8.1	1.7
MH108	N1-DOWN	3/29/2010	Composite	Lead	1 U	ug/L	8.1	0.12
MH108	N1-DOWN	2/23/2010	Composite	Lead	1.9 J	ug/L	8.1	0.23
MH108	N1-DOWN	2/23/2010	Composite	Lead	0.2 UJ	ug/L	8.1	0.025
MH108	N1-DOWN	2/11/2010	Composite	Lead	3.0	ug/L	8.1	0.37
MH108	N1-DOWN	2/11/2010	Composite	Lead	0.2 U	ug/L	8.1	0.025
MH108	N1-DOWN	2/5/2010	Composite	Lead	1.0	ug/L	8.1	0.12
MH108	N1-DOWN	2/5/2010	Composite	Lead	1 U	ug/L	8.1	0.12
MH108	N1-DOWN	12/15/2009	Composite	Lead	5.0	ug/L	8.1	0.62
MH108	N1-DOWN	12/15/2009	Composite	Lead	1 U	ug/L	8.1	0.12
MH108	N1-DOWN	11/6/2009	Composite	Lead	18	ug/L	8.1	2.2
MH108	N1-DOWN	11/6/2009	Composite	Lead	1 U	ug/L	8.1	0.12
MH108	N1-DOWN	10/29/2009	Composite	Lead	1.0	ug/L	8.1	0.12
MH108	N1-DOWN	10/29/2009	Composite	Lead	1 U	ug/L	8.1	0.12
MH108	N1-DOWN	10/17/2009	Composite	Lead	2.0	ug/L	8.1	0.25
MH108	N1-DOWN	10/17/2009	Composite	Lead	1 U	ug/L	8.1	0.12
MH108	N1-DOWN	4/27/2011	Composite	Nickel	2.2	ug/L	8.2	0.27
MH108	N1-DOWN	4/27/2011	Composite	Nickel	1.4	ug/L	8.2	0.17
MH108	N1-DOWN	4/25/2011	Composite	Nickel	1.1	ug/L	8.2	0.13
MH108	N1-DOWN	4/25/2011	Composite	Nickel	1.0	ug/L	8.2	0.12
MH108	N1-DOWN	3/9/2011	Composite	Nickel	3.6	ug/L	8.2	0.44
MH108	N1-DOWN	3/9/2011	Composite	Nickel	0.90	ug/L	8.2	0.11
MH108	N1-DOWN	1/21/2011	Composite	Nickel	1.3	ug/L	8.2	0.16
MH108	N1-DOWN	1/21/2011	Composite	Nickel	1.0	ug/L	8.2	0.12
MH108	N1-DOWN	12/12/2010	Composite	Nickel	1.0	ug/L	8.2	0.12
MH108	N1-DOWN	12/12/2010	Composite	Nickel	0.5 U	ug/L	8.2	0.061
MH108	N1-DOWN	11/30/2010	Composite	Nickel	0.90	ug/L	8.2	0.11
MH108	N1-DOWN	11/30/2010	Composite	Nickel	0.70	ug/L	8.2	0.085
MH108	N1-DOWN	11/17/2010	Composite	Nickel	1.3	ug/L	8.2	0.16
MH108	N1-DOWN	11/17/2010	Composite	Nickel	1.3	ug/L	8.2	0.16
MH108	N1-DOWN	6/29/2010	Composite	Nickel	1.4	ug/L	8.2	0.17
MH108	N1-DOWN	6/29/2010	Composite	Nickel	1.1	ug/L	8.2	0.13
MH108	N1-DOWN	6/2/2010	Composite	Nickel	1.6	ug/L	8.2	0.20
MH108	N1-DOWN	6/2/2010	Composite	Nickel	1.1	ug/L	8.2	0.13
MH108	N1-DOWN	5/20/2010	Composite	Nickel	2.8	ug/L	8.2	0.34
MH108	N1-DOWN	5/20/2010	Composite	Nickel	1.3	ug/L	8.2	0.16
MH108	N1-DOWN	4/27/2010	Composite	Nickel	1.2	ug/L	8.2	0.15

Table 7.2-9
Storm Drain Water Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Results	Units	RISL	RISL Exceedance Factor
MH108	N1-DOWN	4/27/2010	Composite	Nickel	1.1	ug/L	8.2	0.13
MH108	N1-DOWN	3/29/2010	Composite	Nickel	5.1	ug/L	8.2	0.62
MH108	N1-DOWN	3/29/2010	Composite	Nickel	0.80	ug/L	8.2	0.098
MH108	N1-DOWN	2/23/2010	Composite	Nickel	2.2 J	ug/L	8.2	0.26
MH108	N1-DOWN	2/23/2010	Composite	Nickel	2.0 J	ug/L	8.2	0.24
MH108	N1-DOWN	2/11/2010	Composite	Nickel	2.1 J	ug/L	8.2	0.26
MH108	N1-DOWN	2/11/2010	Composite	Nickel	1.7	ug/L	8.2	0.20
MH108	N1-DOWN	2/5/2010	Composite	Nickel	1.7	ug/L	8.2	0.21
MH108	N1-DOWN	2/5/2010	Composite	Nickel	1.5	ug/L	8.2	0.18
MH108	N1-DOWN	12/15/2009	Composite	Nickel	1.9	ug/L	8.2	0.23
MH108	N1-DOWN	12/15/2009	Composite	Nickel	0.80	ug/L	8.2	0.098
MH108	N1-DOWN	11/6/2009	Composite	Nickel	3.5	ug/L	8.2	0.43
MH108	N1-DOWN	11/6/2009	Composite	Nickel	0.60	ug/L	8.2	0.073
MH108	N1-DOWN	10/29/2009	Composite	Nickel	0.80	ug/L	8.2	0.098
MH108	N1-DOWN	10/29/2009	Composite	Nickel	0.50	ug/L	8.2	0.061
MH108	N1-DOWN	10/17/2009	Composite	Nickel	0.80	ug/L	8.2	0.098
MH108	N1-DOWN	10/17/2009	Composite	Nickel	0.5 U	ug/L	8.2	0.061
MH108	N1-DOWN	4/27/2011	Composite	Zinc	61	ug/L	33	1.8
MH108	N1-DOWN	4/27/2011	Composite	Zinc	36	ug/L	33	1.1
MH108	N1-DOWN	4/25/2011	Composite	Zinc	42	ug/L	33	1.3
MH108	N1-DOWN	4/25/2011	Composite	Zinc	35	ug/L	33	1.1
MH108	N1-DOWN	3/9/2011	Composite	Zinc	80	ug/L	33	2.4
MH108	N1-DOWN	3/9/2011	Composite	Zinc	34	ug/L	33	1.0
MH108	N1-DOWN	1/21/2011	Composite	Zinc	48	ug/L	33	1.5
MH108	N1-DOWN	1/21/2011	Composite	Zinc	38	ug/L	33	1.2
MH108	N1-DOWN	12/12/2010	Composite	Zinc	51	ug/L	33	1.5
MH108	N1-DOWN	12/12/2010	Composite	Zinc	38	ug/L	33	1.2
MH108	N1-DOWN	11/30/2010	Composite	Zinc	69	ug/L	33	2.1
MH108	N1-DOWN	11/30/2010	Composite	Zinc	56	ug/L	33	1.7
MH108	N1-DOWN	11/17/2010	Composite	Zinc	49	ug/L	33	1.5
MH108	N1-DOWN	11/17/2010	Composite	Zinc	26	ug/L	33	0.79
MH108	N1-DOWN	6/29/2010	Composite	Zinc	16	ug/L	33	0.48
MH108	N1-DOWN	6/29/2010	Composite	Zinc	4 U	ug/L	33	0.12
MH108	N1-DOWN	6/2/2010	Composite	Zinc	63	ug/L	33	1.9
MH108	N1-DOWN	6/2/2010	Composite	Zinc	44	ug/L	33	1.3
MH108	N1-DOWN	5/20/2010	Composite	Zinc	103	ug/L	33	3.1
MH108	N1-DOWN	5/20/2010	Composite	Zinc	59	ug/L	33	1.8
MH108	N1-DOWN	4/27/2010	Composite	Zinc	73	ug/L	33	2.2
MH108	N1-DOWN	4/27/2010	Composite	Zinc	59	ug/L	33	1.8
MH108	N1-DOWN	3/29/2010	Composite	Zinc	114	ug/L	33	3.5
MH108	N1-DOWN	3/29/2010	Composite	Zinc	52	ug/L	33	1.6
MH108	N1-DOWN	2/23/2010	Composite	Zinc	19	ug/L	33	0.57
MH108	N1-DOWN	2/23/2010	Composite	Zinc	13 J	ug/L	33	0.40
MH108	N1-DOWN	2/11/2010	Composite	Zinc	64	ug/L	33	1.9
MH108	N1-DOWN	2/11/2010	Composite	Zinc	34	ug/L	33	1.0
MH108	N1-DOWN	2/5/2010	Composite	Zinc	51	ug/L	33	1.5
MH108	N1-DOWN	2/5/2010	Composite	Zinc	43	ug/L	33	1.3
MH108	N1-DOWN	12/15/2009	Composite	Zinc	107	ug/L	33	3.2
MH108	N1-DOWN	12/15/2009	Composite	Zinc	66	ug/L	33	2.0
MH108	N1-DOWN	11/6/2009	Composite	Zinc	127	ug/L	33	3.8
MH108	N1-DOWN	11/6/2009	Composite	Zinc	66	ug/L	33	2.0
MH108	N1-DOWN	10/29/2009	Composite	Zinc	80	ug/L	33	2.4
MH108	N1-DOWN	10/29/2009	Composite	Zinc	70	ug/L	33	2.1
MH108	N1-DOWN	10/17/2009	Composite	Zinc	62	ug/L	33	1.9
MH108	N1-DOWN	10/17/2009	Composite	Zinc	50	ug/L	33	1.5
MH108	N1-DOWN	4/27/2011	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
MH108	N1-DOWN	4/25/2011	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
MH108	N1-DOWN	1/21/2011	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
MH108	N1-DOWN	12/12/2010	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
MH108	N1-DOWN	11/30/2010	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
MH108	N1-DOWN	11/17/2010	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
MH108	N1-DOWN	6/29/2010	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
MH108	N1-DOWN	6/2/2010	Composite	Bis(2-ethylhexyl) phthalate	1.1 U	ug/L	1.4	0.79
MH108	N1-DOWN	5/20/2010	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71

Table 7.2-9
Storm Drain Water Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Results	Units	RISL	RISL Exceedance Factor
MH108	N1-DOWN	4/27/2010	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
MH108	N1-DOWN	3/29/2010	Composite	Bis(2-ethylhexyl) phthalate	4.4 U	ug/L	1.4	3.1
MH108	N1-DOWN	2/23/2010	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
MH108	N1-DOWN	2/11/2010	Composite	Bis(2-ethylhexyl) phthalate	2.1 U	ug/L	1.4	1.5
MH108	N1-DOWN	2/5/2010	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
MH108	N1-DOWN	12/15/2009	Composite	Bis(2-ethylhexyl) phthalate	3.2	ug/L	1.4	2.3
MH108	N1-DOWN	10/29/2009	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
MH108	N1-DOWN	10/17/2009	Composite	Bis(2-ethylhexyl) phthalate	0.80 J	ug/L	1.4	0.57
MH108	N1-DOWN	4/27/2011	Composite	Benzo(g,h,i)perylene	0.16	ug/L	0.012	13
MH108	N1-DOWN	4/25/2011	Composite	Benzo(g,h,i)perylene	0.01 U	ug/L	0.012	0.83
MH108	N1-DOWN	3/9/2011	Composite	Benzo(g,h,i)perylene	0.42	ug/L	0.012	35
MH108	N1-DOWN	1/21/2011	Composite	Benzo(g,h,i)perylene	0.012	ug/L	0.012	1.0
MH108	N1-DOWN	12/12/2010	Composite	Benzo(g,h,i)perylene	0.075	ug/L	0.012	6.3
MH108	N1-DOWN	11/30/2010	Composite	Benzo(g,h,i)perylene	0.01 U	ug/L	0.012	0.83
MH108	N1-DOWN	11/17/2010	Composite	Benzo(g,h,i)perylene	0.011 U	ug/L	0.012	0.92
MH108	N1-DOWN	6/29/2010	Composite	Benzo(g,h,i)perylene	0.01 U	ug/L	0.012	0.83
MH108	N1-DOWN	6/2/2010	Composite	Benzo(g,h,i)perylene	0.014	ug/L	0.012	1.2
MH108	N1-DOWN	5/20/2010	Composite	Benzo(g,h,i)perylene	0.14	ug/L	0.012	12
MH108	N1-DOWN	4/27/2010	Composite	Benzo(g,h,i)perylene	0.01 U	ug/L	0.012	0.83
MH108	N1-DOWN	3/29/2010	Composite	Benzo(g,h,i)perylene	0.20	ug/L	0.012	17
MH108	N1-DOWN	2/23/2010	Composite	Benzo(g,h,i)perylene	0.01 U	ug/L	0.012	0.83
MH108	N1-DOWN	2/11/2010	Composite	Benzo(g,h,i)perylene	0.01 U	ug/L	0.012	0.83
MH108	N1-DOWN	2/5/2010	Composite	Benzo(g,h,i)perylene	0.01 U	ug/L	0.012	0.83
MH108	N1-DOWN	12/15/2009	Composite	Benzo(g,h,i)perylene	0.050	ug/L	0.012	4.2
MH108	N1-DOWN	11/6/2009	Composite	Benzo(g,h,i)perylene	1.3	ug/L	0.012	110
MH108	N1-DOWN	10/29/2009	Composite	Benzo(g,h,i)perylene	0.01 U	ug/L	0.012	0.83
MH108	N1-DOWN	10/17/2009	Composite	Benzo(g,h,i)perylene	0.043	ug/L	0.012	3.6
MH108	N1-DOWN	4/27/2011	Composite	Benzo(a)pyrene	0.15	ug/L	0.010	15
MH108	N1-DOWN	4/25/2011	Composite	Benzo(a)pyrene	0.01 U	ug/L	0.010	1.0
MH108	N1-DOWN	3/9/2011	Composite	Benzo(a)pyrene	0.42	ug/L	0.010	42
MH108	N1-DOWN	1/21/2011	Composite	Benzo(a)pyrene	0.011	ug/L	0.010	1.1
MH108	N1-DOWN	12/12/2010	Composite	Benzo(a)pyrene	0.078	ug/L	0.010	7.8
MH108	N1-DOWN	11/30/2010	Composite	Benzo(a)pyrene	0.01 U	ug/L	0.010	1.0
MH108	N1-DOWN	11/17/2010	Composite	Benzo(a)pyrene	0.011 U	ug/L	0.010	1.1
MH108	N1-DOWN	6/29/2010	Composite	Benzo(a)pyrene	0.01 U	ug/L	0.010	1.0
MH108	N1-DOWN	6/2/2010	Composite	Benzo(a)pyrene	0.013 J	ug/L	0.010	1.3
MH108	N1-DOWN	5/20/2010	Composite	Benzo(a)pyrene	0.13	ug/L	0.010	13
MH108	N1-DOWN	4/27/2010	Composite	Benzo(a)pyrene	0.01 U	ug/L	0.010	1.0
MH108	N1-DOWN	3/29/2010	Composite	Benzo(a)pyrene	0.20	ug/L	0.010	20
MH108	N1-DOWN	2/23/2010	Composite	Benzo(a)pyrene	0.01 U	ug/L	0.010	1.0
MH108	N1-DOWN	2/11/2010	Composite	Benzo(a)pyrene	0.01 U	ug/L	0.010	1.0
MH108	N1-DOWN	2/5/2010	Composite	Benzo(a)pyrene	0.01 U	ug/L	0.010	1.0
MH108	N1-DOWN	12/15/2009	Composite	Benzo(a)pyrene	0.038	ug/L	0.010	3.8
MH108	N1-DOWN	11/6/2009	Composite	Benzo(a)pyrene	1.2 J	ug/L	0.010	120
MH108	N1-DOWN	10/29/2009	Composite	Benzo(a)pyrene	0.01 U	ug/L	0.010	1.0
MH108	N1-DOWN	10/17/2009	Composite	Benzo(a)pyrene	0.031	ug/L	0.010	3.1
MH108	N1-DOWN	4/27/2011	Composite	Fluoranthene	0.36	ug/L	2.3	0.16
MH108	N1-DOWN	4/25/2011	Composite	Fluoranthene	0.043	ug/L	2.3	0.019
MH108	N1-DOWN	3/9/2011	Composite	Fluoranthene	1.0	ug/L	2.3	0.43
MH108	N1-DOWN	1/21/2011	Composite	Fluoranthene	0.046	ug/L	2.3	0.020
MH108	N1-DOWN	12/12/2010	Composite	Fluoranthene	0.22	ug/L	2.3	0.096
MH108	N1-DOWN	11/30/2010	Composite	Fluoranthene	0.038	ug/L	2.3	0.017
MH108	N1-DOWN	11/17/2010	Composite	Fluoranthene	0.011 U	ug/L	2.3	0.0048
MH108	N1-DOWN	6/29/2010	Composite	Fluoranthene	0.030	ug/L	2.3	0.013
MH108	N1-DOWN	6/2/2010	Composite	Fluoranthene	0.074	ug/L	2.3	0.032
MH108	N1-DOWN	5/20/2010	Composite	Fluoranthene	0.44	ug/L	2.3	0.19
MH108	N1-DOWN	4/27/2010	Composite	Fluoranthene	0.12	ug/L	2.3	0.052
MH108	N1-DOWN	3/29/2010	Composite	Fluoranthene	0.56	ug/L	2.3	0.24
MH108	N1-DOWN	2/23/2010	Composite	Fluoranthene	0.01 U	ug/L	2.3	0.0043
MH108	N1-DOWN	2/11/2010	Composite	Fluoranthene	0.044	ug/L	2.3	0.019
MH108	N1-DOWN	2/5/2010	Composite	Fluoranthene	0.047	ug/L	2.3	0.020
MH108	N1-DOWN	12/15/2009	Composite	Fluoranthene	0.15	ug/L	2.3	0.065
MH108	N1-DOWN	11/6/2009	Composite	Fluoranthene	2.7	ug/L	2.3	1.2
MH108	N1-DOWN	10/29/2009	Composite	Fluoranthene	0.088	ug/L	2.3	0.038

Table 7.2-9
Storm Drain Water Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Results	Units	RISL	RISL Exceedance Factor
MH108	N1-DOWN	10/17/2009	Composite	Fluoranthene	0.12	ug/L	2.3	0.052
MH108	N1-DOWN	4/27/2011	Composite	Total cPAHs (TEQ, NDx0.5)	0.21	ug/L	0.010	21
MH108	N1-DOWN	4/25/2011	Composite	Total cPAHs (TEQ, NDx0.5)	0.0071	ug/L	0.010	0.71
MH108	N1-DOWN	3/9/2011	Composite	Total cPAHs (TEQ, NDx0.5)	0.59	ug/L	0.010	59
MH108	N1-DOWN	1/21/2011	Composite	Total cPAHs (TEQ, NDx0.5)	0.015	ug/L	0.010	1.5
MH108	N1-DOWN	12/12/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.29	ug/L	0.010	29
MH108	N1-DOWN	11/30/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.0091	ug/L	0.010	0.91
MH108	N1-DOWN	11/17/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.0078 U	ug/L	0.010	0.78
MH108	N1-DOWN	6/29/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.11	ug/L	0.010	11
MH108	N1-DOWN	6/2/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.018	ug/L	0.010	1.8
MH108	N1-DOWN	5/20/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.18	ug/L	0.010	18
MH108	N1-DOWN	4/27/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.0078	ug/L	0.010	0.78
MH108	N1-DOWN	3/29/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.28	ug/L	0.010	28
MH108	N1-DOWN	2/23/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.00755 U	ug/L	0.010	0.76
MH108	N1-DOWN	2/11/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.0077	ug/L	0.010	0.77
MH108	N1-DOWN	2/5/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.0091	ug/L	0.010	0.91
MH108	N1-DOWN	12/15/2009	Composite	Total cPAHs (TEQ, NDx0.5)	0.058	ug/L	0.010	5.8
MH108	N1-DOWN	11/6/2009	Composite	Total cPAHs (TEQ, NDx0.5)	1.7	ug/L	0.010	170
MH108	N1-DOWN	10/29/2009	Composite	Total cPAHs (TEQ, NDx0.5)	0.0092	ug/L	0.010	0.92
MH108	N1-DOWN	10/17/2009	Composite	Total cPAHs (TEQ, NDx0.5)	0.046	ug/L	0.010	4.6
MH178	N1-UP	5/25/2011	Composite	Total PCBs	0.01 U	ug/L	0.010	1.0
MH178	N1-UP	5/15/2011	Composite	Total PCBs	0.01 U	ug/L	0.010	1.0
MH178	N1-UP	4/27/2011	Composite	Total PCBs	0.23	ug/L	0.010	23
MH178	N1-UP	4/21/2011	Composite	Total PCBs	0.13	ug/L	0.010	13
MH178	N1-UP	3/21/2011	Composite	Total PCBs	0.048	ug/L	0.010	4.8
MH178	N1-UP	3/9/2011	Composite	Total PCBs	0.22	ug/L	0.010	22
MH178	N1-UP	5/25/2011	Composite	Arsenic	0.90	ug/L	0.87	1.0
MH178	N1-UP	5/25/2011	Composite	Arsenic	0.40	ug/L	0.87	0.46
MH178	N1-UP	5/15/2011	Composite	Arsenic	0.70	ug/L	0.87	0.80
MH178	N1-UP	5/15/2011	Composite	Arsenic	0.40	ug/L	0.87	0.46
MH178	N1-UP	4/27/2011	Composite	Arsenic	7.0	ug/L	0.87	8.0
MH178	N1-UP	4/27/2011	Composite	Arsenic	0.30	ug/L	0.87	0.34
MH178	N1-UP	4/21/2011	Composite	Arsenic	3.0	ug/L	0.87	3.4
MH178	N1-UP	4/21/2011	Composite	Arsenic	0.40	ug/L	0.87	0.46
MH178	N1-UP	3/21/2011	Composite	Arsenic	2.1	ug/L	0.87	2.4
MH178	N1-UP	3/21/2011	Composite	Arsenic	0.30	ug/L	0.87	0.34
MH178	N1-UP	3/9/2011	Composite	Arsenic	6.2	ug/L	0.87	7.1
MH178	N1-UP	3/9/2011	Composite	Arsenic	0.30	ug/L	0.87	0.34
MH178	N1-UP	5/25/2011	Composite	Cadmium	0.30	ug/L	0.43	0.70
MH178	N1-UP	5/25/2011	Composite	Cadmium	0.20	ug/L	0.43	0.47
MH178	N1-UP	5/15/2011	Composite	Cadmium	0.20	ug/L	0.43	0.47
MH178	N1-UP	5/15/2011	Composite	Cadmium	0.20	ug/L	0.43	0.47
MH178	N1-UP	4/27/2011	Composite	Cadmium	2.7	ug/L	0.43	6.3
MH178	N1-UP	4/27/2011	Composite	Cadmium	0.1 U	ug/L	0.43	0.23
MH178	N1-UP	4/21/2011	Composite	Cadmium	1.1	ug/L	0.43	2.6
MH178	N1-UP	4/21/2011	Composite	Cadmium	0.1 U	ug/L	0.43	0.23
MH178	N1-UP	3/21/2011	Composite	Cadmium	0.80	ug/L	0.43	1.9
MH178	N1-UP	3/21/2011	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH178	N1-UP	3/9/2011	Composite	Cadmium	2.0	ug/L	0.43	4.7
MH178	N1-UP	3/9/2011	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
MH178	N1-UP	5/25/2011	Composite	Copper	21	ug/L	2.4	8.9
MH178	N1-UP	5/25/2011	Composite	Copper	15	ug/L	2.4	6.0
MH178	N1-UP	5/15/2011	Composite	Copper	8.7	ug/L	2.4	3.6
MH178	N1-UP	5/15/2011	Composite	Copper	5.2	ug/L	2.4	2.2
MH178	N1-UP	4/27/2011	Composite	Copper	91	ug/L	2.4	38
MH178	N1-UP	4/27/2011	Composite	Copper	3.6	ug/L	2.4	1.5
MH178	N1-UP	4/21/2011	Composite	Copper	40	ug/L	2.4	17
MH178	N1-UP	4/21/2011	Composite	Copper	2.4	ug/L	2.4	1.0
MH178	N1-UP	3/21/2011	Composite	Copper	18	ug/L	2.4	7.7
MH178	N1-UP	3/21/2011	Composite	Copper	2.0	ug/L	2.4	0.83
MH178	N1-UP	3/9/2011	Composite	Copper	94	ug/L	2.4	39
MH178	N1-UP	3/9/2011	Composite	Copper	3.4	ug/L	2.4	1.4
MH178	N1-UP	5/25/2011	Composite	Lead	3.0	ug/L	8.1	0.37
MH178	N1-UP	5/25/2011	Composite	Lead	0.40	ug/L	8.1	0.049

Table 7.2-9
Storm Drain Water Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Results	Units	RISL	RISL Exceedance Factor
MH178	N1-UP	5/15/2011	Composite	Lead	4.7	ug/L	8.1	0.58
MH178	N1-UP	5/15/2011	Composite	Lead	0.30	ug/L	8.1	0.037
MH178	N1-UP	4/27/2011	Composite	Lead	132	ug/L	8.1	16
MH178	N1-UP	4/27/2011	Composite	Lead	0.30	ug/L	8.1	0.037
MH178	N1-UP	4/21/2011	Composite	Lead	236	ug/L	8.1	29
MH178	N1-UP	4/21/2011	Composite	Lead	0.10	ug/L	8.1	0.012
MH178	N1-UP	3/21/2011	Composite	Lead	24	ug/L	8.1	3.0
MH178	N1-UP	3/21/2011	Composite	Lead	1 U	ug/L	8.1	0.12
MH178	N1-UP	3/9/2011	Composite	Lead	99	ug/L	8.1	12
MH178	N1-UP	3/9/2011	Composite	Lead	1 U	ug/L	8.1	0.12
MH178	N1-UP	5/25/2011	Composite	Nickel	2.4	ug/L	8.2	0.29
MH178	N1-UP	5/25/2011	Composite	Nickel	2.1	ug/L	8.2	0.26
MH178	N1-UP	5/15/2011	Composite	Nickel	1.0	ug/L	8.2	0.12
MH178	N1-UP	5/15/2011	Composite	Nickel	0.80	ug/L	8.2	0.098
MH178	N1-UP	4/27/2011	Composite	Nickel	11	ug/L	8.2	1.4
MH178	N1-UP	4/27/2011	Composite	Nickel	1.7	ug/L	8.2	0.21
MH178	N1-UP	4/21/2011	Composite	Nickel	6.4	ug/L	8.2	0.78
MH178	N1-UP	4/21/2011	Composite	Nickel	2.8	ug/L	8.2	0.34
MH178	N1-UP	3/21/2011	Composite	Nickel	4.0	ug/L	8.2	0.49
MH178	N1-UP	3/21/2011	Composite	Nickel	1.9	ug/L	8.2	0.23
MH178	N1-UP	3/9/2011	Composite	Nickel	12	ug/L	8.2	1.4
MH178	N1-UP	3/9/2011	Composite	Nickel	0.90	ug/L	8.2	0.11
MH178	N1-UP	5/25/2011	Composite	Zinc	65	ug/L	33	2.0
MH178	N1-UP	5/25/2011	Composite	Zinc	56	ug/L	33	1.7
MH178	N1-UP	5/15/2011	Composite	Zinc	38	ug/L	33	1.2
MH178	N1-UP	5/15/2011	Composite	Zinc	31	ug/L	33	0.94
MH178	N1-UP	4/27/2011	Composite	Zinc	280	ug/L	33	8.5
MH178	N1-UP	4/27/2011	Composite	Zinc	20	ug/L	33	0.61
MH178	N1-UP	4/21/2011	Composite	Zinc	110	ug/L	33	3.3
MH178	N1-UP	4/21/2011	Composite	Zinc	8.0	ug/L	33	0.24
MH178	N1-UP	3/21/2011	Composite	Zinc	45	ug/L	33	1.4
MH178	N1-UP	3/21/2011	Composite	Zinc	6.0	ug/L	33	0.18
MH178	N1-UP	3/9/2011	Composite	Zinc	227	ug/L	33	6.9
MH178	N1-UP	3/9/2011	Composite	Zinc	19	ug/L	33	0.58
MH178	N1-UP	5/25/2011	Composite	Bis(2-ethylhexyl) phthalate	1.7	ug/L	1.4	1.2
MH178	N1-UP	5/15/2011	Composite	Bis(2-ethylhexyl) phthalate	1.3	ug/L	1.4	0.93
MH178	N1-UP	4/27/2011	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
MH178	N1-UP	4/21/2011	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
MH178	N1-UP	3/21/2011	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
MH178	N1-UP	5/25/2011	Composite	Benzo(g,h,i)perylene	0.043	ug/L	0.012	3.6
MH178	N1-UP	5/15/2011	Composite	Benzo(g,h,i)perylene	0.023 U	ug/L	0.012	1.9
MH178	N1-UP	4/27/2011	Composite	Benzo(g,h,i)perylene	2.8	ug/L	0.012	230
MH178	N1-UP	4/21/2011	Composite	Benzo(g,h,i)perylene	0.46	ug/L	0.012	38
MH178	N1-UP	3/21/2011	Composite	Benzo(g,h,i)perylene	0.76	ug/L	0.012	63
MH178	N1-UP	3/9/2011	Composite	Benzo(g,h,i)perylene	3.2	ug/L	0.012	270
MH178	N1-UP	5/25/2011	Composite	Benzo(a)pyrene	0.029	ug/L	0.010	2.9
MH178	N1-UP	5/15/2011	Composite	Benzo(a)pyrene	0.021 U	ug/L	0.010	2.1
MH178	N1-UP	4/27/2011	Composite	Benzo(a)pyrene	3.1	ug/L	0.010	310
MH178	N1-UP	4/21/2011	Composite	Benzo(a)pyrene	0.48	ug/L	0.010	48
MH178	N1-UP	3/21/2011	Composite	Benzo(a)pyrene	0.65	ug/L	0.010	65
MH178	N1-UP	3/9/2011	Composite	Benzo(a)pyrene	3.6	ug/L	0.010	360
MH178	N1-UP	5/25/2011	Composite	Fluoranthene	0.18	ug/L	2.3	0.078
MH178	N1-UP	5/15/2011	Composite	Fluoranthene	0.14	ug/L	2.3	0.061
MH178	N1-UP	4/27/2011	Composite	Fluoranthene	5.6	ug/L	2.3	2.4
MH178	N1-UP	4/21/2011	Composite	Fluoranthene	0.92	ug/L	2.3	0.40
MH178	N1-UP	3/21/2011	Composite	Fluoranthene	1.2	ug/L	2.3	0.52
MH178	N1-UP	3/9/2011	Composite	Fluoranthene	9.0	ug/L	2.3	3.9
MH178	N1-UP	5/25/2011	Composite	Total cPAHs (TEQ, NDx0.5)	0.044	ug/L	0.010	4.4
MH178	N1-UP	5/15/2011	Composite	Total cPAHs (TEQ, NDx0.5)	0.017	ug/L	0.010	1.7
MH178	N1-UP	4/27/2011	Composite	Total cPAHs (TEQ, NDx0.5)	4.3	ug/L	0.010	430
MH178	N1-UP	4/21/2011	Composite	Total cPAHs (TEQ, NDx0.5)	0.73	ug/L	0.010	73
MH178	N1-UP	3/21/2011	Composite	Total cPAHs (TEQ, NDx0.5)	0.95	ug/L	0.010	95
MH178	N1-UP	3/9/2011	Composite	Total cPAHs (TEQ, NDx0.5)	5.0	ug/L	0.010	500
CB187A	N11	12/2/2009	Grab	Total PCBs	0.74	ug/L	0.010	74

Table 7.2-9
Storm Drain Water Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Results	Units	RISL	RISL Exceedance Factor
NLS-ROOF02	NA	3/15/2011	Roof Drain Grab	Total PCBs	0.01 U	ug/L	0.010	1.0
NLS-ROOF02	NA	3/15/2011	Roof Drain Grab	Arsenic	0.2 U	ug/L	0.87	0.23
NLS-ROOF02	NA	3/15/2011	Roof Drain Grab	Cadmium	0.2 U	ug/L	0.43	0.47
NLS-ROOF02	NA	3/15/2011	Roof Drain Grab	Copper	3.6	ug/L	2.4	1.5
NLS-ROOF02	NA	3/15/2011	Roof Drain Grab	Lead	2.0	ug/L	8.1	0.25
NLS-ROOF02	NA	3/15/2011	Roof Drain Grab	Zinc	23	ug/L	33	0.70
NLS-ROOF03	NA	5/2/2011	Roof Drain Grab	Total PCBs	0.011	ug/L	0.010	1.1
NLS-ROOF03	NA	5/2/2011	Roof Drain Grab	Arsenic	0.60	ug/L	0.87	0.69
NLS-ROOF03	NA	5/2/2011	Roof Drain Grab	Cadmium	0.40	ug/L	0.43	0.93
NLS-ROOF03	NA	5/2/2011	Roof Drain Grab	Copper	20	ug/L	2.4	8.3
NLS-ROOF03	NA	5/2/2011	Roof Drain Grab	Lead	13	ug/L	8.1	1.6
NLS-ROOF03	NA	5/2/2011	Roof Drain Grab	Zinc	190	ug/L	33	5.8
NLS-ROOF04	NA	4/13/2011	Roof Drain Grab	Total PCBs	0.01 U	ug/L	0.010	1.0
NLS-ROOF04	NA	4/13/2011	Roof Drain Grab	Arsenic	0.2 U	ug/L	0.87	0.23
NLS-ROOF04	NA	4/13/2011	Roof Drain Grab	Cadmium	0.20	ug/L	0.43	0.47
NLS-ROOF04	NA	4/13/2011	Roof Drain Grab	Copper	4.3	ug/L	2.4	1.8
NLS-ROOF04	NA	4/13/2011	Roof Drain Grab	Lead	0.40	ug/L	8.1	0.049
NLS-ROOF04	NA	4/13/2011	Roof Drain Grab	Zinc	271	ug/L	33	8.2
NLS-ROOF06	NA	3/15/2011	Roof Drain Grab	Total PCBs	0.01 U	ug/L	0.010	1.0
NLS-ROOF06	NA	3/15/2011	Roof Drain Grab	Arsenic	0.50	ug/L	0.87	0.57
NLS-ROOF06	NA	3/15/2011	Roof Drain Grab	Cadmium	0.70	ug/L	0.43	1.6
NLS-ROOF06	NA	3/15/2011	Roof Drain Grab	Copper	15	ug/L	2.4	6.2
NLS-ROOF06	NA	3/15/2011	Roof Drain Grab	Lead	6.0	ug/L	8.1	0.74
NLS-ROOF06	NA	3/15/2011	Roof Drain Grab	Zinc	250	ug/L	33	7.6
NLS-ROOF09	NA	4/13/2011	Roof Drain Grab	Total PCBs	0.011	ug/L	0.010	1.1
NLS-ROOF09	NA	4/13/2011	Roof Drain Grab	Arsenic	9.8	ug/L	0.87	11
NLS-ROOF09	NA	4/13/2011	Roof Drain Grab	Cadmium	8.6	ug/L	0.43	20
NLS-ROOF09	NA	4/13/2011	Roof Drain Grab	Copper	35	ug/L	2.4	15
NLS-ROOF09	NA	4/13/2011	Roof Drain Grab	Lead	2.8	ug/L	8.1	0.35
NLS-ROOF09	NA	4/13/2011	Roof Drain Grab	Zinc	1,590	ug/L	33	48
NLS-ROOF10	NA	3/15/2011	Roof Drain Grab	Total PCBs	0.01 U	ug/L	0.010	1.0
NLS-ROOF10	NA	3/15/2011	Roof Drain Grab	Arsenic	0.20	ug/L	0.87	0.23
NLS-ROOF10	NA	3/15/2011	Roof Drain Grab	Cadmium	0.40	ug/L	0.43	0.93
NLS-ROOF10	NA	3/15/2011	Roof Drain Grab	Copper	8.4	ug/L	2.4	3.5
NLS-ROOF10	NA	3/15/2011	Roof Drain Grab	Lead	6.0	ug/L	8.1	0.74
NLS-ROOF10	NA	3/15/2011	Roof Drain Grab	Zinc	490	ug/L	33	15
NLS-ROOF12	NA	3/15/2011	Roof Drain Grab	Total PCBs	0.01 U	ug/L	0.010	1.0
NLS-ROOF12	NA	3/15/2011	Roof Drain Grab	Arsenic	0.2 U	ug/L	0.87	0.23
NLS-ROOF12	NA	3/15/2011	Roof Drain Grab	Cadmium	0.2 U	ug/L	0.43	0.47
NLS-ROOF12	NA	3/15/2011	Roof Drain Grab	Copper	1.6	ug/L	2.4	0.67
NLS-ROOF12	NA	3/15/2011	Roof Drain Grab	Lead	1 U	ug/L	8.1	0.12
NLS-ROOF12	NA	3/15/2011	Roof Drain Grab	Zinc	199	ug/L	33	6.0
NLS-ROOF13	NA	5/2/2011	Roof Drain Grab	Total PCBs	0.01 U	ug/L	0.010	1.0
NLS-ROOF13	NA	5/2/2011	Roof Drain Grab	Arsenic	0.20	ug/L	0.87	0.23
NLS-ROOF13	NA	5/2/2011	Roof Drain Grab	Cadmium	0.10	ug/L	0.43	0.23
NLS-ROOF13	NA	5/2/2011	Roof Drain Grab	Copper	3.6	ug/L	2.4	1.5
NLS-ROOF13	NA	5/2/2011	Roof Drain Grab	Lead	2.9	ug/L	8.1	0.36
NLS-ROOF13	NA	5/2/2011	Roof Drain Grab	Zinc	80	ug/L	33	2.4
NLS-ROOF15	NA	4/13/2011	Roof Drain Grab	Total PCBs	0.01 U	ug/L	0.010	1.0
NLS-ROOF15	NA	4/13/2011	Roof Drain Grab	Arsenic	1.2	ug/L	0.87	1.4
NLS-ROOF15	NA	4/13/2011	Roof Drain Grab	Cadmium	0.10	ug/L	0.43	0.23
NLS-ROOF15	NA	4/13/2011	Roof Drain Grab	Copper	9.7	ug/L	2.4	4.0
NLS-ROOF15	NA	4/13/2011	Roof Drain Grab	Lead	4.0	ug/L	8.1	0.49
NLS-ROOF15	NA	4/13/2011	Roof Drain Grab	Zinc	81	ug/L	33	2.5
NLS-ROOF16	NA	5/2/2011	Roof Drain Grab	Total PCBs	0.013	ug/L	0.010	1.3
NLS-ROOF16	NA	5/2/2011	Roof Drain Grab	Arsenic	0.40	ug/L	0.87	0.46
NLS-ROOF16	NA	5/2/2011	Roof Drain Grab	Cadmium	0.30	ug/L	0.43	0.70
NLS-ROOF16	NA	5/2/2011	Roof Drain Grab	Copper	12	ug/L	2.4	5.2
NLS-ROOF16	NA	5/2/2011	Roof Drain Grab	Lead	12	ug/L	8.1	1.5
NLS-ROOF16	NA	5/2/2011	Roof Drain Grab	Zinc	211	ug/L	33	6.4
NLS-ROOF17	NA	3/15/2011	Roof Drain Grab	Total PCBs	0.013	ug/L	0.010	1.3
NLS-ROOF17	NA	3/15/2011	Roof Drain Grab	Arsenic	0.2 U	ug/L	0.87	0.23
NLS-ROOF17	NA	3/15/2011	Roof Drain Grab	Cadmium	0.2 U	ug/L	0.43	0.47
NLS-ROOF17	NA	3/15/2011	Roof Drain Grab	Copper	6.8	ug/L	2.4	2.8

Table 7.2-9
Storm Drain Water Sampling Results - North Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Results	Units	RISL	RISL Exceedance Factor
NLS-ROOF17	NA	3/15/2011	Roof Drain Grab	Lead	3.0	ug/L	8.1	0.37
NLS-ROOF17	NA	3/15/2011	Roof Drain Grab	Zinc	132	ug/L	33	4.0
NLS-ROOF19	NA	3/15/2011	Roof Drain Grab	Total PCBs	0.026	ug/L	0.010	2.6
NLS-ROOF19	NA	3/15/2011	Roof Drain Grab	Arsenic	0.2 U	ug/L	0.87	0.23
NLS-ROOF19	NA	3/15/2011	Roof Drain Grab	Cadmium	0.60	ug/L	0.43	1.4
NLS-ROOF19	NA	3/15/2011	Roof Drain Grab	Copper	9.5	ug/L	2.4	4.0
NLS-ROOF19	NA	3/15/2011	Roof Drain Grab	Lead	1 U	ug/L	8.1	0.12
NLS-ROOF19	NA	3/15/2011	Roof Drain Grab	Zinc	1,140	ug/L	33	35

(green shading)	Indicates detected result exceeds the RISL.
(grey shading)	Indicates nondetected result exceeds the RISL

Table includes only chemicals that exceed the screening level in at least one sample in this drainage area.
RISL = RI Screening Level

Table 7.2-10
Chemicals Detected Above RISLs in Storm Drain Solids
North-Central Lateral Drainage Area

Chemical Class	Chemical	Frequency of Detection	Min Detect (mg/kg DW)	Max Detect (mg/kg DW)	Average Detect (mg/kg DW)	RISL (mg/kg DW)	Fraction of Detections Above SL	Maximum Exceedance Factor*	Average Exceedance Factor*
Metals	Arsenic	58 / 84	5.2	70	19	7.3	57 / 58	9.6	2.6
	Cadmium	58 / 58	2.0	110	20	5.1	48 / 58	22	3.9
	Chromium	58 / 58	29	364	136	260	2 / 58	1.4	<1
	Copper	84 / 84	36	469	214	390	4 / 84	1.2	<1
	Lead	84 / 84	50	700	244	450	5 / 84	1.6	<1
	Mercury	75 / 84	0.021	8.3	0.52	0.41	16 / 75	20	1.3
	Zinc	84 / 84	332	3,280	1,296	410	78 / 84	8.0	3.2
Polychlorinated Aromatic Compounds	Total PCBs	143 / 144	0.074	420	12	0.13	137 / 143	3,200	92
	Total dioxins/furans (ng/kg)	3 / 3	43	88	67	13	3 / 3	6.8	5.2
PAHs	2-Methylnaphthalene	5 / 29	0.078	4.0	1.0	0.67	1 / 5	6.0	1.5
	Acenaphthene	9 / 28	0.084	1.3	0.41	0.50	2 / 9	2.6	<1
	Anthracene	19 / 28	0.071	1.5	0.48	0.96	3 / 21	1.6	<1
	Dibenzofuran	14 / 29	0.079	0.74	0.32	0.54	2 / 14	1.4	<1
	Fluorene	15 / 28	0.073	1.1	0.36	0.54	2 / 15	2.0	<1
	Phenanthrene	29 / 29	0.30	24	5.1	1.5	25 / 29	16	3.4
	Total LPAH	32 / 32	0.44	24	5.4	5.2	11 / 32	4.6	1.0
	Benzo(a)anthracene	27 / 28	0.23	8.9	2.3	1.3	20 / 27	6.8	1.8
	Benzo(a)pyrene	27 / 28	0.30	23	4.2	0.15	27 / 27	150	28
	Benzofluoranthenes	28 / 28	0.72	66	12	3.2	26 / 28	21	3.8
	Benzo(g,h,i)perylene	24 / 24	0.23	29	4.5	0.67	22 / 24	43	6.7
	Chrysene	28 / 28	0.49	37	6.4	1.4	26 / 28	26	4.6
	Dibenz(a,h)anthracene	16 / 28	0.12	7.2	1.6	0.23	15 / 16	31	7.0
	Fluoranthene	29 / 29	0.92	66	12	1.7	27 / 29	39	7.1
	Indeno(1,2,3-cd)pyrene	27 / 28	0.22	24	3.6	0.60	24 / 27	40	6.0
	Pyrene	29 / 29	0.87	39	7.1	2.6	23 / 29	15	2.7
	Total HPAH	32 / 32	4.4	300	47	12	29 / 32	25	3.9
	Total cPAH	28 / 28	0.43	34	6.0	0.15	28 / 28	230	40
Phthalates	Bis(2-ethylhexyl) phthalate	21 / 21	0.39	30	6.5	1.3	18 / 21	23	5.0
	Butyl benzyl phthalate	10 / 21	0.12	1.2	0.47	0.067	10 / 10	18	7.0
Other SVOCs	p-Cresol (4-methylphenol)	6 / 21	0.17	1.2	0.46	0.67	1 / 6	1.8	<1
	Phenol	5 / 21	0.13	0.47	0.28	0.42	1 / 5	1.1	<1

EF Colors	EF Ranges
	< 5.0
	> 5.0 - 25
	> 25 - 125
	> 125 - 625
	> 625

Dioxin/furan concentrations are in units of ng/kg TEQ.

* Maximum and average exceedance factor for detected values only.

Table 7.2-11
Chemicals Detected Above RISLs in Storm Drain Water
North-Central Lateral Drainage Area

Chemical Class	Chemical	Frequency of Detection	Minimum Detect (ug/L)	Maximum Detect (ug/L)	Average Detect (ug/L)	RISL (ug/L)	Fraction of Detections Above SL	Maximum Exceedance Factor*	Average Exceedance Factor*
Metals	Copper	12 / 12	1.80	4	2.6	2.4	6 / 12	1.5	1.1
	Zinc	12 / 12	22.0	40	28	33	2 / 12	1	<1
PCBs	Total PCBs	3 / 6	0.011	0.02	0.02	0.010	3 / 3	2.4	1.8
PAHs	Benzo(a)pyrene	6 / 6	0.022	0.066	0.03	0.010	6 / 6	6.6	3.0
	Benzo(g,h,i)perylene	6 / 6	0.027	0.093	0.05	0.012	6 / 6	7.8	4.2
	Total cPAH	6 / 6	0.035	0.1	0.054	0.010	6 / 6	11	5.4

EF Colors	EF Ranges
	< 5.0
	> 5.0 - 25

* Maximum and average exceedance factor for detected values only.

Table 7.2-12
Maximum RISL Exceedance Factors in Storm Drain Solids, by Subdrainage
North-Central Lateral Drainage Area

	Subdrainage:	NC1 (Main Line)	NC2	NC3	NC4	NC5	NC6
Chemical Class	**Chemical**						
Metals	Arsenic	9.6	1.7	3.7	3.6	2.7	2.7
	Cadmium	4.3	1.2	8.9	6.7	22	4.9
	Chromium	<1	<1	1.4	<1	<1	<1
	Copper	1.2	<1	1.1	<1	<1	<1
	Lead	1.6	<1	1.2	<1	<1	1.1
	Mercury	20	ND	1.2	1.2	5.5	1.7
	Zinc	6.2	3.8	5.8	5.9	8.0	4.2
Polychlorinated Aromatic Compounds	Total PCBs	**3,200**	85	330	260	13	380
	Total dioxins/furans	6.8	--	--	--	--	--
PAHs	2-Methylnaphthalene	6.0	--	--	--	--	--
	Acenaphthene	2.6	--	--	--	--	--
	Anthracene	1.6	--	--	--	--	--
	Dibenzofuran	1.4	--	--	--	--	--
	Fluorene	2.0	--	--	--	--	--
	Phenanthrene	16	--	--	--	--	--
	Total LPAHs	4.6	--	--	--	--	--
	Benzo(a)anthracene	6.8	--	--	--	--	--
	Benzo(a)pyrene	150	--	--	--	--	--
	Benzofluoranthenes	21	--	--	--	--	--
	Benzo(g,h,i)perylene	43	--	--	--	--	--
	Chrysene	26	--	--	--	--	--
	Dibenzo(a,h)anthracene	31	--	--	--	--	--
	Fluoranthene	39	--	--	--	--	--
	Indeno(1,2,3-cd)pyrene	40	--	--	--	--	--
	Pyrene	15	--	--	--	--	--
	Total HPAHs	25	--	--	--	--	--
	Total cPAHs	230	--	--	--	--	--
Phthalates	Bis(2-ethylhexyl) phthalate	23	--	--	--	--	--
	Butyl benzyl phthalate	18	--	--	--	--	--
Other SVOCs	p-Cresol (4-methylphenol)	1.8	--	--	--	--	--
	Phenol	1.1	--	--	--	--	--

EF Colors	EF Ranges
(green)	> 1.0 - 5.0
(yellow)	> 5.0 - 25
(orange)	> 25 - 125
(pink)	> 125 - 625
(dark red)	> 625

-- = indicates sample not analyzed for this parameter
ND = not detected
Table shows maximum exceedance factors for detected chemicals only.
Subdrainage locations are shown in Figure 7.2-8.

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB229A	NC1	4/24/2012	Sediment Trap	Total PCBs	0.26	mg/kg	0.13	2.0
CB229A	NC1	4/5/2011	Sediment Trap	Total PCBs	0.15	mg/kg	0.13	1.2
CB229A	NC1	4/15/2010	Grab	Total PCBs	0.11	mg/kg	0.13	0.85
CB229A	NC1	4/8/2010	Sediment Trap	Total PCBs	0.68	mg/kg	0.13	5.2
CB229A	NC1	9/22/2008	Grab	Total PCBs	0.074	mg/kg	0.13	0.57
CB229A	NC1	4/10/2007	Grab	Total PCBs	0.10	mg/kg	0.13	0.77
CB229A	NC1	1/8/2007	Sediment Trap	Total PCBs	0.10	mg/kg	0.13	0.79
CB229A	NC1	10/11/2006	Sediment Trap	Total PCBs	0.24	mg/kg	0.13	1.9
CB229A	NC1	3/16/2006	Sediment Trap	Total PCBs	0.11	mg/kg	0.13	0.88
CB229A	NC1	8/11/2005	Sediment Trap	Total PCBs	0.45	mg/kg	0.13	3.5
CB229A	NC1	2/16/2005	Grab	Total PCBs	5.6	mg/kg	0.13	43
CB229A	NC1	4/24/2012	Sediment Trap	Arsenic	20	mg/kg	7.3	2.7
CB229A	NC1	4/15/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB229A	NC1	4/8/2010	Sediment Trap	Arsenic	14	mg/kg	7.3	1.9
CB229A	NC1	1/8/2007	Sediment Trap	Arsenic	12	mg/kg	7.3	1.6
CB229A	NC1	10/11/2006	Sediment Trap	Arsenic	20	mg/kg	7.3	2.7
CB229A	NC1	3/16/2006	Sediment Trap	Arsenic	13	mg/kg	7.3	1.8
CB229A	NC1	8/11/2005	Sediment Trap	Arsenic	16	mg/kg	7.3	2.2
CB229A	NC1	2/16/2005	Grab	Arsenic	30	mg/kg	7.3	4.1
CB229A	NC1	4/15/2010	Grab	Cadmium	3.2	mg/kg	5.1	0.63
CB229A	NC1	4/15/2010	Grab	Chromium	29	mg/kg	260	0.11
CB229A	NC1	4/24/2012	Sediment Trap	Copper	419	mg/kg	390	1.1
CB229A	NC1	4/15/2010	Grab	Copper	36	mg/kg	390	0.091
CB229A	NC1	4/8/2010	Sediment Trap	Copper	248 J	mg/kg	390	0.64
CB229A	NC1	1/8/2007	Sediment Trap	Copper	76	mg/kg	390	0.19
CB229A	NC1	10/11/2006	Sediment Trap	Copper	262	mg/kg	390	0.67
CB229A	NC1	3/16/2006	Sediment Trap	Copper	75	mg/kg	390	0.19
CB229A	NC1	8/11/2005	Sediment Trap	Copper	94	mg/kg	390	0.24
CB229A	NC1	2/16/2005	Grab	Copper	86	mg/kg	390	0.22
CB229A	NC1	4/24/2012	Sediment Trap	Lead	506	mg/kg	450	1.1
CB229A	NC1	4/15/2010	Grab	Lead	91	mg/kg	450	0.20
CB229A	NC1	4/8/2010	Sediment Trap	Lead	376 J	mg/kg	450	0.84
CB229A	NC1	1/8/2007	Sediment Trap	Lead	121	mg/kg	450	0.27
CB229A	NC1	10/11/2006	Sediment Trap	Lead	414	mg/kg	450	0.92
CB229A	NC1	3/16/2006	Sediment Trap	Lead	116	mg/kg	450	0.26
CB229A	NC1	8/11/2005	Sediment Trap	Lead	144	mg/kg	450	0.32
CB229A	NC1	2/16/2005	Grab	Lead	155	mg/kg	450	0.34
CB229A	NC1	4/24/2012	Sediment Trap	Mercury	0.34	mg/kg	0.41	0.83
CB229A	NC1	4/15/2010	Grab	Mercury	0.040	mg/kg	0.41	0.098
CB229A	NC1	4/8/2010	Sediment Trap	Mercury	0.23	mg/kg	0.41	0.56
CB229A	NC1	1/8/2007	Sediment Trap	Mercury	0.090	mg/kg	0.41	0.22
CB229A	NC1	10/11/2006	Sediment Trap	Mercury	0.30	mg/kg	0.41	0.73
CB229A	NC1	3/16/2006	Sediment Trap	Mercury	0.10	mg/kg	0.41	0.24
CB229A	NC1	8/11/2005	Sediment Trap	Mercury	0.19	mg/kg	0.41	0.46
CB229A	NC1	2/16/2005	Grab	Mercury	0.07	mg/kg	0.41	0.17
CB229A	NC1	4/15/2010	Grab	Silver	0.9 U	mg/kg	6.1	0.15
CB229A	NC1	4/24/2012	Sediment Trap	Zinc	1,430	mg/kg	410	3.5
CB229A	NC1	4/15/2010	Grab	Zinc	590	mg/kg	410	1.4
CB229A	NC1	4/8/2010	Sediment Trap	Zinc	551	mg/kg	410	1.3
CB229A	NC1	1/8/2007	Sediment Trap	Zinc	433	mg/kg	410	1.1
CB229A	NC1	10/11/2006	Sediment Trap	Zinc	1,220	mg/kg	410	3.0
CB229A	NC1	3/16/2006	Sediment Trap	Zinc	337	mg/kg	410	0.82
CB229A	NC1	8/11/2005	Sediment Trap	Zinc	460	mg/kg	410	1.1
CB229A	NC1	2/16/2005	Grab	Zinc	1,130	mg/kg	410	2.8
CB229A	NC1	4/24/2012	Sediment Trap	Acenaphthene	0.48 U	mg/kg	0.50	0.96
CB229A	NC1	4/8/2010	Sediment Trap	Acenaphthene	0.17 J	mg/kg	0.50	0.34
CB229A	NC1	1/8/2007	Sediment Trap	Acenaphthene	0.16 U	mg/kg	0.50	0.32
CB229A	NC1	3/16/2006	Sediment Trap	Acenaphthene	0.6 U	mg/kg	0.50	1.2
CB229A	NC1	8/11/2005	Sediment Trap	Acenaphthene	0.16 U	mg/kg	0.50	0.32
CB229A	NC1	2/16/2005	Grab	Acenaphthene	0.93	mg/kg	0.50	1.9

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB229A	NC1	4/24/2012	Sediment Trap	Anthracene	0.65	mg/kg	0.96	0.68
CB229A	NC1	4/8/2010	Sediment Trap	Anthracene	0.68	mg/kg	0.96	0.71
CB229A	NC1	1/8/2007	Sediment Trap	Anthracene	0.21	mg/kg	0.96	0.22
CB229A	NC1	3/16/2006	Sediment Trap	Anthracene	0.6 U	mg/kg	0.96	0.63
CB229A	NC1	8/11/2005	Sediment Trap	Anthracene	0.18	mg/kg	0.96	0.19
CB229A	NC1	2/16/2005	Grab	Anthracene	1.2	mg/kg	0.96	1.3
CB229A	NC1	4/24/2012	Sediment Trap	Benzo(a)anthracene	3.5	mg/kg	1.3	2.7
CB229A	NC1	4/8/2010	Sediment Trap	Benzo(a)anthracene	3.9	mg/kg	1.3	3.0
CB229A	NC1	1/8/2007	Sediment Trap	Benzo(a)anthracene	0.92	mg/kg	1.3	0.71
CB229A	NC1	3/16/2006	Sediment Trap	Benzo(a)anthracene	1.0	mg/kg	1.3	0.77
CB229A	NC1	8/11/2005	Sediment Trap	Benzo(a)anthracene	0.86	mg/kg	1.3	0.66
CB229A	NC1	2/16/2005	Grab	Benzo(a)anthracene	3.0	mg/kg	1.3	2.3
CB229A	NC1	4/24/2012	Sediment Trap	Total Benzofluoranthenes	18	mg/kg	3.2	5.6
CB229A	NC1	4/8/2010	Sediment Trap	Total Benzofluoranthenes	11	mg/kg	3.2	3.4
CB229A	NC1	1/8/2007	Sediment Trap	Total Benzofluoranthenes	4.8	mg/kg	3.2	1.5
CB229A	NC1	3/16/2006	Sediment Trap	Total Benzofluoranthenes	4.4	mg/kg	3.2	1.4
CB229A	NC1	8/11/2005	Sediment Trap	Total Benzofluoranthenes	3.4	mg/kg	3.2	1.1
CB229A	NC1	2/16/2005	Grab	Total Benzofluoranthenes	9.0	mg/kg	3.2	2.8
CB229A	NC1	4/24/2012	Sediment Trap	Benzo(g,h,i)perylene	7.0	mg/kg	0.67	10
CB229A	NC1	4/8/2010	Sediment Trap	Benzo(g,h,i)perylene	2.9	mg/kg	0.67	4.3
CB229A	NC1	3/16/2006	Sediment Trap	Benzo(g,h,i)perylene	0.90	mg/kg	0.67	1.3
CB229A	NC1	8/11/2005	Sediment Trap	Benzo(g,h,i)perylene	0.71	mg/kg	0.67	1.1
CB229A	NC1	2/16/2005	Grab	Benzo(g,h,i)perylene	1.3	mg/kg	0.67	1.9
CB229A	NC1	4/24/2012	Sediment Trap	Benzo(a)pyrene	6.5	mg/kg	0.15	43
CB229A	NC1	4/8/2010	Sediment Trap	Benzo(a)pyrene	5.7	mg/kg	0.15	38
CB229A	NC1	1/8/2007	Sediment Trap	Benzo(a)pyrene	1.5	mg/kg	0.15	10
CB229A	NC1	3/16/2006	Sediment Trap	Benzo(a)pyrene	1.6	mg/kg	0.15	11
CB229A	NC1	8/11/2005	Sediment Trap	Benzo(a)pyrene	1.4	mg/kg	0.15	9.3
CB229A	NC1	2/16/2005	Grab	Benzo(a)pyrene	3.4	mg/kg	0.15	23
CB229A	NC1	4/24/2012	Sediment Trap	Chrysene	9.7	mg/kg	1.4	6.9
CB229A	NC1	4/8/2010	Sediment Trap	Chrysene	6.5	mg/kg	1.4	4.6
CB229A	NC1	1/8/2007	Sediment Trap	Chrysene	2.0	mg/kg	1.4	1.4
CB229A	NC1	3/16/2006	Sediment Trap	Chrysene	2.5	mg/kg	1.4	1.8
CB229A	NC1	8/11/2005	Sediment Trap	Chrysene	1.7	mg/kg	1.4	1.2
CB229A	NC1	2/16/2005	Grab	Chrysene	4.2	mg/kg	1.4	3.0
CB229A	NC1	4/24/2012	Sediment Trap	Dibenz(a,h)anthracene	2.3	mg/kg	0.23	10
CB229A	NC1	4/8/2010	Sediment Trap	Dibenz(a,h)anthracene	1.2	mg/kg	0.23	5.2
CB229A	NC1	1/8/2007	Sediment Trap	Dibenz(a,h)anthracene	0.16 U	mg/kg	0.23	0.70
CB229A	NC1	3/16/2006	Sediment Trap	Dibenz(a,h)anthracene	0.6 U	mg/kg	0.23	2.6
CB229A	NC1	8/11/2005	Sediment Trap	Dibenz(a,h)anthracene	0.16 U	mg/kg	0.23	0.70
CB229A	NC1	2/16/2005	Grab	Dibenz(a,h)anthracene	0.22 U	mg/kg	0.23	0.96
CB229A	NC1	4/24/2012	Sediment Trap	Dibenzofuran	0.34 J	mg/kg	0.54	0.63
CB229A	NC1	4/8/2010	Sediment Trap	Dibenzofuran	0.20 J	mg/kg	0.54	0.37
CB229A	NC1	1/8/2007	Sediment Trap	Dibenzofuran	0.16 U	mg/kg	0.54	0.30
CB229A	NC1	3/16/2006	Sediment Trap	Dibenzofuran	0.6 U	mg/kg	0.54	1.1
CB229A	NC1	8/11/2005	Sediment Trap	Dibenzofuran	0.16 U	mg/kg	0.54	0.30
CB229A	NC1	2/16/2005	Grab	Dibenzofuran	0.56	mg/kg	0.54	1.0
CB229A	NC1	4/24/2012	Sediment Trap	Fluoranthene	15	mg/kg	1.7	8.8
CB229A	NC1	4/8/2010	Sediment Trap	Fluoranthene	13	mg/kg	1.7	7.6
CB229A	NC1	1/8/2007	Sediment Trap	Fluoranthene	3.2	mg/kg	1.7	1.9
CB229A	NC1	3/16/2006	Sediment Trap	Fluoranthene	4.2	mg/kg	1.7	2.5
CB229A	NC1	8/11/2005	Sediment Trap	Fluoranthene	3.1	mg/kg	1.7	1.8
CB229A	NC1	2/16/2005	Grab	Fluoranthene	11	mg/kg	1.7	6.5
CB229A	NC1	4/24/2012	Sediment Trap	Fluorene	0.26 J	mg/kg	0.54	0.48
CB229A	NC1	4/8/2010	Sediment Trap	Fluorene	0.26	mg/kg	0.54	0.48
CB229A	NC1	1/8/2007	Sediment Trap	Fluorene	0.16 U	mg/kg	0.54	0.30
CB229A	NC1	3/16/2006	Sediment Trap	Fluorene	0.6 U	mg/kg	0.54	1.1
CB229A	NC1	8/11/2005	Sediment Trap	Fluorene	0.16 U	mg/kg	0.54	0.30
CB229A	NC1	2/16/2005	Grab	Fluorene	1.1	mg/kg	0.54	2.0
CB229A	NC1	4/24/2012	Sediment Trap	Indeno(1,2,3-cd)pyrene	6.3	mg/kg	0.60	11

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB229A	NC1	4/8/2010	Sediment Trap	Indeno(1,2,3-cd)pyrene	2.8	mg/kg	0.60	4.7
CB229A	NC1	1/8/2007	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.67	mg/kg	0.60	1.1
CB229A	NC1	3/16/2006	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.95	mg/kg	0.60	1.6
CB229A	NC1	8/11/2005	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.78	mg/kg	0.60	1.3
CB229A	NC1	2/16/2005	Grab	Indeno(1,2,3-cd)pyrene	1.5	mg/kg	0.60	2.5
CB229A	NC1	4/24/2012	Sediment Trap	2-Methylnaphthalene	0.48 U	mg/kg	0.67	0.72
CB229A	NC1	4/8/2010	Sediment Trap	2-Methylnaphthalene	0.25 U	mg/kg	0.67	0.37
CB229A	NC1	1/8/2007	Sediment Trap	2-Methylnaphthalene	0.16 U	mg/kg	0.67	0.24
CB229A	NC1	3/16/2006	Sediment Trap	2-Methylnaphthalene	0.6 U	mg/kg	0.67	0.90
CB229A	NC1	8/11/2005	Sediment Trap	2-Methylnaphthalene	0.16 U	mg/kg	0.67	0.24
CB229A	NC1	2/16/2005	Grab	2-Methylnaphthalene	0.66	mg/kg	0.67	0.99
CB229A	NC1	4/24/2012	Sediment Trap	Phenanthrene	6.9	mg/kg	1.5	4.6
CB229A	NC1	4/8/2010	Sediment Trap	Phenanthrene	4.9	mg/kg	1.5	3.3
CB229A	NC1	1/8/2007	Sediment Trap	Phenanthrene	1.4	mg/kg	1.5	0.93
CB229A	NC1	3/16/2006	Sediment Trap	Phenanthrene	1.6	mg/kg	1.5	1.1
CB229A	NC1	8/11/2005	Sediment Trap	Phenanthrene	1.7	mg/kg	1.5	1.1
CB229A	NC1	2/16/2005	Grab	Phenanthrene	8.9	mg/kg	1.5	5.9
CB229A	NC1	4/24/2012	Sediment Trap	Pyrene	12	mg/kg	2.6	4.6
CB229A	NC1	4/8/2010	Sediment Trap	Pyrene	7.1	mg/kg	2.6	2.7
CB229A	NC1	1/8/2007	Sediment Trap	Pyrene	2.3	mg/kg	2.6	0.88
CB229A	NC1	3/16/2006	Sediment Trap	Pyrene	2.4	mg/kg	2.6	0.92
CB229A	NC1	8/11/2005	Sediment Trap	Pyrene	2.1	mg/kg	2.6	0.81
CB229A	NC1	2/16/2005	Grab	Pyrene	7.6	mg/kg	2.6	2.9
CB229A	NC1	4/24/2012	Sediment Trap	Total HPAHs	80	mg/kg	12	6.7
CB229A	NC1	4/8/2010	Sediment Trap	Total HPAHs	54	mg/kg	12	4.5
CB229A	NC1	1/8/2007	Sediment Trap	Total HPAHs	15	mg/kg	12	1.3
CB229A	NC1	3/16/2006	Sediment Trap	Total HPAHs	18	mg/kg	12	1.5
CB229A	NC1	8/11/2005	Sediment Trap	Total HPAHs	14	mg/kg	12	1.2
CB229A	NC1	2/16/2005	Grab	Total HPAHs	41	mg/kg	12	3.4
CB229A	NC1	4/24/2012	Sediment Trap	Total LPAHs	7.8	mg/kg	5.2	1.5
CB229A	NC1	4/8/2010	Sediment Trap	Total LPAHs	6.0	mg/kg	5.2	1.2
CB229A	NC1	1/8/2007	Sediment Trap	Total LPAHs	1.6	mg/kg	5.2	0.31
CB229A	NC1	3/16/2006	Sediment Trap	Total LPAHs	1.6	mg/kg	5.2	0.31
CB229A	NC1	8/11/2005	Sediment Trap	Total LPAHs	1.9	mg/kg	5.2	0.36
CB229A	NC1	2/16/2005	Grab	Total LPAHs	12	mg/kg	5.2	2.3
CB229A	NC1	4/24/2012	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	9.6	mg/kg	0.15	64
CB229A	NC1	4/8/2010	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	7.7	mg/kg	0.15	51
CB229A	NC1	1/8/2007	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	2.2	mg/kg	0.15	14
CB229A	NC1	3/16/2006	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	2.3	mg/kg	0.15	15
CB229A	NC1	8/11/2005	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	1.9	mg/kg	0.15	13
CB229A	NC1	2/16/2005	Grab	Total cPAHs (TEQ, NDx0.5)	4.8	mg/kg	0.15	32
CB229A	NC1	4/24/2012	Sediment Trap	Bis(2-ethylhexyl) phthalate	8.1	mg/kg	1.3	6.2
CB229A	NC1	4/8/2010	Sediment Trap	Bis(2-ethylhexyl) phthalate	6.0	mg/kg	1.3	4.6
CB229A	NC1	1/8/2007	Sediment Trap	Bis(2-ethylhexyl) phthalate	3.7	mg/kg	1.3	2.8
CB229A	NC1	3/16/2006	Sediment Trap	Bis(2-ethylhexyl) phthalate	2.6	mg/kg	1.3	2.0
CB229A	NC1	8/11/2005	Sediment Trap	Bis(2-ethylhexyl) phthalate	2.6	mg/kg	1.3	2.0
CB229A	NC1	2/16/2005	Grab	Bis(2-ethylhexyl) phthalate	2.2	mg/kg	1.3	1.7
CB229A	NC1	4/24/2012	Sediment Trap	Butyl benzyl phthalate	0.57 J	mg/kg	0.067	8.5
CB229A	NC1	4/8/2010	Sediment Trap	Butyl benzyl phthalate	0.63	mg/kg	0.067	9.4
CB229A	NC1	1/8/2007	Sediment Trap	Butyl benzyl phthalate	0.22	mg/kg	0.067	3.3
CB229A	NC1	3/16/2006	Sediment Trap	Butyl benzyl phthalate	0.6 U	mg/kg	0.067	9.0
CB229A	NC1	8/11/2005	Sediment Trap	Butyl benzyl phthalate	0.16 U	mg/kg	0.067	2.4
CB229A	NC1	2/16/2005	Grab	Butyl benzyl phthalate	0.22 U	mg/kg	0.067	3.3
CB229A	NC1	4/24/2012	Sediment Trap	p-Cresol (4-Methylphenol)	1.2	mg/kg	0.67	1.8
CB229A	NC1	4/8/2010	Sediment Trap	p-Cresol (4-Methylphenol)	0.27	mg/kg	0.67	0.40
CB229A	NC1	1/8/2007	Sediment Trap	p-Cresol (4-Methylphenol)	0.16 U	mg/kg	0.67	0.24
CB229A	NC1	3/16/2006	Sediment Trap	p-Cresol (4-Methylphenol)	0.6 U	mg/kg	0.67	0.90
CB229A	NC1	8/11/2005	Sediment Trap	p-Cresol (4-Methylphenol)	0.16 U	mg/kg	0.67	0.24
CB229A	NC1	2/16/2005	Grab	p-Cresol (4-Methylphenol)	0.22 U	mg/kg	0.67	0.33
CB229A	NC1	4/24/2012	Sediment Trap	Phenol	0.34 J	mg/kg	0.42	0.81

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB229A	NC1	4/8/2010	Sediment Trap	Phenol	0.25 U	mg/kg	0.42	0.60
CB229A	NC1	1/8/2007	Sediment Trap	Phenol	0.16 U	mg/kg	0.42	0.38
CB229A	NC1	3/16/2006	Sediment Trap	Phenol	0.6 U	mg/kg	0.42	1.4
CB229A	NC1	8/11/2005	Sediment Trap	Phenol	0.16 U	mg/kg	0.42	0.38
CB229A	NC1	2/16/2005	Grab	Phenol	0.22 U	mg/kg	0.42	0.52
D313A	NC1	5/10/2010	Grab	Total PCBs	2.0	mg/kg	0.13	15
MH219	NC1	6/10/2009	Grab	Total PCBs	0.50	mg/kg	0.13	3.8
MH219	NC1	6/10/2009	Grab	Arsenic	22	mg/kg	7.3	3.0
MH219	NC1	6/10/2009	Grab	Copper	50	mg/kg	390	0.13
MH219	NC1	6/10/2009	Grab	Lead	59 J	mg/kg	450	0.13
MH219	NC1	6/10/2009	Grab	Mercury	0.09 J	mg/kg	0.41	0.22
MH219	NC1	6/10/2009	Grab	Zinc	637	mg/kg	410	1.6
MH219	NC1	6/10/2009	Grab	Acenaphthene	0.084	mg/kg	0.50	0.17
MH219	NC1	6/10/2009	Grab	Anthracene	0.065 U	mg/kg	0.96	0.068
MH219	NC1	6/10/2009	Grab	Benzo(a)anthracene	0.23	mg/kg	1.3	0.18
MH219	NC1	6/10/2009	Grab	Total Benzofluoranthenes	0.72	mg/kg	3.2	0.23
MH219	NC1	6/10/2009	Grab	Benzo(g,h,i)perylene	0.24 J	mg/kg	0.67	0.36
MH219	NC1	6/10/2009	Grab	Benzo(a)pyrene	0.30 J	mg/kg	0.15	2.0
MH219	NC1	6/10/2009	Grab	Chrysene	0.51	mg/kg	1.4	0.36
MH219	NC1	6/10/2009	Grab	Dibenz(a,h)anthracene	0.065 UJ	mg/kg	0.23	0.28
MH219	NC1	6/10/2009	Grab	Dibenzofuran	0.079	mg/kg	0.54	0.15
MH219	NC1	6/10/2009	Grab	Fluoranthene	1.2 J	mg/kg	1.7	0.71
MH219	NC1	6/10/2009	Grab	Fluorene	0.086	mg/kg	0.54	0.16
MH219	NC1	6/10/2009	Grab	Indeno(1,2,3-cd)pyrene	0.22 J	mg/kg	0.60	0.37
MH219	NC1	6/10/2009	Grab	2-Methylnaphthalene	0.065 U	mg/kg	0.67	0.097
MH219	NC1	6/10/2009	Grab	Phenanthrene	1.2 J	mg/kg	1.5	0.80
MH219	NC1	6/10/2009	Grab	Pyrene	0.93 J	mg/kg	2.6	0.36
MH219	NC1	6/10/2009	Grab	Total HPAHs	4.4	mg/kg	12	0.36
MH219	NC1	6/10/2009	Grab	Total LPAHs	1.4	mg/kg	5.2	0.26
MH219	NC1	6/10/2009	Grab	Total cPAHs (TEQ, NDx0.5)	0.43	mg/kg	0.15	2.8
MH219	NC1	6/10/2009	Grab	Bis(2-ethylhexyl) phthalate	0.39	mg/kg	1.3	0.30
MH219	NC1	6/10/2009	Grab	Butyl benzyl phthalate	0.065 U	mg/kg	0.067	0.97
MH219	NC1	6/10/2009	Grab	p-Cresol (4-Methylphenol)	0.065 U	mg/kg	0.67	0.097
MH219	NC1	6/10/2009	Grab	Phenol	0.065 U	mg/kg	0.42	0.15
MH221A	NC1	4/24/2012	Sediment Trap	Total PCBs	1.4	mg/kg	0.13	11
MH221A	NC1	4/5/2011	Sediment Trap	Total PCBs	0.77	mg/kg	0.13	5.9
MH221A	NC1	4/8/2010	Sediment Trap	Total PCBs	1.1	mg/kg	0.13	8.2
MH221A	NC1	10/29/2007	Sediment Trap	Total PCBs	1.9	mg/kg	0.13	14
MH221A	NC1	5/17/2007	Sediment Trap	Total PCBs	1.6	mg/kg	0.13	12
MH221A	NC1	5/14/2007	Sediment Trap	Total PCBs	1.6	mg/kg	0.13	12
MH221A	NC1	1/8/2007	Sediment Trap	Total PCBs	1.7	mg/kg	0.13	13
MH221A	NC1	10/11/2006	Sediment Trap	Total PCBs	0.94	mg/kg	0.13	7.2
MH221A	NC1	3/16/2006	Sediment Trap	Total PCBs	1.1	mg/kg	0.13	8.4
MH221A	NC1	8/11/2005	Sediment Trap	Total PCBs	2.8	mg/kg	0.13	21
MH221A	NC1	2/16/2005	Grab	Total PCBs	1.5	mg/kg	0.13	11
MH221A	NC1	4/24/2012	Sediment Trap	Arsenic	30	mg/kg	7.3	4.1
MH221A	NC1	4/8/2010	Sediment Trap	Arsenic	30	mg/kg	7.3	4.1
MH221A	NC1	3/18/2008	Sediment Trap	Arsenic	18	mg/kg	7.3	2.5
MH221A	NC1	10/29/2007	Sediment Trap	Arsenic	50	mg/kg	7.3	6.8
MH221A	NC1	1/8/2007	Sediment Trap	Arsenic	10	mg/kg	7.3	1.4
MH221A	NC1	10/11/2006	Sediment Trap	Arsenic	70	mg/kg	7.3	9.6
MH221A	NC1	3/16/2006	Sediment Trap	Arsenic	20	mg/kg	7.3	2.7
MH221A	NC1	2/16/2005	Grab	Arsenic	12	mg/kg	7.3	1.6
MH221A	NC1	4/24/2012	Sediment Trap	Copper	408	mg/kg	390	1.0
MH221A	NC1	4/8/2010	Sediment Trap	Copper	334	mg/kg	390	0.86
MH221A	NC1	3/18/2008	Sediment Trap	Copper	86	mg/kg	390	0.22
MH221A	NC1	10/29/2007	Sediment Trap	Copper	329	mg/kg	390	0.84
MH221A	NC1	1/8/2007	Sediment Trap	Copper	125	mg/kg	390	0.32
MH221A	NC1	10/11/2006	Sediment Trap	Copper	271	mg/kg	390	0.69
MH221A	NC1	3/16/2006	Sediment Trap	Copper	134	mg/kg	390	0.34

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH221A	NC1	2/16/2005	Grab	Copper	39	mg/kg	390	0.099
MH221A	NC1	4/24/2012	Sediment Trap	Lead	399	mg/kg	450	0.89
MH221A	NC1	4/8/2010	Sediment Trap	Lead	382	mg/kg	450	0.85
MH221A	NC1	3/18/2008	Sediment Trap	Lead	115	mg/kg	450	0.26
MH221A	NC1	10/29/2007	Sediment Trap	Lead	288	mg/kg	450	0.64
MH221A	NC1	1/8/2007	Sediment Trap	Lead	175	mg/kg	450	0.39
MH221A	NC1	10/11/2006	Sediment Trap	Lead	330	mg/kg	450	0.73
MH221A	NC1	3/16/2006	Sediment Trap	Lead	190	mg/kg	450	0.42
MH221A	NC1	2/16/2005	Grab	Lead	50	mg/kg	450	0.11
MH221A	NC1	4/24/2012	Sediment Trap	Mercury	0.47	mg/kg	0.41	1.1
MH221A	NC1	4/8/2010	Sediment Trap	Mercury	0.37	mg/kg	0.41	0.90
MH221A	NC1	3/18/2008	Sediment Trap	Mercury	0.021	mg/kg	0.41	0.051
MH221A	NC1	10/29/2007	Sediment Trap	Mercury	0.50	mg/kg	0.41	1.2
MH221A	NC1	1/8/2007	Sediment Trap	Mercury	0.40	mg/kg	0.41	0.98
MH221A	NC1	10/11/2006	Sediment Trap	Mercury	0.60	mg/kg	0.41	1.5
MH221A	NC1	3/16/2006	Sediment Trap	Mercury	0.40	mg/kg	0.41	0.98
MH221A	NC1	2/16/2005	Grab	Mercury	0.09	mg/kg	0.41	0.22
MH221A	NC1	4/24/2012	Sediment Trap	Zinc	1,920	mg/kg	410	4.7
MH221A	NC1	4/8/2010	Sediment Trap	Zinc	1,880	mg/kg	410	4.6
MH221A	NC1	3/18/2008	Sediment Trap	Zinc	1,080	mg/kg	410	2.6
MH221A	NC1	10/29/2007	Sediment Trap	Zinc	1,990	mg/kg	410	4.9
MH221A	NC1	1/8/2007	Sediment Trap	Zinc	828	mg/kg	410	2.0
MH221A	NC1	10/11/2006	Sediment Trap	Zinc	2,460	mg/kg	410	6.0
MH221A	NC1	3/16/2006	Sediment Trap	Zinc	733	mg/kg	410	1.8
MH221A	NC1	2/16/2005	Grab	Zinc	332	mg/kg	410	0.81
MH221A	NC1	4/24/2012	Sediment Trap	Acenaphthene	0.45 U	mg/kg	0.50	0.90
MH221A	NC1	4/8/2010	Sediment Trap	Acenaphthene	0.39 U	mg/kg	0.50	0.78
MH221A	NC1	1/8/2007	Sediment Trap	Acenaphthene	0.28 U	mg/kg	0.50	0.56
MH221A	NC1	3/16/2006	Sediment Trap	Acenaphthene	0.55 U	mg/kg	0.50	1.1
MH221A	NC1	8/11/2005	Sediment Trap	Acenaphthene	1.3	mg/kg	0.50	2.6
MH221A	NC1	2/16/2005	Grab	Acenaphthene	0.058 U	mg/kg	0.50	0.12
MH221A	NC1	4/24/2012	Sediment Trap	Anthracene	0.45	mg/kg	0.96	0.47
MH221A	NC1	4/8/2010	Sediment Trap	Anthracene	0.42	mg/kg	0.96	0.44
MH221A	NC1	1/8/2007	Sediment Trap	Anthracene	0.50	mg/kg	0.96	0.52
MH221A	NC1	3/16/2006	Sediment Trap	Anthracene	0.55 U	mg/kg	0.96	0.57
MH221A	NC1	8/11/2005	Sediment Trap	Anthracene	1.5	mg/kg	0.96	1.6
MH221A	NC1	2/16/2005	Grab	Anthracene	0.071	mg/kg	0.96	0.074
MH221A	NC1	4/24/2012	Sediment Trap	Benzo(a)anthracene	2.6	mg/kg	1.3	2.0
MH221A	NC1	4/8/2010	Sediment Trap	Benzo(a)anthracene	2.3	mg/kg	1.3	1.8
MH221A	NC1	1/8/2007	Sediment Trap	Benzo(a)anthracene	2.3	mg/kg	1.3	1.8
MH221A	NC1	3/16/2006	Sediment Trap	Benzo(a)anthracene	1.6	mg/kg	1.3	1.2
MH221A	NC1	8/11/2005	Sediment Trap	Benzo(a)anthracene	3.0	mg/kg	1.3	2.3
MH221A	NC1	2/16/2005	Grab	Benzo(a)anthracene	0.28	mg/kg	1.3	0.22
MH221A	NC1	4/24/2012	Sediment Trap	Total Benzofluoranthenes	14	mg/kg	3.2	4.4
MH221A	NC1	4/8/2010	Sediment Trap	Total Benzofluoranthenes	9.8	mg/kg	3.2	3.1
MH221A	NC1	1/8/2007	Sediment Trap	Total Benzofluoranthenes	9.6	mg/kg	3.2	3.0
MH221A	NC1	3/16/2006	Sediment Trap	Total Benzofluoranthenes	5.0	mg/kg	3.2	1.6
MH221A	NC1	8/11/2005	Sediment Trap	Total Benzofluoranthenes	7.2	mg/kg	3.2	2.3
MH221A	NC1	2/16/2005	Grab	Total Benzofluoranthenes	1.1	mg/kg	3.2	0.35
MH221A	NC1	4/24/2012	Sediment Trap	Benzo(g,h,i)perylene	5.6	mg/kg	0.67	8.4
MH221A	NC1	4/8/2010	Sediment Trap	Benzo(g,h,i)perylene	3.0	mg/kg	0.67	4.5
MH221A	NC1	3/16/2006	Sediment Trap	Benzo(g,h,i)perylene	0.99	mg/kg	0.67	1.5
MH221A	NC1	8/11/2005	Sediment Trap	Benzo(g,h,i)perylene	1.6	mg/kg	0.67	2.4
MH221A	NC1	2/16/2005	Grab	Benzo(g,h,i)perylene	0.23	mg/kg	0.67	0.34
MH221A	NC1	4/24/2012	Sediment Trap	Benzo(a)pyrene	5.0	mg/kg	0.15	33
MH221A	NC1	4/8/2010	Sediment Trap	Benzo(a)pyrene	4.2	mg/kg	0.15	28
MH221A	NC1	1/8/2007	Sediment Trap	Benzo(a)pyrene	3.3	mg/kg	0.15	22
MH221A	NC1	3/16/2006	Sediment Trap	Benzo(a)pyrene	2.0	mg/kg	0.15	13
MH221A	NC1	8/11/2005	Sediment Trap	Benzo(a)pyrene	3.4	mg/kg	0.15	23
MH221A	NC1	2/16/2005	Grab	Benzo(a)pyrene	0.40	mg/kg	0.15	2.7

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
MH221A	NC1	4/24/2012	Sediment Trap	Chrysene	8.3		mg/kg	1.4	5.9
MH221A	NC1	4/8/2010	Sediment Trap	Chrysene	6.2		mg/kg	1.4	4.4
MH221A	NC1	1/8/2007	Sediment Trap	Chrysene	4.4		mg/kg	1.4	3.1
MH221A	NC1	3/16/2006	Sediment Trap	Chrysene	3.1		mg/kg	1.4	2.2
MH221A	NC1	8/11/2005	Sediment Trap	Chrysene	4.1		mg/kg	1.4	2.9
MH221A	NC1	2/16/2005	Grab	Chrysene	0.49		mg/kg	1.4	0.35
MH221A	NC1	4/24/2012	Sediment Trap	Dibenz(a,h)anthracene	1.7		mg/kg	0.23	7.4
MH221A	NC1	4/8/2010	Sediment Trap	Dibenz(a,h)anthracene	1.0		mg/kg	0.23	4.3
MH221A	NC1	1/8/2007	Sediment Trap	Dibenz(a,h)anthracene	0.28	U	mg/kg	0.23	1.2
MH221A	NC1	3/16/2006	Sediment Trap	Dibenz(a,h)anthracene	0.55	U	mg/kg	0.23	2.4
MH221A	NC1	8/11/2005	Sediment Trap	Dibenz(a,h)anthracene	0.73		mg/kg	0.23	3.2
MH221A	NC1	2/16/2005	Grab	Dibenz(a,h)anthracene	0.058	U	mg/kg	0.23	0.25
MH221A	NC1	4/24/2012	Sediment Trap	Dibenzofuran	0.29	J	mg/kg	0.54	0.54
MH221A	NC1	4/8/2010	Sediment Trap	Dibenzofuran	0.39	U	mg/kg	0.54	0.72
MH221A	NC1	1/8/2007	Sediment Trap	Dibenzofuran	0.28	U	mg/kg	0.54	0.52
MH221A	NC1	3/16/2006	Sediment Trap	Dibenzofuran	0.55	U	mg/kg	0.54	1.0
MH221A	NC1	8/11/2005	Sediment Trap	Dibenzofuran	0.74		mg/kg	0.54	1.4
MH221A	NC1	2/16/2005	Grab	Dibenzofuran	0.058	U	mg/kg	0.54	0.11
MH221A	NC1	4/24/2012	Sediment Trap	Fluoranthene	12		mg/kg	1.7	7.1
MH221A	NC1	4/8/2010	Sediment Trap	Fluoranthene	11		mg/kg	1.7	6.5
MH221A	NC1	1/8/2007	Sediment Trap	Fluoranthene	8.7		mg/kg	1.7	5.1
MH221A	NC1	3/16/2006	Sediment Trap	Fluoranthene	6.1		mg/kg	1.7	3.6
MH221A	NC1	8/11/2005	Sediment Trap	Fluoranthene	8.9		mg/kg	1.7	5.2
MH221A	NC1	2/16/2005	Grab	Fluoranthene	0.92		mg/kg	1.7	0.54
MH221A	NC1	4/24/2012	Sediment Trap	Fluorene	0.27	J	mg/kg	0.54	0.50
MH221A	NC1	4/8/2010	Sediment Trap	Fluorene	0.24	J	mg/kg	0.54	0.44
MH221A	NC1	1/8/2007	Sediment Trap	Fluorene	0.34		mg/kg	0.54	0.63
MH221A	NC1	3/16/2006	Sediment Trap	Fluorene	0.55	U	mg/kg	0.54	1.0
MH221A	NC1	8/11/2005	Sediment Trap	Fluorene	1.0		mg/kg	0.54	1.9
MH221A	NC1	2/16/2005	Grab	Fluorene	0.073		mg/kg	0.54	0.14
MH221A	NC1	4/24/2012	Sediment Trap	Indeno(1,2,3-cd)pyrene	4.9		mg/kg	0.60	8.2
MH221A	NC1	4/8/2010	Sediment Trap	Indeno(1,2,3-cd)pyrene	2.8		mg/kg	0.60	4.7
MH221A	NC1	1/8/2007	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.4		mg/kg	0.60	2.3
MH221A	NC1	3/16/2006	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.0		mg/kg	0.60	1.7
MH221A	NC1	8/11/2005	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.9		mg/kg	0.60	3.2
MH221A	NC1	2/16/2005	Grab	Indeno(1,2,3-cd)pyrene	0.26		mg/kg	0.60	0.43
MH221A	NC1	4/24/2012	Sediment Trap	2-Methylnaphthalene	0.45	U	mg/kg	0.67	0.67
MH221A	NC1	4/8/2010	Sediment Trap	2-Methylnaphthalene	0.39	U	mg/kg	0.67	0.58
MH221A	NC1	1/8/2007	Sediment Trap	2-Methylnaphthalene	0.28	U	mg/kg	0.67	0.42
MH221A	NC1	3/16/2006	Sediment Trap	2-Methylnaphthalene	0.55	U	mg/kg	0.67	0.82
MH221A	NC1	8/11/2005	Sediment Trap	2-Methylnaphthalene	4.0		mg/kg	0.67	6.0
MH221A	NC1	2/16/2005	Grab	2-Methylnaphthalene	0.058	U	mg/kg	0.67	0.087
MH221A	NC1	4/24/2012	Sediment Trap	Phenanthrene	5.7		mg/kg	1.5	3.8
MH221A	NC1	4/8/2010	Sediment Trap	Phenanthrene	4.3		mg/kg	1.5	2.9
MH221A	NC1	1/8/2007	Sediment Trap	Phenanthrene	4.1		mg/kg	1.5	2.7
MH221A	NC1	3/16/2006	Sediment Trap	Phenanthrene	2.8		mg/kg	1.5	1.9
MH221A	NC1	8/11/2005	Sediment Trap	Phenanthrene	8.6		mg/kg	1.5	5.7
MH221A	NC1	2/16/2005	Grab	Phenanthrene	0.30		mg/kg	1.5	0.20
MH221A	NC1	4/24/2012	Sediment Trap	Pyrene	10		mg/kg	2.6	3.8
MH221A	NC1	4/8/2010	Sediment Trap	Pyrene	5.2		mg/kg	2.6	2.0
MH221A	NC1	1/8/2007	Sediment Trap	Pyrene	5.6		mg/kg	2.6	2.2
MH221A	NC1	3/16/2006	Sediment Trap	Pyrene	3.5		mg/kg	2.6	1.3
MH221A	NC1	8/11/2005	Sediment Trap	Pyrene	6.8		mg/kg	2.6	2.6
MH221A	NC1	2/16/2005	Grab	Pyrene	0.87		mg/kg	2.6	0.33
MH221A	NC1	4/24/2012	Sediment Trap	Total HPAHs	64		mg/kg	12	5.3
MH221A	NC1	4/8/2010	Sediment Trap	Total HPAHs	46		mg/kg	12	3.8
MH221A	NC1	1/8/2007	Sediment Trap	Total HPAHs	35		mg/kg	12	2.9
MH221A	NC1	3/16/2006	Sediment Trap	Total HPAHs	23		mg/kg	12	1.9
MH221A	NC1	3/15/2006	Sediment Trap	Total HPAHs	23		mg/kg	12	1.9
MH221A	NC1	8/11/2005	Sediment Trap	Total HPAHs	38		mg/kg	12	3.1

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH221A	NC1	2/16/2005	Grab	Total HPAHs	4.6	mg/kg	12	0.38
MH221A	NC1	4/24/2012	Sediment Trap	Total LPAHs	6.4	mg/kg	5.2	1.2
MH221A	NC1	4/8/2010	Sediment Trap	Total LPAHs	5.0	mg/kg	5.2	0.95
MH221A	NC1	1/8/2007	Sediment Trap	Total LPAHs	4.9	mg/kg	5.2	0.95
MH221A	NC1	3/16/2006	Sediment Trap	Total LPAHs	2.8	mg/kg	5.2	0.54
MH221A	NC1	3/15/2006	Sediment Trap	Total LPAHs	2.8	mg/kg	5.2	0.54
MH221A	NC1	8/11/2005	Sediment Trap	Total LPAHs	13	mg/kg	5.2	2.5
MH221A	NC1	2/16/2005	Grab	Total LPAHs	0.444	mg/kg	5.2	0.085
MH221A	NC1	4/24/2012	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	7.4	mg/kg	0.15	49
MH221A	NC1	4/8/2010	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	5.9	mg/kg	0.15	39
MH221A	NC1	1/8/2007	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	4.7	mg/kg	0.15	31
MH221A	NC1	3/16/2006	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	2.8	mg/kg	0.15	19
MH221A	NC1	8/11/2005	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	4.7	mg/kg	0.15	31
MH221A	NC1	2/16/2005	Grab	Total cPAHs (TEQ, NDx0.5)	0.57	mg/kg	0.15	3.8
MH221A	NC1	4/24/2012	Sediment Trap	Bis(2-ethylhexyl) phthalate	30	mg/kg	1.3	23
MH221A	NC1	4/8/2010	Sediment Trap	Bis(2-ethylhexyl) phthalate	18	mg/kg	1.3	14
MH221A	NC1	1/8/2007	Sediment Trap	Bis(2-ethylhexyl) phthalate	9.0	mg/kg	1.3	6.9
MH221A	NC1	3/16/2006	Sediment Trap	Bis(2-ethylhexyl) phthalate	7.4	mg/kg	1.3	5.7
MH221A	NC1	8/11/2005	Sediment Trap	Bis(2-ethylhexyl) phthalate	6.0	mg/kg	1.3	4.6
MH221A	NC1	2/16/2005	Grab	Bis(2-ethylhexyl) phthalate	0.76	mg/kg	1.3	0.58
MH221A	NC1	4/24/2012	Sediment Trap	Butyl benzyl phthalate	0.49 J	mg/kg	0.067	7.3
MH221A	NC1	4/8/2010	Sediment Trap	Butyl benzyl phthalate	0.32 J	mg/kg	0.067	4.8
MH221A	NC1	1/8/2007	Sediment Trap	Butyl benzyl phthalate	0.44	mg/kg	0.067	6.6
MH221A	NC1	3/16/2006	Sediment Trap	Butyl benzyl phthalate	0.55 U	mg/kg	0.067	8.2
MH221A	NC1	8/11/2005	Sediment Trap	Butyl benzyl phthalate	0.21 U	mg/kg	0.067	3.1
MH221A	NC1	2/16/2005	Grab	Butyl benzyl phthalate	0.058 U	mg/kg	0.067	0.87
MH221A	NC1	4/24/2012	Sediment Trap	p-Cresol (4-Methylphenol)	0.45 J	mg/kg	0.67	0.67
MH221A	NC1	4/8/2010	Sediment Trap	p-Cresol (4-Methylphenol)	0.39 U	mg/kg	0.67	0.58
MH221A	NC1	1/8/2007	Sediment Trap	p-Cresol (4-Methylphenol)	0.28 U	mg/kg	0.67	0.42
MH221A	NC1	3/16/2006	Sediment Trap	p-Cresol (4-Methylphenol)	0.55 U	mg/kg	0.67	0.82
MH221A	NC1	8/11/2005	Sediment Trap	p-Cresol (4-Methylphenol)	0.21 U	mg/kg	0.67	0.31
MH221A	NC1	2/16/2005	Grab	p-Cresol (4-Methylphenol)	0.058 U	mg/kg	0.67	0.087
MH221A	NC1	4/24/2012	Sediment Trap	Phenol	0.47	mg/kg	0.42	1.1
MH221A	NC1	4/8/2010	Sediment Trap	Phenol	0.39 U	mg/kg	0.42	0.93
MH221A	NC1	1/8/2007	Sediment Trap	Phenol	0.28 U	mg/kg	0.42	0.67
MH221A	NC1	3/16/2006	Sediment Trap	Phenol	0.55 U	mg/kg	0.42	1.3
MH221A	NC1	8/11/2005	Sediment Trap	Phenol	0.22	mg/kg	0.42	0.52
MH221A	NC1	2/16/2005	Grab	Phenol	0.058 U	mg/kg	0.42	0.14
MH226	NC1	5/20/2010	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	43	ng/kg	13	3.3
MH226	NC1	6/2/2010	Filter/Stormwater	Total PCBs	0.50	mg/kg	0.13	3.8
MH226	NC1	5/20/2010	Filter/Stormwater	Total PCBs	0.54	mg/kg	0.13	4.2
MH226	NC1	4/27/2010	Filter/Stormwater	Total PCBs	0.34	mg/kg	0.13	2.6
MH226	NC1	3/14/2007	Grab	Total PCBs	50	mg/kg	0.13	380
MH226	NC1	7/25/2006	Grab	Total PCBs	25	mg/kg	0.13	190
MH226	NC1	6/2/2010	Filter/Stormwater	Arsenic	60	mg/kg	7.3	8.2
MH226	NC1	5/20/2010	Filter/Stormwater	Arsenic	40	mg/kg	7.3	5.5
MH226	NC1	4/27/2010	Filter/Stormwater	Arsenic	40 U	mg/kg	7.3	5.5
MH226	NC1	6/2/2010	Filter/Stormwater	Cadmium	22	mg/kg	5.1	4.3
MH226	NC1	5/20/2010	Filter/Stormwater	Cadmium	13	mg/kg	5.1	2.5
MH226	NC1	4/27/2010	Filter/Stormwater	Cadmium	10	mg/kg	5.1	2.0
MH226	NC1	6/2/2010	Filter/Stormwater	Chromium	132	mg/kg	260	0.51
MH226	NC1	5/20/2010	Filter/Stormwater	Chromium	97	mg/kg	260	0.37
MH226	NC1	4/27/2010	Filter/Stormwater	Chromium	56 J	mg/kg	260	0.22
MH226	NC1	6/2/2010	Filter/Stormwater	Copper	469	mg/kg	390	1.2
MH226	NC1	5/20/2010	Filter/Stormwater	Copper	291 J	mg/kg	390	0.75
MH226	NC1	4/27/2010	Filter/Stormwater	Copper	211	mg/kg	390	0.54
MH226	NC1	6/2/2010	Filter/Stormwater	Lead	300	mg/kg	450	0.67
MH226	NC1	5/20/2010	Filter/Stormwater	Lead	308	mg/kg	450	0.68
MH226	NC1	4/27/2010	Filter/Stormwater	Lead	200	mg/kg	450	0.44
MH226	NC1	6/2/2010	Filter/Stormwater	Mercury	0.30 J	mg/kg	0.41	0.73

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH226	NC1	5/20/2010	Filter/Stormwater	Mercury	0.30 J	mg/kg	0.41	0.73
MH226	NC1	4/27/2010	Filter/Stormwater	Mercury	0.40 J	mg/kg	0.41	0.98
MH226	NC1	6/2/2010	Filter/Stormwater	Silver	3 U	mg/kg	6.1	0.49
MH226	NC1	5/20/2010	Filter/Stormwater	Silver	1 U	mg/kg	6.1	0.16
MH226	NC1	4/27/2010	Filter/Stormwater	Silver	2 U	mg/kg	6.1	0.33
MH226	NC1	6/2/2010	Filter/Stormwater	Zinc	2,540	mg/kg	410	6.2
MH226	NC1	5/20/2010	Filter/Stormwater	Zinc	1,710	mg/kg	410	4.2
MH226	NC1	4/27/2010	Filter/Stormwater	Zinc	1,170 J	mg/kg	410	2.9
MH226	NC1	6/2/2010	Filter/Stormwater	Acenaphthene	0.24 U	mg/kg	0.50	0.48
MH226	NC1	6/2/2010	Filter/Stormwater	Anthracene	0.25	mg/kg	0.96	0.26
MH226	NC1	6/2/2010	Filter/Stormwater	Benzo(a)anthracene	1.6	mg/kg	1.3	1.2
MH226	NC1	6/2/2010	Filter/Stormwater	Total Benzofluoranthenes	12	mg/kg	3.2	3.9
MH226	NC1	6/2/2010	Filter/Stormwater	Benzo(g,h,i)perylene	4.9	mg/kg	0.67	7.3
MH226	NC1	6/2/2010	Filter/Stormwater	Benzo(a)pyrene	3.7	mg/kg	0.15	25
MH226	NC1	6/2/2010	Filter/Stormwater	Chrysene	7.9	mg/kg	1.4	5.6
MH226	NC1	6/2/2010	Filter/Stormwater	Dibenz(a,h)anthracene	1.3	mg/kg	0.23	5.7
MH226	NC1	6/2/2010	Filter/Stormwater	Dibenzofuran	0.36	mg/kg	0.54	0.67
MH226	NC1	4/27/2010	Filter/Stormwater	Dibenzofuran	0.17	mg/kg	0.54	0.31
MH226	NC1	6/2/2010	Filter/Stormwater	Fluoranthene	12	mg/kg	1.7	7.1
MH226	NC1	4/27/2010	Filter/Stormwater	Fluoranthene	7.8	mg/kg	1.7	4.6
MH226	NC1	6/2/2010	Filter/Stormwater	Fluorene	0.24 U	mg/kg	0.54	0.44
MH226	NC1	6/2/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	4.4	mg/kg	0.60	7.3
MH226	NC1	6/2/2010	Filter/Stormwater	2-Methylnaphthalene	0.24 U	mg/kg	0.67	0.36
MH226	NC1	4/27/2010	Filter/Stormwater	2-Methylnaphthalene	0.078	mg/kg	0.67	0.12
MH226	NC1	6/2/2010	Filter/Stormwater	Phenanthrene	5.0	mg/kg	1.5	3.3
MH226	NC1	4/27/2010	Filter/Stormwater	Phenanthrene	2.9	mg/kg	1.5	1.9
MH226	NC1	6/2/2010	Filter/Stormwater	Pyrene	6.6	mg/kg	2.6	2.5
MH226	NC1	4/27/2010	Filter/Stormwater	Pyrene	2.9	mg/kg	2.6	1.1
MH226	NC1	6/2/2010	Filter/Stormwater	Total HPAHs	55	mg/kg	12	4.6
MH226	NC1	4/27/2010	Filter/Stormwater	Total HPAHs	11	mg/kg	12	0.89
MH226	NC1	6/2/2010	Filter/Stormwater	Total LPAHs	5.3	mg/kg	5.2	1.0
MH226	NC1	4/27/2010	Filter/Stormwater	Total LPAHs	2.9	mg/kg	5.2	0.56
MH226	NC1	6/2/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	5.7	mg/kg	0.15	38
MH228	NC1	4/10/2007	Grab	Total PCBs	1.9	mg/kg	0.13	14
MH228C	NC1	6/10/2009	Grab	Total PCBs	0.11	mg/kg	0.13	0.81
MH228C	NC1	4/10/2007	Grab	Total PCBs	20	mg/kg	0.13	150
MH362	NC1	3/13/2012	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	70	ng/kg	13	5.4
MH362	NC1	3/29/2012	Filter/Stormwater	Total PCBs	2.1	mg/kg	0.13	16
MH362	NC1	2/24/2012	Filter/Stormwater	Total PCBs	1.7 J	mg/kg	0.13	13
MH362	NC1	3/29/2012	Filter/Stormwater	Arsenic	30	mg/kg	7.3	4.1
MH362	NC1	3/13/2012	Filter/Stormwater	Arsenic	30	mg/kg	7.3	4.1
MH362	NC1	2/24/2012	Filter/Stormwater	Arsenic	60 U	mg/kg	7.3	8.2
MH362	NC1	3/29/2012	Filter/Stormwater	Cadmium	8.7	mg/kg	5.1	1.7
MH362	NC1	3/13/2012	Filter/Stormwater	Cadmium	11	mg/kg	5.1	2.2
MH362	NC1	2/24/2012	Filter/Stormwater	Cadmium	11	mg/kg	5.1	2.2
MH362	NC1	3/29/2012	Filter/Stormwater	Chromium	92	mg/kg	260	0.35
MH362	NC1	3/13/2012	Filter/Stormwater	Chromium	186	mg/kg	260	0.72
MH362	NC1	2/24/2012	Filter/Stormwater	Chromium	131	mg/kg	260	0.50
MH362	NC1	3/29/2012	Filter/Stormwater	Copper	166	mg/kg	390	0.43
MH362	NC1	3/13/2012	Filter/Stormwater	Copper	264	mg/kg	390	0.68
MH362	NC1	2/24/2012	Filter/Stormwater	Copper	250	mg/kg	390	0.64
MH362	NC1	3/29/2012	Filter/Stormwater	Lead	118	mg/kg	450	0.26
MH362	NC1	3/13/2012	Filter/Stormwater	Lead	190	mg/kg	450	0.42
MH362	NC1	2/24/2012	Filter/Stormwater	Lead	230	mg/kg	450	0.51
MH362	NC1	3/29/2012	Filter/Stormwater	Mercury	0.32	mg/kg	0.41	0.78
MH362	NC1	3/13/2012	Filter/Stormwater	Mercury	0.40	mg/kg	0.41	0.98
MH362	NC1	2/24/2012	Filter/Stormwater	Mercury	0.40	mg/kg	0.41	0.98
MH362	NC1	3/29/2012	Filter/Stormwater	Silver	2.0	mg/kg	6.1	0.33
MH362	NC1	3/13/2012	Filter/Stormwater	Silver	2 U	mg/kg	6.1	0.33
MH362	NC1	2/24/2012	Filter/Stormwater	Silver	3 U	mg/kg	6.1	0.49

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH362	NC1	3/29/2012	Filter/Stormwater	Zinc	1,070	mg/kg	410	2.6
MH362	NC1	3/13/2012	Filter/Stormwater	Zinc	1,360	mg/kg	410	3.3
MH362	NC1	2/24/2012	Filter/Stormwater	Zinc	1,330	mg/kg	410	3.2
MH362	NC1	3/29/2012	Filter/Stormwater	Acenaphthene	0.43 U	mg/kg	0.50	0.86
MH362	NC1	3/13/2012	Filter/Stormwater	Acenaphthene	2.7 U	mg/kg	0.50	5.4
MH362	NC1	2/24/2012	Filter/Stormwater	Acenaphthene	0.91 U	mg/kg	0.50	1.8
MH362	NC1	3/29/2012	Filter/Stormwater	Anthracene	0.43 U	mg/kg	0.96	0.45
MH362	NC1	3/13/2012	Filter/Stormwater	Anthracene	2.7 U	mg/kg	0.96	2.8
MH362	NC1	2/24/2012	Filter/Stormwater	Anthracene	0.91 U	mg/kg	0.96	0.95
MH362	NC1	3/29/2012	Filter/Stormwater	Benzo(a)anthracene	1.0	mg/kg	1.3	0.77
MH362	NC1	3/13/2012	Filter/Stormwater	Benzo(a)anthracene	2.7 U	mg/kg	1.3	2.1
MH362	NC1	2/24/2012	Filter/Stormwater	Benzo(a)anthracene	1.5	mg/kg	1.3	1.2
MH362	NC1	3/29/2012	Filter/Stormwater	Total Benzofluoranthenes	10	mg/kg	3.2	3.1
MH362	NC1	3/13/2012	Filter/Stormwater	Total Benzofluoranthenes	9.3	mg/kg	3.2	2.9
MH362	NC1	2/24/2012	Filter/Stormwater	Total Benzofluoranthenes	13	mg/kg	3.2	4.1
MH362	NC1	3/29/2012	Filter/Stormwater	Benzo(g,h,i)perylene	3.1	mg/kg	0.67	4.6
MH362	NC1	3/13/2012	Filter/Stormwater	Benzo(g,h,i)perylene	2.7	mg/kg	0.67	4.0
MH362	NC1	2/24/2012	Filter/Stormwater	Benzo(g,h,i)perylene	5.5	mg/kg	0.67	8.2
MH362	NC1	3/29/2012	Filter/Stormwater	Benzo(a)pyrene	2.3	mg/kg	0.15	15
MH362	NC1	3/13/2012	Filter/Stormwater	Benzo(a)pyrene	2.7 U	mg/kg	0.15	18
MH362	NC1	2/24/2012	Filter/Stormwater	Benzo(a)pyrene	4.1	mg/kg	0.15	27
MH362	NC1	3/29/2012	Filter/Stormwater	Chrysene	5.4	mg/kg	1.4	3.9
MH362	NC1	3/13/2012	Filter/Stormwater	Chrysene	4.3	mg/kg	1.4	3.1
MH362	NC1	2/24/2012	Filter/Stormwater	Chrysene	7.3	mg/kg	1.4	5.2
MH362	NC1	3/29/2012	Filter/Stormwater	Dibenz(a,h)anthracene	0.55	mg/kg	0.23	2.4
MH362	NC1	3/13/2012	Filter/Stormwater	Dibenz(a,h)anthracene	2.7 U	mg/kg	0.23	12
MH362	NC1	2/24/2012	Filter/Stormwater	Dibenz(a,h)anthracene	1.4	mg/kg	0.23	6.1
MH362	NC1	3/29/2012	Filter/Stormwater	Dibenzofuran	0.24 J	mg/kg	0.54	0.44
MH362	NC1	3/13/2012	Filter/Stormwater	Dibenzofuran	2.7 U	mg/kg	0.54	5.0
MH362	NC1	2/24/2012	Filter/Stormwater	Dibenzofuran	0.91 U	mg/kg	0.54	1.7
MH362	NC1	3/29/2012	Filter/Stormwater	Fluoranthene	9.2	mg/kg	1.7	5.4
MH362	NC1	3/13/2012	Filter/Stormwater	Fluoranthene	8.7	mg/kg	1.7	5.1
MH362	NC1	2/24/2012	Filter/Stormwater	Fluoranthene	14	mg/kg	1.7	8.2
MH362	NC1	3/29/2012	Filter/Stormwater	Fluorene	0.43 U	mg/kg	0.54	0.80
MH362	NC1	3/13/2012	Filter/Stormwater	Fluorene	2.7 U	mg/kg	0.54	5.0
MH362	NC1	2/24/2012	Filter/Stormwater	Fluorene	0.91 U	mg/kg	0.54	1.7
MH362	NC1	3/29/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	2.8	mg/kg	0.60	4.7
MH362	NC1	3/13/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	2.7 U	mg/kg	0.60	4.5
MH362	NC1	2/24/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	4.5	mg/kg	0.60	7.5
MH362	NC1	3/29/2012	Filter/Stormwater	2-Methylnaphthalene	0.43 U	mg/kg	0.67	0.64
MH362	NC1	3/13/2012	Filter/Stormwater	2-Methylnaphthalene	2.7 U	mg/kg	0.67	4.0
MH362	NC1	2/24/2012	Filter/Stormwater	2-Methylnaphthalene	0.91 U	mg/kg	0.67	1.4
MH362	NC1	3/29/2012	Filter/Stormwater	Phenanthrene	3.3	mg/kg	1.5	2.2
MH362	NC1	3/13/2012	Filter/Stormwater	Phenanthrene	2.7	mg/kg	1.5	1.8
MH362	NC1	2/24/2012	Filter/Stormwater	Phenanthrene	4.5	mg/kg	1.5	3.0
MH362	NC1	3/29/2012	Filter/Stormwater	Pyrene	5.2	mg/kg	2.6	2.0
MH362	NC1	3/13/2012	Filter/Stormwater	Pyrene	4.5	mg/kg	2.6	1.7
MH362	NC1	2/24/2012	Filter/Stormwater	Pyrene	9.1	mg/kg	2.6	3.5
MH362	NC1	3/29/2012	Filter/Stormwater	Total HPAHs	40	mg/kg	12	3.3
MH362	NC1	3/13/2012	Filter/Stormwater	Total HPAHs	30	mg/kg	12	2.5
MH362	NC1	2/24/2012	Filter/Stormwater	Total HPAHs	60	mg/kg	12	5.0
MH362	NC1	3/29/2012	Filter/Stormwater	Total LPAHs	3.3	mg/kg	5.2	0.63
MH362	NC1	3/13/2012	Filter/Stormwater	Total LPAHs	2.7	mg/kg	5.2	0.52
MH362	NC1	2/24/2012	Filter/Stormwater	Total LPAHs	4.5	mg/kg	5.2	0.87
MH362	NC1	3/29/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	3.8	mg/kg	0.15	25
MH362	NC1	3/13/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	2.7	mg/kg	0.15	18
MH362	NC1	2/24/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	6.2	mg/kg	0.15	41
MH422	NC1	4/24/2012	Sediment Trap	Total PCBs	0.62	mg/kg	0.13	4.8
MH422	NC1	4/5/2011	Sediment Trap	Total PCBs	4.1	mg/kg	0.13	31
MH422	NC1	4/8/2010	Sediment Trap	Total PCBs	4.0	mg/kg	0.13	30

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH422	NC1	3/18/2008	Sediment Trap	Total PCBs	7.6	mg/kg	0.13	58
MH422	NC1	5/14/2007	Sediment Trap	Total PCBs	420	mg/kg	0.13	3,200
MH422	NC1	1/8/2007	Sediment Trap	Total PCBs	260	mg/kg	0.13	2,000
MH422	NC1	10/11/2006	Sediment Trap	Total PCBs	110	mg/kg	0.13	850
MH422	NC1	3/16/2006	Sediment Trap	Total PCBs	107	mg/kg	0.13	820
MH422	NC1	8/11/2005	Sediment Trap	Total PCBs	10	mg/kg	0.13	77
MH422	NC1	4/24/2012	Sediment Trap	Arsenic	10 U	mg/kg	7.3	1.4
MH422	NC1	4/8/2010	Sediment Trap	Arsenic	15	mg/kg	7.3	2.1
MH422	NC1	12/3/2008	Sediment Trap	Arsenic	9 U	mg/kg	7.3	1.2
MH422	NC1	7/30/2008	Sediment Trap	Arsenic	10	mg/kg	7.3	1.4
MH422	NC1	3/18/2008	Sediment Trap	Arsenic	19	mg/kg	7.3	2.6
MH422	NC1	5/14/2007	Sediment Trap	Arsenic	20	mg/kg	7.3	2.7
MH422	NC1	1/8/2007	Sediment Trap	Arsenic	9.0	mg/kg	7.3	1.2
MH422	NC1	10/11/2006	Sediment Trap	Arsenic	30	mg/kg	7.3	4.1
MH422	NC1	3/16/2006	Sediment Trap	Arsenic	10	mg/kg	7.3	1.4
MH422	NC1	8/11/2005	Sediment Trap	Arsenic	11	mg/kg	7.3	1.5
MH422	NC1	4/24/2012	Sediment Trap	Copper	98	mg/kg	390	0.25
MH422	NC1	4/8/2010	Sediment Trap	Copper	140	mg/kg	390	0.36
MH422	NC1	12/3/2008	Sediment Trap	Copper	168	mg/kg	390	0.43
MH422	NC1	7/30/2008	Sediment Trap	Copper	142	mg/kg	390	0.36
MH422	NC1	3/18/2008	Sediment Trap	Copper	80	mg/kg	390	0.21
MH422	NC1	5/14/2007	Sediment Trap	Copper	123	mg/kg	390	0.32
MH422	NC1	1/8/2007	Sediment Trap	Copper	133	mg/kg	390	0.34
MH422	NC1	10/11/2006	Sediment Trap	Copper	325	mg/kg	390	0.83
MH422	NC1	3/16/2006	Sediment Trap	Copper	110	mg/kg	390	0.28
MH422	NC1	8/11/2005	Sediment Trap	Copper	84	mg/kg	390	0.21
MH422	NC1	4/24/2012	Sediment Trap	Lead	117	mg/kg	450	0.26
MH422	NC1	4/8/2010	Sediment Trap	Lead	309	mg/kg	450	0.69
MH422	NC1	12/3/2008	Sediment Trap	Lead	215	mg/kg	450	0.48
MH422	NC1	7/30/2008	Sediment Trap	Lead	190	mg/kg	450	0.42
MH422	NC1	3/18/2008	Sediment Trap	Lead	90	mg/kg	450	0.20
MH422	NC1	5/14/2007	Sediment Trap	Lead	227	mg/kg	450	0.50
MH422	NC1	1/8/2007	Sediment Trap	Lead	159	mg/kg	450	0.35
MH422	NC1	10/11/2006	Sediment Trap	Lead	216	mg/kg	450	0.48
MH422	NC1	3/16/2006	Sediment Trap	Lead	97	mg/kg	450	0.22
MH422	NC1	8/11/2005	Sediment Trap	Lead	140	mg/kg	450	0.31
MH422	NC1	4/24/2012	Sediment Trap	Mercury	0.15	mg/kg	0.41	0.37
MH422	NC1	4/8/2010	Sediment Trap	Mercury	0.36	mg/kg	0.41	0.88
MH422	NC1	12/3/2008	Sediment Trap	Mercury	0.33	mg/kg	0.41	0.80
MH422	NC1	7/30/2008	Sediment Trap	Mercury	2.6	mg/kg	0.41	6.4
MH422	NC1	3/18/2008	Sediment Trap	Mercury	0.43	mg/kg	0.41	1.0
MH422	NC1	5/14/2007	Sediment Trap	Mercury	2.7	mg/kg	0.41	6.5
MH422	NC1	1/8/2007	Sediment Trap	Mercury	3.7	mg/kg	0.41	8.9
MH422	NC1	10/11/2006	Sediment Trap	Mercury	8.3	mg/kg	0.41	20
MH422	NC1	3/16/2006	Sediment Trap	Mercury	0.93	mg/kg	0.41	2.3
MH422	NC1	8/11/2005	Sediment Trap	Mercury	1.1	mg/kg	0.41	2.7
MH422	NC1	4/24/2012	Sediment Trap	Zinc	487	mg/kg	410	1.2
MH422	NC1	4/8/2010	Sediment Trap	Zinc	554	mg/kg	410	1.4
MH422	NC1	12/3/2008	Sediment Trap	Zinc	518	mg/kg	410	1.3
MH422	NC1	7/30/2008	Sediment Trap	Zinc	563	mg/kg	410	1.4
MH422	NC1	3/18/2008	Sediment Trap	Zinc	717	mg/kg	410	1.7
MH422	NC1	5/14/2007	Sediment Trap	Zinc	474	mg/kg	410	1.2
MH422	NC1	1/8/2007	Sediment Trap	Zinc	382	mg/kg	410	0.93
MH422	NC1	10/11/2006	Sediment Trap	Zinc	1,140	mg/kg	410	2.8
MH422	NC1	3/16/2006	Sediment Trap	Zinc	435	mg/kg	410	1.1
MH422	NC1	8/11/2005	Sediment Trap	Zinc	368	mg/kg	410	0.90
MH422	NC1	4/24/2012	Sediment Trap	Acenaphthene	0.36	mg/kg	0.50	0.72
MH422	NC1	4/8/2010	Sediment Trap	Acenaphthene	0.20 J	mg/kg	0.50	0.40
MH422	NC1	3/18/2008	Sediment Trap	Acenaphthene	0.37	mg/kg	0.50	0.74
MH422	NC1	5/14/2007	Sediment Trap	Acenaphthene	0.48 U	mg/kg	0.50	0.96

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH422	NC1	1/8/2007	Sediment Trap	Acenaphthene	0.09	mg/kg	0.50	0.18
MH422	NC1	10/11/2006	Sediment Trap	Acenaphthene	0.24 U	mg/kg	0.50	0.48
MH422	NC1	3/16/2006	Sediment Trap	Acenaphthene	0.34 U	mg/kg	0.50	0.68
MH422	NC1	8/11/2005	Sediment Trap	Acenaphthene	0.21	mg/kg	0.50	0.42
MH422	NC1	4/24/2012	Sediment Trap	Anthracene	0.33	mg/kg	0.96	0.34
MH422	NC1	4/8/2010	Sediment Trap	Anthracene	0.56	mg/kg	0.96	0.58
MH422	NC1	3/18/2008	Sediment Trap	Anthracene	0.51	mg/kg	0.96	0.53
MH422	NC1	5/14/2007	Sediment Trap	Anthracene	0.48 U	mg/kg	0.96	0.50
MH422	NC1	1/8/2007	Sediment Trap	Anthracene	0.22	mg/kg	0.96	0.23
MH422	NC1	10/11/2006	Sediment Trap	Anthracene	0.29	mg/kg	0.96	0.30
MH422	NC1	3/16/2006	Sediment Trap	Anthracene	0.38	mg/kg	0.96	0.40
MH422	NC1	8/11/2005	Sediment Trap	Anthracene	0.36	mg/kg	0.96	0.38
MH422	NC1	4/24/2012	Sediment Trap	Benzo(a)anthracene	1.7	mg/kg	1.3	1.3
MH422	NC1	4/8/2010	Sediment Trap	Benzo(a)anthracene	3.1	mg/kg	1.3	2.4
MH422	NC1	3/18/2008	Sediment Trap	Benzo(a)anthracene	1.6	mg/kg	1.3	1.2
MH422	NC1	5/14/2007	Sediment Trap	Benzo(a)anthracene	1.9	mg/kg	1.3	1.5
MH422	NC1	1/8/2007	Sediment Trap	Benzo(a)anthracene	1.1	mg/kg	1.3	0.85
MH422	NC1	10/11/2006	Sediment Trap	Benzo(a)anthracene	1.6	mg/kg	1.3	1.2
MH422	NC1	3/16/2006	Sediment Trap	Benzo(a)anthracene	1.8	mg/kg	1.3	1.4
MH422	NC1	8/11/2005	Sediment Trap	Benzo(a)anthracene	1.4	mg/kg	1.3	1.1
MH422	NC1	4/24/2012	Sediment Trap	Total Benzofluoranthenes	5.5	mg/kg	3.2	1.7
MH422	NC1	4/8/2010	Sediment Trap	Total Benzofluoranthenes	8.6	mg/kg	3.2	2.7
MH422	NC1	3/18/2008	Sediment Trap	Total Benzofluoranthenes	4.3	mg/kg	3.2	1.3
MH422	NC1	5/14/2007	Sediment Trap	Total Benzofluoranthenes	7.0	mg/kg	3.2	2.2
MH422	NC1	1/8/2007	Sediment Trap	Total Benzofluoranthenes	3.3	mg/kg	3.2	1.0
MH422	NC1	10/11/2006	Sediment Trap	Total Benzofluoranthenes	7.3	mg/kg	3.2	2.3
MH422	NC1	3/16/2006	Sediment Trap	Total Benzofluoranthenes	4.7	mg/kg	3.2	1.5
MH422	NC1	8/11/2005	Sediment Trap	Total Benzofluoranthenes	3.7	mg/kg	3.2	1.2
MH422	NC1	4/24/2012	Sediment Trap	Benzo(g,h,i)perylene	2.1	mg/kg	0.67	3.1
MH422	NC1	4/8/2010	Sediment Trap	Benzo(g,h,i)perylene	3.6	mg/kg	0.67	5.4
MH422	NC1	3/18/2008	Sediment Trap	Benzo(g,h,i)perylene	1.3	mg/kg	0.67	1.9
MH422	NC1	5/14/2007	Sediment Trap	Benzo(g,h,i)perylene	1.3	mg/kg	0.67	1.9
MH422	NC1	3/16/2006	Sediment Trap	Benzo(g,h,i)perylene	0.89	mg/kg	0.67	1.3
MH422	NC1	8/11/2005	Sediment Trap	Benzo(g,h,i)perylene	0.72	mg/kg	0.67	1.1
MH422	NC1	4/24/2012	Sediment Trap	Benzo(a)pyrene	2.2	mg/kg	0.15	15
MH422	NC1	4/8/2010	Sediment Trap	Benzo(a)pyrene	4.6	mg/kg	0.15	31
MH422	NC1	3/18/2008	Sediment Trap	Benzo(a)pyrene	1.9	mg/kg	0.15	13
MH422	NC1	5/14/2007	Sediment Trap	Benzo(a)pyrene	2.6	mg/kg	0.15	17
MH422	NC1	1/8/2007	Sediment Trap	Benzo(a)pyrene	1.4	mg/kg	0.15	9.3
MH422	NC1	10/11/2006	Sediment Trap	Benzo(a)pyrene	2.8	mg/kg	0.15	19
MH422	NC1	3/16/2006	Sediment Trap	Benzo(a)pyrene	2.0	mg/kg	0.15	13
MH422	NC1	8/11/2005	Sediment Trap	Benzo(a)pyrene	1.7	mg/kg	0.15	11
MH422	NC1	4/24/2012	Sediment Trap	Chrysene	3.3	mg/kg	1.4	2.4
MH422	NC1	4/8/2010	Sediment Trap	Chrysene	5.1	mg/kg	1.4	3.6
MH422	NC1	3/18/2008	Sediment Trap	Chrysene	2.5	mg/kg	1.4	1.8
MH422	NC1	5/14/2007	Sediment Trap	Chrysene	3.0	mg/kg	1.4	2.1
MH422	NC1	1/8/2007	Sediment Trap	Chrysene	1.6	mg/kg	1.4	1.1
MH422	NC1	10/11/2006	Sediment Trap	Chrysene	4.3	mg/kg	1.4	3.1
MH422	NC1	3/16/2006	Sediment Trap	Chrysene	2.7	mg/kg	1.4	1.9
MH422	NC1	8/11/2005	Sediment Trap	Chrysene	1.9	mg/kg	1.4	1.4
MH422	NC1	4/24/2012	Sediment Trap	Dibenz(a,h)anthracene	0.65	mg/kg	0.23	2.8
MH422	NC1	4/8/2010	Sediment Trap	Dibenz(a,h)anthracene	1.3	mg/kg	0.23	5.7
MH422	NC1	3/18/2008	Sediment Trap	Dibenz(a,h)anthracene	0.49 U	mg/kg	0.23	2.1
MH422	NC1	5/14/2007	Sediment Trap	Dibenz(a,h)anthracene	0.48 U	mg/kg	0.23	2.1
MH422	NC1	1/8/2007	Sediment Trap	Dibenz(a,h)anthracene	0.12	mg/kg	0.23	0.52
MH422	NC1	10/11/2006	Sediment Trap	Dibenz(a,h)anthracene	0.70	mg/kg	0.23	3.0
MH422	NC1	3/16/2006	Sediment Trap	Dibenz(a,h)anthracene	0.34 U	mg/kg	0.23	1.5
MH422	NC1	8/11/2005	Sediment Trap	Dibenz(a,h)anthracene	0.26	mg/kg	0.23	1.1
MH422	NC1	4/24/2012	Sediment Trap	Dibenzofuran	0.33	mg/kg	0.54	0.61
MH422	NC1	4/8/2010	Sediment Trap	Dibenzofuran	0.24	mg/kg	0.54	0.44

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH422	NC1	3/18/2008	Sediment Trap	Dibenzofuran	0.26	mg/kg	0.54	0.48
MH422	NC1	5/14/2007	Sediment Trap	Dibenzofuran	0.48 U	mg/kg	0.54	0.89
MH422	NC1	1/8/2007	Sediment Trap	Dibenzofuran	0.079 U	mg/kg	0.54	0.15
MH422	NC1	10/11/2006	Sediment Trap	Dibenzofuran	0.24 U	mg/kg	0.54	0.44
MH422	NC1	3/16/2006	Sediment Trap	Dibenzofuran	0.34 U	mg/kg	0.54	0.63
MH422	NC1	8/11/2005	Sediment Trap	Dibenzofuran	0.15	mg/kg	0.54	0.28
MH422	NC1	4/24/2012	Sediment Trap	Fluoranthene	7.0	mg/kg	1.7	4.1
MH422	NC1	4/8/2010	Sediment Trap	Fluoranthene	9.9	mg/kg	1.7	5.8
MH422	NC1	3/18/2008	Sediment Trap	Fluoranthene	5.6	mg/kg	1.7	3.3
MH422	NC1	5/14/2007	Sediment Trap	Fluoranthene	5.8	mg/kg	1.7	3.4
MH422	NC1	1/8/2007	Sediment Trap	Fluoranthene	2.4	mg/kg	1.7	1.4
MH422	NC1	10/11/2006	Sediment Trap	Fluoranthene	7.7	mg/kg	1.7	4.5
MH422	NC1	3/16/2006	Sediment Trap	Fluoranthene	6.6	mg/kg	1.7	3.9
MH422	NC1	8/11/2005	Sediment Trap	Fluoranthene	4.1	mg/kg	1.7	2.4
MH422	NC1	4/24/2012	Sediment Trap	Fluorene	0.42	mg/kg	0.54	0.78
MH422	NC1	4/8/2010	Sediment Trap	Fluorene	0.26	mg/kg	0.54	0.48
MH422	NC1	3/18/2008	Sediment Trap	Fluorene	0.49	mg/kg	0.54	0.91
MH422	NC1	5/14/2007	Sediment Trap	Fluorene	0.48 U	mg/kg	0.54	0.89
MH422	NC1	1/8/2007	Sediment Trap	Fluorene	0.13	mg/kg	0.54	0.24
MH422	NC1	10/11/2006	Sediment Trap	Fluorene	0.24 U	mg/kg	0.54	0.44
MH422	NC1	3/16/2006	Sediment Trap	Fluorene	0.34 U	mg/kg	0.54	0.63
MH422	NC1	8/11/2005	Sediment Trap	Fluorene	0.19	mg/kg	0.54	0.35
MH422	NC1	4/24/2012	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.9	mg/kg	0.60	3.2
MH422	NC1	4/8/2010	Sediment Trap	Indeno(1,2,3-cd)pyrene	3.1	mg/kg	0.60	5.2
MH422	NC1	3/18/2008	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.2	mg/kg	0.60	2.0
MH422	NC1	5/14/2007	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.3	mg/kg	0.60	2.2
MH422	NC1	1/8/2007	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.53	mg/kg	0.60	0.88
MH422	NC1	10/11/2006	Sediment Trap	Indeno(1,2,3-cd)pyrene	2.0	mg/kg	0.60	3.3
MH422	NC1	3/16/2006	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.93	mg/kg	0.60	1.6
MH422	NC1	8/11/2005	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.81	mg/kg	0.60	1.4
MH422	NC1	4/24/2012	Sediment Trap	2-Methylnaphthalene	0.20	mg/kg	0.67	0.30
MH422	NC1	4/8/2010	Sediment Trap	2-Methylnaphthalene	0.2 U	mg/kg	0.67	0.30
MH422	NC1	3/18/2008	Sediment Trap	2-Methylnaphthalene	0.16 U	mg/kg	0.67	0.24
MH422	NC1	5/14/2007	Sediment Trap	2-Methylnaphthalene	0.48 U	mg/kg	0.67	0.72
MH422	NC1	1/8/2007	Sediment Trap	2-Methylnaphthalene	0.079 U	mg/kg	0.67	0.12
MH422	NC1	10/11/2006	Sediment Trap	2-Methylnaphthalene	0.24 U	mg/kg	0.67	0.36
MH422	NC1	3/16/2006	Sediment Trap	2-Methylnaphthalene	0.34 U	mg/kg	0.67	0.51
MH422	NC1	8/11/2005	Sediment Trap	2-Methylnaphthalene	0.12	mg/kg	0.67	0.18
MH422	NC1	4/24/2012	Sediment Trap	Phenanthrene	5.2	mg/kg	1.5	3.5
MH422	NC1	4/8/2010	Sediment Trap	Phenanthrene	4.0	mg/kg	1.5	2.7
MH422	NC1	3/18/2008	Sediment Trap	Phenanthrene	4.3	mg/kg	1.5	2.9
MH422	NC1	5/14/2007	Sediment Trap	Phenanthrene	2.7	mg/kg	1.5	1.8
MH422	NC1	1/8/2007	Sediment Trap	Phenanthrene	1.2	mg/kg	1.5	0.80
MH422	NC1	10/11/2006	Sediment Trap	Phenanthrene	2.9	mg/kg	1.5	1.9
MH422	NC1	3/16/2006	Sediment Trap	Phenanthrene	2.5	mg/kg	1.5	1.7
MH422	NC1	8/11/2005	Sediment Trap	Phenanthrene	2.8	mg/kg	1.5	1.9
MH422	NC1	4/24/2012	Sediment Trap	Pyrene	5.7	mg/kg	2.6	2.2
MH422	NC1	4/8/2010	Sediment Trap	Pyrene	5.4	mg/kg	2.6	2.1
MH422	NC1	3/18/2008	Sediment Trap	Pyrene	3.8	mg/kg	2.6	1.5
MH422	NC1	5/14/2007	Sediment Trap	Pyrene	3.9	mg/kg	2.6	1.5
MH422	NC1	1/8/2007	Sediment Trap	Pyrene	2.1	mg/kg	2.6	0.81
MH422	NC1	10/11/2006	Sediment Trap	Pyrene	4.7	mg/kg	2.6	1.8
MH422	NC1	3/16/2006	Sediment Trap	Pyrene	3.4	mg/kg	2.6	1.3
MH422	NC1	8/11/2005	Sediment Trap	Pyrene	3.0	mg/kg	2.6	1.2
MH422	NC1	4/24/2012	Sediment Trap	Total HPAHs	30	mg/kg	12	2.5
MH422	NC1	4/8/2010	Sediment Trap	Total HPAHs	45	mg/kg	12	3.7
MH422	NC1	3/18/2008	Sediment Trap	Total HPAHs	22	mg/kg	12	1.9
MH422	NC1	5/14/2007	Sediment Trap	Total HPAHs	27	mg/kg	12	2.2
MH422	NC1	1/8/2007	Sediment Trap	Total HPAHs	13	mg/kg	12	1.0
MH422	NC1	10/11/2006	Sediment Trap	Total HPAHs	31	mg/kg	12	2.6

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH422	NC1	3/16/2006	Sediment Trap	Total HPAHs	23	mg/kg	12	1.9
MH422	NC1	3/15/2006	Sediment Trap	Total HPAHs	23	mg/kg	12	1.9
MH422	NC1	8/11/2005	Sediment Trap	Total HPAHs	18	mg/kg	12	1.5
MH422	NC1	4/24/2012	Sediment Trap	Total LPAHs	6.5	mg/kg	5.2	1.2
MH422	NC1	4/8/2010	Sediment Trap	Total LPAHs	5.0	mg/kg	5.2	0.97
MH422	NC1	3/18/2008	Sediment Trap	Total LPAHs	5.7	mg/kg	5.2	1.1
MH422	NC1	5/14/2007	Sediment Trap	Total LPAHs	2.7	mg/kg	5.2	0.52
MH422	NC1	1/8/2007	Sediment Trap	Total LPAHs	1.6	mg/kg	5.2	0.32
MH422	NC1	10/11/2006	Sediment Trap	Total LPAHs	3.2	mg/kg	5.2	0.61
MH422	NC1	3/16/2006	Sediment Trap	Total LPAHs	2.9	mg/kg	5.2	0.55
MH422	NC1	3/15/2006	Sediment Trap	Total LPAHs	2.9	mg/kg	5.2	0.55
MH422	NC1	8/11/2005	Sediment Trap	Total LPAHs	3.6	mg/kg	5.2	0.68
MH422	NC1	4/24/2012	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	3.2	mg/kg	0.15	21
MH422	NC1	4/8/2010	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	6.3	mg/kg	0.15	42
MH422	NC1	3/18/2008	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	2.7	mg/kg	0.15	18
MH422	NC1	5/14/2007	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	3.7	mg/kg	0.15	24
MH422	NC1	1/8/2007	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	1.9	mg/kg	0.15	13
MH422	NC1	10/11/2006	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	4.0	mg/kg	0.15	27
MH422	NC1	3/16/2006	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	2.8	mg/kg	0.15	19
MH422	NC1	8/11/2005	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	2.3	mg/kg	0.15	16
MH422	NC1	4/24/2012	Sediment Trap	Bis(2-ethylhexyl) phthalate	4.4	mg/kg	1.3	3.4
MH422	NC1	4/8/2010	Sediment Trap	Bis(2-ethylhexyl) phthalate	7.4	mg/kg	1.3	5.7
MH422	NC1	3/18/2008	Sediment Trap	Bis(2-ethylhexyl) phthalate	2.2	mg/kg	1.3	1.7
MH422	NC1	5/14/2007	Sediment Trap	Bis(2-ethylhexyl) phthalate	9.8	mg/kg	1.3	7.5
MH422	NC1	1/8/2007	Sediment Trap	Bis(2-ethylhexyl) phthalate	1.2	mg/kg	1.3	0.92
MH422	NC1	10/11/2006	Sediment Trap	Bis(2-ethylhexyl) phthalate	10	mg/kg	1.3	7.7
MH422	NC1	3/16/2006	Sediment Trap	Bis(2-ethylhexyl) phthalate	2.6	mg/kg	1.3	2.0
MH422	NC1	8/11/2005	Sediment Trap	Bis(2-ethylhexyl) phthalate	2.4	mg/kg	1.3	1.8
MH422	NC1	4/24/2012	Sediment Trap	Butyl benzyl phthalate	0.37 J	mg/kg	0.067	5.5
MH422	NC1	4/8/2010	Sediment Trap	Butyl benzyl phthalate	0.33	mg/kg	0.067	4.9
MH422	NC1	3/18/2008	Sediment Trap	Butyl benzyl phthalate	0.43 U	mg/kg	0.067	6.4
MH422	NC1	5/14/2007	Sediment Trap	Butyl benzyl phthalate	0.48 U	mg/kg	0.067	7.2
MH422	NC1	1/8/2007	Sediment Trap	Butyl benzyl phthalate	0.079 U	mg/kg	0.067	1.2
MH422	NC1	10/11/2006	Sediment Trap	Butyl benzyl phthalate	1.2	mg/kg	0.067	18
MH422	NC1	3/16/2006	Sediment Trap	Butyl benzyl phthalate	0.34 U	mg/kg	0.067	5.1
MH422	NC1	8/11/2005	Sediment Trap	Butyl benzyl phthalate	0.12	mg/kg	0.067	1.8
MH422	NC1	4/24/2012	Sediment Trap	p-Cresol (4-Methylphenol)	0.22	mg/kg	0.67	0.33
MH422	NC1	4/8/2010	Sediment Trap	p-Cresol (4-Methylphenol)	0.2 U	mg/kg	0.67	0.30
MH422	NC1	3/18/2008	Sediment Trap	p-Cresol (4-Methylphenol)	0.16 U	mg/kg	0.67	0.24
MH422	NC1	5/14/2007	Sediment Trap	p-Cresol (4-Methylphenol)	0.48 U	mg/kg	0.67	0.72
MH422	NC1	1/8/2007	Sediment Trap	p-Cresol (4-Methylphenol)	0.17	mg/kg	0.67	0.25
MH422	NC1	10/11/2006	Sediment Trap	p-Cresol (4-Methylphenol)	0.42	mg/kg	0.67	0.63
MH422	NC1	3/16/2006	Sediment Trap	p-Cresol (4-Methylphenol)	0.34 U	mg/kg	0.67	0.51
MH422	NC1	8/11/2005	Sediment Trap	p-Cresol (4-Methylphenol)	0.1 U	mg/kg	0.67	0.15
MH422	NC1	4/24/2012	Sediment Trap	Phenol	0.13	mg/kg	0.42	0.31
MH422	NC1	4/8/2010	Sediment Trap	Phenol	0.2 U	mg/kg	0.42	0.48
MH422	NC1	3/18/2008	Sediment Trap	Phenol	0.16 U	mg/kg	0.42	0.38
MH422	NC1	5/14/2007	Sediment Trap	Phenol	0.48 U	mg/kg	0.42	1.1
MH422	NC1	1/8/2007	Sediment Trap	Phenol	0.079 U	mg/kg	0.42	0.19
MH422	NC1	10/11/2006	Sediment Trap	Phenol	0.26	mg/kg	0.42	0.62
MH422	NC1	3/16/2006	Sediment Trap	Phenol	0.34 U	mg/kg	0.42	0.81
MH422	NC1	8/11/2005	Sediment Trap	Phenol	0.1 U	mg/kg	0.42	0.24
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	88	ng/kg	13	6.8
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Total PCBs	0.27	mg/kg	0.13	2.1
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Total PCBs	0.22	mg/kg	0.13	1.7
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Arsenic	40 U	mg/kg	7.3	5.5
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Arsenic	30 U	mg/kg	7.3	4.1
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Arsenic	70 U	mg/kg	7.3	9.6
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Cadmium	7.0	mg/kg	5.1	1.4
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Cadmium	9.0	mg/kg	5.1	1.8

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Cadmium	8.0	mg/kg	5.1	1.6
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Chromium	99	mg/kg	260	0.38
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Chromium	177	mg/kg	260	0.68
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Chromium	91	mg/kg	260	0.35
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Copper	309	mg/kg	390	0.79
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Copper	370	mg/kg	390	0.95
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Copper	352	mg/kg	390	0.90
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Lead	340	mg/kg	450	0.76
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Lead	700	mg/kg	450	1.6
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Lead	360	mg/kg	450	0.80
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Mercury	0.40	mg/kg	0.41	0.98
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Mercury	0.30	mg/kg	0.41	0.73
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Mercury	0.3 U	mg/kg	0.41	0.73
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Silver	2 U	mg/kg	6.1	0.33
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Silver	2 U	mg/kg	6.1	0.33
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Silver	4 U	mg/kg	6.1	0.66
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Zinc	818	mg/kg	410	2.0
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Zinc	1,120	mg/kg	410	2.7
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Zinc	1,000	mg/kg	410	2.4
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Acenaphthene	0.41 U	mg/kg	0.50	0.82
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Acenaphthene	0.87 U	mg/kg	0.50	1.7
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Acenaphthene	1.9 U	mg/kg	0.50	3.8
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Anthracene	0.43 J	mg/kg	0.96	0.45
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Anthracene	0.87 U	mg/kg	0.96	0.91
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Anthracene	1.9 U	mg/kg	0.96	2.0
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Benzo(a)anthracene	3.0	mg/kg	1.3	2.3
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Benzo(a)anthracene	5.1	mg/kg	1.3	3.9
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Benzo(a)anthracene	8.9	mg/kg	1.3	6.8
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Total Benzofluoranthenes	32	mg/kg	3.2	10
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Total Benzofluoranthenes	46	mg/kg	3.2	14
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Total Benzofluoranthenes	66	mg/kg	3.2	21
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Benzo(g,h,i)perylene	11	mg/kg	0.67	16
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Benzo(g,h,i)perylene	17	mg/kg	0.67	25
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Benzo(g,h,i)perylene	29	mg/kg	0.67	43
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Benzo(a)pyrene	8.1	mg/kg	0.15	54
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Benzo(a)pyrene	13	mg/kg	0.15	87
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Benzo(a)pyrene	23	mg/kg	0.15	150
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Chrysene	16	mg/kg	1.4	11
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Chrysene	23	mg/kg	1.4	16
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Chrysene	37	mg/kg	1.4	26
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Dibenz(a,h)anthracene	1.9	mg/kg	0.23	8.3
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Dibenz(a,h)anthracene	3.0	mg/kg	0.23	13
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Dibenz(a,h)anthracene	7.2	mg/kg	0.23	31
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Dibenzofuran	0.53	mg/kg	0.54	0.98
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Dibenzofuran	0.87 U	mg/kg	0.54	1.6
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Dibenzofuran	1.9 U	mg/kg	0.54	3.5
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Fluoranthene	34	mg/kg	1.7	20
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Fluoranthene	39	mg/kg	1.7	23
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Fluoranthene	66	mg/kg	1.7	39
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Fluorene	0.23 J	mg/kg	0.54	0.43
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Fluorene	0.87 U	mg/kg	0.54	1.6
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Fluorene	1.9 U	mg/kg	0.54	3.5
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	10	mg/kg	0.60	17
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	14	mg/kg	0.60	23
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	24	mg/kg	0.60	40
UNKCB27	NC1	3/29/2012	Filter/Stormwater	2-Methylnaphthalene	0.41 U	mg/kg	0.67	0.61
UNKCB27	NC1	3/13/2012	Filter/Stormwater	2-Methylnaphthalene	0.87 U	mg/kg	0.67	1.3
UNKCB27	NC1	2/24/2012	Filter/Stormwater	2-Methylnaphthalene	1.9 U	mg/kg	0.67	2.8
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Phenanthrene	11	mg/kg	1.5	7.3
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Phenanthrene	16	mg/kg	1.5	11

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Phenanthrene	24	mg/kg	1.5	16
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Pyrene	17	mg/kg	2.6	6.5
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Pyrene	24	mg/kg	2.6	9.2
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Pyrene	39	mg/kg	2.6	15
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Total HPAHs	130	mg/kg	12	11
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Total HPAHs	180	mg/kg	12	15
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Total HPAHs	300	mg/kg	12	25
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Total LPAHs	12 J	mg/kg	5.2	2.3
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Total LPAHs	16	mg/kg	5.2	3.1
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Total LPAHs	24	mg/kg	5.2	4.6
UNKCB27	NC1	3/29/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	13	mg/kg	0.15	86
UNKCB27	NC1	3/13/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	20	mg/kg	0.15	130
UNKCB27	NC1	2/24/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	34	mg/kg	0.15	230
CB364A	NC2	7/20/2012	Grab	Total PCBs	3.8	mg/kg	0.13	29
CB364A	NC2	6/10/2009	Grab	Total PCBs	4.5	mg/kg	0.13	35
CB364A	NC2	12/30/2008	Grab	Total PCBs	2.8	mg/kg	0.13	22
CB364A	NC2	3/14/2007	Grab	Total PCBs	5.4	mg/kg	0.13	42
CB364A	NC2	7/26/2006	Grab	Total PCBs	5.5	mg/kg	0.13	42
CB364A	NC2	5/13/2005	Grab	Total PCBs	11	mg/kg	0.13	85
CB364A	NC2	7/20/2012	Grab	Arsenic	12	mg/kg	7.3	1.7
CB364A	NC2	7/20/2012	Grab	Cadmium	6.3	mg/kg	5.1	1.2
CB364A	NC2	7/20/2012	Grab	Chromium	190	mg/kg	260	0.73
CB364A	NC2	7/20/2012	Grab	Copper	267	mg/kg	390	0.68
CB364A	NC2	7/20/2012	Grab	Lead	142	mg/kg	450	0.32
CB364A	NC2	7/20/2012	Grab	Mercury	0.24 U	mg/kg	0.41	0.58
CB364A	NC2	7/20/2012	Grab	Silver	0.69	mg/kg	6.1	0.11
CB364A	NC2	7/20/2012	Grab	Zinc	1,540	mg/kg	410	3.8
CB221	NC3	7/20/2012	Grab	Total PCBs	0.85	mg/kg	0.13	6.5
CB221	NC3	6/16/2009	Grab	Total PCBs	2.8	mg/kg	0.13	21
CB221	NC3	12/30/2008	Grab	Total PCBs	1.3	mg/kg	0.13	10
CB221	NC3	7/20/2012	Grab	Arsenic	8.2	mg/kg	7.3	1.1
CB221	NC3	7/20/2012	Grab	Cadmium	3.5	mg/kg	5.1	0.69
CB221	NC3	7/20/2012	Grab	Chromium	120	mg/kg	260	0.46
CB221	NC3	7/20/2012	Grab	Copper	206	mg/kg	390	0.53
CB221	NC3	7/20/2012	Grab	Lead	112	mg/kg	450	0.25
CB221	NC3	7/20/2012	Grab	Mercury	0.19 U	mg/kg	0.41	0.47
CB221	NC3	7/20/2012	Grab	Silver	0.59	mg/kg	6.1	0.097
CB221	NC3	7/20/2012	Grab	Zinc	942	mg/kg	410	2.3
CB222	NC3	7/19/2012	Grab	Total PCBs	0.96	mg/kg	0.13	7.4
CB222	NC3	4/14/2010	Grab	Total PCBs	1.0	mg/kg	0.13	8.0
CB222	NC3	12/30/2008	Grab	Total PCBs	2.0	mg/kg	0.13	16
CB222	NC3	7/19/2012	Grab	Arsenic	7.9	mg/kg	7.3	1.1
CB222	NC3	4/14/2010	Grab	Arsenic	8 U	mg/kg	7.3	1.1
CB222	NC3	7/19/2012	Grab	Cadmium	5.1	mg/kg	5.1	0.99
CB222	NC3	4/14/2010	Grab	Cadmium	2.7	mg/kg	5.1	0.53
CB222	NC3	7/19/2012	Grab	Chromium	175	mg/kg	260	0.67
CB222	NC3	4/14/2010	Grab	Chromium	156	mg/kg	260	0.60
CB222	NC3	7/19/2012	Grab	Copper	216	mg/kg	390	0.55
CB222	NC3	4/14/2010	Grab	Copper	128	mg/kg	390	0.33
CB222	NC3	7/19/2012	Grab	Lead	155	mg/kg	450	0.34
CB222	NC3	4/14/2010	Grab	Lead	157	mg/kg	450	0.35
CB222	NC3	7/19/2012	Grab	Mercury	0.22	mg/kg	0.41	0.54
CB222	NC3	4/14/2010	Grab	Mercury	0.040	mg/kg	0.41	0.098
CB222	NC3	7/19/2012	Grab	Silver	0.84	mg/kg	6.1	0.14
CB222	NC3	4/14/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB222	NC3	7/19/2012	Grab	Zinc	1,070	mg/kg	410	2.6
CB222	NC3	4/14/2010	Grab	Zinc	528	mg/kg	410	1.3
CB224	NC3	7/19/2012	Grab	Total PCBs	6.2	mg/kg	0.13	48
CB224	NC3	4/15/2010	Grab	Total PCBs	2.5	mg/kg	0.13	19
CB224	NC3	12/30/2008	Grab	Total PCBs	4.6	mg/kg	0.13	35

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB224	NC3	9/22/2008	Grab	Total PCBs	4.3	mg/kg	0.13	33
CB224	NC3	3/13/2007	Grab	Total PCBs	26	mg/kg	0.13	200
CB224	NC3	7/25/2006	Grab	Total PCBs	15	mg/kg	0.13	110
CB224	NC3	5/13/2005	Grab	Total PCBs	43	mg/kg	0.13	330
CB224	NC3	7/19/2012	Grab	Arsenic	10	mg/kg	7.3	1.4
CB224	NC3	4/15/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB224	NC3	7/19/2012	Grab	Cadmium	21	mg/kg	5.1	4.1
CB224	NC3	4/15/2010	Grab	Cadmium	24	mg/kg	5.1	4.6
CB224	NC3	7/19/2012	Grab	Chromium	146	mg/kg	260	0.56
CB224	NC3	4/15/2010	Grab	Chromium	125	mg/kg	260	0.48
CB224	NC3	7/19/2012	Grab	Copper	192	mg/kg	390	0.49
CB224	NC3	4/15/2010	Grab	Copper	174 J	mg/kg	390	0.45
CB224	NC3	7/19/2012	Grab	Lead	115	mg/kg	450	0.26
CB224	NC3	4/15/2010	Grab	Lead	202	mg/kg	450	0.45
CB224	NC3	7/19/2012	Grab	Mercury	0.19	mg/kg	0.41	0.47
CB224	NC3	4/15/2010	Grab	Mercury	0.13	mg/kg	0.41	0.32
CB224	NC3	7/19/2012	Grab	Silver	0.78	mg/kg	6.1	0.13
CB224	NC3	4/15/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB224	NC3	7/19/2012	Grab	Zinc	1,270	mg/kg	410	3.1
CB224	NC3	4/15/2010	Grab	Zinc	1,220	mg/kg	410	3.0
CB225	NC3	7/19/2012	Grab	Total PCBs	3.6	mg/kg	0.13	28
CB225	NC3	4/15/2010	Grab	Total PCBs	4.9	mg/kg	0.13	38
CB225	NC3	12/30/2008	Grab	Total PCBs	2.0	mg/kg	0.13	15
CB225	NC3	9/22/2008	Grab	Total PCBs	1.9	mg/kg	0.13	14
CB225	NC3	3/13/2007	Grab	Total PCBs	12	mg/kg	0.13	92
CB225	NC3	12/8/2006	Grab	Total PCBs	14	mg/kg	0.13	110
CB225	NC3	7/25/2006	Grab	Total PCBs	28	mg/kg	0.13	210
CB225	NC3	7/19/2012	Grab	Arsenic	15	mg/kg	7.3	2.0
CB225	NC3	4/15/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB225	NC3	7/19/2012	Grab	Cadmium	36	mg/kg	5.1	7.0
CB225	NC3	4/15/2010	Grab	Cadmium	28	mg/kg	5.1	5.5
CB225	NC3	7/19/2012	Grab	Chromium	201	mg/kg	260	0.77
CB225	NC3	4/15/2010	Grab	Chromium	175	mg/kg	260	0.67
CB225	NC3	7/19/2012	Grab	Copper	294	mg/kg	390	0.75
CB225	NC3	4/15/2010	Grab	Copper	261	mg/kg	390	0.67
CB225	NC3	7/19/2012	Grab	Lead	257	mg/kg	450	0.57
CB225	NC3	4/15/2010	Grab	Lead	242	mg/kg	450	0.54
CB225	NC3	7/19/2012	Grab	Mercury	0.30 U	mg/kg	0.41	0.73
CB225	NC3	4/15/2010	Grab	Mercury	0.12	mg/kg	0.41	0.29
CB225	NC3	7/19/2012	Grab	Silver	1.0	mg/kg	6.1	0.16
CB225	NC3	4/15/2010	Grab	Silver	5.3	mg/kg	6.1	0.87
CB225	NC3	7/19/2012	Grab	Zinc	1,980	mg/kg	410	4.8
CB225	NC3	4/15/2010	Grab	Zinc	1,320	mg/kg	410	3.2
MH220	NC3	7/19/2012	Grab	Total PCBs	1.1	mg/kg	0.13	8.5
MH220	NC3	4/14/2010	Grab	Total PCBs	34	mg/kg	0.13	260
MH220	NC3	6/16/2009	Grab	Total PCBs	16	mg/kg	0.13	120
MH220	NC3	12/30/2008	Grab	Total PCBs	3.6	mg/kg	0.13	28
MH220	NC3	7/19/2012	Grab	Arsenic	27	mg/kg	7.3	3.7
MH220	NC3	4/14/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
MH220	NC3	7/19/2012	Grab	Cadmium	45	mg/kg	5.1	8.9
MH220	NC3	4/14/2010	Grab	Cadmium	45	mg/kg	5.1	8.8
MH220	NC3	7/19/2012	Grab	Chromium	364	mg/kg	260	1.4
MH220	NC3	4/14/2010	Grab	Chromium	287	mg/kg	260	1.1
MH220	NC3	7/19/2012	Grab	Copper	325	mg/kg	390	0.83
MH220	NC3	4/14/2010	Grab	Copper	417	mg/kg	390	1.1
MH220	NC3	7/19/2012	Grab	Lead	540	mg/kg	450	1.2
MH220	NC3	4/14/2010	Grab	Lead	387	mg/kg	450	0.86
MH220	NC3	7/19/2012	Grab	Mercury	0.33	mg/kg	0.41	0.80
MH220	NC3	4/14/2010	Grab	Mercury	0.50	mg/kg	0.41	1.2
MH220	NC3	7/19/2012	Grab	Silver	1.5	mg/kg	6.1	0.25

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH220	NC3	4/14/2010	Grab	Silver	1.0	mg/kg	6.1	0.16
MH220	NC3	7/19/2012	Grab	Zinc	2,380	mg/kg	410	5.8
MH220	NC3	4/14/2010	Grab	Zinc	2,140	mg/kg	410	5.2
OWS220A	NC3	12/30/2008	Grab	Total PCBs	2.8	mg/kg	0.13	22
CB227	NC4	7/19/2012	Grab	Total PCBs	0.99	mg/kg	0.13	7.6
CB227	NC4	4/15/2010	Grab	Total PCBs	1.9	mg/kg	0.13	14
CB227	NC4	6/10/2009	Grab	Total PCBs	2.8	mg/kg	0.13	21
CB227	NC4	3/14/2007	Grab	Total PCBs	2.6	mg/kg	0.13	20
CB227	NC4	7/25/2006	Grab	Total PCBs	7.5	mg/kg	0.13	58
CB227	NC4	7/19/2012	Grab	Arsenic	9.5	mg/kg	7.3	1.3
CB227	NC4	4/15/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB227	NC4	7/19/2012	Grab	Cadmium	23	mg/kg	5.1	4.5
CB227	NC4	4/15/2010	Grab	Cadmium	34	mg/kg	5.1	6.7
CB227	NC4	7/19/2012	Grab	Chromium	167	mg/kg	260	0.64
CB227	NC4	4/15/2010	Grab	Chromium	175	mg/kg	260	0.67
CB227	NC4	7/19/2012	Grab	Copper	278	mg/kg	390	0.71
CB227	NC4	4/15/2010	Grab	Copper	282	mg/kg	390	0.72
CB227	NC4	7/19/2012	Grab	Lead	297	mg/kg	450	0.66
CB227	NC4	4/15/2010	Grab	Lead	232	mg/kg	450	0.52
CB227	NC4	7/19/2012	Grab	Mercury	0.24 U	mg/kg	0.41	0.59
CB227	NC4	4/15/2010	Grab	Mercury	0.20	mg/kg	0.41	0.49
CB227	NC4	7/19/2012	Grab	Silver	0.94	mg/kg	6.1	0.15
CB227	NC4	4/15/2010	Grab	Silver	1.1	mg/kg	6.1	0.18
CB227	NC4	7/19/2012	Grab	Zinc	1,410	mg/kg	410	3.4
CB227	NC4	4/15/2010	Grab	Zinc	1,340	mg/kg	410	3.3
CB250	NC4	4/21/2010	Grab	Total PCBs	0.40	mg/kg	0.13	3.1
CB250	NC4	4/21/2010	Grab	Arsenic	6 U	mg/kg	7.3	0.82
CB250	NC4	4/21/2010	Grab	Cadmium	4.5	mg/kg	5.1	0.88
CB250	NC4	4/21/2010	Grab	Chromium	40	mg/kg	260	0.15
CB250	NC4	4/21/2010	Grab	Copper	44	mg/kg	390	0.11
CB250	NC4	4/21/2010	Grab	Lead	128	mg/kg	450	0.28
CB250	NC4	4/21/2010	Grab	Mercury	0.02 U	mg/kg	0.41	0.049
CB250	NC4	4/21/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB250	NC4	4/21/2010	Grab	Zinc	366	mg/kg	410	0.89
CB251	NC4	4/21/2010	Grab	Total PCBs	0.58	mg/kg	0.13	4.5
CB251	NC4	4/21/2010	Grab	Arsenic	6 U	mg/kg	7.3	0.82
CB251	NC4	4/21/2010	Grab	Cadmium	5.1	mg/kg	5.1	1.0
CB251	NC4	4/21/2010	Grab	Chromium	42	mg/kg	260	0.16
CB251	NC4	4/21/2010	Grab	Copper	61	mg/kg	390	0.16
CB251	NC4	4/21/2010	Grab	Lead	208	mg/kg	450	0.46
CB251	NC4	4/21/2010	Grab	Mercury	0.03 U	mg/kg	0.41	0.073
CB251	NC4	4/21/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB251	NC4	4/21/2010	Grab	Zinc	440	mg/kg	410	1.1
CB252	NC4	4/21/2010	Grab	Total PCBs	0.89	mg/kg	0.13	6.8
CB252	NC4	6/11/2009	Grab	Total PCBs	0.49	mg/kg	0.13	3.8
CB252	NC4	4/21/2010	Grab	Arsenic	15	mg/kg	7.3	2.1
CB252	NC4	4/21/2010	Grab	Cadmium	23	mg/kg	5.1	4.5
CB252	NC4	4/21/2010	Grab	Chromium	151	mg/kg	260	0.58
CB252	NC4	4/21/2010	Grab	Copper	164	mg/kg	390	0.42
CB252	NC4	4/21/2010	Grab	Lead	245	mg/kg	450	0.54
CB252	NC4	4/21/2010	Grab	Mercury	0.15	mg/kg	0.41	0.37
CB252	NC4	4/21/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB252	NC4	4/21/2010	Grab	Zinc	819	mg/kg	410	2.0
CB253	NC4	4/21/2010	Grab	Total PCBs	0.65	mg/kg	0.13	5.0
CB253	NC4	6/11/2009	Grab	Total PCBs	0.45	mg/kg	0.13	3.5
CB253	NC4	4/21/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB253	NC4	4/21/2010	Grab	Cadmium	11	mg/kg	5.1	2.2
CB253	NC4	4/21/2010	Grab	Chromium	74	mg/kg	260	0.28
CB253	NC4	4/21/2010	Grab	Copper	150	mg/kg	390	0.38
CB253	NC4	4/21/2010	Grab	Lead	150	mg/kg	450	0.33

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB253	NC4	4/21/2010	Grab	Mercury	0.08	mg/kg	0.41	0.20
CB253	NC4	4/21/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB253	NC4	4/21/2010	Grab	Zinc	616	mg/kg	410	1.5
CB254	NC4	4/21/2010	Grab	Total PCBs	1.1	mg/kg	0.13	8.6
CB254	NC4	4/21/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB254	NC4	4/21/2010	Grab	Cadmium	8.6	mg/kg	5.1	1.7
CB254	NC4	4/21/2010	Grab	Chromium	147	mg/kg	260	0.57
CB254	NC4	4/21/2010	Grab	Copper	147	mg/kg	390	0.38
CB254	NC4	4/21/2010	Grab	Lead	207	mg/kg	450	0.46
CB254	NC4	4/21/2010	Grab	Mercury	0.09	mg/kg	0.41	0.22
CB254	NC4	4/21/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB254	NC4	4/21/2010	Grab	Zinc	593	mg/kg	410	1.4
CB255	NC4	4/21/2010	Grab	Total PCBs	0.71	mg/kg	0.13	5.5
CB255	NC4	4/21/2010	Grab	Arsenic	8.0	mg/kg	7.3	1.1
CB255	NC4	4/21/2010	Grab	Cadmium	7.7	mg/kg	5.1	1.5
CB255	NC4	4/21/2010	Grab	Chromium	69	mg/kg	260	0.26
CB255	NC4	4/21/2010	Grab	Copper	170	mg/kg	390	0.44
CB255	NC4	4/21/2010	Grab	Lead	146	mg/kg	450	0.32
CB255	NC4	4/21/2010	Grab	Mercury	0.10	mg/kg	0.41	0.24
CB255	NC4	4/21/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB255	NC4	4/21/2010	Grab	Zinc	394	mg/kg	410	0.96
CB256	NC4	7/17/2012	Grab	Total PCBs	1.6	mg/kg	0.13	12
CB256	NC4	4/21/2010	Grab	Total PCBs	1.3	mg/kg	0.13	9.6
CB256	NC4	6/11/2009	Grab	Total PCBs	1.0	mg/kg	0.13	7.8
CB256	NC4	7/17/2012	Grab	Arsenic	26	mg/kg	7.3	3.6
CB256	NC4	4/21/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB256	NC4	7/17/2012	Grab	Cadmium	25	mg/kg	5.1	4.9
CB256	NC4	4/21/2010	Grab	Cadmium	29	mg/kg	5.1	5.7
CB256	NC4	7/17/2012	Grab	Chromium	126	mg/kg	260	0.48
CB256	NC4	4/21/2010	Grab	Chromium	121	mg/kg	260	0.47
CB256	NC4	7/17/2012	Grab	Copper	223	mg/kg	390	0.57
CB256	NC4	4/21/2010	Grab	Copper	282	mg/kg	390	0.72
CB256	NC4	7/17/2012	Grab	Lead	215	mg/kg	450	0.48
CB256	NC4	4/21/2010	Grab	Lead	167	mg/kg	450	0.37
CB256	NC4	7/17/2012	Grab	Mercury	0.29 U	mg/kg	0.41	0.70
CB256	NC4	4/21/2010	Grab	Mercury	0.14	mg/kg	0.41	0.34
CB256	NC4	7/17/2012	Grab	Silver	0.70	mg/kg	6.1	0.11
CB256	NC4	4/21/2010	Grab	Silver	0.8 U	mg/kg	6.1	0.13
CB256	NC4	7/17/2012	Grab	Zinc	1,580	mg/kg	410	3.9
CB256	NC4	4/21/2010	Grab	Zinc	1,140	mg/kg	410	2.8
CB257	NC4	4/21/2010	Grab	Total PCBs	1.1	mg/kg	0.13	8.2
CB257	NC4	4/21/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB257	NC4	4/21/2010	Grab	Cadmium	25	mg/kg	5.1	4.8
CB257	NC4	4/21/2010	Grab	Chromium	129	mg/kg	260	0.50
CB257	NC4	4/21/2010	Grab	Copper	216	mg/kg	390	0.55
CB257	NC4	4/21/2010	Grab	Lead	337	mg/kg	450	0.75
CB257	NC4	4/21/2010	Grab	Mercury	0.08	mg/kg	0.41	0.20
CB257	NC4	4/21/2010	Grab	Silver	0.8 U	mg/kg	6.1	0.13
CB257	NC4	4/21/2010	Grab	Zinc	993	mg/kg	410	2.4
CB372	NC4	7/16/2012	Grab	Total PCBs	1.1	mg/kg	0.13	8.2
CB372	NC4	4/15/2010	Grab	Total PCBs	1.1	mg/kg	0.13	8.6
CB372	NC4	6/10/2009	Grab	Total PCBs	4.1	mg/kg	0.13	32
CB372	NC4	9/22/2008	Grab	Total PCBs	2.6	mg/kg	0.13	20
CB372	NC4	3/14/2007	Grab	Total PCBs	6.2	mg/kg	0.13	48
CB372	NC4	7/26/2006	Grab	Total PCBs	33	mg/kg	0.13	250
CB372	NC4	7/16/2012	Grab	Arsenic	5.2	mg/kg	7.3	0.72
CB372	NC4	4/15/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB372	NC4	7/16/2012	Grab	Cadmium	2.0	mg/kg	5.1	0.38
CB372	NC4	4/15/2010	Grab	Cadmium	4.4	mg/kg	5.1	0.86
CB372	NC4	7/16/2012	Grab	Chromium	55	mg/kg	260	0.21

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB372	NC4	4/15/2010	Grab	Chromium	139	mg/kg	260	0.53
CB372	NC4	7/16/2012	Grab	Copper	116	mg/kg	390	0.30
CB372	NC4	4/15/2010	Grab	Copper	220	mg/kg	390	0.56
CB372	NC4	7/16/2012	Grab	Lead	59	mg/kg	450	0.13
CB372	NC4	4/15/2010	Grab	Lead	201	mg/kg	450	0.45
CB372	NC4	7/16/2012	Grab	Mercury	0.15 U	mg/kg	0.41	0.37
CB372	NC4	4/15/2010	Grab	Mercury	0.11	mg/kg	0.41	0.27
CB372	NC4	7/16/2012	Grab	Silver	0.26	mg/kg	6.1	0.042
CB372	NC4	4/15/2010	Grab	Silver	0.8 U	mg/kg	6.1	0.13
CB372	NC4	7/16/2012	Grab	Zinc	544	mg/kg	410	1.3
CB372	NC4	4/15/2010	Grab	Zinc	912	mg/kg	410	2.2
CB372A	NC4	7/19/2012	Grab	Total PCBs	3.3	mg/kg	0.13	25
CB372A	NC4	4/15/2010	Grab	Total PCBs	4.5	mg/kg	0.13	35
CB372A	NC4	6/10/2009	Grab	Total PCBs	4.9	mg/kg	0.13	38
CB372A	NC4	9/22/2008	Grab	Total PCBs	3.9	mg/kg	0.13	30
CB372A	NC4	3/14/2007	Grab	Total PCBs	33	mg/kg	0.13	250
CB372A	NC4	5/13/2005	Grab	Total PCBs	8.8	mg/kg	0.13	68
CB372A	NC4	7/19/2012	Grab	Arsenic	13	mg/kg	7.3	1.7
CB372A	NC4	4/15/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB372A	NC4	7/19/2012	Grab	Cadmium	31	mg/kg	5.1	6.1
CB372A	NC4	4/15/2010	Grab	Cadmium	21	mg/kg	5.1	4.1
CB372A	NC4	7/19/2012	Grab	Chromium	213	mg/kg	260	0.82
CB372A	NC4	4/15/2010	Grab	Chromium	167	mg/kg	260	0.64
CB372A	NC4	7/19/2012	Grab	Copper	347	mg/kg	390	0.89
CB372A	NC4	4/15/2010	Grab	Copper	242	mg/kg	390	0.62
CB372A	NC4	7/19/2012	Grab	Lead	358	mg/kg	450	0.80
CB372A	NC4	4/15/2010	Grab	Lead	238	mg/kg	450	0.53
CB372A	NC4	7/19/2012	Grab	Mercury	0.48	mg/kg	0.41	1.2
CB372A	NC4	4/15/2010	Grab	Mercury	0.30	mg/kg	0.41	0.73
CB372A	NC4	7/19/2012	Grab	Silver	1.6	mg/kg	6.1	0.27
CB372A	NC4	4/15/2010	Grab	Silver	0.7 U	mg/kg	6.1	0.11
CB372A	NC4	7/19/2012	Grab	Zinc	2,430	mg/kg	410	5.9
CB372A	NC4	4/15/2010	Grab	Zinc	1,560	mg/kg	410	3.8
MH247	NC4	3/14/2007	Grab	Total PCBs	34	mg/kg	0.13	260
MH249	NC4	3/14/2007	Grab	Total PCBs	4.0	mg/kg	0.13	31
MH249	NC4	7/26/2006	Grab	Total PCBs	11	mg/kg	0.13	86
MH249	NC4	5/13/2005	Grab	Total PCBs	12	mg/kg	0.13	89
OWS226A	NC4	3/14/2007	Grab	Total PCBs	11	mg/kg	0.13	87
OWS226A	NC4	7/25/2006	Grab	Total PCBs	17	mg/kg	0.13	130
OWS226A	NC4	1/5/2006	Grab	Total PCBs	32	mg/kg	0.13	250
CB137C	NC5	4/12/2010	Grab	Total PCBs	0.46	mg/kg	0.13	3.5
CB137C	NC5	4/12/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB137C	NC5	4/12/2010	Grab	Cadmium	63	mg/kg	5.1	12
CB137C	NC5	4/12/2010	Grab	Chromium	127	mg/kg	260	0.49
CB137C	NC5	4/12/2010	Grab	Copper	239	mg/kg	390	0.61
CB137C	NC5	4/12/2010	Grab	Lead	284	mg/kg	450	0.63
CB137C	NC5	4/12/2010	Grab	Mercury	0.18	mg/kg	0.41	0.44
CB137C	NC5	4/12/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB137C	NC5	4/12/2010	Grab	Zinc	1,830	mg/kg	410	4.5
CB231	NC5	4/14/2010	Grab	Total PCBs	0.95	mg/kg	0.13	7.3
CB231	NC5	6/9/2009	Grab	Total PCBs	1.1	mg/kg	0.13	8.1
CB231	NC5	4/14/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB231	NC5	4/14/2010	Grab	Cadmium	34	mg/kg	5.1	6.6
CB231	NC5	4/14/2010	Grab	Chromium	154	mg/kg	260	0.59
CB231	NC5	4/14/2010	Grab	Copper	286	mg/kg	390	0.73
CB231	NC5	4/14/2010	Grab	Lead	298	mg/kg	450	0.66
CB231	NC5	4/14/2010	Grab	Mercury	0.63	mg/kg	0.41	1.5
CB231	NC5	4/14/2010	Grab	Silver	1.1	mg/kg	6.1	0.18
CB231	NC5	4/14/2010	Grab	Zinc	2,890	mg/kg	410	7.0
CB231F	NC5	4/14/2010	Grab	Total PCBs	0.40	mg/kg	0.13	3.1

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
CB231F	NC5	4/14/2010	Grab	Arsenic	20		mg/kg	7.3	2.7
CB231F	NC5	4/14/2010	Grab	Cadmium	40		mg/kg	5.1	7.9
CB231F	NC5	4/14/2010	Grab	Chromium	187		mg/kg	260	0.72
CB231F	NC5	4/14/2010	Grab	Copper	259		mg/kg	390	0.66
CB231F	NC5	4/14/2010	Grab	Lead	221		mg/kg	450	0.49
CB231F	NC5	4/14/2010	Grab	Mercury	0.20		mg/kg	0.41	0.49
CB231F	NC5	4/14/2010	Grab	Silver	1.7		mg/kg	6.1	0.28
CB231F	NC5	4/14/2010	Grab	Zinc	1,380		mg/kg	410	3.4
CB232	NC5	4/12/2010	Grab	Total PCBs	1.2		mg/kg	0.13	9.2
CB232	NC5	4/12/2010	Grab	Arsenic	10		mg/kg	7.3	1.4
CB232	NC5	4/12/2010	Grab	Cadmium	21		mg/kg	5.1	4.1
CB232	NC5	4/12/2010	Grab	Chromium	149		mg/kg	260	0.57
CB232	NC5	4/12/2010	Grab	Copper	201		mg/kg	390	0.52
CB232	NC5	4/12/2010	Grab	Lead	390		mg/kg	450	0.87
CB232	NC5	4/12/2010	Grab	Mercury	0.74		mg/kg	0.41	1.8
CB232	NC5	4/12/2010	Grab	Silver	0.6	U	mg/kg	6.1	0.098
CB232	NC5	4/12/2010	Grab	Zinc	2,270		mg/kg	410	5.5
CB236	NC5	4/14/2010	Grab	Total PCBs	0.47		mg/kg	0.13	3.6
CB236	NC5	4/14/2010	Grab	Arsenic	10	U	mg/kg	7.3	1.4
CB236	NC5	4/14/2010	Grab	Cadmium	14		mg/kg	5.1	2.7
CB236	NC5	4/14/2010	Grab	Chromium	159		mg/kg	260	0.61
CB236	NC5	4/14/2010	Grab	Copper	276		mg/kg	390	0.71
CB236	NC5	4/14/2010	Grab	Lead	405		mg/kg	450	0.90
CB236	NC5	4/14/2010	Grab	Mercury	0.22		mg/kg	0.41	0.54
CB236	NC5	4/14/2010	Grab	Silver	0.7	U	mg/kg	6.1	0.11
CB236	NC5	4/14/2010	Grab	Zinc	2,910		mg/kg	410	7.1
CB237	NC5	4/14/2010	Grab	Total PCBs	0.29		mg/kg	0.13	2.2
CB237	NC5	4/14/2010	Grab	Arsenic	8.0		mg/kg	7.3	1.1
CB237	NC5	4/14/2010	Grab	Cadmium	6.8		mg/kg	5.1	1.3
CB237	NC5	4/14/2010	Grab	Chromium	164		mg/kg	260	0.63
CB237	NC5	4/14/2010	Grab	Copper	202		mg/kg	390	0.52
CB237	NC5	4/14/2010	Grab	Lead	359		mg/kg	450	0.80
CB237	NC5	4/14/2010	Grab	Mercury	0.11		mg/kg	0.41	0.27
CB237	NC5	4/14/2010	Grab	Silver	0.5	U	mg/kg	6.1	0.082
CB237	NC5	4/14/2010	Grab	Zinc	3,280		mg/kg	410	8.0
CB238	NC5	4/14/2010	Grab	Total PCBs	0.45		mg/kg	0.13	3.5
CB238	NC5	4/14/2010	Grab	Arsenic	10		mg/kg	7.3	1.4
CB238	NC5	4/14/2010	Grab	Cadmium	14		mg/kg	5.1	2.7
CB238	NC5	4/14/2010	Grab	Chromium	175		mg/kg	260	0.67
CB238	NC5	4/14/2010	Grab	Copper	368		mg/kg	390	0.94
CB238	NC5	4/14/2010	Grab	Lead	378		mg/kg	450	0.84
CB238	NC5	4/14/2010	Grab	Mercury	0.24		mg/kg	0.41	0.59
CB238	NC5	4/14/2010	Grab	Silver	0.70		mg/kg	6.1	0.11
CB238	NC5	4/14/2010	Grab	Zinc	2,820		mg/kg	410	6.9
CB239	NC5	4/14/2010	Grab	Total PCBs	0.77		mg/kg	0.13	5.9
CB239	NC5	4/14/2010	Grab	Arsenic	10		mg/kg	7.3	1.4
CB239	NC5	4/14/2010	Grab	Cadmium	54		mg/kg	5.1	11
CB239	NC5	4/14/2010	Grab	Chromium	155		mg/kg	260	0.60
CB239	NC5	4/14/2010	Grab	Copper	335		mg/kg	390	0.86
CB239	NC5	4/14/2010	Grab	Lead	352		mg/kg	450	0.78
CB239	NC5	4/14/2010	Grab	Mercury	0.27		mg/kg	0.41	0.66
CB239	NC5	4/14/2010	Grab	Silver	0.60		mg/kg	6.1	0.098
CB239	NC5	4/14/2010	Grab	Zinc	1,990		mg/kg	410	4.9
CB241	NC5	4/14/2010	Grab	Total PCBs	0.33		mg/kg	0.13	2.5
CB241	NC5	4/14/2010	Grab	Arsenic	10		mg/kg	7.3	1.4
CB241	NC5	4/14/2010	Grab	Cadmium	41		mg/kg	5.1	8.0
CB241	NC5	4/14/2010	Grab	Chromium	119		mg/kg	260	0.46
CB241	NC5	4/14/2010	Grab	Copper	217		mg/kg	390	0.56
CB241	NC5	4/14/2010	Grab	Lead	214		mg/kg	450	0.48
CB241	NC5	4/14/2010	Grab	Mercury	0.13		mg/kg	0.41	0.32

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB241	NC5	4/14/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB241	NC5	4/14/2010	Grab	Zinc	2,480	mg/kg	410	6.0
CB241A	NC5	4/12/2010	Grab	Total PCBs	0.58	mg/kg	0.13	4.5
CB241A	NC5	4/12/2010	Grab	Arsenic	9.0	mg/kg	7.3	1.2
CB241A	NC5	4/12/2010	Grab	Cadmium	8.7	mg/kg	5.1	1.7
CB241A	NC5	4/12/2010	Grab	Chromium	81	mg/kg	260	0.31
CB241A	NC5	4/12/2010	Grab	Copper	203	mg/kg	390	0.52
CB241A	NC5	4/12/2010	Grab	Lead	148	mg/kg	450	0.33
CB241A	NC5	4/12/2010	Grab	Mercury	0.07	mg/kg	0.41	0.17
CB241A	NC5	4/12/2010	Grab	Silver	0.50	mg/kg	6.1	0.082
CB241A	NC5	4/12/2010	Grab	Zinc	2,280	mg/kg	410	5.6
CB242	NC5	4/14/2010	Grab	Total PCBs	0.33	mg/kg	0.13	2.5
CB242	NC5	4/14/2010	Grab	Arsenic	8.0	mg/kg	7.3	1.1
CB242	NC5	4/14/2010	Grab	Cadmium	23	mg/kg	5.1	4.5
CB242	NC5	4/14/2010	Grab	Chromium	123	mg/kg	260	0.47
CB242	NC5	4/14/2010	Grab	Copper	180	mg/kg	390	0.46
CB242	NC5	4/14/2010	Grab	Lead	196	mg/kg	450	0.44
CB242	NC5	4/14/2010	Grab	Mercury	0.12	mg/kg	0.41	0.29
CB242	NC5	4/14/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB242	NC5	4/14/2010	Grab	Zinc	1,880	mg/kg	410	4.6
CB243	NC5	4/14/2010	Grab	Total PCBs	0.71	mg/kg	0.13	5.5
CB243	NC5	4/14/2010	Grab	Arsenic	20 U	mg/kg	7.3	2.7
CB243	NC5	4/14/2010	Grab	Cadmium	4.8	mg/kg	5.1	0.94
CB243	NC5	4/14/2010	Grab	Chromium	119	mg/kg	260	0.46
CB243	NC5	4/14/2010	Grab	Copper	250	mg/kg	390	0.64
CB243	NC5	4/14/2010	Grab	Lead	270	mg/kg	450	0.60
CB243	NC5	4/14/2010	Grab	Mercury	0.20	mg/kg	0.41	0.49
CB243	NC5	4/14/2010	Grab	Silver	1 U	mg/kg	6.1	0.16
CB243	NC5	4/14/2010	Grab	Zinc	1,470	mg/kg	410	3.6
CB244	NC5	4/12/2010	Grab	Total PCBs	0.96	mg/kg	0.13	7.4
CB244	NC5	4/12/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB244	NC5	4/12/2010	Grab	Cadmium	110	mg/kg	5.1	22
CB244	NC5	4/12/2010	Grab	Chromium	132	mg/kg	260	0.51
CB244	NC5	4/12/2010	Grab	Copper	263	mg/kg	390	0.67
CB244	NC5	4/12/2010	Grab	Lead	417	mg/kg	450	0.93
CB244	NC5	4/12/2010	Grab	Mercury	0.23	mg/kg	0.41	0.56
CB244	NC5	4/12/2010	Grab	Silver	0.70	mg/kg	6.1	0.11
CB244	NC5	4/12/2010	Grab	Zinc	3,190	mg/kg	410	7.8
CB246	NC5	4/12/2010	Grab	Total PCBs	0.48	mg/kg	0.13	3.7
CB246	NC5	4/12/2010	Grab	Arsenic	20 U	mg/kg	7.3	2.7
CB246	NC5	4/12/2010	Grab	Cadmium	33	mg/kg	5.1	6.5
CB246	NC5	4/12/2010	Grab	Chromium	91	mg/kg	260	0.35
CB246	NC5	4/12/2010	Grab	Copper	181	mg/kg	390	0.46
CB246	NC5	4/12/2010	Grab	Lead	199	mg/kg	450	0.44
CB246	NC5	4/12/2010	Grab	Mercury	0.07	mg/kg	0.41	0.17
CB246	NC5	4/12/2010	Grab	Silver	1 U	mg/kg	6.1	0.16
CB246	NC5	4/12/2010	Grab	Zinc	1,260	mg/kg	410	3.1
CB608	NC5	4/12/2010	Grab	Total PCBs	0.46	mg/kg	0.13	3.5
CB608	NC5	4/12/2010	Grab	Arsenic	7 U	mg/kg	7.3	0.96
CB608	NC5	4/12/2010	Grab	Cadmium	4.0	mg/kg	5.1	0.78
CB608	NC5	4/12/2010	Grab	Chromium	93	mg/kg	260	0.36
CB608	NC5	4/12/2010	Grab	Copper	115	mg/kg	390	0.29
CB608	NC5	4/12/2010	Grab	Lead	155	mg/kg	450	0.34
CB608	NC5	4/12/2010	Grab	Mercury	0.14	mg/kg	0.41	0.34
CB608	NC5	4/12/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB608	NC5	4/12/2010	Grab	Zinc	1,110	mg/kg	410	2.7
MH231E	NC5	4/14/2010	Grab	Total PCBs	1.1	mg/kg	0.13	8.6
MH231E	NC5	4/14/2010	Grab	Arsenic	8.0	mg/kg	7.3	1.1
MH231E	NC5	4/14/2010	Grab	Cadmium	14	mg/kg	5.1	2.7
MH231E	NC5	4/14/2010	Grab	Chromium	73	mg/kg	260	0.28

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH231E	NC5	4/14/2010	Grab	Copper	120	mg/kg	390	0.31
MH231E	NC5	4/14/2010	Grab	Lead	163	mg/kg	450	0.36
MH231E	NC5	4/14/2010	Grab	Mercury	0.23	mg/kg	0.41	0.56
MH231E	NC5	4/14/2010	Grab	Silver	5.7	mg/kg	6.1	0.93
MH231E	NC5	4/14/2010	Grab	Zinc	1,150	mg/kg	410	2.8
MH607	NC5	4/14/2010	Grab	Total PCBs	0.76	mg/kg	0.13	5.8
MH607	NC5	4/14/2010	Grab	Arsenic	15	mg/kg	7.3	2.1
MH607	NC5	4/14/2010	Grab	Cadmium	11	mg/kg	5.1	2.1
MH607	NC5	4/14/2010	Grab	Chromium	79	mg/kg	260	0.31
MH607	NC5	4/14/2010	Grab	Copper	139	mg/kg	390	0.36
MH607	NC5	4/14/2010	Grab	Lead	150	mg/kg	450	0.33
MH607	NC5	4/14/2010	Grab	Mercury	2.3	mg/kg	0.41	5.5
MH607	NC5	4/14/2010	Grab	Silver	0.80	mg/kg	6.1	0.13
MH607	NC5	4/14/2010	Grab	Zinc	1,040	mg/kg	410	2.5
MH609	NC5	4/14/2010	Grab	Total PCBs	1.8	mg/kg	0.13	13
MH609	NC5	4/14/2010	Grab	Arsenic	20 U	mg/kg	7.3	2.7
MH609	NC5	4/14/2010	Grab	Cadmium	32	mg/kg	5.1	6.2
MH609	NC5	4/14/2010	Grab	Chromium	119	mg/kg	260	0.46
MH609	NC5	4/14/2010	Grab	Copper	241	mg/kg	390	0.62
MH609	NC5	4/14/2010	Grab	Lead	304	mg/kg	450	0.68
MH609	NC5	4/14/2010	Grab	Mercury	0.28	mg/kg	0.41	0.68
MH609	NC5	4/14/2010	Grab	Silver	3.0	mg/kg	6.1	0.49
MH609	NC5	4/14/2010	Grab	Zinc	1,890	mg/kg	410	4.6
OWS231A	NC5	6/10/2009	Grab	Total PCBs	1.5	mg/kg	0.13	11
CB228F	NC6	7/16/2012	Grab	Total PCBs	2.2	mg/kg	0.13	17
CB228F	NC6	4/15/2010	Grab	Total PCBs	0.76	mg/kg	0.13	5.8
CB228F	NC6	6/10/2009	Grab	Total PCBs	1.5	mg/kg	0.13	12
CB228F	NC6	9/22/2008	Grab	Total PCBs	22	mg/kg	0.13	170
CB228F	NC6	3/14/2007	Grab	Total PCBs	50	mg/kg	0.13	380
CB228F	NC6	7/26/2006	Grab	Total PCBs	3.5 U	mg/kg	0.13	27
CB228F	NC6	5/13/2005	Grab	Total PCBs	22	mg/kg	0.13	170
CB228F	NC6	7/16/2012	Grab	Arsenic	19	mg/kg	7.3	2.6
CB228F	NC6	4/15/2010	Grab	Arsenic	9 U	mg/kg	7.3	1.2
CB228F	NC6	7/16/2012	Grab	Cadmium	25	mg/kg	5.1	4.9
CB228F	NC6	4/15/2010	Grab	Cadmium	18	mg/kg	5.1	3.5
CB228F	NC6	7/16/2012	Grab	Chromium	250	mg/kg	260	0.96
CB228F	NC6	4/15/2010	Grab	Chromium	181	mg/kg	260	0.70
CB228F	NC6	7/16/2012	Grab	Copper	335	mg/kg	390	0.86
CB228F	NC6	4/15/2010	Grab	Copper	187	mg/kg	390	0.48
CB228F	NC6	7/16/2012	Grab	Lead	468	mg/kg	450	1.0
CB228F	NC6	4/15/2010	Grab	Lead	501	mg/kg	450	1.1
CB228F	NC6	7/16/2012	Grab	Mercury	0.25	mg/kg	0.41	0.61
CB228F	NC6	4/15/2010	Grab	Mercury	0.080	mg/kg	0.41	0.20
CB228F	NC6	7/16/2012	Grab	Silver	1.4	mg/kg	6.1	0.22
CB228F	NC6	4/15/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB228F	NC6	7/16/2012	Grab	Zinc	1,320	mg/kg	410	3.2
CB228F	NC6	4/15/2010	Grab	Zinc	1,100	mg/kg	410	2.7
MH228D	NC6	6/10/2009	Grab	Total PCBs	7.3	mg/kg	0.13	56
MH228D	NC6	4/10/2007	Grab	Total PCBs	20	mg/kg	0.13	150
UNKCB28	NC6	4/15/2010	Grab	Total PCBs	0.22	mg/kg	0.13	1.7
UNKCB28	NC6	4/15/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
UNKCB28	NC6	4/15/2010	Grab	Cadmium	7.2	mg/kg	5.1	1.4
UNKCB28	NC6	4/15/2010	Grab	Chromium	90	mg/kg	260	0.35
UNKCB28	NC6	4/15/2010	Grab	Copper	242	mg/kg	390	0.62
UNKCB28	NC6	4/15/2010	Grab	Lead	262	mg/kg	450	0.58
UNKCB28	NC6	4/15/2010	Grab	Mercury	0.26	mg/kg	0.41	0.63
UNKCB28	NC6	4/15/2010	Grab	Silver	0.7 U	mg/kg	6.1	0.11
UNKCB28	NC6	4/15/2010	Grab	Zinc	1,060	mg/kg	410	2.6
UNKCB6	NC6	4/15/2010	Grab	Total PCBs	1.5	mg/kg	0.13	12
UNKCB6	NC6	4/15/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4

Table 7.2-13
Storm Drain Solids Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
UNKCB6	NC6	4/15/2010	Grab	Cadmium	18	mg/kg	5.1	3.6
UNKCB6	NC6	4/15/2010	Grab	Chromium	136	mg/kg	260	0.52
UNKCB6	NC6	4/15/2010	Grab	Copper	277	mg/kg	390	0.71
UNKCB6	NC6	4/15/2010	Grab	Lead	197	mg/kg	450	0.44
UNKCB6	NC6	4/15/2010	Grab	Mercury	0.20	mg/kg	0.41	0.49
UNKCB6	NC6	4/15/2010	Grab	Silver	0.7 U	mg/kg	6.1	0.11
UNKCB6	NC6	4/15/2010	Grab	Zinc	1,720	mg/kg	410	4.2
UNKMH21	NC6	4/15/2010	Grab	Total PCBs	7.5	mg/kg	0.13	58
UNKMH21	NC6	4/15/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
UNKMH21	NC6	4/15/2010	Grab	Cadmium	14	mg/kg	5.1	2.7
UNKMH21	NC6	4/15/2010	Grab	Chromium	116	mg/kg	260	0.45
UNKMH21	NC6	4/15/2010	Grab	Copper	244	mg/kg	390	0.63
UNKMH21	NC6	4/15/2010	Grab	Lead	261	mg/kg	450	0.58
UNKMH21	NC6	4/15/2010	Grab	Mercury	0.68	mg/kg	0.41	1.7
UNKMH21	NC6	4/15/2010	Grab	Silver	0.7 U	mg/kg	6.1	0.11
UNKMH21	NC6	4/15/2010	Grab	Zinc	1,290	mg/kg	410	3.1

Indicates detected result exceeds the RISL.
Indicates nondetected result exceeds the RISL

All samples presented as dry weight concentrations.
Table includes only chemicals that exceed the screening level in at least one sample in this drainage area.
RISL = RI Screening Level

Table 7.2-14
Storm Drain Water Sampling Results - North-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Chemical	Results		Units	RISL	RISL Exceedance Factor
MH362	NC1	3/29/2012	Total PCBs	0.024	J	ug/L	0.010	2.4
MH362	NC1	3/13/2012	Total PCBs	0.011		ug/L	0.010	1.1
MH362	NC1	2/24/2012	Total PCBs	0.019	J	ug/L	0.010	1.9
MH362	NC1	3/29/2012	Copper	3.7		ug/L	2.4	1.5
MH362	NC1	3/29/2012	Copper	2.1		ug/L	2.4	0.88
MH362	NC1	3/13/2012	Copper	3.3		ug/L	2.4	1.4
MH362	NC1	3/13/2012	Copper	2.0		ug/L	2.4	0.83
MH362	NC1	2/24/2012	Copper	3.2		ug/L	2.4	1.3
MH362	NC1	2/24/2012	Copper	1.9		ug/L	2.4	0.79
MH362	NC1	3/29/2012	Zinc	40		ug/L	33	1.2
MH362	NC1	3/29/2012	Zinc	30		ug/L	33	0.91
MH362	NC1	3/13/2012	Zinc	38		ug/L	33	1.2
MH362	NC1	3/13/2012	Zinc	28		ug/L	33	0.85
MH362	NC1	2/24/2012	Zinc	25		ug/L	33	0.76
MH362	NC1	2/24/2012	Zinc	23		ug/L	33	0.70
MH362	NC1	3/29/2012	Benzo(g,h,i)perylene	0.039		ug/L	0.012	3.3
MH362	NC1	3/13/2012	Benzo(g,h,i)perylene	0.033		ug/L	0.012	2.8
MH362	NC1	2/24/2012	Benzo(g,h,i)perylene	0.055		ug/L	0.012	4.6
MH362	NC1	3/29/2012	Benzo(a)pyrene	0.025	J	ug/L	0.010	2.5
MH362	NC1	3/13/2012	Benzo(a)pyrene	0.027		ug/L	0.010	2.7
MH362	NC1	2/24/2012	Benzo(a)pyrene	0.037		ug/L	0.010	3.7
MH362	NC1	3/29/2012	Total cPAHs (TEQ, NDx0.5)	0.038		ug/L	0.010	3.8
MH362	NC1	3/13/2012	Total cPAHs (TEQ, NDx0.5)	0.043		ug/L	0.010	4.3
MH362	NC1	2/24/2012	Total cPAHs (TEQ, NDx0.5)	0.057		ug/L	0.010	5.7
UNKCB27	NC1	3/29/2012	Total PCBs	0.01	U	ug/L	0.010	1.0
UNKCB27	NC1	3/13/2012	Total PCBs	0.01	U	ug/L	0.010	1.0
UNKCB27	NC1	2/24/2012	Total PCBs	0.01	U	ug/L	0.010	1.0
UNKCB27	NC1	3/29/2012	Copper	2.6		ug/L	2.4	1.1
UNKCB27	NC1	3/29/2012	Copper	1.8		ug/L	2.4	0.75
UNKCB27	NC1	3/13/2012	Copper	3.0		ug/L	2.4	1.3
UNKCB27	NC1	3/13/2012	Copper	2.1		ug/L	2.4	0.88
UNKCB27	NC1	2/24/2012	Copper	3.3		ug/L	2.4	1.4
UNKCB27	NC1	2/24/2012	Copper	2.1		ug/L	2.4	0.88
UNKCB27	NC1	3/29/2012	Zinc	27		ug/L	33	0.82
UNKCB27	NC1	3/29/2012	Zinc	23		ug/L	33	0.70
UNKCB27	NC1	3/13/2012	Zinc	25		ug/L	33	0.76
UNKCB27	NC1	3/13/2012	Zinc	22		ug/L	33	0.67
UNKCB27	NC1	2/24/2012	Zinc	25		ug/L	33	0.76
UNKCB27	NC1	2/24/2012	Zinc	24		ug/L	33	0.73
UNKCB27	NC1	3/29/2012	Benzo(g,h,i)perylene	0.040		ug/L	0.012	3.3
UNKCB27	NC1	3/13/2012	Benzo(g,h,i)perylene	0.027		ug/L	0.012	2.3
UNKCB27	NC1	2/24/2012	Benzo(g,h,i)perylene	0.093		ug/L	0.012	7.8
UNKCB27	NC1	3/29/2012	Benzo(a)pyrene	0.022	J	ug/L	0.010	2.2
UNKCB27	NC1	3/13/2012	Benzo(a)pyrene	0.028		ug/L	0.010	2.8
UNKCB27	NC1	2/24/2012	Benzo(a)pyrene	0.066		ug/L	0.010	6.6
UNKCB27	NC1	3/29/2012	Total cPAHs (TEQ, NDx0.5)	0.035		ug/L	0.010	3.5
UNKCB27	NC1	3/13/2012	Total cPAHs (TEQ, NDx0.5)	0.044		ug/L	0.010	4.4
UNKCB27	NC1	2/24/2012	Total cPAHs (TEQ, NDx0.5)	0.11		ug/L	0.010	11

Indicates detected result exceeds the RISL.

Table includes only chemicals that exceed the screening level in at least one sample in this drainage area.
RISL = RI Screening Level

Table 7.2-15
Chemicals Detected Above RISLs in Storm Drain Solids
South-Central Lateral Drainage Area

Chemical Class	Chemical	Frequency of Detection	Min Detect (mg/kg DW)	Max Detect (mg/kg DW)	Average Detect (mg/kg DW)	RISL (mg/kg DW)	Fraction of Detections Above SL	Maximum Exceedance Factor*	Average Exceedance Factor*
Metals	Arsenic	21 / 44	7.4	70	20	7.3	21 / 21	9.6	2.7
	Cadmium	28 / 31	2.0	35	12	5.1	17 / 28	6.8	2.4
	Copper	44 / 44	12	842	196	390	4 / 44	2.2	<1
	Lead	40 / 44	20	1,070	203	450	4 / 40	2.4	<1
	Zinc	44 / 44	91	2,710	667	410	26 / 44	6.6	1.6
Polychlorinated Aromatic Compounds	Total PCBs	80 / 85	0.038	104	6.2	0.13	75 / 80	800	48
	Total dioxins/furans (ng/kg)	3 / 3	17	49	33	13	3 / 3	3.8	2.5
PAHs	Phenanthrene	18 / 19	0.084	6.0	1.4	1.5	6 / 18	4.0	<1
	Total LPAH	18 / 19	0.17	7.5	1.6	5.2	1 / 18	1.4	<1
	Benzo(a)anthracene	16 / 19	0.022	3.6	0.88	1.3	2 / 16	2.8	<1
	Benzo(a)pyrene	18 / 19	0.04	4.6	1.1	0.15	14 / 18	31	7.3
	Benzofluoranthenes	19 / 19	0.15	13	3.0	3.2	8 / 19	3.9	<1
	Benzo(g,h,i)perylene	17 / 18	0.059	2.2	0.74	0.67	7 / 17	3.3	1.1
	Chrysene	19 / 19	0.086	6.8	1.8	1.4	9 / 19	4.9	1.3
	Dibenz(a,h)anthracene	10 / 19	0.015	0.60	0.27	0.23	5 / 10	2.6	1.2
	Fluoranthene	19 / 19	0.14	12	2.9	1.7	10 / 19	7.1	1.7
	Indeno(1,2,3-cd)pyrene	17 / 19	0.048	2.5	0.79	0.60	8 / 17	4.2	1.3
	Pyrene	19 / 19	0.084	8.4	1.9	2.6	4 / 19	3.2	<1
	Total HPAH	19 / 19	0.53	53	13	12	9 / 19	4.4	1.1
	Total cPAH	19 / 19	0.066	6.6	1.6	0.15	17 / 19	44	11
Phthalates	Bis(2-ethylhexyl) phthalate	11 / 11	0.27	5.7	2.9	1.3	8 / 11	4.4	2.2
	Butyl benzyl phthalate	5 / 11	0.062	0.54	0.22	0.067	4 / 5	8.1	3.3
Other SVOCs	p-Cresol (4-methylphenol)	4 / 11	0.10	6.0	2.4	0.67	2 / 4	9.0	3.6
	Phenol	2 / 9	0.21	0.62	0.42	0.42	1 / 2	1.5	1.0

EF Colors	EF Ranges
(white)	< 5.0
(yellow)	> 5.0 - 25
(light orange)	> 25 - 125
(rose)	> 125 - 625
(dark red)	> 625

Dioxin/furan concentrations are in units of ng/kg TEQ.
* Maximum and average exceedance factor for detected values only.

Table 7.2-16
Chemicals Detected Above RISLs in Storm Drain Water
South-Central Lateral Drainage Area

Chemical Class	Chemical	Frequency of Detection	Minimum Detect (ug/L)	Maximum Detect (ug/L)	Average Detect (ug/L)	RISL (ug/L)	Fraction of Detections Above SL	Maximum Exceedance Factor*	Average Exceedance Factor*
Metals	Arsenic	12 / 12	0.40	1.5	0.84	0.87	6 / 12	1.7	1.0
	Copper	12 / 12	1.20	4.2	2.5	2.4	6 / 12	1.8	1.0
	Zinc	12 / 12	7.0	36	17	33	1 / 12	1.1	<1
PCBs	Total PCBs	3 / 6	0.0060	0.020	0.011	0.010	2 / 3	1.5	1.1
PAHs	Benzo(a)pyrene	6 / 6	0.0059	0.017	0.010	0.010	3 / 6	1.7	1.0
	Benzo(g,h,i)perylene	6 / 6	0.0055	0.023	0.014	0.012	3 / 6	1.9	1.2
	Total cPAH	6 / 6	0.0083	0.027	0.016	0.010	5 / 6	2.7	1.6

* Maximum and average exceedance factor for detected values.

Table 7.2-17
Maximum RISL Exceedance Factors in Storm Drain Solids, by Subdrainage
South-Central Lateral Drainage Area

Chemical Class	Chemical (Subdrainage:)	SC1 (Main Line)	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9
Metals	Arsenic	2.7	--	9.6	1.0	1.1	--	2.7	1.4	4.1
	Cadmium	2.0	--	1.8	<1	<1	--	3.5	<1	6.8
	Chromium	<1	--	<1	<1	<1	--	<1	<1	<1
	Copper	<1	--	<1	<1	<1	--	2.2	1.7	1.3
	Lead	2.4	--	<1	<1	<1	--	<1	<1	1.1
	Mercury	<1	--	<1	<1	<1	--	<1	<1	<1
	Zinc	2.0	--	2.0	2.8	<1	--	6.6	1.5	4.4
Polychlorinated Aromatic Compounds	Total PCBs	14	5.2	220	10	10	11	800	98	180
	Total dioxins/furans	3.8	--	1.3	--	--	--	--	--	--
PAHs	2-Methylnaphthalene	<1	--	<1	--	--	--	--	--	--
	Acenaphthene	<1	--	<1	--	--	--	--	--	--
	Anthracene	<1	--	<1	--	--	--	--	--	--
	Dibenzofuran	<1	--	<1	--	--	--	--	--	--
	Fluorene	<1	--	<1	--	--	--	--	--	--
	Phenanthrene	4.0	--	<1	--	--	--	--	--	--
	Total LPAHs	1.4	--	<1	--	--	--	--	--	--
	Benzo(a)anthracene	2.8	--	<1	--	--	--	--	--	--
	Benzo(a)pyrene	31	--	3.1	--	--	--	--	--	--
	Benzofluoranthenes	3.9	--	<1	--	--	--	--	--	--
	Benzo(g,h,i)perylene	3.3	--	<1	--	--	--	--	--	--
	Chrysene	4.9	--	<1	--	--	--	--	--	--
	Dibenzo(a,h)anthracene	2.6	--	<1	--	--	--	--	--	--
	Fluoranthene	7.1	--	<1	--	--	--	--	--	--
	Indeno(1,2,3-cd)pyrene	4.2	--	<1	--	--	--	--	--	--
	Pyrene	3.2	--	<1	--	--	--	--	--	--
	Total HPAHs	4.4	--	<1	--	--	--	--	--	--
	Total cPAHs	44	--	4.2	--	--	--	--	--	--
Phthalates	Bis(2-ethylhexyl) phthalate	4.4	--	--	--	--	--	--	--	--
	Butyl benzyl phthalate	8.1	--	--	--	--	--	--	--	--
Other SVOCs	p-Cresol (4-methylphenol)	9.0	--	--	--	--	--	--	--	--
	Phenol	1.5	--	--	--	--	--	--	--	--

EF Colors	EF Ranges
(green)	> 1.0 - 5.0
(yellow)	> 5.0 - 25
(orange)	> 25 - 125
(light red)	> 125 - 625
(dark red)	> 625

Dioxin/furan concentrations are in units of ng/kg TEQ.
-- = indicates sample not analyzed for this parameter
ND = not detected
Table shows maximum exceedance factors for detected chemicals only.
Subdrainage locations are shown in Figure 7.2-10.

Table 7.2-18
Storm Drain Solids Sampling Results - South-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB364	SC1	4/24/2012	Sediment Trap	Total PCBs	0.70	mg/kg	0.13	5.4
CB364	SC1	4/5/2011	Sediment Trap	Total PCBs	0.55	mg/kg	0.13	4.2
CB364	SC1	4/8/2010	Sediment Trap	Total PCBs	0.25	mg/kg	0.13	1.9
CB364	SC1	1/8/2007	Sediment Trap	Total PCBs	0.43	mg/kg	0.13	3.3
CB364	SC1	10/11/2006	Sediment Trap	Total PCBs	0.63	mg/kg	0.13	4.8
CB364	SC1	3/16/2006	Sediment Trap	Total PCBs	1.8	mg/kg	0.13	14
CB364	SC1	8/11/2005	Sediment Trap	Total PCBs	1.4	mg/kg	0.13	11
CB364	SC1	4/24/2012	Sediment Trap	Arsenic	70 U	mg/kg	7.3	9.6
CB364	SC1	1/8/2007	Sediment Trap	Arsenic	10 U	mg/kg	7.3	1.4
CB364	SC1	10/11/2006	Sediment Trap	Arsenic	100 U	mg/kg	7.3	14
CB364	SC1	3/16/2006	Sediment Trap	Arsenic	30 U	mg/kg	7.3	4.1
CB364	SC1	4/24/2012	Sediment Trap	Copper	110	mg/kg	390	0.28
CB364	SC1	1/8/2007	Sediment Trap	Copper	72	mg/kg	390	0.19
CB364	SC1	10/11/2006	Sediment Trap	Copper	106	mg/kg	390	0.27
CB364	SC1	3/16/2006	Sediment Trap	Copper	99	mg/kg	390	0.25
CB364	SC1	4/24/2012	Sediment Trap	Lead	90	mg/kg	450	0.20
CB364	SC1	1/8/2007	Sediment Trap	Lead	97	mg/kg	450	0.22
CB364	SC1	10/11/2006	Sediment Trap	Lead	100	mg/kg	450	0.22
CB364	SC1	3/16/2006	Sediment Trap	Lead	120	mg/kg	450	0.27
CB364	SC1	4/24/2012	Sediment Trap	Mercury	0.10	mg/kg	0.41	0.24
CB364	SC1	1/8/2007	Sediment Trap	Mercury	0.09 U	mg/kg	0.41	0.22
CB364	SC1	10/11/2006	Sediment Trap	Mercury	0.7 U	mg/kg	0.41	1.7
CB364	SC1	3/16/2006	Sediment Trap	Mercury	0.30	mg/kg	0.41	0.73
CB364	SC1	4/24/2012	Sediment Trap	Zinc	640	mg/kg	410	1.6
CB364	SC1	1/8/2007	Sediment Trap	Zinc	293	mg/kg	410	0.71
CB364	SC1	10/11/2006	Sediment Trap	Zinc	660	mg/kg	410	1.6
CB364	SC1	3/16/2006	Sediment Trap	Zinc	448	mg/kg	410	1.1
CB364	SC1	4/24/2012	Sediment Trap	p-Cresol (4-Methylphenol)	6.0	mg/kg	0.67	9.0
CB364	SC1	4/8/2010	Sediment Trap	p-Cresol (4-Methylphenol)	0.18 U	mg/kg	0.67	0.27
CB364	SC1	1/8/2007	Sediment Trap	p-Cresol (4-Methylphenol)	0.48 U	mg/kg	0.67	0.72
CB364	SC1	3/16/2006	Sediment Trap	p-Cresol (4-Methylphenol)	0.53 U	mg/kg	0.67	0.79
CB364	SC1	4/24/2012	Sediment Trap	Phenol	0.62	mg/kg	0.42	1.5
CB364	SC1	4/8/2010	Sediment Trap	Phenol	0.18 U	mg/kg	0.42	0.43
CB364	SC1	1/8/2007	Sediment Trap	Phenol	0.48 U	mg/kg	0.42	1.1
CB364	SC1	3/16/2006	Sediment Trap	Phenol	0.53 U	mg/kg	0.42	1.3
CB364	SC1	4/24/2012	Sediment Trap	Bis(2-ethylhexyl) phthalate	5.7	mg/kg	1.3	4.4
CB364	SC1	4/8/2010	Sediment Trap	Bis(2-ethylhexyl) phthalate	4.0	mg/kg	1.3	3.1
CB364	SC1	1/8/2007	Sediment Trap	Bis(2-ethylhexyl) phthalate	3.6	mg/kg	1.3	2.8
CB364	SC1	3/16/2006	Sediment Trap	Bis(2-ethylhexyl) phthalate	4.8	mg/kg	1.3	3.7
CB364	SC1	4/24/2012	Sediment Trap	Butyl benzyl phthalate	0.17 J,J1	mg/kg	0.067	2.5
CB364	SC1	4/8/2010	Sediment Trap	Butyl benzyl phthalate	0.18 U	mg/kg	0.067	2.7
CB364	SC1	1/8/2007	Sediment Trap	Butyl benzyl phthalate	0.48 U	mg/kg	0.067	7.2
CB364	SC1	3/16/2006	Sediment Trap	Butyl benzyl phthalate	0.53 U	mg/kg	0.067	7.9
CB364	SC1	4/24/2012	Sediment Trap	Acenaphthene	0.25 U	mg/kg	0.50	0.50
CB364	SC1	4/8/2010	Sediment Trap	Acenaphthene	0.18 U	mg/kg	0.50	0.36
CB364	SC1	1/8/2007	Sediment Trap	Acenaphthene	0.48 U	mg/kg	0.50	0.96
CB364	SC1	3/16/2006	Sediment Trap	Acenaphthene	0.53 U	mg/kg	0.50	1.1
CB364	SC1	4/24/2012	Sediment Trap	Anthracene	0.25 U	mg/kg	0.96	0.26
CB364	SC1	4/8/2010	Sediment Trap	Anthracene	0.18 U	mg/kg	0.96	0.19
CB364	SC1	1/8/2007	Sediment Trap	Anthracene	0.48 U	mg/kg	0.96	0.50
CB364	SC1	3/16/2006	Sediment Trap	Anthracene	0.53 U	mg/kg	0.96	0.55
CB364	SC1	4/24/2012	Sediment Trap	Benzo(a)anthracene	0.67	mg/kg	1.3	0.52
CB364	SC1	4/8/2010	Sediment Trap	Benzo(a)anthracene	0.44	mg/kg	1.3	0.34
CB364	SC1	1/8/2007	Sediment Trap	Benzo(a)anthracene	1.3	mg/kg	1.3	1.0
CB364	SC1	3/16/2006	Sediment Trap	Benzo(a)anthracene	1.2	mg/kg	1.3	0.92
CB364	SC1	4/24/2012	Sediment Trap	Total Benzofluoranthenes	3.0	mg/kg	3.2	0.94
CB364	SC1	4/8/2010	Sediment Trap	Total Benzofluoranthenes	1.6	mg/kg	3.2	0.51
CB364	SC1	1/8/2007	Sediment Trap	Total Benzofluoranthenes	4.7	mg/kg	3.2	1.5
CB364	SC1	3/16/2006	Sediment Trap	Total Benzofluoranthenes	4.3	mg/kg	3.2	1.3
CB364	SC1	4/24/2012	Sediment Trap	Benzo(g,h,i)perylene	1.1	mg/kg	0.67	1.6
CB364	SC1	4/8/2010	Sediment Trap	Benzo(g,h,i)perylene	0.55	mg/kg	0.67	0.82
CB364	SC1	3/16/2006	Sediment Trap	Benzo(g,h,i)perylene	0.95	mg/kg	0.67	1.4
CB364	SC1	4/24/2012	Sediment Trap	Benzo(a)pyrene	1.1	mg/kg	0.15	7.3
CB364	SC1	4/8/2010	Sediment Trap	Benzo(a)pyrene	0.67	mg/kg	0.15	4.5
CB364	SC1	1/8/2007	Sediment Trap	Benzo(a)pyrene	1.9	mg/kg	0.15	13
CB364	SC1	3/16/2006	Sediment Trap	Benzo(a)pyrene	1.5	mg/kg	0.15	10

Table 7.2-18
Storm Drain Solids Sampling Results - South-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB364	SC1	4/24/2012	Sediment Trap	Chrysene	1.9	mg/kg	1.4	1.4
CB364	SC1	4/8/2010	Sediment Trap	Chrysene	1.1	mg/kg	1.4	0.79
CB364	SC1	1/8/2007	Sediment Trap	Chrysene	2.6	mg/kg	1.4	1.9
CB364	SC1	3/16/2006	Sediment Trap	Chrysene	2.6	mg/kg	1.4	1.9
CB364	SC1	4/24/2012	Sediment Trap	Dibenz(a,h)anthracene	0.36	mg/kg	0.23	1.6
CB364	SC1	4/8/2010	Sediment Trap	Dibenz(a,h)anthracene	0.18 J	mg/kg	0.23	0.78
CB364	SC1	1/8/2007	Sediment Trap	Dibenz(a,h)anthracene	0.48 U	mg/kg	0.23	2.1
CB364	SC1	3/16/2006	Sediment Trap	Dibenz(a,h)anthracene	0.53 U	mg/kg	0.23	2.3
CB364	SC1	4/24/2012	Sediment Trap	Dibenzofuran	0.25 U	mg/kg	0.54	0.46
CB364	SC1	4/8/2010	Sediment Trap	Dibenzofuran	0.18 U	mg/kg	0.54	0.33
CB364	SC1	1/8/2007	Sediment Trap	Dibenzofuran	0.48 U	mg/kg	0.54	0.89
CB364	SC1	3/16/2006	Sediment Trap	Dibenzofuran	0.53 U	mg/kg	0.54	0.98
CB364	SC1	4/24/2012	Sediment Trap	Fluoranthene	2.5	mg/kg	1.7	1.5
CB364	SC1	4/8/2010	Sediment Trap	Fluoranthene	1.8	mg/kg	1.7	1.1
CB364	SC1	1/8/2007	Sediment Trap	Fluoranthene	4.7	mg/kg	1.7	2.8
CB364	SC1	3/16/2006	Sediment Trap	Fluoranthene	4.8	mg/kg	1.7	2.8
CB364	SC1	4/24/2012	Sediment Trap	Fluorene	0.25 U	mg/kg	0.54	0.46
CB364	SC1	4/8/2010	Sediment Trap	Fluorene	0.18 U	mg/kg	0.54	0.33
CB364	SC1	1/8/2007	Sediment Trap	Fluorene	0.48 U	mg/kg	0.54	0.89
CB364	SC1	3/16/2006	Sediment Trap	Fluorene	0.53	mg/kg	0.54	0.98
CB364	SC1	4/24/2012	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.0	mg/kg	0.60	1.7
CB364	SC1	4/8/2010	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.48	mg/kg	0.60	0.80
CB364	SC1	1/8/2007	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.4	mg/kg	0.60	2.3
CB364	SC1	3/16/2006	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.93	mg/kg	0.60	1.6
CB364	SC1	4/24/2012	Sediment Trap	2-Methylnaphthalene	0.25 U	mg/kg	0.67	0.37
CB364	SC1	4/8/2010	Sediment Trap	2-Methylnaphthalene	0.18 U	mg/kg	0.67	0.27
CB364	SC1	1/8/2007	Sediment Trap	2-Methylnaphthalene	0.48 U	mg/kg	0.67	0.72
CB364	SC1	3/16/2006	Sediment Trap	2-Methylnaphthalene	0.53 U	mg/kg	0.67	0.79
CB364	SC1	4/24/2012	Sediment Trap	Phenanthrene	1.2	mg/kg	1.5	0.80
CB364	SC1	4/8/2010	Sediment Trap	Phenanthrene	0.76	mg/kg	1.5	0.51
CB364	SC1	1/8/2007	Sediment Trap	Phenanthrene	2.0	mg/kg	1.5	1.3
CB364	SC1	3/16/2006	Sediment Trap	Phenanthrene	1.8	mg/kg	1.5	1.2
CB364	SC1	4/24/2012	Sediment Trap	Pyrene	2.1	mg/kg	2.6	0.81
CB364	SC1	4/8/2010	Sediment Trap	Pyrene	1.1	mg/kg	2.6	0.42
CB364	SC1	1/8/2007	Sediment Trap	Pyrene	2.9	mg/kg	2.6	1.1
CB364	SC1	3/16/2006	Sediment Trap	Pyrene	2.7	mg/kg	2.6	1.0
CB364	SC1	4/24/2012	Sediment Trap	Total HPAHs	14	mg/kg	12	1.1
CB364	SC1	4/8/2010	Sediment Trap	Total HPAHs	7.9	mg/kg	12	0.66
CB364	SC1	1/8/2007	Sediment Trap	Total HPAHs	20	mg/kg	12	1.6
CB364	SC1	3/16/2006	Sediment Trap	Total HPAHs	19	mg/kg	12	1.6
CB364	SC1	4/24/2012	Sediment Trap	Total LPAHs	1.2	mg/kg	5.2	0.23
CB364	SC1	4/8/2010	Sediment Trap	Total LPAHs	0.76	mg/kg	5.2	0.15
CB364	SC1	1/8/2007	Sediment Trap	Total LPAHs	2.0	mg/kg	5.2	0.38
CB364	SC1	3/16/2006	Sediment Trap	Total LPAHs	2.3	mg/kg	5.2	0.45
CB364	SC1	4/24/2012	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	1.6	mg/kg	0.15	11
CB364	SC1	4/8/2010	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	0.95	mg/kg	0.15	6.4
CB364	SC1	1/8/2007	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	2.7	mg/kg	0.15	18
CB364	SC1	3/16/2006	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	2.2	mg/kg	0.15	15
MH19C	SC1	10/7/2009	Sediment Trap	Total PCBs	0.02 U	mg/kg	0.13	0.15
MH19C	SC1	4/7/2009	Sediment Trap	Total PCBs	0.23	mg/kg	0.13	1.7
MH19C	SC1	8/5/2008	Sediment Trap	Total PCBs	0.24	mg/kg	0.13	1.8
MH19C	SC1	3/18/2008	Sediment Trap	Total PCBs	0.92 U	mg/kg	0.13	7.1
MH19C	SC1	5/17/2007	Sediment Trap	Total PCBs	0.078	mg/kg	0.13	0.60
MH19C	SC1	1/9/2007	Sediment Trap	Total PCBs	0.19	mg/kg	0.13	1.4
MH19C	SC1	3/16/2006	Sediment Trap	Total PCBs	0.73	mg/kg	0.13	5.6
MH19C	SC1	8/11/2005	Sediment Trap	Total PCBs	0.038	mg/kg	0.13	0.29
MH19C	SC1	4/29/2010	Sediment Trap	Arsenic	10 U	mg/kg	7.3	1.4
MH19C	SC1	10/7/2009	Sediment Trap	Arsenic	30 UJ	mg/kg	7.3	4.1
MH19C	SC1	4/7/2009	Sediment Trap	Arsenic	20 J	mg/kg	7.3	2.7
MH19C	SC1	8/5/2008	Sediment Trap	Arsenic	30 U	mg/kg	7.3	4.1
MH19C	SC1	3/18/2008	Sediment Trap	Arsenic	10 U	mg/kg	7.3	1.4
MH19C	SC1	5/17/2007	Sediment Trap	Arsenic	20 U	mg/kg	7.3	2.7
MH19C	SC1	10/6/2006	Sediment Trap	Arsenic	20 U	mg/kg	7.3	2.7
MH19C	SC1	3/16/2006	Sediment Trap	Arsenic	12	mg/kg	7.3	1.6
MH19C	SC1	4/29/2010	Sediment Trap	Copper	48	mg/kg	390	0.12
MH19C	SC1	10/7/2009	Sediment Trap	Copper	56 J	mg/kg	390	0.14

Table 7.2-18
Storm Drain Solids Sampling Results - South-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH19C	SC1	4/7/2009	Sediment Trap	Copper	63 J	mg/kg	390	0.16
MH19C	SC1	8/5/2008	Sediment Trap	Copper	86	mg/kg	390	0.22
MH19C	SC1	3/18/2008	Sediment Trap	Copper	117	mg/kg	390	0.30
MH19C	SC1	5/17/2007	Sediment Trap	Copper	121	mg/kg	390	0.31
MH19C	SC1	10/6/2006	Sediment Trap	Copper	282	mg/kg	390	0.72
MH19C	SC1	3/16/2006	Sediment Trap	Copper	142	mg/kg	390	0.36
MH19C	SC1	4/29/2010	Sediment Trap	Lead	31	mg/kg	450	0.069
MH19C	SC1	10/7/2009	Sediment Trap	Lead	60 J	mg/kg	450	0.13
MH19C	SC1	4/7/2009	Sediment Trap	Lead	64 J	mg/kg	450	0.14
MH19C	SC1	8/5/2008	Sediment Trap	Lead	250	mg/kg	450	0.56
MH19C	SC1	3/18/2008	Sediment Trap	Lead	405	mg/kg	450	0.90
MH19C	SC1	5/17/2007	Sediment Trap	Lead	787	mg/kg	450	1.7
MH19C	SC1	10/6/2006	Sediment Trap	Lead	1,070	mg/kg	450	2.4
MH19C	SC1	3/16/2006	Sediment Trap	Lead	740	mg/kg	450	1.6
MH19C	SC1	4/29/2010	Sediment Trap	Mercury	0.05 U	mg/kg	0.41	0.12
MH19C	SC1	10/7/2009	Sediment Trap	Mercury	0.06 UJ	mg/kg	0.41	0.15
MH19C	SC1	4/7/2009	Sediment Trap	Mercury	0.2 UJ	mg/kg	0.41	0.49
MH19C	SC1	8/5/2008	Sediment Trap	Mercury	0.09 U	mg/kg	0.41	0.22
MH19C	SC1	3/18/2008	Sediment Trap	Mercury	0.10	mg/kg	0.41	0.24
MH19C	SC1	5/17/2007	Sediment Trap	Mercury	0.1 U	mg/kg	0.41	0.24
MH19C	SC1	10/6/2006	Sediment Trap	Mercury	0.2 U	mg/kg	0.41	0.49
MH19C	SC1	3/16/2006	Sediment Trap	Mercury	0.16	mg/kg	0.41	0.39
MH19C	SC1	4/29/2010	Sediment Trap	Zinc	91	mg/kg	410	0.22
MH19C	SC1	10/7/2009	Sediment Trap	Zinc	163 J	mg/kg	410	0.40
MH19C	SC1	4/7/2009	Sediment Trap	Zinc	162 J	mg/kg	410	0.40
MH19C	SC1	8/5/2008	Sediment Trap	Zinc	179	mg/kg	410	0.44
MH19C	SC1	3/18/2008	Sediment Trap	Zinc	241	mg/kg	410	0.59
MH19C	SC1	5/17/2007	Sediment Trap	Zinc	289	mg/kg	410	0.70
MH19C	SC1	10/6/2006	Sediment Trap	Zinc	418	mg/kg	410	1.0
MH19C	SC1	3/16/2006	Sediment Trap	Zinc	276	mg/kg	410	0.67
MH19C	SC1	4/29/2010	Sediment Trap	p-Cresol (4-Methylphenol)	0.11 U	mg/kg	0.67	0.16
MH19C	SC1	8/5/2008	Sediment Trap	p-Cresol (4-Methylphenol)	0.27 U	mg/kg	0.67	0.40
MH19C	SC1	3/18/2008	Sediment Trap	p-Cresol (4-Methylphenol)	0.2 U	mg/kg	0.67	0.30
MH19C	SC1	1/9/2007	Sediment Trap	p-Cresol (4-Methylphenol)	0.31	mg/kg	0.67	0.46
MH19C	SC1	10/6/2006	Sediment Trap	p-Cresol (4-Methylphenol)	0.10	mg/kg	0.67	0.15
MH19C	SC1	3/15/2006	Sediment Trap	p-Cresol (4-Methylphenol)	3.0	mg/kg	0.67	4.5
MH19C	SC1	4/29/2010	Sediment Trap	Phenol	0.11 U	mg/kg	0.42	0.26
MH19C	SC1	8/5/2008	Sediment Trap	Phenol	0.27 U	mg/kg	0.42	0.64
MH19C	SC1	3/18/2008	Sediment Trap	Phenol	0.21	mg/kg	0.42	0.50
MH19C	SC1	3/15/2006	Sediment Trap	Phenol	0.66 U	mg/kg	0.42	1.6
MH19C	SC1	4/29/2010	Sediment Trap	Bis(2-ethylhexyl) phthalate	1.6	mg/kg	1.3	1.2
MH19C	SC1	8/5/2008	Sediment Trap	Bis(2-ethylhexyl) phthalate	3.8	mg/kg	1.3	2.9
MH19C	SC1	3/18/2008	Sediment Trap	Bis(2-ethylhexyl) phthalate	2.9	mg/kg	1.3	2.2
MH19C	SC1	1/9/2007	Sediment Trap	Bis(2-ethylhexyl) phthalate	0.80	mg/kg	1.3	0.62
MH19C	SC1	10/6/2006	Sediment Trap	Bis(2-ethylhexyl) phthalate	0.67	mg/kg	1.3	0.52
MH19C	SC1	3/15/2006	Sediment Trap	Bis(2-ethylhexyl) phthalate	3.8	mg/kg	1.3	2.9
MH19C	SC1	4/29/2010	Sediment Trap	Butyl benzyl phthalate	0.11 U	mg/kg	0.067	1.6
MH19C	SC1	8/5/2008	Sediment Trap	Butyl benzyl phthalate	0.27 U	mg/kg	0.067	4.0
MH19C	SC1	3/18/2008	Sediment Trap	Butyl benzyl phthalate	0.17 J	mg/kg	0.067	2.5
MH19C	SC1	1/9/2007	Sediment Trap	Butyl benzyl phthalate	0.14	mg/kg	0.067	2.1
MH19C	SC1	10/6/2006	Sediment Trap	Butyl benzyl phthalate	0.062	mg/kg	0.067	0.93
MH19C	SC1	3/15/2006	Sediment Trap	Butyl benzyl phthalate	0.54 J	mg/kg	0.067	8.1
MH19C	SC1	4/29/2010	Sediment Trap	Acenaphthene	0.11 U	mg/kg	0.50	0.22
MH19C	SC1	8/5/2008	Sediment Trap	Acenaphthene	0.27 U	mg/kg	0.50	0.54
MH19C	SC1	3/18/2008	Sediment Trap	Acenaphthene	0.10 J	mg/kg	0.50	0.20
MH19C	SC1	1/9/2007	Sediment Trap	Acenaphthene	0.076 J	mg/kg	0.50	0.15
MH19C	SC1	10/6/2006	Sediment Trap	Acenaphthene	0.083	mg/kg	0.50	0.17
MH19C	SC1	3/15/2006	Sediment Trap	Acenaphthene	0.37 J	mg/kg	0.50	0.74
MH19C	SC1	4/29/2010	Sediment Trap	Anthracene	0.13	mg/kg	0.96	0.14
MH19C	SC1	8/5/2008	Sediment Trap	Anthracene	0.27 U	mg/kg	0.96	0.28
MH19C	SC1	3/18/2008	Sediment Trap	Anthracene	0.32	mg/kg	0.96	0.33
MH19C	SC1	1/9/2007	Sediment Trap	Anthracene	0.22	mg/kg	0.96	0.23
MH19C	SC1	10/6/2006	Sediment Trap	Anthracene	0.23	mg/kg	0.96	0.24
MH19C	SC1	3/15/2006	Sediment Trap	Anthracene	0.69	mg/kg	0.96	0.72
MH19C	SC1	4/29/2010	Sediment Trap	Benzo(a)anthracene	1.0	mg/kg	1.3	0.77
MH19C	SC1	8/5/2008	Sediment Trap	Benzo(a)anthracene	0.82	mg/kg	1.3	0.63

Table 7.2-18
Storm Drain Solids Sampling Results - South-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH19C	SC1	3/18/2008	Sediment Trap	Benzo(a)anthracene	1.8	mg/kg	1.3	1.4
MH19C	SC1	1/9/2007	Sediment Trap	Benzo(a)anthracene	1.1	mg/kg	1.3	0.85
MH19C	SC1	10/6/2006	Sediment Trap	Benzo(a)anthracene	1.1	mg/kg	1.3	0.85
MH19C	SC1	3/15/2006	Sediment Trap	Benzo(a)anthracene	3.6	mg/kg	1.3	2.8
MH19C	SC1	4/29/2010	Sediment Trap	Total Benzofluoranthenes	4.6	mg/kg	3.2	1.4
MH19C	SC1	8/5/2008	Sediment Trap	Total Benzofluoranthenes	3.8	mg/kg	3.2	1.2
MH19C	SC1	3/18/2008	Sediment Trap	Total Benzofluoranthenes	8.3	mg/kg	3.2	2.6
MH19C	SC1	1/9/2007	Sediment Trap	Total Benzofluoranthenes	4.5	mg/kg	3.2	1.4
MH19C	SC1	10/6/2006	Sediment Trap	Total Benzofluoranthenes	3.3	mg/kg	3.2	1.0
MH19C	SC1	3/15/2006	Sediment Trap	Total Benzofluoranthenes	13	mg/kg	3.2	3.9
MH19C	SC1	4/29/2010	Sediment Trap	Benzo(g,h,i)perylene	1.8	mg/kg	0.67	2.7
MH19C	SC1	8/5/2008	Sediment Trap	Benzo(g,h,i)perylene	0.88	mg/kg	0.67	1.3
MH19C	SC1	3/18/2008	Sediment Trap	Benzo(g,h,i)perylene	1.0	mg/kg	0.67	1.5
MH19C	SC1	1/9/2007	Sediment Trap	Benzo(g,h,i)perylene	0.88	mg/kg	0.67	1.3
MH19C	SC1	10/6/2006	Sediment Trap	Benzo(g,h,i)perylene	0.51	mg/kg	0.67	0.76
MH19C	SC1	3/15/2006	Sediment Trap	Benzo(g,h,i)perylene	2.2 J	mg/kg	0.67	3.3
MH19C	SC1	4/29/2010	Sediment Trap	Benzo(a)pyrene	1.7	mg/kg	0.15	11
MH19C	SC1	8/5/2008	Sediment Trap	Benzo(a)pyrene	1.3	mg/kg	0.15	8.7
MH19C	SC1	3/18/2008	Sediment Trap	Benzo(a)pyrene	2.6	mg/kg	0.15	17
MH19C	SC1	1/9/2007	Sediment Trap	Benzo(a)pyrene	1.6	mg/kg	0.15	11
MH19C	SC1	10/6/2006	Sediment Trap	Benzo(a)pyrene	1.5	mg/kg	0.15	10
MH19C	SC1	3/15/2006	Sediment Trap	Benzo(a)pyrene	4.6	mg/kg	0.15	31
MH19C	SC1	4/29/2010	Sediment Trap	Chrysene	2.4	mg/kg	1.4	1.7
MH19C	SC1	8/5/2008	Sediment Trap	Chrysene	2.2	mg/kg	1.4	1.6
MH19C	SC1	3/18/2008	Sediment Trap	Chrysene	4.2	mg/kg	1.4	3.0
MH19C	SC1	1/9/2007	Sediment Trap	Chrysene	2.1	mg/kg	1.4	1.5
MH19C	SC1	10/6/2006	Sediment Trap	Chrysene	2.1	mg/kg	1.4	1.5
MH19C	SC1	3/15/2006	Sediment Trap	Chrysene	6.8	mg/kg	1.4	4.9
MH19C	SC1	4/29/2010	Sediment Trap	Dibenz(a,h)anthracene	0.60	mg/kg	0.23	2.6
MH19C	SC1	8/5/2008	Sediment Trap	Dibenz(a,h)anthracene	0.27 U	mg/kg	0.23	1.2
MH19C	SC1	3/18/2008	Sediment Trap	Dibenz(a,h)anthracene	0.32	mg/kg	0.23	1.4
MH19C	SC1	1/9/2007	Sediment Trap	Dibenz(a,h)anthracene	0.17	mg/kg	0.23	0.74
MH19C	SC1	10/6/2006	Sediment Trap	Dibenz(a,h)anthracene	0.25	mg/kg	0.23	1.1
MH19C	SC1	3/15/2006	Sediment Trap	Dibenz(a,h)anthracene	0.60	mg/kg	0.23	2.6
MH19C	SC1	4/29/2010	Sediment Trap	Dibenzofuran	0.064 J	mg/kg	0.54	0.12
MH19C	SC1	8/5/2008	Sediment Trap	Dibenzofuran	0.27 U	mg/kg	0.54	0.50
MH19C	SC1	3/18/2008	Sediment Trap	Dibenzofuran	0.13 J	mg/kg	0.54	0.24
MH19C	SC1	1/9/2007	Sediment Trap	Dibenzofuran	0.13 U	mg/kg	0.54	0.24
MH19C	SC1	10/6/2006	Sediment Trap	Dibenzofuran	0.076 U	mg/kg	0.54	0.14
MH19C	SC1	3/15/2006	Sediment Trap	Dibenzofuran	0.66 U	mg/kg	0.54	1.2
MH19C	SC1	4/29/2010	Sediment Trap	Fluoranthene	3.8	mg/kg	1.7	2.2
MH19C	SC1	8/5/2008	Sediment Trap	Fluoranthene	2.7	mg/kg	1.7	1.6
MH19C	SC1	3/18/2008	Sediment Trap	Fluoranthene	7.4	mg/kg	1.7	4.4
MH19C	SC1	1/9/2007	Sediment Trap	Fluoranthene	4.0	mg/kg	1.7	2.4
MH19C	SC1	10/6/2006	Sediment Trap	Fluoranthene	3.7	mg/kg	1.7	2.2
MH19C	SC1	3/15/2006	Sediment Trap	Fluoranthene	12	mg/kg	1.7	7.1
MH19C	SC1	4/29/2010	Sediment Trap	Fluorene	0.06 J	mg/kg	0.54	0.11
MH19C	SC1	8/5/2008	Sediment Trap	Fluorene	0.27 U	mg/kg	0.54	0.50
MH19C	SC1	3/18/2008	Sediment Trap	Fluorene	0.15 J	mg/kg	0.54	0.28
MH19C	SC1	1/9/2007	Sediment Trap	Fluorene	0.11 J	mg/kg	0.54	0.20
MH19C	SC1	10/6/2006	Sediment Trap	Fluorene	0.10	mg/kg	0.54	0.19
MH19C	SC1	3/15/2006	Sediment Trap	Fluorene	0.42 J	mg/kg	0.54	0.78
MH19C	SC1	4/29/2010	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.7	mg/kg	0.60	2.8
MH19C	SC1	8/5/2008	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.84	mg/kg	0.60	1.4
MH19C	SC1	3/18/2008	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.3	mg/kg	0.60	2.2
MH19C	SC1	1/9/2007	Sediment Trap	Indeno(1,2,3-cd)pyrene	1.1	mg/kg	0.60	1.8
MH19C	SC1	10/6/2006	Sediment Trap	Indeno(1,2,3-cd)pyrene	0.58	mg/kg	0.60	0.97
MH19C	SC1	3/15/2006	Sediment Trap	Indeno(1,2,3-cd)pyrene	2.5	mg/kg	0.60	4.2
MH19C	SC1	4/29/2010	Sediment Trap	2-Methylnaphthalene	0.11 U	mg/kg	0.67	0.16
MH19C	SC1	8/5/2008	Sediment Trap	2-Methylnaphthalene	0.27 U	mg/kg	0.67	0.40
MH19C	SC1	3/18/2008	Sediment Trap	2-Methylnaphthalene	0.2 U	mg/kg	0.67	0.30
MH19C	SC1	1/9/2007	Sediment Trap	2-Methylnaphthalene	0.13 U	mg/kg	0.67	0.19
MH19C	SC1	10/6/2006	Sediment Trap	2-Methylnaphthalene	0.042	mg/kg	0.67	0.063
MH19C	SC1	3/15/2006	Sediment Trap	2-Methylnaphthalene	0.66 U	mg/kg	0.67	0.99
MH19C	SC1	4/29/2010	Sediment Trap	Phenanthrene	1.5	mg/kg	1.5	1.0
MH19C	SC1	8/5/2008	Sediment Trap	Phenanthrene	1.3	mg/kg	1.5	0.87

Table 7.2-18
Storm Drain Solids Sampling Results - South-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH19C	SC1	3/18/2008	Sediment Trap	Phenanthrene	2.7	mg/kg	1.5	1.8
MH19C	SC1	1/9/2007	Sediment Trap	Phenanthrene	1.7	mg/kg	1.5	1.1
MH19C	SC1	10/6/2006	Sediment Trap	Phenanthrene	1.8	mg/kg	1.5	1.2
MH19C	SC1	3/15/2006	Sediment Trap	Phenanthrene	6.0	mg/kg	1.5	4.0
MH19C	SC1	4/29/2010	Sediment Trap	Pyrene	2.0	mg/kg	2.6	0.77
MH19C	SC1	8/5/2008	Sediment Trap	Pyrene	2.2	mg/kg	2.6	0.85
MH19C	SC1	3/18/2008	Sediment Trap	Pyrene	4.2	mg/kg	2.6	1.6
MH19C	SC1	1/9/2007	Sediment Trap	Pyrene	2.4	mg/kg	2.6	0.92
MH19C	SC1	10/6/2006	Sediment Trap	Pyrene	2.6	mg/kg	2.6	1.0
MH19C	SC1	3/15/2006	Sediment Trap	Pyrene	8.4	mg/kg	2.6	3.2
MH19C	SC1	4/29/2010	Sediment Trap	Total HPAHs	20	mg/kg	12	1.6
MH19C	SC1	8/5/2008	Sediment Trap	Total HPAHs	15	mg/kg	12	1.2
MH19C	SC1	3/18/2008	Sediment Trap	Total HPAHs	31	mg/kg	12	2.6
MH19C	SC1	1/9/2007	Sediment Trap	Total HPAHs	18	mg/kg	12	1.5
MH19C	SC1	10/6/2006	Sediment Trap	Total HPAHs	16	mg/kg	12	1.3
MH19C	SC1	3/15/2006	Sediment Trap	Total HPAHs	53	mg/kg	12	4.4
MH19C	SC1	4/29/2010	Sediment Trap	Total LPAHs	1.7	mg/kg	5.2	0.33
MH19C	SC1	8/5/2008	Sediment Trap	Total LPAHs	1.3	mg/kg	5.2	0.25
MH19C	SC1	3/18/2008	Sediment Trap	Total LPAHs	3.3	mg/kg	5.2	0.63
MH19C	SC1	1/9/2007	Sediment Trap	Total LPAHs	2.1	mg/kg	5.2	0.41
MH19C	SC1	10/6/2006	Sediment Trap	Total LPAHs	2.3	mg/kg	5.2	0.44
MH19C	SC1	3/15/2006	Sediment Trap	Total LPAHs	7.5	mg/kg	5.2	1.4
MH19C	SC1	4/29/2010	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	2.5	mg/kg	0.15	17
MH19C	SC1	8/5/2008	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	1.9	mg/kg	0.15	13
MH19C	SC1	3/18/2008	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	3.8	mg/kg	0.15	25
MH19C	SC1	1/9/2007	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	2.3	mg/kg	0.15	15
MH19C	SC1	10/6/2006	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	2.0	mg/kg	0.15	14
MH19C	SC1	3/15/2006	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	6.6	mg/kg	0.15	44
MH368	SC1	3/29/2012	Filter/Stormwater	Total PCBs	0.20	mg/kg	0.13	1.5
MH368	SC1	2/24/2012	Filter/Stormwater	Total PCBs	0.29	mg/kg	0.13	2.2
MH368	SC1	6/15/2009	Grab	Total PCBs	0.54	mg/kg	0.13	4.2
MH368	SC1	3/13/2012	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	33	ng/kg	13	2.5
MH368	SC1	3/29/2012	Filter/Stormwater	Arsenic	30 U	mg/kg	7.3	4.1
MH368	SC1	3/13/2012	Filter/Stormwater	Arsenic	50 U	mg/kg	7.3	6.8
MH368	SC1	2/24/2012	Filter/Stormwater	Arsenic	90 U	mg/kg	7.3	12
MH368	SC1	6/15/2009	Grab	Arsenic	11	mg/kg	7.3	1.5
MH368	SC1	3/29/2012	Filter/Stormwater	Cadmium	2.0	mg/kg	5.1	0.39
MH368	SC1	3/13/2012	Filter/Stormwater	Cadmium	5.0	mg/kg	5.1	0.98
MH368	SC1	2/24/2012	Filter/Stormwater	Cadmium	10	mg/kg	5.1	2.0
MH368	SC1	3/29/2012	Filter/Stormwater	Chromium	34	mg/kg	260	0.13
MH368	SC1	3/13/2012	Filter/Stormwater	Chromium	67	mg/kg	260	0.26
MH368	SC1	2/24/2012	Filter/Stormwater	Chromium	57	mg/kg	260	0.22
MH368	SC1	3/29/2012	Filter/Stormwater	Copper	41	mg/kg	390	0.11
MH368	SC1	3/13/2012	Filter/Stormwater	Copper	88	mg/kg	390	0.23
MH368	SC1	2/24/2012	Filter/Stormwater	Copper	80	mg/kg	390	0.21
MH368	SC1	6/15/2009	Grab	Copper	27	mg/kg	390	0.068
MH368	SC1	3/29/2012	Filter/Stormwater	Lead	30	mg/kg	450	0.067
MH368	SC1	3/13/2012	Filter/Stormwater	Lead	60	mg/kg	450	0.13
MH368	SC1	2/24/2012	Filter/Stormwater	Lead	40	mg/kg	450	0.089
MH368	SC1	6/15/2009	Grab	Lead	37	mg/kg	450	0.082
MH368	SC1	3/29/2012	Filter/Stormwater	Mercury	0.06 U	mg/kg	0.41	0.15
MH368	SC1	3/13/2012	Filter/Stormwater	Mercury	0.19	mg/kg	0.41	0.46
MH368	SC1	2/24/2012	Filter/Stormwater	Mercury	0.2 U	mg/kg	0.41	0.49
MH368	SC1	6/15/2009	Grab	Mercury	0.06	mg/kg	0.41	0.15
MH368	SC1	3/29/2012	Filter/Stormwater	Silver	2 U	mg/kg	6.1	0.33
MH368	SC1	3/13/2012	Filter/Stormwater	Silver	3 U	mg/kg	6.1	0.49
MH368	SC1	2/24/2012	Filter/Stormwater	Silver	6 U	mg/kg	6.1	0.98
MH368	SC1	3/29/2012	Filter/Stormwater	Zinc	264	mg/kg	410	0.64
MH368	SC1	3/13/2012	Filter/Stormwater	Zinc	490	mg/kg	410	1.2
MH368	SC1	2/24/2012	Filter/Stormwater	Zinc	800	mg/kg	410	2.0
MH368	SC1	6/15/2009	Grab	Zinc	163	mg/kg	410	0.40
MH368	SC1	6/15/2009	Grab	p-Cresol (4-Methylphenol)	0.064 U	mg/kg	0.67	0.096
MH368	SC1	6/15/2009	Grab	Phenol	0.064 U	mg/kg	0.42	0.15
MH368	SC1	6/15/2009	Grab	Bis(2-ethylhexyl) phthalate	0.27	mg/kg	1.3	0.21
MH368	SC1	6/15/2009	Grab	Butyl benzyl phthalate	0.064 U	mg/kg	0.067	0.96
MH368	SC1	3/29/2012	Filter/Stormwater	Acenaphthene	0.086 U	mg/kg	0.50	0.17

Table 7.2-18
Storm Drain Solids Sampling Results - South-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH368	SC1	3/13/2012	Filter/Stormwater	Acenaphthene	0.44 U	mg/kg	0.50	0.88
MH368	SC1	2/24/2012	Filter/Stormwater	Acenaphthene	0.015 J	mg/kg	0.50	0.030
MH368	SC1	6/15/2009	Grab	Acenaphthene	0.064 U	mg/kg	0.50	0.13
MH368	SC1	3/29/2012	Filter/Stormwater	Anthracene	0.086 U	mg/kg	0.96	0.090
MH368	SC1	3/13/2012	Filter/Stormwater	Anthracene	0.44 U	mg/kg	0.96	0.46
MH368	SC1	2/24/2012	Filter/Stormwater	Anthracene	0.02 J	mg/kg	0.96	0.021
MH368	SC1	6/15/2009	Grab	Anthracene	0.064 U	mg/kg	0.96	0.067
MH368	SC1	3/29/2012	Filter/Stormwater	Benzo(a)anthracene	0.083 J	mg/kg	1.3	0.064
MH368	SC1	3/13/2012	Filter/Stormwater	Benzo(a)anthracene	0.44 U	mg/kg	1.3	0.34
MH368	SC1	2/24/2012	Filter/Stormwater	Benzo(a)anthracene	0.086	mg/kg	1.3	0.066
MH368	SC1	6/15/2009	Grab	Benzo(a)anthracene	0.064 U	mg/kg	1.3	0.049
MH368	SC1	3/29/2012	Filter/Stormwater	Total Benzofluoranthenes	0.51	mg/kg	3.2	0.16
MH368	SC1	3/13/2012	Filter/Stormwater	Total Benzofluoranthenes	1.2	mg/kg	3.2	0.38
MH368	SC1	2/24/2012	Filter/Stormwater	Total Benzofluoranthenes	0.35	mg/kg	3.2	0.11
MH368	SC1	6/15/2009	Grab	Total Benzofluoranthenes	0.15	mg/kg	3.2	0.046
MH368	SC1	3/29/2012	Filter/Stormwater	Benzo(g,h,i)perylene	0.17	mg/kg	0.67	0.25
MH368	SC1	3/13/2012	Filter/Stormwater	Benzo(g,h,i)perylene	0.49	mg/kg	0.67	0.73
MH368	SC1	2/24/2012	Filter/Stormwater	Benzo(g,h,i)perylene	0.16	mg/kg	0.67	0.24
MH368	SC1	6/15/2009	Grab	Benzo(g,h,i)perylene	0.064 U	mg/kg	0.67	0.096
MH368	SC1	3/29/2012	Filter/Stormwater	Benzo(a)pyrene	0.12	mg/kg	0.15	0.80
MH368	SC1	3/13/2012	Filter/Stormwater	Benzo(a)pyrene	0.44 U	mg/kg	0.15	2.9
MH368	SC1	2/24/2012	Filter/Stormwater	Benzo(a)pyrene	0.14	mg/kg	0.15	0.93
MH368	SC1	6/15/2009	Grab	Benzo(a)pyrene	0.076 J	mg/kg	0.15	0.51
MH368	SC1	3/29/2012	Filter/Stormwater	Chrysene	0.34	mg/kg	1.4	0.24
MH368	SC1	3/13/2012	Filter/Stormwater	Chrysene	1.2	mg/kg	1.4	0.86
MH368	SC1	2/24/2012	Filter/Stormwater	Chrysene	0.31	mg/kg	1.4	0.22
MH368	SC1	6/15/2009	Grab	Chrysene	0.086 J	mg/kg	1.4	0.061
MH368	SC1	3/29/2012	Filter/Stormwater	Dibenz(a,h)anthracene	0.086 U	mg/kg	0.23	0.37
MH368	SC1	3/13/2012	Filter/Stormwater	Dibenz(a,h)anthracene	0.44 U	mg/kg	0.23	1.9
MH368	SC1	2/24/2012	Filter/Stormwater	Dibenz(a,h)anthracene	0.046 J	mg/kg	0.23	0.20
MH368	SC1	6/15/2009	Grab	Dibenz(a,h)anthracene	0.064 U	mg/kg	0.23	0.28
MH368	SC1	3/29/2012	Filter/Stormwater	Dibenzofuran	0.068 J	mg/kg	0.54	0.13
MH368	SC1	3/13/2012	Filter/Stormwater	Dibenzofuran	0.44 U	mg/kg	0.54	0.81
MH368	SC1	2/24/2012	Filter/Stormwater	Dibenzofuran	0.046	mg/kg	0.54	0.085
MH368	SC1	6/15/2009	Grab	Dibenzofuran	0.064 U	mg/kg	0.54	0.12
MH368	SC1	3/29/2012	Filter/Stormwater	Fluoranthene	0.51	mg/kg	1.7	0.30
MH368	SC1	3/13/2012	Filter/Stormwater	Fluoranthene	1.5	mg/kg	1.7	0.88
MH368	SC1	2/24/2012	Filter/Stormwater	Fluoranthene	0.49	mg/kg	1.7	0.29
MH368	SC1	6/15/2009	Grab	Fluoranthene	0.14 J	mg/kg	1.7	0.082
MH368	SC1	3/29/2012	Filter/Stormwater	Fluorene	0.086 U	mg/kg	0.54	0.16
MH368	SC1	3/13/2012	Filter/Stormwater	Fluorene	0.44 U	mg/kg	0.54	0.81
MH368	SC1	2/24/2012	Filter/Stormwater	Fluorene	0.041	mg/kg	0.54	0.076
MH368	SC1	6/15/2009	Grab	Fluorene	0.064 U	mg/kg	0.54	0.12
MH368	SC1	3/29/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.13	mg/kg	0.60	0.22
MH368	SC1	3/13/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.44 U	mg/kg	0.60	0.73
MH368	SC1	2/24/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.11	mg/kg	0.60	0.18
MH368	SC1	6/15/2009	Grab	Indeno(1,2,3-cd)pyrene	0.064 U	mg/kg	0.60	0.11
MH368	SC1	3/29/2012	Filter/Stormwater	2-Methylnaphthalene	0.086 U	mg/kg	0.67	0.13
MH368	SC1	3/13/2012	Filter/Stormwater	2-Methylnaphthalene	0.44 U	mg/kg	0.67	0.66
MH368	SC1	2/24/2012	Filter/Stormwater	2-Methylnaphthalene	0.13	mg/kg	0.67	0.19
MH368	SC1	6/15/2009	Grab	2-Methylnaphthalene	0.064 U	mg/kg	0.67	0.096
MH368	SC1	3/29/2012	Filter/Stormwater	Phenanthrene	0.23	mg/kg	1.5	0.15
MH368	SC1	3/13/2012	Filter/Stormwater	Phenanthrene	0.71	mg/kg	1.5	0.47
MH368	SC1	2/24/2012	Filter/Stormwater	Phenanthrene	0.28	mg/kg	1.5	0.19
MH368	SC1	6/15/2009	Grab	Phenanthrene	0.064 U	mg/kg	1.5	0.043
MH368	SC1	3/29/2012	Filter/Stormwater	Pyrene	0.29	mg/kg	2.6	0.11
MH368	SC1	3/13/2012	Filter/Stormwater	Pyrene	1.1	mg/kg	2.6	0.42
MH368	SC1	2/24/2012	Filter/Stormwater	Pyrene	0.32	mg/kg	2.6	0.12
MH368	SC1	6/15/2009	Grab	Pyrene	0.085	mg/kg	2.6	0.033
MH368	SC1	3/29/2012	Filter/Stormwater	Total HPAHs	2.2 J	mg/kg	12	0.18
MH368	SC1	3/13/2012	Filter/Stormwater	Total HPAHs	5.5	mg/kg	12	0.46
MH368	SC1	2/24/2012	Filter/Stormwater	Total HPAHs	2.0 J	mg/kg	12	0.17
MH368	SC1	6/15/2009	Grab	Total HPAHs	0.53	mg/kg	12	0.044
MH368	SC1	3/29/2012	Filter/Stormwater	Total LPAHs	0.23	mg/kg	5.2	0.044
MH368	SC1	3/13/2012	Filter/Stormwater	Total LPAHs	0.71	mg/kg	5.2	0.14
MH368	SC1	2/24/2012	Filter/Stormwater	Total LPAHs	0.44 J	mg/kg	5.2	0.085

Table 7.2-18
Storm Drain Solids Sampling Results - South-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH368	SC1	6/15/2009	Grab	Total LPAHs	0.064 U	mg/kg	5.2	0.012
MH368	SC1	3/29/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.20	mg/kg	0.15	1.3
MH368	SC1	3/13/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.42	mg/kg	0.15	2.8
MH368	SC1	2/24/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.20	mg/kg	0.15	1.3
MH368	SC1	6/15/2009	Grab	Total cPAHs (TEQ, NDx0.5)	0.10	mg/kg	0.15	0.67
MH413	SC1	4/19/2010	Grab	Total PCBs	0.37	mg/kg	0.13	2.8
MH413	SC1	4/19/2010	Grab	Arsenic	40 U	mg/kg	7.3	5.5
MH413	SC1	4/19/2010	Grab	Cadmium	3.0	mg/kg	5.1	0.59
MH413	SC1	4/19/2010	Grab	Chromium	54	mg/kg	260	0.21
MH413	SC1	4/19/2010	Grab	Copper	115	mg/kg	390	0.29
MH413	SC1	4/19/2010	Grab	Lead	100	mg/kg	450	0.22
MH413	SC1	4/19/2010	Grab	Mercury	0.06 U	mg/kg	0.41	0.15
MH413	SC1	4/19/2010	Grab	Silver	2 U	mg/kg	6.1	0.33
MH413	SC1	4/19/2010	Grab	Zinc	103	mg/kg	410	0.25
MH414	SC1	4/19/2010	Grab	Total PCBs	0.12	mg/kg	0.13	0.92
MH414	SC1	4/10/2007	Grab	Total PCBs	0.37	mg/kg	0.13	2.8
MH414	SC1	4/19/2010	Grab	Arsenic	80 U	mg/kg	7.3	11
MH414	SC1	4/19/2010	Grab	Cadmium	4.0	mg/kg	5.1	0.78
MH414	SC1	4/19/2010	Grab	Chromium	56	mg/kg	260	0.22
MH414	SC1	4/19/2010	Grab	Copper	12	mg/kg	390	0.031
MH414	SC1	4/19/2010	Grab	Lead	30 U	mg/kg	450	0.067
MH414	SC1	4/19/2010	Grab	Mercury	0.1 U	mg/kg	0.41	0.24
MH414	SC1	4/19/2010	Grab	Silver	5 U	mg/kg	6.1	0.82
MH414	SC1	4/19/2010	Grab	Zinc	110	mg/kg	410	0.27
MH461	SC1	3/29/2012	Filter/Stormwater	Total PCBs	0.15 J	mg/kg	0.13	1.2
MH461	SC1	2/24/2012	Filter/Stormwater	Total PCBs	0.0053 U	mg/kg	0.13	0.041
MH461	SC1	11/24/2004	Filter/Undifferentiated	Total PCBs	0.04	mg/kg	0.13	0.31
MH461	SC1	3/13/2012	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	49	ng/kg	13	3.8
MH461	SC1	3/29/2012	Filter/Stormwater	Arsenic	90 U	mg/kg	7.3	12
MH461	SC1	3/13/2012	Filter/Stormwater	Arsenic	80 U	mg/kg	7.3	11
MH461	SC1	2/24/2012	Filter/Stormwater	Arsenic	100 U	mg/kg	7.3	14
MH461	SC1	3/29/2012	Filter/Stormwater	Cadmium	4 U	mg/kg	5.1	0.78
MH461	SC1	3/13/2012	Filter/Stormwater	Cadmium	3 U	mg/kg	5.1	0.59
MH461	SC1	2/24/2012	Filter/Stormwater	Cadmium	5.0	mg/kg	5.1	0.98
MH461	SC1	3/29/2012	Filter/Stormwater	Chromium	42	mg/kg	260	0.16
MH461	SC1	3/13/2012	Filter/Stormwater	Chromium	62	mg/kg	260	0.24
MH461	SC1	2/24/2012	Filter/Stormwater	Chromium	20	mg/kg	260	0.077
MH461	SC1	3/29/2012	Filter/Stormwater	Copper	149	mg/kg	390	0.38
MH461	SC1	3/13/2012	Filter/Stormwater	Copper	182	mg/kg	390	0.47
MH461	SC1	2/24/2012	Filter/Stormwater	Copper	28	mg/kg	390	0.072
MH461	SC1	3/29/2012	Filter/Stormwater	Lead	40 U	mg/kg	450	0.089
MH461	SC1	3/13/2012	Filter/Stormwater	Lead	40	mg/kg	450	0.089
MH461	SC1	2/24/2012	Filter/Stormwater	Lead	40 U	mg/kg	450	0.089
MH461	SC1	3/29/2012	Filter/Stormwater	Mercury	0.20	mg/kg	0.41	0.49
MH461	SC1	3/13/2012	Filter/Stormwater	Mercury	0.30	mg/kg	0.41	0.73
MH461	SC1	2/24/2012	Filter/Stormwater	Mercury	0.2 U	mg/kg	0.41	0.49
MH461	SC1	3/29/2012	Filter/Stormwater	Silver	5 U	mg/kg	6.1	0.82
MH461	SC1	3/13/2012	Filter/Stormwater	Silver	5 U	mg/kg	6.1	0.82
MH461	SC1	2/24/2012	Filter/Stormwater	Silver	6 U	mg/kg	6.1	0.98
MH461	SC1	3/29/2012	Filter/Stormwater	Zinc	210	mg/kg	410	0.51
MH461	SC1	3/13/2012	Filter/Stormwater	Zinc	240	mg/kg	410	0.59
MH461	SC1	2/24/2012	Filter/Stormwater	Zinc	120	mg/kg	410	0.29
MH461	SC1	3/29/2012	Filter/Stormwater	Acenaphthene	0.16 U	mg/kg	0.50	0.32
MH461	SC1	3/13/2012	Filter/Stormwater	Acenaphthene	0.23 U	mg/kg	0.50	0.46
MH461	SC1	2/24/2012	Filter/Stormwater	Acenaphthene	0.018 U	mg/kg	0.50	0.036
MH461	SC1	3/29/2012	Filter/Stormwater	Anthracene	0.16 U	mg/kg	0.96	0.17
MH461	SC1	3/13/2012	Filter/Stormwater	Anthracene	0.23 U	mg/kg	0.96	0.24
MH461	SC1	2/24/2012	Filter/Stormwater	Anthracene	0.018 U	mg/kg	0.96	0.019
MH461	SC1	3/29/2012	Filter/Stormwater	Benzo(a)anthracene	0.11 J	mg/kg	1.3	0.085
MH461	SC1	3/13/2012	Filter/Stormwater	Benzo(a)anthracene	0.23 U	mg/kg	1.3	0.18
MH461	SC1	2/24/2012	Filter/Stormwater	Benzo(a)anthracene	0.022	mg/kg	1.3	0.017
MH461	SC1	3/29/2012	Filter/Stormwater	Total Benzofluoranthenes	1.4	mg/kg	3.2	0.44
MH461	SC1	3/13/2012	Filter/Stormwater	Total Benzofluoranthenes	1.5	mg/kg	3.2	0.47
MH461	SC1	2/24/2012	Filter/Stormwater	Total Benzofluoranthenes	0.16	mg/kg	3.2	0.050
MH461	SC1	3/29/2012	Filter/Stormwater	Benzo(g,h,i)perylene	0.49	mg/kg	0.67	0.73
MH461	SC1	3/13/2012	Filter/Stormwater	Benzo(g,h,i)perylene	0.55	mg/kg	0.67	0.82

Table 7.2-18
Storm Drain Solids Sampling Results - South-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH461	SC1	2/24/2012	Filter/Stormwater	Benzo(g,h,i)perylene	0.059	mg/kg	0.67	0.088
MH461	SC1	3/29/2012	Filter/Stormwater	Benzo(a)pyrene	0.28	mg/kg	0.15	1.9
MH461	SC1	3/13/2012	Filter/Stormwater	Benzo(a)pyrene	0.30	mg/kg	0.15	2.0
MH461	SC1	2/24/2012	Filter/Stormwater	Benzo(a)pyrene	0.04	mg/kg	0.15	0.27
MH461	SC1	3/29/2012	Filter/Stormwater	Chrysene	0.83	mg/kg	1.4	0.59
MH461	SC1	3/13/2012	Filter/Stormwater	Chrysene	0.98	mg/kg	1.4	0.70
MH461	SC1	2/24/2012	Filter/Stormwater	Chrysene	0.12	mg/kg	1.4	0.086
MH461	SC1	3/29/2012	Filter/Stormwater	Dibenz(a,h)anthracene	0.16 U	mg/kg	0.23	0.70
MH461	SC1	3/13/2012	Filter/Stormwater	Dibenz(a,h)anthracene	0.23 U	mg/kg	0.23	1.0
MH461	SC1	2/24/2012	Filter/Stormwater	Dibenz(a,h)anthracene	0.015 J	mg/kg	0.23	0.065
MH461	SC1	3/29/2012	Filter/Stormwater	Dibenzofuran	0.16 U	mg/kg	0.54	0.30
MH461	SC1	3/13/2012	Filter/Stormwater	Dibenzofuran	0.23 U	mg/kg	0.54	0.43
MH461	SC1	2/24/2012	Filter/Stormwater	Dibenzofuran	0.011 J	mg/kg	0.54	0.020
MH461	SC1	3/29/2012	Filter/Stormwater	Fluoranthene	0.99	mg/kg	1.7	0.58
MH461	SC1	3/13/2012	Filter/Stormwater	Fluoranthene	1.2	mg/kg	1.7	0.71
MH461	SC1	2/24/2012	Filter/Stormwater	Fluoranthene	0.19	mg/kg	1.7	0.11
MH461	SC1	3/29/2012	Filter/Stormwater	Fluorene	0.16 U	mg/kg	0.54	0.30
MH461	SC1	3/13/2012	Filter/Stormwater	Fluorene	0.23 U	mg/kg	0.54	0.43
MH461	SC1	2/24/2012	Filter/Stormwater	Fluorene	0.033 J	mg/kg	0.54	0.061
MH461	SC1	3/29/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.39	mg/kg	0.60	0.65
MH461	SC1	3/13/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.40	mg/kg	0.60	0.67
MH461	SC1	2/24/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.048	mg/kg	0.60	0.080
MH461	SC1	3/29/2012	Filter/Stormwater	2-Methylnaphthalene	0.16 U	mg/kg	0.67	0.24
MH461	SC1	3/13/2012	Filter/Stormwater	2-Methylnaphthalene	0.23 U	mg/kg	0.67	0.34
MH461	SC1	2/24/2012	Filter/Stormwater	2-Methylnaphthalene	0.059	mg/kg	0.67	0.088
MH461	SC1	3/29/2012	Filter/Stormwater	Phenanthrene	0.37	mg/kg	1.5	0.25
MH461	SC1	3/13/2012	Filter/Stormwater	Phenanthrene	0.53	mg/kg	1.5	0.35
MH461	SC1	2/24/2012	Filter/Stormwater	Phenanthrene	0.084	mg/kg	1.5	0.056
MH461	SC1	3/29/2012	Filter/Stormwater	Pyrene	0.57	mg/kg	2.6	0.22
MH461	SC1	3/13/2012	Filter/Stormwater	Pyrene	0.69	mg/kg	2.6	0.27
MH461	SC1	2/24/2012	Filter/Stormwater	Pyrene	0.084	mg/kg	2.6	0.032
MH461	SC1	3/29/2012	Filter/Stormwater	Total HPAHs	5.1 J	mg/kg	12	0.43
MH461	SC1	3/13/2012	Filter/Stormwater	Total HPAHs	5.6	mg/kg	12	0.47
MH461	SC1	2/24/2012	Filter/Stormwater	Total HPAHs	0.74 J	mg/kg	12	0.062
MH461	SC1	3/29/2012	Filter/Stormwater	Total LPAHs	0.37	mg/kg	5.2	0.071
MH461	SC1	3/13/2012	Filter/Stormwater	Total LPAHs	0.53	mg/kg	5.2	0.10
MH461	SC1	2/24/2012	Filter/Stormwater	Total LPAHs	0.17 J	mg/kg	5.2	0.033
MH461	SC1	3/29/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.49	mg/kg	0.15	3.2
MH461	SC1	3/13/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.52	mg/kg	0.15	3.5
MH461	SC1	2/24/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.066	mg/kg	0.15	0.44
CB359	SC2	12/30/2008	Grab	Total PCBs	0.67	mg/kg	0.13	5.2
MH360	SC2	4/10/2007	Grab	Total PCBs	0.033 U	mg/kg	0.13	0.25
CB370	SC3	6/10/2009	Grab	Total PCBs	2.6	mg/kg	0.13	20
CB370	SC3	3/14/2007	Grab	Total PCBs	6.0	mg/kg	0.13	46
CB370	SC3	7/26/2006	Grab	Total PCBs	28	mg/kg	0.13	220
MH369	SC3	6/2/2010	Filter/Stormwater	Total PCBs	0.69	mg/kg	0.13	5.3
MH369	SC3	5/20/2010	Filter/Stormwater	Total PCBs	0.23	mg/kg	0.13	1.8
MH369	SC3	4/27/2010	Filter/Stormwater	Total PCBs	1.1	mg/kg	0.13	8.2
MH369	SC3	5/20/2010	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	17	ng/kg	13	1.3
MH369	SC3	6/2/2010	Filter/Stormwater	Arsenic	70	mg/kg	7.3	9.6
MH369	SC3	5/20/2010	Filter/Stormwater	Arsenic	70	mg/kg	7.3	9.6
MH369	SC3	4/27/2010	Filter/Stormwater	Arsenic	90 U	mg/kg	7.3	12
MH369	SC3	6/2/2010	Filter/Stormwater	Cadmium	5.0	mg/kg	5.1	0.98
MH369	SC3	5/20/2010	Filter/Stormwater	Cadmium	6.0	mg/kg	5.1	1.2
MH369	SC3	4/27/2010	Filter/Stormwater	Cadmium	9.0	mg/kg	5.1	1.8
MH369	SC3	6/2/2010	Filter/Stormwater	Chromium	80	mg/kg	260	0.31
MH369	SC3	5/20/2010	Filter/Stormwater	Chromium	98	mg/kg	260	0.38
MH369	SC3	4/27/2010	Filter/Stormwater	Chromium	108 J	mg/kg	260	0.42
MH369	SC3	6/2/2010	Filter/Stormwater	Copper	86	mg/kg	390	0.22
MH369	SC3	5/20/2010	Filter/Stormwater	Copper	111 J	mg/kg	390	0.28
MH369	SC3	4/27/2010	Filter/Stormwater	Copper	133	mg/kg	390	0.34
MH369	SC3	6/2/2010	Filter/Stormwater	Lead	60	mg/kg	450	0.13
MH369	SC3	5/20/2010	Filter/Stormwater	Lead	90	mg/kg	450	0.20
MH369	SC3	4/27/2010	Filter/Stormwater	Lead	130	mg/kg	450	0.29
MH369	SC3	6/2/2010	Filter/Stormwater	Mercury	0.10 J	mg/kg	0.41	0.24
MH369	SC3	5/20/2010	Filter/Stormwater	Mercury	0.20 J	mg/kg	0.41	0.49

Table 7.2-18
Storm Drain Solids Sampling Results - South-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH369	SC3	4/27/2010	Filter/Stormwater	Mercury	0.20 J	mg/kg	0.41	0.49
MH369	SC3	6/2/2010	Filter/Stormwater	Silver	4 U	mg/kg	6.1	0.66
MH369	SC3	5/20/2010	Filter/Stormwater	Silver	4 U	mg/kg	6.1	0.66
MH369	SC3	4/27/2010	Filter/Stormwater	Silver	5 U	mg/kg	6.1	0.82
MH369	SC3	6/2/2010	Filter/Stormwater	Zinc	630	mg/kg	410	1.5
MH369	SC3	5/20/2010	Filter/Stormwater	Zinc	630	mg/kg	410	1.5
MH369	SC3	4/27/2010	Filter/Stormwater	Zinc	820 J	mg/kg	410	2.0
MH369	SC3	6/2/2010	Filter/Stormwater	Acenaphthene	0.12 U	mg/kg	0.50	0.24
MH369	SC3	4/27/2010	Filter/Stormwater	Acenaphthene	0.068	mg/kg	0.50	0.14
MH369	SC3	6/2/2010	Filter/Stormwater	Anthracene	0.12 U	mg/kg	0.96	0.13
MH369	SC3	4/27/2010	Filter/Stormwater	Anthracene	0.099	mg/kg	0.96	0.10
MH369	SC3	6/2/2010	Filter/Stormwater	Benzo(a)anthracene	0.36	mg/kg	1.3	0.28
MH369	SC3	4/27/2010	Filter/Stormwater	Benzo(a)anthracene	0.38	mg/kg	1.3	0.29
MH369	SC3	6/2/2010	Filter/Stormwater	Total Benzofluoranthenes	0.86	mg/kg	3.2	0.27
MH369	SC3	4/27/2010	Filter/Stormwater	Total Benzofluoranthenes	0.86	mg/kg	3.2	0.27
MH369	SC3	6/2/2010	Filter/Stormwater	Benzo(g,h,i)perylene	0.36	mg/kg	0.67	0.54
MH369	SC3	4/27/2010	Filter/Stormwater	Benzo(g,h,i)perylene	0.40 J	mg/kg	0.67	0.60
MH369	SC3	6/2/2010	Filter/Stormwater	Benzo(a)pyrene	0.42	mg/kg	0.15	2.8
MH369	SC3	4/27/2010	Filter/Stormwater	Benzo(a)pyrene	0.46 J	mg/kg	0.15	3.1
MH369	SC3	6/2/2010	Filter/Stormwater	Chrysene	1.0	mg/kg	1.4	0.71
MH369	SC3	4/27/2010	Filter/Stormwater	Chrysene	0.99	mg/kg	1.4	0.71
MH369	SC3	6/2/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.12 U	mg/kg	0.23	0.52
MH369	SC3	4/27/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.12 J	mg/kg	0.23	0.52
MH369	SC3	6/2/2010	Filter/Stormwater	Dibenzofuran	0.13	mg/kg	0.54	0.24
MH369	SC3	4/27/2010	Filter/Stormwater	Dibenzofuran	0.10	mg/kg	0.54	0.19
MH369	SC3	6/2/2010	Filter/Stormwater	Fluoranthene	1.3	mg/kg	1.7	0.76
MH369	SC3	4/27/2010	Filter/Stormwater	Fluoranthene	1.5	mg/kg	1.7	0.88
MH369	SC3	6/2/2010	Filter/Stormwater	Fluorene	0.12	mg/kg	0.54	0.22
MH369	SC3	4/27/2010	Filter/Stormwater	Fluorene	0.13	mg/kg	0.54	0.24
MH369	SC3	6/2/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.26	mg/kg	0.60	0.43
MH369	SC3	4/27/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.31 J	mg/kg	0.60	0.52
MH369	SC3	6/2/2010	Filter/Stormwater	2-Methylnaphthalene	0.13	mg/kg	0.67	0.19
MH369	SC3	4/27/2010	Filter/Stormwater	2-Methylnaphthalene	0.093	mg/kg	0.67	0.14
MH369	SC3	6/2/2010	Filter/Stormwater	Phenanthrene	0.78	mg/kg	1.5	0.52
MH369	SC3	4/27/2010	Filter/Stormwater	Phenanthrene	0.99	mg/kg	1.5	0.66
MH369	SC3	6/2/2010	Filter/Stormwater	Pyrene	1.1	mg/kg	2.6	0.42
MH369	SC3	4/27/2010	Filter/Stormwater	Pyrene	0.86	mg/kg	2.6	0.33
MH369	SC3	6/2/2010	Filter/Stormwater	Total HPAHs	5.7	mg/kg	12	0.47
MH369	SC3	4/27/2010	Filter/Stormwater	Total HPAHs	5.9	mg/kg	12	0.49
MH369	SC3	6/2/2010	Filter/Stormwater	Total LPAHs	1.0	mg/kg	5.2	0.20
MH369	SC3	4/27/2010	Filter/Stormwater	Total LPAHs	1.4	mg/kg	5.2	0.27
MH369	SC3	6/2/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.58	mg/kg	0.15	3.9
MH369	SC3	4/27/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.64	mg/kg	0.15	4.2
CB374	SC4	7/17/2012	Grab	Total PCBs	0.38	mg/kg	0.13	2.9
CB374	SC4	4/19/2010	Grab	Total PCBs	1.0	mg/kg	0.13	7.9
CB374	SC4	6/10/2009	Grab	Total PCBs	1.3	mg/kg	0.13	10
CB374	SC4	7/17/2012	Grab	Arsenic	7.4	mg/kg	7.3	1.0
CB374	SC4	4/19/2010	Grab	Arsenic	9 U	mg/kg	7.3	1.2
CB374	SC4	7/17/2012	Grab	Cadmium	3.6	mg/kg	5.1	0.70
CB374	SC4	4/19/2010	Grab	Cadmium	2.4	mg/kg	5.1	0.47
CB374	SC4	7/17/2012	Grab	Chromium	108	mg/kg	260	0.42
CB374	SC4	4/19/2010	Grab	Chromium	63	mg/kg	260	0.24
CB374	SC4	7/17/2012	Grab	Copper	155	mg/kg	390	0.40
CB374	SC4	4/19/2010	Grab	Copper	200	mg/kg	390	0.51
CB374	SC4	7/17/2012	Grab	Lead	175	mg/kg	450	0.39
CB374	SC4	4/19/2010	Grab	Lead	109	mg/kg	450	0.24
CB374	SC4	7/17/2012	Grab	Mercury	0.20 U	mg/kg	0.41	0.49
CB374	SC4	4/19/2010	Grab	Mercury	0.040	mg/kg	0.41	0.098
CB374	SC4	7/17/2012	Grab	Silver	0.32	mg/kg	6.1	0.053
CB374	SC4	4/19/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB374	SC4	7/17/2012	Grab	Zinc	1,140	mg/kg	410	2.8
CB374	SC4	4/19/2010	Grab	Zinc	597	mg/kg	410	1.5
MH402	SC5	4/19/2010	Grab	Total PCBs	0.68	mg/kg	0.13	5.2
MH402	SC5	6/11/2009	Grab	Total PCBs	1.3	mg/kg	0.13	10
MH402	SC5	4/19/2010	Grab	Arsenic	8.0	mg/kg	7.3	1.1
MH402	SC5	4/19/2010	Grab	Cadmium	2.5	mg/kg	5.1	0.49

Table 7.2-18
Storm Drain Solids Sampling Results - South-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH402	SC5	4/19/2010	Grab	Chromium	53	mg/kg	260	0.21
MH402	SC5	4/19/2010	Grab	Copper	84	mg/kg	390	0.22
MH402	SC5	4/19/2010	Grab	Lead	94	mg/kg	450	0.21
MH402	SC5	4/19/2010	Grab	Mercury	0.040	mg/kg	0.41	0.098
MH402	SC5	4/19/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
MH402	SC5	4/19/2010	Grab	Zinc	304	mg/kg	410	0.74
CB412	SC6	6/11/2009	Grab	Total PCBs	1.5	mg/kg	0.13	11
CB416	SC7	7/17/2012	Grab	Total PCBs	4.4	mg/kg	0.13	34
CB416	SC7	4/19/2010	Grab	Total PCBs	1.9	mg/kg	0.13	14
CB416	SC7	6/11/2009	Grab	Total PCBs	5.4	mg/kg	0.13	42
CB416	SC7	3/14/2007	Grab	Total PCBs	3.7	mg/kg	0.13	28
CB416	SC7	7/26/2006	Grab	Total PCBs	15	mg/kg	0.13	110
CB416	SC7	6/6/2005	Grab	Total PCBs	16	mg/kg	0.13	120
CB416	SC7	5/13/2005	Grab	Total PCBs	50	mg/kg	0.13	380
CB416	SC7	7/17/2012	Grab	Arsenic	14	mg/kg	7.3	1.9
CB416	SC7	4/19/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB416	SC7	7/17/2012	Grab	Cadmium	17	mg/kg	5.1	3.3
CB416	SC7	4/19/2010	Grab	Cadmium	11	mg/kg	5.1	2.1
CB416	SC7	7/17/2012	Grab	Chromium	152	mg/kg	260	0.58
CB416	SC7	4/19/2010	Grab	Chromium	124	mg/kg	260	0.48
CB416	SC7	7/17/2012	Grab	Copper	325	mg/kg	390	0.83
CB416	SC7	4/19/2010	Grab	Copper	365	mg/kg	390	0.94
CB416	SC7	7/17/2012	Grab	Lead	161	mg/kg	450	0.36
CB416	SC7	4/19/2010	Grab	Lead	161	mg/kg	450	0.36
CB416	SC7	7/17/2012	Grab	Mercury	0.31 U	mg/kg	0.41	0.75
CB416	SC7	4/19/2010	Grab	Mercury	0.12	mg/kg	0.41	0.29
CB416	SC7	7/17/2012	Grab	Silver	0.85	mg/kg	6.1	0.14
CB416	SC7	4/19/2010	Grab	Silver	0.8 U	mg/kg	6.1	0.13
CB416	SC7	7/17/2012	Grab	Zinc	2,710	mg/kg	410	6.6
CB416	SC7	4/19/2010	Grab	Zinc	1,220	mg/kg	410	3.0
CB418	SC7	4/19/2010	Grab	Total PCBs	1.2	mg/kg	0.13	9.2
CB418	SC7	3/14/2007	Grab	Total PCBs	2.8	mg/kg	0.13	22
CB418	SC7	6/6/2005	Grab	Total PCBs	4.0	mg/kg	0.13	31
CB418	SC7	4/19/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB418	SC7	4/19/2010	Grab	Cadmium	13	mg/kg	5.1	2.5
CB418	SC7	4/19/2010	Grab	Chromium	141	mg/kg	260	0.54
CB418	SC7	4/19/2010	Grab	Copper	322	mg/kg	390	0.83
CB418	SC7	4/19/2010	Grab	Lead	168	mg/kg	450	0.37
CB418	SC7	4/19/2010	Grab	Mercury	0.19	mg/kg	0.41	0.46
CB418	SC7	4/19/2010	Grab	Silver	0.8 U	mg/kg	6.1	0.13
CB418	SC7	4/19/2010	Grab	Zinc	1,160	mg/kg	410	2.8
CB419	SC7	7/17/2012	Grab	Total PCBs	1.6	mg/kg	0.13	12
CB419	SC7	4/19/2010	Grab	Total PCBs	2.2	mg/kg	0.13	17
CB419	SC7	6/11/2009	Grab	Total PCBs	3.5	mg/kg	0.13	27
CB419	SC7	3/14/2007	Grab	Total PCBs	3.4	mg/kg	0.13	26
CB419	SC7	7/26/2006	Grab	Total PCBs	6.2	mg/kg	0.13	48
CB419	SC7	6/6/2005	Grab	Total PCBs	22	mg/kg	0.13	170
CB419	SC7	7/17/2012	Grab	Arsenic	10	mg/kg	7.3	1.4
CB419	SC7	4/19/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB419	SC7	7/17/2012	Grab	Cadmium	9.5	mg/kg	5.1	1.9
CB419	SC7	4/19/2010	Grab	Cadmium	18	mg/kg	5.1	3.5
CB419	SC7	7/17/2012	Grab	Chromium	157	mg/kg	260	0.60
CB419	SC7	4/19/2010	Grab	Chromium	172	mg/kg	260	0.66
CB419	SC7	7/17/2012	Grab	Copper	296	mg/kg	390	0.76
CB419	SC7	4/19/2010	Grab	Copper	378	mg/kg	390	0.97
CB419	SC7	7/17/2012	Grab	Lead	163	mg/kg	450	0.36
CB419	SC7	4/19/2010	Grab	Lead	327	mg/kg	450	0.73
CB419	SC7	7/17/2012	Grab	Mercury	0.24 U	mg/kg	0.41	0.59
CB419	SC7	4/19/2010	Grab	Mercury	0.13	mg/kg	0.41	0.32
CB419	SC7	7/17/2012	Grab	Silver	0.51	mg/kg	6.1	0.083
CB419	SC7	4/19/2010	Grab	Silver	0.8 U	mg/kg	6.1	0.13
CB419	SC7	7/17/2012	Grab	Zinc	2,460	mg/kg	410	6.0
CB419	SC7	4/19/2010	Grab	Zinc	1,440	mg/kg	410	3.5
CB420	SC7	4/19/2010	Grab	Total PCBs	0.52	mg/kg	0.13	4.0
CB420	SC7	6/11/2009	Grab	Total PCBs	0.25	mg/kg	0.13	1.9
CB420	SC7	3/14/2007	Grab	Total PCBs	3.7	mg/kg	0.13	28

Table 7.2-18
Storm Drain Solids Sampling Results - South-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB420	SC7	7/26/2006	Grab	Total PCBs	8.4	mg/kg	0.13	65
CB420	SC7	5/13/2005	Grab	Total PCBs	30	mg/kg	0.13	230
CB420	SC7	4/19/2010	Grab	Arsenic	8.0	mg/kg	7.3	1.1
CB420	SC7	4/19/2010	Grab	Cadmium	18	mg/kg	5.1	3.5
CB420	SC7	4/19/2010	Grab	Chromium	72	mg/kg	260	0.28
CB420	SC7	4/19/2010	Grab	Copper	842	mg/kg	390	2.2
CB420	SC7	4/19/2010	Grab	Lead	41	mg/kg	450	0.091
CB420	SC7	4/19/2010	Grab	Mercury	0.34	mg/kg	0.41	0.83
CB420	SC7	4/19/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB420	SC7	4/19/2010	Grab	Zinc	492	mg/kg	410	1.2
MH415	SC7	4/19/2010	Grab	Total PCBs	0.30	mg/kg	0.13	2.3
MH415	SC7	6/11/2009	Grab	Total PCBs	17	mg/kg	0.13	130
MH415	SC7	9/22/2008	Grab	Total PCBs	8.2	mg/kg	0.13	63
MH415	SC7	4/10/2007	Grab	Total PCBs	47	mg/kg	0.13	360
MH415	SC7	3/14/2007	Grab	Total PCBs	104	mg/kg	0.13	800
MH415	SC7	7/26/2006	Grab	Total PCBs	3.8 U	mg/kg	0.13	29
MH415	SC7	6/6/2005	Grab	Total PCBs	13	mg/kg	0.13	100
MH415	SC7	4/19/2010	Grab	Arsenic	160 U	mg/kg	7.3	22
MH415	SC7	4/19/2010	Grab	Cadmium	7 U	mg/kg	5.1	1.4
MH415	SC7	4/19/2010	Grab	Chromium	60	mg/kg	260	0.23
MH415	SC7	4/19/2010	Grab	Copper	125	mg/kg	390	0.32
MH415	SC7	4/19/2010	Grab	Lead	70 U	mg/kg	450	0.16
MH415	SC7	4/19/2010	Grab	Mercury	0.2 U	mg/kg	0.41	0.49
MH415	SC7	4/19/2010	Grab	Silver	10 U	mg/kg	6.1	1.6
MH415	SC7	4/19/2010	Grab	Zinc	120	mg/kg	410	0.29
MH471	SC8	4/21/2010	Grab	Total PCBs	6.8	mg/kg	0.13	52
MH471	SC8	6/11/2009	Grab	Total PCBs	13	mg/kg	0.13	98
MH471	SC8	4/21/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
MH471	SC8	4/21/2010	Grab	Cadmium	3.3	mg/kg	5.1	0.65
MH471	SC8	4/21/2010	Grab	Chromium	105	mg/kg	260	0.40
MH471	SC8	4/21/2010	Grab	Copper	658	mg/kg	390	1.7
MH471	SC8	4/21/2010	Grab	Lead	248	mg/kg	450	0.55
MH471	SC8	4/21/2010	Grab	Mercury	0.10	mg/kg	0.41	0.24
MH471	SC8	4/21/2010	Grab	Silver	0.80	mg/kg	6.1	0.13
MH471	SC8	4/21/2010	Grab	Zinc	619	mg/kg	410	1.5
CB462	SC9	4/21/2010	Grab	Total PCBs	0.83	mg/kg	0.13	6.4
CB462	SC9	4/21/2010	Grab	Arsenic	18	mg/kg	7.3	2.5
CB462	SC9	4/21/2010	Grab	Cadmium	18	mg/kg	5.1	3.6
CB462	SC9	4/21/2010	Grab	Chromium	127 J	mg/kg	260	0.49
CB462	SC9	4/21/2010	Grab	Copper	193 J	mg/kg	390	0.49
CB462	SC9	4/21/2010	Grab	Lead	312 J	mg/kg	450	0.69
CB462	SC9	4/21/2010	Grab	Mercury	0.20	mg/kg	0.41	0.49
CB462	SC9	4/21/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB462	SC9	4/21/2010	Grab	Zinc	695	mg/kg	410	1.7
CB463	SC9	4/21/2010	Grab	Total PCBs	0.61	mg/kg	0.13	4.7
CB463	SC9	6/11/2009	Grab	Total PCBs	0.68	mg/kg	0.13	5.2
CB463	SC9	4/10/2007	Grab	Total PCBs	5.5	mg/kg	0.13	42
CB463	SC9	4/21/2010	Grab	Arsenic	30	mg/kg	7.3	4.1
CB463	SC9	4/21/2010	Grab	Cadmium	26	mg/kg	5.1	5.0
CB463	SC9	4/21/2010	Grab	Chromium	173	mg/kg	260	0.67
CB463	SC9	4/21/2010	Grab	Copper	385	mg/kg	390	0.99
CB463	SC9	4/21/2010	Grab	Lead	479	mg/kg	450	1.1
CB463	SC9	4/21/2010	Grab	Mercury	0.15	mg/kg	0.41	0.37
CB463	SC9	4/21/2010	Grab	Silver	0.7 U	mg/kg	6.1	0.11
CB463	SC9	4/21/2010	Grab	Zinc	1,240	mg/kg	410	3.0
CB472	SC9	4/21/2010	Grab	Total PCBs	0.041	mg/kg	0.13	0.32
CB472	SC9	4/10/2007	Grab	Total PCBs	0.18	mg/kg	0.13	1.4
CB472	SC9	4/21/2010	Grab	Arsenic	12	mg/kg	7.3	1.6
CB472	SC9	4/21/2010	Grab	Cadmium	3.6	mg/kg	5.1	0.71
CB472	SC9	4/21/2010	Grab	Chromium	61	mg/kg	260	0.23
CB472	SC9	4/21/2010	Grab	Copper	109	mg/kg	390	0.28
CB472	SC9	4/21/2010	Grab	Lead	20	mg/kg	450	0.044
CB472	SC9	4/21/2010	Grab	Mercury	0.040	mg/kg	0.41	0.098
CB472	SC9	4/21/2010	Grab	Silver	0.3 U	mg/kg	6.1	0.049
CB472	SC9	4/21/2010	Grab	Zinc	241	mg/kg	410	0.59
CB473	SC9	4/21/2010	Grab	Total PCBs	0.72	mg/kg	0.13	5.5

Table 7.2-18
Storm Drain Solids Sampling Results - South-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB473	SC9	4/10/2007	Grab	Total PCBs	1.3	mg/kg	0.13	10
CB473	SC9	4/21/2010	Grab	Arsenic	9.0	mg/kg	7.3	1.2
CB473	SC9	4/21/2010	Grab	Cadmium	11	mg/kg	5.1	2.2
CB473	SC9	4/21/2010	Grab	Chromium	135	mg/kg	260	0.52
CB473	SC9	4/21/2010	Grab	Copper	148	mg/kg	390	0.38
CB473	SC9	4/21/2010	Grab	Lead	256	mg/kg	450	0.57
CB473	SC9	4/21/2010	Grab	Mercury	0.03 U	mg/kg	0.41	0.073
CB473	SC9	4/21/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB473	SC9	4/21/2010	Grab	Zinc	661	mg/kg	410	1.6
CB474	SC9	7/17/2012	Grab	Total PCBs	1.6	mg/kg	0.13	12
CB474	SC9	4/21/2010	Grab	Total PCBs	1.5	mg/kg	0.13	12
CB474	SC9	6/11/2009	Grab	Total PCBs	1.3	mg/kg	0.13	10
CB474	SC9	7/17/2012	Grab	Arsenic	13	mg/kg	7.3	1.8
CB474	SC9	4/21/2010	Grab	Arsenic	15	mg/kg	7.3	2.1
CB474	SC9	7/17/2012	Grab	Cadmium	16	mg/kg	5.1	3.2
CB474	SC9	4/21/2010	Grab	Cadmium	19	mg/kg	5.1	3.6
CB474	SC9	7/17/2012	Grab	Chromium	101	mg/kg	260	0.39
CB474	SC9	4/21/2010	Grab	Chromium	173	mg/kg	260	0.67
CB474	SC9	7/17/2012	Grab	Copper	185	mg/kg	390	0.47
CB474	SC9	4/21/2010	Grab	Copper	296	mg/kg	390	0.76
CB474	SC9	7/17/2012	Grab	Lead	83	mg/kg	450	0.18
CB474	SC9	4/21/2010	Grab	Lead	308	mg/kg	450	0.68
CB474	SC9	7/17/2012	Grab	Mercury	0.18 U	mg/kg	0.41	0.44
CB474	SC9	4/21/2010	Grab	Mercury	0.090	mg/kg	0.41	0.22
CB474	SC9	7/17/2012	Grab	Silver	0.28	mg/kg	6.1	0.045
CB474	SC9	4/21/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB474	SC9	7/17/2012	Grab	Zinc	1,180	mg/kg	410	2.9
CB474	SC9	4/21/2010	Grab	Zinc	1,030	mg/kg	410	2.5
CB475	SC9	4/21/2010	Grab	Total PCBs	0.85	mg/kg	0.13	6.5
CB475	SC9	4/21/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB475	SC9	4/21/2010	Grab	Cadmium	27	mg/kg	5.1	5.2
CB475	SC9	4/21/2010	Grab	Chromium	165	mg/kg	260	0.63
CB475	SC9	4/21/2010	Grab	Copper	231	mg/kg	390	0.59
CB475	SC9	4/21/2010	Grab	Lead	215	mg/kg	450	0.48
CB475	SC9	4/21/2010	Grab	Mercury	0.080	mg/kg	0.41	0.20
CB475	SC9	4/21/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB475	SC9	4/21/2010	Grab	Zinc	814	mg/kg	410	2.0
CB476	SC9	4/21/2010	Grab	Total PCBs	0.79	mg/kg	0.13	6.1
CB476	SC9	4/21/2010	Grab	Arsenic	19	mg/kg	7.3	2.6
CB476	SC9	4/21/2010	Grab	Cadmium	23	mg/kg	5.1	4.5
CB476	SC9	4/21/2010	Grab	Chromium	240	mg/kg	260	0.92
CB476	SC9	4/21/2010	Grab	Copper	492	mg/kg	390	1.3
CB476	SC9	4/21/2010	Grab	Lead	183	mg/kg	450	0.41
CB476	SC9	4/21/2010	Grab	Mercury	0.070	mg/kg	0.41	0.17
CB476	SC9	4/21/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB476	SC9	4/21/2010	Grab	Zinc	971	mg/kg	410	2.4
MH863	SC9	4/19/2010	Grab	Total PCBs	0.88	mg/kg	0.13	6.8
MH863	SC9	4/19/2010	Grab	Arsenic	30	mg/kg	7.3	4.1
MH863	SC9	4/19/2010	Grab	Cadmium	35	mg/kg	5.1	6.8
MH863	SC9	4/19/2010	Grab	Chromium	191	mg/kg	260	0.73
MH863	SC9	4/19/2010	Grab	Copper	496	mg/kg	390	1.3
MH863	SC9	4/19/2010	Grab	Lead	210	mg/kg	450	0.47
MH863	SC9	4/19/2010	Grab	Mercury	0.15	mg/kg	0.41	0.37
MH863	SC9	4/19/2010	Grab	Silver	2.6	mg/kg	6.1	0.43
MH863	SC9	4/19/2010	Grab	Zinc	1,810	mg/kg	410	4.4
OWS472A	SC9	6/11/2009	Grab	Total PCBs	0.28	mg/kg	0.13	2.2
OWS472A	SC9	3/14/2007	Grab	Total PCBs	24	mg/kg	0.13	180
OWS472A	SC9	1/5/2006	Grab	Total PCBs	5.6	mg/kg	0.13	43

(shaded)	Indicates detected result exceeds the RISL.
(shaded)	Indicates nondetected result exceeds the RISL

All samples presented as dry weight concentrations.
Table includes only chemicals that exceed the screening level in at least one sample in this drainage area.
RISL = RI Screening Level

Table 7.2-19
Storm Drain Water Sampling Results - South-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH368	SC1	3/29/2012	Total PCBs	0.015 J	ug/L	0.010	1.5
MH368	SC1	3/13/2012	Total PCBs	0.006 J	ug/L	0.010	0.60
MH368	SC1	2/24/2012	Total PCBs	0.011	ug/L	0.010	1.1
MH368	SC1	3/29/2012	Arsenic	1.2	ug/L	0.87	1.4
MH368	SC1	3/29/2012	Arsenic	0.4	ug/L	0.87	0.46
MH368	SC1	3/13/2012	Arsenic	1.1	ug/L	0.87	1.3
MH368	SC1	3/13/2012	Arsenic	0.7	ug/L	0.87	0.80
MH368	SC1	2/24/2012	Arsenic	1.5	ug/L	0.87	1.7
MH368	SC1	2/24/2012	Arsenic	0.7	ug/L	0.87	0.80
MH368	SC1	3/29/2012	Copper	4.2	ug/L	2.4	1.8
MH368	SC1	3/29/2012	Copper	1.5	ug/L	2.4	0.63
MH368	SC1	3/13/2012	Copper	2.7	ug/L	2.4	1.1
MH368	SC1	3/13/2012	Copper	1.2	ug/L	2.4	0.50
MH368	SC1	2/24/2012	Copper	3.6	ug/L	2.4	1.5
MH368	SC1	2/24/2012	Copper	1.4	ug/L	2.4	0.58
MH368	SC1	3/29/2012	Zinc	32	ug/L	33	0.97
MH368	SC1	3/29/2012	Zinc	13	ug/L	33	0.39
MH368	SC1	3/13/2012	Zinc	25	ug/L	33	0.76
MH368	SC1	3/13/2012	Zinc	18	ug/L	33	0.55
MH368	SC1	2/24/2012	Zinc	36	ug/L	33	1.1
MH368	SC1	2/24/2012	Zinc	19	ug/L	33	0.58
MH368	SC1	3/29/2012	Benzo(g,h,i)perylene	0.019	ug/L	0.012	1.6
MH368	SC1	3/13/2012	Benzo(g,h,i)perylene	0.0055 J	ug/L	0.012	0.46
MH368	SC1	2/24/2012	Benzo(g,h,i)perylene	0.023	ug/L	0.012	1.9
MH368	SC1	3/29/2012	Benzo(a)pyrene	0.011 J	ug/L	0.010	1.1
MH368	SC1	3/13/2012	Benzo(a)pyrene	0.0059 J	ug/L	0.010	0.59
MH368	SC1	2/24/2012	Benzo(a)pyrene	0.017	ug/L	0.010	1.7
MH368	SC1	3/29/2012	Total cPAHs (TEQ, NDx0.5)	0.017	ug/L	0.010	1.7
MH368	SC1	3/13/2012	Total cPAHs (TEQ, NDx0.5)	0.0083	ug/L	0.010	0.83
MH368	SC1	2/24/2012	Total cPAHs (TEQ, NDx0.5)	0.027	ug/L	0.010	2.7
MH461	SC1	3/29/2012	Total PCBs	0.01 U	ug/L	0.010	1.0
MH461	SC1	3/13/2012	Total PCBs	0.01 U	ug/L	0.010	1.0
MH461	SC1	2/24/2012	Total PCBs	0.01 U	ug/L	0.010	1.0
MH461	SC1	3/29/2012	Arsenic	1	ug/L	0.87	1.1
MH461	SC1	3/29/2012	Arsenic	0.5	ug/L	0.87	0.57
MH461	SC1	3/13/2012	Arsenic	0.9	ug/L	0.87	1.0
MH461	SC1	3/13/2012	Arsenic	0.5	ug/L	0.87	0.57
MH461	SC1	2/24/2012	Arsenic	1	ug/L	0.87	1.1
MH461	SC1	2/24/2012	Arsenic	0.6	ug/L	0.87	0.69
MH461	SC1	3/29/2012	Copper	3.4	ug/L	2.4	1.4
MH461	SC1	3/29/2012	Copper	1.9	ug/L	2.4	0.79
MH461	SC1	3/13/2012	Copper	3.2	ug/L	2.4	1.3
MH461	SC1	3/13/2012	Copper	2	ug/L	2.4	0.83
MH461	SC1	2/24/2012	Copper	3.1	ug/L	2.4	1.3
MH461	SC1	2/24/2012	Copper	1.8	ug/L	2.4	0.75
MH461	SC1	3/29/2012	Zinc	10	ug/L	33	0.30
MH461	SC1	3/29/2012	Zinc	7	ug/L	33	0.21
MH461	SC1	3/13/2012	Zinc	11	ug/L	33	0.33
MH461	SC1	3/13/2012	Zinc	8	ug/L	33	0.24
MH461	SC1	2/24/2012	Zinc	12	ug/L	33	0.36
MH461	SC1	2/24/2012	Zinc	9	ug/L	33	0.27
MH461	SC1	3/29/2012	Benzo(g,h,i)perylene	0.012	ug/L	0.012	1.0
MH461	SC1	3/13/2012	Benzo(g,h,i)perylene	0.012	ug/L	0.012	1.0
MH461	SC1	2/24/2012	Benzo(g,h,i)perylene	0.015	ug/L	0.012	1.3

Table 7.2-19
Storm Drain Water Sampling Results - South-Central Lateral

Sample Location	Sub-Drainage	Sample Date	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH461	SC1	3/29/2012	Benzo(a)pyrene	0.0063 J	ug/L	0.010	0.63
MH461	SC1	3/13/2012	Benzo(a)pyrene	0.012	ug/L	0.010	1.2
MH461	SC1	2/24/2012	Benzo(a)pyrene	0.0095 J	ug/L	0.010	0.95
MH461	SC1	3/29/2012	Total cPAHs (TEQ, NDx0.5)	0.011	ug/L	0.010	1.1
MH461	SC1	3/13/2012	Total cPAHs (TEQ, NDx0.5)	0.019	ug/L	0.010	1.9
MH461	SC1	2/24/2012	Total cPAHs (TEQ, NDx0.5)	0.017	ug/L	0.010	1.7

Indicates detected result exceeds the RISL.

Table includes only chemicals that exceed the screening level in at least one sample in this drainage area.
RISL = RI Screening Level

Table 7.2-20
Chemicals Detected Above RISLs in Storm Drain Solids
South Lateral Drainage Area

Chemical Class	Chemical	Frequency of Detection	Min Detect (mg/kg DW)	Max Detect (mg/kg DW)	Average Detect (mg/kg DW)	RI SL (mg/kg DW)	Fraction of Detections Above SL	Maximum Exceedance Factor*	Average Exceedance Factor*
Metals	Arsenic	33 / 53	7.0	110	21	7.3	32 / 33	15	2.9
	Cadmium	45 / 45	1.5	55	17	5.1	41 / 45	11	3.3
	Chromium	45 / 45	30	3,140	208	260	5 / 45	12	<1
	Copper	53 / 53	34	1,200	336	390	15 / 53	3.1	<1
	Lead	53 / 53	41	851	220	450	2 / 53	1.9	<1
	Mercury	49 / 53	0.060	14	0.87	0.41	16 / 49	35	2.1
	Zinc	53 / 53	137	2,990	1,268	410	50 / 53	7.3	3.1
Polychlorinated Aromatic Compounds	Total PCBs	85 / 86	0.015	110	3.6	0.13	81 / 85	850	28
	Total dioxins/furans (ng/kg)	3 / 3	6.3	84	50	13	2 / 3	6.5	3.8
PAHs	2-Methylnaphthalene	10 / 25	0.14	4.8	0.90	0.67	3 / 10	7.2	1.3
	Acenaphthene	10 / 25	0.096	2.5	0.48	0.50	1 / 10	5.0	1.0
	Anthracene	16 / 25	0.097	2.7	0.91	0.96	6 / 16	2.8	<1
	Dibenzofuran	11 / 25	0.16	1.8	0.56	0.54	2 / 11	3.3	1.0
	Fluorene	11 / 25	0.14	3.1	0.71	0.54	4 / 11	5.7	1.3
	Phenanthrene	24 / 25	0.19	27	6.8	1.5	20 / 24	18	4.5
	Total LPAH	24 / 25	0.19	31	8.0	5.2	11 / 24	6.0	1.5
	Benzo(a)anthracene	21 / 24	0.21	20	4.2	1.3	15 / 21	15	3.2
	Benzo(a)pyrene	24 / 24	0.072	29	5.9	0.15	23 / 24	190	39
	Benzofluoranthenes	25 / 25	0.19	76	18	3.2	21 / 25	24	5.6
	Benzo(g,h,i)perylene	23 / 25	0.072	24	5.3	0.67	19 / 23	36	7.9
	Chrysene	25 / 25	0.076	45	11.0	1.4	21 / 25	32	7.9
	Dibenz(a,h)anthracene	17 / 24	0.11	9.9	2.1	0.23	16 / 17	43	9.1
	Fluoranthene	23 / 23	0.14	100	20	1.7	20 / 23	59	12
	Indeno(1,2,3-cd)pyrene	22 / 25	0.15	26	5.4	0.60	20 / 22	43	9.0
	Pyrene	25 / 25	0.092	33	9.2	2.6	20 / 25	13	3.5
	Total HPAH	25 / 25	0.64	363	78	12	22 / 25	30	6.5
	Total cPAH	25 / 25	0.10	43	8.7	0.15	24 / 25	280	58
Phthalates	Bis(2-ethylhexyl) phthalate	15 / 15	0.44	48	18	1.3	10 / 15	37	14
	Butyl benzyl phthalate	8 / 15	0.44	1.6	0.85	0.067	8 ' 8	24	13
Other SVOCs	p-Cresol (4-methylphenol)	3 / 15	0.10	2.1	1.0	0.67	2 / 3	3.1	1.5
	Phenol	2 / 15	0.67	0.73	0.70	0.42	2 / 2	1.7	1.7

EF Colors	EF Ranges
(white)	< 5.0
(yellow)	> 5.0 - 25
(light orange)	> 25 - 125
(pink/red)	> 125 - 625
(dark red)	> 625

Dioxin/furan concentrations are in units of ng/kg TEQ.
* Maximum and average exceedance factor for detected values only.

Table 7.2-21
Chemicals Detected Above RISLs in Storm Drain Water
South Lateral Drainage Area

Chemical Class	Chemical	Frequency of Detection	Minimum Detect (ug/L)	Maximum Detect (ug/L)	Average Detect (ug/L)	RISL (ug/L)	Fraction of Detections Above SL	Maximum Exceedance Factor*	Average Exceedance Factor*
Metals	Arsenic	12 / 12	0.30	1.9	0.70	0.87	2 / 12	2.2	<1
	Cadmium	9 / 12	0.20	0.60	0.36	0.43	3 / 9	1.4	<1
	Copper	12 / 12	1.7	12	4.7	2.4	9 / 12	4.8	2.0
	Lead	12 / 12	0.20	10	2.8	8.1	1 / 12	1.2	<1
	Zinc	12 / 12	11	71	31	33	3 / 12	2.2	1.0
PCBs	Total PCBs	3 / 6	0.013	0.020	0.019	0.010	3 / 3	2.4	1.9
PAHs	Benzo(a)pyrene	6 / 6	0.13	0.48	0.28	0.010	6 / 6	48	28
	Benzo(g,h,i)perylene	6 / 6	0.13	0.64	0.39	0.012	6 / 6	53	33
	Total cPAH	6 / 6	0.21	0.74	0.44	0.010	6 / 6	74	44

EF Colors	EF Ranges
	< 5.0
	> 5.0 - 25
	> 25 - 125

* Maximum and average exceedance factor for detected values only.

Table 7.2-22
Maximum RISL Exceedance Factors in Storm Drain Solids, by Subdrainage
South Lateral Drainage Area

Chemical Class	Chemical	S1 (Main Line)	S2	S3	S6A	S6B	S7	S8
Metals	Arsenic	4.1	ND	15	2.7	2.7	3.1	5.5
	Cadmium	3.3	3.1	<1	8.0	8.0	9.8	11
	Chromium	12	1.2	<1	<1	<1	<1	1.0
	Copper	2.6	1.1	<1	2.2	3.1	1.1	1.9
	Lead	<1	<1	<1	1.0	<1	1.9	<1
	Mercury	15	1.3	<1	10	<1	2.5	35
	Zinc	3.8	3.9	3.6	7.3	3.2	4.5	7.3
Polychlorinated Aromatic Compounds	Total PCBs	37	150	2	32	3.2	850	110
	Total dioxins/furans	6.5	--	--	--	--	--	--
PAHs	2-Methylnaphthalene	7.2	1.1	--	1.5	--	ND	2.1
	Acenaphthene	<1	1.5	--	<1	--	ND	5.0
	Anthracene	2.8	<1	--	<1	--	ND	2.7
	Dibenzofuran	2.4	1.4	--	ND	--	ND	3.3
	Fluorene	3.0	1.4	--	<1	--	ND	5.7
	Phenanthrene	18	1.9	--	1.9	--	4.9	13
	Total LPAHs	6.0	<1	--	<1	--	1.4	5.4
	Benzo(a)anthracene	15	<1	--	1.4	--	ND	6.6
	Benzo(a)pyrene	190	13	--	17	--	24	55
	Benzofluoranthenes	24	1.5	--	1.4	--	3.2	6.8
	Benzo(g,h,i)perylene	36	2.1	--	1.8	--	ND	3.9
	Chrysene	32	2.4	--	1.7	--	5.6	8.6
	Dibenzo(a,h)anthracene	43	3.2	--	ND	--	ND	5.2
	Fluoranthene	59	4.7	--	3.1	--	8.2	24
	Indeno(1,2,3-cd)pyrene	43	1.8	--	2.0	--	ND	4.8
	Pyrene	13	1.7	--	1.4	--	3.6	6.2
	Total HPAHs	30	2.2	--	1.9	--	3.8	9.4
	Total cPAHs	280	18	--	22	--	35	79
Phthalates	Bis(2-ethylhexyl) phthalate	37	7.7	--	4.5	--	20	32
	Butyl benzyl phthalate	24	12	--	6.6	--	ND	12
Other SVOCs	p-Cresol (4-methylphenol)	3.1	ND	--	<1	--	ND	ND
	Phenol	1.7	ND	--	<1	--	ND	ND

EF Colors	EF Ranges
Green	> 1.0 - 5.0
Yellow	> 5.0 - 25
Orange	> 25 - 125
Light red	> 125 - 625
Dark red	> 625

Dioxin/furan concentrations are in units of ng/kg TEQ.
-- = indicates sample not analyzed for this parameter
ND = not detected
Table shows maximum exceedance factors for detected chemicals only.
Subdrainage locations are shown in Figure 7.2-12.

Table 7.2-23
Storm Drain Solids Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH281	S1	6/15/2009	Grab	Total PCBs	0.58	mg/kg	0.13	4.5
MH281	S1	6/15/2009	Grab	Arsenic	30	mg/kg	7.3	4.1
MH281	S1	6/15/2009	Grab	Copper	141	mg/kg	390	0.36
MH281	S1	6/15/2009	Grab	Lead	82	mg/kg	450	0.18
MH281	S1	6/15/2009	Grab	Mercury	0.090	mg/kg	0.41	0.22
MH281	S1	6/15/2009	Grab	Zinc	497	mg/kg	410	1.2
MH281	S1	6/15/2009	Grab	p-Cresol (4-Methylphenol)	0.10	mg/kg	0.67	0.15
MH281	S1	6/15/2009	Grab	Phenol	0.06 U	mg/kg	0.42	0.14
MH281	S1	6/15/2009	Grab	Bis(2-ethylhexyl) phthalate	0.56	mg/kg	1.3	0.43
MH281	S1	6/15/2009	Grab	Butyl benzyl phthalate	0.06 U	mg/kg	0.067	0.90
MH281	S1	6/15/2009	Grab	Acenaphthene	0.06 U	mg/kg	0.50	0.12
MH281	S1	6/15/2009	Grab	Anthracene	0.097	mg/kg	0.96	0.10
MH281	S1	6/15/2009	Grab	Benzo(a)anthracene	0.49	mg/kg	1.3	0.38
MH281	S1	6/15/2009	Grab	Total Benzofluoranthenes	1.4	mg/kg	3.2	0.43
MH281	S1	6/15/2009	Grab	Benzo(g,h,i)perylene	0.22	mg/kg	0.67	0.33
MH281	S1	6/15/2009	Grab	Benzo(a)pyrene	0.61	mg/kg	0.15	4.1
MH281	S1	6/15/2009	Grab	Chrysene	0.80	mg/kg	1.4	0.57
MH281	S1	6/15/2009	Grab	Dibenz(a,h)anthracene	0.11	mg/kg	0.23	0.48
MH281	S1	6/15/2009	Grab	Dibenzofuran	0.06 U	mg/kg	0.54	0.11
MH281	S1	6/15/2009	Grab	Fluoranthene	1.7	mg/kg	1.7	1.0
MH281	S1	6/15/2009	Grab	Fluorene	0.06 U	mg/kg	0.54	0.11
MH281	S1	6/15/2009	Grab	Indeno(1,2,3-cd)pyrene	0.25	mg/kg	0.60	0.42
MH281	S1	6/15/2009	Grab	2-Methylnaphthalene	0.06 U	mg/kg	0.67	0.090
MH281	S1	6/15/2009	Grab	Phenanthrene	0.44	mg/kg	1.5	0.29
MH281	S1	6/15/2009	Grab	Pyrene	0.78	mg/kg	2.6	0.30
MH281	S1	6/15/2009	Grab	Total HPAHs	6.3	mg/kg	12	0.53
MH281	S1	6/15/2009	Grab	Total LPAHs	0.54	mg/kg	5.2	0.10
MH281	S1	6/15/2009	Grab	Total cPAHs (TEQ, NDx0.5)	0.84	mg/kg	0.15	5.6
MH356	S1	4/24/2012	Sediment Trap	Total PCBs	0.75	mg/kg	0.13	5.8
MH356	S1	3/29/2012	Filter/Stormwater	Total PCBs	0.44	mg/kg	0.13	3.4
MH356	S1	2/24/2012	Filter/Stormwater	Total PCBs	0.17 J	mg/kg	0.13	1.3
MH356	S1	4/5/2011	Sediment Trap	Total PCBs	0.68	mg/kg	0.13	5.2
MH356	S1	6/2/2010	Filter/Stormwater	Total PCBs	0.47	mg/kg	0.13	3.6
MH356	S1	5/20/2010	Filter/Stormwater	Total PCBs	0.27	mg/kg	0.13	2.0
MH356	S1	4/27/2010	Filter/Stormwater	Total PCBs	0.82	mg/kg	0.13	6.3
MH356	S1	4/8/2010	Sediment Trap	Total PCBs	0.46	mg/kg	0.13	3.5
MH356	S1	5/14/2007	Sediment Trap	Total PCBs	0.13	mg/kg	0.13	0.98
MH356	S1	1/8/2007	Sediment Trap	Total PCBs	0.32	mg/kg	0.13	2.5
MH356	S1	10/6/2006	Sediment Trap	Total PCBs	1.2	mg/kg	0.13	9.5
MH356	S1	3/16/2006	Sediment Trap	Total PCBs	1.5	mg/kg	0.13	11
MH356	S1	8/11/2005	Sediment Trap	Total PCBs	0.84	mg/kg	0.13	6.5
MH356	S1	3/13/2012	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	84	ng/kg	13	6.5
MH356	S1	5/20/2010	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	6.3	ng/kg	13	0.49
MH356	S1	4/24/2012	Sediment Trap	Arsenic	20 U	mg/kg	7.3	2.7
MH356	S1	3/29/2012	Filter/Stormwater	Arsenic	30 U	mg/kg	7.3	4.1
MH356	S1	3/13/2012	Filter/Stormwater	Arsenic	30 U	mg/kg	7.3	4.1
MH356	S1	2/24/2012	Filter/Stormwater	Arsenic	50 U	mg/kg	7.3	6.8
MH356	S1	6/2/2010	Filter/Stormwater	Arsenic	70 U	mg/kg	7.3	9.6
MH356	S1	5/20/2010	Filter/Stormwater	Arsenic	50 U	mg/kg	7.3	6.8
MH356	S1	4/27/2010	Filter/Stormwater	Arsenic	60 U	mg/kg	7.3	8.2
MH356	S1	10/6/2006	Sediment Trap	Arsenic	50 U	mg/kg	7.3	6.8
MH356	S1	3/29/2012	Filter/Stormwater	Cadmium	10	mg/kg	5.1	2.0
MH356	S1	3/13/2012	Filter/Stormwater	Cadmium	8.0	mg/kg	5.1	1.6
MH356	S1	2/24/2012	Filter/Stormwater	Cadmium	10	mg/kg	5.1	2.0
MH356	S1	6/2/2010	Filter/Stormwater	Cadmium	14	mg/kg	5.1	2.7
MH356	S1	5/20/2010	Filter/Stormwater	Cadmium	14	mg/kg	5.1	2.7
MH356	S1	4/27/2010	Filter/Stormwater	Cadmium	16	mg/kg	5.1	3.1
MH356	S1	3/29/2012	Filter/Stormwater	Chromium	137	mg/kg	260	0.53
MH356	S1	3/13/2012	Filter/Stormwater	Chromium	354	mg/kg	260	1.4
MH356	S1	2/24/2012	Filter/Stormwater	Chromium	3,140	mg/kg	260	12
MH356	S1	6/2/2010	Filter/Stormwater	Chromium	101	mg/kg	260	0.39
MH356	S1	5/20/2010	Filter/Stormwater	Chromium	98	mg/kg	260	0.38
MH356	S1	4/27/2010	Filter/Stormwater	Chromium	94 J	mg/kg	260	0.36
MH356	S1	4/24/2012	Sediment Trap	Copper	249	mg/kg	390	0.64
MH356	S1	3/29/2012	Filter/Stormwater	Copper	182	mg/kg	390	0.47
MH356	S1	3/13/2012	Filter/Stormwater	Copper	227	mg/kg	390	0.58
MH356	S1	2/24/2012	Filter/Stormwater	Copper	535	mg/kg	390	1.4
MH356	S1	6/2/2010	Filter/Stormwater	Copper	250	mg/kg	390	0.64

Table 7.2-23
Storm Drain Solids Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH356	S1	5/20/2010	Filter/Stormwater	Copper	254 J	mg/kg	390	0.65
MH356	S1	4/27/2010	Filter/Stormwater	Copper	226	mg/kg	390	0.58
MH356	S1	10/6/2006	Sediment Trap	Copper	276	mg/kg	390	0.71
MH356	S1	4/24/2012	Sediment Trap	Lead	272	mg/kg	450	0.60
MH356	S1	3/29/2012	Filter/Stormwater	Lead	160	mg/kg	450	0.36
MH356	S1	3/13/2012	Filter/Stormwater	Lead	180	mg/kg	450	0.40
MH356	S1	2/24/2012	Filter/Stormwater	Lead	120	mg/kg	450	0.27
MH356	S1	6/2/2010	Filter/Stormwater	Lead	200	mg/kg	450	0.44
MH356	S1	5/20/2010	Filter/Stormwater	Lead	250	mg/kg	450	0.56
MH356	S1	4/27/2010	Filter/Stormwater	Lead	180	mg/kg	450	0.40
MH356	S1	10/6/2006	Sediment Trap	Lead	300	mg/kg	450	0.67
MH356	S1	4/24/2012	Sediment Trap	Mercury	0.42	mg/kg	0.41	1.0
MH356	S1	3/29/2012	Filter/Stormwater	Mercury	0.30	mg/kg	0.41	0.73
MH356	S1	3/13/2012	Filter/Stormwater	Mercury	0.20	mg/kg	0.41	0.49
MH356	S1	2/24/2012	Filter/Stormwater	Mercury	0.40	mg/kg	0.41	0.98
MH356	S1	6/2/2010	Filter/Stormwater	Mercury	0.3 UJ	mg/kg	0.41	0.73
MH356	S1	5/20/2010	Filter/Stormwater	Mercury	0.30 J	mg/kg	0.41	0.73
MH356	S1	4/27/2010	Filter/Stormwater	Mercury	0.30 J	mg/kg	0.41	0.73
MH356	S1	10/6/2006	Sediment Trap	Mercury	0.60	mg/kg	0.41	1.5
MH356	S1	3/29/2012	Filter/Stormwater	Silver	2 U	mg/kg	6.1	0.33
MH356	S1	3/13/2012	Filter/Stormwater	Silver	2 U	mg/kg	6.1	0.33
MH356	S1	2/24/2012	Filter/Stormwater	Silver	3 U	mg/kg	6.1	0.49
MH356	S1	6/2/2010	Filter/Stormwater	Silver	4 U	mg/kg	6.1	0.66
MH356	S1	5/20/2010	Filter/Stormwater	Silver	3 U	mg/kg	6.1	0.49
MH356	S1	4/27/2010	Filter/Stormwater	Silver	3 U	mg/kg	6.1	0.49
MH356	S1	4/24/2012	Sediment Trap	Zinc	1,470	mg/kg	410	3.6
MH356	S1	3/29/2012	Filter/Stormwater	Zinc	1,000	mg/kg	410	2.4
MH356	S1	3/13/2012	Filter/Stormwater	Zinc	1,020	mg/kg	410	2.5
MH356	S1	2/24/2012	Filter/Stormwater	Zinc	1,030	mg/kg	410	2.5
MH356	S1	6/2/2010	Filter/Stormwater	Zinc	1,320	mg/kg	410	3.2
MH356	S1	5/20/2010	Filter/Stormwater	Zinc	1,460	mg/kg	410	3.6
MH356	S1	4/27/2010	Filter/Stormwater	Zinc	1,420 J	mg/kg	410	3.5
MH356	S1	10/6/2006	Sediment Trap	Zinc	1,560	mg/kg	410	3.8
MH356	S1	4/24/2012	Sediment Trap	p-Cresol (4-Methylphenol)	2.1	mg/kg	0.67	3.1
MH356	S1	4/8/2010	Sediment Trap	p-Cresol (4-Methylphenol)	0.47 U	mg/kg	0.67	0.70
MH356	S1	3/16/2006	Sediment Trap	p-Cresol (4-Methylphenol)	1.3 U	mg/kg	0.67	1.9
MH356	S1	4/24/2012	Sediment Trap	Phenol	0.73	mg/kg	0.42	1.7
MH356	S1	4/8/2010	Sediment Trap	Phenol	0.47 U	mg/kg	0.42	1.1
MH356	S1	3/16/2006	Sediment Trap	Phenol	1.3 U	mg/kg	0.42	3.1
MH356	S1	4/24/2012	Sediment Trap	Bis(2-ethylhexyl) phthalate	37	mg/kg	1.3	28
MH356	S1	4/8/2010	Sediment Trap	Bis(2-ethylhexyl) phthalate	19	mg/kg	1.3	15
MH356	S1	3/16/2006	Sediment Trap	Bis(2-ethylhexyl) phthalate	34	mg/kg	1.3	26
MH356	S1	4/24/2012	Sediment Trap	Butyl benzyl phthalate	1.0 J	mg/kg	0.067	15
MH356	S1	4/8/2010	Sediment Trap	Butyl benzyl phthalate	0.53	mg/kg	0.067	7.9
MH356	S1	3/16/2006	Sediment Trap	Butyl benzyl phthalate	1.6	mg/kg	0.067	24
MH356	S1	4/24/2012	Sediment Trap	Acenaphthene	0.48	mg/kg	0.50	0.96
MH356	S1	3/29/2012	Filter/Stormwater	Acenaphthene	0.15 J	mg/kg	0.50	0.30
MH356	S1	3/20/2012	Filter/Stormwater	Acenaphthene	0.54 U	mg/kg	0.50	1.1
MH356	S1	3/13/2012	Filter/Stormwater	Acenaphthene	0.38 U	mg/kg	0.50	0.76
MH356	S1	2/24/2012	Filter/Stormwater	Acenaphthene	1.1 U	mg/kg	0.50	2.2
MH356	S1	6/2/2010	Filter/Stormwater	Acenaphthene	0.29	mg/kg	0.50	0.58
MH356	S1	4/27/2010	Filter/Stormwater	Acenaphthene	0.13 J	mg/kg	0.50	0.26
MH356	S1	4/8/2010	Sediment Trap	Acenaphthene	0.43 J	mg/kg	0.50	0.86
MH356	S1	3/16/2006	Sediment Trap	Acenaphthene	1.3 U	mg/kg	0.50	2.6
MH356	S1	4/24/2012	Sediment Trap	Anthracene	1.1	mg/kg	0.96	1.1
MH356	S1	3/29/2012	Filter/Stormwater	Anthracene	0.19 J	mg/kg	0.96	0.20
MH356	S1	3/20/2012	Filter/Stormwater	Anthracene	0.54 U	mg/kg	0.96	0.56
MH356	S1	3/13/2012	Filter/Stormwater	Anthracene	0.38 U	mg/kg	0.96	0.40
MH356	S1	2/24/2012	Filter/Stormwater	Anthracene	1.1 U	mg/kg	0.96	1.1
MH356	S1	6/2/2010	Filter/Stormwater	Anthracene	0.25	mg/kg	0.96	0.26
MH356	S1	4/27/2010	Filter/Stormwater	Anthracene	1.6 J	mg/kg	0.96	1.7
MH356	S1	4/8/2010	Sediment Trap	Anthracene	1.3	mg/kg	0.96	1.4
MH356	S1	3/16/2006	Sediment Trap	Anthracene	1.7	mg/kg	0.96	1.8
MH356	S1	4/24/2012	Sediment Trap	Benzo(a)anthracene	7.7	mg/kg	1.3	5.9
MH356	S1	3/29/2012	Filter/Stormwater	Benzo(a)anthracene	1.8	mg/kg	1.3	1.4
MH356	S1	3/20/2012	Filter/Stormwater	Benzo(a)anthracene	0.76	mg/kg	1.3	0.58
MH356	S1	3/13/2012	Filter/Stormwater	Benzo(a)anthracene	2.5	mg/kg	1.3	1.9

Table 7.2-23
Storm Drain Solids Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH356	S1	2/24/2012	Filter/Stormwater	Benzo(a)anthracene	1.1 J	mg/kg	1.3	0.85
MH356	S1	6/2/2010	Filter/Stormwater	Benzo(a)anthracene	1.9	mg/kg	1.3	1.5
MH356	S1	4/8/2010	Sediment Trap	Benzo(a)anthracene	7.2	mg/kg	1.3	5.5
MH356	S1	3/16/2006	Sediment Trap	Benzo(a)anthracene	11	mg/kg	1.3	8.5
MH356	S1	4/24/2012	Sediment Trap	Total Benzofluoranthenes	34	mg/kg	3.2	11
MH356	S1	3/29/2012	Filter/Stormwater	Total Benzofluoranthenes	17	mg/kg	3.2	5.3
MH356	S1	3/20/2012	Filter/Stormwater	Total Benzofluoranthenes	4.0	mg/kg	3.2	1.3
MH356	S1	3/13/2012	Filter/Stormwater	Total Benzofluoranthenes	18	mg/kg	3.2	5.6
MH356	S1	2/24/2012	Filter/Stormwater	Total Benzofluoranthenes	6.0	mg/kg	3.2	1.9
MH356	S1	6/2/2010	Filter/Stormwater	Total Benzofluoranthenes	14	mg/kg	3.2	4.3
MH356	S1	4/27/2010	Filter/Stormwater	Total Benzofluoranthenes	14	mg/kg	3.2	4.3
MH356	S1	4/8/2010	Sediment Trap	Total Benzofluoranthenes	26	mg/kg	3.2	8.1
MH356	S1	3/16/2006	Sediment Trap	Total Benzofluoranthenes	43	mg/kg	3.2	13
MH356	S1	4/24/2012	Sediment Trap	Benzo(g,h,i)perylene	13	mg/kg	0.67	19
MH356	S1	3/29/2012	Filter/Stormwater	Benzo(g,h,i)perylene	4.8	mg/kg	0.67	7.2
MH356	S1	3/20/2012	Filter/Stormwater	Benzo(g,h,i)perylene	1.3	mg/kg	0.67	1.9
MH356	S1	3/13/2012	Filter/Stormwater	Benzo(g,h,i)perylene	5.1	mg/kg	0.67	7.6
MH356	S1	2/24/2012	Filter/Stormwater	Benzo(g,h,i)perylene	2.6	mg/kg	0.67	3.9
MH356	S1	6/2/2010	Filter/Stormwater	Benzo(g,h,i)perylene	4.5	mg/kg	0.67	6.7
MH356	S1	4/27/2010	Filter/Stormwater	Benzo(g,h,i)perylene	1.3 J	mg/kg	0.67	1.9
MH356	S1	4/8/2010	Sediment Trap	Benzo(g,h,i)perylene	9.4	mg/kg	0.67	14
MH356	S1	3/16/2006	Sediment Trap	Benzo(g,h,i)perylene	9.0	mg/kg	0.67	13
MH356	S1	4/24/2012	Sediment Trap	Benzo(a)pyrene	12	mg/kg	0.15	80
MH356	S1	3/29/2012	Filter/Stormwater	Benzo(a)pyrene	3.2	mg/kg	0.15	21
MH356	S1	3/20/2012	Filter/Stormwater	Benzo(a)pyrene	1.1	mg/kg	0.15	7.3
MH356	S1	3/13/2012	Filter/Stormwater	Benzo(a)pyrene	4.1	mg/kg	0.15	27
MH356	S1	2/24/2012	Filter/Stormwater	Benzo(a)pyrene	2.0	mg/kg	0.15	13
MH356	S1	6/2/2010	Filter/Stormwater	Benzo(a)pyrene	3.5	mg/kg	0.15	23
MH356	S1	4/8/2010	Sediment Trap	Benzo(a)pyrene	12	mg/kg	0.15	80
MH356	S1	3/16/2006	Sediment Trap	Benzo(a)pyrene	15	mg/kg	0.15	100
MH356	S1	4/24/2012	Sediment Trap	Chrysene	19	mg/kg	1.4	14
MH356	S1	3/29/2012	Filter/Stormwater	Chrysene	9.2	mg/kg	1.4	6.6
MH356	S1	3/20/2012	Filter/Stormwater	Chrysene	2.2	mg/kg	1.4	1.6
MH356	S1	3/13/2012	Filter/Stormwater	Chrysene	11	mg/kg	1.4	7.9
MH356	S1	2/24/2012	Filter/Stormwater	Chrysene	3.5	mg/kg	1.4	2.5
MH356	S1	6/2/2010	Filter/Stormwater	Chrysene	9.9	mg/kg	1.4	7.1
MH356	S1	4/27/2010	Filter/Stormwater	Chrysene	9.7 J	mg/kg	1.4	6.9
MH356	S1	4/8/2010	Sediment Trap	Chrysene	16	mg/kg	1.4	11
MH356	S1	3/16/2006	Sediment Trap	Chrysene	23	mg/kg	1.4	16
MH356	S1	4/24/2012	Sediment Trap	Dibenz(a,h)anthracene	4.7	mg/kg	0.23	20
MH356	S1	3/29/2012	Filter/Stormwater	Dibenz(a,h)anthracene	0.96	mg/kg	0.23	4.2
MH356	S1	3/20/2012	Filter/Stormwater	Dibenz(a,h)anthracene	0.54 U	mg/kg	0.23	2.3
MH356	S1	3/13/2012	Filter/Stormwater	Dibenz(a,h)anthracene	0.97	mg/kg	0.23	4.2
MH356	S1	2/24/2012	Filter/Stormwater	Dibenz(a,h)anthracene	0.76 J	mg/kg	0.23	3.3
MH356	S1	6/2/2010	Filter/Stormwater	Dibenz(a,h)anthracene	1.4	mg/kg	0.23	6.1
MH356	S1	4/8/2010	Sediment Trap	Dibenz(a,h)anthracene	3.5	mg/kg	0.23	15
MH356	S1	3/16/2006	Sediment Trap	Dibenz(a,h)anthracene	2.1	mg/kg	0.23	9.1
MH356	S1	4/24/2012	Sediment Trap	Dibenzofuran	0.44	mg/kg	0.54	0.81
MH356	S1	3/29/2012	Filter/Stormwater	Dibenzofuran	0.18 J	mg/kg	0.54	0.33
MH356	S1	3/20/2012	Filter/Stormwater	Dibenzofuran	0.54 U	mg/kg	0.54	1.0
MH356	S1	3/13/2012	Filter/Stormwater	Dibenzofuran	0.38 U	mg/kg	0.54	0.70
MH356	S1	2/24/2012	Filter/Stormwater	Dibenzofuran	1.1 U	mg/kg	0.54	2.0
MH356	S1	6/2/2010	Filter/Stormwater	Dibenzofuran	0.37	mg/kg	0.54	0.69
MH356	S1	4/27/2010	Filter/Stormwater	Dibenzofuran	0.26 J	mg/kg	0.54	0.48
MH356	S1	4/8/2010	Sediment Trap	Dibenzofuran	0.43 J	mg/kg	0.54	0.80
MH356	S1	3/16/2006	Sediment Trap	Dibenzofuran	1.3 U	mg/kg	0.54	2.4
MH356	S1	4/24/2012	Sediment Trap	Fluoranthene	26	mg/kg	1.7	15
MH356	S1	3/29/2012	Filter/Stormwater	Fluoranthene	12	mg/kg	1.7	7.1
MH356	S1	3/20/2012	Filter/Stormwater	Fluoranthene	4.2	mg/kg	1.7	2.5
MH356	S1	3/13/2012	Filter/Stormwater	Fluoranthene	17	mg/kg	1.7	10
MH356	S1	2/24/2012	Filter/Stormwater	Fluoranthene	6.0	mg/kg	1.7	3.5
MH356	S1	4/27/2010	Filter/Stormwater	Fluoranthene	18 J	mg/kg	1.7	11
MH356	S1	4/8/2010	Sediment Trap	Fluoranthene	28	mg/kg	1.7	16
MH356	S1	3/16/2006	Sediment Trap	Fluoranthene	45	mg/kg	1.7	26
MH356	S1	4/24/2012	Sediment Trap	Fluorene	0.48	mg/kg	0.54	0.89
MH356	S1	3/29/2012	Filter/Stormwater	Fluorene	0.26 U	mg/kg	0.54	0.48
MH356	S1	3/20/2012	Filter/Stormwater	Fluorene	0.54 U	mg/kg	0.54	1.0

Table 7.2-23
Storm Drain Solids Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH356	S1	3/13/2012	Filter/Stormwater	Fluorene	0.38 U	mg/kg	0.54	0.70
MH356	S1	2/24/2012	Filter/Stormwater	Fluorene	1.1 U	mg/kg	0.54	2.0
MH356	S1	6/2/2010	Filter/Stormwater	Fluorene	0.24	mg/kg	0.54	0.44
MH356	S1	4/27/2010	Filter/Stormwater	Fluorene	0.19 J	mg/kg	0.54	0.35
MH356	S1	4/8/2010	Sediment Trap	Fluorene	0.57	mg/kg	0.54	1.1
MH356	S1	3/16/2006	Sediment Trap	Fluorene	1.3 U	mg/kg	0.54	2.4
MH356	S1	4/24/2012	Sediment Trap	Indeno(1,2,3-cd)pyrene	12	mg/kg	0.60	20
MH356	S1	3/29/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	4.4	mg/kg	0.60	7.3
MH356	S1	3/20/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	1.1	mg/kg	0.60	1.8
MH356	S1	3/13/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	4.5	mg/kg	0.60	7.5
MH356	S1	2/24/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	2.3	mg/kg	0.60	3.8
MH356	S1	6/2/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	4.4	mg/kg	0.60	7.3
MH356	S1	4/27/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	1.7 J	mg/kg	0.60	2.8
MH356	S1	4/8/2010	Sediment Trap	Indeno(1,2,3-cd)pyrene	8.5	mg/kg	0.60	14
MH356	S1	3/16/2006	Sediment Trap	Indeno(1,2,3-cd)pyrene	9.2	mg/kg	0.60	15
MH356	S1	4/24/2012	Sediment Trap	2-Methylnaphthalene	0.22 J	mg/kg	0.67	0.33
MH356	S1	3/29/2012	Filter/Stormwater	2-Methylnaphthalene	0.15 J	mg/kg	0.67	0.22
MH356	S1	3/20/2012	Filter/Stormwater	2-Methylnaphthalene	0.54 U	mg/kg	0.67	0.81
MH356	S1	3/13/2012	Filter/Stormwater	2-Methylnaphthalene	0.38 U	mg/kg	0.67	0.57
MH356	S1	2/24/2012	Filter/Stormwater	2-Methylnaphthalene	1.1 U	mg/kg	0.67	1.6
MH356	S1	6/2/2010	Filter/Stormwater	2-Methylnaphthalene	0.14	mg/kg	0.67	0.21
MH356	S1	4/27/2010	Filter/Stormwater	2-Methylnaphthalene	0.17 J	mg/kg	0.67	0.25
MH356	S1	4/8/2010	Sediment Trap	2-Methylnaphthalene	0.47 U	mg/kg	0.67	0.70
MH356	S1	3/16/2006	Sediment Trap	2-Methylnaphthalene	1.3 U	mg/kg	0.67	1.9
MH356	S1	4/24/2012	Sediment Trap	Phenanthrene	11	mg/kg	1.5	7.3
MH356	S1	3/29/2012	Filter/Stormwater	Phenanthrene	3.3	mg/kg	1.5	2.2
MH356	S1	3/20/2012	Filter/Stormwater	Phenanthrene	1.2	mg/kg	1.5	0.80
MH356	S1	3/13/2012	Filter/Stormwater	Phenanthrene	4.4	mg/kg	1.5	2.9
MH356	S1	2/24/2012	Filter/Stormwater	Phenanthrene	2.0	mg/kg	1.5	1.3
MH356	S1	6/2/2010	Filter/Stormwater	Phenanthrene	5.0	mg/kg	1.5	3.3
MH356	S1	4/27/2010	Filter/Stormwater	Phenanthrene	1.7 J	mg/kg	1.5	1.1
MH356	S1	4/8/2010	Sediment Trap	Phenanthrene	11	mg/kg	1.5	7.3
MH356	S1	3/16/2006	Sediment Trap	Phenanthrene	15	mg/kg	1.5	10
MH356	S1	4/24/2012	Sediment Trap	Pyrene	19	mg/kg	2.6	7.3
MH356	S1	3/29/2012	Filter/Stormwater	Pyrene	6.1	mg/kg	2.6	2.3
MH356	S1	3/20/2012	Filter/Stormwater	Pyrene	2.2	mg/kg	2.6	0.85
MH356	S1	3/13/2012	Filter/Stormwater	Pyrene	8.2	mg/kg	2.6	3.2
MH356	S1	2/24/2012	Filter/Stormwater	Pyrene	3.6	mg/kg	2.6	1.4
MH356	S1	6/2/2010	Filter/Stormwater	Pyrene	6.8	mg/kg	2.6	2.6
MH356	S1	4/27/2010	Filter/Stormwater	Pyrene	4.3 J	mg/kg	2.6	1.7
MH356	S1	4/8/2010	Sediment Trap	Pyrene	15	mg/kg	2.6	5.8
MH356	S1	3/16/2006	Sediment Trap	Pyrene	23	mg/kg	2.6	8.8
MH356	S1	4/24/2012	Sediment Trap	Total HPAHs	147	mg/kg	12	12
MH356	S1	3/29/2012	Filter/Stormwater	Total HPAHs	59	mg/kg	12	4.9
MH356	S1	3/20/2012	Filter/Stormwater	Total HPAHs	17	mg/kg	12	1.4
MH356	S1	3/13/2012	Filter/Stormwater	Total HPAHs	71	mg/kg	12	5.9
MH356	S1	2/24/2012	Filter/Stormwater	Total HPAHs	28 J	mg/kg	12	2.3
MH356	S1	6/2/2010	Filter/Stormwater	Total HPAHs	46	mg/kg	12	3.8
MH356	S1	4/27/2010	Filter/Stormwater	Total HPAHs	49	mg/kg	12	4.1
MH356	S1	4/8/2010	Sediment Trap	Total HPAHs	126	mg/kg	12	10
MH356	S1	3/15/2006	Sediment Trap	Total HPAHs	180	mg/kg	12	15
MH356	S1	4/24/2012	Sediment Trap	Total LPAHs	13	mg/kg	5.2	2.6
MH356	S1	3/29/2012	Filter/Stormwater	Total LPAHs	3.6 J	mg/kg	5.2	0.69
MH356	S1	3/20/2012	Filter/Stormwater	Total LPAHs	1.2	mg/kg	5.2	0.23
MH356	S1	3/13/2012	Filter/Stormwater	Total LPAHs	4.4	mg/kg	5.2	0.85
MH356	S1	2/24/2012	Filter/Stormwater	Total LPAHs	2.0	mg/kg	5.2	0.38
MH356	S1	6/2/2010	Filter/Stormwater	Total LPAHs	6.0	mg/kg	5.2	1.2
MH356	S1	4/27/2010	Filter/Stormwater	Total LPAHs	3.8	mg/kg	5.2	0.74
MH356	S1	4/8/2010	Sediment Trap	Total LPAHs	13	mg/kg	5.2	2.6
MH356	S1	3/15/2006	Sediment Trap	Total LPAHs	17	mg/kg	5.2	3.2
MH356	S1	4/24/2012	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	18	mg/kg	0.15	120
MH356	S1	3/29/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	5.7	mg/kg	0.15	38
MH356	S1	3/20/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	1.7	mg/kg	0.15	12
MH356	S1	3/13/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	6.8	mg/kg	0.15	45
MH356	S1	2/24/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	3.1	mg/kg	0.15	20
MH356	S1	6/2/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	5.7	mg/kg	0.15	38
MH356	S1	4/27/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	1.6	mg/kg	0.15	11

Table 7.2-23
Storm Drain Solids Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH356	S1	4/8/2010	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	17	mg/kg	0.15	110
MH356	S1	3/16/2006	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	22	mg/kg	0.15	150
MH481	S1	7/26/2006	Grab	p-Cresol (4-Methylphenol)	0.065 U	mg/kg	0.67	0.097
MH481	S1	7/26/2006	Grab	Phenol	0.065 U	mg/kg	0.42	0.15
MH481	S1	7/26/2006	Grab	Bis(2-ethylhexyl) phthalate	1.1	mg/kg	1.3	0.85
MH481	S1	7/26/2006	Grab	Butyl benzyl phthalate	0.065 U	mg/kg	0.067	0.97
MH481	S1	7/26/2006	Grab	Acenaphthene	0.065 U	mg/kg	0.50	0.13
MH481	S1	7/26/2006	Grab	Anthracene	0.065 U	mg/kg	0.96	0.068
MH481	S1	7/26/2006	Grab	Benzo(a)anthracene	0.065 U	mg/kg	1.3	0.050
MH481	S1	7/26/2006	Grab	Total Benzofluoranthenes	0.19	mg/kg	3.2	0.059
MH481	S1	7/26/2006	Grab	Benzo(g,h,i)perylene	0.072	mg/kg	0.67	0.11
MH481	S1	7/26/2006	Grab	Benzo(a)pyrene	0.072	mg/kg	0.15	0.48
MH481	S1	7/26/2006	Grab	Chrysene	0.076	mg/kg	1.4	0.054
MH481	S1	7/26/2006	Grab	Dibenz(a,h)anthracene	0.065 U	mg/kg	0.23	0.28
MH481	S1	7/26/2006	Grab	Dibenzofuran	0.065 U	mg/kg	0.54	0.12
MH481	S1	7/26/2006	Grab	Fluoranthene	0.14	mg/kg	1.7	0.082
MH481	S1	7/26/2006	Grab	Fluorene	0.065 U	mg/kg	0.54	0.12
MH481	S1	7/26/2006	Grab	Indeno(1,2,3-cd)pyrene	0.065 U	mg/kg	0.60	0.11
MH481	S1	7/26/2006	Grab	2-Methylnaphthalene	0.065 U	mg/kg	0.67	0.097
MH481	S1	7/26/2006	Grab	Phenanthrene	0.065 U	mg/kg	1.5	0.043
MH481	S1	7/26/2006	Grab	Pyrene	0.092	mg/kg	2.6	0.035
MH481	S1	7/26/2006	Grab	Total HPAHs	0.64	mg/kg	12	0.053
MH481	S1	7/26/2006	Grab	Total LPAHs	0.065 U	mg/kg	5.2	0.013
MH481	S1	7/26/2006	Grab	Total cPAHs (TEQ, NDx0.5)	0.10	mg/kg	0.15	0.68
MH482	S1	3/29/2012	Filter/Stormwater	Total PCBs	0.36	mg/kg	0.13	2.8
MH482	S1	2/24/2012	Filter/Stormwater	Total PCBs	0.015	mg/kg	0.13	0.12
MH482	S1	4/27/2010	Grab	Total PCBs	0.25	mg/kg	0.13	1.9
MH482	S1	12/13/2004	Filter/Undifferentiated	Total PCBs	0.13	mg/kg	0.13	0.98
MH482	S1	3/13/2012	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	60	ng/kg	13	4.6
MH482	S1	3/29/2012	Filter/Stormwater	Arsenic	20	mg/kg	7.3	2.7
MH482	S1	3/13/2012	Filter/Stormwater	Arsenic	30	mg/kg	7.3	4.1
MH482	S1	2/24/2012	Filter/Stormwater	Arsenic	30 U	mg/kg	7.3	4.1
MH482	S1	4/27/2010	Grab	Arsenic	12	mg/kg	7.3	1.6
MH482	S1	3/29/2012	Filter/Stormwater	Cadmium	8.9	mg/kg	5.1	1.7
MH482	S1	3/13/2012	Filter/Stormwater	Cadmium	10	mg/kg	5.1	2.0
MH482	S1	2/24/2012	Filter/Stormwater	Cadmium	13	mg/kg	5.1	2.5
MH482	S1	4/27/2010	Grab	Cadmium	5.7	mg/kg	5.1	1.1
MH482	S1	3/29/2012	Filter/Stormwater	Chromium	50	mg/kg	260	0.19
MH482	S1	3/13/2012	Filter/Stormwater	Chromium	45	mg/kg	260	0.17
MH482	S1	2/24/2012	Filter/Stormwater	Chromium	33	mg/kg	260	0.13
MH482	S1	4/27/2010	Grab	Chromium	37	mg/kg	260	0.14
MH482	S1	3/29/2012	Filter/Stormwater	Copper	149	mg/kg	390	0.38
MH482	S1	3/13/2012	Filter/Stormwater	Copper	176	mg/kg	390	0.45
MH482	S1	2/24/2012	Filter/Stormwater	Copper	214	mg/kg	390	0.55
MH482	S1	4/27/2010	Grab	Copper	49	mg/kg	390	0.13
MH482	S1	3/29/2012	Filter/Stormwater	Lead	147	mg/kg	450	0.33
MH482	S1	3/13/2012	Filter/Stormwater	Lead	192	mg/kg	450	0.43
MH482	S1	2/24/2012	Filter/Stormwater	Lead	90	mg/kg	450	0.20
MH482	S1	4/27/2010	Grab	Lead	145	mg/kg	450	0.32
MH482	S1	3/29/2012	Filter/Stormwater	Mercury	0.20	mg/kg	0.41	0.49
MH482	S1	3/13/2012	Filter/Stormwater	Mercury	6.1	mg/kg	0.41	15
MH482	S1	2/24/2012	Filter/Stormwater	Mercury	0.20	mg/kg	0.41	0.49
MH482	S1	4/27/2010	Grab	Mercury	0.28	mg/kg	0.41	0.68
MH482	S1	3/29/2012	Filter/Stormwater	Silver	0.9 U	mg/kg	6.1	0.15
MH482	S1	3/13/2012	Filter/Stormwater	Silver	1 U	mg/kg	6.1	0.16
MH482	S1	2/24/2012	Filter/Stormwater	Silver	2 U	mg/kg	6.1	0.33
MH482	S1	4/27/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
MH482	S1	3/29/2012	Filter/Stormwater	Zinc	724	mg/kg	410	1.8
MH482	S1	3/13/2012	Filter/Stormwater	Zinc	819	mg/kg	410	2.0
MH482	S1	2/24/2012	Filter/Stormwater	Zinc	714	mg/kg	410	1.7
MH482	S1	4/27/2010	Grab	Zinc	411	mg/kg	410	1.0
MH482	S1	7/26/2006	Grab	p-Cresol (4-Methylphenol)	0.32 U	mg/kg	0.67	0.48
MH482	S1	7/26/2006	Grab	Phenol	0.32 U	mg/kg	0.42	0.76
MH482	S1	7/26/2006	Grab	Bis(2-ethylhexyl) phthalate	0.92	mg/kg	1.3	0.71
MH482	S1	7/26/2006	Grab	Butyl benzyl phthalate	0.32 U	mg/kg	0.067	4.8
MH482	S1	3/29/2012	Filter/Stormwater	Acenaphthene	0.23 J	mg/kg	0.50	0.46
MH482	S1	3/20/2012	Filter/Stormwater	Acenaphthene	0.14	mg/kg	0.50	0.28

Table 7.2-23
Storm Drain Solids Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH482	S1	3/13/2012	Filter/Stormwater	Acenaphthene	0.65 U	mg/kg	0.50	1.3
MH482	S1	2/24/2012	Filter/Stormwater	Acenaphthene	0.096 J	mg/kg	0.50	0.19
MH482	S1	7/26/2006	Grab	Acenaphthene	0.32 U	mg/kg	0.50	0.64
MH482	S1	3/29/2012	Filter/Stormwater	Anthracene	0.53	mg/kg	0.96	0.55
MH482	S1	3/20/2012	Filter/Stormwater	Anthracene	0.25	mg/kg	0.96	0.26
MH482	S1	3/13/2012	Filter/Stormwater	Anthracene	0.65 U	mg/kg	0.96	0.68
MH482	S1	2/24/2012	Filter/Stormwater	Anthracene	0.17	mg/kg	0.96	0.18
MH482	S1	7/26/2006	Grab	Anthracene	0.52	mg/kg	0.96	0.54
MH482	S1	3/29/2012	Filter/Stormwater	Benzo(a)anthracene	6.9	mg/kg	1.3	5.3
MH482	S1	3/20/2012	Filter/Stormwater	Benzo(a)anthracene	2.2	mg/kg	1.3	1.7
MH482	S1	3/13/2012	Filter/Stormwater	Benzo(a)anthracene	5.0	mg/kg	1.3	3.8
MH482	S1	2/24/2012	Filter/Stormwater	Benzo(a)anthracene	2.2	mg/kg	1.3	1.7
MH482	S1	7/26/2006	Grab	Benzo(a)anthracene	2.8	mg/kg	1.3	2.2
MH482	S1	3/29/2012	Filter/Stormwater	Total Benzofluoranthenes	63	mg/kg	3.2	20
MH482	S1	3/20/2012	Filter/Stormwater	Total Benzofluoranthenes	10	mg/kg	3.2	3.1
MH482	S1	3/13/2012	Filter/Stormwater	Total Benzofluoranthenes	49	mg/kg	3.2	15
MH482	S1	2/24/2012	Filter/Stormwater	Total Benzofluoranthenes	8.7	mg/kg	3.2	2.7
MH482	S1	7/26/2006	Grab	Total Benzofluoranthenes	8.1	mg/kg	3.2	2.5
MH482	S1	3/29/2012	Filter/Stormwater	Benzo(g,h,i)perylene	17	mg/kg	0.67	25
MH482	S1	3/20/2012	Filter/Stormwater	Benzo(g,h,i)perylene	3.5	mg/kg	0.67	5.2
MH482	S1	3/13/2012	Filter/Stormwater	Benzo(g,h,i)perylene	14	mg/kg	0.67	21
MH482	S1	2/24/2012	Filter/Stormwater	Benzo(g,h,i)perylene	3.5	mg/kg	0.67	5.2
MH482	S1	7/26/2006	Grab	Benzo(g,h,i)perylene	1.7	mg/kg	0.67	2.5
MH482	S1	3/29/2012	Filter/Stormwater	Benzo(a)pyrene	13	mg/kg	0.15	87
MH482	S1	3/20/2012	Filter/Stormwater	Benzo(a)pyrene	3.2	mg/kg	0.15	21
MH482	S1	3/13/2012	Filter/Stormwater	Benzo(a)pyrene	9.5	mg/kg	0.15	63
MH482	S1	2/24/2012	Filter/Stormwater	Benzo(a)pyrene	3.4	mg/kg	0.15	23
MH482	S1	7/26/2006	Grab	Benzo(a)pyrene	3.6	mg/kg	0.15	24
MH482	S1	3/29/2012	Filter/Stormwater	Chrysene	38	mg/kg	1.4	27
MH482	S1	3/20/2012	Filter/Stormwater	Chrysene	5.5	mg/kg	1.4	3.9
MH482	S1	3/13/2012	Filter/Stormwater	Chrysene	29	mg/kg	1.4	21
MH482	S1	2/24/2012	Filter/Stormwater	Chrysene	5.1	mg/kg	1.4	3.6
MH482	S1	7/26/2006	Grab	Chrysene	4.4	mg/kg	1.4	3.1
MH482	S1	3/29/2012	Filter/Stormwater	Dibenz(a,h)anthracene	3.7	mg/kg	0.23	16
MH482	S1	3/20/2012	Filter/Stormwater	Dibenz(a,h)anthracene	0.81	mg/kg	0.23	3.5
MH482	S1	3/13/2012	Filter/Stormwater	Dibenz(a,h)anthracene	2.5	mg/kg	0.23	11
MH482	S1	2/24/2012	Filter/Stormwater	Dibenz(a,h)anthracene	1.4 J	mg/kg	0.23	6.1
MH482	S1	7/26/2006	Grab	Dibenz(a,h)anthracene	0.37	mg/kg	0.23	1.6
MH482	S1	3/29/2012	Filter/Stormwater	Dibenzofuran	0.54	mg/kg	0.54	1.0
MH482	S1	3/20/2012	Filter/Stormwater	Dibenzofuran	0.16	mg/kg	0.54	0.30
MH482	S1	3/13/2012	Filter/Stormwater	Dibenzofuran	0.65 U	mg/kg	0.54	1.2
MH482	S1	2/24/2012	Filter/Stormwater	Dibenzofuran	0.18	mg/kg	0.54	0.33
MH482	S1	7/26/2006	Grab	Dibenzofuran	0.32 U	mg/kg	0.54	0.59
MH482	S1	3/29/2012	Filter/Stormwater	Fluoranthene	50	mg/kg	1.7	29
MH482	S1	3/13/2012	Filter/Stormwater	Fluoranthene	37	mg/kg	1.7	22
MH482	S1	2/24/2012	Filter/Stormwater	Fluoranthene	11	mg/kg	1.7	6.5
MH482	S1	7/26/2006	Grab	Fluoranthene	8.1	mg/kg	1.7	4.8
MH482	S1	3/29/2012	Filter/Stormwater	Fluorene	0.32 J	mg/kg	0.54	0.59
MH482	S1	3/20/2012	Filter/Stormwater	Fluorene	0.14	mg/kg	0.54	0.26
MH482	S1	3/13/2012	Filter/Stormwater	Fluorene	0.65 U	mg/kg	0.54	1.2
MH482	S1	2/24/2012	Filter/Stormwater	Fluorene	0.22	mg/kg	0.54	0.41
MH482	S1	7/26/2006	Grab	Fluorene	0.32 U	mg/kg	0.54	0.59
MH482	S1	3/29/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	16	mg/kg	0.60	27
MH482	S1	3/20/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	3.1	mg/kg	0.60	5.2
MH482	S1	3/13/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	13	mg/kg	0.60	22
MH482	S1	2/24/2012	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	3.3	mg/kg	0.60	5.5
MH482	S1	7/26/2006	Grab	Indeno(1,2,3-cd)pyrene	1.8	mg/kg	0.60	3.0
MH482	S1	3/29/2012	Filter/Stormwater	2-Methylnaphthalene	0.34 U	mg/kg	0.67	0.51
MH482	S1	3/20/2012	Filter/Stormwater	2-Methylnaphthalene	0.14	mg/kg	0.67	0.21
MH482	S1	3/13/2012	Filter/Stormwater	2-Methylnaphthalene	0.65 U	mg/kg	0.67	0.97
MH482	S1	2/24/2012	Filter/Stormwater	2-Methylnaphthalene	0.59	mg/kg	0.67	0.88
MH482	S1	7/26/2006	Grab	2-Methylnaphthalene	0.32 U	mg/kg	0.67	0.48
MH482	S1	3/29/2012	Filter/Stormwater	Phenanthrene	11	mg/kg	1.5	7.3
MH482	S1	3/20/2012	Filter/Stormwater	Phenanthrene	3.0	mg/kg	1.5	2.0
MH482	S1	3/13/2012	Filter/Stormwater	Phenanthrene	8.7	mg/kg	1.5	5.8
MH482	S1	2/24/2012	Filter/Stormwater	Phenanthrene	3.3	mg/kg	1.5	2.2
MH482	S1	7/26/2006	Grab	Phenanthrene	3.3	mg/kg	1.5	2.2

Table 7.2-23
Storm Drain Solids Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH482	S1	3/29/2012	Filter/Stormwater	Pyrene	19	mg/kg	2.6	7.3
MH482	S1	3/20/2012	Filter/Stormwater	Pyrene	5.1	mg/kg	2.6	2.0
MH482	S1	3/13/2012	Filter/Stormwater	Pyrene	18	mg/kg	2.6	6.9
MH482	S1	2/24/2012	Filter/Stormwater	Pyrene	3.9	mg/kg	2.6	1.5
MH482	S1	7/26/2006	Grab	Pyrene	5.6	mg/kg	2.6	2.2
MH482	S1	3/29/2012	Filter/Stormwater	Total HPAHs	230	mg/kg	12	19
MH482	S1	3/20/2012	Filter/Stormwater	Total HPAHs	43	mg/kg	12	3.6
MH482	S1	3/13/2012	Filter/Stormwater	Total HPAHs	180	mg/kg	12	15
MH482	S1	2/24/2012	Filter/Stormwater	Total HPAHs	43 J	mg/kg	12	3.6
MH482	S1	7/26/2006	Grab	Total HPAHs	36	mg/kg	12	3.0
MH482	S1	3/29/2012	Filter/Stormwater	Total LPAHs	12 J	mg/kg	5.2	2.3
MH482	S1	3/20/2012	Filter/Stormwater	Total LPAHs	3.6 J	mg/kg	5.2	0.69
MH482	S1	3/13/2012	Filter/Stormwater	Total LPAHs	8.7	mg/kg	5.2	1.7
MH482	S1	2/24/2012	Filter/Stormwater	Total LPAHs	4.1 J	mg/kg	5.2	0.79
MH482	S1	7/26/2006	Grab	Total LPAHs	3.8	mg/kg	5.2	0.73
MH482	S1	3/29/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	22	mg/kg	0.15	150
MH482	S1	3/20/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	4.9	mg/kg	0.15	32
MH482	S1	3/13/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	17	mg/kg	0.15	110
MH482	S1	2/24/2012	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	5.0	mg/kg	0.15	33
MH482	S1	7/26/2006	Grab	Total cPAHs (TEQ, NDx0.5)	5.0	mg/kg	0.15	33
MH483A	S1	7/17/2012	Grab	Total PCBs	2.8	mg/kg	0.13	22
MH483A	S1	4/21/2010	Grab	Total PCBs	4.8	mg/kg	0.13	37
MH483A	S1	6/11/2009	Grab	Total PCBs	1.7	mg/kg	0.13	13
MH483A	S1	5/13/2005	Grab	Total PCBs	3.5	mg/kg	0.13	27
MH483A	S1	7/17/2012	Grab	Arsenic	12	mg/kg	7.3	1.6
MH483A	S1	4/21/2010	Grab	Arsenic	11	mg/kg	7.3	1.5
MH483A	S1	7/17/2012	Grab	Cadmium	17	mg/kg	5.1	3.3
MH483A	S1	4/21/2010	Grab	Cadmium	15	mg/kg	5.1	3.0
MH483A	S1	7/17/2012	Grab	Chromium	129	mg/kg	260	0.50
MH483A	S1	4/21/2010	Grab	Chromium	106	mg/kg	260	0.41
MH483A	S1	7/17/2012	Grab	Copper	1,010	mg/kg	390	2.6
MH483A	S1	4/21/2010	Grab	Copper	255	mg/kg	390	0.65
MH483A	S1	7/17/2012	Grab	Lead	305	mg/kg	450	0.68
MH483A	S1	4/21/2010	Grab	Lead	375	mg/kg	450	0.83
MH483A	S1	7/17/2012	Grab	Mercury	1.6	mg/kg	0.41	3.9
MH483A	S1	4/21/2010	Grab	Mercury	0.84	mg/kg	0.41	2.0
MH483A	S1	7/17/2012	Grab	Silver	0.33	mg/kg	6.1	0.055
MH483A	S1	4/21/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
MH483A	S1	7/17/2012	Grab	Zinc	1,080	mg/kg	410	2.6
MH483A	S1	4/21/2010	Grab	Zinc	836	mg/kg	410	2.0
MH492	S1	4/29/2010	Sediment Trap	Total PCBs	0.45	mg/kg	0.13	3.5
MH492	S1	10/7/2009	Sediment Trap	Total PCBs	0.18	mg/kg	0.13	1.4
MH492	S1	4/7/2009	Sediment Trap	Total PCBs	0.20	mg/kg	0.13	1.5
MH492	S1	8/5/2008	Sediment Trap	Total PCBs	0.36	mg/kg	0.13	2.8
MH492	S1	5/17/2007	Sediment Trap	Total PCBs	0.23	mg/kg	0.13	1.8
MH492	S1	1/9/2007	Sediment Trap	Total PCBs	0.28	mg/kg	0.13	2.2
MH492	S1	10/6/2006	Sediment Trap	Total PCBs	0.02 U	mg/kg	0.13	0.15
MH492	S1	3/15/2006	Sediment Trap	Total PCBs	0.38	mg/kg	0.13	2.9
MH492	S1	8/11/2005	Sediment Trap	Total PCBs	0.18	mg/kg	0.13	1.4
MH492	S1	4/29/2010	Sediment Trap	Arsenic	20 U	mg/kg	7.3	2.7
MH492	S1	10/7/2009	Sediment Trap	Arsenic	10 UJ	mg/kg	7.3	1.4
MH492	S1	4/7/2009	Sediment Trap	Arsenic	20 UJ	mg/kg	7.3	2.7
MH492	S1	3/18/2008	Sediment Trap	Arsenic	20 U	mg/kg	7.3	2.7
MH492	S1	10/6/2006	Sediment Trap	Arsenic	7 U	mg/kg	7.3	0.96
MH492	S1	4/29/2010	Sediment Trap	Copper	190	mg/kg	390	0.49
MH492	S1	10/7/2009	Sediment Trap	Copper	216 J	mg/kg	390	0.55
MH492	S1	4/7/2009	Sediment Trap	Copper	211 J	mg/kg	390	0.54
MH492	S1	3/18/2008	Sediment Trap	Copper	263	mg/kg	390	0.67
MH492	S1	10/6/2006	Sediment Trap	Copper	34	mg/kg	390	0.087
MH492	S1	4/29/2010	Sediment Trap	Lead	246	mg/kg	450	0.55
MH492	S1	10/7/2009	Sediment Trap	Lead	311 J	mg/kg	450	0.69
MH492	S1	4/7/2009	Sediment Trap	Lead	275 J	mg/kg	450	0.61
MH492	S1	3/18/2008	Sediment Trap	Lead	424	mg/kg	450	0.94
MH492	S1	10/6/2006	Sediment Trap	Lead	41	mg/kg	450	0.091
MH492	S1	4/29/2010	Sediment Trap	Mercury	0.24	mg/kg	0.41	0.59
MH492	S1	10/7/2009	Sediment Trap	Mercury	0.25 J	mg/kg	0.41	0.61
MH492	S1	4/7/2009	Sediment Trap	Mercury	0.20 J	mg/kg	0.41	0.49

Table 7.2-23
Storm Drain Solids Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH492	S1	3/18/2008	Sediment Trap	Mercury	0.30	mg/kg	0.41	0.73
MH492	S1	10/6/2006	Sediment Trap	Mercury	0.06 U	mg/kg	0.41	0.15
MH492	S1	4/29/2010	Sediment Trap	Zinc	1,070	mg/kg	410	2.6
MH492	S1	10/7/2009	Sediment Trap	Zinc	1,200 J	mg/kg	410	2.9
MH492	S1	4/7/2009	Sediment Trap	Zinc	1,140 J	mg/kg	410	2.8
MH492	S1	3/18/2008	Sediment Trap	Zinc	1,280	mg/kg	410	3.1
MH492	S1	10/6/2006	Sediment Trap	Zinc	137	mg/kg	410	0.33
MH492	S1	4/29/2010	Sediment Trap	p-Cresol (4-Methylphenol)	0.93 U	mg/kg	0.67	1.4
MH492	S1	10/6/2006	Sediment Trap	p-Cresol (4-Methylphenol)	0.82	mg/kg	0.67	1.2
MH492	S1	4/29/2010	Sediment Trap	Phenol	0.93 U	mg/kg	0.42	2.2
MH492	S1	10/11/2006	Sediment Trap	Phenol	0.67	mg/kg	0.42	1.6
MH492	S1	4/29/2010	Sediment Trap	Bis(2-ethylhexyl) phthalate	48	mg/kg	1.3	37
MH492	S1	10/6/2006	Sediment Trap	Bis(2-ethylhexyl) phthalate	4.1	mg/kg	1.3	3.2
MH492	S1	4/29/2010	Sediment Trap	Butyl benzyl phthalate	1.1	mg/kg	0.067	16
MH492	S1	10/6/2006	Sediment Trap	Butyl benzyl phthalate	0.50	mg/kg	0.067	7.5
MH492	S1	4/29/2010	Sediment Trap	Acenaphthene	0.93 U	mg/kg	0.50	1.9
MH492	S1	10/11/2006	Sediment Trap	Acenaphthene	0.57 U	mg/kg	0.50	1.1
MH492	S1	4/29/2010	Sediment Trap	Anthracene	2.7	mg/kg	0.96	2.8
MH492	S1	10/6/2006	Sediment Trap	Anthracene	0.83	mg/kg	0.96	0.86
MH492	S1	4/29/2010	Sediment Trap	Benzo(a)anthracene	20	mg/kg	1.3	15
MH492	S1	10/6/2006	Sediment Trap	Benzo(a)anthracene	2.6	mg/kg	1.3	2.0
MH492	S1	4/29/2010	Sediment Trap	Total Benzofluoranthenes	76	mg/kg	3.2	24
MH492	S1	10/6/2006	Sediment Trap	Total Benzofluoranthenes	12	mg/kg	3.2	3.7
MH492	S1	4/29/2010	Sediment Trap	Benzo(g,h,i)perylene	24	mg/kg	0.67	36
MH492	S1	10/6/2006	Sediment Trap	Benzo(g,h,i)perylene	1.8	mg/kg	0.67	2.7
MH492	S1	4/29/2010	Sediment Trap	Benzo(a)pyrene	29	mg/kg	0.15	190
MH492	S1	10/6/2006	Sediment Trap	Benzo(a)pyrene	4.2	mg/kg	0.15	28
MH492	S1	4/29/2010	Sediment Trap	Chrysene	45	mg/kg	1.4	32
MH492	S1	10/6/2006	Sediment Trap	Chrysene	5.5	mg/kg	1.4	3.9
MH492	S1	4/29/2010	Sediment Trap	Dibenz(a,h)anthracene	9.9	mg/kg	0.23	43
MH492	S1	10/6/2006	Sediment Trap	Dibenz(a,h)anthracene	0.78	mg/kg	0.23	3.4
MH492	S1	4/29/2010	Sediment Trap	Dibenzofuran	1.3	mg/kg	0.54	2.4
MH492	S1	10/6/2006	Sediment Trap	Dibenzofuran	0.49	mg/kg	0.54	0.91
MH492	S1	4/29/2010	Sediment Trap	Fluoranthene	100	mg/kg	1.7	59
MH492	S1	10/6/2006	Sediment Trap	Fluoranthene	12	mg/kg	1.7	7.1
MH492	S1	4/29/2010	Sediment Trap	Fluorene	1.6	mg/kg	0.54	3.0
MH492	S1	10/6/2006	Sediment Trap	Fluorene	0.56	mg/kg	0.54	1.0
MH492	S1	4/29/2010	Sediment Trap	Indeno(1,2,3-cd)pyrene	26	mg/kg	0.60	43
MH492	S1	10/6/2006	Sediment Trap	Indeno(1,2,3-cd)pyrene	2.0	mg/kg	0.60	3.3
MH492	S1	4/29/2010	Sediment Trap	2-Methylnaphthalene	4.8	mg/kg	0.67	7.2
MH492	S1	10/6/2006	Sediment Trap	2-Methylnaphthalene	0.36	mg/kg	0.67	0.54
MH492	S1	4/29/2010	Sediment Trap	Phenanthrene	27	mg/kg	1.5	18
MH492	S1	10/6/2006	Sediment Trap	Phenanthrene	6.2	mg/kg	1.5	4.1
MH492	S1	4/29/2010	Sediment Trap	Pyrene	33	mg/kg	2.6	13
MH492	S1	10/6/2006	Sediment Trap	Pyrene	7.0	mg/kg	2.6	2.7
MH492	S1	4/29/2010	Sediment Trap	Total HPAHs	363	mg/kg	12	30
MH492	S1	10/6/2006	Sediment Trap	Total HPAHs	48	mg/kg	12	4.0
MH492	S1	4/29/2010	Sediment Trap	Total LPAHs	31	mg/kg	5.2	6.0
MH492	S1	10/6/2006	Sediment Trap	Total LPAHs	8.2	mg/kg	5.2	1.6
MH492	S1	4/29/2010	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	43	mg/kg	0.15	280
MH492	S1	10/6/2006	Sediment Trap	Total cPAHs (TEQ, NDx0.5)	6.0	mg/kg	0.15	40
CB384	S2	9/23/2008	Grab	Total PCBs	3.6	mg/kg	0.13	28
CB384	S2	3/14/2007	Grab	Total PCBs	19	mg/kg	0.13	150
CB384	S2	5/13/2005	Grab	Total PCBs	16	mg/kg	0.13	120
D393A	S2	5/10/2010	Grab	Total PCBs	0.95	mg/kg	0.13	7.3
CB437A	S2	4/20/2010	Grab	Total PCBs	1.1	mg/kg	0.13	8.1
CB437A	S2	4/20/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB437A	S2	4/20/2010	Grab	Cadmium	10	mg/kg	5.1	2.0
CB437A	S2	4/20/2010	Grab	Chromium	291	mg/kg	260	1.1
CB437A	S2	4/20/2010	Grab	Copper	230	mg/kg	390	0.59
CB437A	S2	4/20/2010	Grab	Lead	406	mg/kg	450	0.90
CB437A	S2	4/20/2010	Grab	Mercury	0.22	mg/kg	0.41	0.54
CB437A	S2	4/20/2010	Grab	Silver	1.4	mg/kg	6.1	0.23
CB437A	S2	4/20/2010	Grab	Zinc	1,600	mg/kg	410	3.9
OWS1-C	S2	4/26/2010	Grab	Total PCBs	6.2	mg/kg	0.13	47
OWS1-C	S2	7/26/2006	Grab	Total PCBs	2.2	mg/kg	0.13	17
OWS1-C	S2	1/13/2006	Grab	Total PCBs	4.7	mg/kg	0.13	36

Table 7.2-23
Storm Drain Solids Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
OWS1-C	S2	4/26/2010	Grab	Arsenic	50 U	mg/kg	7.3	6.8
OWS1-C	S2	4/26/2010	Grab	Cadmium	16 J	mg/kg	5.1	3.1
OWS1-C	S2	4/26/2010	Grab	Chromium	312 J	mg/kg	260	1.2
OWS1-C	S2	4/26/2010	Grab	Copper	418 J	mg/kg	390	1.1
OWS1-C	S2	4/26/2010	Grab	Lead	350 J	mg/kg	450	0.78
OWS1-C	S2	4/26/2010	Grab	Mercury	0.55	mg/kg	0.41	1.3
OWS1-C	S2	4/26/2010	Grab	Silver	3 U	mg/kg	6.1	0.49
OWS1-C	S2	4/26/2010	Grab	Zinc	1,590 J	mg/kg	410	3.9
OWS1-C	S2	7/26/2006	Grab	p-Cresol (4-Methylphenol)	0.74 U	mg/kg	0.67	1.1
OWS1-C	S2	7/26/2006	Grab	Phenol	0.74 U	mg/kg	0.42	1.8
OWS1-C	S2	7/26/2006	Grab	Bis(2-ethylhexyl) phthalate	10	mg/kg	1.3	7.7
OWS1-C	S2	7/26/2006	Grab	Butyl benzyl phthalate	0.81	mg/kg	0.067	12
OWS1-C	S2	7/26/2006	Grab	Acenaphthene	0.74 U	mg/kg	0.50	1.5
OWS1-C	S2	7/26/2006	Grab	Anthracene	0.74 U	mg/kg	0.96	0.77
OWS1-C	S2	7/26/2006	Grab	Benzo(a)anthracene	1.2	mg/kg	1.3	0.92
OWS1-C	S2	7/26/2006	Grab	Total Benzofluoranthenes	4.9	mg/kg	3.2	1.5
OWS1-C	S2	7/26/2006	Grab	Benzo(g,h,i)perylene	1.4	mg/kg	0.67	2.1
OWS1-C	S2	7/26/2006	Grab	Benzo(a)pyrene	1.9	mg/kg	0.15	13
OWS1-C	S2	7/26/2006	Grab	Chrysene	3.3	mg/kg	1.4	2.4
OWS1-C	S2	7/26/2006	Grab	Dibenz(a,h)anthracene	0.74 U	mg/kg	0.23	3.2
OWS1-C	S2	7/26/2006	Grab	Dibenzofuran	0.74 U	mg/kg	0.54	1.4
OWS1-C	S2	7/26/2006	Grab	Fluoranthene	8.0	mg/kg	1.7	4.7
OWS1-C	S2	7/26/2006	Grab	Fluorene	0.74 U	mg/kg	0.54	1.4
OWS1-C	S2	7/26/2006	Grab	Indeno(1,2,3-cd)pyrene	1.1	mg/kg	0.60	1.8
OWS1-C	S2	7/26/2006	Grab	2-Methylnaphthalene	0.74 U	mg/kg	0.67	1.1
OWS1-C	S2	7/26/2006	Grab	Phenanthrene	2.9	mg/kg	1.5	1.9
OWS1-C	S2	7/26/2006	Grab	Pyrene	4.4	mg/kg	2.6	1.7
OWS1-C	S2	7/26/2006	Grab	Total HPAHs	26	mg/kg	12	2.2
OWS1-C	S2	7/26/2006	Grab	Total LPAHs	2.9	mg/kg	5.2	0.56
OWS1-C	S2	7/26/2006	Grab	Total cPAHs (TEQ, NDx0.5)	2.7	mg/kg	0.15	18
CB299/D299A	S3	5/10/2010	Grab	Total PCBs	0.097	mg/kg	0.13	0.75
OWS289	S3	4/26/2010	Grab	Total PCBs	0.24	mg/kg	0.13	1.8
OWS289	S3	6/16/2009	Grab	Total PCBs	0.16	mg/kg	0.13	1.2
OWS289	S3	4/26/2010	Grab	Arsenic	110	mg/kg	7.3	15
OWS289	S3	4/26/2010	Grab	Cadmium	2.9	mg/kg	5.1	0.57
OWS289	S3	4/26/2010	Grab	Chromium	80	mg/kg	260	0.31
OWS289	S3	4/26/2010	Grab	Copper	145	mg/kg	390	0.37
OWS289	S3	4/26/2010	Grab	Lead	166	mg/kg	450	0.37
OWS289	S3	4/26/2010	Grab	Mercury	0.14	mg/kg	0.41	0.34
OWS289	S3	4/26/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
OWS289	S3	4/26/2010	Grab	Zinc	1,470	mg/kg	410	3.6
CB308	S6A	4/26/2010	Grab	Total PCBs	0.85	mg/kg	0.13	6.5
CB308	S6A	4/26/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB308	S6A	4/26/2010	Grab	Cadmium	11	mg/kg	5.1	2.1
CB308	S6A	4/26/2010	Grab	Chromium	229	mg/kg	260	0.88
CB308	S6A	4/26/2010	Grab	Copper	250	mg/kg	390	0.64
CB308	S6A	4/26/2010	Grab	Lead	128	mg/kg	450	0.28
CB308	S6A	4/26/2010	Grab	Mercury	0.16	mg/kg	0.41	0.39
CB308	S6A	4/26/2010	Grab	Silver	0.9 U	mg/kg	6.1	0.15
CB308	S6A	4/26/2010	Grab	Zinc	2,240	mg/kg	410	5.5
CB310B	S6A	4/29/2010	Grab	Total PCBs	0.27	mg/kg	0.13	2.1
CB310B	S6A	4/29/2010	Grab	Arsenic	8 U	mg/kg	7.3	1.1
CB310B	S6A	4/29/2010	Grab	Cadmium	2.2	mg/kg	5.1	0.43
CB310B	S6A	4/29/2010	Grab	Chromium	86	mg/kg	260	0.33
CB310B	S6A	4/29/2010	Grab	Copper	134	mg/kg	390	0.34
CB310B	S6A	4/29/2010	Grab	Lead	125	mg/kg	450	0.28
CB310B	S6A	4/29/2010	Grab	Mercury	0.060	mg/kg	0.41	0.15
CB310B	S6A	4/29/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB310B	S6A	4/29/2010	Grab	Zinc	565	mg/kg	410	1.4
CB310D	S6A	4/29/2010	Grab	Total PCBs	0.30	mg/kg	0.13	2.3
CB310D	S6A	4/29/2010	Grab	Arsenic	7 U	mg/kg	7.3	0.96
CB310D	S6A	4/29/2010	Grab	Cadmium	1.5	mg/kg	5.1	0.29
CB310D	S6A	4/29/2010	Grab	Chromium	68	mg/kg	260	0.26
CB310D	S6A	4/29/2010	Grab	Copper	87	mg/kg	390	0.22
CB310D	S6A	4/29/2010	Grab	Lead	54	mg/kg	450	0.12
CB310D	S6A	4/29/2010	Grab	Mercury	0.03 U	mg/kg	0.41	0.073
CB310D	S6A	4/29/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066

Table 7.2-23
Storm Drain Solids Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB310D	S6A	4/29/2010	Grab	Zinc	285	mg/kg	410	0.70
CB310G	S6A	4/27/2010	Grab	Total PCBs	0.60	mg/kg	0.13	4.6
CB310G	S6A	4/27/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB310G	S6A	4/27/2010	Grab	Cadmium	4.9	mg/kg	5.1	0.96
CB310G	S6A	4/27/2010	Grab	Chromium	152	mg/kg	260	0.58
CB310G	S6A	4/27/2010	Grab	Copper	194	mg/kg	390	0.50
CB310G	S6A	4/27/2010	Grab	Lead	458	mg/kg	450	1.0
CB310G	S6A	4/27/2010	Grab	Mercury	0.23	mg/kg	0.41	0.56
CB310G	S6A	4/27/2010	Grab	Silver	0.8 U	mg/kg	6.1	0.13
CB310G	S6A	4/27/2010	Grab	Zinc	1,530	mg/kg	410	3.7
CB446	S6A	7/26/2006	Grab	p-Cresol (4-Methylphenol)	0.32 U	mg/kg	0.67	0.48
CB446	S6A	7/26/2006	Grab	Phenol	0.32 U	mg/kg	0.42	0.76
CB446	S6A	7/26/2006	Grab	Bis(2-ethylhexyl) phthalate	5.9	mg/kg	1.3	4.5
CB446	S6A	7/26/2006	Grab	Butyl benzyl phthalate	0.44	mg/kg	0.067	6.6
CB446	S6A	7/26/2006	Grab	Acenaphthene	0.32	mg/kg	0.50	0.64
CB446	S6A	7/26/2006	Grab	Anthracene	0.53	mg/kg	0.96	0.55
CB446	S6A	7/26/2006	Grab	Benzo(a)anthracene	1.8	mg/kg	1.3	1.4
CB446	S6A	7/26/2006	Grab	Total Benzofluoranthenes	4.6	mg/kg	3.2	1.4
CB446	S6A	7/26/2006	Grab	Benzo(g,h,i)perylene	1.2	mg/kg	0.67	1.8
CB446	S6A	7/26/2006	Grab	Benzo(a)pyrene	2.5	mg/kg	0.15	17
CB446	S6A	7/26/2006	Grab	Chrysene	2.4	mg/kg	1.4	1.7
CB446	S6A	7/26/2006	Grab	Dibenz(a,h)anthracene	0.32 U	mg/kg	0.23	1.4
CB446	S6A	7/26/2006	Grab	Dibenzofuran	0.32 U	mg/kg	0.54	0.59
CB446	S6A	7/26/2006	Grab	Fluoranthene	5.3	mg/kg	1.7	3.1
CB446	S6A	7/26/2006	Grab	Fluorene	0.37	mg/kg	0.54	0.69
CB446	S6A	7/26/2006	Grab	Indeno(1,2,3-cd)pyrene	1.2	mg/kg	0.60	2.0
CB446	S6A	7/26/2006	Grab	2-Methylnaphthalene	0.98	mg/kg	0.67	1.5
CB446	S6A	7/26/2006	Grab	Phenanthrene	2.9	mg/kg	1.5	1.9
CB446	S6A	7/26/2006	Grab	Pyrene	3.7	mg/kg	2.6	1.4
CB446	S6A	7/26/2006	Grab	Total HPAHs	23	mg/kg	12	1.9
CB446	S6A	7/26/2006	Grab	Total LPAHs	4.1	mg/kg	5.2	0.79
CB446	S6A	7/26/2006	Grab	Total cPAHs (TEQ, NDx0.5)	3.3	mg/kg	0.15	22
CB448	S6A	7/17/2012	Grab	Total PCBs	2.3	mg/kg	0.13	17
CB448	S6A	4/26/2010	Grab	Total PCBs	2.1	mg/kg	0.13	16
CB448	S6A	6/16/2009	Grab	Total PCBs	2.9	mg/kg	0.13	22
CB448	S6A	7/17/2012	Grab	Arsenic	8.7	mg/kg	7.3	1.2
CB448	S6A	4/26/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB448	S6A	7/17/2012	Grab	Cadmium	13	mg/kg	5.1	2.6
CB448	S6A	4/26/2010	Grab	Cadmium	11	mg/kg	5.1	2.2
CB448	S6A	7/17/2012	Grab	Chromium	119	mg/kg	260	0.46
CB448	S6A	4/26/2010	Grab	Chromium	177	mg/kg	260	0.68
CB448	S6A	7/17/2012	Grab	Copper	197	mg/kg	390	0.51
CB448	S6A	4/26/2010	Grab	Copper	197	mg/kg	390	0.51
CB448	S6A	7/17/2012	Grab	Lead	242	mg/kg	450	0.54
CB448	S6A	4/26/2010	Grab	Lead	382	mg/kg	450	0.85
CB448	S6A	7/17/2012	Grab	Mercury	0.18 U	mg/kg	0.41	0.45
CB448	S6A	4/26/2010	Grab	Mercury	0.12	mg/kg	0.41	0.29
CB448	S6A	7/17/2012	Grab	Silver	0.62	mg/kg	6.1	0.10
CB448	S6A	4/26/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB448	S6A	7/17/2012	Grab	Zinc	1,640	mg/kg	410	4.0
CB448	S6A	4/26/2010	Grab	Zinc	1,000	mg/kg	410	2.4
CB451	S6A	4/26/2010	Grab	Total PCBs	1.3	mg/kg	0.13	9.7
CB451	S6A	4/26/2010	Grab	Arsenic	11	mg/kg	7.3	1.5
CB451	S6A	4/26/2010	Grab	Cadmium	10	mg/kg	5.1	2.0
CB451	S6A	4/26/2010	Grab	Chromium	132	mg/kg	260	0.51
CB451	S6A	4/26/2010	Grab	Copper	202	mg/kg	390	0.52
CB451	S6A	4/26/2010	Grab	Lead	120	mg/kg	450	0.27
CB451	S6A	4/26/2010	Grab	Mercury	0.13	mg/kg	0.41	0.32
CB451	S6A	4/26/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB451	S6A	4/26/2010	Grab	Zinc	1,940	mg/kg	410	4.7
CB453	S6A	7/19/2012	Grab	Total PCBs	1.5	mg/kg	0.13	12
CB453	S6A	4/29/2010	Grab	Total PCBs	4.1	mg/kg	0.13	32
CB453	S6A	6/16/2009	Grab	Total PCBs	3.8	mg/kg	0.13	29
CB453	S6A	7/19/2012	Grab	Arsenic	9.7	mg/kg	7.3	1.3
CB453	S6A	4/29/2010	Grab	Arsenic	10 U	mg/kg	7.3	1.4
CB453	S6A	7/19/2012	Grab	Cadmium	16	mg/kg	5.1	3.1
CB453	S6A	4/29/2010	Grab	Cadmium	16	mg/kg	5.1	3.2

Table 7.2-23
Storm Drain Solids Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
CB453	S6A	7/19/2012	Grab	Chromium	130		mg/kg	260	0.50
CB453	S6A	4/29/2010	Grab	Chromium	121		mg/kg	260	0.47
CB453	S6A	7/19/2012	Grab	Copper	349		mg/kg	390	0.89
CB453	S6A	4/29/2010	Grab	Copper	279		mg/kg	390	0.72
CB453	S6A	7/19/2012	Grab	Lead	148		mg/kg	450	0.33
CB453	S6A	4/29/2010	Grab	Lead	125		mg/kg	450	0.28
CB453	S6A	7/19/2012	Grab	Mercury	4.1		mg/kg	0.41	10
CB453	S6A	4/29/2010	Grab	Mercury	0.57		mg/kg	0.41	1.4
CB453	S6A	7/19/2012	Grab	Silver	0.40		mg/kg	6.1	0.066
CB453	S6A	4/29/2010	Grab	Silver	0.8	U	mg/kg	6.1	0.13
CB453	S6A	7/19/2012	Grab	Zinc	2,220		mg/kg	410	5.4
CB453	S6A	4/29/2010	Grab	Zinc	1,910		mg/kg	410	4.7
CB456	S6A	4/26/2010	Grab	Total PCBs	0.65		mg/kg	0.13	5.0
CB456	S6A	6/16/2009	Grab	Total PCBs	2.5		mg/kg	0.13	19
CB456	S6A	4/26/2010	Grab	Arsenic	20		mg/kg	7.3	2.7
CB456	S6A	4/26/2010	Grab	Cadmium	29		mg/kg	5.1	5.6
CB456	S6A	4/26/2010	Grab	Chromium	179		mg/kg	260	0.69
CB456	S6A	4/26/2010	Grab	Copper	812		mg/kg	390	2.1
CB456	S6A	4/26/2010	Grab	Lead	142		mg/kg	450	0.32
CB456	S6A	4/26/2010	Grab	Mercury	0.83		mg/kg	0.41	2.0
CB456	S6A	4/26/2010	Grab	Silver	0.8	U	mg/kg	6.1	0.13
CB456	S6A	4/26/2010	Grab	Zinc	1,900		mg/kg	410	4.6
CB458	S6A	4/26/2010	Grab	Total PCBs	1.2		mg/kg	0.13	9.0
CB458	S6A	4/26/2010	Grab	Arsenic	20		mg/kg	7.3	2.7
CB458	S6A	4/26/2010	Grab	Cadmium	41		mg/kg	5.1	8.0
CB458	S6A	4/26/2010	Grab	Chromium	217		mg/kg	260	0.83
CB458	S6A	4/26/2010	Grab	Copper	664		mg/kg	390	1.7
CB458	S6A	4/26/2010	Grab	Lead	324		mg/kg	450	0.72
CB458	S6A	4/26/2010	Grab	Mercury	0.73		mg/kg	0.41	1.8
CB458	S6A	4/26/2010	Grab	Silver	1.1		mg/kg	6.1	0.18
CB458	S6A	4/26/2010	Grab	Zinc	2,990		mg/kg	410	7.3
CB1307	S6A	4/27/2010	Grab	Total PCBs	0.60		mg/kg	0.13	4.6
CB1307	S6A	4/27/2010	Grab	Arsenic	20		mg/kg	7.3	2.7
CB1307	S6A	4/27/2010	Grab	Cadmium	15		mg/kg	5.1	2.9
CB1307	S6A	4/27/2010	Grab	Chromium	205		mg/kg	260	0.79
CB1307	S6A	4/27/2010	Grab	Copper	874		mg/kg	390	2.2
CB1307	S6A	4/27/2010	Grab	Lead	201		mg/kg	450	0.45
CB1307	S6A	4/27/2010	Grab	Mercury	0.34		mg/kg	0.41	0.83
CB1307	S6A	4/27/2010	Grab	Silver	1.2		mg/kg	6.1	0.20
CB1307	S6A	4/27/2010	Grab	Zinc	1,730		mg/kg	410	4.2
MH445A	S6A	7/26/2006	Grab	p-Cresol (4-Methylphenol)	0.066	U	mg/kg	0.67	0.099
MH445A	S6A	7/26/2006	Grab	Phenol	0.066	U	mg/kg	0.42	0.16
MH445A	S6A	7/26/2006	Grab	Bis(2-ethylhexyl) phthalate	0.75		mg/kg	1.3	0.58
MH445A	S6A	7/26/2006	Grab	Butyl benzyl phthalate	0.066	U	mg/kg	0.067	0.99
MH445A	S6A	7/26/2006	Grab	Acenaphthene	0.066	U	mg/kg	0.50	0.13
MH445A	S6A	7/26/2006	Grab	Anthracene	0.066	U	mg/kg	0.96	0.069
MH445A	S6A	7/26/2006	Grab	Benzo(a)anthracene	0.21		mg/kg	1.3	0.16
MH445A	S6A	7/26/2006	Grab	Total Benzofluoranthenes	0.58		mg/kg	3.2	0.18
MH445A	S6A	7/26/2006	Grab	Benzo(g,h,i)perylene	0.16		mg/kg	0.67	0.24
MH445A	S6A	7/26/2006	Grab	Benzo(a)pyrene	0.29		mg/kg	0.15	1.9
MH445A	S6A	7/26/2006	Grab	Chrysene	0.31		mg/kg	1.4	0.22
MH445A	S6A	7/26/2006	Grab	Dibenz(a,h)anthracene	0.066	U	mg/kg	0.23	0.29
MH445A	S6A	7/26/2006	Grab	Dibenzofuran	0.066	U	mg/kg	0.54	0.12
MH445A	S6A	7/26/2006	Grab	Fluoranthene	0.53		mg/kg	1.7	0.31
MH445A	S6A	7/26/2006	Grab	Fluorene	0.066	U	mg/kg	0.54	0.12
MH445A	S6A	7/26/2006	Grab	Indeno(1,2,3-cd)pyrene	0.15		mg/kg	0.60	0.25
MH445A	S6A	7/26/2006	Grab	2-Methylnaphthalene	0.066	U	mg/kg	0.67	0.099
MH445A	S6A	7/26/2006	Grab	Phenanthrene	0.19		mg/kg	1.5	0.13
MH445A	S6A	7/26/2006	Grab	Pyrene	0.39		mg/kg	2.6	0.15
MH445A	S6A	7/26/2006	Grab	Total HPAHs	2.6		mg/kg	12	0.22
MH445A	S6A	7/26/2006	Grab	Total LPAHs	0.19		mg/kg	5.2	0.037
MH445A	S6A	7/26/2006	Grab	Total cPAHs (TEQ, NDx0.5)	0.39		mg/kg	0.15	2.6
OWS640	S6A	4/26/2010	Grab	Total PCBs	1.3		mg/kg	0.13	9.7
OWS640	S6A	1/5/2006	Grab	Total PCBs	2.6		mg/kg	0.13	20
OWS640	S6A	4/26/2010	Grab	Arsenic	20		mg/kg	7.3	2.7
OWS640	S6A	4/26/2010	Grab	Cadmium	19		mg/kg	5.1	3.7
OWS640	S6A	4/26/2010	Grab	Chromium	184		mg/kg	260	0.71

Table 7.2-23
Storm Drain Solids Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
OWS640	S6A	4/26/2010	Grab	Copper	346	mg/kg	390	0.89
OWS640	S6A	4/26/2010	Grab	Lead	210	mg/kg	450	0.47
OWS640	S6A	4/26/2010	Grab	Mercury	1.0	mg/kg	0.41	2.5
OWS640	S6A	4/26/2010	Grab	Silver	0.7 U	mg/kg	6.1	0.11
OWS640	S6A	4/26/2010	Grab	Zinc	1,780	mg/kg	410	4.3
CB502	S6B	6/16/2009	Grab	Total PCBs	0.39	mg/kg	0.13	3.0
CB503	S6B	4/21/2010	Grab	Total PCBs	0.31	mg/kg	0.13	2.4
CB503	S6B	4/21/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB503	S6B	4/21/2010	Grab	Cadmium	7.1	mg/kg	5.1	1.4
CB503	S6B	4/21/2010	Grab	Chromium	141	mg/kg	260	0.54
CB503	S6B	4/21/2010	Grab	Copper	536	mg/kg	390	1.4
CB503	S6B	4/21/2010	Grab	Lead	218	mg/kg	450	0.48
CB503	S6B	4/21/2010	Grab	Mercury	0.28	mg/kg	0.41	0.68
CB503	S6B	4/21/2010	Grab	Silver	1 U	mg/kg	6.1	0.16
CB503	S6B	4/21/2010	Grab	Zinc	457	mg/kg	410	1.1
CB1308	S6B	4/27/2010	Grab	Total PCBs	0.41	mg/kg	0.13	3.2
CB1308	S6B	4/27/2010	Grab	Arsenic	17	mg/kg	7.3	2.3
CB1308	S6B	4/27/2010	Grab	Cadmium	41	mg/kg	5.1	8.0
CB1308	S6B	4/27/2010	Grab	Chromium	151	mg/kg	260	0.58
CB1308	S6B	4/27/2010	Grab	Copper	1,200	mg/kg	390	3.1
CB1308	S6B	4/27/2010	Grab	Lead	74	mg/kg	450	0.16
CB1308	S6B	4/27/2010	Grab	Mercury	0.14	mg/kg	0.41	0.34
CB1308	S6B	4/27/2010	Grab	Silver	0.80	mg/kg	6.1	0.13
CB1308	S6B	4/27/2010	Grab	Zinc	1,330	mg/kg	410	3.2
CB259	S7	4/21/2010	Grab	Total PCBs	1.3	mg/kg	0.13	10
CB259	S7	4/21/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB259	S7	4/21/2010	Grab	Cadmium	20	mg/kg	5.1	3.9
CB259	S7	4/21/2010	Grab	Chromium	148	mg/kg	260	0.57
CB259	S7	4/21/2010	Grab	Copper	228	mg/kg	390	0.58
CB259	S7	4/21/2010	Grab	Lead	851	mg/kg	450	1.9
CB259	S7	4/21/2010	Grab	Mercury	0.12	mg/kg	0.41	0.29
CB259	S7	4/21/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB259	S7	4/21/2010	Grab	Zinc	895	mg/kg	410	2.2
CB260	S7	4/21/2010	Grab	Total PCBs	0.91	mg/kg	0.13	7.0
CB260	S7	4/21/2010	Grab	Arsenic	17	mg/kg	7.3	2.3
CB260	S7	4/21/2010	Grab	Cadmium	14	mg/kg	5.1	2.8
CB260	S7	4/21/2010	Grab	Chromium	126	mg/kg	260	0.48
CB260	S7	4/21/2010	Grab	Copper	255	mg/kg	390	0.65
CB260	S7	4/21/2010	Grab	Lead	327	mg/kg	450	0.73
CB260	S7	4/21/2010	Grab	Mercury	0.12	mg/kg	0.41	0.29
CB260	S7	4/21/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB260	S7	4/21/2010	Grab	Zinc	1,010	mg/kg	410	2.5
CB261	S7	8/9/2012	Grab	Total PCBs	23	mg/kg	0.13	180
CB261	S7	7/17/2012	Grab	Total PCBs	110	mg/kg	0.13	850
CB261	S7	4/26/2010	Grab	Total PCBs	1.5	mg/kg	0.13	11
CB261	S7	6/11/2009	Grab	Total PCBs	8.8	mg/kg	0.13	68
CB261	S7	7/17/2012	Grab	Arsenic	23	mg/kg	7.3	3.1
CB261	S7	4/26/2010	Grab	Arsenic	18	mg/kg	7.3	2.5
CB261	S7	7/17/2012	Grab	Cadmium	50	mg/kg	5.1	9.8
CB261	S7	4/26/2010	Grab	Cadmium	49	mg/kg	5.1	9.7
CB261	S7	7/17/2012	Grab	Chromium	224	mg/kg	260	0.86
CB261	S7	4/26/2010	Grab	Chromium	138	mg/kg	260	0.53
CB261	S7	7/17/2012	Grab	Copper	397	mg/kg	390	1.0
CB261	S7	4/26/2010	Grab	Copper	444	mg/kg	390	1.1
CB261	S7	7/17/2012	Grab	Lead	179	mg/kg	450	0.40
CB261	S7	4/26/2010	Grab	Lead	113	mg/kg	450	0.25
CB261	S7	7/17/2012	Grab	Mercury	0.48	mg/kg	0.41	1.2
CB261	S7	4/26/2010	Grab	Mercury	0.090	mg/kg	0.41	0.22
CB261	S7	7/17/2012	Grab	Silver	3.4	mg/kg	6.1	0.56
CB261	S7	4/26/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB261	S7	7/17/2012	Grab	Zinc	1,830	mg/kg	410	4.5
CB261	S7	4/26/2010	Grab	Zinc	1,210	mg/kg	410	3.0
CB261	S7	7/26/2006	Grab	p-Cresol (4-Methylphenol)	3.4 U	mg/kg	0.67	5.1
CB261	S7	7/26/2006	Grab	Phenol	3.4 U	mg/kg	0.42	8.1
CB261	S7	7/26/2006	Grab	Bis(2-ethylhexyl) phthalate	26	mg/kg	1.3	20
CB261	S7	7/26/2006	Grab	Butyl benzyl phthalate	3.4 U	mg/kg	0.067	51
CB261	S7	7/26/2006	Grab	Acenaphthene	3.4 U	mg/kg	0.50	6.8

Table 7.2-23
Storm Drain Solids Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB261	S7	7/26/2006	Grab	Anthracene	3.4 U	mg/kg	0.96	3.5
CB261	S7	7/26/2006	Grab	Benzo(a)anthracene	3.4 U	mg/kg	1.3	2.6
CB261	S7	7/26/2006	Grab	Total Benzofluoranthenes	10	mg/kg	3.2	3.2
CB261	S7	7/26/2006	Grab	Benzo(g,h,i)perylene	3.4 U	mg/kg	0.67	5.1
CB261	S7	7/26/2006	Grab	Benzo(a)pyrene	3.6	mg/kg	0.15	24
CB261	S7	7/26/2006	Grab	Chrysene	7.9	mg/kg	1.4	5.6
CB261	S7	7/26/2006	Grab	Dibenz(a,h)anthracene	3.4 U	mg/kg	0.23	15
CB261	S7	7/26/2006	Grab	Dibenzofuran	3.4 U	mg/kg	0.54	6.3
CB261	S7	7/26/2006	Grab	Fluoranthene	14	mg/kg	1.7	8.2
CB261	S7	7/26/2006	Grab	Fluorene	3.4 U	mg/kg	0.54	6.3
CB261	S7	7/26/2006	Grab	Indeno(1,2,3-cd)pyrene	3.4 U	mg/kg	0.60	5.7
CB261	S7	7/26/2006	Grab	2-Methylnaphthalene	3.4 U	mg/kg	0.67	5.1
CB261	S7	7/26/2006	Grab	Phenanthrene	7.4	mg/kg	1.5	4.9
CB261	S7	7/26/2006	Grab	Pyrene	9.4	mg/kg	2.6	3.6
CB261	S7	7/26/2006	Grab	Total HPAHs	45	mg/kg	12	3.8
CB261	S7	7/26/2006	Grab	Total LPAHs	7.4	mg/kg	5.2	1.4
CB261	S7	7/26/2006	Grab	Total cPAHs (TEQ, NDx0.5)	5.2	mg/kg	0.15	35
MH642	S7	7/17/2012	Grab	Total PCBs	1.9	mg/kg	0.13	15
MH642	S7	4/26/2010	Grab	Total PCBs	6.1	mg/kg	0.13	47
MH642	S7	6/16/2009	Grab	Total PCBs	6.5	mg/kg	0.13	50
MH642	S7	7/17/2012	Grab	Arsenic	12	mg/kg	7.3	1.6
MH642	S7	4/26/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
MH642	S7	7/17/2012	Grab	Cadmium	9.1	mg/kg	5.1	1.8
MH642	S7	4/26/2010	Grab	Cadmium	16	mg/kg	5.1	3.2
MH642	S7	7/17/2012	Grab	Chromium	30	mg/kg	260	0.12
MH642	S7	4/26/2010	Grab	Chromium	127	mg/kg	260	0.49
MH642	S7	7/17/2012	Grab	Copper	37	mg/kg	390	0.096
MH642	S7	4/26/2010	Grab	Copper	217	mg/kg	390	0.56
MH642	S7	7/17/2012	Grab	Lead	138	mg/kg	450	0.31
MH642	S7	4/26/2010	Grab	Lead	291	mg/kg	450	0.65
MH642	S7	7/17/2012	Grab	Mercury	0.20 J	mg/kg	0.41	0.48
MH642	S7	4/26/2010	Grab	Mercury	1.0	mg/kg	0.41	2.5
MH642	S7	7/17/2012	Grab	Silver	0.14	mg/kg	6.1	0.023
MH642	S7	4/26/2010	Grab	Silver	0.80	mg/kg	6.1	0.13
MH642	S7	7/17/2012	Grab	Zinc	264	mg/kg	410	0.64
MH642	S7	4/26/2010	Grab	Zinc	1,170	mg/kg	410	2.9
CB483	S8	4/21/2010	Grab	Total PCBs	0.29	mg/kg	0.13	2.2
CB483	S8	4/21/2010	Grab	Arsenic	12	mg/kg	7.3	1.6
CB483	S8	4/21/2010	Grab	Cadmium	12	mg/kg	5.1	2.4
CB483	S8	4/21/2010	Grab	Chromium	79	mg/kg	260	0.30
CB483	S8	4/21/2010	Grab	Copper	274	mg/kg	390	0.70
CB483	S8	4/21/2010	Grab	Lead	154	mg/kg	450	0.34
CB483	S8	4/21/2010	Grab	Mercury	0.10	mg/kg	0.41	0.24
CB483	S8	4/21/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB483	S8	4/21/2010	Grab	Zinc	656	mg/kg	410	1.6
CB486	S8	4/21/2010	Grab	Total PCBs	0.28	mg/kg	0.13	2.2
CB486	S8	4/21/2010	Grab	Arsenic	7.0	mg/kg	7.3	0.96
CB486	S8	4/21/2010	Grab	Cadmium	9.7	mg/kg	5.1	1.9
CB486	S8	4/21/2010	Grab	Chromium	61	mg/kg	260	0.24
CB486	S8	4/21/2010	Grab	Copper	166	mg/kg	390	0.43
CB486	S8	4/21/2010	Grab	Lead	100	mg/kg	450	0.22
CB486	S8	4/21/2010	Grab	Mercury	0.060	mg/kg	0.41	0.15
CB486	S8	4/21/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB486	S8	4/21/2010	Grab	Zinc	602	mg/kg	410	1.5
CB487	S8	4/21/2010	Grab	Total PCBs	0.68	mg/kg	0.13	5.2
CB487	S8	4/21/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB487	S8	4/21/2010	Grab	Cadmium	9.5	mg/kg	5.1	1.9
CB487	S8	4/21/2010	Grab	Chromium	63	mg/kg	260	0.24
CB487	S8	4/21/2010	Grab	Copper	434	mg/kg	390	1.1
CB487	S8	4/21/2010	Grab	Lead	59	mg/kg	450	0.13
CB487	S8	4/21/2010	Grab	Mercury	1.6	mg/kg	0.41	3.9
CB487	S8	4/21/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB487	S8	4/21/2010	Grab	Zinc	775	mg/kg	410	1.9
CB488	S8	4/21/2010	Grab	Total PCBs	0.72	mg/kg	0.13	5.5
CB488	S8	4/21/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB488	S8	4/21/2010	Grab	Cadmium	11	mg/kg	5.1	2.2
CB488	S8	4/21/2010	Grab	Chromium	132	mg/kg	260	0.51

Table 7.2-23
Storm Drain Solids Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB488	S8	4/21/2010	Grab	Copper	502	mg/kg	390	1.3
CB488	S8	4/21/2010	Grab	Lead	119	mg/kg	450	0.26
CB488	S8	4/21/2010	Grab	Mercury	0.19	mg/kg	0.41	0.46
CB488	S8	4/21/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB488	S8	4/21/2010	Grab	Zinc	1,250	mg/kg	410	3.0
CB489	S8	4/21/2010	Grab	Total PCBs	0.96	mg/kg	0.13	7.4
CB489	S8	4/21/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB489	S8	4/21/2010	Grab	Cadmium	11	mg/kg	5.1	2.1
CB489	S8	4/21/2010	Grab	Chromium	131	mg/kg	260	0.50
CB489	S8	4/21/2010	Grab	Copper	376	mg/kg	390	0.96
CB489	S8	4/21/2010	Grab	Lead	104	mg/kg	450	0.23
CB489	S8	4/21/2010	Grab	Mercury	0.28	mg/kg	0.41	0.68
CB489	S8	4/21/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB489	S8	4/21/2010	Grab	Zinc	1,290	mg/kg	410	3.1
CB490	S8	4/21/2010	Grab	Total PCBs	0.19	mg/kg	0.13	1.4
CB490	S8	6/11/2009	Grab	Total PCBs	0.20	mg/kg	0.13	1.5
CB490	S8	4/21/2010	Grab	Arsenic	21	mg/kg	7.3	2.9
CB490	S8	4/21/2010	Grab	Cadmium	16	mg/kg	5.1	3.0
CB490	S8	4/21/2010	Grab	Chromium	139	mg/kg	260	0.53
CB490	S8	4/21/2010	Grab	Copper	366	mg/kg	390	0.94
CB490	S8	4/21/2010	Grab	Lead	134	mg/kg	450	0.30
CB490	S8	4/21/2010	Grab	Mercury	0.31	mg/kg	0.41	0.76
CB490	S8	4/21/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB490	S8	4/21/2010	Grab	Zinc	1,600	mg/kg	410	3.9
CB491	S8	4/21/2010	Grab	Total PCBs	0.19	mg/kg	0.13	1.5
CB491	S8	4/21/2010	Grab	Arsenic	20	mg/kg	7.3	2.7
CB491	S8	4/21/2010	Grab	Cadmium	12	mg/kg	5.1	2.4
CB491	S8	4/21/2010	Grab	Chromium	155	mg/kg	260	0.60
CB491	S8	4/21/2010	Grab	Copper	509	mg/kg	390	1.3
CB491	S8	4/21/2010	Grab	Lead	155	mg/kg	450	0.34
CB491	S8	4/21/2010	Grab	Mercury	0.17	mg/kg	0.41	0.41
CB491	S8	4/21/2010	Grab	Silver	0.6 U	mg/kg	6.1	0.098
CB491	S8	4/21/2010	Grab	Zinc	968	mg/kg	410	2.4
OWS483B/C	S8	4/27/2010	Grab	Total PCBs	4.0	mg/kg	0.13	30
OWS483B/C	S8	3/15/2007	Grab	Total PCBs	0.74	mg/kg	0.13	5.7
OWS483B/C	S8	7/26/2006	Grab	Total PCBs	3.6	mg/kg	0.13	28
OWS483B/C	S8	4/27/2010	Grab	Arsenic	40	mg/kg	7.3	5.5
OWS483B/C	S8	4/27/2010	Grab	Cadmium	50	mg/kg	5.1	9.8
OWS483B/C	S8	4/27/2010	Grab	Chromium	225	mg/kg	260	0.87
OWS483B/C	S8	4/27/2010	Grab	Copper	676	mg/kg	390	1.7
OWS483B/C	S8	4/27/2010	Grab	Lead	344	mg/kg	450	0.76
OWS483B/C	S8	4/27/2010	Grab	Mercury	1.2	mg/kg	0.41	3.0
OWS483B/C	S8	4/27/2010	Grab	Silver	0.9 U	mg/kg	6.1	0.15
OWS483B/C	S8	4/27/2010	Grab	Zinc	2,310	mg/kg	410	5.6
OWS483B/C	S8	3/15/2007	Grab	p-Cresol (4-Methylphenol)	0.26 U	mg/kg	0.67	0.39
OWS483B/C	S8	7/26/2006	Grab	p-Cresol (4-Methylphenol)	4.6 U	mg/kg	0.67	6.9
OWS483B/C	S8	3/15/2007	Grab	Phenol	0.26 U	mg/kg	0.42	0.62
OWS483B/C	S8	7/26/2006	Grab	Phenol	4.6 U	mg/kg	0.42	11
OWS483B/C	S8	3/15/2007	Grab	Bis(2-ethylhexyl) phthalate	35	mg/kg	1.3	27
OWS483B/C	S8	7/26/2006	Grab	Bis(2-ethylhexyl) phthalate	42	mg/kg	1.3	32
OWS483B/C	S8	3/15/2007	Grab	Butyl benzyl phthalate	0.80	mg/kg	0.067	12
OWS483B/C	S8	7/26/2006	Grab	Butyl benzyl phthalate	4.6 U	mg/kg	0.067	69
OWS483B/C	S8	3/15/2007	Grab	Acenaphthene	2.5	mg/kg	0.50	5.0
OWS483B/C	S8	7/26/2006	Grab	Acenaphthene	4.6 U	mg/kg	0.50	9.2
OWS483B/C	S8	3/15/2007	Grab	Anthracene	2.6	mg/kg	0.96	2.7
OWS483B/C	S8	7/26/2006	Grab	Anthracene	4.6 U	mg/kg	0.96	4.8
OWS483B/C	S8	3/15/2007	Grab	Benzo(a)anthracene	8.6	mg/kg	1.3	6.6
OWS483B/C	S8	7/26/2006	Grab	Benzo(a)anthracene	4.6 U	mg/kg	1.3	3.5
OWS483B/C	S8	3/15/2007	Grab	Total Benzofluoranthenes	22	mg/kg	3.2	6.8
OWS483B/C	S8	7/26/2006	Grab	Total Benzofluoranthenes	13	mg/kg	3.2	4.1
OWS483B/C	S8	3/15/2007	Grab	Benzo(g,h,i)perylene	2.6	mg/kg	0.67	3.9
OWS483B/C	S8	7/26/2006	Grab	Benzo(g,h,i)perylene	4.6 U	mg/kg	0.67	6.9
OWS483B/C	S8	3/15/2007	Grab	Benzo(a)pyrene	8.3	mg/kg	0.15	55
OWS483B/C	S8	7/26/2006	Grab	Benzo(a)pyrene	4.9	mg/kg	0.15	33
OWS483B/C	S8	3/15/2007	Grab	Chrysene	12	mg/kg	1.4	8.6
OWS483B/C	S8	7/26/2006	Grab	Chrysene	9.7	mg/kg	1.4	6.9
OWS483B/C	S8	3/15/2007	Grab	Dibenz(a,h)anthracene	1.2	mg/kg	0.23	5.2

Table 7.2-23
Storm Drain Solids Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
OWS483B/C	S8	7/26/2006	Grab	Dibenz(a,h)anthracene	4.6 U	mg/kg	0.23	20
OWS483B/C	S8	3/15/2007	Grab	Dibenzofuran	1.8	mg/kg	0.54	3.3
OWS483B/C	S8	7/26/2006	Grab	Dibenzofuran	4.6 U	mg/kg	0.54	8.5
OWS483B/C	S8	3/15/2007	Grab	Fluoranthene	40	mg/kg	1.7	24
OWS483B/C	S8	7/26/2006	Grab	Fluoranthene	20	mg/kg	1.7	12
OWS483B/C	S8	3/15/2007	Grab	Fluorene	3.1	mg/kg	0.54	5.7
OWS483B/C	S8	7/26/2006	Grab	Fluorene	4.6 U	mg/kg	0.54	8.5
OWS483B/C	S8	3/15/2007	Grab	Indeno(1,2,3-cd)pyrene	2.9	mg/kg	0.60	4.8
OWS483B/C	S8	7/26/2006	Grab	Indeno(1,2,3-cd)pyrene	4.6 U	mg/kg	0.60	7.7
OWS483B/C	S8	3/15/2007	Grab	2-Methylnaphthalene	1.4	mg/kg	0.67	2.1
OWS483B/C	S8	7/26/2006	Grab	2-Methylnaphthalene	4.6 U	mg/kg	0.67	6.9
OWS483B/C	S8	3/15/2007	Grab	Phenanthrene	19	mg/kg	1.5	13
OWS483B/C	S8	7/26/2006	Grab	Phenanthrene	12	mg/kg	1.5	8.0
OWS483B/C	S8	3/15/2007	Grab	Pyrene	16	mg/kg	2.6	6.2
OWS483B/C	S8	7/26/2006	Grab	Pyrene	13	mg/kg	2.6	5.0
OWS483B/C	S8	3/15/2007	Grab	Total HPAHs	113	mg/kg	12	9.4
OWS483B/C	S8	7/26/2006	Grab	Total HPAHs	61	mg/kg	12	5.1
OWS483B/C	S8	3/15/2007	Grab	Total LPAHs	28	mg/kg	5.2	5.4
OWS483B/C	S8	7/26/2006	Grab	Total LPAHs	12	mg/kg	5.2	2.3
OWS483B/C	S8	3/15/2007	Grab	Total cPAHs (TEQ, NDx0.5)	12	mg/kg	0.15	79
OWS483B/C	S8	7/26/2006	Grab	Total cPAHs (TEQ, NDx0.5)	7.0	mg/kg	0.15	47
OWS483E/D	S8	4/27/2010	Grab	Total PCBs	14	mg/kg	0.13	110
OWS483E/D	S8	6/11/2009	Grab	Total PCBs	2.0	mg/kg	0.13	15
OWS483E/D	S8	1/5/2006	Grab	Total PCBs	6.6	mg/kg	0.13	51
OWS483E/D	S8	4/27/2010	Grab	Arsenic	40	mg/kg	7.3	5.5
OWS483E/D	S8	4/27/2010	Grab	Cadmium	55	mg/kg	5.1	11
OWS483E/D	S8	4/27/2010	Grab	Chromium	265	mg/kg	260	1.0
OWS483E/D	S8	4/27/2010	Grab	Copper	729	mg/kg	390	1.9
OWS483E/D	S8	4/27/2010	Grab	Lead	414	mg/kg	450	0.92
OWS483E/D	S8	4/27/2010	Grab	Mercury	14	mg/kg	0.41	35
OWS483E/D	S8	4/27/2010	Grab	Silver	1.0	mg/kg	6.1	0.16
OWS483E/D	S8	4/27/2010	Grab	Zinc	2,990	mg/kg	410	7.3
OWS483F	S8	3/15/2007	Grab	Total PCBs	0.14	mg/kg	0.13	1.1
OWS483F	S8	3/15/2007	Grab	p-Cresol (4-Methylphenol)	0.064 U	mg/kg	0.67	0.096
OWS483F	S8	3/15/2007	Grab	Phenol	0.064 U	mg/kg	0.42	0.15
OWS483F	S8	3/15/2007	Grab	Bis(2-ethylhexyl) phthalate	0.44	mg/kg	1.3	0.34
OWS483F	S8	3/15/2007	Grab	Butyl benzyl phthalate	0.064 U	mg/kg	0.067	0.96
OWS483F	S8	3/15/2007	Grab	Acenaphthene	0.064 U	mg/kg	0.50	0.13
OWS483F	S8	3/15/2007	Grab	Anthracene	0.15	mg/kg	0.96	0.16
OWS483F	S8	3/15/2007	Grab	Benzo(a)anthracene	0.96	mg/kg	1.3	0.74
OWS483F	S8	3/15/2007	Grab	Total Benzofluoranthenes	3.0	mg/kg	3.2	0.94
OWS483F	S8	3/15/2007	Grab	Benzo(g,h,i)perylene	0.60	mg/kg	0.67	0.90
OWS483F	S8	3/15/2007	Grab	Benzo(a)pyrene	1.2	mg/kg	0.15	8.0
OWS483F	S8	3/15/2007	Grab	Chrysene	1.4	mg/kg	1.4	1.0
OWS483F	S8	3/15/2007	Grab	Dibenz(a,h)anthracene	0.29	mg/kg	0.23	1.3
OWS483F	S8	3/15/2007	Grab	Dibenzofuran	0.064 U	mg/kg	0.54	0.12
OWS483F	S8	3/15/2007	Grab	Fluoranthene	3.0	mg/kg	1.7	1.8
OWS483F	S8	3/15/2007	Grab	Fluorene	0.064 U	mg/kg	0.54	0.12
OWS483F	S8	3/15/2007	Grab	Indeno(1,2,3-cd)pyrene	0.72	mg/kg	0.60	1.2
OWS483F	S8	3/15/2007	Grab	2-Methylnaphthalene	0.064 U	mg/kg	0.67	0.096
OWS483F	S8	3/15/2007	Grab	Phenanthrene	1.1	mg/kg	1.5	0.73
OWS483F	S8	3/15/2007	Grab	Pyrene	1.5	mg/kg	2.6	0.58
OWS483F	S8	3/15/2007	Grab	Total HPAHs	12.7	mg/kg	12	1.1
OWS483F	S8	3/15/2007	Grab	Total LPAHs	1.3	mg/kg	5.2	0.24
OWS483F	S8	3/15/2007	Grab	Total cPAHs (TEQ, NDx0.5)	1.7	mg/kg	0.15	11

	Indicates detected result exceeds the RISL.
	Indicates nondetected result exceeds the RISL

All samples presented as dry weight concentrations.
Table includes only chemicals that exceed the screening level in at least one sample in this drainage area.
RISL = RI Screening Level

Table 7.2-24
Storm Drain Water Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH356	S1	3/29/2012	Total PCBs	0.013	ug/L	0.010	1.3
MH356	S1	3/13/2012	Total PCBs	0.019 J	ug/L	0.010	1.9
MH356	S1	2/24/2012	Total PCBs	0.024	ug/L	0.010	2.4
MH356	S1	3/29/2012	Arsenic	1.9	ug/L	0.87	2.2
MH356	S1	3/29/2012	Arsenic	0.30	ug/L	0.87	0.34
MH356	S1	3/13/2012	Arsenic	0.80	ug/L	0.87	0.92
MH356	S1	3/13/2012	Arsenic	0.30	ug/L	0.87	0.34
MH356	S1	2/24/2012	Arsenic	1.5	ug/L	0.87	1.7
MH356	S1	2/24/2012	Arsenic	0.40	ug/L	0.87	0.46
MH356	S1	3/29/2012	Cadmium	0.60	ug/L	0.43	1.4
MH356	S1	3/29/2012	Cadmium	0.1 U	ug/L	0.43	0.23
MH356	S1	3/13/2012	Cadmium	0.50	ug/L	0.43	1.2
MH356	S1	3/13/2012	Cadmium	0.1 U	ug/L	0.43	0.23
MH356	S1	2/24/2012	Cadmium	0.50	ug/L	0.43	1.2
MH356	S1	2/24/2012	Cadmium	0.1 U	ug/L	0.43	0.23
MH356	S1	3/29/2012	Copper	12	ug/L	2.4	4.8
MH356	S1	3/29/2012	Copper	1.7	ug/L	2.4	0.71
MH356	S1	3/13/2012	Copper	7.7	ug/L	2.4	3.2
MH356	S1	3/13/2012	Copper	2.0	ug/L	2.4	0.83
MH356	S1	2/24/2012	Copper	9.1	ug/L	2.4	3.8
MH356	S1	2/24/2012	Copper	2.1	ug/L	2.4	0.88
MH356	S1	3/29/2012	Lead	9.7	ug/L	8.1	1.2
MH356	S1	3/29/2012	Lead	0.2 J	ug/L	8.1	0.025
MH356	S1	3/13/2012	Lead	6.8	ug/L	8.1	0.84
MH356	S1	3/13/2012	Lead	0.20	ug/L	8.1	0.025
MH356	S1	2/24/2012	Lead	7.5	ug/L	8.1	0.93
MH356	S1	2/24/2012	Lead	0.30	ug/L	8.1	0.037
MH356	S1	3/29/2012	Zinc	71	ug/L	33	2.2
MH356	S1	3/29/2012	Zinc	11	ug/L	33	0.33
MH356	S1	3/13/2012	Zinc	54	ug/L	33	1.6
MH356	S1	3/13/2012	Zinc	16	ug/L	33	0.48
MH356	S1	2/24/2012	Zinc	61	ug/L	33	1.8
MH356	S1	2/24/2012	Zinc	18	ug/L	33	0.55
MH356	S1	3/29/2012	Benzo(g,h,i)perylene	0.60	ug/L	0.012	50
MH356	S1	3/13/2012	Benzo(g,h,i)perylene	0.55	ug/L	0.012	46
MH356	S1	2/24/2012	Benzo(g,h,i)perylene	0.64	ug/L	0.012	53
MH356	S1	3/29/2012	Benzo(a)pyrene	0.35 J	ug/L	0.010	35
MH356	S1	3/13/2012	Benzo(a)pyrene	0.45	ug/L	0.010	45
MH356	S1	2/24/2012	Benzo(a)pyrene	0.48	ug/L	0.010	48
MH356	S1	3/29/2012	Total cPAHs (TEQ, NDx0.5)	0.54	ug/L	0.010	54
MH356	S1	3/13/2012	Total cPAHs (TEQ, NDx0.5)	0.69	ug/L	0.010	69
MH356	S1	2/24/2012	Total cPAHs (TEQ, NDx0.5)	0.74	ug/L	0.010	74
MH482	S1	3/29/2012	Total PCBs	0.01 U	ug/L	0.010	1.0
MH482	S1	3/13/2012	Total PCBs	0.01 U	ug/L	0.010	1.0
MH482	S1	2/24/2012	Total PCBs	0.01 U	ug/L	0.010	1.0
MH482	S1	3/29/2012	Arsenic	0.70	ug/L	0.87	0.80
MH482	S1	3/29/2012	Arsenic	0.40	ug/L	0.87	0.46
MH482	S1	3/13/2012	Arsenic	0.60	ug/L	0.87	0.69
MH482	S1	3/13/2012	Arsenic	0.40	ug/L	0.87	0.46
MH482	S1	2/24/2012	Arsenic	0.70	ug/L	0.87	0.80
MH482	S1	2/24/2012	Arsenic	0.40	ug/L	0.87	0.46
MH482	S1	3/29/2012	Cadmium	0.30	ug/L	0.43	0.70
MH482	S1	3/29/2012	Cadmium	0.20	ug/L	0.43	0.47
MH482	S1	3/13/2012	Cadmium	0.30	ug/L	0.43	0.70

Table 7.2-24
Storm Drain Water Sampling Results - South Lateral

Sample Location	Sub-Drainage	Sample Date	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH482	S1	3/13/2012	Cadmium	0.20	ug/L	0.43	0.47
MH482	S1	2/24/2012	Cadmium	0.40	ug/L	0.43	0.93
MH482	S1	2/24/2012	Cadmium	0.20	ug/L	0.43	0.47
MH482	S1	3/29/2012	Copper	4.8	ug/L	2.4	2.0
MH482	S1	3/29/2012	Copper	2.6	ug/L	2.4	1.1
MH482	S1	3/13/2012	Copper	4.6	ug/L	2.4	1.9
MH482	S1	3/13/2012	Copper	3.0	ug/L	2.4	1.3
MH482	S1	2/24/2012	Copper	4.7	ug/L	2.4	2.0
MH482	S1	2/24/2012	Copper	2.7	ug/L	2.4	1.1
MH482	S1	3/29/2012	Lead	3.1	ug/L	8.1	0.38
MH482	S1	3/29/2012	Lead	0.60 J	ug/L	8.1	0.074
MH482	S1	3/13/2012	Lead	2.1	ug/L	8.1	0.26
MH482	S1	3/13/2012	Lead	0.30	ug/L	8.1	0.037
MH482	S1	2/24/2012	Lead	2.6	ug/L	8.1	0.32
MH482	S1	2/24/2012	Lead	0.40	ug/L	8.1	0.049
MH482	S1	3/29/2012	Zinc	28	ug/L	33	0.85
MH482	S1	3/29/2012	Zinc	16	ug/L	33	0.48
MH482	S1	3/13/2012	Zinc	29	ug/L	33	0.88
MH482	S1	3/13/2012	Zinc	20	ug/L	33	0.61
MH482	S1	2/24/2012	Zinc	29	ug/L	33	0.88
MH482	S1	2/24/2012	Zinc	23	ug/L	33	0.70
MH482	S1	3/29/2012	Benzo(g,h,i)perylene	0.23	ug/L	0.012	19
MH482	S1	3/13/2012	Benzo(g,h,i)perylene	0.13	ug/L	0.012	11
MH482	S1	2/24/2012	Benzo(g,h,i)perylene	0.21	ug/L	0.012	18
MH482	S1	3/29/2012	Benzo(a)pyrene	0.13 J	ug/L	0.010	13
MH482	S1	3/13/2012	Benzo(a)pyrene	0.13	ug/L	0.010	13
MH482	S1	2/24/2012	Benzo(a)pyrene	0.15	ug/L	0.010	15
MH482	S1	3/29/2012	Total cPAHs (TEQ, NDx0.5)	0.21	ug/L	0.010	21
MH482	S1	3/13/2012	Total cPAHs (TEQ, NDx0.5)	0.21	ug/L	0.010	21
MH482	S1	2/24/2012	Total cPAHs (TEQ, NDx0.5)	0.25	ug/L	0.010	25

Indicates detected result exceeds the RISL.

Table includes only chemicals that exceed the screening level in at least one sample in this drainage area.
RISL = RI Screening Level

Table 7.2-25
Chemicals Detected Above RISLs in Storm Drain Solids
Building 3-380 Drainage Area

Chemical Class	Chemical	Frequency of Detection	Min Detect (mg/kg DW)	Max Detect (mg/kg DW)	Average Detect (mg/kg DW)	RISL (mg/kg DW)	Fraction of Detections Above SL	Maximum Exceedance Factor*	Average Exceedance Factor*
Metals	Arsenic	9 / 18	7.0	20	10	7.3	6 / 9	2.7**	1.4
	Cadmium	17 / 17	1.2	16	5.0	5.1	4 / 17	3.2	1.0
	Lead	18 / 18	55	715	255	450	4 / 18	1.6	<1
	Zinc	18 / 18	365	2,970	1,278	410	17 / 18	7.2	3.1
Polychlorinated Aromatic Compounds	Total PCBs	29 / 29	0.041	1.8	0.40	0.13	24 / 29	14	3.1
	Total dioxins/furans (ng/kg)	1 / 1	44	44	44	13	1 / 1	3.4	3.4
PAHs	Benzo(a)pyrene	1 / 2	0.71	0.71	0.71	0.15	1 / 1	4.7	4.7
	Fluoranthene	2 / 2	0.73	2.7	1.7	1.7	1 / 2	1.6	1.0
	Total cPAH	2 / 2	0.31	1.1	0.69	0.15	2 / 2	7.1	4.6
Phthalates	Bis(2-ethylhexyl) phthalate	1 / 1	15	15	15	1.3	1 / 1	12	12
	Butyl benzyl phthalate	1 / 1	0.89	0.89	0.89	0.067	1 / 1	13	13

EF Colors	EF Ranges
(white)	< 5.0
(yellow)	> 5.0 - 25

Dioxin/furan concentrations are in units of ng/kg TEQ.
* Maximum and average exceedance factor for detected values only.
**The highest exceedance factor for arsenic in a nondetect sample was 4.1.

Note: The following non-detected COPCs exceeded the screening level in at least one sample: phenol, acenaphthene, fluorene, and indeno(1,2,3-cd)pyrene.

Table 7.2-26
Maximum RISL Exceedance Factors in Storm Drain Solids, by Subdrainage
Building 3-380 Drainage Area

Chemical Class	Chemical	B1 (Main Line)	B2	B3	B4
	Subdrainage:				
Metals	Arsenic	2.7	<1	1.4	<1
	Cadmium	1.3	<1	3.2	1.1
	Chromium	<1	<1	<1	<1
	Copper	<1	<1	<1	<1
	Lead	1.1	1.6	1.3	<1
	Zinc	7.2	2.4	3.3	2.3
Polychlorinated Aromatic Compounds	Total PCBs	14	3.8	3.0	1.4
	Total dioxins/furans	3.4	--	--	--
PAHs	Benzo(a)pyrene	4.7	--	--	--
	Benzo(g,h,i)perylene	<1	--	--	--
	Fluoranthene	1.6	--	--	--
	Total cPAHs	7.1	--	--	--
Phthalates	Bis(2-ethylhexyl) phthalate	12	--	--	--
	Butyl benzyl phthalate	13	--	--	--

EF Colors	EF Ranges
Green	> 1.0 - 5.0
Yellow	> 5.0 - 25

Dioxin/furan concentrations are in units of ng/kg TEQ.
-- = indicates sample not analyzed for this parameter
Table shows maximum exceedance factors for detected chemicals only.
Subdrainage locations are shown in Figure 7.2-14.

Table 7.2-27
Storm Drain Solids Sampling Results - Building 3-380 Area

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB104	B1	11/18/2008	Grab	Total PCBs	0.12	mg/kg	0.13	0.92
CB104	B1	11/18/2008	Grab	Mercury	0.05 U	mg/kg	0.41	0.12
CB107A	B1	12/30/2008	Grab	Total PCBs	0.058	mg/kg	0.13	0.45
CB109C	B1	4/21/2010	Grab	Total PCBs	0.43	mg/kg	0.13	3.3
CB109C	B1	4/21/2010	Grab	Arsenic	9 U	mg/kg	7.3	1.2
CB109C	B1	4/21/2010	Grab	Cadmium	6.4 J	mg/kg	5.1	1.3
CB109C	B1	4/21/2010	Grab	Chromium	207	mg/kg	260	0.80
CB109C	B1	4/21/2010	Grab	Copper	326 J	mg/kg	390	0.84
CB109C	B1	4/21/2010	Grab	Lead	373	mg/kg	450	0.83
CB109C	B1	4/21/2010	Grab	Mercury	0.23 J	mg/kg	0.41	0.56
CB109C	B1	4/21/2010	Grab	Silver	0.90	mg/kg	6.1	0.15
CB109C	B1	4/21/2010	Grab	Zinc	2,160	mg/kg	410	5.3
CB423	B1	6/2/2010	Filter/Stormwater	Total PCBs	1.8	mg/kg	0.13	14
CB423	B1	5/28/2010	Filter/Stormwater	Total PCBs	0.74	mg/kg	0.13	5.7
CB423	B1	5/20/2010	Filter/Stormwater	Total PCBs	0.18	mg/kg	0.13	1.3
CB423	B1	5/20/2010	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	44	ng/kg	13	3.4
CB423	B1	6/2/2010	Filter/Stormwater	Arsenic	20 U	mg/kg	7.3	2.7
CB423	B1	5/28/2010	Filter/Stormwater	Arsenic	10 U	mg/kg	7.3	1.4
CB423	B1	5/20/2010	Filter/Stormwater	Arsenic	30 U	mg/kg	7.3	4.1
CB423	B1	6/2/2010	Filter/Stormwater	Cadmium	5.0	mg/kg	5.1	0.98
CB423	B1	5/28/2010	Filter/Stormwater	Cadmium	4.4	mg/kg	5.1	0.86
CB423	B1	5/20/2010	Filter/Stormwater	Cadmium	5.0	mg/kg	5.1	0.98
CB423	B1	6/2/2010	Filter/Stormwater	Chromium	110	mg/kg	260	0.42
CB423	B1	5/28/2010	Filter/Stormwater	Chromium	65 J	mg/kg	260	0.25
CB423	B1	5/20/2010	Filter/Stormwater	Chromium	114	mg/kg	260	0.44
CB423	B1	6/2/2010	Filter/Stormwater	Copper	153	mg/kg	390	0.39
CB423	B1	5/28/2010	Filter/Stormwater	Copper	91.7	mg/kg	390	0.24
CB423	B1	5/20/2010	Filter/Stormwater	Copper	264 J	mg/kg	390	0.68
CB423	B1	6/2/2010	Filter/Stormwater	Lead	132	mg/kg	450	0.29
CB423	B1	5/28/2010	Filter/Stormwater	Lead	88	mg/kg	450	0.20
CB423	B1	5/20/2010	Filter/Stormwater	Lead	190	mg/kg	450	0.42
CB423	B1	6/2/2010	Filter/Stormwater	Mercury	0.26 J	mg/kg	0.41	0.63
CB423	B1	5/28/2010	Filter/Stormwater	Mercury	0.09	mg/kg	0.41	0.22
CB423	B1	5/20/2010	Filter/Stormwater	Mercury	0.20 J	mg/kg	0.41	0.49
CB423	B1	6/2/2010	Filter/Stormwater	Silver	0.9 U	mg/kg	6.1	0.15
CB423	B1	5/28/2010	Filter/Stormwater	Silver	0.6 U	mg/kg	6.1	0.098
CB423	B1	5/20/2010	Filter/Stormwater	Silver	2 U	mg/kg	6.1	0.33
CB423	B1	6/2/2010	Filter/Stormwater	Zinc	1,860	mg/kg	410	4.5
CB423	B1	5/28/2010	Filter/Stormwater	Zinc	1,630	mg/kg	410	4.0
CB423	B1	5/20/2010	Filter/Stormwater	Zinc	1,360	mg/kg	410	3.3
CB423	B1	6/2/2010	Filter/Stormwater	Acenaphthene	0.41 U	mg/kg	0.50	0.82
CB423	B1	6/2/2010	Filter/Stormwater	Anthracene	0.41 U	mg/kg	0.96	0.43
CB423	B1	6/2/2010	Filter/Stormwater	Benzo(a)anthracene	0.41 U	mg/kg	1.3	0.32
CB423	B1	6/2/2010	Filter/Stormwater	Total Benzofluoranthenes	0.41 U	mg/kg	3.2	0.13
CB423	B1	6/2/2010	Filter/Stormwater	Benzo(g,h,i)perylene	0.48	mg/kg	0.67	0.72
CB423	B1	6/2/2010	Filter/Stormwater	Benzo(a)pyrene	0.41 U	mg/kg	0.15	2.7
CB423	B1	6/2/2010	Filter/Stormwater	Chrysene	0.51	mg/kg	1.4	0.36
CB423	B1	6/2/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.41 U	mg/kg	0.23	1.8
CB423	B1	6/2/2010	Filter/Stormwater	Dibenzofuran	0.41 U	mg/kg	0.54	0.76
CB423	B1	6/2/2010	Filter/Stormwater	Fluoranthene	0.73	mg/kg	1.7	0.43
CB423	B1	6/2/2010	Filter/Stormwater	Fluorene	0.41 U	mg/kg	0.54	0.76
CB423	B1	6/2/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.41 U	mg/kg	0.60	0.68
CB423	B1	6/2/2010	Filter/Stormwater	2-Methylnaphthalene	0.41 U	mg/kg	0.67	0.61
CB423	B1	6/2/2010	Filter/Stormwater	Phenanthrene	0.53	mg/kg	1.5	0.35
CB423	B1	6/2/2010	Filter/Stormwater	Pyrene	0.63	mg/kg	2.6	0.24
CB423	B1	6/2/2010	Filter/Stormwater	Total HPAHs	2.4	mg/kg	12	0.20
CB423	B1	6/2/2010	Filter/Stormwater	Total LPAHs	0.53	mg/kg	5.2	0.10
CB423	B1	6/2/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.31	mg/kg	0.15	2.1

Table 7.2-27
Storm Drain Solids Sampling Results - Building 3-380 Area

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB423A	B1	12/30/2008	Grab	Total PCBs	0.25	mg/kg	0.13	1.9
CB423A	B1	11/18/2008	Grab	Total PCBs	0.20	mg/kg	0.13	1.5
CB423A	B1	11/18/2008	Grab	Mercury	0.08 U	mg/kg	0.41	0.20
CB427	B1	4/21/2010	Grab	Total PCBs	0.42	mg/kg	0.13	3.2
CB427	B1	11/18/2008	Grab	Total PCBs	0.31	mg/kg	0.13	2.4
CB427	B1	4/21/2010	Grab	Arsenic	8 U	mg/kg	7.3	1.1
CB427	B1	4/21/2010	Grab	Cadmium	4.8	mg/kg	5.1	0.94
CB427	B1	4/21/2010	Grab	Chromium	163	mg/kg	260	0.63
CB427	B1	4/21/2010	Grab	Copper	105	mg/kg	390	0.27
CB427	B1	4/21/2010	Grab	Lead	469	mg/kg	450	1.0
CB427	B1	4/21/2010	Grab	Mercury	0.10	mg/kg	0.41	0.24
CB427	B1	11/18/2008	Grab	Mercury	0.06	mg/kg	0.41	0.15
CB427	B1	4/21/2010	Grab	Silver	0.50	mg/kg	6.1	0.082
CB427	B1	4/21/2010	Grab	Zinc	1,680	mg/kg	410	4.1
CB429	B1	4/21/2010	Grab	Total PCBs	0.41	mg/kg	0.13	3.2
CB429	B1	11/18/2008	Grab	Total PCBs	0.26	mg/kg	0.13	2.0
CB429	B1	4/21/2010	Grab	Arsenic	8.0	mg/kg	7.3	1.1
CB429	B1	4/21/2010	Grab	Cadmium	3.7	mg/kg	5.1	0.73
CB429	B1	4/21/2010	Grab	Chromium	154	mg/kg	260	0.59
CB429	B1	4/21/2010	Grab	Copper	188	mg/kg	390	0.48
CB429	B1	4/21/2010	Grab	Lead	413	mg/kg	450	0.92
CB429	B1	4/21/2010	Grab	Mercury	0.17	mg/kg	0.41	0.41
CB429	B1	11/18/2008	Grab	Mercury	0.15	mg/kg	0.41	0.37
CB429	B1	4/21/2010	Grab	Silver	1.0	mg/kg	6.1	0.16
CB429	B1	4/21/2010	Grab	Zinc	1,930	mg/kg	410	4.7
MH105	B1	6/9/2009	Grab	Total PCBs	1.3	mg/kg	0.13	10
MH105	B1	6/9/2009	Grab	Arsenic	20	mg/kg	7.3	2.7
MH105	B1	6/9/2009	Grab	Copper	321	mg/kg	390	0.82
MH105	B1	6/9/2009	Grab	Lead	486	mg/kg	450	1.1
MH105	B1	6/9/2009	Grab	Mercury	0.32	mg/kg	0.41	0.78
MH105	B1	6/9/2009	Grab	Zinc	2,970	mg/kg	410	7.2
MH105	B1	6/9/2009	Grab	p-Cresol (4-Methylphenol)	0.63 U	mg/kg	0.67	0.94
MH105	B1	6/9/2009	Grab	Phenol	0.63 U	mg/kg	0.42	1.5
MH105	B1	6/9/2009	Grab	Bis(2-ethylhexyl) phthalate	15	mg/kg	1.3	12
MH105	B1	6/9/2009	Grab	Butyl benzyl phthalate	0.89	mg/kg	0.067	13
MH105	B1	6/9/2009	Grab	Acenaphthene	0.63 U	mg/kg	0.50	1.3
MH105	B1	6/9/2009	Grab	Anthracene	0.63 U	mg/kg	0.96	0.66
MH105	B1	6/9/2009	Grab	Benzo(a)anthracene	0.63 U	mg/kg	1.3	0.48
MH105	B1	6/9/2009	Grab	Total Benzofluoranthenes	2.4	mg/kg	3.2	0.75
MH105	B1	6/9/2009	Grab	Benzo(g,h,i)perylene	0.65	mg/kg	0.67	0.97
MH105	B1	6/9/2009	Grab	Benzo(a)pyrene	0.71	mg/kg	0.15	4.7
MH105	B1	6/9/2009	Grab	Chrysene	1.4	mg/kg	1.4	1.0
MH105	B1	6/9/2009	Grab	Dibenz(a,h)anthracene	0.63 U	mg/kg	0.23	2.7
MH105	B1	6/9/2009	Grab	Dibenzofuran	0.63 U	mg/kg	0.54	1.2
MH105	B1	6/9/2009	Grab	Fluoranthene	2.7	mg/kg	1.7	1.6
MH105	B1	6/9/2009	Grab	Fluorene	0.63 U	mg/kg	0.54	1.2
MH105	B1	6/9/2009	Grab	Indeno(1,2,3-cd)pyrene	0.63 U	mg/kg	0.60	1.1
MH105	B1	6/9/2009	Grab	2-Methylnaphthalene	0.63 U	mg/kg	0.67	0.94
MH105	B1	6/9/2009	Grab	Phenanthrene	1.4	mg/kg	1.5	0.93
MH105	B1	6/9/2009	Grab	Pyrene	1.5	mg/kg	2.6	0.58
MH105	B1	6/9/2009	Grab	Total HPAHs	9.4	mg/kg	12	0.78
MH105	B1	6/9/2009	Grab	Total LPAHs	1.4	mg/kg	5.2	0.27
MH105	B1	6/9/2009	Grab	Total cPAHs (TEQ, NDx0.5)	1.1	mg/kg	0.15	7.1
MH427A	B1	4/29/2010	Grab	Total PCBs	0.29	mg/kg	0.13	2.2
MH427A	B1	12/30/2008	Grab	Total PCBs	0.18	mg/kg	0.13	1.4
MH427A	B1	4/29/2010	Grab	Arsenic	7.0	mg/kg	7.3	0.96
MH427A	B1	4/29/2010	Grab	Cadmium	2.4	mg/kg	5.1	0.47
MH427A	B1	4/29/2010	Grab	Chromium	68	mg/kg	260	0.26

Table 7.2-27
Storm Drain Solids Sampling Results - Building 3-380 Area

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH427A	B1	4/29/2010	Grab	Copper	90	mg/kg	390	0.23
MH427A	B1	4/29/2010	Grab	Lead	164	mg/kg	450	0.36
MH427A	B1	4/29/2010	Grab	Mercury	0.060	mg/kg	0.41	0.15
MH427A	B1	4/29/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
MH427A	B1	4/29/2010	Grab	Zinc	1,190	mg/kg	410	2.9
MH428	B1	12/30/2008	Grab	Total PCBs	0.041	mg/kg	0.13	0.32
MH428A	B1	12/30/2008	Grab	Total PCBs	0.39	mg/kg	0.13	3.0
CB102	B2	4/20/2010	Grab	Total PCBs	0.27	mg/kg	0.13	2.1
CB102	B2	4/20/2010	Grab	Arsenic	14	mg/kg	7.3	1.9
CB102	B2	4/20/2010	Grab	Cadmium	3.6	mg/kg	5.1	0.71
CB102	B2	4/20/2010	Grab	Chromium	69	mg/kg	260	0.27
CB102	B2	4/20/2010	Grab	Copper	104	mg/kg	390	0.27
CB102	B2	4/20/2010	Grab	Lead	715	mg/kg	450	1.6
CB102	B2	4/20/2010	Grab	Mercury	0.10	mg/kg	0.41	0.24
CB102	B2	4/20/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB102	B2	4/20/2010	Grab	Zinc	699	mg/kg	410	1.7
CB102A	B2	4/20/2010	Grab	Total PCBs	0.46	mg/kg	0.13	3.5
CB102A	B2	4/20/2010	Grab	Arsenic	8.0	mg/kg	7.3	1.1
CB102A	B2	4/20/2010	Grab	Cadmium	2.5	mg/kg	5.1	0.49
CB102A	B2	4/20/2010	Grab	Chromium	75	mg/kg	260	0.29
CB102A	B2	4/20/2010	Grab	Copper	95	mg/kg	390	0.24
CB102A	B2	4/20/2010	Grab	Lead	89	mg/kg	450	0.20
CB102A	B2	4/20/2010	Grab	Mercury	0.12	mg/kg	0.41	0.29
CB102A	B2	4/20/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB102A	B2	4/20/2010	Grab	Zinc	990	mg/kg	410	2.4
CB102B	B2	4/20/2010	Grab	Total PCBs	0.49	mg/kg	0.13	3.8
CB102B	B2	4/20/2010	Grab	Arsenic	8 U	mg/kg	7.3	1.1
CB102B	B2	4/20/2010	Grab	Cadmium	1.4	mg/kg	5.1	0.27
CB102B	B2	4/20/2010	Grab	Chromium	42	mg/kg	260	0.16
CB102B	B2	4/20/2010	Grab	Copper	56	mg/kg	390	0.14
CB102B	B2	4/20/2010	Grab	Lead	69	mg/kg	450	0.15
CB102B	B2	4/20/2010	Grab	Mercury	0.060	mg/kg	0.41	0.15
CB102B	B2	4/20/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB102B	B2	4/20/2010	Grab	Zinc	460	mg/kg	410	1.1
CB102C	B2	4/20/2010	Grab	Total PCBs	0.37	mg/kg	0.13	2.8
CB102C	B2	4/20/2010	Grab	Arsenic	7.0	mg/kg	7.3	0.96
CB102C	B2	4/20/2010	Grab	Cadmium	1.7	mg/kg	5.1	0.33
CB102C	B2	4/20/2010	Grab	Chromium	37	mg/kg	260	0.14
CB102C	B2	4/20/2010	Grab	Copper	52	mg/kg	390	0.13
CB102C	B2	4/20/2010	Grab	Lead	55	mg/kg	450	0.12
CB102C	B2	4/20/2010	Grab	Mercury	0.040	mg/kg	0.41	0.098
CB102C	B2	4/20/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB102C	B2	4/20/2010	Grab	Zinc	559	mg/kg	410	1.4
CB102D	B2	4/20/2010	Grab	Total PCBs	0.30	mg/kg	0.13	2.3
CB102D	B2	4/20/2010	Grab	Arsenic	8 U	mg/kg	7.3	1.1
CB102D	B2	4/20/2010	Grab	Cadmium	2.8	mg/kg	5.1	0.55
CB102D	B2	4/20/2010	Grab	Chromium	48	mg/kg	260	0.18
CB102D	B2	4/20/2010	Grab	Copper	82	mg/kg	390	0.21
CB102D	B2	4/20/2010	Grab	Lead	77	mg/kg	450	0.17
CB102D	B2	4/20/2010	Grab	Mercury	0.080	mg/kg	0.41	0.20
CB102D	B2	4/20/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB102D	B2	4/20/2010	Grab	Zinc	941	mg/kg	410	2.3
CB106	B3	4/21/2010	Grab	Total PCBs	0.39	mg/kg	0.13	3.0
CB106	B3	11/18/2008	Grab	Total PCBs	0.044	mg/kg	0.13	0.34
CB106	B3	4/21/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB106	B3	4/21/2010	Grab	Cadmium	16	mg/kg	5.1	3.1
CB106	B3	4/21/2010	Grab	Chromium	224	mg/kg	260	0.86
CB106	B3	4/21/2010	Grab	Copper	130	mg/kg	390	0.33

Table 7.2-27
Storm Drain Solids Sampling Results - Building 3-380 Area

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB106	B3	4/21/2010	Grab	Lead	592	mg/kg	450	1.3
CB106	B3	4/21/2010	Grab	Mercury	0.19	mg/kg	0.41	0.46
CB106	B3	11/18/2008	Grab	Mercury	0.1 U	mg/kg	0.41	0.24
CB106	B3	4/21/2010	Grab	Silver	0.70	mg/kg	6.1	0.11
CB106	B3	4/21/2010	Grab	Zinc	1,370	mg/kg	410	3.3
CB106A	B3	4/21/2010	Grab	Total PCBs	0.28	mg/kg	0.13	2.2
CB106A	B3	4/21/2010	Grab	Arsenic	7.0	mg/kg	7.3	0.96
CB106A	B3	4/21/2010	Grab	Cadmium	2.8	mg/kg	5.1	0.55
CB106A	B3	4/21/2010	Grab	Chromium	59	mg/kg	260	0.23
CB106A	B3	4/21/2010	Grab	Copper	74	mg/kg	390	0.19
CB106A	B3	4/21/2010	Grab	Lead	111	mg/kg	450	0.25
CB106A	B3	4/21/2010	Grab	Mercury	0.060	mg/kg	0.41	0.15
CB106A	B3	4/21/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB106A	B3	4/21/2010	Grab	Zinc	622	mg/kg	410	1.5
CB107	B3	4/21/2010	Grab	Total PCBs	0.35	mg/kg	0.13	2.7
CB107	B3	4/21/2010	Grab	Arsenic	9.0	mg/kg	7.3	1.2
CB107	B3	4/21/2010	Grab	Cadmium	16	mg/kg	5.1	3.2
CB107	B3	4/21/2010	Grab	Chromium	121	mg/kg	260	0.47
CB107	B3	4/21/2010	Grab	Copper	116	mg/kg	390	0.30
CB107	B3	4/21/2010	Grab	Lead	285	mg/kg	450	0.63
CB107	B3	4/21/2010	Grab	Mercury	0.17	mg/kg	0.41	0.41
CB107	B3	4/21/2010	Grab	Silver	1.0	mg/kg	6.1	0.16
CB107	B3	4/21/2010	Grab	Zinc	1,270	mg/kg	410	3.1
CB428B	B4	4/21/2010	Grab	Total PCBs	0.18	mg/kg	0.13	1.4
CB428B	B4	4/21/2010	Grab	Arsenic	7 U	mg/kg	7.3	0.96
CB428B	B4	4/21/2010	Grab	Cadmium	5.8	mg/kg	5.1	1.1
CB428B	B4	4/21/2010	Grab	Chromium	105	mg/kg	260	0.40
CB428B	B4	4/21/2010	Grab	Copper	99	mg/kg	390	0.25
CB428B	B4	4/21/2010	Grab	Lead	209	mg/kg	450	0.46
CB428B	B4	4/21/2010	Grab	Mercury	0.070	mg/kg	0.41	0.17
CB428B	B4	4/21/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066
CB428B	B4	4/21/2010	Grab	Zinc	949	mg/kg	410	2.3
CB428C	B4	4/26/2010	Grab	Total PCBs	0.098	mg/kg	0.13	0.75
CB428C	B4	4/26/2010	Grab	Arsenic	8 U	mg/kg	7.3	1.1
CB428C	B4	4/26/2010	Grab	Cadmium	1.2	mg/kg	5.1	0.24
CB428C	B4	4/26/2010	Grab	Chromium	56	mg/kg	260	0.22
CB428C	B4	4/26/2010	Grab	Copper	65	mg/kg	390	0.17
CB428C	B4	4/26/2010	Grab	Lead	77	mg/kg	450	0.17
CB428C	B4	4/26/2010	Grab	Mercury	0.050	mg/kg	0.41	0.12
CB428C	B4	4/26/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB428C	B4	4/26/2010	Grab	Zinc	365	mg/kg	410	0.89
MH101	NA	6/10/2009	Grab	Total PCBs	0.98	mg/kg	0.13	7.5

Indicates dectected result exceeds the RISL.
Indicates nondetected result exceeds the RISL.

All samples presented as dry weight concentrations.
Table includes only chemicals that exceed the screening level in at least one sample in this drainage area.
RISL = RI Screening Level

Table 7.2-28
Chemicals Detected Above RISLs in Storm Drain Solids
Parking Lot Drainage Area

Chemical Class	Chemical	Frequency of Detection	Min Detect (mg/kg DW)	Max Detect (mg/kg DW)	Average Detect (mg/kg DW)	RI SL (mg/kg DW)	Fraction of Detections Above SL	Maximum Exceedance Factor*	Average Exceedance Factor*
Metals	Arsenic	11 / 12	9.0	144	44	7.3	11 / 11	20	6.0
	Cadmium	11 / 11	1.4	8.4	4.1	5.1	3 / 11	1.6	<1
	Chromium	11 / 11	54	410	129	260	1 / 11	1.6	<1
	Lead	12 / 12	95	870	304	450	3 / 12	1.9	<1
	Zinc	12 / 12	394	1,500	921	410	11 / 12	3.7	2.2
Polychlorinated Aromatic Compounds	Total PCBs	17 / 17	0.19	2.1	0.6	0.13	17 / 17	16	4.6
	Total dioxins/furans (ng/kg)	1 / 1	62	62	62	13	1 / 1	4.8	4.8
PAHs	Phenanthrene	3 / 3	0.19	2.1	1.3	1.5	2 / 3	1.4	<1
	Benzo(a)pyrene	2 / 3	0.93	1.5	1.2	0.15	2 / 2	10	8.0
	Benzofluoranthenes	3 / 3	0.30	4.0	2.4	3.2	1 / 3	1.3	<1
	Benzo(g,h,i)perylene	2 / 3	1.2	1.7	1.5	0.67	2 / 2	2.5	2.2
	Chrysene	3 / 3	0.20	2.3	1.6	1.4	2 / 3	1.6	1.1
	Dibenz(a,h)anthracene	2 / 3	0.40	0.50	0.45	0.23	2 / 2	2.2	2.0
	Fluoranthene	3 / 3	0.38	4.2	2.5	1.7	2 / 3	2.5	1.5
	Indeno(1,2,3-cd)pyrene	2 / 3	1.0	1.3	1.2	0.6	2 / 2	2.2	1.9
	Pyrene	3 / 3	0.20	3.1	2.1	2.6	2 / 3	1.2	<1
	Total HPAH	3 / 3	1.2	19	12	12	2 / 3	1.6	1.0
	Total cPAH	3 / 3	0.12	2.1	1.2	0.15	2 / 3	15	8.0
Phthalates	Bis(2-ethylhexyl) phthalate	1 / 1	1.5	1.5	1.5	1.3	1 / 1	1.2	1.2

EF Colors	EF Ranges
(white)	< 5.0
(yellow)	> 5.0 - 25

Dioxin/furan concentrations are in units of ng/kg TEQ.

* Maximum and average exceedance factor for detected values only.

Table 7.2-29
Maximum RISL Exceedance Factors in Storm Drain Solids, by Subdrainage
Parking Lot Drainage Area

Chemical Class	Chemical	PL1 (Main Line)	PL2	PL3	PL4
	Subdrainage:				
Metals	Arsenic	1.5	20	--	4.5
	Cadmium	1.6	1.6	--	<1
	Chromium	<1	1.6	--	<1
	Lead	1.5	1.9	--	<1
	Zinc	3.7	3.6	--	1.2
Polychlorinated Aromatic Compounds	Total PCBs	4.4	16	4.2	3.8
	Total dioxins/furans	--	4.8	--	--
PAHs	Phenanthrene	--	1.4	--	<1
	Benzo(a)pyrene	--	10	--	ND
	Benzo(g,h,i)perylene	--	2.5	--	<1
	Benzofluoranthenes	--	1.3	--	<1
	Chrysene	--	1.6	--	<1
	Dibenzo(a,h)anthracene	--	2.2	--	<1
	Fluoranthene	--	2.5	--	<1
	Indeno(1,2,3-cd)pyrene	--	2.2	--	<1
	Pyrene	--	1.2	--	<1
	Total HPAHs	--	1.6	--	<1
	Total cPAHs	--	15	--	2.0
Phthalates	Bis(2-ethylhexyl) phthalate	--	ND	--	1.2
Other SVOCs	Dibenzofuran	--	1.1	--	<1

EF Colors	EF Ranges
(green)	> 1.0 - 5.0
(yellow)	> 5.0 - 25

Dioxin/furan concentrations are in units of ng/kg TEQ.
-- = indicates sample not analyzed for this parameter
ND = not detected
Table shows maximum exceedance factors for detected chemicals only.
Subdrainage locations are shown in Figure 7.2-16.

Table 7.2-30
Storm Drain Solids Sampling Results - Parking Lot Area

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB432	PL1	4/20/2010	Grab	Total PCBs	0.57	mg/kg	0.13	4.4
CB432	PL1	4/20/2010	Grab	Arsenic	10	mg/kg	7.3	1.4
CB432	PL1	4/20/2010	Grab	Cadmium	8.0	mg/kg	5.1	1.6
CB432	PL1	4/20/2010	Grab	Chromium	238 J	mg/kg	260	0.92
CB432	PL1	4/20/2010	Grab	Copper	197	mg/kg	390	0.51
CB432	PL1	4/20/2010	Grab	Lead	657 J	mg/kg	450	1.5
CB432	PL1	4/20/2010	Grab	Mercury	0.14	mg/kg	0.41	0.34
CB432	PL1	4/20/2010	Grab	Silver	0.60	mg/kg	6.1	0.098
CB432	PL1	4/20/2010	Grab	Zinc	1,500	mg/kg	410	3.7
CB433	PL1	4/20/2010	Grab	Total PCBs	0.25	mg/kg	0.13	1.9
CB433	PL1	4/20/2010	Grab	Arsenic	11	mg/kg	7.3	1.5
CB433	PL1	4/20/2010	Grab	Cadmium	2.0	mg/kg	5.1	0.39
CB433	PL1	4/20/2010	Grab	Chromium	62	mg/kg	260	0.24
CB433	PL1	4/20/2010	Grab	Copper	112	mg/kg	390	0.29
CB433	PL1	4/20/2010	Grab	Lead	111	mg/kg	450	0.25
CB433	PL1	4/20/2010	Grab	Mercury	0.06	mg/kg	0.41	0.15
CB433	PL1	4/20/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB433	PL1	4/20/2010	Grab	Zinc	668	mg/kg	410	1.6
CB435A	PL1	4/20/2010	Grab	Total PCBs	0.26	mg/kg	0.13	2.0
CB435A	PL1	4/20/2010	Grab	Arsenic	9.0	mg/kg	7.3	1.2
CB435A	PL1	4/20/2010	Grab	Cadmium	1.7	mg/kg	5.1	0.33
CB435A	PL1	4/20/2010	Grab	Chromium	75	mg/kg	260	0.29
CB435A	PL1	4/20/2010	Grab	Copper	120	mg/kg	390	0.31
CB435A	PL1	4/20/2010	Grab	Lead	118	mg/kg	450	0.26
CB435A	PL1	4/20/2010	Grab	Mercury	0.07	mg/kg	0.41	0.17
CB435A	PL1	4/20/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB435A	PL1	4/20/2010	Grab	Zinc	746	mg/kg	410	1.8
IN433A	PL1	4/20/2010	Grab	Total PCBs	0.20	mg/kg	0.13	1.5
IN433A	PL1	4/20/2010	Grab	Arsenic	8 U	mg/kg	7.3	1.1
IN433A	PL1	4/20/2010	Grab	Cadmium	1.4	mg/kg	5.1	0.27
IN433A	PL1	4/20/2010	Grab	Chromium	54	mg/kg	260	0.21
IN433A	PL1	4/20/2010	Grab	Copper	76	mg/kg	390	0.19
IN433A	PL1	4/20/2010	Grab	Lead	98	mg/kg	450	0.22
IN433A	PL1	4/20/2010	Grab	Mercury	0.05	mg/kg	0.41	0.12
IN433A	PL1	4/20/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
IN433A	PL1	4/20/2010	Grab	Zinc	830	mg/kg	410	2.0
CB436	PL2	4/20/2010	Grab	Total PCBs	0.91	mg/kg	0.13	7.0
CB436	PL2	4/20/2010	Grab	Arsenic	144	mg/kg	7.3	20
CB436	PL2	4/20/2010	Grab	Cadmium	6.4	mg/kg	5.1	1.3
CB436	PL2	4/20/2010	Grab	Chromium	238	mg/kg	260	0.92
CB436	PL2	4/20/2010	Grab	Copper	160	mg/kg	390	0.41
CB436	PL2	4/20/2010	Grab	Lead	706	mg/kg	450	1.6
CB436	PL2	4/20/2010	Grab	Mercury	0.12	mg/kg	0.41	0.29
CB436	PL2	4/20/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB436	PL2	4/20/2010	Grab	Zinc	1,030	mg/kg	410	2.5
CB631	PL2	4/20/2010	Grab	Total PCBs	0.50	mg/kg	0.13	3.8
CB631	PL2	4/20/2010	Grab	Arsenic	30	mg/kg	7.3	4.1
CB631	PL2	4/20/2010	Grab	Cadmium	8.4	mg/kg	5.1	1.6
CB631	PL2	4/20/2010	Grab	Chromium	410	mg/kg	260	1.6
CB631	PL2	4/20/2010	Grab	Copper	197	mg/kg	390	0.51
CB631	PL2	4/20/2010	Grab	Lead	870	mg/kg	450	1.9
CB631	PL2	4/20/2010	Grab	Mercury	0.18	mg/kg	0.41	0.44
CB631	PL2	4/20/2010	Grab	Silver	0.70	mg/kg	6.1	0.11
CB631	PL2	4/20/2010	Grab	Zinc	1,490	mg/kg	410	3.6
CB633	PL2	4/20/2010	Grab	Total PCBs	2.1	mg/kg	0.13	16
CB633	PL2	4/20/2010	Grab	Arsenic	32	mg/kg	7.3	4.4
CB633	PL2	4/20/2010	Grab	Cadmium	3.1	mg/kg	5.1	0.61
CB633	PL2	4/20/2010	Grab	Chromium	55	mg/kg	260	0.21
CB633	PL2	4/20/2010	Grab	Copper	44	mg/kg	390	0.11
CB633	PL2	4/20/2010	Grab	Lead	283	mg/kg	450	0.63
CB633	PL2	4/20/2010	Grab	Mercury	0.10	mg/kg	0.41	0.24
CB633	PL2	4/20/2010	Grab	Silver	0.4 U	mg/kg	6.1	0.066

Table 7.2-30
Storm Drain Solids Sampling Results - Parking Lot Area

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
CB633	PL2	4/20/2010	Grab	Zinc	689	mg/kg	410	1.7
D283A	PL2	5/10/2010	Grab	Total PCBs	1.1	mg/kg	0.13	8.1
D436A	PL2	5/10/2010	Grab	Total PCBs	0.41	mg/kg	0.13	3.2
IN437	PL2	6/15/2009	Grab	Total PCBs	0.58	mg/kg	0.13	4.5
MH434	PL2	6/2/2010	Filter/Stormwater	Total PCBs	0.61	mg/kg	0.13	4.7
MH434	PL2	5/28/2010	Filter/Stormwater	Total PCBs	0.57	mg/kg	0.13	4.4
MH434	PL2	4/27/2010	Filter/Stormwater	Total PCBs	0.76	mg/kg	0.13	5.8
MH434	PL2	5/28/2010	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	62	ng/kg	13	4.8
MH434	PL2	6/2/2010	Filter/Stormwater	Arsenic	90	mg/kg	7.3	12
MH434	PL2	5/28/2010	Filter/Stormwater	Arsenic	39	mg/kg	7.3	5.3
MH434	PL2	4/27/2010	Filter/Stormwater	Arsenic	60	mg/kg	7.3	8.2
MH434	PL2	6/2/2010	Filter/Stormwater	Cadmium	5.1	mg/kg	5.1	1.0
MH434	PL2	5/28/2010	Filter/Stormwater	Cadmium	3.4	mg/kg	5.1	0.67
MH434	PL2	4/27/2010	Filter/Stormwater	Cadmium	3.4	mg/kg	5.1	0.67
MH434	PL2	6/2/2010	Filter/Stormwater	Chromium	93	mg/kg	260	0.36
MH434	PL2	5/28/2010	Filter/Stormwater	Chromium	66 J	mg/kg	260	0.25
MH434	PL2	4/27/2010	Filter/Stormwater	Chromium	76 J	mg/kg	260	0.29
MH434	PL2	6/2/2010	Filter/Stormwater	Copper	162	mg/kg	390	0.42
MH434	PL2	5/28/2010	Filter/Stormwater	Copper	83	mg/kg	390	0.21
MH434	PL2	4/27/2010	Filter/Stormwater	Copper	130	mg/kg	390	0.33
MH434	PL2	6/2/2010	Filter/Stormwater	Lead	236	mg/kg	450	0.52
MH434	PL2	5/28/2010	Filter/Stormwater	Lead	219	mg/kg	450	0.49
MH434	PL2	4/27/2010	Filter/Stormwater	Lead	146	mg/kg	450	0.32
MH434	PL2	6/2/2010	Filter/Stormwater	Mercury	0.20 J	mg/kg	0.41	0.49
MH434	PL2	5/28/2010	Filter/Stormwater	Mercury	0.13	mg/kg	0.41	0.32
MH434	PL2	4/27/2010	Filter/Stormwater	Mercury	0.10 J	mg/kg	0.41	0.24
MH434	PL2	6/2/2010	Filter/Stormwater	Silver	0.8 U	mg/kg	6.1	0.13
MH434	PL2	5/28/2010	Filter/Stormwater	Silver	0.5 U	mg/kg	6.1	0.082
MH434	PL2	4/27/2010	Filter/Stormwater	Silver	1 U	mg/kg	6.1	0.16
MH434	PL2	6/2/2010	Filter/Stormwater	Zinc	1,350	mg/kg	410	3.3
MH434	PL2	5/28/2010	Filter/Stormwater	Zinc	941	mg/kg	410	2.3
MH434	PL2	4/27/2010	Filter/Stormwater	Zinc	923 J	mg/kg	410	2.3
MH434	PL2	6/2/2010	Filter/Stormwater	Acenaphthene	0.13 U	mg/kg	0.50	0.26
MH434	PL2	4/27/2010	Filter/Stormwater	Acenaphthene	0.11	mg/kg	0.50	0.22
MH434	PL2	6/2/2010	Filter/Stormwater	Anthracene	0.13 U	mg/kg	0.96	0.14
MH434	PL2	4/27/2010	Filter/Stormwater	Anthracene	0.14	mg/kg	0.96	0.15
MH434	PL2	6/2/2010	Filter/Stormwater	Benzo(a)anthracene	0.78	mg/kg	1.3	0.60
MH434	PL2	4/27/2010	Filter/Stormwater	Benzo(a)anthracene	0.53	mg/kg	1.3	0.41
MH434	PL2	6/2/2010	Filter/Stormwater	Total Benzofluoranthenes	4.0	mg/kg	3.2	1.3
MH434	PL2	4/27/2010	Filter/Stormwater	Total Benzofluoranthenes	2.8	mg/kg	3.2	0.88
MH434	PL2	6/2/2010	Filter/Stormwater	Benzo(g,h,i)perylene	1.7	mg/kg	0.67	2.5
MH434	PL2	4/27/2010	Filter/Stormwater	Benzo(g,h,i)perylene	1.2	mg/kg	0.67	1.8
MH434	PL2	6/2/2010	Filter/Stormwater	Benzo(a)pyrene	1.5	mg/kg	0.15	10
MH434	PL2	4/27/2010	Filter/Stormwater	Benzo(a)pyrene	0.93	mg/kg	0.15	6.2
MH434	PL2	6/2/2010	Filter/Stormwater	Chrysene	2.3	mg/kg	1.4	1.6
MH434	PL2	4/27/2010	Filter/Stormwater	Chrysene	2.2	mg/kg	1.4	1.6
MH434	PL2	6/2/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.50	mg/kg	0.23	2.2
MH434	PL2	4/27/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.40	mg/kg	0.23	1.7
MH434	PL2	6/2/2010	Filter/Stormwater	Dibenzofuran	0.16	mg/kg	0.54	0.30
MH434	PL2	4/27/2010	Filter/Stormwater	Dibenzofuran	0.25	mg/kg	0.54	0.46
MH434	PL2	6/2/2010	Filter/Stormwater	Fluoranthene	4.2	mg/kg	1.7	2.5
MH434	PL2	4/27/2010	Filter/Stormwater	Fluoranthene	2.9	mg/kg	1.7	1.7
MH434	PL2	6/2/2010	Filter/Stormwater	Fluorene	0.13 U	mg/kg	0.54	0.24
MH434	PL2	4/27/2010	Filter/Stormwater	Fluorene	0.34	mg/kg	0.54	0.63
MH434	PL2	6/2/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	1.3	mg/kg	0.60	2.2
MH434	PL2	4/27/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	1.0	mg/kg	0.60	1.7
MH434	PL2	6/2/2010	Filter/Stormwater	2-Methylnaphthalene	0.23	mg/kg	0.67	0.34
MH434	PL2	4/27/2010	Filter/Stormwater	2-Methylnaphthalene	0.20	mg/kg	0.67	0.30
MH434	PL2	6/2/2010	Filter/Stormwater	Phenanthrene	2.1	mg/kg	1.5	1.4
MH434	PL2	4/27/2010	Filter/Stormwater	Phenanthrene	1.6	mg/kg	1.5	1.1
MH434	PL2	6/2/2010	Filter/Stormwater	Pyrene	3.1	mg/kg	2.6	1.2
MH434	PL2	4/27/2010	Filter/Stormwater	Pyrene	2.9	mg/kg	2.6	1.1

Table 7.2-30
Storm Drain Solids Sampling Results - Parking Lot Area

Sample Location	Sub-Drainage	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
MH434	PL2	6/2/2010	Filter/Stormwater	Total HPAHs	19	mg/kg	12	1.6
MH434	PL2	4/27/2010	Filter/Stormwater	Total HPAHs	15	mg/kg	12	1.2
MH434	PL2	6/2/2010	Filter/Stormwater	Total LPAHs	2.3	mg/kg	5.2	0.44
MH434	PL2	4/27/2010	Filter/Stormwater	Total LPAHs	2.5	mg/kg	5.2	0.48
MH434	PL2	6/2/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	2.2	mg/kg	0.15	15
MH434	PL2	4/27/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	1.4	mg/kg	0.15	9.5
D434A	PL3	5/10/2010	Grab	Total PCBs	0.55	mg/kg	0.13	4.2
CB435	PL4	4/20/2010	Grab	Total PCBs	0.24	mg/kg	0.13	1.8
CB435	PL4	6/15/2009	Grab	Total PCBs	0.19	mg/kg	0.13	1.4
CB435	PL4	4/20/2010	Grab	Arsenic	33	mg/kg	7.3	4.5
CB435	PL4	6/15/2009	Grab	Arsenic	30	mg/kg	7.3	4.1
CB435	PL4	4/20/2010	Grab	Cadmium	2.0	mg/kg	5.1	0.39
CB435	PL4	4/20/2010	Grab	Chromium	55	mg/kg	260	0.21
CB435	PL4	4/20/2010	Grab	Copper	110	mg/kg	390	0.28
CB435	PL4	6/15/2009	Grab	Copper	110	mg/kg	390	0.28
CB435	PL4	4/20/2010	Grab	Lead	113	mg/kg	450	0.25
CB435	PL4	6/15/2009	Grab	Lead	95	mg/kg	450	0.21
CB435	PL4	4/20/2010	Grab	Mercury	0.08	mg/kg	0.41	0.20
CB435	PL4	6/15/2009	Grab	Mercury	0.04	mg/kg	0.41	0.098
CB435	PL4	4/20/2010	Grab	Silver	0.5 U	mg/kg	6.1	0.082
CB435	PL4	4/20/2010	Grab	Zinc	487	mg/kg	410	1.2
CB435	PL4	6/15/2009	Grab	Zinc	394	mg/kg	410	0.96
CB435	PL4	6/15/2009	Grab	p-Cresol (4-Methylphenol)	0.50	mg/kg	0.67	0.75
CB435	PL4	6/15/2009	Grab	Phenol	0.13 U	mg/kg	0.42	0.31
CB435	PL4	6/15/2009	Grab	Bis(2-ethylhexyl) phthalate	1.5	mg/kg	1.3	1.2
CB435	PL4	6/15/2009	Grab	Butyl benzyl phthalate	0.13 U	mg/kg	0.067	1.9
CB435	PL4	6/15/2009	Grab	Acenaphthene	0.13 U	mg/kg	0.50	0.26
CB435	PL4	6/15/2009	Grab	Anthracene	0.13 U	mg/kg	0.96	0.14
CB435	PL4	6/15/2009	Grab	Benzo(a)anthracene	0.13	mg/kg	1.3	0.10
CB435	PL4	6/15/2009	Grab	Total Benzofluoranthenes	0.30	mg/kg	3.2	0.094
CB435	PL4	6/15/2009	Grab	Benzo(g,h,i)perylene	0.13 U	mg/kg	0.67	0.19
CB435	PL4	6/15/2009	Grab	Benzo(a)pyrene	0.13 U	mg/kg	0.15	0.87
CB435	PL4	6/15/2009	Grab	Chrysene	0.20	mg/kg	1.4	0.14
CB435	PL4	6/15/2009	Grab	Dibenz(a,h)anthracene	0.13 U	mg/kg	0.23	0.57
CB435	PL4	6/15/2009	Grab	Dibenzofuran	0.13 U	mg/kg	0.54	0.24
CB435	PL4	6/15/2009	Grab	Fluoranthene	0.38	mg/kg	1.7	0.22
CB435	PL4	6/15/2009	Grab	Fluorene	0.13 U	mg/kg	0.54	0.24
CB435	PL4	6/15/2009	Grab	Indeno(1,2,3-cd)pyrene	0.13 U	mg/kg	0.60	0.22
CB435	PL4	6/15/2009	Grab	2-Methylnaphthalene	0.13 U	mg/kg	0.67	0.19
CB435	PL4	6/15/2009	Grab	Phenanthrene	0.19	mg/kg	1.5	0.13
CB435	PL4	6/15/2009	Grab	Pyrene	0.20	mg/kg	2.6	0.077
CB435	PL4	6/15/2009	Grab	Total HPAHs	1.2	mg/kg	12	0.10
CB435	PL4	6/15/2009	Grab	Total LPAHs	0.19	mg/kg	5.2	0.037
CB435	PL4	6/15/2009	Grab	Total cPAHs (TEQ, NDx0.5)	0.12	mg/kg	0.15	0.82
D435B	PL4	5/10/2010	Grab	Total PCBs	0.50	mg/kg	0.13	3.8

Indicates detected result exceeds the RISL.
Indicates nondetected result exceeds the RISL.

All samples presented as dry weight concentrations.
Table includes only chemicals that exceed the screening level in at least one sample in this drainage area.

Table 7.2-31
Chemicals Detected Above RISLs in Storm Drain Solids
King County Lift Station

Chemical Class	Chemical	Frequency of Detection	Min Detect (mg/kg DW)	Max Detect (mg/kg DW)	Average Detect (mg/kg DW)	RISL (mg/kg DW)	Fraction of Detections Above SL	Maximum Exceedance Factor*	Average Exceedance Factor*
Metals	Arsenic	5 / 29	9.0	20	12	7.3	5 / 5	2.7**	1.6
	Cadmium	29 / 29	2.9	11	5.1	5.1	10 / 29	2.2	1.0
	Mercury	27 / 30	0.050	5.6	0.42	0.41	3 / 27	14	1.0
	Zinc	29 / 29	125	1,200	432	410	14 / 29	2.9	1.1
Polychlorinated Aromatic Compounds	Total PCBs	35 / 35	0.076	3.3	1.0	0.13	33 / 35	25	7.7
	Total dioxins/furans (ng/kg)	11 / 11	2.1	68	16	13	3 / 11	5.2	1.2
PAHs	Acenaphthene	6 / 12	0.044	0.54	0.22	0.50	1 / 6	1.1	<1
	Phenanthrene	12 / 12	0.087	3.1	1.4	1.5	4 / 12	2.1	<1
	Benzo(a)anthracene	12 / 12	0.049	1.7	0.66	1.3	1 / 12	1.3	<1
	Benzo(a)pyrene	12 / 12	0.067	2.6	0.99	0.15	11 / 12	17	6.6
	Benzofluoranthenes	12 / 12	0.22	6.0	2.8	3.2	5 / 12	1.9	<1
	Benzo(g,h,i)perylene	12 / 12	0.074	2.5	1.0	0.67	8 / 12	3.7	1.5
	Chrysene	12 / 12	0.14	4.3	1.9	1.4	6 / 12	3.1	1.4
	Dibenz(a,h)anthracene	9 / 12	0.026	1.0	0.39	0.23	6 / 9	4.3	1.7
	Fluoranthene	12 / 12	0.21	7.8	3.0	1.7	8 / 12	4.6	1.8
	Indeno(1,2,3-cd)pyrene	12 / 12	0.063	2.3	0.97	0.60	7 / 12	3.8	1.6
	Pyrene	12 / 12	0.15	4.1	1.8	2.6	3 / 12	1.6	<1
	Total HPAH	'12 / 12	0.97	30	13	12	6 / 12	2.5	1.1
	Total cPAH	12 / 12	0.10	3.6	1.5	0.15	11 / 12	24	10

EF Colors	EF Ranges
	< 5.0
(yellow)	> 5.0 - 25

Dioxin/furan concentrations are in units of ng/kg TEQ.
* Maximum and average exceedance factor for detected values only.
** The highest exceedance factor for arsenic in a nondetect sample was 9.6.

Table 7.2-32
Chemicals Detected Above RISLs in Storm Drain Water
Lift Station

Chemical Class	Chemical	Frequency of Detection	Minimum Detect (ug/L)	Maximum Detect (ug/L)	Average Detect (ug/L)	RISL (ug/L)	Fraction of Detections Above SL	Maximum Exceedance Factor*	Average Exceedance Factor*
Metals	Arsenic	43 / 46	0.30	4.6	0.93	0.87	17 / 43	5.3	1.1
	Cadmium	20 / 46	0.20	17	1.5	0.43	10 / 20	38	3.5
	Copper	40 / 46	1.00	18	5.2	2.4	26 / 40	7.3	2.2
	Lead	25 / 46	0.20	31	4.7	8.1	4 / 25	3.8	<1
	Zinc	44 / 46	7.0	99	36	33	19 / 44	3.0	1.1
PCBs	Total PCBs	19 / 23	0.011	0.17	0.04	0.010	19 / 19	17	3.8
PAHs	Benzo(a)pyrene	20 / 23	0.019	0.65	0.11	0.010	20 / 20	65	11
	Benzo(g,h,i)perylene	20 / 23	0.018	0.73	0.12	0.012	20 / 20	61	10
	Total cPAH	23 / 23	0.0083	0.9	0.17	0.010	22 / 23	92	17
Phthalates	Bis(2-ethylhexyl) phthalate	5 / 22	1.0	2.0	1.4	1.4	2 / 5	1.4	1.0
	Di-n-octyl phthalate	4 / 23	1.0	2.1	1.5	1.0	3 / 4	2.1	1.5

EF Colors	EF Ranges
(white)	< 5.0
(yellow)	> 5.0 - 25
(orange)	> 25 - 125

* Maximum and average exceedance factor for detected values only.

Table 7.2-33
Storm Drain Solids Sampling Results - Lift Station

Sample Location	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
LS431	5/15/2011	Filter/Stormwater	Total PCBs	0.36	mg/kg	0.13	2.8
LS431	4/28/2011	Filter/Stormwater	Total PCBs	0.96	mg/kg	0.13	7.4
LS431	4/25/2011	Filter/Stormwater	Total PCBs	0.40	mg/kg	0.13	3.1
LS431	3/21/2011	Filter/Baseflow	Total PCBs	0.092	mg/kg	0.13	0.71
LS431	3/9/2011	Filter/Stormwater	Total PCBs	0.61	mg/kg	0.13	4.7
LS431	1/28/2011	Filter/Baseflow	Total PCBs	0.82	mg/kg	0.13	6.3
LS431	1/21/2011	Filter/Stormwater	Total PCBs	0.32	mg/kg	0.13	2.5
LS431	12/12/2010	Filter/Stormwater	Total PCBs	1.7	mg/kg	0.13	13
LS431	11/30/2010	Filter/Stormwater	Total PCBs	0.79	mg/kg	0.13	6.1
LS431	11/17/2010	Filter/Stormwater	Total PCBs	0.64	mg/kg	0.13	4.9
LS431	6/30/2010	Filter/Baseflow	Total PCBs	0.53	mg/kg	0.13	4.1
LS431	6/2/2010	Filter/Stormwater	Total PCBs	0.52	mg/kg	0.13	4.0
LS431	5/28/2010	Filter/Stormwater	Total PCBs	0.6	mg/kg	0.13	4.6
LS431	5/20/2010	Filter/Stormwater	Total PCBs	0.36	mg/kg	0.13	2.8
LS431	4/27/2010	Filter/Stormwater	Total PCBs	0.87	mg/kg	0.13	6.7
LS431	3/29/2010	Filter/Stormwater	Total PCBs	1.9	mg/kg	0.13	15
LS431	3/20/2010	Filter/Baseflow	Total PCBs	1.6	mg/kg	0.13	12
LS431	2/11/2010	Filter/Stormwater	Total PCBs	2.3	mg/kg	0.13	18
LS431	2/5/2010	Filter/Stormwater	Total PCBs	2.8	mg/kg	0.13	22
LS431	12/15/2009	Filter/Stormwater	Total PCBs	0.66	mg/kg	0.13	5.1
LS431	11/6/2009	Filter/Stormwater	Total PCBs	1.7	mg/kg	0.13	13
LS431	10/29/2009	Filter/Stormwater	Total PCBs	1.8	mg/kg	0.13	14
LS431	10/17/2009	Filter/Stormwater	Total PCBs	0.69	mg/kg	0.13	5.3
LS431	2/1/2007	Filter/Undifferentiated	Total PCBs	3.3	mg/kg	0.13	25
LS431	1/17/2007	Filter/Undifferentiated	Total PCBs	2.2	mg/kg	0.13	17
LS431	4/10/2005	Filter/Undifferentiated	Total PCBs	0.31	mg/kg	0.13	2.4
LS431	8/26/2004	Filter/Undifferentiated	Total PCBs	0.39	mg/kg	0.13	3.0
LS431	7/20/2004	Filter/Undifferentiated	Total PCBs	0.076	mg/kg	0.13	0.58
LS431	4/28/2011	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	24	ng/kg	13	1.9
LS431	4/25/2011	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	20	ng/kg	13	1.5
LS431	3/21/2011	Filter/Baseflow	Total Dioxins/Furans (TEQ, NDx0.5)	2.9	ng/kg	13	0.22
LS431	1/21/2011	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	7.5	ng/kg	13	0.58
LS431	11/30/2010	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	11	ng/kg	13	0.83
LS431	6/30/2010	Filter/Baseflow	Total Dioxins/Furans (TEQ, NDx0.5)	2.1	ng/kg	13	0.16
LS431	5/20/2010	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	5.0	ng/kg	13	0.39
LS431	12/15/2009	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	26	ng/kg	13	2.0
LS431	10/29/2009	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	68	ng/kg	13	5.2
LS431	5/25/2011	Filter/Stormwater	Arsenic	60 U	mg/kg	7.3	8.2
LS431	5/15/2011	Filter/Stormwater	Arsenic	9.0	mg/kg	7.3	1.2
LS431	4/28/2011	Filter/Stormwater	Arsenic	10	mg/kg	7.3	1.4
LS431	4/25/2011	Filter/Stormwater	Arsenic	7 U	mg/kg	7.3	0.96
LS431	3/21/2011	Filter/Baseflow	Arsenic	20 U	mg/kg	7.3	2.7
LS431	3/9/2011	Filter/Stormwater	Arsenic	10 U	mg/kg	7.3	1.4
LS431	1/28/2011	Filter/Baseflow	Arsenic	40 U	mg/kg	7.3	5.5
LS431	1/21/2011	Filter/Stormwater	Arsenic	40 U	mg/kg	7.3	5.5
LS431	12/12/2010	Filter/Stormwater	Arsenic	8 U	mg/kg	7.3	1.1
LS431	11/30/2010	Filter/Stormwater	Arsenic	30 U	mg/kg	7.3	4.1
LS431	11/17/2010	Filter/Stormwater	Arsenic	30 U	mg/kg	7.3	4.1
LS431	6/30/2010	Filter/Baseflow	Arsenic	50 U	mg/kg	7.3	6.8
LS431	6/2/2010	Filter/Stormwater	Arsenic	40 U	mg/kg	7.3	5.5
LS431	5/28/2010	Filter/Stormwater	Arsenic	40 U	mg/kg	7.3	5.5
LS431	5/20/2010	Filter/Stormwater	Arsenic	40 U	mg/kg	7.3	5.5
LS431	4/27/2010	Filter/Stormwater	Arsenic	50 U	mg/kg	7.3	6.8
LS431	3/29/2010	Filter/Stormwater	Arsenic	10	mg/kg	7.3	1.4
LS431	3/20/2010	Filter/Baseflow	Arsenic	20 U	mg/kg	7.3	2.7
LS431	2/11/2010	Filter/Stormwater	Arsenic	50 U	mg/kg	7.3	6.8
LS431	2/5/2010	Filter/Stormwater	Arsenic	50 U	mg/kg	7.3	6.8
LS431	12/15/2009	Filter/Stormwater	Arsenic	50 U	mg/kg	7.3	6.8

Table 7.2-33
Storm Drain Solids Sampling Results - Lift Station

Sample Location	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
LS431	11/6/2009	Filter/Stormwater	Arsenic	20	mg/kg	7.3	2.7
LS431	10/29/2009	Filter/Stormwater	Arsenic	20 U	mg/kg	7.3	2.7
LS431	10/17/2009	Filter/Stormwater	Arsenic	9.0	mg/kg	7.3	1.2
LS431	5/25/2011	Filter/Stormwater	Cadmium	7.0	mg/kg	5.1	1.4
LS431	5/15/2011	Filter/Stormwater	Cadmium	4.4	mg/kg	5.1	0.86
LS431	4/28/2011	Filter/Stormwater	Cadmium	5.0	mg/kg	5.1	0.98
LS431	4/25/2011	Filter/Stormwater	Cadmium	3.9	mg/kg	5.1	0.76
LS431	3/21/2011	Filter/Baseflow	Cadmium	2.9	mg/kg	5.1	0.57
LS431	3/9/2011	Filter/Stormwater	Cadmium	5.3	mg/kg	5.1	1.0
LS431	1/28/2011	Filter/Baseflow	Cadmium	4.0	mg/kg	5.1	0.78
LS431	1/21/2011	Filter/Stormwater	Cadmium	4.0	mg/kg	5.1	0.78
LS431	12/12/2010	Filter/Stormwater	Cadmium	4.3	mg/kg	5.1	0.84
LS431	11/30/2010	Filter/Stormwater	Cadmium	4.0	mg/kg	5.1	0.78
LS431	11/17/2010	Filter/Stormwater	Cadmium	4.0	mg/kg	5.1	0.78
LS431	6/30/2010	Filter/Baseflow	Cadmium	3.0	mg/kg	5.1	0.59
LS431	6/2/2010	Filter/Stormwater	Cadmium	5.0	mg/kg	5.1	0.98
LS431	5/28/2010	Filter/Stormwater	Cadmium	5.0	mg/kg	5.1	0.98
LS431	5/20/2010	Filter/Stormwater	Cadmium	6.0	mg/kg	5.1	1.2
LS431	4/27/2010	Filter/Stormwater	Cadmium	7.0	mg/kg	5.1	1.4
LS431	3/29/2010	Filter/Stormwater	Cadmium	7.0	mg/kg	5.1	1.4
LS431	3/20/2010	Filter/Baseflow	Cadmium	4.9	mg/kg	5.1	0.96
LS431	2/11/2010	Filter/Stormwater	Cadmium	5.0	mg/kg	5.1	0.98
LS431	2/5/2010	Filter/Stormwater	Cadmium	5.0	mg/kg	5.1	0.98
LS431	12/15/2009	Filter/Stormwater	Cadmium	6.0	mg/kg	5.1	1.2
LS431	11/6/2009	Filter/Stormwater	Cadmium	11	mg/kg	5.1	2.2
LS431	10/29/2009	Filter/Stormwater	Cadmium	8.0	mg/kg	5.1	1.6
LS431	10/17/2009	Filter/Stormwater	Cadmium	6.1	mg/kg	5.1	1.2
LS431	5/25/2011	Filter/Stormwater	Chromium	44	mg/kg	260	0.17
LS431	5/15/2011	Filter/Stormwater	Chromium	33	mg/kg	260	0.13
LS431	4/28/2011	Filter/Stormwater	Chromium	32	mg/kg	260	0.12
LS431	4/25/2011	Filter/Stormwater	Chromium	18	mg/kg	260	0.071
LS431	3/21/2011	Filter/Baseflow	Chromium	20	mg/kg	260	0.077
LS431	3/9/2011	Filter/Stormwater	Chromium	39	mg/kg	260	0.15
LS431	1/28/2011	Filter/Baseflow	Chromium	25	mg/kg	260	0.096
LS431	1/21/2011	Filter/Stormwater	Chromium	45	mg/kg	260	0.17
LS431	12/12/2010	Filter/Stormwater	Chromium	38	mg/kg	260	0.14
LS431	11/30/2010	Filter/Stormwater	Chromium	30	mg/kg	260	0.12
LS431	11/17/2010	Filter/Stormwater	Chromium	31	mg/kg	260	0.12
LS431	6/30/2010	Filter/Baseflow	Chromium	27	mg/kg	260	0.10
LS431	6/2/2010	Filter/Stormwater	Chromium	40	mg/kg	260	0.15
LS431	5/28/2010	Filter/Stormwater	Chromium	36 J	mg/kg	260	0.14
LS431	5/20/2010	Filter/Stormwater	Chromium	49	mg/kg	260	0.19
LS431	4/27/2010	Filter/Stormwater	Chromium	44 J	mg/kg	260	0.17
LS431	3/29/2010	Filter/Stormwater	Chromium	54	mg/kg	260	0.21
LS431	3/20/2010	Filter/Baseflow	Chromium	61 J	mg/kg	260	0.23
LS431	2/11/2010	Filter/Stormwater	Chromium	36	mg/kg	260	0.14
LS431	2/5/2010	Filter/Stormwater	Chromium	42	mg/kg	260	0.16
LS431	12/15/2009	Filter/Stormwater	Chromium	42	mg/kg	260	0.16
LS431	11/6/2009	Filter/Stormwater	Chromium	102	mg/kg	260	0.39
LS431	10/29/2009	Filter/Stormwater	Chromium	73	mg/kg	260	0.28
LS431	10/17/2009	Filter/Stormwater	Chromium	37	mg/kg	260	0.14
LS431	5/25/2011	Filter/Stormwater	Copper	87	mg/kg	390	0.22
LS431	5/15/2011	Filter/Stormwater	Copper	35	mg/kg	390	0.091
LS431	4/28/2011	Filter/Stormwater	Copper	65	mg/kg	390	0.17
LS431	4/25/2011	Filter/Stormwater	Copper	23	mg/kg	390	0.059
LS431	3/21/2011	Filter/Baseflow	Copper	26	mg/kg	390	0.067
LS431	3/9/2011	Filter/Stormwater	Copper	71	mg/kg	390	0.18
LS431	1/28/2011	Filter/Baseflow	Copper	28	mg/kg	390	0.072

Table 7.2-33
Storm Drain Solids Sampling Results - Lift Station

Sample Location	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
LS431	1/21/2011	Filter/Stormwater	Copper	41	mg/kg	390	0.11
LS431	12/12/2010	Filter/Stormwater	Copper	64	mg/kg	390	0.16
LS431	11/30/2010	Filter/Stormwater	Copper	64	mg/kg	390	0.16
LS431	11/17/2010	Filter/Stormwater	Copper	43	mg/kg	390	0.11
LS431	6/30/2010	Filter/Baseflow	Copper	26	mg/kg	390	0.067
LS431	6/2/2010	Filter/Stormwater	Copper	75	mg/kg	390	0.19
LS431	5/28/2010	Filter/Stormwater	Copper	72	mg/kg	390	0.18
LS431	5/20/2010	Filter/Stormwater	Copper	137 J	mg/kg	390	0.35
LS431	4/27/2010	Filter/Stormwater	Copper	85	mg/kg	390	0.22
LS431	3/29/2010	Filter/Stormwater	Copper	151	mg/kg	390	0.39
LS431	3/20/2010	Filter/Baseflow	Copper	51 J	mg/kg	390	0.13
LS431	2/11/2010	Filter/Stormwater	Copper	68	mg/kg	390	0.17
LS431	2/5/2010	Filter/Stormwater	Copper	80	mg/kg	390	0.21
LS431	12/15/2009	Filter/Stormwater	Copper	95	mg/kg	390	0.24
LS431	11/6/2009	Filter/Stormwater	Copper	261	mg/kg	390	0.67
LS431	10/29/2009	Filter/Stormwater	Copper	145	mg/kg	390	0.37
LS431	10/17/2009	Filter/Stormwater	Copper	74	mg/kg	390	0.19
LS431	5/25/2011	Filter/Stormwater	Lead	60	mg/kg	450	0.13
LS431	5/15/2011	Filter/Stormwater	Lead	138	mg/kg	450	0.31
LS431	4/28/2011	Filter/Stormwater	Lead	79	mg/kg	450	0.18
LS431	4/25/2011	Filter/Stormwater	Lead	32	mg/kg	450	0.071
LS431	3/21/2011	Filter/Baseflow	Lead	27	mg/kg	450	0.060
LS431	3/9/2011	Filter/Stormwater	Lead	70	mg/kg	450	0.16
LS431	1/28/2011	Filter/Baseflow	Lead	50	mg/kg	450	0.11
LS431	1/21/2011	Filter/Stormwater	Lead	140	mg/kg	450	0.31
LS431	12/12/2010	Filter/Stormwater	Lead	120	mg/kg	450	0.27
LS431	11/30/2010	Filter/Stormwater	Lead	70	mg/kg	450	0.16
LS431	11/17/2010	Filter/Stormwater	Lead	60	mg/kg	450	0.13
LS431	6/30/2010	Filter/Baseflow	Lead	20 U	mg/kg	450	0.044
LS431	6/2/2010	Filter/Stormwater	Lead	70	mg/kg	450	0.16
LS431	5/28/2010	Filter/Stormwater	Lead	70	mg/kg	450	0.16
LS431	5/20/2010	Filter/Stormwater	Lead	100	mg/kg	450	0.22
LS431	4/27/2010	Filter/Stormwater	Lead	50	mg/kg	450	0.11
LS431	3/29/2010	Filter/Stormwater	Lead	134	mg/kg	450	0.30
LS431	3/20/2010	Filter/Baseflow	Lead	293 J	mg/kg	450	0.65
LS431	2/11/2010	Filter/Stormwater	Lead	30	mg/kg	450	0.067
LS431	2/5/2010	Filter/Stormwater	Lead	80	mg/kg	450	0.18
LS431	12/15/2009	Filter/Stormwater	Lead	60	mg/kg	450	0.13
LS431	11/6/2009	Filter/Stormwater	Lead	265	mg/kg	450	0.59
LS431	10/29/2009	Filter/Stormwater	Lead	130	mg/kg	450	0.29
LS431	10/17/2009	Filter/Stormwater	Lead	86	mg/kg	450	0.19
LS431	5/25/2011	Filter/Stormwater	Mercury	0.12	mg/kg	0.41	0.29
LS431	5/15/2011	Filter/Stormwater	Mercury	0.070	mg/kg	0.41	0.17
LS431	4/28/2011	Filter/Stormwater	Mercury	0.12	mg/kg	0.41	0.29
LS431	4/25/2011	Filter/Stormwater	Mercury	0.060	mg/kg	0.41	0.15
LS431	3/21/2011	Filter/Baseflow	Mercury	0.06 U	mg/kg	0.41	0.15
LS431	3/9/2011	Filter/Stormwater	Mercury	0.12	mg/kg	0.41	0.29
LS431	1/28/2011	Filter/Baseflow	Mercury	0.090	mg/kg	0.41	0.22
LS431	1/21/2011	Filter/Stormwater	Mercury	0.090	mg/kg	0.41	0.22
LS431	12/12/2010	Filter/Stormwater	Mercury	0.44	mg/kg	0.41	1.1
LS431	11/30/2010	Filter/Stormwater	Mercury	0.11	mg/kg	0.41	0.27
LS431	11/17/2010	Filter/Stormwater	Mercury	5.6	mg/kg	0.41	14
LS431	6/30/2010	Filter/Baseflow	Mercury	0.15 J	mg/kg	0.41	0.37
LS431	6/2/2010	Filter/Stormwater	Mercury	0.10 J	mg/kg	0.41	0.24
LS431	5/28/2010	Filter/Stormwater	Mercury	0.12	mg/kg	0.41	0.29
LS431	5/20/2010	Filter/Stormwater	Mercury	0.38 J	mg/kg	0.41	0.93
LS431	4/27/2010	Filter/Stormwater	Mercury	0.16 J	mg/kg	0.41	0.39
LS431	3/29/2010	Filter/Stormwater	Mercury	0.37 J	mg/kg	0.41	0.90

Table 7.2-33
Storm Drain Solids Sampling Results - Lift Station

Sample Location	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
LS431	3/20/2010	Filter/Baseflow	Mercury	0.06	mg/kg	0.41	0.15
LS431	2/11/2010	Filter/Stormwater	Mercury	0.12	mg/kg	0.41	0.29
LS431	2/5/2010	Filter/Stormwater	Mercury	0.14	mg/kg	0.41	0.34
LS431	12/15/2009	Filter/Stormwater	Mercury	0.18	mg/kg	0.41	0.44
LS431	11/6/2009	Filter/Stormwater	Mercury	0.30	mg/kg	0.41	0.73
LS431	10/29/2009	Filter/Stormwater	Mercury	2.0 J	mg/kg	0.41	4.9
LS431	10/17/2009	Filter/Stormwater	Mercury	0.12	mg/kg	0.41	0.29
LS431	2/1/2007	Filter/Undifferentiated	Mercury	0.04 U	mg/kg	0.41	0.098
LS431	5/25/2011	Filter/Stormwater	Silver	4 U	mg/kg	6.1	0.66
LS431	5/15/2011	Filter/Stormwater	Silver	0.5 U	mg/kg	6.1	0.082
LS431	4/28/2011	Filter/Stormwater	Silver	0.6 U	mg/kg	6.1	0.098
LS431	4/25/2011	Filter/Stormwater	Silver	0.4 U	mg/kg	6.1	0.066
LS431	3/21/2011	Filter/Baseflow	Silver	0.9 U	mg/kg	6.1	0.15
LS431	3/9/2011	Filter/Stormwater	Silver	0.8 U	mg/kg	6.1	0.13
LS431	1/28/2011	Filter/Baseflow	Silver	2 U	mg/kg	6.1	0.33
LS431	1/21/2011	Filter/Stormwater	Silver	2 U	mg/kg	6.1	0.33
LS431	12/12/2010	Filter/Stormwater	Silver	0.5 U	mg/kg	6.1	0.082
LS431	11/30/2010	Filter/Stormwater	Silver	2 U	mg/kg	6.1	0.33
LS431	11/17/2010	Filter/Stormwater	Silver	2 U	mg/kg	6.1	0.33
LS431	6/30/2010	Filter/Baseflow	Silver	3 U	mg/kg	6.1	0.49
LS431	6/2/2010	Filter/Stormwater	Silver	3 U	mg/kg	6.1	0.49
LS431	5/28/2010	Filter/Stormwater	Silver	2 U	mg/kg	6.1	0.33
LS431	5/20/2010	Filter/Stormwater	Silver	2 U	mg/kg	6.1	0.33
LS431	4/27/2010	Filter/Stormwater	Silver	3 U	mg/kg	6.1	0.49
LS431	3/29/2010	Filter/Stormwater	Silver	0.7 U	mg/kg	6.1	0.11
LS431	3/20/2010	Filter/Baseflow	Silver	1 U	mg/kg	6.1	0.16
LS431	2/11/2010	Filter/Stormwater	Silver	3 U	mg/kg	6.1	0.49
LS431	2/5/2010	Filter/Stormwater	Silver	3 U	mg/kg	6.1	0.49
LS431	12/15/2009	Filter/Stormwater	Silver	3 U	mg/kg	6.1	0.49
LS431	11/6/2009	Filter/Stormwater	Silver	1 U	mg/kg	6.1	0.16
LS431	10/29/2009	Filter/Stormwater	Silver	1 U	mg/kg	6.1	0.16
LS431	10/17/2009	Filter/Stormwater	Silver	0.5 U	mg/kg	6.1	0.082
LS431	5/25/2011	Filter/Stormwater	Zinc	730	mg/kg	410	1.8
LS431	5/15/2011	Filter/Stormwater	Zinc	357	mg/kg	410	0.87
LS431	4/28/2011	Filter/Stormwater	Zinc	553	mg/kg	410	1.3
LS431	4/25/2011	Filter/Stormwater	Zinc	160	mg/kg	410	0.39
LS431	3/21/2011	Filter/Baseflow	Zinc	125	mg/kg	410	0.30
LS431	3/9/2011	Filter/Stormwater	Zinc	454	mg/kg	410	1.1
LS431	1/28/2011	Filter/Baseflow	Zinc	254	mg/kg	410	0.62
LS431	1/21/2011	Filter/Stormwater	Zinc	356	mg/kg	410	0.87
LS431	12/12/2010	Filter/Stormwater	Zinc	370	mg/kg	410	0.90
LS431	11/30/2010	Filter/Stormwater	Zinc	381	mg/kg	410	0.93
LS431	11/17/2010	Filter/Stormwater	Zinc	303	mg/kg	410	0.74
LS431	6/30/2010	Filter/Baseflow	Zinc	220	mg/kg	410	0.54
LS431	6/2/2010	Filter/Stormwater	Zinc	487	mg/kg	410	1.2
LS431	5/28/2010	Filter/Stormwater	Zinc	491	mg/kg	410	1.2
LS431	5/20/2010	Filter/Stormwater	Zinc	705	mg/kg	410	1.7
LS431	4/27/2010	Filter/Stormwater	Zinc	610 J	mg/kg	410	1.5
LS431	3/29/2010	Filter/Stormwater	Zinc	704	mg/kg	410	1.7
LS431	3/20/2010	Filter/Baseflow	Zinc	245 J	mg/kg	410	0.60
LS431	2/11/2010	Filter/Stormwater	Zinc	450	mg/kg	410	1.1
LS431	2/5/2010	Filter/Stormwater	Zinc	430	mg/kg	410	1.0
LS431	12/15/2009	Filter/Stormwater	Zinc	760	mg/kg	410	1.9
LS431	11/6/2009	Filter/Stormwater	Zinc	1,200	mg/kg	410	2.9
LS431	10/29/2009	Filter/Stormwater	Zinc	823	mg/kg	410	2.0
LS431	10/17/2009	Filter/Stormwater	Zinc	443	mg/kg	410	1.1
LS431	5/15/2011	Filter/Stormwater	Acenaphthene	0.21 U	mg/kg	0.50	0.42
LS431	3/9/2011	Filter/Stormwater	Acenaphthene	0.014 U	mg/kg	0.50	0.028

Table 7.2-33
Storm Drain Solids Sampling Results - Lift Station

Sample Location	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
LS431	1/28/2011	Filter/Baseflow	Acenaphthene	0.056	mg/kg	0.50	0.11
LS431	12/12/2010	Filter/Stormwater	Acenaphthene	0.013 U	mg/kg	0.50	0.026
LS431	11/17/2010	Filter/Stormwater	Acenaphthene	0.23 U	mg/kg	0.50	0.46
LS431	6/2/2010	Filter/Stormwater	Acenaphthene	0.085 U	mg/kg	0.50	0.17
LS431	4/27/2010	Filter/Stormwater	Acenaphthene	0.095	mg/kg	0.50	0.19
LS431	3/29/2010	Filter/Stormwater	Acenaphthene	0.12	mg/kg	0.50	0.24
LS431	2/11/2010	Filter/Stormwater	Acenaphthene	0.49	mg/kg	0.50	0.98
LS431	11/6/2009	Filter/Stormwater	Acenaphthene	0.049 UJ	mg/kg	0.50	0.098
LS431	5/15/2011	Filter/Stormwater	Anthracene	0.21 U	mg/kg	0.96	0.22
LS431	3/9/2011	Filter/Stormwater	Anthracene	0.05	mg/kg	0.96	0.052
LS431	1/28/2011	Filter/Baseflow	Anthracene	0.009 J	mg/kg	0.96	0.0094
LS431	12/12/2010	Filter/Stormwater	Anthracene	0.013 U	mg/kg	0.96	0.014
LS431	11/17/2010	Filter/Stormwater	Anthracene	0.23 U	mg/kg	0.96	0.24
LS431	6/2/2010	Filter/Stormwater	Anthracene	0.094	mg/kg	0.96	0.098
LS431	4/27/2010	Filter/Stormwater	Anthracene	0.048	mg/kg	0.96	0.050
LS431	3/29/2010	Filter/Stormwater	Anthracene	0.26	mg/kg	0.96	0.27
LS431	2/11/2010	Filter/Stormwater	Anthracene	0.52	mg/kg	0.96	0.54
LS431	11/6/2009	Filter/Stormwater	Anthracene	0.28 J	mg/kg	0.96	0.29
LS431	5/15/2011	Filter/Stormwater	Benzo(a)anthracene	0.32	mg/kg	1.3	0.25
LS431	3/9/2011	Filter/Stormwater	Benzo(a)anthracene	0.45	mg/kg	1.3	0.35
LS431	1/28/2011	Filter/Baseflow	Benzo(a)anthracene	0.049	mg/kg	1.3	0.038
LS431	12/12/2010	Filter/Stormwater	Benzo(a)anthracene	0.68	mg/kg	1.3	0.52
LS431	11/17/2010	Filter/Stormwater	Benzo(a)anthracene	0.22	mg/kg	1.3	0.17
LS431	6/2/2010	Filter/Stormwater	Benzo(a)anthracene	0.61	mg/kg	1.3	0.47
LS431	4/27/2010	Filter/Stormwater	Benzo(a)anthracene	0.20 J	mg/kg	1.3	0.15
LS431	3/29/2010	Filter/Stormwater	Benzo(a)anthracene	1.2	mg/kg	1.3	0.92
LS431	2/11/2010	Filter/Stormwater	Benzo(a)anthracene	0.81	mg/kg	1.3	0.62
LS431	11/6/2009	Filter/Stormwater	Benzo(a)anthracene	1.7 J	mg/kg	1.3	1.3
LS431	5/15/2011	Filter/Stormwater	Total Benzofluoranthenes	1.5	mg/kg	3.2	0.47
LS431	3/9/2011	Filter/Stormwater	Total Benzofluoranthenes	2.2	mg/kg	3.2	0.69
LS431	1/28/2011	Filter/Baseflow	Total Benzofluoranthenes	0.22	mg/kg	3.2	0.069
LS431	12/12/2010	Filter/Stormwater	Total Benzofluoranthenes	3.4	mg/kg	3.2	1.1
LS431	11/17/2010	Filter/Stormwater	Total Benzofluoranthenes	1.1	mg/kg	3.2	0.34
LS431	6/2/2010	Filter/Stormwater	Total Benzofluoranthenes	3.4	mg/kg	3.2	1.1
LS431	4/27/2010	Filter/Stormwater	Total Benzofluoranthenes	1.2	mg/kg	3.2	0.38
LS431	3/29/2010	Filter/Stormwater	Total Benzofluoranthenes	6.0	mg/kg	3.2	1.9
LS431	2/11/2010	Filter/Stormwater	Total Benzofluoranthenes	2.6	mg/kg	3.2	0.81
LS431	11/6/2009	Filter/Stormwater	Total Benzofluoranthenes	5.4	mg/kg	3.2	1.7
LS431	5/15/2011	Filter/Stormwater	Benzo(g,h,i)perylene	0.68	mg/kg	0.67	1.0
LS431	3/9/2011	Filter/Stormwater	Benzo(g,h,i)perylene	0.78	mg/kg	0.67	1.2
LS431	1/28/2011	Filter/Baseflow	Benzo(g,h,i)perylene	0.074	mg/kg	0.67	0.11
LS431	12/12/2010	Filter/Stormwater	Benzo(g,h,i)perylene	1.1	mg/kg	0.67	1.6
LS431	11/17/2010	Filter/Stormwater	Benzo(g,h,i)perylene	0.38	mg/kg	0.67	0.57
LS431	6/2/2010	Filter/Stormwater	Benzo(g,h,i)perylene	1.2	mg/kg	0.67	1.8
LS431	4/27/2010	Filter/Stormwater	Benzo(g,h,i)perylene	0.50 J	mg/kg	0.67	0.75
LS431	3/29/2010	Filter/Stormwater	Benzo(g,h,i)perylene	2.1	mg/kg	0.67	3.1
LS431	2/11/2010	Filter/Stormwater	Benzo(g,h,i)perylene	0.84	mg/kg	0.67	1.3
LS431	11/6/2009	Filter/Stormwater	Benzo(g,h,i)perylene	2.5 J	mg/kg	0.67	3.7
LS431	5/15/2011	Filter/Stormwater	Benzo(a)pyrene	0.51	mg/kg	0.15	3.4
LS431	3/9/2011	Filter/Stormwater	Benzo(a)pyrene	0.67	mg/kg	0.15	4.5
LS431	1/28/2011	Filter/Baseflow	Benzo(a)pyrene	0.067	mg/kg	0.15	0.45
LS431	12/12/2010	Filter/Stormwater	Benzo(a)pyrene	1.1	mg/kg	0.15	7.3
LS431	11/17/2010	Filter/Stormwater	Benzo(a)pyrene	0.28	mg/kg	0.15	1.9
LS431	6/2/2010	Filter/Stormwater	Benzo(a)pyrene	1.0	mg/kg	0.15	6.7
LS431	4/27/2010	Filter/Stormwater	Benzo(a)pyrene	0.31 J	mg/kg	0.15	2.1
LS431	3/29/2010	Filter/Stormwater	Benzo(a)pyrene	2.6	mg/kg	0.15	17
LS431	2/11/2010	Filter/Stormwater	Benzo(a)pyrene	0.95	mg/kg	0.15	6.3
LS431	11/6/2009	Filter/Stormwater	Benzo(a)pyrene	2.5 J	mg/kg	0.15	17

Table 7.2-33
Storm Drain Solids Sampling Results - Lift Station

Sample Location	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
LS431	5/15/2011	Filter/Stormwater	Chrysene	1.0	mg/kg	1.4	0.71
LS431	3/9/2011	Filter/Stormwater	Chrysene	1.3	mg/kg	1.4	0.93
LS431	1/28/2011	Filter/Baseflow	Chrysene	0.14	mg/kg	1.4	0.10
LS431	12/12/2010	Filter/Stormwater	Chrysene	1.9	mg/kg	1.4	1.4
LS431	11/17/2010	Filter/Stormwater	Chrysene	0.84	mg/kg	1.4	0.60
LS431	6/2/2010	Filter/Stormwater	Chrysene	2.4	mg/kg	1.4	1.7
LS431	4/27/2010	Filter/Stormwater	Chrysene	0.89 J	mg/kg	1.4	0.64
LS431	3/29/2010	Filter/Stormwater	Chrysene	4.3	mg/kg	1.4	3.1
LS431	2/11/2010	Filter/Stormwater	Chrysene	1.8	mg/kg	1.4	1.3
LS431	11/6/2009	Filter/Stormwater	Chrysene	3.6 J	mg/kg	1.4	2.6
LS431	5/15/2011	Filter/Stormwater	Dibenz(a,h)anthracene	0.21 U	mg/kg	0.23	0.91
LS431	3/9/2011	Filter/Stormwater	Dibenz(a,h)anthracene	0.045	mg/kg	0.23	0.20
LS431	1/28/2011	Filter/Baseflow	Dibenz(a,h)anthracene	0.011 U	mg/kg	0.23	0.048
LS431	12/12/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.026	mg/kg	0.23	0.11
LS431	11/17/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.23 U	mg/kg	0.23	1.0
LS431	6/2/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.36	mg/kg	0.23	1.6
LS431	4/27/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.18 J	mg/kg	0.23	0.78
LS431	3/29/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.58	mg/kg	0.23	2.5
LS431	2/11/2010	Filter/Stormwater	Dibenz(a,h)anthracene	0.27	mg/kg	0.23	1.2
LS431	11/6/2009	Filter/Stormwater	Dibenz(a,h)anthracene	1.0 J	mg/kg	0.23	4.3
LS431	5/15/2011	Filter/Stormwater	Dibenzofuran	0.21 UJ	mg/kg	0.54	0.39
LS431	3/9/2011	Filter/Stormwater	Dibenzofuran	0.050	mg/kg	0.54	0.093
LS431	1/28/2011	Filter/Baseflow	Dibenzofuran	0.011 U	mg/kg	0.54	0.020
LS431	12/12/2010	Filter/Stormwater	Dibenzofuran	0.013 U	mg/kg	0.54	0.024
LS431	11/17/2010	Filter/Stormwater	Dibenzofuran	0.23 U	mg/kg	0.54	0.43
LS431	6/2/2010	Filter/Stormwater	Dibenzofuran	0.17	mg/kg	0.54	0.31
LS431	4/27/2010	Filter/Stormwater	Dibenzofuran	0.11	mg/kg	0.54	0.20
LS431	3/29/2010	Filter/Stormwater	Dibenzofuran	0.16	mg/kg	0.54	0.30
LS431	2/11/2010	Filter/Stormwater	Dibenzofuran	0.32	mg/kg	0.54	0.59
LS431	11/6/2009	Filter/Stormwater	Dibenzofuran	0.22 J	mg/kg	0.54	0.41
LS431	5/15/2011	Filter/Stormwater	Fluoranthene	1.9	mg/kg	1.7	1.1
LS431	3/9/2011	Filter/Stormwater	Fluoranthene	1.8	mg/kg	1.7	1.1
LS431	1/28/2011	Filter/Baseflow	Fluoranthene	0.21	mg/kg	1.7	0.12
LS431	12/12/2010	Filter/Stormwater	Fluoranthene	2.9	mg/kg	1.7	1.7
LS431	11/17/2010	Filter/Stormwater	Fluoranthene	1.2	mg/kg	1.7	0.71
LS431	6/2/2010	Filter/Stormwater	Fluoranthene	3.2	mg/kg	1.7	1.9
LS431	4/27/2010	Filter/Stormwater	Fluoranthene	1.5	mg/kg	1.7	0.88
LS431	3/29/2010	Filter/Stormwater	Fluoranthene	6.6	mg/kg	1.7	3.9
LS431	2/11/2010	Filter/Stormwater	Fluoranthene	3.3	mg/kg	1.7	1.9
LS431	11/6/2009	Filter/Stormwater	Fluoranthene	7.8 J	mg/kg	1.7	4.6
LS431	5/15/2011	Filter/Stormwater	Fluorene	0.21 U	mg/kg	0.54	0.39
LS431	3/9/2011	Filter/Stormwater	Fluorene	0.059	mg/kg	0.54	0.11
LS431	1/28/2011	Filter/Baseflow	Fluorene	0.009 J	mg/kg	0.54	0.017
LS431	12/12/2010	Filter/Stormwater	Fluorene	0.013 U	mg/kg	0.54	0.024
LS431	11/17/2010	Filter/Stormwater	Fluorene	0.23 U	mg/kg	0.54	0.43
LS431	6/2/2010	Filter/Stormwater	Fluorene	0.14	mg/kg	0.54	0.26
LS431	4/27/2010	Filter/Stormwater	Fluorene	0.12	mg/kg	0.54	0.22
LS431	3/29/2010	Filter/Stormwater	Fluorene	0.16	mg/kg	0.54	0.30
LS431	2/11/2010	Filter/Stormwater	Fluorene	0.39	mg/kg	0.54	0.72
LS431	11/6/2009	Filter/Stormwater	Fluorene	0.19 J	mg/kg	0.54	0.35
LS431	5/15/2011	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.56	mg/kg	0.60	0.93
LS431	3/9/2011	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.73	mg/kg	0.60	1.2
LS431	1/28/2011	Filter/Baseflow	Indeno(1,2,3-cd)pyrene	0.063	mg/kg	0.60	0.11
LS431	12/12/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.97	mg/kg	0.60	1.6
LS431	11/17/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.31	mg/kg	0.60	0.52
LS431	6/2/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	1.1	mg/kg	0.60	1.8
LS431	4/27/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.50 J	mg/kg	0.60	0.83
LS431	3/29/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	2.0	mg/kg	0.60	3.3

Table 7.2-33
Storm Drain Solids Sampling Results - Lift Station

Sample Location	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
LS431	2/11/2010	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.81	mg/kg	0.60	1.4
LS431	11/6/2009	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	2.3 J	mg/kg	0.60	3.8
LS431	5/15/2011	Filter/Stormwater	2-Methylnaphthalene	0.21 U	mg/kg	0.67	0.31
LS431	3/9/2011	Filter/Stormwater	2-Methylnaphthalene	0.22	mg/kg	0.67	0.33
LS431	1/28/2011	Filter/Baseflow	2-Methylnaphthalene	0.031	mg/kg	0.67	0.046
LS431	12/12/2010	Filter/Stormwater	2-Methylnaphthalene	0.029	mg/kg	0.67	0.043
LS431	11/17/2010	Filter/Stormwater	2-Methylnaphthalene	0.23 U	mg/kg	0.67	0.34
LS431	6/2/2010	Filter/Stormwater	2-Methylnaphthalene	0.094	mg/kg	0.67	0.14
LS431	4/27/2010	Filter/Stormwater	2-Methylnaphthalene	0.089	mg/kg	0.67	0.13
LS431	3/29/2010	Filter/Stormwater	2-Methylnaphthalene	0.11 U	mg/kg	0.67	0.16
LS431	2/11/2010	Filter/Stormwater	2-Methylnaphthalene	0.39	mg/kg	0.67	0.58
LS431	11/6/2009	Filter/Stormwater	2-Methylnaphthalene	0.18 J	mg/kg	0.67	0.27
LS431	5/15/2011	Filter/Stormwater	Phenanthrene	0.64	mg/kg	1.5	0.43
LS431	3/9/2011	Filter/Stormwater	Phenanthrene	0.75	mg/kg	1.5	0.50
LS431	1/28/2011	Filter/Baseflow	Phenanthrene	0.087	mg/kg	1.5	0.058
LS431	12/12/2010	Filter/Stormwater	Phenanthrene	1.1	mg/kg	1.5	0.73
LS431	11/17/2010	Filter/Stormwater	Phenanthrene	0.48	mg/kg	1.5	0.32
LS431	6/2/2010	Filter/Stormwater	Phenanthrene	1.3	mg/kg	1.5	0.87
LS431	4/27/2010	Filter/Stormwater	Phenanthrene	0.65	mg/kg	1.5	0.43
LS431	3/29/2010	Filter/Stormwater	Phenanthrene	2.8	mg/kg	1.5	1.9
LS431	2/11/2010	Filter/Stormwater	Phenanthrene	2.2	mg/kg	1.5	1.5
LS431	11/6/2009	Filter/Stormwater	Phenanthrene	2.7 J	mg/kg	1.5	1.8
LS431	5/15/2011	Filter/Stormwater	Pyrene	1.1	mg/kg	2.6	0.42
LS431	3/9/2011	Filter/Stormwater	Pyrene	1.2	mg/kg	2.6	0.46
LS431	1/28/2011	Filter/Baseflow	Pyrene	0.15	mg/kg	2.6	0.058
LS431	12/12/2010	Filter/Stormwater	Pyrene	1.9	mg/kg	2.6	0.73
LS431	11/17/2010	Filter/Stormwater	Pyrene	0.84 J	mg/kg	2.6	0.32
LS431	6/2/2010	Filter/Stormwater	Pyrene	1.9	mg/kg	2.6	0.73
LS431	4/27/2010	Filter/Stormwater	Pyrene	0.95 J	mg/kg	2.6	0.37
LS431	3/29/2010	Filter/Stormwater	Pyrene	4.1	mg/kg	2.6	1.6
LS431	2/11/2010	Filter/Stormwater	Pyrene	1.9	mg/kg	2.6	0.73
LS431	11/6/2009	Filter/Stormwater	Pyrene	3.2 J	mg/kg	2.6	1.2
LS431	5/15/2011	Filter/Stormwater	Total HPAHs	7.6	mg/kg	12	0.63
LS431	3/9/2011	Filter/Stormwater	Total HPAHs	9.2	mg/kg	12	0.76
LS431	1/28/2011	Filter/Baseflow	Total HPAHs	0.97	mg/kg	12	0.081
LS431	12/12/2010	Filter/Stormwater	Total HPAHs	14	mg/kg	12	1.2
LS431	11/17/2010	Filter/Stormwater	Total HPAHs	5.2	mg/kg	12	0.43
LS431	6/2/2010	Filter/Stormwater	Total HPAHs	15	mg/kg	12	1.3
LS431	4/27/2010	Filter/Stormwater	Total HPAHs	6.2	mg/kg	12	0.52
LS431	3/29/2010	Filter/Stormwater	Total HPAHs	29	mg/kg	12	2.5
LS431	2/11/2010	Filter/Stormwater	Total HPAHs	13	mg/kg	12	1.1
LS431	11/6/2009	Filter/Stormwater	Total HPAHs	30	mg/kg	12	2.5
LS431	5/15/2011	Filter/Stormwater	Total LPAHs	0.64	mg/kg	5.2	0.12
LS431	3/9/2011	Filter/Stormwater	Total LPAHs	0.98	mg/kg	5.2	0.19
LS431	1/28/2011	Filter/Baseflow	Total LPAHs	0.19	mg/kg	5.2	0.037
LS431	12/12/2010	Filter/Stormwater	Total LPAHs	1.1	mg/kg	5.2	0.22
LS431	11/17/2010	Filter/Stormwater	Total LPAHs	0.62	mg/kg	5.2	0.12
LS431	6/2/2010	Filter/Stormwater	Total LPAHs	1.6	mg/kg	5.2	0.31
LS431	4/27/2010	Filter/Stormwater	Total LPAHs	1.0	mg/kg	5.2	0.20
LS431	3/29/2010	Filter/Stormwater	Total LPAHs	3.5	mg/kg	5.2	0.66
LS431	2/11/2010	Filter/Stormwater	Total LPAHs	3.9	mg/kg	5.2	0.74
LS431	11/6/2009	Filter/Stormwater	Total LPAHs	3.3	mg/kg	5.2	0.63
LS431	5/15/2011	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.77	mg/kg	0.15	5.1
LS431	3/9/2011	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	1.0	mg/kg	0.15	6.8
LS431	1/28/2011	Filter/Baseflow	Total cPAHs (TEQ, NDx0.5)	0.10	mg/kg	0.15	0.68
LS431	12/12/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	1.6	mg/kg	0.15	11
LS431	11/17/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.46	mg/kg	0.15	3.1
LS431	6/2/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	1.6	mg/kg	0.15	10

Table 7.2-33
Storm Drain Solids Sampling Results - Lift Station

Sample Location	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
LS431	4/27/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.53	mg/kg	0.15	3.5
LS431	3/29/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	3.6	mg/kg	0.15	24
LS431	2/11/2010	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	1.4	mg/kg	0.15	9.4
LS431	11/6/2009	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	3.6	mg/kg	0.15	24
LS431V	5/26/2011	Centrifuge	Total PCBs	1.7	mg/kg	0.13	13
LS431V	5/25/2011	Filter/Stormwater	Total PCBs	0.24	mg/kg	0.13	1.8
LS431V	4/28/2011	Centrifuge	Total PCBs	0.22	mg/kg	0.13	1.7
LS431V	4/28/2011	Filter/Stormwater	Total PCBs	0.18	mg/kg	0.13	1.4
LS431V	3/25/2011	Centrifuge	Total PCBs	0.63	mg/kg	0.13	4.8
LS431V	3/25/2011	Filter/Undifferentiated	Total PCBs	0.30	mg/kg	0.13	2.3
LS431V	1/13/2006	Grab	Total PCBs	3.0	mg/kg	0.13	23
LS431V	4/28/2011	Centrifuge	Total Dioxins/Furans (TEQ, NDx0.5)	3.1	ng/kg	13	0.24
LS431V	4/28/2011	Filter/Stormwater	Total Dioxins/Furans (TEQ, NDx0.5)	2.9	ng/kg	13	0.23
LS431V	5/25/2011	Filter/Stormwater	Arsenic	6 U	mg/kg	7.3	0.82
LS431V	4/28/2011	Centrifuge	Arsenic	7 U	mg/kg	7.3	0.96
LS431V	4/28/2011	Filter/Stormwater	Arsenic	6 U	mg/kg	7.3	0.82
LS431V	3/25/2011	Centrifuge	Arsenic	70 U	mg/kg	7.3	9.6
LS431V	3/25/2011	Filter/Undifferentiated	Arsenic	20 U	mg/kg	7.3	2.7
LS431V	5/25/2011	Filter/Stormwater	Cadmium	3.4	mg/kg	5.1	0.67
LS431V	4/28/2011	Centrifuge	Cadmium	3.9	mg/kg	5.1	0.76
LS431V	4/28/2011	Filter/Stormwater	Cadmium	3.6	mg/kg	5.1	0.71
LS431V	3/25/2011	Centrifuge	Cadmium	6.0	mg/kg	5.1	1.2
LS431V	3/25/2011	Filter/Undifferentiated	Cadmium	3.5	mg/kg	5.1	0.69
LS431V	5/25/2011	Filter/Stormwater	Chromium	17	mg/kg	260	0.065
LS431V	4/28/2011	Centrifuge	Chromium	39	mg/kg	260	0.15
LS431V	4/28/2011	Filter/Stormwater	Chromium	20	mg/kg	260	0.075
LS431V	3/25/2011	Centrifuge	Chromium	83	mg/kg	260	0.32
LS431V	3/25/2011	Filter/Undifferentiated	Chromium	20	mg/kg	260	0.077
LS431V	5/25/2011	Filter/Stormwater	Copper	18	mg/kg	390	0.046
LS431V	4/28/2011	Centrifuge	Copper	25	mg/kg	390	0.064
LS431V	4/28/2011	Filter/Stormwater	Copper	24	mg/kg	390	0.062
LS431V	3/25/2011	Centrifuge	Copper	59	mg/kg	390	0.15
LS431V	3/25/2011	Filter/Undifferentiated	Copper	30	mg/kg	390	0.077
LS431V	5/25/2011	Filter/Stormwater	Lead	26	mg/kg	450	0.058
LS431V	4/28/2011	Centrifuge	Lead	103	mg/kg	450	0.23
LS431V	4/28/2011	Filter/Stormwater	Lead	22	mg/kg	450	0.049
LS431V	3/25/2011	Centrifuge	Lead	70	mg/kg	450	0.16
LS431V	3/25/2011	Filter/Undifferentiated	Lead	41	mg/kg	450	0.091
LS431V	5/25/2011	Filter/Stormwater	Mercury	0.050	mg/kg	0.41	0.12
LS431V	4/28/2011	Filter/Stormwater	Mercury	0.060	mg/kg	0.41	0.15
LS431V	4/28/2011	Centrifuge	Mercury	0.050	mg/kg	0.41	0.12
LS431V	3/25/2011	Filter/Undifferentiated	Mercury	0.060	mg/kg	0.41	0.15
LS431V	3/25/2011	Centrifuge	Mercury	0.1 U	mg/kg	0.41	0.24
LS431V	5/25/2011	Filter/Stormwater	Silver	0.4 U	mg/kg	6.1	0.066
LS431V	4/28/2011	Centrifuge	Silver	0.4 U	mg/kg	6.1	0.066
LS431V	4/28/2011	Filter/Stormwater	Silver	0.4 U	mg/kg	6.1	0.066
LS431V	3/25/2011	Centrifuge	Silver	4 U	mg/kg	6.1	0.66
LS431V	3/25/2011	Filter/Undifferentiated	Silver	0.9 U	mg/kg	6.1	0.15
LS431V	5/25/2011	Filter/Stormwater	Zinc	140	mg/kg	410	0.34
LS431V	4/28/2011	Centrifuge	Zinc	188	mg/kg	410	0.46
LS431V	4/28/2011	Filter/Stormwater	Zinc	135	mg/kg	410	0.33
LS431V	3/25/2011	Centrifuge	Zinc	280	mg/kg	410	0.68
LS431V	3/25/2011	Filter/Undifferentiated	Zinc	177	mg/kg	410	0.43
LS431V	5/26/2011	Centrifuge	Acenaphthene	0.54	mg/kg	0.50	1.1
LS431V	5/25/2011	Filter/Stormwater	Acenaphthene	0.044	mg/kg	0.50	0.088
LS431V	5/26/2011	Centrifuge	Anthracene	0.41	mg/kg	0.96	0.43
LS431V	5/25/2011	Filter/Stormwater	Anthracene	0.16	mg/kg	0.96	0.17
LS431V	5/26/2011	Centrifuge	Benzo(a)anthracene	1.1	mg/kg	1.3	0.85

Table 7.2-33
Storm Drain Solids Sampling Results - Lift Station

Sample Location	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
LS431V	5/25/2011	Filter/Stormwater	Benzo(a)anthracene	0.55	mg/kg	1.3	0.42
LS431V	5/26/2011	Centrifuge	Total Benzofluoranthenes	5.4	mg/kg	3.2	1.7
LS431V	5/25/2011	Filter/Stormwater	Total Benzofluoranthenes	0.87	mg/kg	3.2	0.27
LS431V	5/26/2011	Centrifuge	Benzo(g,h,i)perylene	1.9	mg/kg	0.67	2.8
LS431V	5/25/2011	Filter/Stormwater	Benzo(g,h,i)perylene	0.31	mg/kg	0.67	0.46
LS431V	5/26/2011	Centrifuge	Benzo(a)pyrene	1.5	mg/kg	0.15	10
LS431V	5/25/2011	Filter/Stormwater	Benzo(a)pyrene	0.43	mg/kg	0.15	2.9
LS431V	5/26/2011	Centrifuge	Chrysene	3.5	mg/kg	1.4	2.5
LS431V	5/25/2011	Filter/Stormwater	Chrysene	0.62	mg/kg	1.4	0.44
LS431V	5/26/2011	Centrifuge	Dibenz(a,h)anthracene	0.68	mg/kg	0.23	3.0
LS431V	5/25/2011	Filter/Stormwater	Dibenz(a,h)anthracene	0.33	mg/kg	0.23	1.4
LS431V	5/26/2011	Centrifuge	Dibenzofuran	0.45	mg/kg	0.54	0.83
LS431V	5/25/2011	Filter/Stormwater	Dibenzofuran	0.017	mg/kg	0.54	0.031
LS431V	5/26/2011	Centrifuge	Fluoranthene	4.7	mg/kg	1.7	2.8
LS431V	5/25/2011	Filter/Stormwater	Fluoranthene	1.2	mg/kg	1.7	0.71
LS431V	5/26/2011	Centrifuge	Fluorene	0.43	mg/kg	0.54	0.80
LS431V	5/25/2011	Filter/Stormwater	Fluorene	0.047	mg/kg	0.54	0.087
LS431V	5/26/2011	Centrifuge	Indeno(1,2,3-cd)pyrene	1.7	mg/kg	0.60	2.8
LS431V	5/25/2011	Filter/Stormwater	Indeno(1,2,3-cd)pyrene	0.58	mg/kg	0.60	0.97
LS431V	5/26/2011	Centrifuge	2-Methylnaphthalene	0.56	mg/kg	0.67	0.84
LS431V	5/25/2011	Filter/Stormwater	2-Methylnaphthalene	0.023	mg/kg	0.67	0.034
LS431V	5/26/2011	Centrifuge	Phenanthrene	3.1	mg/kg	1.5	2.1
LS431V	5/25/2011	Filter/Stormwater	Phenanthrene	0.62	mg/kg	1.5	0.41
LS431V	5/26/2011	Centrifuge	Pyrene	3.4	mg/kg	2.6	1.3
LS431V	5/25/2011	Filter/Stormwater	Pyrene	0.89	mg/kg	2.6	0.34
LS431V	5/26/2011	Centrifuge	Total HPAHs	24	mg/kg	12	2.0
LS431V	5/25/2011	Filter/Stormwater	Total HPAHs	5.8	mg/kg	12	0.48
LS431V	5/26/2011	Centrifuge	Total LPAHs	5.0	mg/kg	5.2	0.96
LS431V	5/25/2011	Filter/Stormwater	Total LPAHs	0.89	mg/kg	5.2	0.17
LS431V	5/26/2011	Centrifuge	Total cPAHs (TEQ, NDx0.5)	2.4	mg/kg	0.15	16
LS431V	5/25/2011	Filter/Stormwater	Total cPAHs (TEQ, NDx0.5)	0.67	mg/kg	0.15	4.5

Indicates detected result exceeds the RISL.
Indicates nondetected result exceeds the RISL

All samples presented as dry weight concentrations.
Table includes only chemicals that exceed the screening level in at least one sample in this drainage area.
RISL = RI Screening Level

Table 7.2-34
Storm Drain Water Sampling Results - Lift Station

Sample Location	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
LS431	5/25/2011	Composite	Total PCBs	0.014	ug/L	0.010	1.4
LS431	5/15/2011	Composite	Total PCBs	0.012	ug/L	0.010	1.2
LS431	4/28/2011	Composite	Total PCBs	0.057	ug/L	0.010	5.7
LS431	4/25/2011	Composite	Total PCBs	0.011	ug/L	0.010	1.1
LS431	3/21/2011	Composite	Total PCBs	0.013	ug/L	0.010	1.3
LS431	3/9/2011	Composite	Total PCBs	0.045	ug/L	0.010	4.5
LS431	1/28/2011	Composite	Total PCBs	0.015 U	ug/L	0.010	1.5
LS431	1/21/2011	Composite	Total PCBs	0.035	ug/L	0.010	3.5
LS431	12/11/2010	Composite	Total PCBs	0.058	ug/L	0.010	5.8
LS431	11/30/2010	Composite	Total PCBs	0.015	ug/L	0.010	1.5
LS431	11/17/2010	Composite	Total PCBs	0.17	ug/L	0.010	17
LS431	6/30/2010	Composite	Total PCBs	0.016	ug/L	0.010	1.6
LS431	6/2/2010	Composite	Total PCBs	0.015 U	ug/L	0.010	1.5
LS431	5/20/2010	Composite	Total PCBs	0.043	ug/L	0.010	4.3
LS431	4/27/2010	Composite	Total PCBs	0.016	ug/L	0.010	1.6
LS431	3/29/2010	Composite	Total PCBs	0.097	ug/L	0.010	9.7
LS431	2/23/2010	Composite	Total PCBs	0.014	ug/L	0.010	1.4
LS431	2/11/2010	Composite	Total PCBs	0.028	ug/L	0.010	2.8
LS431	2/5/2010	Composite	Total PCBs	0.012	ug/L	0.010	1.2
LS431	12/15/2009	Composite	Total PCBs	0.018	ug/L	0.010	1.8
LS431	11/6/2009	Composite	Total PCBs	0.037	ug/L	0.010	3.7
LS431	10/29/2009	Composite	Total PCBs	0.015 U	ug/L	0.010	1.5
LS431	10/17/2009	Composite	Total PCBs	0.01 U	ug/L	0.010	1.0
LS431	5/25/2011	Composite	Arsenic	1.5	ug/L	0.87	1.7
LS431	5/25/2011	Composite	Arsenic	0.60	ug/L	0.87	0.69
LS431	5/15/2011	Composite	Arsenic	0.80	ug/L	0.87	0.92
LS431	5/15/2011	Composite	Arsenic	0.40	ug/L	0.87	0.46
LS431	4/28/2011	Composite	Arsenic	1.5	ug/L	0.87	1.7
LS431	4/28/2011	Composite	Arsenic	0.40	ug/L	0.87	0.46
LS431	4/25/2011	Composite	Arsenic	0.90	ug/L	0.87	1.0
LS431	4/25/2011	Composite	Arsenic	0.40	ug/L	0.87	0.46
LS431	3/21/2011	Composite	Arsenic	1.4	ug/L	0.87	1.6
LS431	3/21/2011	Composite	Arsenic	0.60	ug/L	0.87	0.69
LS431	3/9/2011	Composite	Arsenic	1.0	ug/L	0.87	1.1
LS431	3/9/2011	Composite	Arsenic	0.40	ug/L	0.87	0.46
LS431	1/28/2011	Composite	Arsenic	1.3	ug/L	0.87	1.5
LS431	1/28/2011	Composite	Arsenic	0.50	ug/L	0.87	0.57
LS431	1/21/2011	Composite	Arsenic	0.80	ug/L	0.87	0.92
LS431	1/21/2011	Composite	Arsenic	0.30	ug/L	0.87	0.34
LS431	12/11/2010	Composite	Arsenic	0.80	ug/L	0.87	0.92
LS431	12/11/2010	Composite	Arsenic	0.30	ug/L	0.87	0.34
LS431	11/30/2010	Composite	Arsenic	0.80	ug/L	0.87	0.92
LS431	11/30/2010	Composite	Arsenic	0.30	ug/L	0.87	0.34
LS431	11/17/2010	Composite	Arsenic	4.6	ug/L	0.87	5.3
LS431	11/17/2010	Composite	Arsenic	0.50	ug/L	0.87	0.57
LS431	6/30/2010	Composite	Arsenic	1.4	ug/L	0.87	1.6
LS431	6/30/2010	Composite	Arsenic	0.60	ug/L	0.87	0.69
LS431	6/2/2010	Composite	Arsenic	0.80	ug/L	0.87	0.92
LS431	6/2/2010	Composite	Arsenic	0.40	ug/L	0.87	0.46
LS431	5/20/2010	Composite	Arsenic	1.9	ug/L	0.87	2.2
LS431	5/20/2010	Composite	Arsenic	0.50	ug/L	0.87	0.57
LS431	4/27/2010	Composite	Arsenic	1.0	ug/L	0.87	1.1
LS431	4/27/2010	Composite	Arsenic	0.50	ug/L	0.87	0.57
LS431	3/29/2010	Composite	Arsenic	1.0	ug/L	0.87	1.1

Table 7.2-34
Storm Drain Water Sampling Results - Lift Station

Sample Location	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
LS431	3/29/2010	Composite	Arsenic	0.5 U	ug/L	0.87	0.57
LS431	2/23/2010	Composite	Arsenic	2.4	ug/L	0.87	2.8
LS431	2/23/2010	Composite	Arsenic	0.95 U	ug/L	0.87	1.1
LS431	2/11/2010	Composite	Arsenic	2.0	ug/L	0.87	2.2
LS431	2/11/2010	Composite	Arsenic	0.95 U	ug/L	0.87	1.1
LS431	2/5/2010	Composite	Arsenic	1.0	ug/L	0.87	1.1
LS431	2/5/2010	Composite	Arsenic	0.50	ug/L	0.87	0.57
LS431	12/15/2009	Composite	Arsenic	2.0	ug/L	0.87	2.3
LS431	12/15/2009	Composite	Arsenic	0.30	ug/L	0.87	0.34
LS431	11/6/2009	Composite	Arsenic	1.0	ug/L	0.87	1.1
LS431	11/6/2009	Composite	Arsenic	0.30	ug/L	0.87	0.34
LS431	10/29/2009	Composite	Arsenic	0.90	ug/L	0.87	1.0
LS431	10/29/2009	Composite	Arsenic	0.40	ug/L	0.87	0.46
LS431	10/17/2009	Composite	Arsenic	0.60	ug/L	0.87	0.69
LS431	10/17/2009	Composite	Arsenic	0.50	ug/L	0.87	0.57
LS431	5/25/2011	Composite	Cadmium	0.50	ug/L	0.43	1.2
LS431	5/25/2011	Composite	Cadmium	0.1 U	ug/L	0.43	0.23
LS431	5/15/2011	Composite	Cadmium	0.20	ug/L	0.43	0.47
LS431	5/15/2011	Composite	Cadmium	0.1 U	ug/L	0.43	0.23
LS431	4/28/2011	Composite	Cadmium	0.50	ug/L	0.43	1.2
LS431	4/28/2011	Composite	Cadmium	0.1 U	ug/L	0.43	0.23
LS431	4/25/2011	Composite	Cadmium	0.20	ug/L	0.43	0.47
LS431	4/25/2011	Composite	Cadmium	0.1 U	ug/L	0.43	0.23
LS431	3/21/2011	Composite	Cadmium	0.30	ug/L	0.43	0.70
LS431	3/21/2011	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	3/9/2011	Composite	Cadmium	0.60	ug/L	0.43	1.4
LS431	3/9/2011	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	1/28/2011	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	1/28/2011	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	1/21/2011	Composite	Cadmium	0.30	ug/L	0.43	0.70
LS431	1/21/2011	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	12/11/2010	Composite	Cadmium	0.70	ug/L	0.43	1.6
LS431	12/11/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	11/30/2010	Composite	Cadmium	0.40	ug/L	0.43	0.93
LS431	11/30/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	11/17/2010	Composite	Cadmium	1.3	ug/L	0.43	3.0
LS431	11/17/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	6/30/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	6/30/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	6/2/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	6/2/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	5/20/2010	Composite	Cadmium	0.60	ug/L	0.43	1.4
LS431	5/20/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	4/27/2010	Composite	Cadmium	0.30	ug/L	0.43	0.70
LS431	4/27/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	3/29/2010	Composite	Cadmium	0.40	ug/L	0.43	0.93
LS431	3/29/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	2/23/2010	Composite	Cadmium	17	ug/L	0.43	38
LS431	2/23/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	2/11/2010	Composite	Cadmium	4.6	ug/L	0.43	11
LS431	2/11/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	2/5/2010	Composite	Cadmium	0.20	ug/L	0.43	0.47
LS431	2/5/2010	Composite	Cadmium	0.2 U	ug/L	0.43	0.47
LS431	12/15/2009	Composite	Cadmium	1.0	ug/L	0.43	2.3

Table 7.2-34
Storm Drain Water Sampling Results - Lift Station

Sample Location	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
LS431	12/15/2009	Composite	Cadmium	0.2	U	ug/L	0.43	0.47
LS431	11/6/2009	Composite	Cadmium	0.70		ug/L	0.43	1.6
LS431	11/6/2009	Composite	Cadmium	0.2	U	ug/L	0.43	0.47
LS431	10/29/2009	Composite	Cadmium	0.40		ug/L	0.43	0.93
LS431	10/29/2009	Composite	Cadmium	0.2	U	ug/L	0.43	0.47
LS431	10/17/2009	Composite	Cadmium	0.30		ug/L	0.43	0.70
LS431	10/17/2009	Composite	Cadmium	0.2	U	ug/L	0.43	0.47
LS431	5/25/2011	Composite	Copper	9.2		ug/L	2.4	3.8
LS431	5/25/2011	Composite	Copper	5.0		ug/L	2.4	2.1
LS431	5/15/2011	Composite	Copper	4.3		ug/L	2.4	1.8
LS431	5/15/2011	Composite	Copper	2.2		ug/L	2.4	0.92
LS431	4/28/2011	Composite	Copper	10		ug/L	2.4	4.2
LS431	4/28/2011	Composite	Copper	3.0		ug/L	2.4	1.3
LS431	4/25/2011	Composite	Copper	4.2		ug/L	2.4	1.8
LS431	4/25/2011	Composite	Copper	2.2		ug/L	2.4	0.92
LS431	3/21/2011	Composite	Copper	2.7		ug/L	2.4	1.1
LS431	3/21/2011	Composite	Copper	1.1		ug/L	2.4	0.46
LS431	3/9/2011	Composite	Copper	5.1		ug/L	2.4	2.1
LS431	3/9/2011	Composite	Copper	1.8		ug/L	2.4	0.75
LS431	1/28/2011	Composite	Copper	1.6		ug/L	2.4	0.67
LS431	1/28/2011	Composite	Copper	1.0		ug/L	2.4	0.42
LS431	1/21/2011	Composite	Copper	2.9		ug/L	2.4	1.2
LS431	1/21/2011	Composite	Copper	1.5		ug/L	2.4	0.63
LS431	12/11/2010	Composite	Copper	6.0		ug/L	2.4	2.5
LS431	12/11/2010	Composite	Copper	1.3		ug/L	2.4	0.54
LS431	11/30/2010	Composite	Copper	4.9		ug/L	2.4	2.0
LS431	11/30/2010	Composite	Copper	1.8		ug/L	2.4	0.75
LS431	11/17/2010	Composite	Copper	17.5		ug/L	2.4	7.3
LS431	11/17/2010	Composite	Copper	1.8		ug/L	2.4	0.75
LS431	6/30/2010	Composite	Copper	1.2		ug/L	2.4	0.50
LS431	6/30/2010	Composite	Copper	2.2	U	ug/L	2.4	0.92
LS431	6/2/2010	Composite	Copper	5	U	ug/L	2.4	2.1
LS431	6/2/2010	Composite	Copper	3	U	ug/L	2.4	1.3
LS431	5/20/2010	Composite	Copper	14		ug/L	2.4	5.9
LS431	5/20/2010	Composite	Copper	5.2		ug/L	2.4	2.2
LS431	4/27/2010	Composite	Copper	7.1		ug/L	2.4	3.0
LS431	4/27/2010	Composite	Copper	4.2		ug/L	2.4	1.8
LS431	3/29/2010	Composite	Copper	9.6		ug/L	2.4	4.0
LS431	3/29/2010	Composite	Copper	2.2		ug/L	2.4	0.92
LS431	2/23/2010	Composite	Copper	11	J	ug/L	2.4	4.7
LS431	2/23/2010	Composite	Copper	0.85	UJ	ug/L	2.4	0.35
LS431	2/11/2010	Composite	Copper	2.5	U	ug/L	2.4	1.0
LS431	2/11/2010	Composite	Copper	0.4	U	ug/L	2.4	0.17
LS431	2/5/2010	Composite	Copper	4.0		ug/L	2.4	1.7
LS431	2/5/2010	Composite	Copper	2.1		ug/L	2.4	0.88
LS431	12/15/2009	Composite	Copper	12		ug/L	2.4	4.8
LS431	12/15/2009	Composite	Copper	2.3		ug/L	2.4	0.96
LS431	11/6/2009	Composite	Copper	17		ug/L	2.4	7.3
LS431	11/6/2009	Composite	Copper	2.8		ug/L	2.4	1.2
LS431	10/29/2009	Composite	Copper	6.7		ug/L	2.4	2.8
LS431	10/29/2009	Composite	Copper	3.4		ug/L	2.4	1.4
LS431	10/17/2009	Composite	Copper	7.0		ug/L	2.4	2.9
LS431	10/17/2009	Composite	Copper	3.6		ug/L	2.4	1.5
LS431	5/25/2011	Composite	Lead	2.6		ug/L	8.1	0.32

Table 7.2-34
Storm Drain Water Sampling Results - Lift Station

Sample Location	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
LS431	5/25/2011	Composite	Lead	0.20	ug/L	8.1	0.025
LS431	5/15/2011	Composite	Lead	1.6	ug/L	8.1	0.20
LS431	5/15/2011	Composite	Lead	0.20	ug/L	8.1	0.025
LS431	4/28/2011	Composite	Lead	5.6	ug/L	8.1	0.69
LS431	4/28/2011	Composite	Lead	0.20	ug/L	8.1	0.025
LS431	4/25/2011	Composite	Lead	1.6	ug/L	8.1	0.20
LS431	4/25/2011	Composite	Lead	0.20	ug/L	8.1	0.025
LS431	3/21/2011	Composite	Lead	2.0	ug/L	8.1	0.25
LS431	3/21/2011	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	3/9/2011	Composite	Lead	9.0	ug/L	8.1	1.1
LS431	3/9/2011	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	1/28/2011	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	1/28/2011	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	1/21/2011	Composite	Lead	1.0	ug/L	8.1	0.12
LS431	1/21/2011	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	12/11/2010	Composite	Lead	9.0	ug/L	8.1	1.1
LS431	12/11/2010	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	11/30/2010	Composite	Lead	4.0	ug/L	8.1	0.49
LS431	11/30/2010	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	11/17/2010	Composite	Lead	31	ug/L	8.1	3.8
LS431	11/17/2010	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	6/30/2010	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	6/30/2010	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	6/2/2010	Composite	Lead	1.0	ug/L	8.1	0.12
LS431	6/2/2010	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	5/20/2010	Composite	Lead	7.0	ug/L	8.1	0.86
LS431	5/20/2010	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	4/27/2010	Composite	Lead	2.0	ug/L	8.1	0.25
LS431	4/27/2010	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	3/29/2010	Composite	Lead	5.0	ug/L	8.1	0.62
LS431	3/29/2010	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	2/23/2010	Composite	Lead	3.1 J	ug/L	8.1	0.38
LS431	2/23/2010	Composite	Lead	0.2 UJ	ug/L	8.1	0.025
LS431	2/11/2010	Composite	Lead	1.7	ug/L	8.1	0.20
LS431	2/11/2010	Composite	Lead	0.2 U	ug/L	8.1	0.025
LS431	2/5/2010	Composite	Lead	1.0	ug/L	8.1	0.12
LS431	2/5/2010	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	12/15/2009	Composite	Lead	8.0	ug/L	8.1	0.99
LS431	12/15/2009	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	11/6/2009	Composite	Lead	13	ug/L	8.1	1.6
LS431	11/6/2009	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	10/29/2009	Composite	Lead	4.0	ug/L	8.1	0.49
LS431	10/29/2009	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	10/17/2009	Composite	Lead	4.0	ug/L	8.1	0.49
LS431	10/17/2009	Composite	Lead	1 U	ug/L	8.1	0.12
LS431	5/25/2011	Composite	Zinc	52	ug/L	33	1.6
LS431	5/25/2011	Composite	Zinc	21	ug/L	33	0.64
LS431	5/15/2011	Composite	Zinc	32	ug/L	33	0.97
LS431	5/15/2011	Composite	Zinc	31	ug/L	33	0.94
LS431	4/28/2011	Composite	Zinc	57	ug/L	33	1.7
LS431	4/28/2011	Composite	Zinc	22	ug/L	33	0.67
LS431	4/25/2011	Composite	Zinc	35	ug/L	33	1.1
LS431	4/25/2011	Composite	Zinc	18	ug/L	33	0.55
LS431	3/21/2011	Composite	Zinc	19	ug/L	33	0.58

Table 7.2-34
Storm Drain Water Sampling Results - Lift Station

Sample Location	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
LS431	3/21/2011	Composite	Zinc	4 U	ug/L	33	0.12
LS431	3/9/2011	Composite	Zinc	47	ug/L	33	1.4
LS431	3/9/2011	Composite	Zinc	23	ug/L	33	0.70
LS431	1/28/2011	Composite	Zinc	11	ug/L	33	0.33
LS431	1/28/2011	Composite	Zinc	7.0	ug/L	33	0.21
LS431	1/21/2011	Composite	Zinc	35	ug/L	33	1.1
LS431	1/21/2011	Composite	Zinc	26	ug/L	33	0.79
LS431	12/11/2010	Composite	Zinc	52	ug/L	33	1.6
LS431	12/11/2010	Composite	Zinc	23	ug/L	33	0.70
LS431	11/30/2010	Composite	Zinc	47	ug/L	33	1.4
LS431	11/30/2010	Composite	Zinc	25	ug/L	33	0.76
LS431	11/17/2010	Composite	Zinc	99	ug/L	33	3.0
LS431	11/17/2010	Composite	Zinc	9.0	ug/L	33	0.27
LS431	6/30/2010	Composite	Zinc	13	ug/L	33	0.39
LS431	6/30/2010	Composite	Zinc	4 U	ug/L	33	0.12
LS431	6/2/2010	Composite	Zinc	41	ug/L	33	1.2
LS431	6/2/2010	Composite	Zinc	26	ug/L	33	0.79
LS431	5/20/2010	Composite	Zinc	69	ug/L	33	2.1
LS431	5/20/2010	Composite	Zinc	22	ug/L	33	0.67
LS431	4/27/2010	Composite	Zinc	44	ug/L	33	1.3
LS431	4/27/2010	Composite	Zinc	27	ug/L	33	0.82
LS431	3/29/2010	Composite	Zinc	61	ug/L	33	1.8
LS431	3/29/2010	Composite	Zinc	25	ug/L	33	0.76
LS431	2/23/2010	Composite	Zinc	24	ug/L	33	0.74
LS431	2/23/2010	Composite	Zinc	17 J	ug/L	33	0.50
LS431	2/11/2010	Composite	Zinc	38 J	ug/L	33	1.2
LS431	2/11/2010	Composite	Zinc	13 J	ug/L	33	0.38
LS431	2/5/2010	Composite	Zinc	35	ug/L	33	1.1
LS431	2/5/2010	Composite	Zinc	23	ug/L	33	0.70
LS431	12/15/2009	Composite	Zinc	98	ug/L	33	3.0
LS431	12/15/2009	Composite	Zinc	18	ug/L	33	0.55
LS431	11/6/2009	Composite	Zinc	95	ug/L	33	2.9
LS431	11/6/2009	Composite	Zinc	38	ug/L	33	1.2
LS431	10/29/2009	Composite	Zinc	58	ug/L	33	1.8
LS431	10/29/2009	Composite	Zinc	33	ug/L	33	1.0
LS431	10/17/2009	Composite	Zinc	46	ug/L	33	1.4
LS431	10/17/2009	Composite	Zinc	32	ug/L	33	0.97
LS431	5/25/2011	Composite	Bis(2-ethylhexyl) phthalate	2.0	ug/L	1.4	1.4
LS431	5/15/2011	Composite	Bis(2-ethylhexyl) phthalate	1.0	ug/L	1.4	0.71
LS431	4/28/2011	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
LS431	4/25/2011	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
LS431	3/21/2011	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
LS431	1/28/2011	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
LS431	1/21/2011	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
LS431	12/11/2010	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
LS431	11/30/2010	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
LS431	11/17/2010	Composite	Bis(2-ethylhexyl) phthalate	1.1	ug/L	1.4	0.79
LS431	6/30/2010	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
LS431	6/2/2010	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
LS431	5/20/2010	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
LS431	4/27/2010	Composite	Bis(2-ethylhexyl) phthalate	1.8 U	ug/L	1.4	1.3
LS431	3/29/2010	Composite	Bis(2-ethylhexyl) phthalate	1.4 U	ug/L	1.4	1.0
LS431	2/23/2010	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
LS431	2/11/2010	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71

Table 7.2-34
Storm Drain Water Sampling Results - Lift Station

Sample Location	Sample Date	Sample Type	Chemical	Result	Units	RISL	RISL Exceedance Factor
LS431	2/5/2010	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
LS431	12/15/2009	Composite	Bis(2-ethylhexyl) phthalate	1.6	ug/L	1.4	1.1
LS431	11/6/2009	Composite	Bis(2-ethylhexyl) phthalate	1.2	ug/L	1.4	0.86
LS431	10/29/2009	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
LS431	10/17/2009	Composite	Bis(2-ethylhexyl) phthalate	1 U	ug/L	1.4	0.71
LS431	5/25/2011	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	5/15/2011	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	4/28/2011	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	4/25/2011	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	3/21/2011	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	3/9/2011	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	1/28/2011	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	1/21/2011	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	12/11/2010	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	11/30/2010	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	11/17/2010	Composite	Di-n-octyl phthalate	1.0	ug/L	1.0	1.0
LS431	6/30/2010	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	6/2/2010	Composite	Di-n-octyl phthalate	1.1	ug/L	1.0	1.1
LS431	5/20/2010	Composite	Di-n-octyl phthalate	1.8	ug/L	1.0	1.8
LS431	4/27/2010	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	3/29/2010	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	2/23/2010	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	2/11/2010	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	2/5/2010	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	12/15/2009	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	11/6/2009	Composite	Di-n-octyl phthalate	2.1	ug/L	1.0	2.1
LS431	10/29/2009	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	10/17/2009	Composite	Di-n-octyl phthalate	1 U	ug/L	1.0	1.0
LS431	5/25/2011	Composite	Benzo(g,h,i)perylene	0.054	ug/L	0.012	4.5
LS431	5/15/2011	Composite	Benzo(g,h,i)perylene	0.042 U	ug/L	0.012	3.5
LS431	4/28/2011	Composite	Benzo(g,h,i)perylene	0.19	ug/L	0.012	16
LS431	4/25/2011	Composite	Benzo(g,h,i)perylene	0.040	ug/L	0.012	3.3
LS431	3/21/2011	Composite	Benzo(g,h,i)perylene	0.023	ug/L	0.012	1.9
LS431	3/9/2011	Composite	Benzo(g,h,i)perylene	0.12	ug/L	0.012	10
LS431	1/28/2011	Composite	Benzo(g,h,i)perylene	0.01 U	ug/L	0.012	0.83
LS431	1/21/2011	Composite	Benzo(g,h,i)perylene	0.094	ug/L	0.012	7.8
LS431	12/11/2010	Composite	Benzo(g,h,i)perylene	0.18	ug/L	0.012	15
LS431	11/30/2010	Composite	Benzo(g,h,i)perylene	0.098	ug/L	0.012	8.2
LS431	11/17/2010	Composite	Benzo(g,h,i)perylene	0.085	ug/L	0.012	7.1
LS431	6/30/2010	Composite	Benzo(g,h,i)perylene	0.01 U	ug/L	0.012	0.83
LS431	6/2/2010	Composite	Benzo(g,h,i)perylene	0.054	ug/L	0.012	4.5
LS431	5/20/2010	Composite	Benzo(g,h,i)perylene	0.26	ug/L	0.012	22
LS431	4/27/2010	Composite	Benzo(g,h,i)perylene	0.031	ug/L	0.012	2.6
LS431	3/29/2010	Composite	Benzo(g,h,i)perylene	0.11	ug/L	0.012	9.2
LS431	2/23/2010	Composite	Benzo(g,h,i)perylene	0.018	ug/L	0.012	1.5
LS431	2/11/2010	Composite	Benzo(g,h,i)perylene	0.035	ug/L	0.012	2.9
LS431	2/5/2010	Composite	Benzo(g,h,i)perylene	0.024	ug/L	0.012	2.0
LS431	12/15/2009	Composite	Benzo(g,h,i)perylene	0.099	ug/L	0.012	8.3
LS431	11/6/2009	Composite	Benzo(g,h,i)perylene	0.73	ug/L	0.012	61
LS431	10/29/2009	Composite	Benzo(g,h,i)perylene	0.13	ug/L	0.012	11
LS431	10/17/2009	Composite	Benzo(g,h,i)perylene	0.080	ug/L	0.012	6.7
LS431	5/25/2011	Composite	Benzo(a)pyrene	0.041	ug/L	0.010	4.1
LS431	5/15/2011	Composite	Benzo(a)pyrene	0.036 U	ug/L	0.010	3.6
LS431	4/28/2011	Composite	Benzo(a)pyrene	0.17	ug/L	0.010	17

Table 7.2-34
Storm Drain Water Sampling Results - Lift Station

Sample Location	Sample Date	Sample Type	Chemical	Result		Units	RISL	RISL Exceedance Factor
LS431	4/25/2011	Composite	Benzo(a)pyrene	0.031		ug/L	0.010	3.1
LS431	3/21/2011	Composite	Benzo(a)pyrene	0.026		ug/L	0.010	2.6
LS431	3/9/2011	Composite	Benzo(a)pyrene	0.12		ug/L	0.010	12
LS431	1/28/2011	Composite	Benzo(a)pyrene	0.01	U	ug/L	0.010	1.0
LS431	1/21/2011	Composite	Benzo(a)pyrene	0.088		ug/L	0.010	8.8
LS431	12/11/2010	Composite	Benzo(a)pyrene	0.20		ug/L	0.010	20
LS431	11/30/2010	Composite	Benzo(a)pyrene	0.088		ug/L	0.010	8.8
LS431	11/17/2010	Composite	Benzo(a)pyrene	0.10		ug/L	0.010	10
LS431	6/30/2010	Composite	Benzo(a)pyrene	0.01	U	ug/L	0.010	1.0
LS431	6/2/2010	Composite	Benzo(a)pyrene	0.053	J	ug/L	0.010	5.3
LS431	5/20/2010	Composite	Benzo(a)pyrene	0.22		ug/L	0.010	22
LS431	4/27/2010	Composite	Benzo(a)pyrene	0.030		ug/L	0.010	3.0
LS431	3/29/2010	Composite	Benzo(a)pyrene	0.11		ug/L	0.010	11
LS431	2/23/2010	Composite	Benzo(a)pyrene	0.020		ug/L	0.010	2.0
LS431	2/11/2010	Composite	Benzo(a)pyrene	0.032		ug/L	0.010	3.2
LS431	2/5/2010	Composite	Benzo(a)pyrene	0.019		ug/L	0.010	1.9
LS431	12/15/2009	Composite	Benzo(a)pyrene	0.088		ug/L	0.010	8.8
LS431	11/6/2009	Composite	Benzo(a)pyrene	0.65	J	ug/L	0.010	65
LS431	10/29/2009	Composite	Benzo(a)pyrene	0.13		ug/L	0.010	13
LS431	10/17/2009	Composite	Benzo(a)pyrene	0.069		ug/L	0.010	6.9
LS431	5/25/2011	Composite	Total cPAHs (TEQ, NDx0.5)	0.066		ug/L	0.010	6.6
LS431	5/15/2011	Composite	Total cPAHs (TEQ, NDx0.5)	0.074		ug/L	0.010	7.4
LS431	4/28/2011	Composite	Total cPAHs (TEQ, NDx0.5)	0.26		ug/L	0.010	26
LS431	4/25/2011	Composite	Total cPAHs (TEQ, NDx0.5)	0.050		ug/L	0.010	5.0
LS431	3/21/2011	Composite	Total cPAHs (TEQ, NDx0.5)	0.037		ug/L	0.010	3.7
LS431	3/9/2011	Composite	Total cPAHs (TEQ, NDx0.5)	0.18		ug/L	0.010	18
LS431	1/28/2011	Composite	Total cPAHs (TEQ, NDx0.5)	0.0083		ug/L	0.010	0.83
LS431	1/21/2011	Composite	Total cPAHs (TEQ, NDx0.5)	0.14		ug/L	0.010	14
LS431	12/11/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.44		ug/L	0.010	44
LS431	11/30/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.13		ug/L	0.010	13
LS431	11/17/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.26		ug/L	0.010	26
LS431	6/30/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.11		ug/L	0.010	11
LS431	6/2/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.076		ug/L	0.010	7.6
LS431	5/20/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.33		ug/L	0.010	33
LS431	4/27/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.045		ug/L	0.010	4.5
LS431	3/29/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.16		ug/L	0.010	16
LS431	2/23/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.029		ug/L	0.010	2.9
LS431	2/11/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.047		ug/L	0.010	4.7
LS431	2/5/2010	Composite	Total cPAHs (TEQ, NDx0.5)	0.032		ug/L	0.010	3.2
LS431	12/15/2009	Composite	Total cPAHs (TEQ, NDx0.5)	0.14		ug/L	0.010	14
LS431	11/6/2009	Composite	Total cPAHs (TEQ, NDx0.5)	0.92		ug/L	0.010	92
LS431	10/29/2009	Composite	Total cPAHs (TEQ, NDx0.5)	0.19		ug/L	0.010	19
LS431	10/17/2009	Composite	Total cPAHs (TEQ, NDx0.5)	0.10		ug/L	0.010	10

Indicates detected result exceeds the RISL.
Indicates nondetected result exceeds the RISL

Table includes only chemicals that exceed the screening level in at least one sample in this drainage area.
RISL = RI Screening Level

Table 7.2-35
Maximum RISL Exceedance Factors in Storm Drain Solids Samples
KCIA Upstream of NBF

Chemical Class	Chemical	RISL (mg/kg DW)	Upstream of North Lateral		Upstream of North-Central Lateral		Upstream of South-Central Lateral		Upstream of South Lateral	
			Max Detect	Max EF	Max Detect	Max EF	Max Detect	Max EF	Max Detect	Max EF
Metals	Arsenic	7.3	23	3.2	34	4.7	29	4.0	12	1.6
	Copper	390	5,660	15	567	1.5	284	<1	286	<1
	Lead	450	463	1.0	744	1.7	420	<1	237	<1
	Mercury	0.41	0.21	<1	0.24	<1	0.30	<1	0.54	1.3
	Zinc	410	3,530	8.6	1,810	4.4	1,240	3.0	1,580	3.9
Chlorinated Aromatics	Total PCBs	0.13	0.23	1.8	0.72	5.5	2.1	16	0.76	5.8
PAHs	Acenaphthene	0.50	ND	ND	ND	ND	1.0	2.0	ND	ND
	Anthracene	0.96	5.0	5.2	0.99	1.0	4.2	4.4	4.4	4.6
	Fluorene	0.54	3.0	5.6	ND	ND	1.7	3.1	ND	ND
	Phenanthrene	1.5	35	23	7.0	4.7	21	14	34	23
	Total LPAH	5.2	43	8.3	8.0	1.5	28	5.4	38	7.3
	Benzo(a)anthracene	1.3	27	21	4.5	3.5	20	15	31	24
	Benzo(a)pyrene	0.15	32	213	7.2	48	26	173	43	287
	Benzofluoranthenes	3.2	68	21	20	6.3	67	21	136	43
	Benzo(g,h,i)perylene	0.67	16	24	7.3	11	25	37	43	64
	Chrysene	1.4	43	31	11	7.9	32	23	67	48
	Dibenz(a,h)anthracene	0.23	5.4	23	2.3	10	7.5	33	10	43
	Fluoranthene	1.7	85	50	18	11	53	31	106	62
	Indeno(1,2,3-cd)pyrene	0.60	19	32	6.6	11	23	38	40	67
	Pyrene	2.6	49	19	14	5.4	45	17	77	30
	Total HPAH	12	344	29	90	7.5	298	25	553	46
	Total cPAH	0.15	44	293	11	73	38	253	65	433
Phthalates	Bis(2-ethylhexyl) phthalate	1.3	73	56	32	25	64	49	57	44
	Butyl benzyl phthalate	0.067	2.0	30	3.1	46	3.0	45	3.5	52

EF Colors	EF Ranges
Green	> 1.0 - 5.0
Yellow	> 5.0 - 25
Orange	> 25 - 125
Red	> 125 - 625

ND = not detected
Maximum exceedance factor for detected values only.

Table 7.2-36
Samples Used for Sampling Method Comparison

Sample Location	Drainage Area	Sample Type	Date Sampled	PCB Concentration (mg/kg for solids, ug/L for water)	Exceedance Factor
CB114	North	Filter	10/19/2005	1.2	31
CB114	North	Grab	9/26/2005	0.87	23
CB159	North	Grab	3/31/2010	17	440
CB159	North	Inlet Filter	3/31/2010	15	390
CB165	North	Filter	4/27/2010	7.5	200
CB165	North	Grab	3/30/2010	3.2	84
CB165	North	Filter	1/26/2007	14	380
CB165	North	Grab	3/13/2007	5.7	150
CB173	North	Filter	11/15/2005	510	13,000
CB173	North	Grab	10/24/2005	400	11,000
CB173	North	Grab	3/29/2010	14	360
CB173	North	Filter	4/27/2010	33	870
CB173	North	Grab	7/21/2011	1.5	39
CB173	North	Filter	1/21/2011	9.7	260
CB182	North	Grab	4/26/2006	6.1	160
CB182	North	Inlet Filter	3/21/2006	14	370
CB185	North	Grab	4/26/2006	11	290
CB185	North	Inlet Filter	3/21/2006	5.5	140
CB203	North	Grab	3/31/2010	0.063	1.7
CB203	North	Inlet Filter	3/31/2010	0.77	20
MH108	North	Filter	3/9/2007	18	480
CB363	North	Grab	3/14/2007	230	6,100
CB363	North	Sed Trap	5/14/2007	180	4,700
CB363	North	Grab	12/8/2006	107	2,800
CB363	North	Sed Trap	1/8/2007	200	5,300
CB363	North	Grab	2/16/2005	7.0	180
CB363	North	Sed Trap	8/11/2005	24	630
CB363	North	Sed Trap	10/11/2006	800	21,000
MH108	North	Grab	7/25/2006	6.6	170
CB363	North	Grab	6/9/2009	6.8	180
CB363	North	Sed Trap	4/6/2009	2.1	55
CB363	North	Sed Trap	4/8/2010	2.6	68
MH108	North	Filter	3/29/2010	3.6	95
CB363	North	Sed Trap	4/5/2011	4.0	110
MH108	North	Filter	4/25/2011	4.4	120
MH130	North	Grab	9/26/2005	2.3	61
MH130	North	Filter	10/11/2005	1.4	37
MH133D	North	Grab	4/7/2010	0.037	1.0
MH133D	North	Filter	5/20/2010	0.27	7.1
MH108	North	Filter	4/27/2011	1.5	39
CB108A	North	Grab	8/24/2011	2.9	76
MH108	North	Filter	10/17/2009	2.2	57
CB108A	North	Grab	6/16/2009	4.8	130
MH108	North	Water	10/17/2009	0.036	3.6
MH108	North	Filter	10/17/2009	2.16	57
MH108	North	Water	10/29/2009	0.016	1.6
MH108	North	Filter	10/29/2009	6.1	160
MH108	North	Water	11/6/2009	0.036	3.6
MH108	North	Filter	11/6/2009	5.6	150
MH108	North	Water	12/15/2009	0.054	5.4
MH108	North	Filter	12/15/2009	3.3	87

Table 7.2-36
Samples Used for Sampling Method Comparison

Sample Location	Drainage Area	Sample Type	Date Sampled	PCB Concentration (mg/kg for solids, ug/L for water)	Exceedance Factor
MH108	North	Water	2/5/2010	0.028	2.8
MH108	North	Filter	2/5/2010	18.3	480
MH108	North	Water	2/11/2010	0.145	15
MH108	North	Filter	2/11/2010	17.7	470
MH108	North	Water	2/23/2010	0.22	22
MH108	North	Filter	2/23/2010	25	660
MH108	North	Water	3/29/2010	0.119	12
MH108	North	Filter	3/29/2010	3.6	95
MH108	North	Water	4/27/2010	0.027	2.7
MH108	North	Filter	4/27/2010	4	110
MH108	North	Water	5/20/2010	0.108	11
MH108	North	Filter	5/20/2010	1.3	34
MH108	North	Water	6/2/2010	0.046	4.6
MH108	North	Filter	6/2/2010	5	130
MH108	North	Water	6/29/2010	0.27	27
MH108	North	Filter	6/30/2010	22	580
MH108	North	Water	11/30/2010	0.013	1.3
MH108	North	Filter	11/30/2010	4.4	120
MH108	North	Water	12/12/2010	0.017	1.7
MH108	North	Filter	12/12/2010	2.5	66
MH108	North	Water	1/21/2011	0.053	5.3
MH108	North	Filter	1/21/2011	2.9	76
MH178	North	Water	3/9/2011	0.22	22
MH178	North	Filter	3/9/2011	0.21	5.5
MH108	North	Water	3/9/2011	0.101	10
MH108	North	Filter	3/9/2011	2	53
MH178	North	Water	3/21/2011	0.048	4.8
MH178	North	Filter	3/21/2011	0.99	26
MH178	North	Water	4/21/2011	0.13	13
MH178	North	Filter	4/21/2011	0.57	15
MH108	North	Water	4/25/2011	0.041	4.1
MH108	North	Filter	4/25/2011	4.4	120
MH178	North	Water	4/27/2011	0.23	23
MH178	North	Filter	4/27/2011	0.56	15
MH108	North	Water	4/27/2011	0.09	9.0
MH108	North	Filter	4/27/2011	1.5	39
MH178	North	Grab	3/29/2010	0.33	8.7
MH178	North	Sed Trap	4/8/2010	0.44	12
MH178	North	Filter	4/27/2010	0.59	16
MH178	North	Filter	2/1/2007	0.72	19
MH178	North	Sed Trap	1/8/2007	0.086	2.3
MH178	North	Sed Trap	4/5/2011	0.33	8.7
MH178	North	Filter	4/25/2011	0.61	16
MH179	North	Grab	7/15/2009	330	8,700
MH179	North	Inlet Filter	8/5/2009	1.0	26
CB137C	North-Central	Grab	4/12/2010	0.46	12
CB137C	North-Central	Inlet Filter	4/12/2010	0.22	5.8
CB229A	North-Central	Grab	2/16/2005	5.6	150
CB229A	North-Central	Sed Trap	8/11/2005	0.45	12
CB229A	North-Central	Grab	4/15/2010	0.11	2.9
CB229A	North-Central	Sed Trap	4/8/2010	0.68	18

Table 7.2-36
Samples Used for Sampling Method Comparison

Sample Location	Drainage Area	Sample Type	Date Sampled	PCB Concentration (mg/kg for solids, ug/L for water)	Exceedance Factor
CB229A	North-Central	Grab	4/10/2007	0.10	2.6
CB229A	North-Central	Sed Trap	1/8/2007	0.10	2.7
CB229A	North-Central	Grab	9/22/2008	0.074	1.9
CB229A	North-Central	Sed Trap	7/30/2008	0.058	1.5
CB236	North-Central	Grab	4/14/2010	0.47	12
CB236	North-Central	Inlet Filter	4/14/2010	0.50	13
CB239	North-Central	Grab	4/14/2010	0.77	20
CB239	North-Central	Inlet Filter	4/14/2010	1.4	36
CB608	North-Central	Grab	4/12/2010	0.46	12
CB608	North-Central	Inlet Filter	4/12/2010	0.18	4.7
MH221A	North-Central	Sed Trap	4/8/2010	1.1	28
MH226	North-Central	Filter	4/27/2010	0.34	8.9
MH221A	North-Central	Sed Trap	4/6/2009	0.34	8.9
MH219	North-Central	Grab	6/10/2009	0.50	13
MH221A	North-Central	Sed Trap	5/17/2007	1.59	42
MH226	North-Central	Grab	3/14/2007	30	790
MH221A	North-Central	Sed Trap	10/11/2006	0.94	25
MH226	North-Central	Grab	7/25/2006	25	660
MH221A	North-Central	Grab	2/16/2005	1.5	39
MH221A	North-Central	Sed Trap	8/11/2005	2.8	74
MH362	North-Central	Water	2/24/2012	0.019	1.9
MH362	North-Central	Filter	2/24/2012	1.7 J	13
UNKCB27	North-Central	Water	2/24/2012	0.01 U	1.0
UNKCB27	North-Central	Filter	2/24/2012	0.22	1.7
MH362	North-Central	Water	3/29/2012	.024 J	2.4
MH362	North-Central	Filter	3/29/2012	2.1	16
UNKCB27	North-Central	Water	3/29/2012	0.01 U	1.0
UNKCB27	North-Central	Filter	3/29/2012	0.27	2.1
MH364	South-Central	Sed Trap	4/6/2009	0.028	0.74
MH368	South-Central	Grab	6/15/2009	0.54	14
MH368	South-Central	Water	2/24/2012	0.011	1.1
MH368	South-Central	Filter	2/24/2012	0.29	2.2
MH368	South-Central	Water	3/29/2012	0.015 J	1.5
MH368	South-Central	Filter	3/29/2012	0.20	1.5
MH461	South-Central	Water	2/24/2012	0.01 U	1.0
MH461	South-Central	Filter	2/24/2012	0.0053 U	0.041
MH461	South-Central	Water	3/29/2012	0.01 U	1.0
MH461	South-Central	Filter	3/29/2012	0.15 J	1.2
CB308	South	Grab	4/26/2010	0.85	22
CB308	South	Inlet Filter	4/26/2010	0.61	16
MH356	South	Sed Trap	4/8/2010	0.46	12
MH356	South	Filter	4/27/2010	0.82	22
MH356	South	Water	2/24/2012	0.024	2.4
MH356	South	Filter	2/24/2012	0.17 J	1.3
MH356	South	Water	3/29/2012	0.013	1.3
MH356	South	Filter	3/29/2012	0.44	3.4
MH482	South	Grab	4/27/2010	0.25	6.6
MH482	South	Sed Trap	10/7/2009	0.18	4.7
MH482	South	Water	2/24/2012	0.01 U	1.0
MH482	South	Filter	2/24/2012	0.015	0.12

Table 7.2-36
Samples Used for Sampling Method Comparison

Sample Location	Drainage Area	Sample Type	Date Sampled	PCB Concentration (mg/kg for solids, ug/L for water)	Exceedance Factor
MH482	South	Water	3/29/2012	0.01 U	1.0
MH482	South	Filter	3/29/2012	0.36	2.8
LS431V	Lift Station	Centrifuge	5/26/2011	1.7	45
LS431V	Lift Station	Filter	5/25/2011	0.24	6.3
LS431V	Lift Station	Centrifuge	3/25/2011	0.63	17
LS431V	Lift Station	Filter	3/25/2011	0.30	7.9
LS431V	Lift Station	Centrifuge	4/28/2011	0.22	5.8
LS431V	Lift Station	Filter	4/28/2011	0.18	4.7
LS431	Lift Station	Water	11/6/2009	0.037	3.7
LS431	Lift Station	Filter	11/6/2009	1.7	45
LS431	Lift Station	Water	12/15/2009	0.018	1.8
LS431	Lift Station	Filter	12/15/2009	0.66	17
LS431	Lift Station	Water	2/5/2010	0.012	1.2
LS431	Lift Station	Filter	2/5/2010	2.8	74
LS431	Lift Station	Water	2/11/2010	0.028	2.8
LS431	Lift Station	Filter	2/11/2010	2.3	61
LS431	Lift Station	Water	3/29/2010	0.097	9.7
LS431	Lift Station	Filter	3/29/2010	1.9	50
LS431	Lift Station	Water	4/27/2010	0.016	1.6
LS431	Lift Station	Filter	4/27/2010	0.87	23
LS431	Lift Station	Water	5/20/2010	0.043	4.3
LS431	Lift Station	Filter	5/20/2010	0.36	9.5
LS431	Lift Station	Water	6/30/2010	0.016	1.6
LS431	Lift Station	Filter	6/30/2010	0.53	14
LS431	Lift Station	Water	11/17/2010	0.17	17
LS431	Lift Station	Filter	11/17/2010	0.64	17
LS431	Lift Station	Water	11/30/2010	0.015	1.5
LS431	Lift Station	Filter	11/30/2010	0.79	21
LS431	Lift Station	Water	12/11/2010	0.058	5.8
LS431	Lift Station	Filter	12/12/2010	1.7	45
LS431	Lift Station	Water	1/21/2011	0.035	3.5
LS431	Lift Station	Filter	1/21/2011	0.32	8.4
LS431	Lift Station	Water	3/9/2011	0.045	4.5
LS431	Lift Station	Filter	3/9/2011	0.61	16
LS431	Lift Station	Water	3/21/2011	0.013	1.3
LS431	Lift Station	Filter	3/21/2011	0.092	2.4
LS431	Lift Station	Water	4/25/2011	0.011	1.1
LS431	Lift Station	Filter	4/25/2011	0.4	11
LS431	Lift Station	Water	4/28/2011	0.057	5.7
LS431	Lift Station	Filter	4/28/2011	0.96	25
LS431	Lift Station	Water	5/15/2011	0.012	1.2
LS431	Lift Station	Filter	5/15/2011	0.36	9.5

Table 7.3-1
RISLs and Maximum Concentrations for COPCs in Anthropogenic Media and Surface Debris

Chemical	Anthropogenic Media											Surface Debris		
	RISL (mg/kg)	Paint		Roof Materials		Other Exterior Materials		CJM		Pavement		RISL (mg/kg)	Max Conc (mg/kg)	Max EF
		Max Conc (mg/kg)	Max EF	Max Conc (mg/kg)	Max EF	Max Conc (mg/kg)	Max EF	Max Conc (mg/kg)	Max EF	Max Conc (mg/kg)	Max EF			
Polychlorinated Aromatic Compounds														
Total PCBs	***1.3***	2,300	1,800	15	12	15,800	12,000	79,000	61,000	380	290	***0.13***	557	4,300
Total Dioxins/Furans (TEQ)*	***130***	NC	NC	--	--	--	--	--	--	--	--	***13***	--	--
Metals														
Arsenic	***73***	200	2.7	295	4.0	53	NE	--	--	NC	NC	***7.3***	80	11
Cadmium	***51***	439	8.6	106	2.1	12	NE	--	--	NC	NC	***5.1***	34	6.7
Chromium	***2,600***	41,100	16	307	NE	155	NE	--	--	NC	NC	***260***	489	1.9
Copper	***3,900***	NC	NC	NC	NC	NC	NC	--	--	NC	NC	***390***	398	NE
Lead	***4,500***	155,000	34	1,350	NE	160	NE	--	--	NC	NC	***450***	2,700	6.0
Mercury	***4.1***	130	32	14	3.4	41	10	--	--	NC	NC	***0.41***	0.67	1.6
Silver	***61***	NC	NC	NC	NC	NC	NC	--	--	NC	NC	***6.1***	1.7	NE
Zinc	***4,100***	222,000	54	9,190	2.2	21,100	5.1	--	--	NC	NC	***410***	5,150	13
Semivolatile Organic Compounds: Phenols, Phthalates, PAHs														
p-Cresol (4-Methylphenol)	***6.7***	--	--	--	--	--	--	--	--	--	--	***0.67***	--	--
Phenol	***4.2***	--	--	--	--	--	--	--	--	--	--	***0.42***	--	--
Bis(2-ethylhexyl) phthalate	***13***	--	--	--	--	--	--	--	--	--	--	***1.3***	--	--
Butyl benzyl phthalate	***0.67***	--	--	--	--	--	--	--	--	--	--	***0.067***	--	--
Acenaphthene	***5.0***	--	--	--	--	--	--	--	--	--	--	***0.50***	0.05 U	NE
Anthracene	***9.6***	--	--	--	--	--	--	--	--	--	--	***0.96***	0.05	NE
Benzo(a)anthracene	***13***	--	--	--	--	--	--	--	--	--	--	***1.3***	0.42	NE
Total Benzofluoranthenes	***32***	--	--	--	--	--	--	--	--	--	--	***3.2***	1.3	NE
Benzo(g,h,i)perylene	***6.7***	--	--	--	--	--	--	--	--	--	--	***0.67***	0.22	NE
Benzo(a)pyrene	***1.5***	--	--	--	--	--	--	--	--	--	--	***0.15***	0.54	3.6
Chrysene	***14***	--	--	--	--	--	--	--	--	--	--	***1.4***	0.68	NE
Dibenz(a,h)anthracene	***2.3***	--	--	--	--	--	--	--	--	--	--	***0.23***	0.055	NE
Dibenzofuran	***5.4***	--	--	--	--	--	--	--	--	--	--	***0.54***	0.05 U	NE
Fluoranthene	***17***	--	--	--	--	--	--	--	--	--	--	***1.7***	1.5	NE
Fluorene	***5.4***	--	--	--	--	--	--	--	--	--	--	***0.54***	0.05 U	NE
Indeno(1,2,3-cd)pyrene	***6.0***	--	--	--	--	--	--	--	--	--	--	***0.6***	0.22	NE
2-Methylnaphthalene	***6.7***	--	--	--	--	--	--	--	--	--	--	***0.67***	0.05 U	NE
Phenanthrene	***15***	--	--	--	--	--	--	--	--	--	--	***1.5***	0.72	NE
Pyrene	***26***	--	--	--	--	--	--	--	--	--	--	***2.6***	1.4	NE
Total HPAHs	***120***	--	--	--	--	--	--	--	--	--	--	***12***	6.3	NE
Total LPAHs	***52***	--	--	--	--	--	--	--	--	--	--	***5.2***	0.77	NE
Total cPAHs (TEQ)	***1.5***	--	--	--	--	--	--	--	--	--	--	***0.15***	0.75	5.0

Conc = Concentration
EF = Exceedance factor
NC = Not a COPC in that medium

NE = No exceedance of RISL
RISL = RI Screening Level
U = Non-detect

Note: Table includes sample materials that are both removed and in place.
* RI screening levels for total dioxins/furans (TEQ, NDx0.5) are in units of ng/kg.
-- Chemical is not analyzed in that medium, but is included as a COPC because this chemical is of concern in storm drain solids.

Table 7.3-2
RI Selected Screening Level Exceedances for COPCs in Paint

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status	Location Type	Location Sub Type	Substrate Material	Paint Color
North Lateral Drainage Area												
3-332-PAINT-01	3727	3-332-PAINT-01-102811	10/28/11	Total PCBs	10.8	1.3	8.3					
3-332-PAINT-01	3727	3-332-PAINT-01-102811	10/28/11	Mercury	18	4.1	4.4					
3-332-PAINT-01	3727	3-332-PAINT-01-102811	10/28/11	Zinc	10,200	4,100	2.5					
NLS-PAINT01	2602	NLS-PAINT01-072010	07/20/10	Zinc	15,500	4,100	3.8		BL	BL	Metal	Y
NLS-PAINT04	2604	NLS-PAINT04-072010	07/20/10	Arsenic	120 U	73	1.6 -N		ES	Metal Cart	Metal	W
NLS-PAINT04	2604	NLS-PAINT04-072010	07/20/10	Zinc	5,950	4,100	1.5		ES	Metal Cart	Metal	W
NLS-PAINT06	2606	NLS-PAINT06-072010	07/20/10	Chromium	2,850	2,600	1.1		PV	Asphalt		
NLS-PAINT06	2606	NLS-PAINT06-072010	07/20/10	Lead	11,400	4,500	2.5		PV	Asphalt		
NLS-PAINT07	2607	NLS-PAINT07-072010	07/20/10	Arsenic	120 U	73	1.6 -N		PM	Pipe		
NLS-PAINT07	2607	NLS-PAINT07-072010	07/20/10	Zinc	123,000	4,100	30		PM	Pipe		
NLS-PAINT08	2608	NLS-PAINT08-072010	07/20/10	Total PCBs	1,700	1.3	1,300	Removed	BL	BL	Metal	Y
NLS-PAINT08	2608	NLS-PAINT08-072010	07/20/10	Chromium	35,600	2,600	14	Removed	BL	BL	Metal	Y
NLS-PAINT08	2608	NLS-PAINT08-072010	07/20/10	Lead	58,600	4,500	13	Removed	BL	BL	Metal	Y
NLS-PAINT09	2609	NLS-PAINT09-072110	07/21/10	Arsenic	120 U	73	1.6 -N		ES	Tub Skid		
NLS-PAINT09	2609	NLS-PAINT09-072110	07/21/10	Lead	13,400	4,500	3.0		ES	Tub Skid		
NLS-PAINT10	2610	NLS-PAINT10-072110	07/21/10	Arsenic	110 U	73	1.5 -N		BE	Door		Gy
NLS-PAINT11	2611	NLS-PAINT11-072110	07/21/10	Arsenic	120 U	73	1.6 -N		BE	Building Side Edge		Gy
NLS-PAINT13	2613	NLS-PAINT13-072210	07/22/10	Chromium	10,700	2,600	4.1		ES	Eye Wash Station	Metal	Y
NLS-PAINT13	2613	NLS-PAINT13-072210	07/22/10	Lead	31,000	4,500	6.9		ES	Eye Wash Station	Metal	Y
NLS-PAINT14	2614	NLS-PAINT14-072210	07/22/10	Chromium	4,120	2,600	1.6		BL	BL	Metal	Y
NLS-PAINT14	2614	NLS-PAINT14-072210	07/22/10	Lead	16,600	4,500	3.7		BL	BL	Metal	Y
NLS-PAINT15	2615	NLS-PAINT15-072210	07/22/10	Total PCBs	2.6	1.3	2.0		PM	Pipes and Support Structure	Metal	Y
NLS-PAINT15	2615	NLS-PAINT15-072210	07/22/10	Cadmium	59	51	1.2		PM	Pipes and Support Structure	Metal	Y
NLS-PAINT16	2616	NLS-PAINT16-072210	07/22/10	Arsenic	120 U	73	1.6 -N		ES	Equipment		Light Bl
NLS-PAINT16	2616	NLS-PAINT16-072210	07/22/10	Cadmium	219	51	4.3		ES	Equipment		Light Bl
NLS-PAINT16	2616	NLS-PAINT16-072210	07/22/10	Zinc	6,990	4,100	1.7		ES	Equipment		Light Bl
NLS-PAINT17	2617	NLS-PAINT17-072210	07/22/10	Total PCBs	9.4	1.3	7.2		BE	Building Foundation	Concrete	W
NLS-PAINT18	2618	NLS-PAINT18-072210	07/22/10	Total PCBs	16.9	1.3	13		BE	Building Siding	Galbestos	
NLS-PAINT19	2619	NLS-PAINT19-072610	07/26/10	Total PCBs	5.4	1.3	4.2		BE	Building Siding		W
NLS-PAINT19	2619	NLS-PAINT19-072610	07/26/10	Mercury	50	4.1	12		BE	Building Siding		W
NLS-PAINT20	2620	NLS-PAINT20-072610	07/26/10	Total PCBs	1.4	1.3	1.1		ES	Railing and Staircase		Gy
NLS-PAINT21	2621	NLS-PAINT21-072610	07/26/10	Arsenic	110 U	73	1.5 -N		ES	Metal Conducting Structure	Metal	
NLS-PAINT22	2622	NLS-PAINT22-072610	07/26/10	Total PCBs	5.77	1.3	4.4		ES	Equipment		
NLS-PAINT22	2622	NLS-PAINT22-072610	07/26/10	Mercury	6	4.1	1.5		ES	Equipment		
NLS-PAINT22	2622	NLS-PAINT22-072610	07/26/10	Zinc	5,580	4,100	1.4		ES	Equipment		
NLS-PAINT24	2624	NLS-PAINT24-072610	07/26/10	Total PCBs	2.4	1.3	1.8		BL	BL	Metal	Y
NLS-PAINT24	2624	NLS-PAINT24-072610	07/26/10	Chromium	20,400	2,600	7.8		BL	BL	Metal	Y
NLS-PAINT24	2624	NLS-PAINT24-072610	07/26/10	Lead	43,400	4,500	9.6		BL	BL	Metal	Y
NLS-PAINT24	2624	NLS-PAINT24-072610	07/26/10	Zinc	12,100	4,100	3.0		BL	BL	Metal	Y
NLS-PAINT27	2626	NLS-PAINT27-072810	07/28/10	Total PCBs	30	1.3	23		ES	Tank		Gn
NLS-PAINT27	2626	NLS-PAINT27-072810	07/28/10	Arsenic	140	73	1.9		ES	Tank		Gn

Table 7.3-2
RI Selected Screening Level Exceedances for COPCs in Paint

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status	Location Type	Location Sub Type	Substrate Material	Paint Color
NLS-PAINT27	2626	NLS-PAINT27-072810	07/28/10	Cadmium	68	51	1.3		ES	Tank		Gn
NLS-PAINT27	2626	NLS-PAINT27-072810	07/28/10	Chromium	6,920	2,600	2.7		ES	Tank		Gn
NLS-PAINT27	2626	NLS-PAINT27-072810	07/28/10	Lead	16,600	4,500	3.7		ES	Tank		Gn
NLS-PAINT27	2626	NLS-PAINT27-072810	07/28/10	Zinc	5,760	4,100	1.4		ES	Tank		Gn
NLS-PAINT28	2627	NLS-PAINT28-072810	07/28/10	Total PCBs	4.4	1.3	3.4	Removed	ES	Tank		P
NLS-PAINT28	2627	NLS-PAINT28-072810	07/28/10	Arsenic	120 U	73	1.6 -N	Removed	ES	Tank		P
NLS-PAINT28	2627	NLS-PAINT28-072810	07/28/10	Chromium	8,890	2,600	3.4	Removed	ES	Tank		P
NLS-PAINT28	2627	NLS-PAINT28-072810	07/28/10	Lead	18,200	4,500	4.0	Removed	ES	Tank		P
NLS-PAINT28	2627	NLS-PAINT28-072810	07/28/10	Zinc	6,760	4,100	1.6	Removed	ES	Tank		P
NLS-PAINT29	2628	NLS-PAINT29-072810	07/28/10	Total PCBs	27	1.3	21	Removed	ES	Tank		Bl
NLS-PAINT29	2628	NLS-PAINT29-072810	07/28/10	Chromium	4,490	2,600	1.7	Removed	ES	Tank		Bl
NLS-PAINT29	2628	NLS-PAINT29-072810	07/28/10	Lead	27,000	4,500	6.0	Removed	ES	Tank		Bl
NLS-PAINT31	2629	NLS-PAINT31-072810	07/28/10	Total PCBs	6.6	1.3	5.1		ES	Container		W
NLS-PAINT31	2629	NLS-PAINT31-072810	07/28/10	Zinc	28,600	4,100	7.0		ES	Container		W
NLS-PAINT32	2630	NLS-PAINT32-072810	07/28/10	Total PCBs	4.5	1.3	3.5		BR	Roof Enclosure	Metal	Bl
NLS-PAINT32	2630	NLS-PAINT32-072810	07/28/10	Chromium	8,940	2,600	3.4		BR	Roof Enclosure	Metal	Bl
NLS-PAINT32	2630	NLS-PAINT32-072810	07/28/10	Zinc	11,100	4,100	2.7		BR	Roof Enclosure	Metal	Bl
NLS-PAINT33	2631	NLS-PAINT33-072610	07/26/10	Chromium	17,600	2,600	6.8		ES	Metal Box	Metal	Y
NLS-PAINT33	2631	NLS-PAINT33-072610	07/26/10	Lead	35,900	4,500	8.0		ES	Metal Box	Metal	Y
NLS-PAINT33	2631	NLS-PAINT33-072610	07/26/10	Zinc	13,900	4,100	3.4		ES	Metal Box	Metal	Y
NLS-PAINT35	2633	NLS-PAINT35-072610	07/26/10	Zinc	12,700	4,100	3.1		ES	Flood Light	Metal	R, W
NLS-PAINT36	2634	NLS-PAINT36-072610	07/26/10	Arsenic	120 U	73	1.6 -N		ES	Switch		
NLS-PAINT36	2634	NLS-PAINT36-072610	07/26/10	Zinc	9,500	4,100	2.3		ES	Switch		
NLS-PAINT37	2635	NLS-PAINT37-072610	07/26/10	Total PCBs	4.9	1.3	3.8		ES	Metal Structure	Metal	Light Gn
NLS-PAINT38	2636	NLS-PAINT38-072610	07/26/10	Total PCBs	750	1.3	580	Removed	BL	BL	Metal	Y
NLS-PAINT38	2636	NLS-PAINT38-072610	07/26/10	Chromium	27,500	2,600	11	Removed	BL	BL	Metal	Y
NLS-PAINT38	2636	NLS-PAINT38-072610	07/26/10	Lead	54,700	4,500	12	Removed	BL	BL	Metal	Y
NLS-PAINT39	2637	NLS-PAINT39-072610	07/26/10	Total PCBs	3.3	1.3	2.5		ES	Tank		W
NLS-PAINT39	2637	NLS-PAINT39-072610	07/26/10	Arsenic	120 U	73	1.6 -N		ES	Tank		W
NLS-PAINT39	2637	NLS-PAINT39-072610	07/26/10	Lead	32,700	4,500	7.3		ES	Tank		W
NLS-PAINT39	2637	NLS-PAINT39-072610	07/26/10	Mercury	5.3	4.1	1.3		ES	Tank		W
NLS-PAINT39	2637	NLS-PAINT39-072610	07/26/10	Zinc	4,440	4,100	1.1		ES	Tank		W
NLS-PAINT41	2638	NLS-PAINT41-072810	07/28/10	Total PCBs	6.4	1.3	4.9		BE	Cinder Block	Concrete	Light Gn
NLS-PAINT41	2638	NLS-PAINT41-072810	07/28/10	Mercury	43	4.1	10		BE	Cinder Block	Concrete	Light Gn
NLS-PAINT42	2639	NLS-PAINT42-072810	07/28/10	Total PCBs	25.5	1.3	20		ES	Metal Support	Metal	Light Gn
NLS-PAINT42	2639	NLS-PAINT42-072810	07/28/10	Arsenic	120 U	73	1.6 -N		ES	Metal Support	Metal	Light Gn
NLS-PAINT42	2639	NLS-PAINT42-072810	07/28/10	Mercury	25	4.1	6.1		ES	Metal Support	Metal	Light Gn
NLS-PAINT43	2640	NLS-PAINT43-072810	07/28/10	Arsenic	120 U	73	1.6 -N		ES	Metal Scaffolding	Metal	R, Bk
NLS-PAINT43	2640	NLS-PAINT43-072810	07/28/10	Chromium	7,540	2,600	2.9		ES	Metal Scaffolding	Metal	R, Bk
NLS-PAINT43	2640	NLS-PAINT43-072810	07/28/10	Mercury	9	4.1	2.2		ES	Metal Scaffolding	Metal	R, Bk
NLS-PAINT43	2640	NLS-PAINT43-072810	07/28/10	Zinc	17,800	4,100	4.3		ES	Metal Scaffolding	Metal	R, Bk
NLS-PAINT44	2641	NLS-PAINT44-072910	07/29/10	Arsenic	120 U	73	1.6 -N		ES	Tub Skid		W, Bl, R

Table 7.3-2
RI Selected Screening Level Exceedances for COPCs in Paint

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status	Location Type	Location Sub Type	Substrate Material	Paint Color
NLS-PAINT45	2642	NLS-PAINT45-072910	07/29/10	Zinc	5,540	4,100	1.4		ES	Wheel Stop	Concrete	Y
NLS-PAINT47	2643	NLS-PAINT47-072910	07/29/10	Zinc	4,770	4,100	1.2		ES	Table		Multiple Layers
NLS-PAINT48	2644	NLS-PAINT48-073010	07/30/10	Arsenic	120 U	73	1.6 -N		ES	Container		Off-W
NLS-PAINT49	2645	NLS-PAINT49-073010	07/30/10	Lead	12,400	4,500	2.8		BE	Building Siding		
NLS-PAINT49	2645	NLS-PAINT49-073010	07/30/10	Mercury	20	4.1	4.9		BE	Building Siding		
NLS-PAINT49	2645	NLS-PAINT49-073010	07/30/10	Zinc	17,500	4,100	4.3		BE	Building Siding		
NLS-PAINT52	2648	NLS-PAINT52-073010	07/30/10	Cadmium	51	51	1.0	Removed	PM	Fire Stand Pipe	Metal	
NLS-PAINT52	2648	NLS-PAINT52-073010	07/30/10	Lead	5,330	4,500	1.2	Removed	PM	Fire Stand Pipe	Metal	
NLS-PAINT52	2648	NLS-PAINT52-073010	07/30/10	Mercury	4.3	4.1	1.0	Removed	PM	Fire Stand Pipe	Metal	
NLS-PAINT52	2648	NLS-PAINT52-073010	07/30/10	Zinc	4,340	4,100	1.1	Removed	PM	Fire Stand Pipe	Metal	
NLS-PAINT53	2649	NLS-PAINT53-073010	07/30/10	Arsenic	120 U	73	1.6 -N	Removed	ES	Tub Skid		Gn
NLS-PAINT53	2649	NLS-PAINT53-073010	07/30/10	Chromium	3,280	2,600	1.3	Removed	ES	Tub Skid		Gn
NLS-PAINT53	2649	NLS-PAINT53-073010	07/30/10	Lead	11,100	4,500	2.5	Removed	ES	Tub Skid		Gn
NLS-PAINT57	2652	NLS-PAINT57-073010	07/30/10	Lead	10,600	4,500	2.4		ES	Container	Metal	W, Bl
NLS-PAINT57	2652	NLS-PAINT57-073010	07/30/10	Zinc	30,100	4,100	7.3		ES	Container	Metal	W, Bl
NLS-PAINT58	2653	NLS-PAINT58-073010	07/30/10	Total PCBs	17.3	1.3	13		BR	Roof Vent		
NLS-PAINT58	2653	NLS-PAINT58-073010	07/30/10	Lead	21,800	4,500	4.8		BR	Roof Vent		
NLS-PAINT58	2653	NLS-PAINT58-073010	07/30/10	Mercury	28	4.1	6.8		BR	Roof Vent		
NLS-PAINT58	2653	NLS-PAINT58-073010	07/30/10	Zinc	18,600	4,100	4.5		BR	Roof Vent		
NLS-PAINT59	2654	NLS-PAINT59-072810	07/28/10	Arsenic	120 U	73	1.6 -N		ES	Pillar	Metal	W
NLS-PAINT60	2655	NLS-PAINT60-072810	07/28/10	Total PCBs	98	1.3	75	Removed	ES	Tank		W
NLS-PAINT60	2655	NLS-PAINT60-072810	07/28/10	Cadmium	116	51	2.3	Removed	ES	Tank		W
NLS-PAINT60	2655	NLS-PAINT60-072810	07/28/10	Lead	11,500	4,500	2.6	Removed	ES	Tank		W
NLS-PAINT60	2655	NLS-PAINT60-072810	07/28/10	Mercury	23	4.1	5.6	Removed	ES	Tank		W
NLS-PAINT60	2655	NLS-PAINT60-072810	07/28/10	Zinc	19,500	4,100	4.8	Removed	ES	Tank		W
NLS-PAINT61	2656	NLS-PAINT61-072810	07/28/10	Total PCBs	136	1.3	100	Removed	ES	Metal Pillar	Metal	Be/Gn
NLS-PAINT61	2656	NLS-PAINT61-072810	07/28/10	Arsenic	120 U	73	1.6 -N	Removed	ES	Metal Pillar	Metal	Be/Gn
NLS-PAINT61	2656	NLS-PAINT61-072810	07/28/10	Mercury	17	4.1	4.1	Removed	ES	Metal Pillar	Metal	Be/Gn
NLS-PAINT61	2656	NLS-PAINT61-072810	07/28/10	Zinc	5,460	4,100	1.3	Removed	ES	Metal Pillar	Metal	Be/Gn
NLS-PAINT62	2657	NLS-PAINT62-072810	07/28/10	Zinc	34,200	4,100	8.3		ES	Elevator Unit	Metal	S
NLS-PAINT64	2658	NLS-PAINT64-072910	07/29/10	Total PCBs	8.6	1.3	6.6		ES	Metal Overhang	Metal	
NLS-PAINT64	2658	NLS-PAINT64-072910	07/29/10	Mercury	14	4.1	3.4		ES	Metal Overhang	Metal	
NLS-PAINT64	2658	NLS-PAINT64-072910	07/29/10	Zinc	8,510	4,100	2.1		ES	Metal Overhang	Metal	
NLS-PAINT65	2659	NLS-PAINT65-072810	07/28/10	Total PCBs	250	1.3	190	Removed	BE	Building Siding		
NLS-PAINT65	2659	NLS-PAINT65-072810	07/28/10	Mercury	130	4.1	32	Removed	BE	Building Siding		
NLS-PAINT66	2660	NLS-PAINT66-072810	07/28/10	Total PCBs	12.1	1.3	9.3	Removed	ES	Metal Support Beam	Metal	Y
NLS-PAINT66	2660	NLS-PAINT66-072810	07/28/10	Cadmium	154	51	3.0	Removed	ES	Metal Support Beam	Metal	Y
NLS-PAINT68	2661	NLS-PAINT68-072910	07/29/10	Total PCBs	5.9	1.3	4.5	Removed	BE	Metal Door	Metal	Gy
NLS-PAINT68	2661	NLS-PAINT68-072910	07/29/10	Arsenic	120 U	73	1.6 -N	Removed	BE	Metal Door	Metal	Gy
NLS-PAINT68	2661	NLS-PAINT68-072910	07/29/10	Lead	5,070	4,500	1.1	Removed	BE	Metal Door	Metal	Gy
NLS-PAINT68	2661	NLS-PAINT68-072910	07/29/10	Mercury	10	4.1	2.4	Removed	BE	Metal Door	Metal	Gy
NLS-PAINT68	2661	NLS-PAINT68-072910	07/29/10	Zinc	6,600	4,100	1.6	Removed	BE	Metal Door	Metal	Gy

Table 7.3-2
RI Selected Screening Level Exceedances for COPCs in Paint

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status	Location Type	Location Sub Type	Substrate Material	Paint Color
NLS-PAINT70	2662	NLS-PAINT70-072910	07/29/10	Total PCBs	160	1.3	120	Removed	BR	Roof Concrete	Concrete Roof Wall	Stained O
NLS-PAINT70	2662	NLS-PAINT70-072910	07/29/10	Mercury	37	4.1	9.0	Removed	BR	Roof Concrete	Concrete Roof Wall	Stained O
NLS-PAINT72	2664	NLS-PAINT72-073010	07/30/10	Arsenic	120 U	73	1.6 -N		ES	Tub Skid		R
NLS-PAINT73	2665	NLS-PAINT73-073010	07/30/10	Chromium	7,280	2,600	2.8		ES	Tub Skid		W, Bl, R
NLS-PAINT73	2665	NLS-PAINT73-073010	07/30/10	Lead	9,580	4,500	2.1		ES	Tub Skid		W, Bl, R
NLS-PAINT74	2666	NLS-PAINT74-082510	08/25/10	Total PCBs	1,900	1.3	1,500	Removed	BL	BL	Metal	Y, (Y, W)
NLS-PAINT74	2666	NLS-PAINT74-080310	08/03/10	Total PCBs	2,300	1.3	1,800	Removed	BL	BL	Metal	Y, (Y, W)
NLS-PAINT79	2671	NLS-PAINT79-080310	08/03/10	Total PCBs	1.7	1.3	1.3	Removed	BL	BL	Metal	Y, (Y, W)
NLS-PAINT80	2672	NLS-PAINT80-080410	08/04/10	Total PCBs	4.6	1.3	3.5	Removed	BL	BL	Metal	Y, (Y, W)
NLS-PAINT83	2675	NLS-PAINT83-080410	08/04/10	Total PCBs	46	1.3	35	Removed	BL	BL	Metal	Y, (light, dark)
NLS-PAINT85	2677	NLS-PAINT85-082510	08/25/10	Total PCBs	5.3	1.3	4.1		ES	Tank		W, (W, Gn, Be, Pi)
NLS-PAINT86	2678	NLS-PAINT86-082510	08/25/10	Total PCBs	22.6	1.3	17		ES	Tank		W, (W, Be, Gn)
NLS-PAINT-W24	3587	NLS-PAINT-W24-061511	06/15/11	Total PCBs	12	1.3	9.2		ES	Support beam		
NLS-PAINT-W24	3587	NLS-PAINT-W24-061511	06/15/11	Arsenic	100 U	73	1.4 -N		ES	Support beam		
NLS-PAINT-W24	3587	NLS-PAINT-W24-061511	06/15/11	Lead	21,200	4,500	4.7		ES	Support beam		
NLS-PAINT-W29	3588	NLS-PAINT-W29-061411	06/14/11	Total PCBs	8.6	1.3	6.6		ES	Structure	Concrete	
NLS-PAINT-W29	3588	NLS-PAINT-W29-061411	06/14/11	Mercury	34.3	4.1	8.4		ES	Structure	Concrete	
NLS-PAINT-W30	3589	NLS-PAINT-W30-061411	06/14/11	Mercury	5	4.1	1.2		ES	Balcony structure		
NLS-PAINT-W32	3590	NLS-PAINT-W32-061411	06/14/11	Total PCBs	7.2	1.3	5.5		ES	Blast fence		
NLS-PAINT-W32	3590	NLS-PAINT-W32-061411	06/14/11	Arsenic	100 U	73	1.4 -N		ES	Blast fence		
NLS-PAINT-W32	3590	NLS-PAINT-W32-061411	06/14/11	Chromium	6,070	2,600	2.3		ES	Blast fence		
NLS-PAINT-W32	3590	NLS-PAINT-W32-061411	06/14/11	Lead	69,800	4,500	16		ES	Blast fence		
NLS-PAINT-W32	3590	NLS-PAINT-W32-061411	06/14/11	Zinc	25,500	4,100	6.2		ES	Blast fence		
NLS-PAINT-W37	3591	NLS-PAINT-W37-061411	06/14/11	Total PCBs	480	1.3	370	Removed	PM	Fire hydrant	Metal	Gn
NLS-PAINT-W37	3591	NLS-PAINT-W37-061411	06/14/11	Zinc	7,250	4,100	1.8	Removed	PM	Fire hydrant	Metal	Gn
NLS-PAINT-W38	3592	NLS-PAINT-W38-061411	06/14/11	Total PCBs	160	1.3	120	Removed	PM	Fire hydrant	Metal	Y
NLS-PAINT-W38	3592	NLS-PAINT-W38-061411	06/14/11	Zinc	4,360	4,100	1.1	Removed	PM	Fire hydrant	Metal	Y
NLS-PAINT-W41	3593	NLS-PAINT-W41-061511	06/15/11	Total PCBs	5.6	1.3	4.3		ES	Railing and stairs		Y
NLS-PAINT-W41	3593	NLS-PAINT-W41-061511	06/15/11	Chromium	15,800	2,600	6.1		ES	Railing and stairs		Y
NLS-PAINT-W41	3593	NLS-PAINT-W41-061511	06/15/11	Lead	62,800	4,500	14		ES	Railing and stairs		Y
NLS-PAINT-W43	3594	NLS-PAINT-W43-061511	06/15/11	Total PCBs	135	1.3	100	Removed	BE	Door		
NLS-PAINT-W43	3594	NLS-PAINT-W43-061511	06/15/11	Lead	12,300	4,500	2.7	Removed	BE	Door		
NLS-PAINT-W43	3594	NLS-PAINT-W43-061511	06/15/11	Mercury	66.8	4.1	16	Removed	BE	Door		
NLS-PAINT-W43	3594	NLS-PAINT-W43-061511	06/15/11	Zinc	6,360	4,100	1.6	Removed	BE	Door		
NLS-PAINT-W45	3595	NLS-PAINT-W45-061611	06/16/11	Chromium	22,100	2,600	8.5		ES	Guard	Metal	Y
NLS-PAINT-W45	3595	NLS-PAINT-W45-061611	06/16/11	Lead	22,200	4,500	4.9		ES	Guard	Metal	Y
NLS-PAINT-W45	3595	NLS-PAINT-W45-061611	06/16/11	Zinc	33,700	4,100	8.2		ES	Guard	Metal	Y
NLS-PAINT-W50	3596	NLS-PAINT-W50-061611	06/16/11	Total PCBs	206	1.3	160	Removed	PM	Fire hydrant	Metal	
NLS-PAINT-W50	3596	NLS-PAINT-W50-061611	06/16/11	Chromium	9,090	2,600	3.5	Removed	PM	Fire hydrant	Metal	
NLS-PAINT-W50	3596	NLS-PAINT-W50-061611	06/16/11	Lead	41,500	4,500	9.2	Removed	PM	Fire hydrant	Metal	
NLS-PAINT-W52	3597	NLS-PAINT-W52-061411	06/14/11	Mercury	12.8	4.1	3.1		BE	Paneled wall	Wood	
NLS-PAINT-W60	3598	NLS-PAINT-W60-061511	06/15/11	Total PCBs	120	1.3	92		ES	Air gas heater		

Table 7.3-2
RI Selected Screening Level Exceedances for COPCs in Paint

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status	Location Type	Location Sub Type	Substrate Material	Paint Color
NLS-PAINT-W60	3598	NLS-PAINT-W60-061511	06/15/11	Mercury	31.4	4.1	7.7		ES	Air gas heater		
NLS-PAINT-W62	3599	NBF-HYDRANT338-PAINT-060911	06/09/11	Chromium	23,300	2,600	9.0		PM	Fire hydrant	Metal	
NLS-PAINT-W62	3599	NBF-HYDRANT338-PAINT-060911	06/09/11	Lead	47,800	4,500	11		PM	Fire hydrant	Metal	
NLS-PAINT-W70	3600	NLS-PAINT-W70-061511	06/15/11	Chromium	3,750	2,600	1.4		ES	Rack structure		
NLS-PAINT-W70	3600	NLS-PAINT-W70-061511	06/15/11	Lead	14,800	4,500	3.3		ES	Rack structure		
NLS-PAINT-W81	3601	NLS-PAINT-W81-061611	06/16/11	Total PCBs	56	1.3	43		ES	Stop sign post stand		
NLS-PAINT-W84	3602	NLS-PAINT-W84-061611	06/16/11	Zinc	13,000	4,100	3.2		BE	Wall	Concrete	
NLS-PAINT-W98	3603	NLS-PAINT-W98-061611	06/16/11	Lead	6,310	4,500	1.4		BE	Wall	Concrete	Y
PAS-PAINT01	4038	PAS-PAINT01-022712	02/27/12	Total PCBs	28	1.3	22					
PAS-PAINT02	4039	PAS-PAINT02-022712	02/27/12	Total PCBs	5.6	1.3	4.3					
PAS-PAINT03	4040	PAS-PAINT03-022712	02/27/12	Total PCBs	39	1.3	30					
PAS-PAINT04	4041	PAS-PAINT04-022712	02/27/12	Total PCBs	250	1.3	190					
PAS-PAINT05	4042	PAS-PAINT05-022712	02/27/12	Total PCBs	6.8	1.3	5.2					
PAS-PAINT06	4043	PAS-PAINT06-022712	02/27/12	Total PCBs	4.1	1.3	3.2					
UTIL-PAINT-01	3948	UTIL-PAINT-01-100311	10/03/11	Arsenic	100 U	73	1.4 -N					
UTIL-PAINT-02	3949	UTIL-PAINT-02-100311	10/03/11	Total PCBs	8.7	1.3	6.7					
UTIL-PAINT-02	3949	UTIL-PAINT-02-100311	10/03/11	Arsenic	100 U	73	1.4 -N					
UTIL-PAINT-03	3950	UTIL-PAINT-03-100311	10/03/11	Total PCBs	8.4	1.3	6.5					
UTIL-PAINT-03	3950	UTIL-PAINT-03-100311	10/03/11	Arsenic	100 U	73	1.4 -N					
UTIL-PAINT-04	3951	UTIL-PAINT-04-100511	10/05/11	Total PCBs	3.2	1.3	2.5					
UTIL-PAINT-04	3951	UTIL-PAINT-04-100511	10/05/11	Arsenic	100 U	73	1.4 -N					
UTIL-PAINT-05	3952	UTIL-PAINT-05-100511	10/05/11	Total PCBs	10.9	1.3	8.4					
UTIL-PAINT-05	3952	UTIL-PAINT-05-100511	10/05/11	Chromium	9,030	2,600	3.5					
UTIL-PAINT-05	3952	UTIL-PAINT-05-100511	10/05/11	Mercury	11	4.1	2.7					
UTIL-PAINT-05	3952	UTIL-PAINT-05-100511	10/05/11	Zinc	23,200	4,100	5.7					
UTIL-PAINT-06	3953	UTIL-PAINT-06-100511	10/05/11	Arsenic	100 U	73	1.4 -N					
UTIL-PAINT-06	3953	UTIL-PAINT-06-100511	10/05/11	Chromium	6,060	2,600	2.3					
UTIL-PAINT-06	3953	UTIL-PAINT-06-100511	10/05/11	Mercury	6.1	4.1	1.5					
UTIL-PAINT-06	3953	UTIL-PAINT-06-100511	10/05/11	Zinc	15,000	4,100	3.7					
UTIL-PAINT-07	3954	UTIL-PAINT-07-102711	10/27/11	Total PCBs	4.9	1.3	3.8					
UTIL-PAINT-07	3954	UTIL-PAINT-07-102711	10/27/11	Mercury	5.3	4.1	1.3					
UTIL-PAINT-08	3955	UTIL-PAINT-08-102711	10/27/11	Total PCBs	2.45	1.3	1.9					
UTIL-PAINT-08	3955	UTIL-PAINT-08-102711	10/27/11	Mercury	9.8	4.1	2.4					
UTIL-PAINT-09	3956	UTIL-PAINT-09-102711	10/27/11	Total PCBs	4.7	1.3	3.6					
UTIL-PAINT-09	3956	UTIL-PAINT-09-102711	10/27/11	Arsenic	120 U	73	1.6 -N					
UTIL-PAINT-09	3956	UTIL-PAINT-09-102711	10/27/11	Mercury	4.8	4.1	1.2					
UTIL-PAINT-10	3957	UTIL-PAINT-10-102711	10/27/11	Total PCBs	2.77	1.3	2.1					
UTIL-PAINT-10	3957	UTIL-PAINT-10-102711	10/27/11	Mercury	16	4.1	3.9					
UTIL-PAINT-11	3958	UTIL-PAINT-11-102711	10/27/11	Mercury	8.4	4.1	2.0					
UTIL-PAINT-12	3959	UTIL-PAINT-12-102711	10/27/11	Total PCBs	2.3	1.3	1.8					
UTIL-PAINT-13	3960	UTIL-PAINT-13-102811	10/28/11	Total PCBs	4	1.3	3.1					
UTIL-PAINT-13	3960	UTIL-PAINT-13-102811	10/28/11	Arsenic	120 U	73	1.6 -N					

Table 7.3-2
RI Selected Screening Level Exceedances for COPCs in Paint

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status	Location Type	Location Sub Type	Substrate Material	Paint Color
UTIL-PAINT-13	3960	UTIL-PAINT-13-102811	10/28/11	Mercury	10	4.1	2.4					
UTIL-PAINT-14	3961	UTIL-PAINT-14-102811	10/28/11	Arsenic	120 U	73	1.6 -N					
UTIL-PAINT-14	3961	UTIL-PAINT-14-102811	10/28/11	Zinc	222,000	4,100	54					
UTIL-PAINT-15	3962	UTIL-PAINT-15-102811	10/28/11	Total PCBs	2.3	1.3	1.8					
UTIL-PAINT-16	3963	UTIL-PAINT-16-102811	10/28/11	Arsenic	120 U	73	1.6 -N					
UTIL-PAINT-16	3963	UTIL-PAINT-16-102811	10/28/11	Lead	11,200	4,500	2.5					
UTIL-PAINT-16	3963	UTIL-PAINT-16-102811	10/28/11	Mercury	14	4.1	3.4					
WIND-PAINT-01	3964	WIND-PAINT-01-101111	10/11/11	Arsenic	100 U	73	1.4 -N					
WIND-PAINT-02	3965	WIND-PAINT-02-101211	10/12/11	Total PCBs	3.2	1.3	2.5					
WIND-PAINT-04	3967	WIND-PAINT-04-101211	10/12/11	Total PCBs	8.8	1.3	6.8					
WIND-PAINT-04	3967	WIND-PAINT-04-101211	10/12/11	Arsenic	100 U	73	1.4 -N					
WIND-PAINT-04	3967	WIND-PAINT-04-101211	10/12/11	Lead	16,400	4,500	3.6					
WIND-PAINT-04	3967	WIND-PAINT-04-101211	10/12/11	Mercury	11.1	4.1	2.7					
WIND-PAINT-07	3970	WIND-PAINT-07-101211	10/12/11	Total PCBs	13.1	1.3	10					
WIND-PAINT-07	3970	WIND-PAINT-07-101211	10/12/11	Arsenic	100 U	73	1.4 -N					
WIND-PAINT-07	3970	WIND-PAINT-07-101211	10/12/11	Chromium	6,130	2,600	2.4					
WIND-PAINT-07	3970	WIND-PAINT-07-101211	10/12/11	Mercury	6.3	4.1	1.5					
WIND-PAINT-07	3970	WIND-PAINT-07-101211	10/12/11	Zinc	8,230	4,100	2.0					
WIND-PAINT-10	3973	WIND-PAINT-10-101211	10/12/11	Total PCBs	2.8	1.3	2.2					
WIND-PAINT-11	3974	WIND-PAINT-11-101811	10/18/11	Total PCBs	18.8	1.3	14					
WIND-PAINT-11	3974	WIND-PAINT-11-101811	10/18/11	Arsenic	100 U	73	1.4 -N					
WIND-PAINT-11	3974	WIND-PAINT-11-101811	10/18/11	Mercury	7.4 J	4.1	1.8					
WIND-PAINT-12	3975	WIND-PAINT-12-101811	10/18/11	Total PCBs	2.22	1.3	1.7					
WIND-PAINT-12	3975	WIND-PAINT-12-101811	10/18/11	Cadmium	194	51	3.8					
WIND-PAINT-13	3976	WIND-PAINT-13-101811	10/18/11	Arsenic	100 U	73	1.4 -N					
WIND-PAINT-13	3976	WIND-PAINT-13-101811	10/18/11	Lead	13,600	4,500	3.0					
North-Central Lateral Drainage Area												
NCLS-PAINT-W01	3582	NCLS-PAINT-W01-081611	08/16/11	Lead	8,840	4,500	2.0		NA			
NCLS-PAINT-W01	3582	NCLS-PAINT-W01-081611	08/16/11	Zinc	7,320	4,100	1.8		NA			
NCLS-PAINT-W21	3584	NCLS-PAINT-W21-081711	08/17/11	Total PCBs	7.7	1.3	5.9		NA			
NCLS-PAINT-W21	3584	NCLS-PAINT-W21-081711	08/17/11	Chromium	4,990	2,600	1.9		NA			
NCLS-PAINT-W21	3584	NCLS-PAINT-W21-081711	08/17/11	Lead	55,700	4,500	12		NA			
NCLS-PAINT-W21	3584	NCLS-PAINT-W21-081711	08/17/11	Zinc	17,400	4,100	4.2		NA			
NCLS-PAINT-W23	3585	NCLS-PAINT-W23-081711	08/17/11	Total PCBs	37	1.3	28		NA			
NCLS-PAINT-W23	3585	NCLS-PAINT-W23-081711	08/17/11	Chromium	23,100	2,600	8.9		NA			
NCLS-PAINT-W23	3585	NCLS-PAINT-W23-081711	08/17/11	Lead	122,000	4,500	27		NA			
NCLS-PAINT-W23	3585	NCLS-PAINT-W23-081711	08/17/11	Zinc	13,300	4,100	3.2		NA			
NLS-PAINT05	2605	NLS-PAINT05-072010	07/20/10	Total PCBs	2.4	1.3	1.8		ES	Container		
NLS-PAINT05	2605	NLS-PAINT05-072010	07/20/10	Lead	13,600	4,500	3.0		ES	Container		
NLS-PAINT23	2623	NLS-PAINT23-072610	07/26/10	Cadmium	439	51	8.6		ES	Metal Support	Metal	
NLS-PAINT25	2625	NLS-PAINT25-072610	07/26/10	Total PCBs	1.6 U	1.3	1.2 -N		ES	Tank	Metal	
NLS-PAINT25	2625	NLS-PAINT25-072610	07/26/10	Zinc	7,300	4,100	1.8		ES	Tank	Metal	

Table 7.3-2
RI Selected Screening Level Exceedances for COPCs in Paint

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status	Location Type	Location Sub Type	Substrate Material	Paint Color
WIND-PAINT-05	3968	WIND-PAINT-05-101211	10/12/11	Zinc	16,700	4,100	4.1					
WIND-PAINT-06	3969	WIND-PAINT-06-101211	10/12/11	Total PCBs	3.25	1.3	2.5					
WIND-PAINT-06	3969	WIND-PAINT-06-101211	10/12/11	Arsenic	100 U	73	1.4 -N					
WIND-PAINT-08	3971	WIND-PAINT-08-101211	10/12/11	Total PCBs	1.3	1.3	1.0					
WIND-PAINT-08	3971	WIND-PAINT-08-101211	10/12/11	Arsenic	100 U	73	1.4 -N					
WIND-PAINT-08	3971	WIND-PAINT-08-101211	10/12/11	Cadmium	54	51	1.1					
WIND-PAINT-09	3972	WIND-PAINT-09-101211	10/12/11	Total PCBs	38	1.3	29					
WIND-PAINT-09	3972	WIND-PAINT-09-101211	10/12/11	Chromium	4,570	2,600	1.8					
South-Central Lateral Drainage Area												
SCLS-PAINT-W01	3632	SCLS-PAINT-W01-081611	08/16/11	Total PCBs	2.3	1.3	1.8		NA			
SCLS-PAINT-W01	3632	SCLS-PAINT-W01-081611	08/16/11	Zinc	30,200	4,100	7.4		NA			
SCLS-PAINT-W02	3633	SCLS-PAINT-W02-081611	08/16/11	Total PCBs	3	1.3	2.3		NA			
SCLS-PAINT-W02	3633	SCLS-PAINT-W02-081611	08/16/11	Chromium	9,640	2,600	3.7		NA			
SCLS-PAINT-W02	3633	SCLS-PAINT-W02-081611	08/16/11	Lead	46,200	4,500	10		NA			
SCLS-PAINT-W02	3633	SCLS-PAINT-W02-081611	08/16/11	Zinc	4,240	4,100	1.0		NA			
SCLS-PAINT-W08	3635	SCLS-PAINT-W08-081811	08/18/11	Total PCBs	15 U	1.3	12 -N		NA			
SCLS-PAINT-W08	3635	SCLS-PAINT-W08-081811	08/18/11	Lead	17,200	4,500	3.8		NA			
SCLS-PAINT-W08	3635	SCLS-PAINT-W08-081811	08/18/11	Zinc	16,100	4,100	3.9		NA			
SCLS-PAINT-W09	3636	SCLS-PAINT-W09-081611	08/16/11	Total PCBs	3.55	1.3	2.7		NA			
SCLS-PAINT-W09	3636	SCLS-PAINT-W09-081611	08/16/11	Chromium	41,100	2,600	16		NA			
SCLS-PAINT-W09	3636	SCLS-PAINT-W09-081611	08/16/11	Lead	151,000	4,500	34		NA			
SCLS-PAINT-W11	3637	SCLS-PAINT-W11-081611	08/16/11	Total PCBs	16.1	1.3	12		NA			
SCLS-PAINT-W11	3637	SCLS-PAINT-W11-081611	08/16/11	Chromium	17,400	2,600	6.7		NA			
SCLS-PAINT-W11	3637	SCLS-PAINT-W11-081611	08/16/11	Lead	84,900	4,500	19		NA			
SCLS-PAINT-W12	3638	SCLS-PAINT-W12-081611	08/16/11	Total PCBs	5.4	1.3	4.2		NA			
SCLS-PAINT-W12	3638	SCLS-PAINT-W12-081611	08/16/11	Chromium	27,400	2,600	11		NA			
SCLS-PAINT-W12	3638	SCLS-PAINT-W12-081611	08/16/11	Lead	124,000	4,500	28		NA			
SCLS-PAINT-W12	3638	SCLS-PAINT-W12-081611	08/16/11	Zinc	9,430	4,100	2.3		NA			
SCLS-PAINT-W17	3639	SCLS-PAINT-W17-081611	08/16/11	Total PCBs	14.5	1.3	11		NA			
SCLS-PAINT-W17	3639	SCLS-PAINT-W17-081611	08/16/11	Lead	8,410	4,500	1.9		NA			
SCLS-PAINT-W17	3639	SCLS-PAINT-W17-081611	08/16/11	Zinc	8,960	4,100	2.2		NA			
South Lateral Drainage Area												
3-818-PAINT-CN	3743	3-818-PAINT-CN-092711	09/27/11	Total PCBs	110	1.3	85	Removed	BE			
3-818-PAINT-CN	3743	3-818-PAINT-CN-092711	09/27/11	Mercury	23	4.1	5.6	Removed	BE			
3-818-PAINT-CW	3744	3-818-PAINT-CW-092711	09/27/11	Total PCBs	230	1.3	180	Removed	BE			
3-818-PAINT-CW	3744	3-818-PAINT-CW-092711	09/27/11	Mercury	20	4.1	4.9	Removed	BE			
3-818-PAINT-SE	3745	3-818-PAINT-SE-092711	09/27/11	Total PCBs	110	1.3	85		BE			
3-818-PAINT-SE	3745	3-818-PAINT-SE-092711	09/27/11	Mercury	21	4.1	5.1		BE			
3-818-PAINT-SEH02	3746	3-818-PAINT-SEH02-120111	12/01/11	Mercury	26	4.1	6.3		BE			
3-818-PAINT-SEH03	3747	3-818-PAINT-SEH03-120111	12/01/11	Mercury	14	4.1	3.4	Removed	BE			
3-818-PAINT-SEL04	3748	3-818-PAINT-SEL04-120111	12/01/11	Total PCBs	3.2	1.3	2.5	Removed	BE			

Table 7.3-2
RI Selected Screening Level Exceedances for COPCs in Paint

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status	Location Type	Location Sub Type	Substrate Material	Paint Color
3-818-PAINT-SEL04	3748	3-818-PAINT-SEL04-120111	12/01/11	Mercury	15	4.1	3.7	Removed	BE			
3-818-PAINT-SN	3749	3-818-PAINT-SN-092711	09/27/11	Total PCBs	12.85	1.3	9.9		BE			
3-818-PAINT-SN	3749	3-818-PAINT-SN-092711	09/27/11	Mercury	16	4.1	3.9		BE			
3-818-PAINT-SNH03	3750	3-818-PAINT-SNH03-113011	11/30/11	Mercury	17	4.1	4.1	Removed	BE			
3-818-PAINT-SNH04	3751	3-818-PAINT-SNH04-120111	12/01/11	Zinc	50,000	4,100	12	Removed	BE			
3-818-PAINT-SNL02	3752	3-818-PAINT-SNL02-113011	11/30/11	Total PCBs	2	1.3	1.5	Removed	BE			
3-818-PAINT-SNL02	3752	3-818-PAINT-SNL02-113011	11/30/11	Mercury	15	4.1	3.7	Removed	BE			
3-818-PAINT-SS	3753	3-818-PAINT-SS-092711	09/27/11	Total PCBs	3.2	1.3	2.5	Removed	BE			
3-818-PAINT-SS	3753	3-818-PAINT-SS-092711	09/27/11	Mercury	12	4.1	2.9	Removed	BE			
3-818-PAINT-SSH03	3754	3-818-PAINT-SSH03-120111	12/01/11	Mercury	8.6	4.1	2.1	Removed	BE			
3-818-PAINT-SSH04	3755	3-818-PAINT-SSH04-120111	12/01/11	Mercury	8	4.1	2.0	Removed	BE			
3-818-PAINT-SSL02	3756	3-818-PAINT-SSL02-111611	11/16/11	Total PCBs	1.7	1.3	1.3	Removed	BE			
3-818-PAINT-SSL02	3756	3-818-PAINT-SSL02-111611	11/16/11	Mercury	15	4.1	3.7	Removed	BE			
3-818-PAINT-SW	3757	3-818-PAINT-SW-092711	09/27/11	Total PCBs	1.5	1.3	1.2	Removed	BE			
3-818-PAINT-SW	3757	3-818-PAINT-SW-092711	09/27/11	Mercury	27	4.1	6.6	Removed	BE			
3-818-PAINT-SWH03	3758	3-818-PAINT-SWH03-120111	12/01/11	Mercury	4.7	4.1	1.1		BE			
3-818-PAINT-SWH03	3758	3-818-PAINT-SWH03-120111	12/01/11	Zinc	33,200	4,100	8.1		BE			
3-818-PAINT-SWH04	3759	3-818-PAINT-SWH04-120111	12/01/11	Mercury	9	4.1	2.2	Removed	BE			
3-818-PAINT-SWH04	3759	3-818-PAINT-SWH04-120111	12/01/11	Zinc	5,040	4,100	1.2	Removed	BE			
3-818-PAINT-SWL02	3760	3-818-PAINT-SWL02-111611	11/16/11	Mercury	9	4.1	2.2	Removed	BE			
SCLS-PAINT-W05	3634	SCLS-PAINT-W05-081611	08/16/11	Total PCBs	14.6	1.3	11		NA			
SCLS-PAINT-W05	3634	SCLS-PAINT-W05-081611	08/16/11	Mercury	57	4.1	14		NA			
SLS-PAINT-W03	3640	SLS-PAINT-W03-081711	08/17/11	Zinc	10,300	4,100	2.5		NA			
SLS-PAINT-W05	3641	SLS-PAINT-W05-081711	08/17/11	Total PCBs	22.2	1.3	17	Removed	NA			
SLS-PAINT-W05	3641	SLS-PAINT-W05-081711	08/17/11	Mercury	5.5	4.1	1.3	Removed	NA			
SLS-PAINT-W05	3641	SLS-PAINT-W05-081711	08/17/11	Zinc	6,780	4,100	1.7	Removed	NA			
SLS-PAINT-W07	3642	SLS-PAINT-W07-081711	08/17/11	Arsenic	100 U	73	1.4 -N		NA			
SLS-PAINT-W07	3642	SLS-PAINT-W07-081711	08/17/11	Zinc	99,600	4,100	24		NA			
SLS-PAINT-W10	3643	SLS-PAINT-W10-081711	08/17/11	Total PCBs	35	1.3	27		NA			
SLS-PAINT-W10	3643	SLS-PAINT-W10-081711	08/17/11	Chromium	38,000	2,600	15		NA			
SLS-PAINT-W10	3643	SLS-PAINT-W10-081711	08/17/11	Lead	151,000	4,500	34		NA			
SLS-PAINT-W17	3644	SLS-PAINT-W17-081711	08/17/11	Total PCBs	2,200	1.3	1,700	Removed	NA			
SLS-PAINT-W17	3644	SLS-PAINT-W17-081711	08/17/11	Mercury	34	4.1	8.3	Removed	NA			
SLS-PAINT-W34	3645	SLS-PAINT-W34-081711	08/17/11	Total PCBs	66	1.3	51	Removed	NA			
SLS-PAINT-W34	3645	SLS-PAINT-W34-081711	08/17/11	Mercury	49	4.1	12	Removed	NA			
SLS-PAINT-W35	3646	SLS-PAINT-W35-081711	08/17/11	Total PCBs	570	1.3	440	Removed	NA			
SLS-PAINT-W35	3646	SLS-PAINT-W35-081711	08/17/11	Arsenic	200	73	2.7	Removed	NA			
SLS-PAINT-W35	3646	SLS-PAINT-W35-081711	08/17/11	Chromium	10,700	2,600	4.1	Removed	NA			
SLS-PAINT-W35	3646	SLS-PAINT-W35-081711	08/17/11	Lead	47,200	4,500	10	Removed	NA			
SLS-PAINT-W36	3647	SLS-PAINT-W36-081711	08/17/11	Mercury	62	4.1	15		NA			
SLS-PAINT-W38	3648	SLS-PAINT-W38-081711	08/17/11	Mercury	41.1	4.1	10		NA			
SLS-PAINT-W38	3648	SLS-PAINT-W38-081711	08/17/11	Zinc	21,200	4,100	5.2		NA			

Table 7.3-2
RI Selected Screening Level Exceedances for COPCs in Paint

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status	Location Type	Location Sub Type	Substrate Material	Paint Color
Building 3-380 Drainage Area												
380S-PAINT-W05	3377	380S-PAINT-W05-081611	08/16/11	Total PCBs	4.58	1.3	3.5		NA			
380S-PAINT-W05	3377	380S-PAINT-W05-081611	08/16/11	Arsenic	100 U	73	1.4 -N		NA			
380S-PAINT-W05	3377	380S-PAINT-W05-081611	08/16/11	Chromium	8,340	2,600	3.2		NA			
380S-PAINT-W05	3377	380S-PAINT-W05-081611	08/16/11	Lead	35,600	4,500	7.9		NA			
380S-PAINT-W08	3378	380S-PAINT-W08-081611	08/16/11	Total PCBs	271	1.3	210	Removed	NA			
380S-PAINT-W08	3378	380S-PAINT-W08-081611	08/16/11	Chromium	40,900	2,600	16	Removed	NA			
380S-PAINT-W08	3378	380S-PAINT-W08-081611	08/16/11	Lead	155,000	4,500	34	Removed	NA			
380S-PAINT-W12	3379	380S-PAINT-W12-081711	08/17/11	Total PCBs	1.8	1.3	1.4		NA			
380S-PAINT-W12	3379	380S-PAINT-W12-081711	08/17/11	Chromium	17,000	2,600	6.5		NA			
380S-PAINT-W12	3379	380S-PAINT-W12-081711	08/17/11	Zinc	22,600	4,100	5.5		NA			
Parking Lot Drainage Area												
NLS-PAINT-W20	3586	NLS-PAINT-W20-061511	06/15/11	Chromium	10,900	2,600	4.2		NA	Parking curb		
NLS-PAINT-W20	3586	NLS-PAINT-W20-061511	06/15/11	Lead	42,300	4,500	9.4		NA	Parking curb		
PLS-PAINT-W04	3616	PLS-PAINT-W04-081611	08/16/11	Zinc	43,600	4,100	11		NA			

() = Layered colors
Bk = Black
BE = Building exterior
Be = Beige
BL = Bollard
Bl = Blue
BR = Building roof
Br = Brown
ES = Equipment/Structure
Gn = Green
Gy = Gray
J = Estimated value
LBl = Light blue
LGn = Light green
Lgy = Light gray
-N = Exceedance factor for a non-detected concentration
NA = Not available
O = Orange
P = Peach
PCBs = Polychlorinated biphenyls
Pi = Pink
PM = Piping and associated materials
PV = Pavement
R = Red
RISL = RI Selected Screening Level
S = Silver
U = Non-detected
W = White
Y = Yellow

Exceedance factors represent the concentration divided by the RISL, and numbers are rounded to two significant figures.

Table 7.3-3
RI Selected Screening Level Exceedances for COPCs in Roof Materials

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status	Location Type	Location Sub Type	Substrate Material	Building Roof Color
North Lateral Drainage Area												
NLS-CAULK03	2561	NLS-CAULK03-072110	07/21/10	Cadmium	106	51	2.1		Caulk	Concrete Wall Joint Seam	Concrete Wall	Black/white
NLS-CAULK16	2567	NLS-CAULK16-073010	07/30/10	Total PCBs	11.6	1.3	8.9		Caulk	Roof Vent		White
NLS-CAULK16	2567	NLS-CAULK16-073010	07/30/10	Mercury	14	4.1	3.4		Caulk	Roof Vent		White
NLS-CAULK17	2568	NLS-CAULK17-072810	07/28/10	Total PCBs	1.5 U	1.3	1.2 -N		Caulk	Vent		White
NLS-MAT04	2584	NLS-MAT04-072110	07/21/10	Arsenic	79	73	1.1		BR	CTM		Black/white
NLS-MAT13	2591	NLS-MAT13-073010	07/30/10	Zinc	9070	4,100	2.2		BR	Asphalt Shingle		White
NLS-MAT16	2594	NLS-MAT16-072910	07/29/10	Arsenic	250 U	73	3.4 -N		ES	Metal Mesh		Black
NLS-MAT17	2595	NLS-MAT17-072910	07/29/10	Total PCBs	1.6 U	1.3	1.2 -N		BR	CTM		Black
NLS-MAT17	2595	NLS-MAT17-072910	07/29/10	Arsenic	295	73	4.0		BR	CTM		Black
NLS-MAT19	2597	NLS-MAT19-072010	07/20/10	Total PCBs	15	1.3	12		Downspout Solid	Roof Drain		White
NLS-MAT19	2597	NLS-MAT19-072010	07/20/10	Arsenic	180 U	73	2.5 -N		Downspout Solid	Roof Drain		White
NLS-MAT19	2597	NLS-MAT19-072010	07/20/10	Mercury	9.8	4.1	2.4		Downspout Solid	Roof Drain		White
NLS-MAT19	2597	NLS-MAT19-072010	07/20/10	Zinc	9190	4,100	2.2		Downspout Solid	Roof Drain		White
NLS-MAT22	2600	NLS-MAT22-072810	07/28/10	Total PCBs	5.4 U	1.3	4.2 -N		Downspout Solid	Roof Drain		Black
NLS-ROOF18	2681	NLS-ROOF18-072910	07/29/10	Total PCBs	3.7 U	1.3	2.8 -N		BR	Roof Material	Asphalt	White

Bk = Black
BR = Building roof
CTM = Coating and tinsel-like material

ES = Equipment/Structure
-N = Exceedance factor for a non-detected concentration
PCBs = Polychlorinated biphenyls

RISL = RI Selected Screening Level
S = Silver
U = Non-detected

Exceedance factors represent the concentration divided by the RISL, and numbers are rounded to two significant figures.
Samples of Roof Materials were collected in only the North Lateral Drainage Area.

Table 7.3-4
RI Selected Screening Level Exceedances for COPCs in Other Exterior Materials

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status	Location Type	Location Sub Type	Material Color
North Lateral Drainage Area											
NLS-CAULK11	2564	NLS-CAULK11-072810	07/28/10	Zinc	12800	4,100	3.1		Caulk	Window Seal	
NLS-CAULK20	2570	NLS-CAULK20-072910	07/29/10	Total PCBs	14000	1.3	11,000	Removed	Caulk	Window Seal	
NLS-CAULK20	2570	NLS-CAULK20-072910	07/29/10	Mercury	40.8	4.1	10	Removed	Caulk	Window Seal	
NLS-MAT03	2583	NLS-MAT03-072110	07/21/10	Zinc	13900	4,100	3.4		Rubber	Weather Stripping	
NLS-MAT06	2586	NLS-MAT06-072210	07/22/10	Total PCBs	15800	1.3	12,000	Removed	BE	Foam	Bk
NLS-MAT06	2586	NLS-MAT06-072210	07/22/10	Zinc	21100	4,100	5.1	Removed	BE	Foam	Bk
NLS-MAT10	2589	NLS-MAT10-073010	07/30/10	Total PCBs	2.5 U	1.3	1.9 -N		PM	Pipe Insulation	W
NLS-MAT14	2592	NLS-MAT14-073010	07/30/10	Total PCBs	9.8	1.3	7.5		PM	Wrap/tape	
NLS-MAT14	2592	NLS-MAT14-073010	07/30/10	Mercury	17	4.1	4.1		PM	Wrap/tape	
NLS-MAT14	2592	NLS-MAT14-073010	07/30/10	Zinc	8600	4,100	2.1		PM	Wrap/tape	
NLS-MAT15	2593	NLS-MAT15-073010	07/30/10	Total PCBs	48 U	1.3	37 -N		Foam	Foam-like Material	O
NLS-MAT23	2601	NLS-MAT23-080410	08/04/10	Total PCBs	20 U	1.3	15 -N		Foam	Foam Material	Bk

Bk = Black
BE = Building exterior
-N = Exceedance factor for a non-detected concentration
O = Orange
PCBs = Polychlorinated biphenyls
PM = Piping & Associated Material
RISL = RI Selected Screening Level
U = Non-detect
W = White

Exceedance factors represent the concentration divided by the RI Selected Screening Level, and numbers are rounded to two significant figures.
Samples of Other Exterior Materials were collected in only the North Lateral Drainage Area.

Table 7.3-5
RI Selected Screening Level Exceedances for COPCs in Concrete Joint Material

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status
North Lateral Drainage Area								
CJM-002	3114	CJM-002-090810	09/08/10	Total PCBs	2	1.3	1.5	
CJM-010	3118	CJM-010-090810	09/08/10	Total PCBs	25.5	1.3	20	
SP01	1539	H-SP01	11/06/00	Total PCBs	164	1.3	130	Removed
SP02	1544	C-SP02	11/06/00	Total PCBs	2.5 U	1.3	1.9 -N	Removed
SP03	1545	E-SP03	11/06/00	Total PCBs	5.2	1.3	4.0	
SP08	1550	B-SP08	11/07/00	Total PCBs	41.9	1.3	32	Removed
SP09	1540	H-SP09	11/07/00	Total PCBs	19.9	1.3	15	
SP10	1551	D-SP10	11/07/00	Total PCBs	1.4	1.3	1.1	
SP33	1570	G-SP33	11/08/00	Total PCBs	50000	1.3	38,000	Removed
SP49	1585	H-SP49	04/02/01	Total PCBs	270	1.3	210	Removed
SP50	1586	H-SP50	04/02/01	Total PCBs	25.1	1.3	19	Removed
SP51	1587	K-SP51	04/02/01	Total PCBs	2 U	1.3	1.5 -N	
SP53	1589	H-SP53	04/02/01	Total PCBs	9	1.3	6.9	
SP55	1591	A-SP55	04/02/01	Total PCBs	2 U	1.3	1.5 -N	
SP56	1592	A-SP56	04/02/01	Total PCBs	49	1.3	38	
SP57	1616	G-SP57	04/02/01	Total PCBs	3900	1.3	3,000	Removed
SP58	1617	G-SP58	04/02/01	Total PCBs	35000	1.3	27,000	Removed
North-Central Lateral Drainage Area								
CJM-007	3116	CJM-007-090810	09/08/10	Total PCBs	1.5	1.3	1.2	
CJM-011	3119	CJM-011-090810	09/08/10	Total PCBs	1.9 U	1.3	1.5 -N	
CJM-016	3122	CJM-016-090810	09/08/10	Total PCBs	6.3	1.3	4.8	
CJM-018	3123	CJM-018-090810	09/08/10	Total PCBs	1.8	1.3	1.4	
CJM-020	3125	CJM-020-090810	09/08/10	Total PCBs	1.5	1.3	1.2	
CJM-036	3129	CJM-036-090810	09/08/10	Total PCBs	45	1.3	35	
CJM-039	3130	CJM-039-091310	09/13/10	Total PCBs	31.5	1.3	24	
CJM-043	3133	CJM-043-091310	09/13/10	Total PCBs	2.4	1.3	1.8	
CJM-048	3137	CJM-048-091310	09/13/10	Total PCBs	1.8	1.3	1.4	
CJM-084	3149	CJM-084-091310	09/13/10	Total PCBs	1200	1.3	920	Removed
CJM-085	3150	CJM-085-091310	09/13/10	Total PCBs	3	1.3	2.3	

Table 7.3-5
RI Selected Screening Level Exceedances for COPCs in Concrete Joint Material

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status
CJM-194	3393	CJM-194-050911	05/09/11	Total PCBs	2.4	1.3	1.8	
CJM-195	3394	CJM-195-050911	05/09/11	Total PCBs	17.2	1.3	13	
CJM-196	3395	CJM-196-050911	05/09/11	Total PCBs	1.9	1.3	1.5	
CJM-197	3396	CJM-197-050911	05/09/11	Total PCBs	1.8	1.3	1.4	
CJM-198	3397	CJM-198-050911	05/09/11	Total PCBs	16.2	1.3	12	
CJM-199	3398	CJM-199-050911	05/09/11	Total PCBs	14.4	1.3	11	
CJM-200	3399	CJM-200-050911	05/09/11	Total PCBs	14.7	1.3	11	
CJM-201	3400	CJM-201-050911	05/09/11	Total PCBs	25.1	1.3	19	
CJM-202	3401	CJM-202-050911	05/09/11	Total PCBs	5.1	1.3	3.9	
CJM-203	3402	CJM-203-050911	05/09/11	Total PCBs	17.8	1.3	14	
CJM-204	3403	CJM-204-050911	05/09/11	Total PCBs	24.4	1.3	19	
CJM-205	3404	CJM-205-050911	05/09/11	Total PCBs	16	1.3	12	
CJM-206	3405	CJM-206-050911	05/09/11	Total PCBs	26.2	1.3	20	
CJM-207	3406	CJM-207-050911	05/09/11	Total PCBs	1.8	1.3	1.4	
CJM-230	3429	CJM-230-051011	05/10/11	Total PCBs	26	1.3	20	Removed
CJM-231	3430	CJM-231-051011	05/10/11	Total PCBs	2.5	1.3	1.9	
CJM-233	3432	CJM-233-051011	05/10/11	Total PCBs	2.5	1.3	1.9	
CJM-234	3433	CJM-234-051011	05/10/11	Total PCBs	6.2	1.3	4.8	Removed
CJM-235	3434	CJM-235-051011	05/10/11	Total PCBs	130	1.3	100	Removed
CJM-236	3435	CJM-236-051011	05/10/11	Total PCBs	2300	1.3	1,800	Removed
CJM-263	3462	CJM-263-051311	05/13/11	Total PCBs	16.8	1.3	13	Removed
CJM-264	3463	CJM-264-051311	05/13/11	Total PCBs	1.9	1.3	1.5	Removed
CJM-268	3467	CJM-268-051311	05/13/11	Total PCBs	28.6	1.3	22	Removed
CJM-CB221	3217	CJM-CB221-102010	10/20/10	Total PCBs	2.3	1.3	1.8	
CJM-CB252	3219	CJM-CB252-101810	10/18/10	Total PCBs	3.14	1.3	2.4	
CJM-CB364A	3221	CJM-CB364A-101810	10/18/10	Total PCBs	3.2	1.3	2.5	Removed
SP14	1554	A-SP14	11/07/00	Total PCBs	23000	1.3	18,000	Removed
SP15	1541	H-SP15	11/07/00	Total PCBs	1.7	1.3	1.3	Removed
SP18	1557	J-SP18	11/07/00	Total PCBs	2 U	1.3	1.5 -N	
SP19	1558	I-SP19	11/07/00	Total PCBs	2 U	1.3	1.5 -N	
SP22	1542	H-SP22	11/07/00	Total PCBs	11.6	1.3	8.9	Removed

Table 7.3-5
RI Selected Screening Level Exceedances for COPCs in Concrete Joint Material

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status
SP59	1618	G-SP59 Res	04/02/01	Total PCBs	20000	1.3	15,000	Removed
SP60	1593	H-SP60 Res	04/02/01	Total PCBs	42	1.3	32	Removed
SP61	1619	G-SP61 Res	04/02/01	Total PCBs	19900	1.3	15,000	Removed
SP65	1534	SP65 (New)	12/19/06	Total PCBs	160	1.3	120	Removed
SP65	1534	A-SP65	04/03/01	Total PCBs	68000	1.3	52,000	Removed
SP66	1535	SP66 (New)	12/19/06	Total PCBs	370	1.3	280	Removed
SP66	1535	A-SP66	04/03/01	Total PCBs	79000	1.3	61,000	Removed
SP67	1620	G-SP67 Res	04/03/01	Total PCBs	25700	1.3	20,000	Removed
SP68	1598	H-SP68 Res	04/03/01	Total PCBs	20.9	1.3	16	
SP69	1536	SP69 (New)	12/19/06	Total PCBs	1.6	1.3	1.2	
SP69	1536	H-SP69 Res	04/03/01	Total PCBs	2240	1.3	1,700	Removed
SP70	1621	G-SP70 Res	04/03/01	Total PCBs	16100	1.3	12,000	Removed
SP74	1602	H-SP74 Res	04/03/01	Total PCBs	1.8	1.3	1.4	
SP76	1623	G-SP76 Res	04/04/01	Total PCBs	17200	1.3	13,000	Removed
South-Central Lateral Drainage Area								
CJM-033	3126	CJM-033-092310	09/23/10	Total PCBs	22	1.3	17	
CJM-047	3136	CJM-047-090810	09/08/10	Total PCBs	1.3	1.3	1.0	
CJM-051	3138	CJM-051-091310	09/13/10	Total PCBs	19	1.3	15	
CJM-057	3141	CJM-057-091310	09/13/10	Total PCBs	6.27	1.3	4.8	
CJM-060	3142	CJM-060-091310	09/13/10	Total PCBs	2.4	1.3	1.8	
CJM-061	3143	CJM-061-091310	09/13/10	Total PCBs	3.6	1.3	2.8	
CJM-087	3151	CJM-087-091310	09/13/10	Total PCBs	1.4	1.3	1.1	
CJM-107	3158	CJM-107-091510	09/15/10	Total PCBs	1.5	1.3	1.2	
CJM-108	3159	CJM-108-092310	09/23/10	Total PCBs	2.4	1.3	1.8	
CJM-113	3164	CJM-113-092310	09/23/10	Total PCBs	6.2	1.3	4.8	
CJM-118	3168	CJM-118-092310	09/23/10	Total PCBs	2.8	1.3	2.2	
CJM-122	3171	CJM-122-091510	09/15/10	Total PCBs	2.7	1.3	2.1	
CJM-123	3172	CJM-123-091610	09/16/10	Total PCBs	3.7	1.3	2.8	
CJM-124	3173	CJM-124-091610	09/16/10	Total PCBs	1.5	1.3	1.2	
CJM-125	3174	CJM-125-091610	09/16/10	Total PCBs	12.7	1.3	9.8	
CJM-130	3177	CJM-130-091610	09/16/10	Total PCBs	1.7	1.3	1.3	

Table 7.3-5
RI Selected Screening Level Exceedances for COPCs in Concrete Joint Material

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status
CJM-208	3407	CJM-208-050911	05/09/11	Total PCBs	6.1	1.3	4.7	
CJM-209	3408	CJM-209-050911	05/09/11	Total PCBs	14	1.3	11	
CJM-210	3409	CJM-210-050911	05/09/11	Total PCBs	13.7	1.3	11	
CJM-212	3411	CJM-212-050911	05/09/11	Total PCBs	2.99	1.3	2.3	
CJM-213	3412	CJM-213-050911	05/09/11	Total PCBs	8.3	1.3	6.4	
CJM-224	3423	CJM-224-051011	05/10/11	Total PCBs	8.4	1.3	6.5	
CJM-225	3424	CJM-225-051011	05/10/11	Total PCBs	3.9	1.3	3.0	
CJM-226	3425	CJM-226-051011	05/10/11	Total PCBs	14	1.3	11	
CJM-227	3426	CJM-227-051011	05/10/11	Total PCBs	8.1	1.3	6.2	
CJM-228	3427	CJM-228-051011	05/10/11	Total PCBs	4	1.3	3.1	
CJM-229	3428	CJM-229-051011	05/10/11	Total PCBs	4.8	1.3	3.7	
CJM-232	3431	CJM-232-051011	05/10/11	Total PCBs	1.3	1.3	1.0	
CJM-239	3438	CJM-239-051211	05/12/11	Total PCBs	3.3	1.3	2.5	
CJM-240	3439	CJM-240-051211	05/12/11	Total PCBs	2.7	1.3	2.1	
CJM-243	3442	CJM-243-051211	05/12/11	Total PCBs	1.4	1.3	1.1	
CJM-244	3443	CJM-244-051211	05/12/11	Total PCBs	15.2	1.3	12	
CJM-269	3468	CJM-269-051311	05/13/11	Total PCBs	17.8	1.3	14	Removed
CJM-270	3469	CJM-270-051311	05/13/11	Total PCBs	38	1.3	29	Removed
CJM-276	4003	CJM-276-070612	07/06/12	Total PCBs	9.6	1.3	7.4	Removed
CJM-277	4004	CJM-277-070612	07/06/12	Total PCBs	78	1.3	60	Removed
CJM-278	4005	CJM-278-070612	07/06/12	Total PCBs	5.5	1.3	4.2	Removed
CJM-279	4006	CJM-279-070612	07/06/12	Total PCBs	9.4	1.3	7.2	Removed
CJM-380001	3475	NBF-CJM-380001-070711	07/07/11	Total PCBs	89	1.3	68	Removed
CJM-380006	3480	NBF-CJM-380006-070711	07/07/11	Total PCBs	1.9 U	1.3	1.5 -N	
CJM-B0401	3488	NBF-CJM-B0401-070711	07/07/11	Total PCBs	7.2	1.3	5.5	
CJM-B0501	3489	NBF-CJM-B0501-071411	07/14/11	Total PCBs	66	1.3	51	Removed
CJM-B0603	3492	NBF-CJM-B0603-071511	07/15/11	Total PCBs	2.4 U	1.3	1.8 -N	Removed
CJM-B0702	3494	NBF-CJM-B0702-070811	07/08/11	Total PCBs	10	1.3	7.7	
CJM-B0801	3495	NBF-CJM-B0801-070811	07/08/11	Total PCBs	50	1.3	38	Removed
CJM-CB370	3222	CJM-CB370-092310	09/23/10	Total PCBs	2.7	1.3	2.1	
CJM-CB419	3226	CJM-CB419-092310	09/23/10	Total PCBs	1.6	1.3	1.2	

Table 7.3-5
RI Selected Screening Level Exceedances for COPCs in Concrete Joint Material

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status
NBF-JM08-01	2205	NBF-JM08-01	09/22/08	Total PCBs	24	1.3	18	Removed
NBF-JM08-02	2206	NBF-JM08-02	09/22/08	Total PCBs	2200	1.3	1,700	Removed
NBF-JM08-03	2207	NBF-JM08-03	09/22/08	Total PCBs	51	1.3	39	Removed
SP17	1556	D1-SP17	11/07/00	Total PCBs	2.7	1.3	2.1	Removed
SP20	1559	G-SP20	11/07/00	Total PCBs	6.1	1.3	4.7	Removed
SP25	1563	B-SP25	11/08/00	Total PCBs	4.3	1.3	3.3	Removed
SP30	1567	G-SP30	11/08/00	Total PCBs	35300	1.3	27,000	Removed
SP36	1573	F-SP36	11/09/00	Total PCBs	2 U	1.3	1.5 -N	
SP62	1594	H-SP62	04/03/01	Total PCBs	17.3	1.3	13	
SP64	1595	C2-SP64	04/03/01	Total PCBs	2.7	1.3	2.1	
SP75	1622	G-SP75	04/03/01	Total PCBs	14.1	1.3	11	Removed
SP77	1603	H-SP77 Res	04/04/01	Total PCBs	20.5	1.3	16	
SP78	1624	G-SP78DUP	04/04/01	Total PCBs	59000	1.3	45,000	Removed
SP80	1537	SP80 (New)	12/19/06	Total PCBs	1.9	1.3	1.5	
SP80	1537	G-SP80 Res	04/04/01	Total PCBs	57000	1.3	44,000	Removed
SP82	1538	G-SP82	04/04/01	Total PCBs	61000	1.3	47,000	Removed
SP83	1605	A-SP83	04/04/01	Total PCBs	43	1.3	33	
SP85	1625	G-SP85 Res	04/04/01	Total PCBs	4200	1.3	3,200	Removed
South Lateral Drainage Area								
CJM-106	3157	CJM-106-091510	09/15/10	Total PCBs	1.3	1.3	1.0	
CJM-109	3160	CJM-109-092310	09/23/10	Total PCBs	730	1.3	560	Removed
CJM-110	3161	CJM-110-092310	09/23/10	Total PCBs	14	1.3	11	
CJM-111	3162	CJM-111-091510	09/15/10	Total PCBs	5.1	1.3	3.9	
CJM-142	3182	CJM-142-091510	09/15/10	Total PCBs	3.7	1.3	2.8	
CJM-157	3195	CJM-157-091510	09/15/10	Total PCBs	2.4 U	1.3	1.8 -N	
CJM-162	3199	CJM-162-091510	09/15/10	Total PCBs	2 U	1.3	1.5 -N	
CJM-182	3212	CJM-182-091510	09/15/10	Total PCBs	1.6 U	1.3	1.2 -N	
CJM-188	3387	CJM-188-050911	05/09/11	Total PCBs	2.6	1.3	2.0	
CJM-215	3414	CJM-215-051011	05/10/11	Total PCBs	2.4 U	1.3	1.8 -N	
CJM-245	3444	CJM-245-051211	05/12/11	Total PCBs	23.7	1.3	18	
CJM-246	3445	CJM-246-051211	05/12/11	Total PCBs	6.38	1.3	4.9	

Table 7.3-5
RI Selected Screening Level Exceedances for COPCs in Concrete Joint Material

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status
CJM-247	3446	CJM-247-051211	05/12/11	Total PCBs	12.5	1.3	9.6	
CJM-248	3447	CJM-248-051211	05/12/11	Total PCBs	26000	1.3	20,000	Removed
CJM-249	3448	CJM-249-051211	05/12/11	Total PCBs	14.7	1.3	11	Removed
CJM-250	3449	CJM-250-051211	05/12/11	Total PCBs	2.5	1.3	1.9	Removed
CJM-251	3450	CJM-251-051211	05/12/11	Total PCBs	4.9	1.3	3.8	Removed
CJM-252	3451	CJM-252-051211	05/12/11	Total PCBs	2.6	1.3	2.0	Removed
CJM-253	3452	CJM-253-051211	05/12/11	Total PCBs	2.2	1.3	1.7	
CJM-254	3453	CJM-254-051211	05/12/11	Total PCBs	3.2	1.3	2.5	Removed
CJM-255	3454	CJM-255-051211	05/12/11	Total PCBs	2.4	1.3	1.8	Removed
CJM-256	3455	CJM-256-051211	05/12/11	Total PCBs	3.8	1.3	2.9	Removed
CJM-258	3457	CJM-258-051211	05/12/11	Total PCBs	1.7	1.3	1.3	
CJM-292	4019	CJM-292-070612	07/06/12	Total PCBs	17 U	1.3	13 -N	Removed
CJM-294	4021	CJM-294-070612	07/06/12	Total PCBs	2.9	1.3	2.2	Removed
CJM-301	4028	CJM-301-071912	07/19/12	Total PCBs	46	1.3	35	Removed
CJM-302	4029	CJM-302-071912	07/19/12	Total PCBs	1.6 U	1.3	1.2 -N	Removed
CJM-B0903	3498	NBF-CJM-B0903-070811	07/08/11	Total PCBs	4.5 U	1.3	3.5 -N	Removed
CJM-B1001	3499	NBF-CJM-B1001-070711	07/07/11	Total PCBs	24	1.3	18	Removed
CJM-B1002	3500	NBF-CJM-B1002-070711	07/07/11	Total PCBs	2.6 U	1.3	2.0 -N	Removed
CJM-B1003	3501	NBF-CJM-B1003-070711	07/07/11	Total PCBs	2.6 U	1.3	2.0 -N	Removed
CJM-B1101	3502	NBF-CJM-B1101-070111	07/01/11	Total PCBs	8 U	1.3	6.2 -N	Removed
CJM-C0303	3515	NBF-CJM-C0303-071411	07/14/11	Total PCBs	3.14	1.3	2.4	
CJM-C0503	3520	NBF-CJM-C0503-071411	07/14/11	Total PCBs	4 U	1.3	3.1 -N	Removed
CJM-C0703	3525	NBF-CJM-C0703-070111	07/01/11	Total PCBs	2.45	1.3	1.9	
CJM-C0803	3529	NBF-CJM-C0803-070111	07/01/11	Total PCBs	9.2	1.3	7.1	
CJM-C0901	3530	NBF-CJM-C0901-063011	06/30/11	Total PCBs	7.6 U	1.3	5.8 -N	
CJM-C0902	3531	NBF-CJM-C0902-063011	06/30/11	Total PCBs	7.9 U	1.3	6.1 -N	
CJM-C0904	3533	NBF-CJM-C0904-063011	06/30/11	Total PCBs	7.6 U	1.3	5.8 -N	
CJM-C0905	3534	NBF-CJM-C0905-063011	06/30/11	Total PCBs	8 U	1.3	6.2 -N	
CJM-C1001	3535	NBF-CJM-C1001-063011	06/30/11	Total PCBs	1.6 U	1.3	1.2 -N	
CJM-CB260	3220	CJM-CB260-101810	10/18/10	Total PCBs	2.2	1.3	1.7	
CJM-CB453	3227	CJM-CB453-092310	09/23/10	Total PCBs	5.2	1.3	4.0	

Table 7.3-5
RI Selected Screening Level Exceedances for COPCs in Concrete Joint Material

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status
CJM-CB502	3236	CJM-CB502-092310	09/23/10	Total PCBs	9.1 U	1.3	7.0 -N	
CJM-MH500	3245	CJM-MH500-092310	09/23/10	Total PCBs	12	1.3	9.2	
NBF-JM08-05	2209	NBF-JM08-05	09/22/08	Total PCBs	1.6	1.3	1.2	
SP06	1548	F-SP06	11/06/00	Total PCBs	2 U	1.3	1.5 -N	
SP26	1564	B2-SP26	11/08/00	Total PCBs	2 U	1.3	1.5 -N	
SP27	1565	B2-SP27	11/08/00	Total PCBs	2 U	1.3	1.5 -N	
SP31	1568	C-SP31	11/08/00	Total PCBs	1.3	1.3	1.0	
SP32	1569	B-SP32	11/08/00	Total PCBs	2 U	1.3	1.5 -N	
SP37	1574	F-SP37	11/09/00	Total PCBs	2 U	1.3	1.5 -N	
SP38	1575	F-SP38	11/09/00	Total PCBs	2.3 U	1.3	1.8 -N	
SP39	1576	C1-SP39	11/09/00	Total PCBs	270 U	1.3	210 -N	
SP40	1577	B2-SP40	11/09/00	Total PCBs	2 U	1.3	1.5 -N	
SP72	1600	C2-SP72	04/03/01	Total PCBs	13	1.3	10	
SP81	1604	H-SP81 Res	04/04/01	Total PCBs	50	1.3	38	Removed
SP84	1606	H-SP84 Res	04/04/01	Total PCBs	24	1.3	18	
SP86	1607	H-SP86 Res	04/04/01	Total PCBs	8.1	1.3	6.2	Removed
SP88	1609	H-SP88	04/04/01	Total PCBs	4.4	1.3	3.4	
Building 3-380 Drainage Area								
No exceedances.								
Parking Lot Drainage Area								
SP05	1547	F-SP05	11/06/00	Total PCBs	2 U	1.3	1.5 -N	
SP07	1549	F-SP07	11/06/00	Total PCBs	3.1	1.3	2.4	

Table 7.3-5
RI Selected Screening Level Exceedances for COPCs in Concrete Joint Material

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status
Drainage Not Assigned								
SP100	4200	NEA-SP100	07/11/01	Total PCBs	3.1	1.3	2.4	
SP101	4201	NEA-SP101	07/11/01	Total PCBs	5.5	1.3	4.2	
SP89	1626	H-SP89	06/20/01	Total PCBs	2 U	1.3	1.5 -N	
SP90	1627	H-SP90	06/20/01	Total PCBs	1.9	1.3	1.5	
SP91	1628	H-SP91	06/20/01	Total PCBs	5.8	1.3	4.5	
SP92	1629	H-SP92	06/20/01	Total PCBs	1.4	1.3	1.1	
SP93	1630	H-SP93	06/20/01	Total PCBs	2 U	1.3	1.5 -N	
SP94	1631	H-SP94	06/20/01	Total PCBs	4.2	1.3	3.2	
SP95	1632	H-SP95	06/20/01	Total PCBs	22	1.3	17	
SP96	1633	L-SP96	07/11/01	Total PCBs	2 U	1.3	1.5 -N	
SP97	1634	L-SP97	07/11/01	Total PCBs	2 U	1.3	1.5 -N	
SP98	4198	NEA-SP98	07/11/01	Total PCBs	2 U	1.3	1.5 -N	
SP99	4199	NEA-SP99	07/11/01	Total PCBs	2.1	1.3	1.6	
CJM-384001	3485	NBF-CJM-384001-070811	07/08/11	Total PCBs	2.5 U	1.3	1.9 -N	
CJM-384002	3486	NBF-CJM-384002-070811	07/08/11	Total PCBs	1.3	1.3	1.0	
CJM-C1301	3540	NBF-CJM-C1301-070811	07/08/11	Total PCBs	2.2 U	1.3	1.7 -N	
CJM-C1302	3541	NBF-CJM-C1302-070811	07/08/11	Total PCBs	3.2 U	1.3	2.5 -N	
CJM-C1303	3542	NBF-CJM-C1303-070811	07/08/11	Total PCBs	2.4 U	1.3	1.8 -N	
JC-3	1532	JC-3	07/22/05	Total PCBs	1.69	1.3	1.3	
SP43	1579	C-SP43	11/09/00	Total PCBs	2 U	1.3	1.5 -N	
SP44	1580	B1-SP44	11/09/00	Total PCBs	2 U	1.3	1.5 -N	
SP45	1581	A-SP45	11/09/00	Total PCBs	10 U	1.3	7.7 -N	
SP46	1582	H-SP46	11/09/00	Total PCBs	2 U	1.3	1.5 -N	
SP47	1583	H-SP47	11/09/00	Total PCBs	3.9	1.3	3.0	
SP48	1584	H-SP48	11/09/00	Total PCBs	2 U	1.3	1.5 -N	

-N = Exceedance factor for a non-detected concentration

PCBs = Polychlorinated biphenyls

RISL = RI Selected Screening Level

U = Non-detect

Exceedance factors represent the concentration divided by the RISL, and numbers are rounded to two significant figures.

Samples of CJM were not collected in the Building 3-380 Area.

Table 7.3-6
RI Selected Screening Level Exceedances for COPCs in Pavement

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status	Location Sub Type
North Lateral Drainage Area									
ASP01	1610	PM26A	08/28/09	Total PCBs	34	1.3	26	Removed	Asphalt
ASP02	1611	PM26B	08/28/09	Total PCBs	380	1.3	290	Removed	Asphalt
ASP03	1612	PM26F	08/28/09	Total PCBs	23.1	1.3	18	Removed	Asphalt
ASP05	1614	PM26H	08/28/09	Total PCBs	18.5	1.3	14	Removed	Asphalt
ASP-Bulk01	2336	QO26Q	03/16/10	Total PCBs	7.4	1.3	5.7	Removed	Asphalt
ASP-Bulk02	2337	QO26R	03/16/10	Total PCBs	14	1.3	11	Removed	Asphalt
ASP-Bulk03	2338	QO26S	03/16/10	Total PCBs	3.8	1.3	2.9	Removed	Asphalt
ASP-Bulk04	2339	QO26T	03/16/10	Total PCBs	7.8	1.3	6.0	Removed	Asphalt

-N = Exceedance factor for a non-detected concentration
PCBs = Polychlorinated biphenyls
RISL = RI Selected Screening Level
U = Non-detect

Exceedance factors represent the concentration divided by the RISL, and numbers are rounded to two significant figures.
Samples of Pavement were collected in only the North Lateral Drainage Area.

Table 7.3-7
RI Selected Screening Level Exceedances for COPCs in Surface Debris

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status	Location Type	Location Sub Type
North Lateral Drainage Area										
NLS-SURFACE01	2683	NLS-SURFACE01-072010	07/20/10	Total PCBs	0.35	0.13	2.7		Ground Surface	Surface Solids
NLS-SURFACE01	2683	NLS-SURFACE01-072010	07/20/10	Arsenic	10 U	7.3	1.4 -N		Ground Surface	Surface Solids
NLS-SURFACE01	2683	NLS-SURFACE01-072010	07/20/10	Cadmium	10.5	5.1	2.1		Ground Surface	Surface Solids
NLS-SURFACE01	2683	NLS-SURFACE01-072010	07/20/10	Chromium	489	260	1.9		Ground Surface	Surface Solids
NLS-SURFACE01	2683	NLS-SURFACE01-072010	07/20/10	Zinc	1260	410	3.1		Ground Surface	Surface Solids
NLS-SURFACE03	2685	NLS-SURFACE03-072010	07/20/10	Total PCBs	0.34	0.13	2.6		Ground Surface	Surface Solids
NLS-SURFACE03	2685	NLS-SURFACE03-072010	07/20/10	Arsenic	16	7.3	2.2		Ground Surface	Surface Solids
NLS-SURFACE03	2685	NLS-SURFACE03-072010	07/20/10	Cadmium	12.8	5.1	2.5		Ground Surface	Surface Solids
NLS-SURFACE03	2685	NLS-SURFACE03-072010	07/20/10	Chromium	371	260	1.4		Ground Surface	Surface Solids
NLS-SURFACE03	2685	NLS-SURFACE03-072010	07/20/10	Zinc	934	410	2.3		Ground Surface	Surface Solids
NLS-SURFACE04	2686	NLS-SURFACE04-072010	07/20/10	Total PCBs	0.6	0.13	4.6		Ground Surface	Surface Solids
NLS-SURFACE04	2686	NLS-SURFACE04-072010	07/20/10	Arsenic	10 U	7.3	1.4 -N		Ground Surface	Surface Solids
NLS-SURFACE04	2686	NLS-SURFACE04-072010	07/20/10	Lead	819	450	1.8		Ground Surface	Surface Solids
NLS-SURFACE04	2686	NLS-SURFACE04-072010	07/20/10	Zinc	1020	410	2.5		Ground Surface	Surface Solids
NLS-SURFACE05	2687	NLS-SURFACE05-072210	07/22/10	Total PCBs	0.77 U	0.13	5.9 -N		Ground Surface	Surface Solids
NLS-SURFACE05	2687	NLS-SURFACE05-072210	07/22/10	Cadmium	7.4	5.1	1.5		Ground Surface	Surface Solids
NLS-SURFACE06	2688	NLS-SURFACE06-072910	07/29/10	Total PCBs	0.79 U	0.13	6.1 -N		Ground Surface	Surface Solids
NLS-SURFACE07	2689	NLS-SURFACE07-072910	07/29/10	Arsenic	10 U	7.3	1.4 -N		Ground Surface	Surface Solids
NLS-SURFACE07	2689	NLS-SURFACE07-072910	07/29/10	Zinc	1210	410	3.0		Ground Surface	Surface Solids
NLS-SURFACE08	2690	NLS-SURFACE08-072910	07/29/10	Arsenic	120 U	7.3	16 -N		Ground Surface	Surface Solids
NLS-SURFACE08	2690	NLS-SURFACE08-072910	07/29/10	Cadmium	7	5.1	1.4		Ground Surface	Surface Solids
NLS-SURFACE08	2690	NLS-SURFACE08-072910	07/29/10	Silver	7 U	6.1	1.1 -N		Ground Surface	Surface Solids
NLS-SURFACE09	2691	NLS-SURFACE09-080210	08/02/10	Total PCBs	9.8	0.13	75		Ground Surface	Surface Solids
NLS-SURFACE09	2691	NLS-SURFACE09-080210	08/02/10	Arsenic	50 U	7.3	6.8 -N		Ground Surface	Surface Solids
NLS-SURFACE09	2691	NLS-SURFACE09-080210	08/02/10	Cadmium	33	5.1	6.5		Ground Surface	Surface Solids
NLS-SURFACE09	2691	NLS-SURFACE09-080210	08/02/10	Chromium	446	260	1.7		Ground Surface	Surface Solids
NLS-SURFACE09	2691	NLS-SURFACE09-080210	08/02/10	Zinc	2540	410	6.2		Ground Surface	Surface Solids
NLS-SURFACE10	2692	NLS-SURFACE10-080210	08/02/10	Total PCBs	0.212	0.13	1.6		Ground Surface	Surface Solids
NLS-SURFACE10	2692	NLS-SURFACE10-080210	08/02/10	Arsenic	10 U	7.3	1.4 -N		Ground Surface	Surface Solids
NLS-SURFACE10	2692	NLS-SURFACE10-080210	08/02/10	Zinc	437	410	1.1		Ground Surface	Surface Solids
NLS-SURFACE11	2693	NLS-SURFACE11-080210	08/02/10	Total PCBs	3.11	0.13	24		Ground Surface	Surface Solids
NLS-SURFACE11	2693	NLS-SURFACE11-080210	08/02/10	Arsenic	80	7.3	11		Ground Surface	Surface Solids
NLS-SURFACE11	2693	NLS-SURFACE11-080210	08/02/10	Cadmium	15.3	5.1	3.0		Ground Surface	Surface Solids
NLS-SURFACE11	2693	NLS-SURFACE11-080210	08/02/10	Zinc	2780	410	6.8		Ground Surface	Surface Solids
NLS-SURFACE12	2694	NLS-SURFACE12-080210	08/02/10	Total PCBs	1.33	0.13	10		Ground Surface	Surface Solids
NLS-SURFACE12	2694	NLS-SURFACE12-080210	08/02/10	Arsenic	30	7.3	4.1		Ground Surface	Surface Solids

Table 7.3-7
RI Selected Screening Level Exceedances for COPCs in Surface Debris

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status	Location Type	Location Sub Type
NLS-SURFACE12	2694	NLS-SURFACE12-080210	08/02/10	Cadmium	30	5.1	5.9		Ground Surface	Surface Solids
NLS-SURFACE12	2694	NLS-SURFACE12-080210	08/02/10	Lead	560	450	1.2		Ground Surface	Surface Solids
NLS-SURFACE12	2694	NLS-SURFACE12-080210	08/02/10	Mercury	0.59	0.41	1.4		Ground Surface	Surface Solids
NLS-SURFACE12	2694	NLS-SURFACE12-080210	08/02/10	Zinc	2050	410	5.0		Ground Surface	Surface Solids
NLS-SURFACE13	2695	NLS-SURFACE13-080210	08/02/10	Total PCBs	0.208	0.13	1.6		Ground Surface	Surface Solids
NLS-SURFACE13	2695	NLS-SURFACE13-080210	08/02/10	Arsenic	10 U	7.3	1.4 -N		Ground Surface	Surface Solids
NLS-SURFACE13	2695	NLS-SURFACE13-080210	08/02/10	Cadmium	11.7	5.1	2.3		Ground Surface	Surface Solids
NLS-SURFACE13	2695	NLS-SURFACE13-080210	08/02/10	Zinc	1050	410	2.6		Ground Surface	Surface Solids
NLS-SURFACE14	2696	NLS-SURFACE14-080210	08/02/10	Total PCBs	0.2	0.13	1.5		Ground Surface	Surface Solids
NLS-SURFACE14	2696	NLS-SURFACE14-080210	08/02/10	Arsenic	10 U	7.3	1.4 -N		Ground Surface	Surface Solids
NLS-SURFACE14	2696	NLS-SURFACE14-080210	08/02/10	Cadmium	5.1	5.1	1.0		Ground Surface	Surface Solids
NLS-SURFACE14	2696	NLS-SURFACE14-080210	08/02/10	Zinc	482	410	1.2		Ground Surface	Surface Solids
NLS-SURFACE15	2697	NLS-SURFACE15-080210	08/02/10	Total PCBs	0.74	0.13	5.7		Ground Surface	Surface Solids
NLS-SURFACE15	2697	NLS-SURFACE15-080210	08/02/10	Arsenic	30 U	7.3	4.1 -N		Ground Surface	Surface Solids
NLS-SURFACE15	2697	NLS-SURFACE15-080210	08/02/10	Cadmium	17	5.1	3.3		Ground Surface	Surface Solids
NLS-SURFACE15	2697	NLS-SURFACE15-080210	08/02/10	Zinc	904	410	2.2		Ground Surface	Surface Solids
NLS-SURFACE16	2698	NLS-SURFACE16-080210	08/02/10	Total PCBs	0.145	0.13	1.1		Ground Surface	Surface Solids
NLS-SURFACE16	2698	NLS-SURFACE16-080210	08/02/10	Zinc	2060	410	5.0		Ground Surface	Surface Solids
NLS-SURFACE17	2699	NLS-SURFACE17-080210	08/02/10	Total PCBs	0.24	0.13	1.8		Ground Surface	Surface Solids
NLS-SURFACE17	2699	NLS-SURFACE17-080210	08/02/10	Mercury	0.58	0.41	1.4		Ground Surface	Surface Solids
NLS-SURFACE18	2700	NLS-SURFACE18-080210	08/02/10	Zinc	2050	410	5.0		Ground Surface	Surface Solids
NLS-SURFACE19	2701	NLS-SURFACE19-080210	08/02/10	Total PCBs	0.238	0.13	1.8		Ground Surface	Surface Solids
NLS-SURFACE19	2701	NLS-SURFACE19-080210	08/02/10	Zinc	453	410	1.1		Ground Surface	Surface Solids
NLS-SURFACE20	2702	NLS-SURFACE20-080210	08/02/10	Total PCBs	0.361	0.13	2.8		Ground Surface	Surface Solids
NLS-SURFACE20	2702	NLS-SURFACE20-080210	08/02/10	Arsenic	10 U	7.3	1.4 -N		Ground Surface	Surface Solids
NLS-SURFACE20	2702	NLS-SURFACE20-080210	08/02/10	Zinc	560	410	1.4		Ground Surface	Surface Solids
NLS-SURFACE21	2703	NLS-SURFACE21-080210	08/02/10	Total PCBs	0.133	0.13	1.0		Ground Surface	Surface Solids
NLS-SURFACE21	2703	NLS-SURFACE21-080210	08/02/10	Arsenic	10 U	7.3	1.4 -N		Ground Surface	Surface Solids
NLS-SURFACE21	2703	NLS-SURFACE21-080210	08/02/10	Cadmium	6.3	5.1	1.2		Ground Surface	Surface Solids
NLS-SURFACE21	2703	NLS-SURFACE21-080210	08/02/10	Zinc	1610	410	3.9		Ground Surface	Surface Solids
NLS-SURFACE22	2704	NLS-SURFACE22-080210	08/02/10	Arsenic	20 U	7.3	2.7 -N		Ground Surface	Surface Solids
NLS-SURFACE23	2705	NLS-SURFACE23-080410	08/04/10	Total PCBs	11.1	0.13	85		Ground Surface	Surface Solids
Surface01	1676	PG89J	07/15/09	Total PCBs	7.6	0.13	58	Removed	Ground Surface	Surface Solids
Surface02	1677	PG89K	07/15/09	Total PCBs	30	0.13	230	Removed	Ground Surface	Surface Solids
Surface03	1678	PG90A	07/15/09	Total PCBs	8.8	0.13	68	Removed	Ground Surface	Surface Solids
Surface03b	1679	PG90B	07/15/09	Total PCBs	8.8	0.13	68	Removed	Ground Surface	Surface Solids
Surface04	1680	PG90C	07/15/09	Total PCBs	8.9	0.13	68	Removed	Ground Surface	Surface Solids

Table 7.3-7
RI Selected Screening Level Exceedances for COPCs in Surface Debris

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status	Location Type	Location Sub Type
Surface05	1681	PG90D	07/15/09	Total PCBs	1.32	0.13	10	Removed	Ground Surface	Surface Solids
Surface06	1682	PG90E	07/15/09	Total PCBs	5.19	0.13	40	Removed	Ground Surface	Surface Solids
Surface07	1683	PG90F	07/15/09	Total PCBs	160	0.13	1,200	Removed	Ground Surface	Surface Solids
Surface08	1684	PG90G	07/15/09	Total PCBs	17.8	0.13	140	Removed	Ground Surface	Surface Solids
Surface09	1685	PG90H	07/15/09	Total PCBs	0.6	0.13	4.6	Removed	Ground Surface	Surface Solids
Surface10	1686	PG90I	07/15/09	Total PCBs	2.09	0.13	16	Removed	Ground Surface	Surface Solids
Surface11	1687	PG90J	07/15/09	Total PCBs	1.09	0.13	8.4	Removed	Ground Surface	Surface Solids
Surface12	1688	PJ30A	08/05/09	Total PCBs	46.2	0.13	360	Removed	Ground Surface	Surface Solids
Surface12b	1689	PJ30B	08/05/09	Total PCBs	36	0.13	280		Ground Surface	Surface Solids
Surface12c	1690	PJ30C	08/05/09	Total PCBs	19	0.13	150		Ground Surface	Surface Solids
Surface13	1691	PJ30D	08/05/09	Total PCBs	557	0.13	4,300	Removed	Ground Surface	Surface Solids
Surface14	1692	PJ30E	08/05/09	Total PCBs	290	0.13	2,200	Removed	Ground Surface	Surface Solids
Surface15	1693	PJ30F	08/05/09	Total PCBs	3.34	0.13	26	Removed	Ground Surface	Surface Solids
Surface16	1694	PJ30G	08/05/09	Total PCBs	1.52	0.13	12	Removed	Ground Surface	Surface Solids
Surface17	1695	PJ30H	08/05/09	Total PCBs	0.77	0.13	5.9	Removed	Ground Surface	Surface Solids
Surface19	1697	PJ30J	08/05/09	Total PCBs	0.33	0.13	2.5	Removed	Ground Surface	Surface Solids
Surface20	1698	PJ30K	08/05/09	Total PCBs	0.195	0.13	1.5	Removed	Ground Surface	Surface Solids
Surface21	1699	PJ30L	08/05/09	Total PCBs	0.192	0.13	1.5		Ground Surface	Surface Solids
Surface22	1700	PJ30M	08/05/09	Total PCBs	0.57	0.13	4.4	Removed	Ground Surface	Surface Solids
Surface23	1701	PJ30Q	08/05/09	Total PCBs	0.254	0.13	2.0	Removed	Ground Surface	Surface Solids
North-Central Lateral Drainage Area										
NLS-SURFACE02	2684	NLS-SURFACE02-072010	07/20/10	Total PCBs	0.66	0.13	5.1		Ground Surface	Surface Solids
NLS-SURFACE02	2684	NLS-SURFACE02-072010	07/20/10	Cadmium	33.6	5.1	6.6		Ground Surface	Surface Solids
NLS-SURFACE02	2684	NLS-SURFACE02-072010	07/20/10	Zinc	1030	410	2.5		Ground Surface	Surface Solids
Parking Lot Drainage Area										
D283A	2300	NBF-D283A-071310-S	07/13/10	Total PCBs	0.34	0.13	2.6		Storm Drain	Surface Solids
D283A	2300	NBF-D283A-071310-S	07/13/10	Arsenic	18	7.3	2.5		Storm Drain	Surface Solids
D283A	2300	NBF-D283A-071310-S	07/13/10	Zinc	585	410	1.4		Storm Drain	Surface Solids
D283A	2300	NBF-D283A-071310-S	07/13/10	Benzo(a)pyrene	0.54	0.15	3.6		Storm Drain	Surface Solids
D283A	2300	NBF-D283A-071310-S	07/13/10	Total cPAHs (TEQ, NDx0.5)	0.75	0.15	5.0		Storm Drain	Surface Solids
D434AN	2437	NBF-D434AN-071310-S	07/13/10	Arsenic	9	7.3	1.2		Ground Surface	Surface Solids
D434AN	2437	NBF-D434AN-071310-S	07/13/10	Zinc	466	410	1.1		Ground Surface	Surface Solids
D434AN	2437	NBF-D434AN-071310-S	07/13/10	Total cPAHs (TEQ, NDx0.5)	0.18	0.15	1.2		Ground Surface	Surface Solids
D434AS	2438	NBF-D434AS-071310-S	07/13/10	Total PCBs	0.205	0.13	1.6		Ground Surface	Surface Solids
D434AS	2438	NBF-D434AS-071310-S	07/13/10	Arsenic	20	7.3	2.7		Ground Surface	Surface Solids
D434AS	2438	NBF-D434AS-071310-S	07/13/10	Zinc	684	410	1.7		Ground Surface	Surface Solids
D434AS	2438	NBF-D434AS-071310-S	07/13/10	Benzo(a)pyrene	0.21	0.15	1.4		Ground Surface	Surface Solids

Table 7.3-7
RI Selected Screening Level Exceedances for COPCs in Surface Debris

Location Name	User Location ID	Sample ID	Sample Date	Chemical	Concentration (mg/kg)	RISL (mg/kg)	RISL Exceedance Factor	Removal Status	Location Type	Location Sub Type
D434AS	2438	NBF-D434AS-071310-S	07/13/10	Total cPAHs (TEQ, NDx0.5)	0.29	0.15	1.9		Ground Surface	Surface Solids
D435BN	2439	NBF-D435BN-071310-S	07/13/10	Total PCBs	0.314	0.13	2.4		Ground Surface	Surface Solids
D435BN	2439	NBF-D435BN-071310-S	07/13/10	Arsenic	20	7.3	2.7		Ground Surface	Surface Solids
D435BN	2439	NBF-D435BN-071310-S	07/13/10	Zinc	756	410	1.8		Ground Surface	Surface Solids
D435BN	2439	NBF-D435BN-071310-S	07/13/10	Benzo(a)pyrene	0.16	0.15	1.1		Ground Surface	Surface Solids
D435BN	2439	NBF-D435BN-071310-S	07/13/10	Total cPAHs (TEQ, NDx0.5)	0.22	0.15	1.5		Ground Surface	Surface Solids
D435BS	2440	NBF-D435BS-071310-S	07/13/10	Total PCBs	0.253	0.13	1.9		Ground Surface	Surface Solids
D435BS	2440	NBF-D435BS-071310-S	07/13/10	Arsenic	30	7.3	4.1		Ground Surface	Surface Solids
D435BS	2440	NBF-D435BS-071310-S	07/13/10	Zinc	724	410	1.8		Ground Surface	Surface Solids
D436A	2310	NBF-D436A-071310-S	07/13/10	Total PCBs	0.199	0.13	1.5		Storm Drain	Surface Solids
D436A	2310	NBF-D436A-071310-S	07/13/10	Arsenic	40	7.3	5.5		Storm Drain	Surface Solids
D436A	2310	NBF-D436A-071310-S	07/13/10	Zinc	652	410	1.6		Storm Drain	Surface Solids
D436A	2310	NBF-D436A-071310-S	07/13/10	Benzo(a)pyrene	0.24	0.15	1.6		Storm Drain	Surface Solids
D436A	2310	NBF-D436A-071310-S	07/13/10	Total cPAHs (TEQ, NDx0.5)	0.33	0.15	2.2		Storm Drain	Surface Solids

-N = Exceedance factor for a non-detected concentration
ND = Non-detect
PAHs = Polycyclic aromatic hydrocarbons
PCBs = Polychlorinated biphenyls
RISL = RI Selected Screening Level
U = Non-detect

Exceedance factors represent the concentration divided by the RISL, and numbers are rounded to two significant figures.
Samples of Surface Debris were collected in only the North Lateral, North-Central, and Parking Lot drainage areas.

Table 7.3-8
Exceedance Factors and Concentrations for Elevated Levels of COPCs in Storm Drain Solids and Anthropogenic Media at North Lateral Drainage Area

Chemical	SD Solids			Anthropogenic Media				
	SD Structure	Most Recent EF	Most Recent Concentration (mg/kg DW)	Medium	Maximum EF	Maximum Concentration (mg/kg)	Sample Count per EF Range	Removal Status (Y/N)
Anthropogenic Media in Areas with Elevated EFs (>25) in SD Solids								
PCBs	CB179	2,500	330	Surface Debris	ND	ND	ND	**Y**
	CB191*	1,400	180	Surface Debris	4,300	557	2	**Y**
				Pavement	290	380	1	**Y**
				CJM	210	270	1	**Y**
				Paint	190	250	1	**Y**
				Pavement	26	34	1	**Y**
				Surface Debris	26	3.34	1	**Y**
					12	1.52	1	**Y**
	MH193	1,300	173	Paint	100	135	1	**Y**
					1.8	2.3	1	N
	OWS186	810	105	NS	NS	NS	NS	NS
	MH187	770	100	Surface Debris	360	46.2	2	1 **Y** / 1 N
				Pavement	14	18.5	4	**Y**
				Paint	9.3	12.1	1	**Y**
	CB193	610	79	Paint	21	27	2	1 **Y** / 1 N
				Surface Debris	10	1.33	1	N
				Paint	2.5	3.2	3	N
	MH130	440	57	NS	NS	NS	NS	NS
	MH169	280	37	Paint	ND	ND	ND	N
	CB173	260	34	Paint	4.1	5.3	1	N
	MH181A	220	29	Surface Debris	8.4	1.09	1	**Y**
				Paint	4.9	6.4	1	N
	CB147	150	18.9	Surface Debris	24	3.11	1	N
				Paint	4.4	5.77	4	N
					< 1.0	1.2	1	N
				Roof Material	< 1.0	0.92	1	N
				CJM	< 1.0	0.61	1	**Y**
	MH166A	140	18	Paint	100	136	1	**Y**
					2.1	2.77	1	N
	CB159	130	16.9	Paint	2.0	2.6	1	N
	CB185	120	15	Surface Debris	230	30	1	**Y**
					68	8.8	3	**Y**
					10	1.32	1	**Y**
				Paint	8.3	10.8	1	N
	CB184*	85	11	NS	NS	NS	NS	NS
	CB184B*	75	9.7	NS	NS	NS	NS	NS
	CB192	62	8	Pavement	2.9	3.8	1	**Y**
				Paint	2.5	3.2	1	N
	MH172	58	7.6	Paint	580	750	1	**Y**
	CB187A	58	7.5	Surface Debris	68	8.8	2	**Y**
				Paint	22	28	1	N
				Roof Material	12	15	1	N
				Paint	3.1	4	1	N
	OWS132	48	6.3	NS	NS	NS	NS	NS
	CB193A	46	6	Paint	190	2,580	1	N
					120	160	1	**Y**
					6.7	8.7	3	N
					3.2	4.1	1	N
	OWS137	38	4.9	Paint	ND	ND	ND	N
	OWS612-2	35	4.6	NS	NS	NS	NS	NS
	MH179B	35	4.6	NS	NS	NS	NS	NS
	CB175	30	3.9	NS	NS	NS	NS	NS
	MH179A	28	3.7	Surface Debris	ND	ND	ND	**Y**
	MH152	28	3.7	NS	NS	NS	NS	NS
	CB363	28	3.7	CJM	1.1	1.4	1	N
	MH138	28	3.6	OEM	ND	ND	ND	N
	CB194	28	3.6	Paint	4.6	5.9	2	1 **Y** / 1 N
				Surface Debris	4.4	0.57	1	**Y**

Table 7.3-8
Exceedance Factors and Concentrations for Elevated Levels of COPCs in Storm Drain Solids and Anthropogenic Media at North Lateral Drainage Area

Chemical	**SD Solids**			**Anthropogenic Media**				
	SD Structure	**Most Recent EF**	**Most Recent Concentration (mg/kg DW)**	**Medium**	**Maximum EF**	**Maximum Concentration (mg/kg)**	**Sample Count per EF Range**	**Removal Status (Y/N)**
Mercury	CB185	48	19.5	Paint	4.4	18	1	N
	CB194	31	12.6	Paint	2.4	10	1	**Y**
					< 1.0	0.94	2	N
Butyl benzyl phthalate	MH181A	25	1.7	NS	NS	NS	NS	NS
Elevated EFs in Anthropogenic Media in Areas with No SD Solids Samples or with Moderate EFs^								
PCBs	CB113	18	2.33	CJM	38,000	50,000	3	**Y**
					15	19.9	1	N
	MH612B	13	1.74	OEM	12,000	15,800	1	**Y**
				Surface Debris	75	10	1	N
	CB188A	NS	NS	OEM	11,000	14,000	1	**Y**
					7.5	9.8	1	N
	CB150	8.4	1.09	Paint	15,000	1,900	2	**Y**
					120	160	1	**Y**
					23	30	3	N
					3.4	4.4	1	**Y**
				Pavement	< 1.0	1.09	1	N
	CB162	22	2.9	Surface Debris	85	11.1	1	N
	UNKCB23	NS	NS	Paint	43	56	1	N
				Surface Debris	5.7	0.74	1	N
	MH112	NS	NS	CJM	38	49	2	1 **Y** / 1 N
					1.5	2	1	N
Mercury	CB191*	NS	NS	Paint	32	130	1	**Y**

Notes:
CB = Catch basin
CJM = Concrete joint material
EF = Exceedance factor
MH = Manhole
ND = Non-detect
NS = Not sampled (due to lack of sufficient solids)
OEM = Other exterior materials
SD = Storm drain
UNK = Unknown
* = Abandoned
^ This section is limited to locations where anthropogenic media results have an EF >25 and SD solids from the nearby SD structures either have not been sampled or have moderate EFs (5-25).

EF Colors	EF Ranges
	> 5.0 - 25
	> 25 - 125
	> 125

Analytical results presented for anthropogenic media exclude non-detects, unless otherwise stated.

Table 7.3-9
Exceedance Factors and Concentrations for Elevated Levels of COPCs in Storm Drain Solids and Anthropogenic Media at North-Central Lateral Drainage Area

Chemical	SD Solids			Anthropogenic Media				
	SD Structure	Most Recent EF	Most Recent Concentration (mg/kg DW)	Medium	Maximum EF	Maximum Concentration (mg/kg)	Sample Count	Removed Status (Y/N)
Anthropogenic Media in Areas with Elevated EFs (>25) in SD Solids								
PCBs	MH247	260	34	CJM	12,000	16,100	1	**Y**
					1.8	2.4	2	N
	OWS226A	87	11.3	CJM	ND	ND	ND	N
	UNKMH21	58	7.5	CJM	ND	ND	ND	N
	MH228D	56	7.3	CJM	ND	ND	ND	N
	CB224	48	6.2	CJM	15,000	19,900	1	**Y**
					32	42	1	**Y**
				Surface Debris	5.1	0.66	1	N
				Paint	1.8	2.4	1	N
				CJM	1.2	1.5	1	N
	MH249	31	4	CJM	ND	ND	ND	1 **Y** / 5 N
	CB364A	29	3.8	CJM	18,000	23,000	3	**Y**
					120	160	2	**Y**
					20	26	1	**Y**
					4.8	6.2	4	2 **Y** / 2 N
	CB225	28	3.6	CJM	20,000	25,700	1	**Y**
	CB372A	25	3.3	NS	NS	NS	NS	NS
cPAHs	UNKCB27	86	13	NS	NS	NS	NS	NS
	CB229A	64	9.61	NS	NS	NS	NS	NS
	MH221A	49	7.4	NS	NS	NS	NS	NS
	MH226	38	5.75	NS	NS	NS	NS	NS
	MH362	25	3.79	NS	NS	NS	NS	NS
Elevated EFs in Anthropogenic Media in Areas with No SD Solids Samples or with Moderate EFs^								
PCBs	MH223	NS	NS	CJM	15,000	20,000	1	**Y**
	MH248	NS	NS	CJM	13,000	17,200	1	**Y**
	CB255	5.5	0.71	CJM	920	1,200	1	**Y**
					22	29	2	**Y**
				Paint	5.9	7.7	1	N
				CJM	2	3	2	1 **Y** / 1 N
					< 1.0	1	2	**Y**
	CB227C	NS	NS	CJM	35	45	1	N
					13	17.2	4	N
					1.8	2.4	3	N
	MH228	14	1.87	Paint	28	37	1	N
Lead	MH228	14	1.87	Paint	27	122,000	1	N

Notes:
CB = Catch basin
CJM = Concrete joint material
EF = Exceedance factor
MH = Manhole
ND = Non-detect
NS = Not sampled (due to lack of sufficient solids)
SD = Storm drain
UNK = Unknown
^ This section is limited to locations where anthropogenic media results have an EF >25 and SD solids from the nearby SD structures either have not been sampled or have moderate EFs (5-25).

Analytical results presented for anthropogenic media exclude non-detects, unless otherwise stated.

EF Colors	EF Ranges
Yellow	> 5.0 - 25
Orange	> 25 - 125
Red	> 125

Table 7.3-10
Exceedance Factors and Concentrations for Elevated Levels of COPCs in Storm Drain Solids and Anthropogenic Media at South-Central Lateral Drainage Area

Chemical	SD Solids			Anthropogenic Media				
	SD Structure	Most Recent EF	Most Recent Concentration (mg/kg DW)	Medium	Maximum EF	Maximum Concentration (mg/kg)	Sample Count	Removed Status (Y/N)
Anthropogenic Media in Areas with Elevated EFs (> 25) in SD Solids								
PCBs	MH471	52	6.8	CJM	11	14	1	**Y**
					4.7	6.1	1	**Y**
	CB416	34	4.4	CJM	5.5	7.2	1	N
					< 1.0	0.98	1	N
Elevated EFs in Anthropogenic Media in Areas with No SD Solids Samples or with Moderate EFs^								
PCBs	CB418	9.2	1.19	CJM	45,000	59,000	2	**Y**
					18	24	2	**Y**
					3.3	4.3	1	**Y**
	CB419	12	1.6	CJM	60	78	2	**Y**
					14	17.8	1	**Y**
					4	6	6	1 **Y** / 5 N
Lead	CB371	NS	NS	Paint	34	151,000	2	N
					19	85	5	N
					4.2	5	5	N

Notes:
CB = Catch basin
CJM = Concrete joint material
EF = Exceedance factor
MH = Manhole
ND = Non-detect
SD = Storm drain
^ This section is limited to locations where anthropogenic media results have an EF >25 and SD solids from the nearby SD structures either have not been sampled or have moderate EFs (5-25).

EF Colors	EF Ranges
Yellow	> 5.0 - 25
Orange	> 25 - 125
Red	> 125

Analytical results presented for anthropogenic media exclude non-detects, unless otherwise stated.

Table 7.3-11
Exceedance Factors and Concentrations for Elevated Levels of COPCs in Storm Drain Solids and Anthropogenic Media at South Lateral Drainage Area

Chemical	SD Solids			Anthropogenic Media				
	SD Structure	Most Recent EF	Most Recent Concentration (mg/kg DW)	Medium	Maximum EF	Maximum Concentration (mg/kg)	Sample Count	Removed Status (Y/N)
Anthropogenic Media in Areas with Elevated EFs (> 25) in SD Solids								
PCBs	CB261	180	23	CJM	20,000	26,000	2	**Y**
					18	24	4	1 **Y** / 3 N
					5	6	4	2 **Y** / 2 N
	OWS483E/D	110	14	CJM	18	24	1	**Y**
	OWS1-C	47	6.16	NS	NS	NS	NS	NS
	OWS483B/C	30	3.95	NS	NS	NS	NS	NS
	CB384	28	3.6	NS	NS	NS	NS	NS
Mercury	OWS483E/D	35	14.2	NS	NS	NS	NS	NS
BEHP	MH492	37	48	NS	NS	NS	NS	NS
	MH356	28	37	NS	NS	NS	NS	NS
	OWS483B/C	27	35	NS	NS	NS	NS	NS
Benzo(g,h,i) perylene	MH492	36	24	NS	NS	NS	NS	NS
	MH482	25	17	NS	NS	NS	NS	NS
Chrysene	MH492	32	45	NS	NS	NS	NS	NS
	MH482	27	38	NS	NS	NS	NS	NS
Dibenz(a,h) anthracene	MH492	43	9.9	NS	NS	NS	NS	NS
Fluoranthene	MH492	59	100	NS	NS	NS	NS	NS
	MH482	29	50	NS	NS	NS	NS	NS
Indeno(1,2,3-cd)pyrene	MH492	43	26	NS	NS	NS	NS	NS
	MH482	27	16	NS	NS	NS	NS	NS
HPAHs	MH492	30	363	NS	NS	NS	NS	NS
cPAHs	MH492	280	42.6	NS	NS	NS	NS	NS
	MH482	150	22.3	NS	NS	NS	NS	NS
	MH356	120	18	NS	NS	NS	NS	NS
	OWS483B/C	79	11.9	NS	NS	NS	NS	NS
	CB261	35	5.21	NS	NS	NS	NS	NS
Elevated EFs in Anthropogenic Media in Areas with No SD Solids Samples or with Moderate EFs^								
PCBs	CB266B	NS	NS	Paint	1,700	2,200	1	**Y**
					< 1.0	0.92	1	**Y**
	OWS443B/446B	NS	NS	Paint	440	570	1	**Y**
	CB278	NS	NS	Paint	180	230	1	**Y**
	CB277C	NS	NS	Paint	85	110	1	**Y**
					10	12.9	1	N
					2	2	1	**Y**
	UNKMH1	NS	NS	Paint	85	110	1	N
					< 1.0	1	1	N
	CB260	7.0	9.1	CJM	38	50	1	**Y**
					1.7	2.2	1	N
	CB352	NS	NS	Paint	27	35	1	N
	CB448	17	2.27	Paint	51	66	1	**Y**
					1.3	1.7	1	**Y**
					< 1.0	1.2	2	**Y**
Lead	CB352	NS	NS	Paint	34	151,000	1	N

Notes:
CB = Catch basin
CJM = Concrete joint material
EF = Exceedance factor
MH = Manhole
ND = Non-detect
NS = Not sampled
SD = Storm drain
^ This section is limited to locations where anthropogenic media results have an EF >25 and SD solids from the nearby SD structures either have not been sampled or have moderate EFs (5-25).

Analytical results presented for anthropogenic media exclude non-detects, unless otherwise stated.

EF Colors	EF Ranges
	> 5.0 - 25
	> 25 - 125
	> 125

Table 7.3-12
Summary of Phase I, Part 1
Proposed Sampling Locations for Storm Drain Solids

Storm Drain Structure To Be Sampled	Adjacent Buildings	Last Sampling Date and Analytes for Storm Drain Solids	Maximum EF in Last Sample	Rationale for Sampling Storm Drain Solids				
				Phase I, Part 1a	Phase I, Part 1b Elevated Levels in SDS Samples Collected Between 2004 and 2009		Phase I, Part 1c SD Structures Not Sampled Since 2004[1]	
				Structures Potentially Affected by Recent Interim Actions	Near or Downgradient of AM Not Adequately Characterized	Near or Downgradient of AM Samples with Elevated Levels	Located on Lateral Line at Main Tributary	Near or Downgradient of AM Samples with Elevated Levels
Georgetown Steam Plant								
MH12[2]	GTSP Powerhouse	NS	NS				●[2]	
Total number of structures to be sampled:		1						
PCBs, metals, and SVOCs analyses:		1						
Dioxins/furans analyses:		1						
North Lateral Drainage Area								
CB147	3-368	4/2010: PCBs, metals	150	●				
CB159	3-626	3/2010: PCBs, metals	130	●				
CB173[3]	3-323	7/2012: PCBs 5/2012: Dioxins/furans, metals, cPAHs, SVOCs	260	●[3]				
CB179	3-323	7/2009: PCBs (MH179)	2,500	●	●			
CB185	3-332	3/2010: PCBs, metals	120	●				
CB187A	3-322, 3-326	7/2009: PCBs	58	●		●		
CB188A	3-326	NS	NS	●				●
CB193	3-322	3/2007: PCBs	610	●				
CB193A	3-322	3/2010: PCBs, metals	46	●				
D133C	3-315	5/2010: PCBs, metals	9.0	●				
MH112	3-350	NS	NS				●	●
MH130	--	3/2007: PCBs	440	●			●	
MH152	3-321	6/2010: PCBs, metals, cPAHs, SVOCs	28	●	●			
MH166A	3-331, 3-334	7/2009: PCBs	140	●	●			
MH169	3-310	1/2007: PCBs, Hg	280	●	●			
MH179A	3-323	9/2005: PCBs	28	●	●			
MH179B	3-323	5/2012: PCBs, metals, cPAHs, SVOCs	35	●				
MH181A[3]	3-323	7/2012: PCBs 5/2012: metals, cPAHs, SVOCs	220	●[3]				
MH187	3-326	3/2007: PCBs	770	●		●		
MH193	3-326	3/2007: PCBs	1,300	●	●			
MH652[3]	3-626	7/2012: PCBs, metals	350		●[3]			
OWS132	--	6/2009: PCBs	48		●			
OWS137	3-368	6/2009: PCBs	38		●			
OWS612-2	3-315	4/2010: PCBs, metals	35	●				
UNKCB23	3-315	NS	NS					●
Total number of structures to be sampled:		*25*						
PCBs, metals, and SVOCs analyses:		*25*						
Dioxins/furans analyses:		*5*						

Table 7.3-12
Summary of Phase I, Part 1
Proposed Sampling Locations for Storm Drain Solids

Storm Drain Structure To Be Sampled	Adjacent Buildings	Last Sampling Date and Analytes for Storm Drain Solids	Maximum EF in Last Sample	Rationale for Sampling Storm Drain Solids				
				Phase I, Part 1a	Phase I, Part 1b Elevated Levels in SDS Samples Collected Between 2004 and 2009		Phase I, Part 1c SD Structures Not Sampled Since 2004[1]	
				Structures Potentially Affected by Recent Interim Actions	Near or Downgradient of AM Not Adequately Characterized	Near or Downgradient of AM Samples with Elevated Levels	Located on Lateral Line at Main Tributary	Near or Downgradient of AM Samples with Elevated Levels
North-Central Lateral Drainage Area								
CB227C	--	NS	NS					●
MH223	A-3	NS	NS					●
MH228B	--	NS	NS				●	
MH228D	--	6/2009: PCBs	56		●			
MH247	--	3/2007: PCBs	260		●			
MH248	--	NS	NS					●
MH249	--	3/2007: PCBs	31	●				
MH358	3-369	NS	NS				●	
MH363A	--	NS	NS				●	
OWS226A	--	3/2007: PCBs	87		●			
Total number of structures to be sampled:		*10*						
PCBs, metals, and SVOCs analyses:		*10*						
Dioxins/furans analyses:		*2*						
South-Central Lateral Drainage Area								
CB373	3-390	NS	NS				●	
MH361	3-369	NS	NS				●	
MH410	3-800	NS	NS				●	
MH864	--	NS	NS				●	
Total number of structures to be sampled:		*4*						
PCBs, metals, and SVOCs analyses:		*4*						
Dioxins/furans analyses:		*1*						
South Lateral Drainage Area								
CB261[3]	--	7/2012: PCBs, metals 7/2006: cPAHs, SVOCs	180	●[3]	●[3]			
CB266B	3-800	NS	NS					●
CB276	3-818, 3-800, 3-801	NS	NS					●
CB352	3-390	NS	NS					●
CB384	3-369	9/2008: PCBs	28		●			
MH263	3-818	NS	NS				●	●
MH271B	3-390/3-800	NS	NS				●	
MH353	--	NS	NS				●	
MH401	3-390	NS	NS					●
MH481	--	7/2006: cPAHs, SVOCs	< 1				●	
MH482	--	7/2006: SVOCs 3/2012: PCBs, metals, cPAHs	150		●			

Table 7.3-12
Summary of Phase I, Part 1
Proposed Sampling Locations for Storm Drain Solids

				Rationale for Sampling Storm Drain Solids				
				Phase I, Part 1a	Phase I, Part 1b Elevated Levels in SDS Samples Collected Between 2004 and 2009		Phase I, Part 1c SD Structures Not Sampled Since 2004[1]	
Storm Drain Structure To Be Sampled	**Adjacent Buildings**	**Last Sampling Date and Analytes for Storm Drain Solids**	**Maximum EF in Last Sample**	**Structures Potentially Affected by Recent Interim Actions**	**Near or Downgradient of AM Not Adequately Characterized**	**Near or Downgradient of AM Samples with Elevated Levels**	**Located on Lateral Line at Main Tributary**	**Near or Downgradient of AM Samples with Elevated Levels**
OWS1-C	3-374	4/2010: PCBs, metals 7/2006: cPAHs, SVOCs	47		●			
OWS483B/C	--	4/2010: PCBs, metals 3/2007: cPAHs, SVOCs	79		●			
OWS483E/D	--	4/2010: PCBs, metals	110	●	●			
UNKMH1	3-818	NS	NS					●
Total number of structures to be sampled: *PCBs, metals, and SVOCs analyses:* *Dioxins/furans analyses:*		*15* *15* *3*						
Building 3-380 Drainage Area								
No storm drain solids sampling proposed								
Parking Lot Drainage Area								
CB433	--	4/2010: PCBs, metals	1.9				●	
Total number of structures to be sampled: *PCBs, metals, and SVOCs analyses:* *Dioxins/furans analyses:*		*1* *1* *1*						
All Areas for NBF-GTSP Site								
Total number of structures to be sampled for all areas: 56								

Notes:
AM = Anthropogenic media
NS = No samples have been collected in the SD structure since 2004

1. Individual COPCs were considered when evaluating SD structures that have not been sampled since 2004.
2. First SD structure downstream of Powerhouse roof drains (but not at a tributary) is to be sampled per Ecology.
3. Storm drain structures CB173, CB261, MH181A, and MH652 are included for SD solids sampling due to significantly elevated levels of PCBs or mercury in 2012 sampling.

SVOCs include PAHs, phthalates, and phenols.
RI samples of SD solids will be collected from the SD structure listed or from adjacent/downstream structures, depending on field determination of drainage direction and the availability of sampleable SD solids.
The total number of proposed samples excludes field duplicates and equipment rinse samples.

Table 7.3-13
Summary of Phase I, Part 2
Proposed Sampling Locations for Surface Debris

Drainage Area (SD polygons and surrounding areas)	**Adjacent Buildings**	**Maximum EF in Last Sample of Storm Drain Solids**	**Rationale for Sampling Surface Debris**			
			Phase I, Part 2a Surface Debris Near SD Structures		**Phase I, Part 2b^ Surface Debris Near Buildings***	
			Elevated Levels in SDS Samples, Surface Debris Not Adequately Characterized	**No SDS Samples, Nearby AM Samples with Elevated Levels**	**Building* is Near SDS Samples with Elevated Levels, Surface Debris Not Adequately Characterized**	**AM Samples from Building* have Elevated Levels or Not Adequately Characterized, No SDS Samples[1]**
Georgetown Steam Plant						
No proposed samples	Powerhouse	--				
North Lateral Drainage Area						
CB136	--	93	●			
CB141	3-315	26	●			
CB142B	3-353	63	●			
CB159	3-626	130	●			
CB173	3-323	260	●			
CB174B	3-323	NS		●		
CB175	3-323	30	●			
CB185	3-332	120	●			
CB188A	3-326	NS		●		
CB192	3-322	62	●			
CB193	3-322	610	●			
CB193A	3-322	46	●			
CB194	3-322	31	●			
CB363	3-380	28	●			
D153B	3-333	29	●			
D153C	3-310	56	●			
MH112	--	NS		●		
MH130	--	440	●			
MH133D	3-341	89	●			
MH138	3-626	28	●			
MH152	3-626	28	●			
MH166A	3-323/3-331/3-334	140	●			
MH169	3-310	280	●			
MH172	3-323	58	●			
MH179B	3-323	35	●			
MH181A	3-323/3-334	220	●			
MH193	--	1,300	●			
MH651	3-626	150	●			
MH652	3-626	350	●			
OWS132	--	48	●			
OWS137	Wind Tunnel	38	●			
UNKCB23	3-315	NS		●		
Tank Area of Building 3-310	3-310	280			●-2	
Building 3-323	--	220			●-4	
Tank Area of Building 3-323	3-323	260			●-2	
Northern half of Building 3-326	--	58				●-2
Building 3-368	--	150	●		●-1	
Building 3-626	--	130			●-4	
Approximate total number of samples:			*47*			
PCBs and metals analyses:			*47*			
SVOCs analyses:			*16*			
Dioxins/furans analyses:			*10*			

Table 7.3-13
Summary of Phase I, Part 2
Proposed Sampling Locations for Surface Debris

Drainage Area (SD polygons and surrounding areas)	**Adjacent Buildings**	**Maximum EF in Last Sample of Storm Drain Solids**	**Rationale for Sampling Surface Debris**			
			Phase I, Part 2a Surface Debris Near SD Structures		**Phase I, Part 2b^ Surface Debris Near Buildings***	
			Elevated Levels in SDS Samples, Surface Debris Not Adequately Characterized	**No SDS Samples, Nearby AM Samples with Elevated Levels**	**Building* is Near SDS Samples with Elevated Levels, Surface Debris Not Adequately Characterized**	**AM Samples from Building* have Elevated Levels or Not Adequately Characterized, No SDS Samples[1]**
North-Central Lateral Drainage Area						
CB227C	--	NS		●		
CB229A	--	64	●			
CB364A	--	29	●			
MH221A	--	49	●			
MH223	--	NS		●		
MH226	--	38	●			
MH228	--	14		●		
MH228D	--	56	●			
MH247	--	260	●			
MH248	--	NS		●		
MH249	--	31	●			
MH362	3-380	25	●			
OWS226A	--	87	●			
Blast Fence near CB224, CB225	--	48	●		●-2	
Approximate total number of samples:			*15*			
PCBs and metals analyses:			*15*			
SVOCs analyses:			*5*			
Dioxins/furans analyses:			*3*			
South-Central Lateral Drainage Area						
MH471	--	52	●			
Building 3-390 (NW side, S of Boiler Room)	--	--		●		
Building 3-390 (NW side, N of Boiler Room)	--	--				●-1
Approximate total number of samples:			*3*			
PCBs and metals analyses:			*3*			
SVOCs analyses:			*1*			
Dioxins/furans analyses:			*1*			
South Lateral Drainage Area						
CB261	--	180	●			
CB384	3-369	28	●			
MH356	3-369	120	●			
MH401	3-390	NS		●		
MH482	--	150	●			
MH492	--	280	●			
OWS1-C	3-374	47	●			
OWS443B/446B	--	NS		●		
OWS483B/C	--	79	●			
OWS483E/D	--	110	●			
Buildings 3-369, 3-374	3-370, 3-390	120			●-4	
Building 3-390 (S side)	--	NS				●-3
Building 3-397	--	NS				●-2
Building 3-818[2]	--	17			●-4	
Building 3-825	--	NS				●-4
Building 8-834	3-811	NS				●-4
Approximate total number of samples:			*31*			
PCBs and metals analyses:			*31*			
SVOCs analyses:			*10*			
Dioxins/furans analyses:			*6*			

Table 7.3-13
Summary of Phase I, Part 2
Proposed Sampling Locations for Surface Debris

Drainage Area (SD polygons and surrounding areas)	**Adjacent Buildings**	**Maximum EF in Last Sample of Storm Drain Solids**	**Rationale for Sampling Surface Debris** — **Phase I, Part 2a Surface Debris Near SD Structures**: **Elevated Levels in SDS Samples, Surface Debris Not Adequately Characterized**	**No SDS Samples, Nearby AM Samples with Elevated Levels**	**Phase I, Part 2b^ Surface Debris Near Buildings***: **Building* is Near SDS Samples with Elevated Levels, Surface Debris Not Adequately Characterized**	**AM Samples from Building* have Elevated Levels or Not Adequately Characterized, No SDS Samples[1]**
Building 3-380 Drainage Area						
No proposed samples						
Parking Lot Drainage Area						
No proposed samples						
All Areas						
Approximate total number of samples:			*96*			
PCBs and metals analyses:			*96*			
SVOCs analyses:			*32*			
Dioxins/furans analyses:			*20*			

Notes:
COPCs = Contaminants of Potential Concern
SDS = Storm drain solids
AM = Anthropogenic media (paint, caulk, surface debris, CJM, pavement, other building materials)
NS = No samples have been collected in the storm drain structure since 2004.
SVOCs includes PAHs, phthalates, and phenols
COPCs are considered elevated if the Exceedance Factor (EF) for the sample falls within the orange or red range.

1. Individual COPCs were considered when evaluating SD structures that have not been sampled since 2004.
2. One SDS sample with a PCB yellow EF range was collected near Building 3-818; numerous paint samples had elevated levels on this building; therefore, surface debris sampling is proposed.

* Buildings considered were constructed or renovated during or before 1985.
^ The number of proposed surface debris samples per building or structure area is indicated after each bullet in Part 2b. More than one sample may be needed to spatially cover large buildings or multiple structures.
The data set for storm drain solids includes results from 2004 to 2012.
Samples will be collected from the SD polygon area listed and possibly also from the surrounding areas, depending on field determination of drainage direction.
The total number of proposed samples excludes field duplicates and equipment rinse samples.