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STORMWATER SOURCE CONTROL EVALUATION REPORT – FINAL UPDATE

Terminal 4 Slip 3

FINAL

Prepared for

Port of Portland
11040 N Lombard Street
Portland, OR 97203

Prepared by

Geosyntec Consultants, Inc.
920 SW Sixth Ave, Suite 600
Portland, OR 97204

Project PNW0524E

September 2024

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ACRONYMS AND ABBREVIATIONS

BEHP	Bis(2-ethylhexyl)phthalate
BES	City of Portland Bureau of Environmental Services
BMP	Best Management Practice
City CPD	City of Portland Commission of Public Docks
COI	Contaminant of Interest
DDx	Dichlorodiphenyldichloro compounds, including DDT, DDE, and DDD
DEQ	Oregon Department of Environmental Quality
DMR	Discharge Monitoring Report
ECSI	Environmental Cleanup Site Information
EPA	U.S. Environmental Protection Agency
EF	Exceedance Factor
Geosyntec	Geosyntec Consultants, Inc.
KM	Kinder Morgan Bulk Terminals, Inc.
MFA	Maul Foster & Alongi, Inc.
MDL	Method Detection Limit
MRL	Method Reporting Limit
MS4	Municipal Separate Storm Sewer System
PAHs	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyl
PHSS	Portland Harbor Superfund Site
Port	Port of Portland
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
SCE	Source Control Evaluation
SCM	Source Control Measure
SLV	JSCS Screening Level Value (DEQ, 2005)
SW	Stormwater
SWPCP	Stormwater Pollution Control Plan
T4	Terminal 4
TAPE	Technology Assessment Protocol - Ecology
Toyota	Toyota Motors USA, Inc.
TSS	Total Suspended Solids
UPRR	Union Pacific Railroad
VCP	Voluntary Cleanup Program

1 INTRODUCTION

1.1 Purpose

This report presents the results of a stormwater Source Control Evaluation (SCE) for the Port of Portland's (Port's) Terminal 4 (T4) Slip 3 Upland Facility (Site; ECSI No. 272). The Site is located at 11040 N Lombard St in Portland, Oregon, and is within the boundary of the Portland Harbor Superfund Site (PHSS). Stormwater from the Site discharges either directly to the Willamette River, or to Slip 3, which is a channel inlet off the main Willamette River between Piers 4 and 5 where large cargo vessels dock.

This report presents and evaluates the observations documented during 2020-2023 (evaluation period) by stormwater basin, in accordance with Oregon Department of Environmental Quality's (DEQ's) *Guidance for Evaluating the Stormwater Pathway at Upland Sites* (DEQ, 2009). Findings and conclusions from historical reports (pre-2020) are also included where relevant.

1.2 Source Control Objective

The objective of this SCE is to demonstrate that existing and potential sources of contamination at the Site have been addressed and no additional characterization or source control measures (SCMs) are needed at the Site.

1.3 Regulatory Framework

This SCE is being conducted as required by DEQ pursuant to the following:

- Terminal 4 Slip 3 Upland Facility – Consent Judgement No. 0410-10234, Multnomah Circuit Court, October 7, 2004, Section 3.C.

1.4 Report Organization

This report follows DEQ's *Template for a Stormwater Source Control Evaluation Report*, which is Appendix C of DEQ's *Guidance for Evaluating the Stormwater Pathway at Upland Sites* (DEQ, 2017).

- Section 1 introduces the purpose and objectives of this stormwater SCE report
- Section 2 presents a description of the Site, land uses, and previous investigations
- Section 3 describes the Site's potential sources of contaminants of interest (COIs)
- Section 4 presents ongoing management measures at the Site
- Section 5 summarizes recent data and observations
- Section 6 describes SCMs relevant to current-day conditions at the Site
- Section 7 evaluates existing information to determine the source control status of each drainage basin in Slip 3

- Section 8 presents the conclusions of this SCE
- Section 9 provides citations for documents referenced by this report

2 SITE BACKGROUND

2.1 Site Description

T4 occupies approximately 260 acres on the east bank of the lower Willamette River downstream from the St. Johns Bridge in north Portland, Oregon, between River Miles 4.2 and 5.5 (Figure 1). The land is zoned for industrial use. Surrounding areas are occupied by marine, industrial, and commercial operations, with a small residential zone of four tax lots located 200 feet east of the terminal.

The topography of T4 consists primarily of relatively flat areas close to the Willamette River with a steep hillside and bluff located on the east side of the Site. Lower portions of the Site are located approximately 35 feet above mean sea level (NAVD88 datum), while eastern portions of the terminal near Lombard Street are at an elevation of approximately 100 feet. The river water elevation is typically less than 10 feet, with a mean tidal range of about 2 feet. Depth to groundwater is around 15 to 20 feet. The land cover at T4 is a mixture of pervious open space, rail tracks, industrial buildings, and asphalt and concrete pavement.

For the purposes of DEQ oversight the T4 upland area was divided into three sections: Terminal 4 Slip 1 (ECSI No. 2356), Terminal 4 Slip 3 (ECSI No. 272), and the Terminal 4 Auto Storage Area (ECSI No. 172). These areas encompass approximately 98 acres, 27 acres, and 102 acres, respectively. This stormwater SCE is for the T4 Slip 3 Upland Facility.

Slip 3 is bounded by the Terminal 4 Slip 1 Upland Facility to the north, the Union Pacific Railroad right-of-way to the east, the Terminal 4 Auto Storage Area to the south, and the ordinary high water line of the Willamette River at Slip 3 to the west. The Port also owns submerged lands below ordinary high water located in Slip 3.

Two water-related areas within or near T4 Slip 3 are:

- Slip 3 – This contains Pier 4 with Berths 410 and 411 that are the main site of active marine operations (80% occupancy) serving deep-draft, ocean-going vessels. Berths 410 and 411 are located along the north side of Slip 3. The south side of Slip 3 consists of Pier 5 with Former Berth 412, which was removed in 1997 (DEQ, 2003).
- Berth 414 – This is an active berth in the main river south (upriver) of Slip 3. It is used to unload automobiles from deep-draft, ocean-going vessels.

2.2 Stormwater Conveyance System

Nearly all stormwater at the Site either infiltrates or reaches a conveyance system via overland flow and then discharges to the river through an outfall. The Site's stormwater conveyance system is shown in Figure 2.

2.2.1 Drainage Basins

T4 Slip 3 contains four stormwater subbasins of various sizes and drainage characteristics (K1, K2, J, and D; Table 1). Basin D is the southernmost basin at T4 Slip 3 and encompasses Berth 414 on the Willamette River and Pier 5 along the southern portion of Slip 3. Portions of Basin D are within the Toyota Auto Storage Area (ECSI No. 172), which has received a no further action determination. Most of the basin is paved and used for temporary vehicle staging, which is a low-risk industrial use. Current day uses are unrelated to the historic presence of a petroleum pipeline and above-ground storage tanks in the vicinity of Slip 3.

Basins J, K2, and K1 are located north of Basin D at the head of Slip 3, with Basin K1 being the Site's northernmost basin. Basins J and K2 are mostly pervious and are currently unused; Basin K1 is approximately half impervious and is part of the Kinder Morgan leasehold. Basin L, which contains the remainder of the Kinder Morgan leasehold, and whose southern border lies along the north edge of Slip 3, is considered part of the Slip 1 upland facility (ECSI No. 2356) as its main outfall is to Wheeler Bay. Therefore, Basin L is not discussed in this report.

Table 1. T4 Slip 3 Upland Facility Drainage Basins

Drainage Basin	Total Area (ac)	Approximate Percent Impervious
J	3.1	6.5
K1	1.3	57
K2	2.4	9.2
D	19.1	63
Total	*25.9*	*51*

2.2.2 Outfalls

There are two active outfalls discharging from the Slip 3 upland facility (Basins K1 and D), and seven outfalls that are inactive (Figure 2, Table 2).

For the purposes of this report, the following definitions apply:

- *Abandoned* - physically removed or filled and abandoned in-place
- *Inactive* - capped and does not currently discharge stormwater
    - *Capped* – fitted with a secure, tightly fitting, but removable device that blocks flow through the structure; structures that are capped are considered inactive rather than abandoned

The storm line for Basin K2 was videoed in 2023 to verify the presence and connectivity of upstream structures to the outlets. Debris in the pipe prevented the Basin K2 line from being fully investigated, however, it has been capped for nearly three years with no issues. The portion of the pipe that could be viewed during field observations was found to be in good condition. Utility locating work in Basin J identified the presence of a single catch basin, which was filled and abandoned as part of SCMs described in Section 6.

Table 2. Current Status of T4 Slip 3 Outfalls

Drainage Basin	Port Asset ID	Outfall Location	Status
D	STSOUT265	Willamette River near Berth 414	Active
D	STSOUT001056	South side of Slip 3	Inactive
D	STSOUT263	South side of Slip 3	Inactive
D	STSOUT001057	South side of Slip 3	Inactive
D	STSOUT262	South side of Slip 3	Inactive
D	STSOUT261	South side of Slip 3	Inactive
J	STSOUT259	Head of Slip 3	Inactive
K2	STSOUT250	Head of Slip 3	Inactive
K1	STSOUT260	Head of Slip 3	Active

2.3 Site Ownership and Operating History

An exhaustive description of Site ownership and historical land uses by stormwater basin was provided in the 2019 Stormwater Source Control Evaluation Work Plan (2019 Work Plan; Geosyntec, 2019). Additional information is available there, as well as the T4 Slip 3 Remedial Investigation Report (Hart Crowser, 2000). A brief background of Site ownership, land uses, and operations is provided below.

Initial development of T4 began in 1907 by the Union Pacific Railroad (UPRR) for an oil supply dock; the Site was then purchased in 1917 by the City of Portland Commission of Public Docks (City CPD). Construction was completed in 1919. The U.S. Army operated the terminal in the 1940s to serve as a port of embarkation and supply depot to support World War II. The Port of Portland (Port) acquired the terminal from the City CPD in 1971 and is the current owner of the Site. However, portions of the Site have been leased to various tenants since the early 1900s.

Historical operations at T4 as a whole have included loading, unloading, processing, and storage of grain; cold storage; fumigation of cotton and food products; liquid storage (*e.g.,* fertilizer, molasses, tallow, urea, caustic soda, petroleum products, and fats); container food freight; a gasoline station; a salvage yard; operation of a break-bulk berth; a fire boat moorage; importation of ore and ore concentrates, including alumina, bauxite, chromite, chrome ore, coal, copper ores/concentrates, ferro-phosphorous iron ore, manganese, lead concentrate, sulfur, tricaphos, and zinc; and importation of other products, including pencil pitch, soda ash, talc, bentonite clay, coal, coke, and live sheep (Ash Creek Associates, 2009). Handling of pencil pitch was discontinued in 1998 (DEQ, 2003).

T4 is currently used as a marine facility. Operations at the Site consist of ship and rail loading/unloading; bulk cargo, liquid, and grain handling and storage; and general equipment and operational maintenance. Portions of T4 Slip 3 are currently leased out to tenants Kinder Morgan Bulk Terminals, Inc. (KM) for handling soda ash, and Toyota Motors USA, Inc. (Toyota) for automobiles (Figure 3).

In general, these current cargos do not include chemicals that are COIs in Portland Harbor sediments and are contained in such a manner that they have low risk of release. In addition, the cargo loading, unloading, and handling are conducted in accordance with Best Management Practices (BMPs) to reduce the risk of releases to the river.

Land uses at the Site have not substantially changed since the Site's original stormwater work plan was created in 2007 (2007 SW Work Plan; Ash Creek Associates, Inc./Newfields, 2007).

2.4 Regulatory History

For the Slip 3 upland area, the Port entered into a Voluntary Cleanup Program (VCP) Agreement for Feasibility Study and Source Control Measures with DEQ on June 27, 2002 (LQVC-NWR-02-11). DEQ issued a Record of Decision (ROD) for the Slip 3 upland area and on October 7, 2004; a Consent Judgment between DEQ and the Port was filed in the Circuit Court of Oregon for Multnomah County (No. 0410-10234). The bulk of the regulatory history at the Site is related to this VCP.

Stormwater discharges from T4 are permitted under the Port's Municipal Separate Storm Sewer System (MS4) Discharge Permit No. 101314 (for property and infrastructure owned by the Port), Toyota's 1200-Z Industrial Stormwater Permit File No. 113672 (for infrastructure on Toyota's leasehold), and KM's 1200-Z Industrial Stormwater Permit Facility No. 100025 (for infrastructure on KM's leasehold). KM also holds an industrial pretreatment permit issued by the City of Portland Bureau of Environmental Services (BES) for direct discharge of treated process and industrial exposure water to the sanitary system. KM and Toyota are responsible for legal compliance under their operating agreements, including operational permits, implementation of a Spill Response Plan and a Stormwater Pollution Control Plan (SWPCP), and compliance with the Port's MS4 Discharge Permit. These permits authorize the release of stormwater to the river subject to specified terms and conditions and require the implementation of stormwater BMPs. As part of their SWPCPs, KM and Toyota are required to collect samples and provide discharge monitoring reports (DMRs) to BES as DEQ's authorized agent.

The Port currently has no regulated tanks at T4, and no current activities that qualify for Resource Conservation and Recovery Act (RCRA) generator status. From historical activities, Terminal 4 qualified for reporting (EPA ID number ORD981771546).

Additional historical information was summarized as part of the remedial investigation (Hart Crowser, 2000; Ash Creek Associates, Inc./Newfields 2007b).

2.5 Previous Investigations

A comprehensive summary of previous investigations was provided in the 2019 Work Plan (Geosyntec, 2019). For reference purposes, completed milestone documents related to stormwater and stormwater source controls at T4 Slip 3 are as follows:

- Remedial Investigation (Hart Crowser, 2000)
- Stormwater Source Control Evaluation (2009 SW SCE; Ash Creek Associates, 2009)
- Source Control Completion Report (Ash Creek Associates, 2011)
- Additional Stormwater Sampling Memo (Ash Creek Associates, 2013)
- Additional Source Control Measures Memo (Apex, 2014)
- Source Control Decision Support Data Collection (Geosyntec and GS&P, 2016)
- Soil Infiltration Testing Report (Geosyntec, 2018)
- Stormwater Quality Assessment Work Plan (2019 Work Plan; Geosyntec, 2019)
- Stormwater Source Control Evaluation Report, Terminal 4 Slip 3 (Geosyntec, 2021)
- Basin K1 Bioinfiltration Basin Annual Report (MFA, 2022)
- Source Control Completion Letter, Terminal 4 Slip 3 (Port of Portland, 2023)
- Basin K1 Bioinfiltration Basin Operational Year 2 Comprehensive Report (MFA, 2024)

Additional descriptions of the history of source controls activities and studies performed at the Site were also summarized in the Terminal 4 Sufficiency Assessment Report (Anchor QEA et al., 2022).

Of the Site's four stormwater basins, stormwater has only previously been characterized for Basins D and K1, and stormwater solids have only been previously characterized for Basin D. These data are provided at the end of this report as Historic Data Tables, and are compared to data from other Portland Harbor industrial sites using the DEQ-provided rank order curves in Appendix A. The other basins (J and K2) have never been sampled as they were thought to produce very little stormwater runoff due to their low imperviousness. The 2007 Stormwater Work Plan (Ash Creek Associates, 2007) suggested these basins could be conservatively represented by Basin L.

The following subsections present investigative history and results for each of the Slip 3 drainage basins. Observed concentrations of COIs are compared to Joint Source Control Strategy Screening Level Values (JSCS SLVs; DEQ and EPA, 2005) as exceedance factors (EFs), calculated as the observed concentration divided by the applicable SLV. SLVs are provided as the first two tables in the Historic Data Tables section at the end of this report.

2.5.1 Basin D

The 2009 SW SCE concluded that no further action was needed to control the stormwater pathway in Basin D. The basis for the conclusion was low TSS and constituent concentrations observed and the Downstream Defender® treatment system in place (Ash Creek Associates, 2009).

The current land use is primarily for automobile storage on a paved parking lot area that is regularly swept. The land use and BMPs (primarily the Downstream Defender® treatment system) have not changed since the initial evaluation in the 2007 SW Work Plan and subsequent sampling (Ash Creek Associates, Inc./Newfields, 2007a).

All historical samples come from the main Basin D outfall, and not the capped and inactive minor outfalls along the south edge of Slip 3 (Figure 2 and Table 2).

2.5.1.1 Historical Uses

Basin D was historically used for petroleum-related activities, including UPRR warehouses and subsurface oil pipelines. The pipelines were 10-inch steel pipes used to transfer diesel, No. 6 fuel, and Bunker C oil from Slip 3 to above-ground storage tanks located east of the railroad tracks in the Basin D area. The pipelines and associated facilities were leased and operated by Chevron from 1969 to 1983. The pipelines were removed by the Port between 1997 and 1998 (DEQ, 2003).

The buildings in Basin D were demolished between late 2002 and early 2003, and the area was converted to a parking area for automobile storage which is its current use.

2.5.1.2 Metals

Basin D was sampled for metals because they were a T4 sediment COI (Ash Creek Associates, 2009). The 2009 SW SCE found no correlation between Basin D surface soils and stormwater, and no surface soil within 100 feet of a catch basin contained metals concentrations exceeding probable effect concentrations (Ash Creek Associates, 2009).

As (EF 2.9-6.0), Cd (EF <1-1.4), Cu (EF 1.1 – 3.2), Pb (EF 16.7-74.6), and Zn (EF <1-1.6) were above Screening Level Values (SLVs) in at least one stormwater sample and Cd (EF 1.4), Cr (EF 1.4), Pb (EF 41.9), Hg (EF 1.1), and Zn (EF 1.1) were above SLVs in stormwater solids samples. However, all exceedances were less than 10 times their respective SLVs except for lead in stormwater solids. Stormwater concentrations were below the knee of each curve for Portland Harbor industrial sites. Metals concentrations in stormwater solids were also below the knee of their curve, except lead which was slightly above the knee of the curve.

2.5.1.3 PAHs

Basin D was sampled for PAHs due to historical activities and because it was a sediment COI for T4 (Ash Creek Associates, 2009). Low concentrations of PAHs were detected in surface soil samples during the site RI; however, PAH concentrations in Basin D were low compared to the other basins that were sampled.

The 2009 SW SCE found seven PAHs above SLVs in at least one sample in both stormwater (EF <1-6.1) and stormwater solids (EF 1.3-19.0). However, these occurrences were rare, and all exceedances were less than 10 times their respective SLVs, with the exception of indeno(1,2,3-cd)pyrene in stormwater solids (EF 19.0). All stormwater samples for total PAHs were well below the knee of the curve for Portland Harbor industrial sites. The stormwater solids sample for total PAHs was just below the knee of the curve.

Toyota, the leaseholder for the majority of Basin D, holds a 1200-Z permit for industrial stormwater discharges from their leasehold. While Basin D is not required to be sampled because it contains no activities classified as industrial, Toyota does sample Basins A and B on a quarterly basis under this permit. These basins are located south of Basin D, and both contain new car parking in addition to industrial activities not occurring within Basin D (Figure 4). More recent stormwater data for these basins (water year 2019) show that total PAHs plot on the flat portion of the rank order curves (Figure 5). Considering land use similarity, this suggests the activities in Basin D are not a significant source of PAHs.

2.5.1.4 Pesticides

Basin D was not sampled for pesticides in stormwater because there were no historic land uses suggesting pesticides might be present, and because the basin is mostly paved resulting in low sediment transport. DDE, DDD, DDT, and total DDx were detected in Basin D stormwater solids at concentrations above SLVs during the 2009 SW SCE (EF 42 - 291), however, most of the values were between laboratory MRLs and MDLs due to the low SLVs for these substances. It was determined that, based on current uses and the presence of a Downstream Defender, no further source control measures were needed in Basin D.

2.5.1.5 PCBs

The original SW SCE workplan did not include analysis of Basin D stormwater for PCBs (Ash Creek Associates, Inc./Newfields, 2007a), but this analysis was added to meet Lower Willamette Group objectives (Ash Creek Associates, 2009). The 2009 SW SCE concluded no further source control measures were needed to consider Basin D controlled for the stormwater pathway (Ash Creek Associates, 2009).

Stormwater solids collected for the initial storm water sampling conducted in 2005 (Ash Creek Associates, Inc./Newfields, 2007a) contained no PCB Aroclors at concentrations above SLVs, however, total PCBs were more than 10x the SLV (EF 1023). Stormwater solids samples collected in 2007 had a lower concentration of PCBs (EF 19.4-676). Total PCBs in stormwater samples collected in 2007-2008 (Ash Creek Associates, 2009) were detected above 10x the SLVs (EF 13.4-23.3), but PCB congeners were also detected in all laboratory method blank samples indicating high bias in the PCB sample concentrations. This basin had the lowest concentration of PCB congeners of any of the sampled basins at T4.

2.5.1.6 Phthalates

Basin D was sampled for phthalates because it was a COI in T4 sediments, with the potential to be present at all sites due to its ubiquitous nature (Ash Creek Associates, 2007). The 2009 SW SCE concluded that no further source control measures were needed to consider Basin D controlled for the stormwater pathway (Ash Creek Associates, 2009).

The 2009 SW SCE did not identify any phthalates above SLVs in Basin D stormwater, and only BEHP was detected above SLVs in stormwater solids (EF 51.5). The BEHP concentration was also below the knee of the curve for Portland Harbor sites.

2.5.1.7 Summary

- The 2009 SW SCE concluded that no further action was needed to control the stormwater pathway in Basin D. The basis for the conclusion was the mostly impervious drainage area with low potential for sediment transport, low observed TSS and other COI concentrations, and the presence of the Downstream Defender® treatment system (Ash Creek Associates, 2009).
- For stormwater samples (3 to 4 water quality samples collected in 2007):
    - All constituents were below the knee of the curve for Portland Harbor industrial sites.
    - Except for total PCB congeners, samples with detected constituents were less than 10x their respective SLVs. PCB congeners were detected in all method blank samples indicating high bias in the PCB sample concentrations. PCB Aroclors were not analyzed.
- For stormwater solids samples (1 sample from 2005 and 1 sample from 2007/2008):
    - Lead was above the knee of the curve for Portland Harbor industrial sites. All other constituents were below the knee of the curve for Portland Harbor industrial sites.
    - Except for lead, DDx, indeno(1,2,3)pyrene, BEHP, and total PCB congeners, all detected constituents were below 10x their respective SLVs. Detected PCB Aroclors were below SLVs.
- The current land uses and BMPs identified in the 2007 SW Work Plan have not changed.
- Toyota's recent DMR data suggest that PAHs remain well below the knee-of-the-curve for stormwater at Portland Harbor industrial sites.
- The minor outfalls from Basin D to the south side of Slip 3 are capped and do not discharge. The structures are expected to be removed as part of future redevelopment of the area.

2.5.2 Basins J and K2

Basin J as defined in the 2007 SW Work Plan has since been split into two basins (Basin J and Basin K2), due to the original delineation having two distinct outfalls. Other changes since that analysis include removal of most of the area with rail tracks, removal of the former Gearlocker building, and a re-delineation that added some areas east and south of the original delineation to Basins J and K2.

In the 2007 SW Work Plan, Basin J and K2 stormwater and stormwater solids were not selected for sampling due to their small size and the fact that the flat grade of the basins and the limited impervious area and stormwater infrastructure means that stormwater predominately infiltrates with little potential for runoff. In addition, the 2007 SW Work Plan asserted that findings from Basin L could be conservatively extrapolated to this area.

The current land use is vacant – there are no current operations occurring in Basins J and K2. The only substantive land use change since the 2007 SW Work Plan for these basins is the demolition of the Gearlocker building in 2017.

These basins do not currently discharge stormwater, which is supported by field observations described in Sections 6.2 and 6.3.

2.5.2.1 Historical Uses

Basin J contained the historic Quaker State facility – an oil canning facility which operated from 1953 to 1985. The facility included above-ground storage tanks, which were contained within a concrete containment area and filled via an underground pipeline connecting the east end of Berth 412 to the tanks. The storage tanks and pipeline were removed in 1985 (DEQ, 2003). Oregon Terminal Company operated the facilities in this basin from 1988-1996 and installed two 4,000-gallon underground storage tanks for diesel and gasoline, as well as a wash station connected to the sanitary sewer. All tanks were removed in 1996 (Blasland, Bouck, and Lee, 2005).

2.5.2.2 Summary

- The 2007 SW Work Plan did not propose sampling for Basin J and K2 primarily because of the small size and limited impervious area and stormwater infrastructure. Also, findings from Basin L could be conservatively extrapolated to these areas.
- The current land use has not substantially changed since the 2007 SW Work Plan, except for administratively splitting Basin J into Basins J and K2, and the demolition of the former Gearlocker building in 2017.
- The Basins J and K2 outfalls are capped and do not discharge.

2.5.3 Basin K1

Parts of this basin are covered by KM's 1200-Z permit, so the K1 outfall has been monitored since at least 2014 and additional stormwater sampling by the Port began in 2015 (Geosyntec, 2016). Stormwater solids have not been sampled in Basin K1 as it was previously represented by Basin L.

The current land use is primarily soda ash loading operations conducted by KM. This land use has not changed since the 2007 SW Work Plan; the original delineation of this basin included a small portion of the dock, but that area has been removed because the dock now drains to the sanitary system.

Historic data show that all constituents except PAHs were both well below the knee of the curves for Portland Harbor industrial sites, and less than ten times their respective SLVs.

Stormwater from Basin K1 is controlled with a bioinfiltration basin constructed in 2021, and stormwater discharges through the outfall only occur during large storm events. This large reduction in discharge volume (well over 90 percent of runoff infiltrated) means there has been a large reduction in mass loading of any COIs through the outfall as compared to historic conditions.

2.5.3.1 Historical Uses

Basin K1 has historically had identical land uses to Basin L, and this remains the case. Historical uses include warehousing and rail and ship import and export of materials, including soda ash and pencil pitch.

2.5.3.2 Metals

Basin K1 was sampled for metals as part of Kinder Morgan's 1200-Z permit. As (EF 19.8-173), Cd (EF 2.2-5.7), Cu (EF 2.9-29.3), Pb (EF 27.8-179), and Zn (EF 1.7-12.0) were above Screening Level Values (SLVs) in at least one stormwater samples. As, Cu, and Pb concentrations were sometimes above 10 times their respective SLVs, however, stormwater concentrations were below the knee of each curve for Portland Harbor industrial sites except for As in one sample.

2.5.3.3 PAHs

Basin K1 stormwater was sampled for PAHs as part of KM's 1200-Z permit. Twelve PAHs were found above SLVs in stormwater (EF <1.0-583), with ten being measured at concentrations more than 10 times their respective SLVs. Data were above the knee of the curve in several instances.

2.5.3.4 Pesticides

Basin K1 has been sampled for hexachlorobenzene, aldrin, dieldrin, 4,4'-DDE, 4,4'-DDD, 4,4'-DDT, and chlordane. None of these constituents have ever been detected in Basin K1 stormwater.

2.5.3.5 PCBs

PCBs have never been detected in Basin K1 stormwater.

2.5.3.6 Phthalates

Basin K1 has never been sampled for phthalates, however, phthalates were sampled in Basin L because of historic activities and sediment COIs for T4 (Ash Creek Associates, 2009). Concentrations of BEHP were slightly above the SLV (EF 1.1-1.4) but below the knee of the curve for Portland Harbor following storm system cleanout.

2.5.3.7 Summary

- All constituents except PAHs and As were below the knee of the curve for Portland Harbor industrial sites.
- Most of the stormwater in Basin K1 infiltrates through a bioinfiltration basin, greatly reducing mass loading of any potential COIs through the outfall.

- The current land use has not substantially changed since the 2007 SW Work Plan, except for removing a small portion of the dock from the drainage area delineation where it now drains to the sanitary system.

3 POTENTIAL SOURCES AND CONTAMINANTS OF INTEREST

3.1 Potential Contaminant Sources

There are no known ongoing sources of contamination at the Site – all potential contaminant sources are from historical activities. The remaining COI at the Site as identified in the 2019 Work Plan is PAHs, which, at the time of the VCP, were found in Slip 3 sediments at high concentrations likely due to historical spills of pencil pitch while offloading cargo vessels, and petroleum seepage (including diesel and bunker C type fuels) associated with a former Union Pacific Railroad fuel pipeline. Since these historical releases occurred, numerous remedial actions have been completed within the upland and in-water portions of Slip 3.

Basin D, which is almost entirely paved and is used mostly for storage of new automobiles, has very little potential to release contaminants via current or historical sources from its main outfall. The only other active outfall within Slip 3 is the Basin K1 outfall, which is treated with a bioinfiltration basin and discharges infrequently, only during large or intense storms. See Section 6.4 for a description of this Basin K1 SCM and Section 7.1.3 for a summary of recent performance data.

3.2 Outfall Sediment Data

Data summarized in the 2022 T4 Sufficiency Assessment (Anchor QEA, et al. 2022) show no exceedances of surface soil remedial action levels (RALs) or principal threat waste (PTW) thresholds near the main Basin D outfall. In addition, the T4 Sufficiency Assessment evaluated surface soil data near the Basin D outfall in relation to cleanup levels exceedances and concluded long-term attainment of remedial action objectives are not expected to be delayed or impaired.

Near the Basin K1 outfall surface soil RAL exceedances have been observed for PAHs, PCBs, and dioxins/furans, and PTW exceedances have been observed for PCBs and dioxins/furans (Figure 6). However, the riverbank here is considered conditionally controlled as it is covered almost entirely by riprap, and the remaining erodible surface soils will be addressed based on the on-going remedial design, which is estimated to be completed in 2026. While this data suggests historical sources of COIs to Slip 3 from Basin K1, there are no known ongoing sources of PAHs, PCBs, or dioxins/furans at the Site, and over 90% of long-term average annual stormwater runoff now infiltrates via the bioinfiltration basin.

3.3 Contaminants of Interest

Based on previous assessments, no meaningful changes in land use, and a lack of ongoing sources, there are no remaining COIs for T4 Slip 3.

4 ONGOING STORMWATER MANAGEMENT MEASURES

The Port has implemented numerous source control measures (SCMs) at the Site through various mechanisms, including tenant contracts, the Environmental Management System Program, continual improvement policy, and a Stormwater Master Plan. Non-structural BMP implementations include pavement sweeping, catch basin inserts, conveyance system cleaning, annual cleanout of catch basins, and regular inspections and maintenance of structures, catch basins, and treatment facilities. Currently, stormwater runoff entering the stormwater conveyance system for Basin D is treated by a Downstream Defender®, which was installed in 2004, and which removes sediment and floating solids via low-energy vortex motion.

The Downstream Defender was installed in conformance with the 2000 BES design manual. It is also approved as a Pretreatment device for removal of TSS through the Washington Department of Ecology's Technology Assessment Protocol – Ecology (TAPE) program. As stated in the TAPE approval document, the Downstream Defender will remove at least 80% of 125-micron particles at 583 gpm, 50% of 50-micron particles at 980 gpm, and 80% of 50-micron particles at 400 gpm. As the Downstream Defender in Basin D is a 6-ft diameter unit, the design flow rate of this unit is estimated at 450 gpm (Ecology, 2005).

A bioinfiltration basin for Basin K1 was construction in 2021 and its hydraulic performance has been monitored and documented since that time (MFA, 2023 and MFA, 2024). This system is designed to meet the 1200-Z Tier 2 Corrective Action Response Design Storm Criteria, which is to treat 50% of the 2-year, 24-hour design storm. The system pump station can divert stormwater flows to the bioinfiltration basin at maximum rate of 144 gpm (0.32 cfs; MFA, 2021). Based on long-term modeling, this diversion flow rate is expected to capture and infiltrate greater than 90 percent of long-term average annual stormwater runoff in the basin (Geosyntec, 2020). Since the SCM went online in September 2021, water has only discharged to the Basin K1 outfall twice, each time for less than two hours. The Basin K1 SCM is inspected and maintained per an Operations and Maintenance manual filed with BES.

5 DATA COLLECTION AND INTERPRETATION

This section is not applicable to the current source control evaluation as no data that has not been summarized as part of a previous report was collected, and no additional stormwater data is needed to establish that the stormwater pathway for Slip 3 is controlled.

6 SOURCE CONTROL MEASURES

The 2021 Stormwater Evaluation Report concluded that Slip 3 was controlled for the stormwater pathway, following implementation and confirmation of remaining SCMs. Information collected since that time is presented below.

6.1 Basin D

As described in the 2021 SER, all five minor outfalls from Basin D to Slip 3 were cut at the slip bulkhead wall and capped on January 20, 2021 (Figure 7; Geosyntec, 2021). These five outfalls and associated infrastructure are expected to be fully removed in conjunction with future redevelopment. No notable ponding has been observed in the area since the outfalls were capped.

The only remaining stormwater discharge from Basin D is through the primary outfall to the Willamette River near Berth 414. Stormwater discharged through this outfall is treated by a Downstream Defender®, which was installed in 2004. The 2009 stormwater source control evaluation report (2009 SW SCE) concluded no further action was needed to control the stormwater pathway in Basin D. Land uses in this basin have not changed since the 2009 SW SCE was completed.

6.2 Basin J

No discharge was observed from the Basin J outfall during four storm events in 2020 (2/15/2020, 10/10/2020, 11/5/2020, and 11/12/2020) which ranged from 0.8 inches to 1.12 inches, indicating the outfall is not active. The Port capped the outfall on August 31, 2021 (Geosyntec, 2021). Following the 2021 report the Port conducted additional stormwater infrastructure investigations for administrative confirmation, which identified a single remaining catch basin in Basin J. This catch basin was abandoned in May 2023. No ponding issues have been observed following the catch basin was abandoned. No additional upstream infrastructure is known to be connected to the Basin J outfall. Figure 8 shows photos of the SCMs in Basin J.

6.3 Basin K2

The 2021 Stormwater Evaluation Report (Geosyntec, 2021) documented that there was no discharge observed from the Basin K2 outfall during four storm events in 2020 (2/15/2020, 10/10/2020, 11/5/2020, and 11/12/2020) which ranged from 0.8 inches to 1.12 inches, indicating the outfall is not active. The Port capped the outfall on August 31, 2021 (Geosyntec, 2021). No upstream infrastructure is known to be connected to the Basin K2 outfall.

An additional catch basin which was previously thought to be part of Basin K2 was found to be connected to Basin K1 in late 2021 when stormwater was observed to be discharging through the Basin K1 outfall while the diversion manhole connected to the bioinfiltration basin was not bypassing stormwater. The catch basin was capped on January 13, 2022. Ponding that overtopped a small berm between Basins K1 and K2 was observed during a particularly wet period from February 27, 2022, through March 3, 2022, during which 4.11 inches of rain fell over five days, including a maximum 24 hour rainfall depth of 2.16 inches (approximately equal to the 2-year, 24-hour storm for the Site according to NOAA Atlas 2). The Port implemented additional SCMs in November 2022 to control ponding observed during larger storm events, including grading and scarifying the ground and installing wattles perpendicular to the slope to promote disperse infiltration. Figure 10 shows photos of the SCMs in Basin K2. No major ponding has been observed in the area since implementation of the SCMs.

6.4 Basin K1

A permanent stormwater SCM for Basin K1 was constructed in 2021. This SCM consists of a pump station that diverts runoff from Basin K1 up to at least the 1200-Z Tier 2 storm (half of the

2-year storm) to a bioinfiltration basin for treatment and infiltration (Figure 9). The performance of the SCM has been verified and documented since it was constructed, including in the most recent report, the Basin K1 Bioinfiltration Basin Operational Year 2 Comprehensive Report (MFA, 2022), approved by DEQ on 26 February 2024. The report concludes that, based on data collected to date, the bioinfiltration basin is operating as designed. The O&M Plan will continue to be followed, including reporting to DEQ.

7 SOURCE CONTROL EVALUATION

7.1 Data Evaluation

7.1.1 Basin D

The five minor outfalls to Slip 3 are inactive – they are capped, and while the upstream structures (pipes and catch basins) remain in place, the Port plans to remove or formally abandon these structures in-place as part of future redevelopment.

For the main outfall to the Willamette River, the 2009 stormwater source control evaluation report concluded no further action was needed to control the stormwater pathway in Basin D; the basis for the conclusion was low TSS and COI concentrations observed, plus the presence of the Downstream Defender® treatment system (Ash Creek Associates, 2009). This conclusion is still valid, as land uses in this basin have not changed since the 2009 SW SCE was completed.

In addition, recent stormwater data from adjacent basins collected by Toyota in accordance with its 1200-Z permit, which provides a conservative estimate of COI discharges from the main Basin D outfall, suggest COIs, such as PAHs, remain well below the knee-of-the-curve for stormwater as compared to other Portland Harbor industrial sites.

7.1.2 Basins K2 and J

There are no above-ground conveyances connected to the Basins K2 or J outfalls, and the outfalls are capped. The Port does not intend to fully remove or abandon these outfalls, however, as there is no pathway for water to flow through these outfalls, they are considered inactive. Therefore, both basins are controlled for the stormwater pathway.

7.1.3 Basin K1

Stormwater from Basin K1 is controlled via treatment and infiltration with a bioinfiltration basin. The T4 Sufficiency Assessment shows the Basin K1 bioinfiltration basin is expected to reduce both cPAH and total PAH mass loading by over 80 percent as a long-term annual average. During the second operational year (July 2022 through June 2023), the SCM infiltrated an estimated 98.9 percent of stormwater runoff from the basin (MFA, 2024).

The SCM's performance has been and continues to be monitored and reported to DEQ (MFA, 2023 and MFA, 2024) in accordance with the O&M plan on file with BES. The Basin K1 SCM is effective in controlling contamination to the Willamette River via the stormwater pathway (MFA, 2024). Based on the approved O&M plan, the final report for the K1 SCM will be submitted to DEQ on or before October 1, 2026.

7.2 Other Lines of Evidence

In addition to the inactive outfalls that are no longer discharging stormwater and the continued operation and maintenance of the Basin K1 infiltration basin and Basin D end-of-pipe treatment described above, there are other lines of evidence that the stormwater pathway will continue to be controlled. For example, any redevelopment that occurs in the Slip 3 upland area will be subject to the City of Portland Stormwater Management Manual (SWMM), which requires the management of stormwater for any development or redevelopment that creates or replaces 500 sf or more of impervious area. The SWMM prioritizes onsite infiltration to the maximum extent practicable and requires treatment for stormwater not infiltrated prior to discharging offsite. In addition, ongoing compliance with the Port's MS4 permit, tenant lease agreements, and 1200-Z permits held by tenants Toyota and Kinder Morgan will ensure there will be ongoing inspection and maintenance of stormwater infrastructure, identification and control of potential pollutant sources, and implementation of non-structural source controls such as pavement sweeping. Overall, these programs and activities will help to keep the existing SCMs functioning as intended, ensure new SCMs are implemented when needed, and that the stormwater pathway remains controlled.

8 FINDING AND CONCLUSIONS

Based on DEQ guidance for presenting findings and conclusions, the following is summarized based on this investigation study (DEQ, 2017).

1. Existing and potential facility-related contaminant sources have been identified and characterized.
    - Previous studies over the past 20+ years established potential sources of contaminants. This is discussed extensively in the 2019 Work Plan.
    - There have been no significant changes in land uses since investigations began at the Site 20+ years ago.
    - There are no known significant ongoing sources of COIs to stormwater at the Site.
2. Contaminant sources are being controlled to the extent feasible.
    - The main outfall from Basin D drains mostly paved area with little potential for contaminant accumulation, and is serviced by a Downstream Defender® treatment unit which minimizes TSS loading to the river. Previous investigations of this outfall have demonstrated it is controlled and no additional source control or performance monitoring is needed.
    - Stormwater from Basin K1 is controlled with an end-of-pipe bioinfiltration basin.
    - No other basins have active stormwater discharges.

3. If pre- and post-SCM data was collected, post-SCM data supports the conclusion that the SCM is effective.
    - Data collected from the Basin K1 show the SCM infiltrated an estimated 98.9 percent of stormwater runoff from the basin during the second year of operation (July 2022 through June 2023; MFA, 2024).
    - There have been no issues with ponding observed following the capping of outfalls in Basins D, J, and K2.
4. Adequate measures are in place to ensure source control and good stormwater management measures occur in the future.
    - Port outfalls are covered under the Port's MS4 permit. The Port will continue to follow the requirements of the permit and will continue to implement its maintenance and inspection program at the facility.
    - Toyota will continue to implement its operations and maintenance (O&M) program as required under their 1200-Z permit.
    - KM will inspect and maintain the bioinfiltration basin servicing Basin K1 in accordance with the approved O&M plan. Regular reporting will be required per KM's 1200-Z permit.
5. Contaminants in stormwater that continue to exceed SLVs in spite of SCMs and stormwater management measures are not likely to result in sediment contamination in the receiving waterbody or contribute to unacceptable risk.
    - The two outfalls that remain active both have SCMs in place which are designed to remove TSS from stormwater prior to discharge.
    - Modeling has shown the Basin K1 bioinfiltration basin is expected to reduce both cPAH and total PAH mass loading by over 80 percent as a long-term annual average (Anchor QEA et al., 2022).

The status of the T4 Slip 3 upland basins is summarized in Figure 11. Based on this SCE report, the next step for the stormwater pathway at T4 Slip 3 is for DEQ to issue a source control determination.

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FIGURES

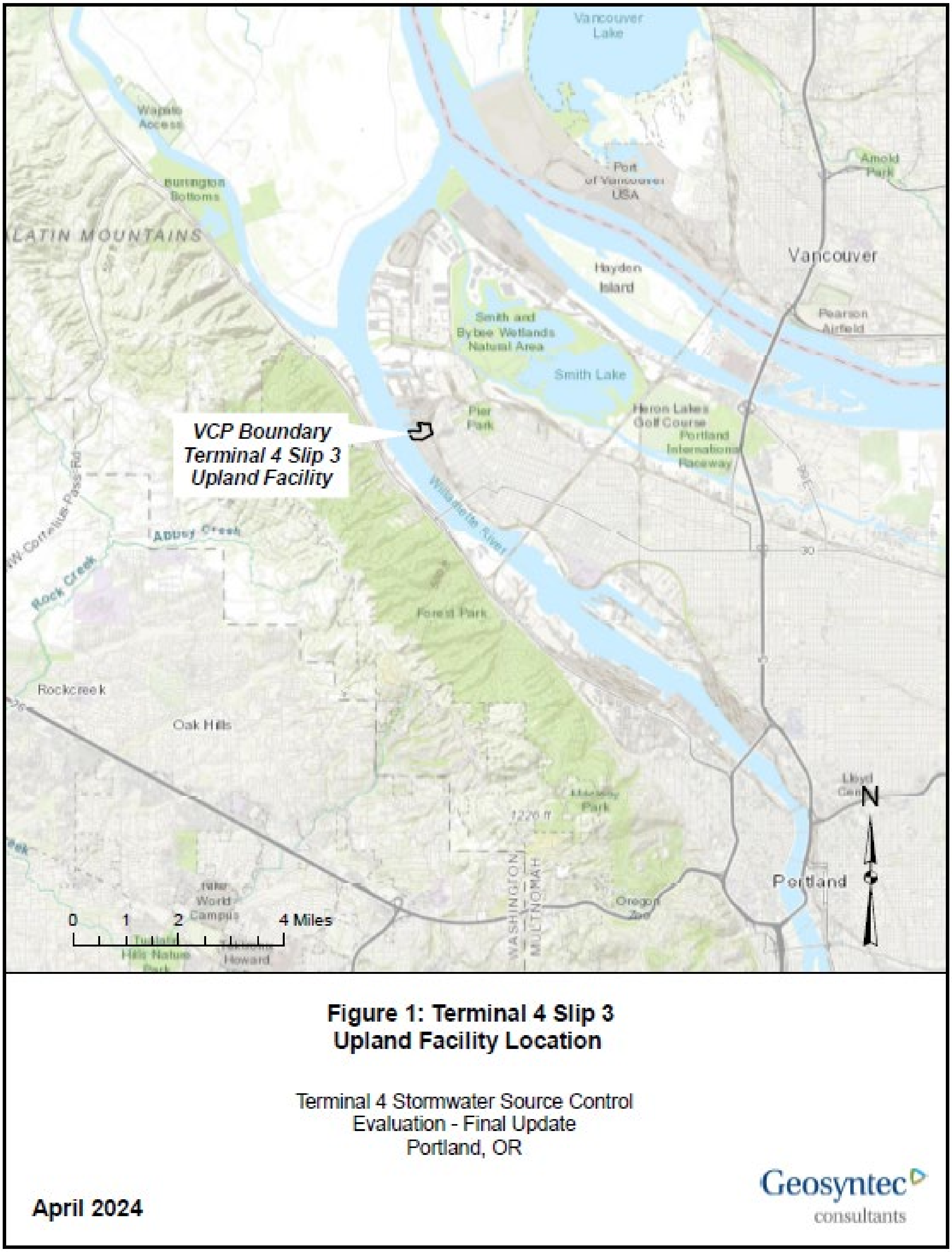


Figure 1. Terminal 4 Slip 3 Upland Facility Location

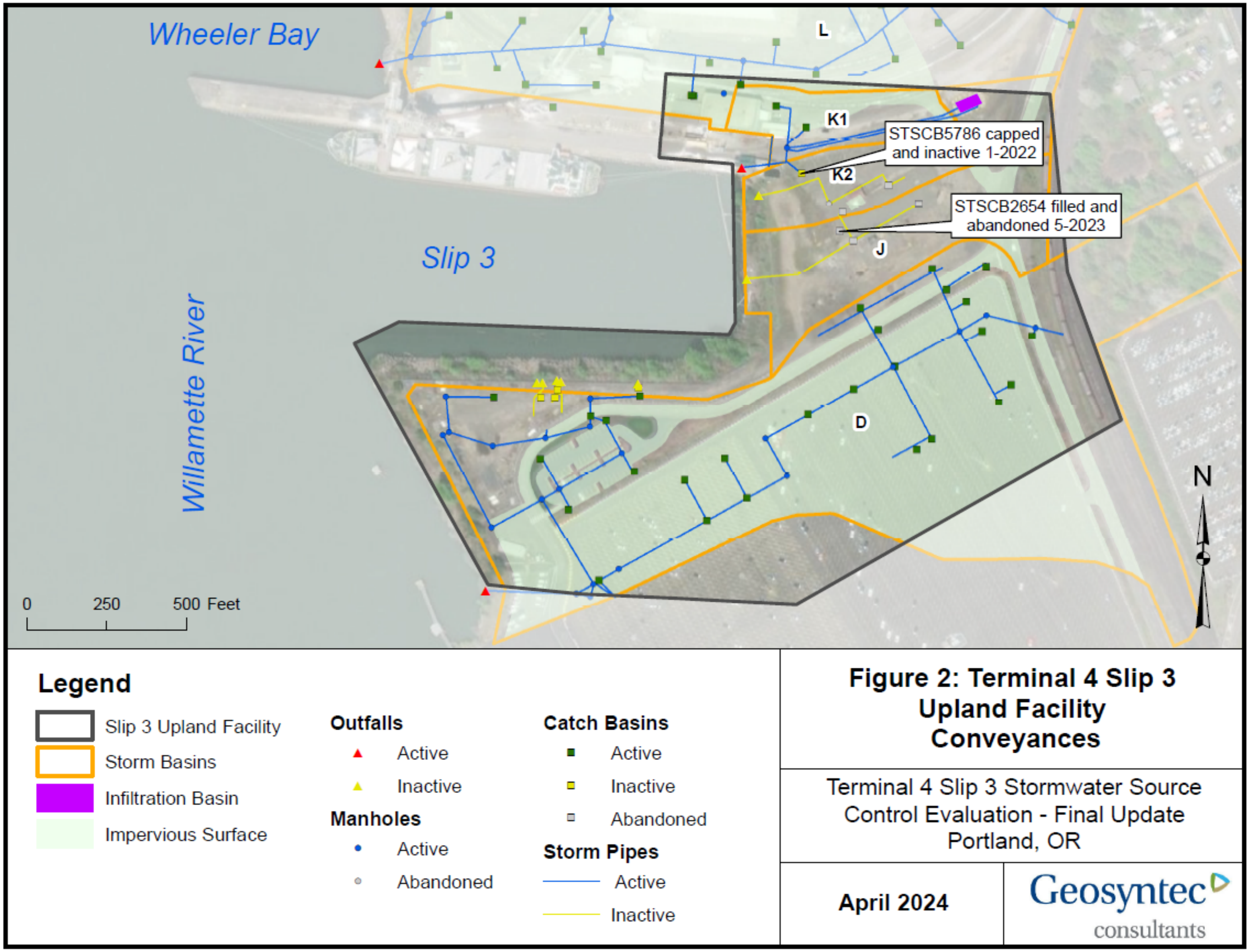


Figure 2. Terminal 4 Slip 3 Upland Facility Stormwater Conveyance System

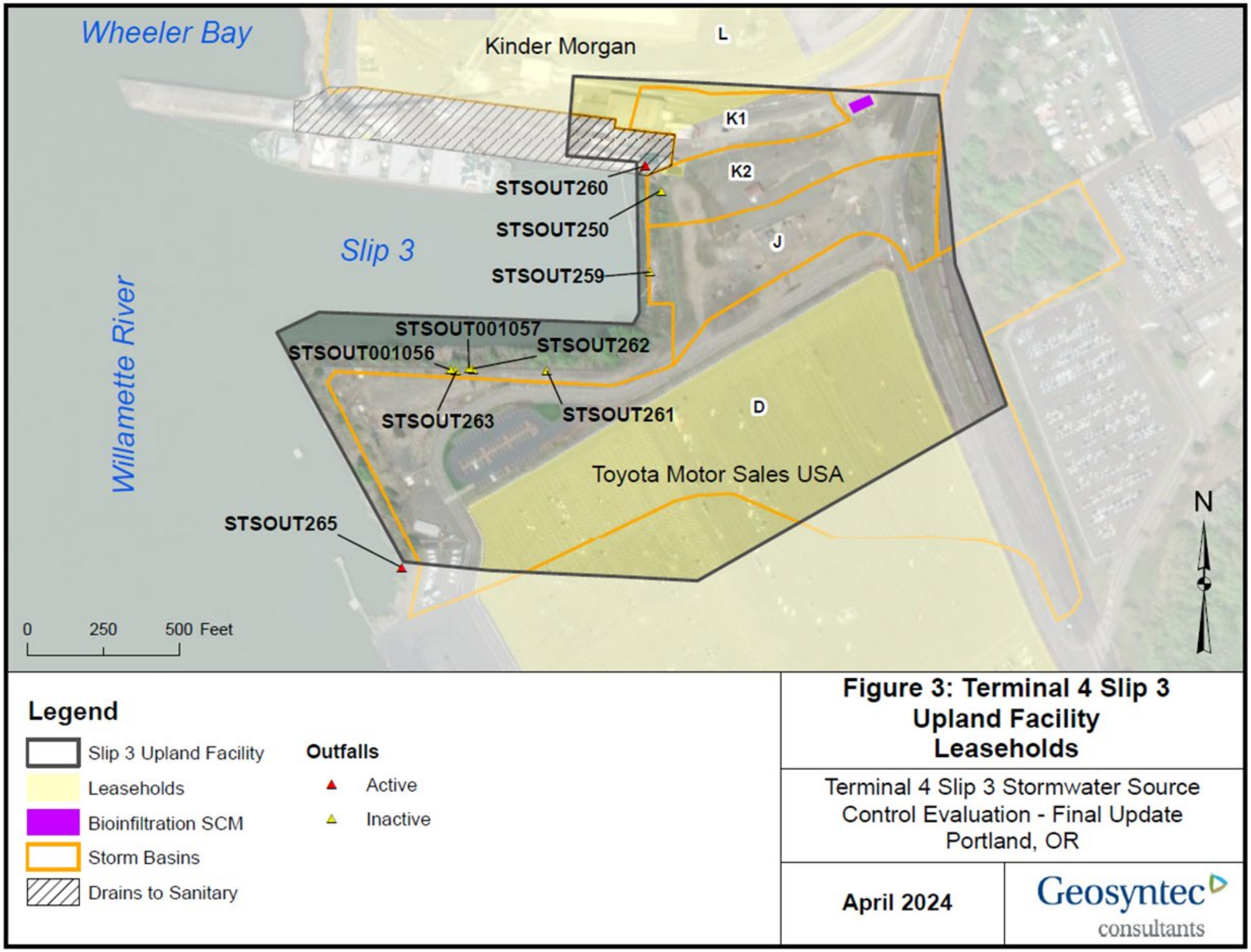
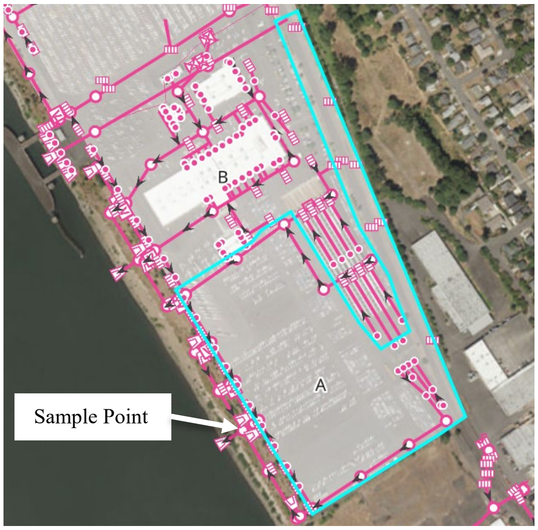


Figure 3. Terminal 4 Slip 3 Upland Facility Leaseholds



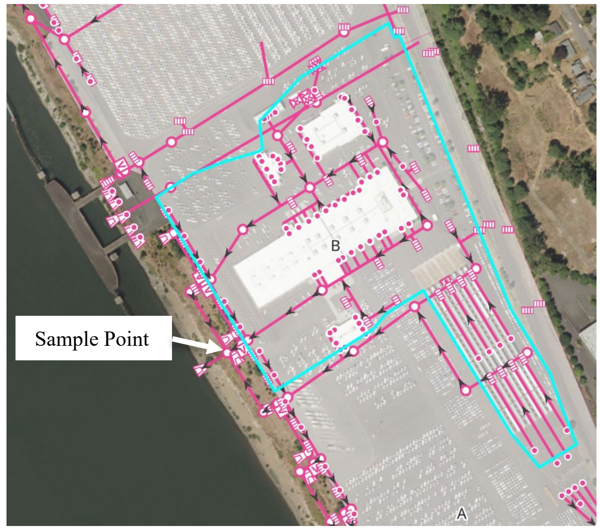


Figure 4. Port of Portland Terminal 4, Basins A and B

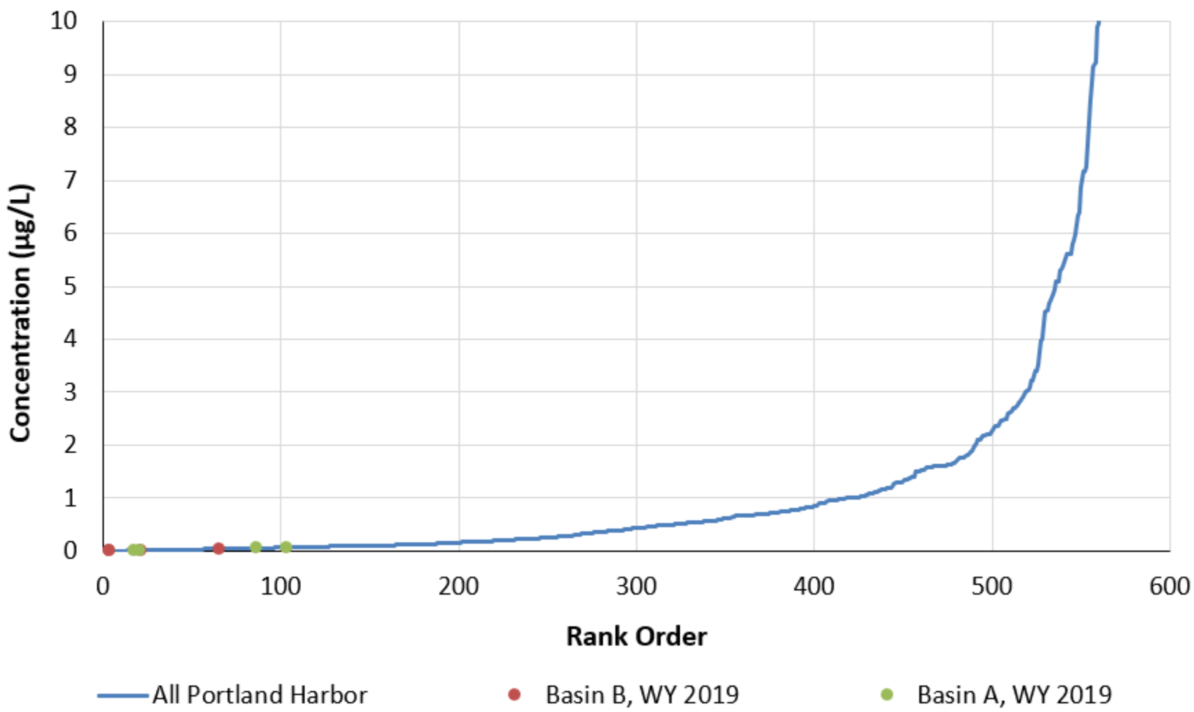


Figure 5. Total PAHs in Stormwater in T4 Toyota 1200-Z Basins in Water Year 2019 Compared to "Typical" Industrial Stormwater in the Portland Harbor (Geosyntec, 2019)

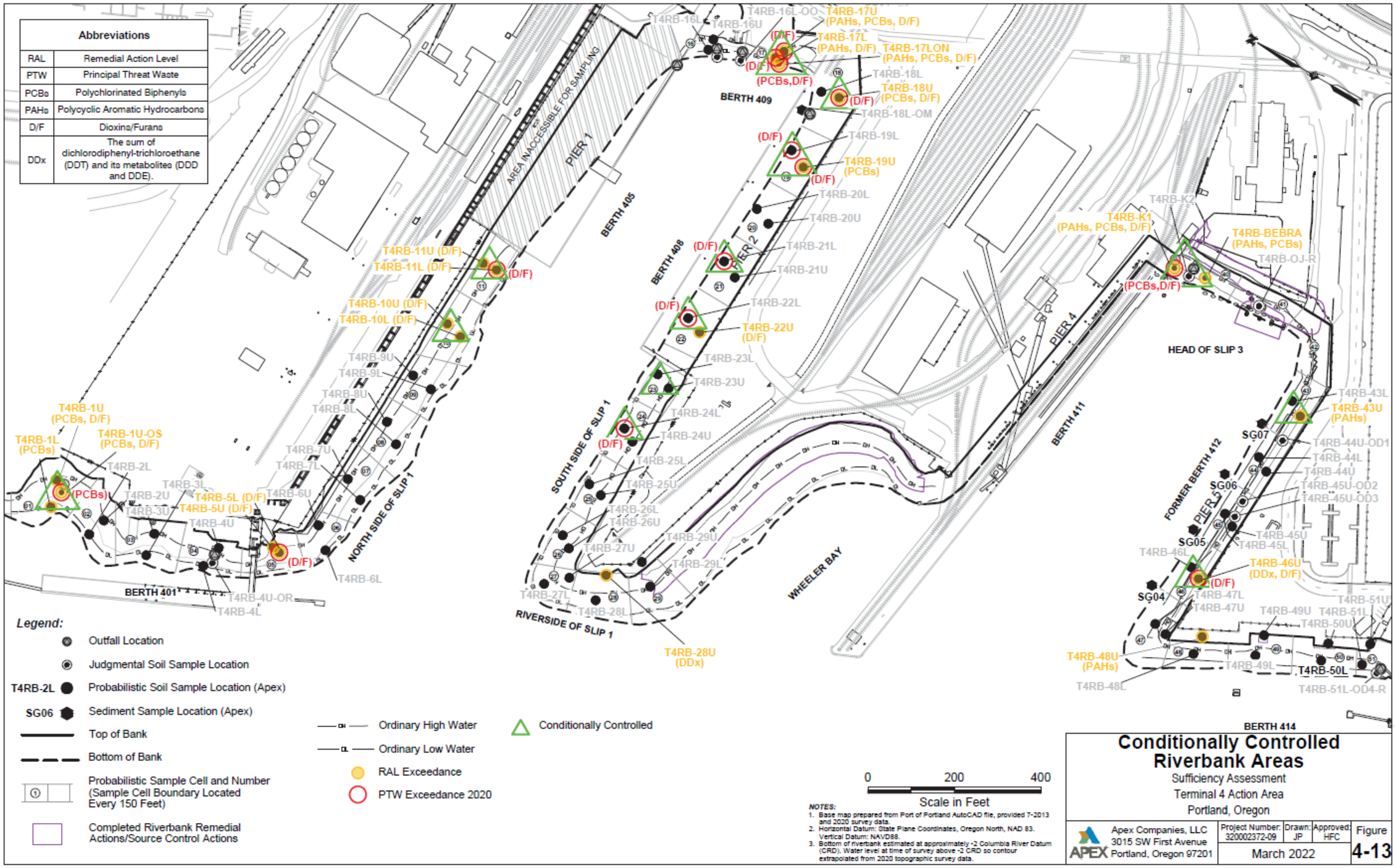


Figure 6. Slip 3 Conditionally Controlled Riverbank Areas (Anchor QEA et al., 2022)

Figure 7. Basin D Stormwater SCMs (left: capped outfall STSOUT262 and STSOUT001057; right: capped outfall STSOUT263)

Figure 8. Basin J Stormwater SCMs (left: capped outfall; right: abandoned catch basin)

Figure 9. Basin K1 Stormwater SCMs (left: diversion manhole with pump; right: bioinfiltration basin)

Figure 10. Basin K2 Stormwater SCMs (left: capped Basin K2 outfall; center: top view of capped Basin K2 outfall; right: scarified surface and wattles)

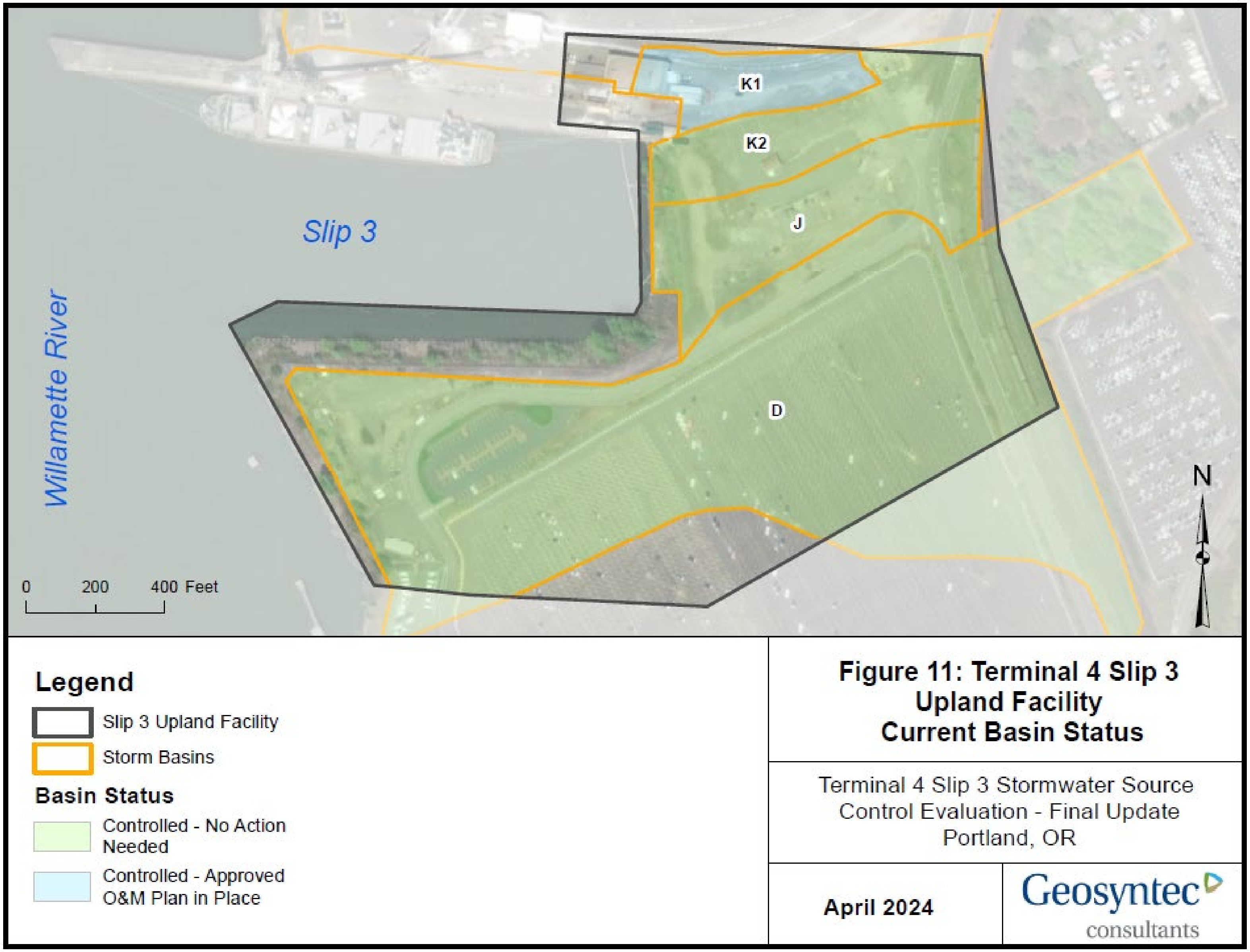


Figure 11. Terminal 4 Slip 3 Upland Facility Current Basin Status

HISTORIC DATA TABLES

Geosyntec consultants

JSCS SLVs Used for Stormwater Comparisons

Category	Constituent	SLV (µg/L)	10x SLV (µg/L)
Metals	Aluminum	50-200[1]	500-2000[1]
	Antimony	6	60
	Arsenic	0.045	0.45
	Cadmium	0.094	0.94
	Chromium	100	1000
	Copper	2.7	27
	Lead	0.54	5.4
	Mercury	0.77	7.7
	Nickel	16	160
	Selenium	5	50
	Silver	0.12	1.2
	Zinc	36	360
PAHs	Naphthalene	0.2	2
	2-Methylnaphthalene	0.2	2
	Acenaphthylene	0.2	2
	Acenaphthene	0.2	2
	Fluorene	0.2	2
	Phenanthrene	0.2	2
	Anthracene	0.2	2
	Fluoranthene	0.2	2
	Pyrene	0.2	2
	Benzo(a)anthracene	0.018	0.18
	Chrysene	0.018	0.18
	Benzo(b)fluoranthene	0.018	0.18
	Benzo(k)fluoranthene	0.018	0.18
	Benzo(a)pyrene	0.018	0.18
	Indeno(1,2,3-cd)pyrene	0.018	0.18
	Dibenz(a,h)anthracene	0.018	0.18
	Benzo(g,h,i)perylene	0.2	2
PCBs	Aroclor 1016	0.96	9.6
	Aroclor 1221	0.034	0.34
	Aroclor 1232	0.034	0.34
	Aroclor 1242	0.034	0.34
	Aroclor 1248	0.034	0.34
	Aroclor 1254	0.033	0.33
	Aroclor 1260	0.034	0.34
	Total PCBs	0.00064	0.0064
Phthalates	Bis(2-ethylhexyl) phthalate	2.2	22
	Di-n-octyl phthalate	3	30

[1]The aluminum criteria are pH-dependent. As pH was not measured for the sample described in this report, aluminum results were not compared to SLVs.

JSCS SLVs Used for Stormwater Solids Comparisons

Category	Constituent	SLV (µg/L)	10x SLV (µg/L)
Metals	Antimony	64	640
	Arsenic	7	70
	Cadmium	1	10
	Chromium	111	1110
	Copper	149	1490
	Lead	17	170
	Mercury	0.07	0.7
	Nickel	48.6	486
	Selenium	2	20
	Silver	5	50
	Zinc	459	4590
PAHs	Naphthalene	561	5610
	2-Methylnaphthalene	200	2000
	Acenaphthylene	200	2000
	Acenaphthene	300	3000
	Fluorene	536	5360
	Phenanthrene	1170	11700
	Anthracene	845	8450
	Fluoranthene	2230	22300
	Pyrene	1520	15200
	Benzo(a)anthracene	1050	10500
	Chrysene	1290	12900
	Benzo(k)fluoranthene	13000	130000
	Benzo(a)pyrene	1450	14500
	Indeno(1,2,3-cd)pyrene	100	1000
	Dibenz(a,h)anthracene	1300	13000
	Benzo(g,h,i)perylene	300	3000
Pesticides	DDE	0.33	3.3
	DDD	0.33	3.3
	DDT	0.33	3.3
	Total DDx	0.33	3.3
PCBs	Aroclor 1016	530	5300
	Aroclor 1248	1500	15000
	Aroclor 1254	300	3000
	Aroclor 1260	200	2000
	Total PCBs	0.39	3.9
Phthalates	Bis(2-ethylhexyl) phthalate	330	3300

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin D	3/24/2007	ISCO Composite	PAHs	2-Methylnaphthalene	0.01	µg/l	J	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	2-Methylnaphthalene	ND	µg/l	U	-	0.02
Basin D	5/3/2007	ISCO Composite	PAHs	2-Methylnaphthalene	0.013	µg/l	J	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	2-Methylnaphthalene	0.0069	µg/l	J,J3	-	-
Basin D	11/16/2007	ISCO Composite	PAHs	2-Methylnaphthalene	ND	µg/l	U	-	0.0024
Basin K1	4/10/2015	Grab	PAHs	2-Methylnaphthalene	ND	µg/l	U	0.02	0.0023
Basin K1	5/11/2015	Grab	PAHs	2-Methylnaphthalene	0.01	µg/l	J	-	-
Basin K1	10/10/2015	Grab	PAHs	2-Methylnaphthalene	ND	µg/l	U	0.385	0.385
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	2-Methylnaphthalene	ND	µg/l	U	0.0769	0.762
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	2-Methylnaphthalene	ND	µg/l	U	0.0769	0.025
Basin K1	11/23/2015	Grab	PAHs	2-Methylnaphthalene	ND	µg/l	U	0.0769	0.0385
Basin K1	6/8/2018		Pesticides	4,4'-DDD	ND	pg/l	U	-	57100
Basin K1	10/5/2018		Pesticides	4,4'-DDD	ND	pg/l	U	-	113000
Basin K1	11/23/2018		Pesticides	4,4'-DDD	ND	pg/l	U	-	56600
Basin K1	1/21/2019		Pesticides	4,4'-DDD	ND	pg/l	U	-	56600
Basin K1	2/14/2019		Pesticides	4,4'-DDD	ND	pg/l	U	-	57100
Basin K1	10/14/2014		Pesticides	4,4'-DDE	ND	pg/l	U	-	5380
Basin K1	3/14/2015		Pesticides	4,4'-DDE	ND	pg/l	U	-	4810
Basin K1	10/25/2015		Pesticides	4,4'-DDE	ND	pg/l	U	-	9800
Basin K1	1/17/2016		Pesticides	4,4'-DDE	ND	pg/l	U	-	9520
Basin K1	10/26/2016		Pesticides	4,4'-DDE	ND	pg/l	U	-	9520
Basin K1	2/15/2017		Pesticides	4,4'-DDE	ND	pg/l	U	-	9430
Basin K1	6/8/2018		Pesticides	4,4'-DDE	ND	pg/l	U,i	-	29500
Basin K1	10/5/2018		Pesticides	4,4'-DDE	ND	pg/l	U	-	18900
Basin K1	11/23/2018		Pesticides	4,4'-DDE	ND	pg/l	U	-	9430
Basin K1	1/21/2019		Pesticides	4,4'-DDE	ND	pg/l	U	-	9430
Basin K1	2/14/2019		Pesticides	4,4'-DDE	ND	pg/l	U	-	9520
Basin K1	10/14/2014		Pesticides	4,4'-DDT	ND	pg/l	U	-	32300
Basin K1	3/14/2015		Pesticides	4,4'-DDT	ND	pg/l	U	-	28800
Basin K1	10/25/2015		Pesticides	4,4'-DDT	ND	pg/l	U	-	58800
Basin K1	1/17/2016		Pesticides	4,4'-DDT	ND	pg/l	U	-	57100
Basin K1	10/26/2016		Pesticides	4,4'-DDT	ND	pg/l	U	-	57100
Basin K1	2/15/2017		Pesticides	4,4'-DDT	ND	pg/l	U	-	56600

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	6/8/2018		Pesticides	4,4'-DDT	ND	pg/l	U,i	-	77100
Basin K1	10/5/2018		Pesticides	4,4'-DDT	ND	pg/l	U	-	113000
Basin K1	11/23/2018		Pesticides	4,4'-DDT	ND	pg/l	U	-	56600
Basin K1	1/21/2019		Pesticides	4,4'-DDT	ND	pg/l	U	-	56600
Basin K1	2/14/2019		Pesticides	4,4'-DDT	ND	pg/l	U	-	57100
Basin D	3/24/2007	ISCO Composite	PAHs	Acenaphthene	0.0089	µg/l	J	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Acenaphthene	0.0066	µg/l	J,J3	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Acenaphthene	0.011	µg/l	J	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Acenaphthene	0.0068	µg/l	J,J3	-	-
Basin D	11/16/2007	ISCO Composite	PAHs	Acenaphthene	ND	µg/l	U	-	0.0046
Basin K1	10/14/2014	Grab	PAHs	Acenaphthene	ND	µg/l	U	-	0.815
Basin K1	3/14/2015	Grab	PAHs	Acenaphthene	ND	µg/l	U	-	0.971
Basin K1	4/10/2015	Grab	PAHs	Acenaphthene	0.0049	µg/l	J	0.02	0.0044
Basin K1	5/11/2015	Grab	PAHs	Acenaphthene	0.026	µg/l	=	-	-
Basin K1	10/10/2015	Grab	PAHs	Acenaphthene	ND	µg/l	U	0.192	0.192
Basin K1	10/25/2015	Grab	PAHs	Acenaphthene	ND	µg/l	U	-	0.781
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Acenaphthene	ND	µg/l	U	0.0385	0.381
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Acenaphthene	0.15	µg/l	=	0.0385	0.0192
Basin K1	11/23/2015	Grab	PAHs	Acenaphthene	0.118	µg/l	=	0.0385	0.0192
Basin K1	1/17/2016	Grab	PAHs	Acenaphthene	ND	µg/l	U	-	0.952
Basin K1	10/26/2016	Grab	PAHs	Acenaphthene	ND	µg/l	U	-	0.95
Basin K1	2/15/2017	Grab	PAHs	Acenaphthene	ND	µg/l	U	-	0.943
Basin K1	6/8/2018	Grab	PAHs	Acenaphthene	ND	µg/l	U	-	0.943
Basin K1	10/5/2018	Grab	PAHs	Acenaphthene	ND	µg/l	U	-	0.952
Basin K1	11/23/2018	Grab	PAHs	Acenaphthene	ND	µg/l	U	-	0.943
Basin K1	1/21/2019	Grab	PAHs	Acenaphthene	ND	µg/l	U	-	0.971
Basin K1	2/14/2019	Grab	PAHs	Acenaphthene	ND	µg/l	U	-	0.952
Basin D	3/24/2007	ISCO Composite	PAHs	Acenaphthylene	0.0042	µg/l	J	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Acenaphthylene	0.0053	µg/l	J	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Acenaphthylene	ND	µg/l	U	-	0.02
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Acenaphthylene	ND	µg/l	U	-	0.02
Basin D	11/16/2007	ISCO Composite	PAHs	Acenaphthylene	ND	µg/l	U	-	0.0036
Basin K1	4/10/2015	Grab	PAHs	Acenaphthylene	ND	µg/l	U	0.02	0.0034

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	5/11/2015	Grab	PAHs	Acenaphthylene	ND	µg/l	U	-	0.0034
Basin K1	10/10/2015	Grab	PAHs	Acenaphthylene	ND	µg/l	U	0.192	0.192
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Acenaphthylene	ND	µg/l	U	0.0385	0.381
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Acenaphthylene	ND	µg/l	U	0.0385	0.025
Basin K1	11/23/2015	Grab	PAHs	Acenaphthylene	0.0383	µg/l	=	0.0385	0.0192
Basin K1	10/14/2014		Pesticides	Aldrin	ND	pg/l	U	-	32300
Basin K1	3/14/2015		Pesticides	Aldrin	ND	pg/l	U	-	28800
Basin K1	10/25/2015		Pesticides	Aldrin	ND	pg/l	U	-	58800
Basin K1	1/17/2016		Pesticides	Aldrin	ND	pg/l	U	-	57100
Basin K1	10/26/2016		Pesticides	Aldrin	ND	pg/l	U	-	57100
Basin K1	2/15/2017		Pesticides	Aldrin	ND	pg/l	U	-	56600
Basin K1	6/8/2018		Pesticides	Aldrin	ND	pg/l	U	-	57100
Basin K1	10/5/2018		Pesticides	Aldrin	ND	pg/l	U	-	113000
Basin K1	11/23/2018		Pesticides	Aldrin	ND	pg/l	U	-	56600
Basin K1	1/21/2019		Pesticides	Aldrin	ND	pg/l	U	-	56600
Basin K1	2/14/2019		Pesticides	Aldrin	ND	pg/l	U	-	57100
Basin D	3/24/2007	ISCO Composite	Metals	Aluminum	161	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	Metals	Aluminum	267	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite-DUP	Metals	Aluminum	262	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite	Metals	Aluminum	128	µg/l	=	-	-
Basin D	11/16/2007	ISCO Composite	Metals	Aluminum	145	µg/l	=	-	-
Basin K1	10/14/2014	Grab	Metals	Aluminum	1290	µg/l	=	-	-
Basin K1	3/14/2015	Grab	Metals	Aluminum	1170	µg/l	=	-	-
Basin K1	10/25/2015	Grab	Metals	Aluminum	1360	µg/l	=	-	-
Basin K1	11/13/2015	Grab	Metals	Aluminum	1230	µg/l	=	-	-
Basin K1	1/17/2016	Grab	Metals	Aluminum	844	µg/l	=	-	-
Basin K1	4/4/2016	Grab	Metals	Aluminum	951	µg/l	=	-	-
Basin K1	10/26/2016	Grab	Metals	Aluminum	811	µg/l	=	-	-
Basin K1	11/22/2016	Grab	Metals	Aluminum	891	µg/l	=	-	-
Basin K1	2/15/2017	Grab	Metals	Aluminum	2360	µg/l	=	-	-
Basin K1	3/15/2017	Grab	Metals	Aluminum	1370	µg/l	=	-	-
Basin K1	6/8/2018	Grab	Metals	Aluminum	6150	µg/l	=	-	-
Basin K1	10/5/2018	Grab	Metals	Aluminum	2500	µg/l	=	-	-

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	11/23/2018	Grab	Metals	Aluminum	2950	µg/l	=	-	-
Basin K1	1/21/2019	Grab	Metals	Aluminum	932	µg/l	=	-	-
Basin K1	2/14/2019	Grab	Metals	Aluminum	1330	µg/l	=	-	-
Basin D	3/24/2007	ISCO Composite	PAHs	Anthracene	0.012	µg/l	J	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Anthracene	0.0063	µg/l	J,J3	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Anthracene	0.013	µg/l	J	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Anthracene	0.0059	µg/l	J,J3	-	-
Basin D	11/16/2007	ISCO Composite	PAHs	Anthracene	ND	µg/l	U	-	0.0038
Basin K1	10/14/2014	Grab	PAHs	Anthracene	ND	µg/l	U	-	0.815
Basin K1	3/14/2015	Grab	PAHs	Anthracene	ND	µg/l	U	-	0.971
Basin K1	4/10/2015	Grab	PAHs	Anthracene	0.014	µg/l	J	0.02	0.0036
Basin K1	5/11/2015	Grab	PAHs	Anthracene	0.027	µg/l	=	-	-
Basin K1	10/10/2015	Grab	PAHs	Anthracene	ND	µg/l	U	0.192	0.192
Basin K1	10/25/2015	Grab	PAHs	Anthracene	ND	µg/l	U	-	0.781
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Anthracene	0.14	µg/l	=	0.0385	0.0192
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Anthracene	ND	µg/l	U	0.0385	0.381
Basin K1	11/23/2015	Grab	PAHs	Anthracene	0.231	µg/l	=	0.0385	0.0192
Basin K1	1/17/2016	Grab	PAHs	Anthracene	ND	µg/l	U	-	0.952
Basin K1	10/26/2016	Grab	PAHs	Anthracene	ND	µg/l	U	-	0.95
Basin K1	2/15/2017	Grab	PAHs	Anthracene	ND	µg/l	U	-	0.943
Basin K1	6/8/2018	Grab	PAHs	Anthracene	ND	µg/l	U	-	0.943
Basin K1	10/5/2018	Grab	PAHs	Anthracene	ND	µg/l	U	-	0.952
Basin K1	11/23/2018	Grab	PAHs	Anthracene	ND	µg/l	U	-	0.943
Basin K1	1/21/2019	Grab	PAHs	Anthracene	ND	µg/l	U	-	0.971
Basin K1	2/14/2019	Grab	PAHs	Anthracene	ND	µg/l	U	-	0.952
Basin D	3/24/2007	ISCO Composite	Metals	Antimony	0.15	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	Metals	Antimony	0.341	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite-DUP	Metals	Antimony	0.335	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite	Metals	Antimony	0.28	µg/l	=	-	-
Basin D	11/16/2007	ISCO Composite	Metals	Antimony	0.236	µg/l	=	-	-
Basin K1	10/14/2014		PCBs	Aroclor 1016	ND	µg/l	U	-	0.108
Basin K1	3/14/2015		PCBs	Aroclor 1016	ND	µg/l	U	-	0.0962
Basin K1	10/25/2015		PCBs	Aroclor 1016	ND	µg/l	U	-	0.098

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	1/17/2016		PCBs	Aroclor 1016	ND	µg/l	U	-	0.0952
Basin K1	10/26/2016		PCBs	Aroclor 1016	ND	µg/l	U	-	0.0952
Basin K1	6/8/2018		PCBs	Aroclor 1016	ND	µg/l	U	-	0.0935
Basin K1	10/5/2018		PCBs	Aroclor 1016	ND	µg/l	U	-	0.0962
Basin K1	11/23/2018		PCBs	Aroclor 1016	ND	µg/l	U	-	0.0943
Basin K1	1/21/2019		PCBs	Aroclor 1016	ND	µg/l	U	-	0.0962
Basin K1	2/14/2019		PCBs	Aroclor 1016	ND	µg/l	U	-	0.0943
Basin K1	10/14/2014		PCBs	Aroclor 1221	ND	µg/l	U	-	0.108
Basin K1	3/14/2015		PCBs	Aroclor 1221	ND	µg/l	U	-	0.0962
Basin K1	10/25/2015		PCBs	Aroclor 1221	ND	µg/l	U	-	0.098
Basin K1	1/17/2016		PCBs	Aroclor 1221	ND	µg/l	U	-	0.0952
Basin K1	10/26/2016		PCBs	Aroclor 1221	ND	µg/l	U	-	0.0952
Basin K1	6/8/2018		PCBs	Aroclor 1221	ND	µg/l	U	-	0.0935
Basin K1	10/5/2018		PCBs	Aroclor 1221	ND	µg/l	U	-	0.0962
Basin K1	11/23/2018		PCBs	Aroclor 1221	ND	µg/l	U	-	0.0943
Basin K1	1/21/2019		PCBs	Aroclor 1221	ND	µg/l	U	-	0.0962
Basin K1	2/14/2019		PCBs	Aroclor 1221	ND	µg/l	U	-	0.0943
Basin K1	10/14/2014		PCBs	Aroclor 1232	ND	µg/l	U	-	0.108
Basin K1	3/14/2015		PCBs	Aroclor 1232	ND	µg/l	U	-	0.0962
Basin K1	10/25/2015		PCBs	Aroclor 1232	ND	µg/l	U	-	0.098
Basin K1	1/17/2016		PCBs	Aroclor 1232	ND	µg/l	U	-	0.0952
Basin K1	10/26/2016		PCBs	Aroclor 1232	ND	µg/l	U	-	0.0952
Basin K1	6/8/2018		PCBs	Aroclor 1232	ND	µg/l	U	-	0.0935
Basin K1	10/5/2018		PCBs	Aroclor 1232	ND	µg/l	U	-	0.0962
Basin K1	11/23/2018		PCBs	Aroclor 1232	ND	µg/l	U	-	0.0943
Basin K1	1/21/2019		PCBs	Aroclor 1232	ND	µg/l	U	-	0.0962
Basin K1	2/14/2019		PCBs	Aroclor 1232	ND	µg/l	U	-	0.0943
Basin K1	10/14/2014		PCBs	Aroclor 1242	ND	µg/l	U	-	0.108
Basin K1	3/14/2015		PCBs	Aroclor 1242	ND	µg/l	U	-	0.0962
Basin K1	10/25/2015		PCBs	Aroclor 1242	ND	µg/l	U	-	0.098
Basin K1	1/17/2016		PCBs	Aroclor 1242	ND	µg/l	U	-	0.0952
Basin K1	10/26/2016		PCBs	Aroclor 1242	ND	µg/l	U	-	0.0952
Basin K1	6/8/2018		PCBs	Aroclor 1242	ND	µg/l	U	-	0.0935

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	10/5/2018		PCBs	Aroclor 1242	ND	µg/l	U	-	0.0962
Basin K1	11/23/2018		PCBs	Aroclor 1242	ND	µg/l	U	-	0.0943
Basin K1	1/21/2019		PCBs	Aroclor 1242	ND	µg/l	U	-	0.0962
Basin K1	2/14/2019		PCBs	Aroclor 1242	ND	µg/l	U	-	0.0943
Basin K1	10/14/2014		PCBs	Aroclor 1248	ND	µg/l	U	-	0.108
Basin K1	3/14/2015		PCBs	Aroclor 1248	ND	µg/l	U	-	0.0962
Basin K1	10/25/2015		PCBs	Aroclor 1248	ND	µg/l	U	-	0.098
Basin K1	1/17/2016		PCBs	Aroclor 1248	ND	µg/l	U	-	0.0952
Basin K1	10/26/2016		PCBs	Aroclor 1248	ND	µg/l	U	-	0.0952
Basin K1	6/8/2018		PCBs	Aroclor 1248	ND	µg/l	U	-	0.0935
Basin K1	10/5/2018		PCBs	Aroclor 1248	ND	µg/l	U	-	0.0962
Basin K1	11/23/2018		PCBs	Aroclor 1248	ND	µg/l	U	-	0.0943
Basin K1	1/21/2019		PCBs	Aroclor 1248	ND	µg/l	U	-	0.0962
Basin K1	2/14/2019		PCBs	Aroclor 1248	ND	µg/l	U	-	0.0943
Basin K1	10/14/2014		PCBs	Aroclor 1254	ND	µg/l	U	-	0.108
Basin K1	3/14/2015		PCBs	Aroclor 1254	ND	µg/l	U	-	0.0962
Basin K1	10/25/2015		PCBs	Aroclor 1254	ND	µg/l	U	-	0.098
Basin K1	1/17/2016		PCBs	Aroclor 1254	ND	µg/l	U	-	0.0952
Basin K1	10/26/2016		PCBs	Aroclor 1254	ND	µg/l	U	-	0.0952
Basin K1	6/8/2018		PCBs	Aroclor 1254	ND	µg/l	U	-	0.0935
Basin K1	10/5/2018		PCBs	Aroclor 1254	ND	µg/l	U	-	0.0962
Basin K1	11/23/2018		PCBs	Aroclor 1254	ND	µg/l	U	-	0.0943
Basin K1	1/21/2019		PCBs	Aroclor 1254	ND	µg/l	U	-	0.0962
Basin K1	2/14/2019		PCBs	Aroclor 1254	ND	µg/l	U	-	0.0943
Basin K1	10/14/2014		PCBs	Aroclor 1260	ND	µg/l	U	-	0.108
Basin K1	3/14/2015		PCBs	Aroclor 1260	ND	µg/l	U	-	0.0962
Basin K1	10/25/2015		PCBs	Aroclor 1260	ND	µg/l	U	-	0.098
Basin K1	1/17/2016		PCBs	Aroclor 1260	ND	µg/l	U	-	0.0952
Basin K1	10/26/2016		PCBs	Aroclor 1260	ND	µg/l	U	-	0.0952
Basin K1	6/8/2018		PCBs	Aroclor 1260	ND	µg/l	U	-	0.0935
Basin K1	10/5/2018		PCBs	Aroclor 1260	ND	µg/l	U	-	0.0962
Basin K1	11/23/2018		PCBs	Aroclor 1260	ND	µg/l	U	-	0.0943
Basin K1	1/21/2019		PCBs	Aroclor 1260	ND	µg/l	U	-	0.0962

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	2/14/2019		PCBs	Aroclor 1260	ND	µg/l	U	-	0.0943
Basin D	3/24/2007	ISCO Composite	Metals	Arsenic	0.139	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	Metals	Arsenic	0.27	µg/l	J2	-	-
Basin D	5/3/2007	ISCO Composite-DUP	Metals	Arsenic	0.26	µg/l	J2	-	-
Basin D	5/20/2007	ISCO Composite	Metals	Arsenic	0.265	µg/l	=	-	-
Basin D	11/16/2007	ISCO Composite	Metals	Arsenic	0.13	µg/l	=	-	-
Basin K1	4/10/2015	Grab	Metals	Arsenic	7.8	µg/l	=	0.1	0.02
Basin K1	5/11/2015	Grab	Metals	Arsenic	0.89	µg/l	=	0.1	0.02
Basin K1	11/7/2015	Grab	Metals	Arsenic	1.3	µg/l	=	-	-
Basin K1	11/23/2015	Grab	Metals	Arsenic	1.9	µg/l	=	-	-
Basin D	3/24/2007	ISCO Composite	PAHs	Benz[a]anthracene	0.04	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Benz[a]anthracene	0.067	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Benz[a]anthracene	0.019	µg/l	J,J3	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Benz[a]anthracene	0.017	µg/l	J,J3	-	-
Basin D	11/16/2007	ISCO Composite	PAHs	Benz[a]anthracene	ND	µg/l	U	-	0.0028
Basin K1	10/14/2014	Grab	PAHs	Benz[a]anthracene	2.9	µg/l	=	-	-
Basin K1	3/14/2015	Grab	PAHs	Benz[a]anthracene	1.63	µg/l	=	-	-
Basin K1	4/10/2015	Grab	PAHs	Benz[a]anthracene	0.08	µg/l	=	0.02	0.0026
Basin K1	5/11/2015	Grab	PAHs	Benz[a]anthracene	0.23	µg/l	=	-	-
Basin K1	10/10/2015	Grab	PAHs	Benz[a]anthracene	3.12	µg/l	M	0.192	0.192
Basin K1	10/25/2015	Grab	PAHs	Benz[a]anthracene	2.73	µg/l	=	-	-
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Benz[a]anthracene	2	µg/l	=	0.0385	0.0192
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Benz[a]anthracene	2.53	µg/l	M	0.0385	0.0192
Basin K1	11/23/2015	Grab	PAHs	Benz[a]anthracene	2.47	µg/l	=	0.0385	0.0192
Basin K1	1/17/2016	Grab	PAHs	Benz[a]anthracene	2.02	µg/l	=	-	-
Basin K1	10/26/2016	Grab	PAHs	Benz[a]anthracene	ND	µg/l	U,M	-	0.95
Basin K1	2/15/2017	Grab	PAHs	Benz[a]anthracene	1.93	µg/l	=	-	-
Basin K1	6/8/2018	Grab	PAHs	Benz[a]anthracene	1.19	µg/l	M	-	-
Basin K1	10/5/2018	Grab	PAHs	Benz[a]anthracene	3.09	µg/l	=	-	-
Basin K1	11/23/2018	Grab	PAHs	Benz[a]anthracene	1.6	µg/l	=	-	-
Basin K1	1/21/2019	Grab	PAHs	Benz[a]anthracene	ND	µg/l	U	-	0.971
Basin K1	2/14/2019	Grab	PAHs	Benz[a]anthracene	1.22	µg/l	M	-	-
Basin D	3/24/2007	ISCO Composite	PAHs	Benzo(a)pyrene	0.052	µg/l	=	-	-

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin D	5/3/2007	ISCO Composite	PAHs	Benzo(a)pyrene	0.054	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Benzo(a)pyrene	0.019	µg/l	J,J3,J6	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Benzo(a)pyrene	0.021	µg/l	J3,J6	-	-
Basin D	11/16/2007	ISCO Composite	PAHs	Benzo(a)pyrene	0.023	µg/l	=	-	-
Basin K1	10/14/2014	Grab	PAHs	Benzo(a)pyrene	5.65	µg/l	=	-	-
Basin K1	3/14/2015	Grab	PAHs	Benzo(a)pyrene	3.36	µg/l	=	-	-
Basin K1	4/10/2015	Grab	PAHs	Benzo(a)pyrene	0.13	µg/l	=	0.02	0.0043
Basin K1	5/11/2015	Grab	PAHs	Benzo(a)pyrene	0.43	µg/l	=	-	-
Basin K1	10/10/2015	Grab	PAHs	Benzo(a)pyrene	6.51	µg/l	=	0.192	0.192
Basin K1	10/25/2015	Grab	PAHs	Benzo(a)pyrene	5.46	µg/l	=	-	-
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Benzo(a)pyrene	3.1	µg/l	=	0.0385	0.0192
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Benzo(a)pyrene	4.38	µg/l	=	0.0385	0.0192
Basin K1	11/23/2015	Grab	PAHs	Benzo(a)pyrene	4.36	µg/l	=	0.0385	0.0192
Basin K1	1/17/2016	Grab	PAHs	Benzo(a)pyrene	3.74	µg/l	=	-	-
Basin K1	10/26/2016	Grab	PAHs	Benzo(a)pyrene	1.67	µg/l	=	-	-
Basin K1	2/15/2017	Grab	PAHs	Benzo(a)pyrene	3.79	µg/l	=	-	-
Basin K1	6/8/2018	Grab	PAHs	Benzo(a)pyrene	2.49	µg/l	=	-	-
Basin K1	10/5/2018	Grab	PAHs	Benzo(a)pyrene	6.59	µg/l	=	-	-
Basin K1	11/23/2018	Grab	PAHs	Benzo(a)pyrene	3.19	µg/l	=	-	-
Basin K1	1/21/2019	Grab	PAHs	Benzo(a)pyrene	ND	µg/l	U	-	0.971
Basin K1	2/14/2019	Grab	PAHs	Benzo(a)pyrene	1.97	µg/l	=	-	-
Basin D	3/24/2007	ISCO Composite	PAHs	Benzo(g,h,i)perylene	0.063	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Benzo(g,h,i)perylene	0.028	µg/l	J3	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Benzo(g,h,i)perylene	0.082	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Benzo(g,h,i)perylene	0.023	µg/l	J3	-	-
Basin D	11/16/2007	ISCO Composite	PAHs	Benzo(g,h,i)perylene	0.033	µg/l	=	-	-
Basin K1	4/10/2015	Grab	PAHs	Benzo(g,h,i)perylene	0.16	µg/l	=	0.02	0.0029
Basin K1	5/11/2015	Grab	PAHs	Benzo(g,h,i)perylene	0.53	µg/l	=	-	-
Basin K1	10/10/2015	Grab	PAHs	Benzo(g,h,i)perylene	6.43	µg/l	=	0.192	0.192
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Benzo(g,h,i)perylene	3.9	µg/l	=	0.0385	0.0192
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Benzo(g,h,i)perylene	4.57	µg/l	=	0.0385	0.0192
Basin K1	11/23/2015	Grab	PAHs	Benzo(g,h,i)perylene	4.7	µg/l	=	0.0385	0.0192
Basin D	3/24/2007	ISCO Composite	PAHs	Benzo[b]fluoranthene	0.086	µg/l	=	-	-

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin D	5/3/2007	ISCO Composite	PAHs	Benzo[b]fluoranthene	0.028	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Benzo[b]fluoranthene	0.11	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Benzo[b]fluoranthene	0.03	µg/l	=	-	-
Basin D	11/16/2007	ISCO Composite	PAHs	Benzo[b]fluoranthene	0.054	µg/l	=	-	-
Basin K1	10/14/2014	Grab	PAHs	Benzo[b]fluoranthene	7.5	µg/l	=	-	-
Basin K1	3/14/2015	Grab	PAHs	Benzo[b]fluoranthene	4.32	µg/l	=	-	-
Basin K1	4/10/2015	Grab	PAHs	Benzo[b]fluoranthene	0.18	µg/l	=	0.02	0.0041
Basin K1	5/11/2015	Grab	PAHs	Benzo[b]fluoranthene	0.76	µg/l	=	-	-
Basin K1	10/10/2015	Grab	PAHs	Benzo[b]fluoranthene	10.5	µg/l	M	0.192	0.192
Basin K1	10/25/2015	Grab	PAHs	Benzo[b]fluoranthene	8.37	µg/l	M	-	-
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Benzo[b]fluoranthene	6.76	µg/l	M	0.762	0.381
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Benzo[b]fluoranthene	5.7	µg/l	=	0.762	0.381
Basin K1	11/23/2015	Grab	PAHs	Benzo[b]fluoranthene	6.59	µg/l	M	0.762	0.381
Basin K1	1/17/2016	Grab	PAHs	Benzo[b]fluoranthene	4.96	µg/l	M	-	-
Basin K1	10/26/2016	Grab	PAHs	Benzo[b]fluoranthene	2.4	µg/l	M	-	-
Basin K1	2/15/2017	Grab	PAHs	Benzo[b]fluoranthene	5.07	µg/l	=	-	-
Basin K1	6/8/2018	Grab	PAHs	Benzo[b]fluoranthene	4.5	µg/l	M	-	-
Basin K1	10/5/2018	Grab	PAHs	Benzo[b]fluoranthene	10	µg/l	M	-	-
Basin K1	11/23/2018	Grab	PAHs	Benzo[b]fluoranthene	5.01	µg/l	M	-	-
Basin K1	1/21/2019	Grab	PAHs	Benzo[b]fluoranthene	1.22	µg/l	=	-	-
Basin K1	2/14/2019	Grab	PAHs	Benzo[b]fluoranthene	2.96	µg/l	M	-	-
Basin D	3/24/2007	ISCO Composite	PAHs	Benzo[k]fluoranthene	0.03	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Benzo[k]fluoranthene	0.012	µg/l	J	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Benzo[k]fluoranthene	0.058	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Benzo[k]fluoranthene	0.011	µg/l	J	-	-
Basin D	11/16/2007	ISCO Composite	PAHs	Benzo[k]fluoranthene	ND	µg/l	U	-	0.0027
Basin K1	10/14/2014	Grab	PAHs	Benzo[k]fluoranthene	2.92	µg/l	=	-	-
Basin K1	3/14/2015	Grab	PAHs	Benzo[k]fluoranthene	1.62	µg/l	=	-	-
Basin K1	4/10/2015	Grab	PAHs	Benzo[k]fluoranthene	0.054	µg/l	=	0.02	0.003
Basin K1	5/11/2015	Grab	PAHs	Benzo[k]fluoranthene	0.21	µg/l	=	-	-
Basin K1	10/10/2015	Grab	PAHs	Benzo[k]fluoranthene	3.26	µg/l	M	0.192	0.192
Basin K1	10/25/2015	Grab	PAHs	Benzo[k]fluoranthene	3.04	µg/l	M	-	-
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Benzo[k]fluoranthene	2	µg/l	=	0.762	0.381

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Benzo[k]fluoranthene	2.63	µg/l	M	0.762	0.381
Basin K1	11/23/2015	Grab	PAHs	Benzo[k]fluoranthene	2.04	µg/l	M	0.762	0.381
Basin K1	1/17/2016	Grab	PAHs	Benzo[k]fluoranthene	2.01	µg/l	M	-	-
Basin K1	10/26/2016	Grab	PAHs	Benzo[k]fluoranthene	ND	µg/l	U,M	-	0.95
Basin K1	2/15/2017	Grab	PAHs	Benzo[k]fluoranthene	2.03	µg/l	=	-	-
Basin K1	6/8/2018	Grab	PAHs	Benzo[k]fluoranthene	1.19	µg/l	M	-	-
Basin K1	10/5/2018	Grab	PAHs	Benzo[k]fluoranthene	3.24	µg/l	M	-	-
Basin K1	11/23/2018	Grab	PAHs	Benzo[k]fluoranthene	1.92	µg/l	M	-	-
Basin K1	1/21/2019	Grab	PAHs	Benzo[k]fluoranthene	ND	µg/l	U	-	0.971
Basin K1	2/14/2019	Grab	PAHs	Benzo[k]fluoranthene	1.05	µg/l	M	-	-
Basin D	4/7/2007		Phthalates	Benzyl butyl phthalate	0.062	µg/l	J,J3	-	-
Basin D	11/16/2007	Dup1	Phthalates	Benzyl butyl phthalate	0.077	µg/l	J,J3	-	-
Basin D	11/16/2007		Phthalates	Benzyl butyl phthalate	0.062	µg/l	J,J3	-	-
Basin L	10/23/2010		Phthalates	Benzyl butyl phthalate	ND	µg/l	U	-	0.44
Basin L	11/6/2010		Phthalates	Benzyl butyl phthalate	ND	µg/l	U	-	0.44
Basin L	2/12/2011		Phthalates	Benzyl butyl phthalate	ND	µg/l	U	-	0.49
Basin D	4/7/2007		Phthalates	Bis(2-ethylhexyl) phthalate	1.4	µg/l	J7	-	-
Basin D	11/16/2007	Dup1	Phthalates	Bis(2-ethylhexyl) phthalate	1.8	µg/l	J2	-	-
Basin D	11/16/2007		Phthalates	Bis(2-ethylhexyl) phthalate	1.1	µg/l	J2	-	-
Basin L	10/23/2010		Phthalates	Bis(2-ethylhexyl) phthalate	3	µg/l	J	-	-
Basin L	11/6/2010		Phthalates	Bis(2-ethylhexyl) phthalate	2.5	µg/l	J	-	-
Basin L	2/12/2011		Phthalates	Bis(2-ethylhexyl) phthalate	2.6	µg/l	J	-	-
Basin D	3/24/2007	ISCO Composite	Metals	Cadmium	0.13	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite-DUP	Metals	Cadmium	0.105	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	Metals	Cadmium	0.125	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite	Metals	Cadmium	0.115	µg/l	=	-	-
Basin D	11/16/2007	ISCO Composite	Metals	Cadmium	0.079	µg/l	=	-	-
Basin K1	10/14/2014	Grab	Metals	Cadmium	0.467	µg/l	=	-	-
Basin K1	3/14/2015	Grab	Metals	Cadmium	0.433	µg/l	=	-	-
Basin K1	10/25/2015	Grab	Metals	Cadmium	0.422	µg/l	=	-	-
Basin K1	11/13/2015	Grab	Metals	Cadmium	0.4	µg/l	=	-	-
Basin K1	1/17/2016	Grab	Metals	Cadmium	0.211	µg/l	=	-	-
Basin K1	4/4/2016	Grab	Metals	Cadmium	ND	µg/l	U	-	2

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	10/26/2016	Grab	Metals	Cadmium	0.365	µg/l	=	-	-
Basin K1	11/22/2016	Grab	Metals	Cadmium	0.356	µg/l	=	-	-
Basin K1	2/15/2017	Grab	Metals	Cadmium	0.533	µg/l	=	-	-
Basin K1	3/15/2017	Grab	Metals	Cadmium	0.378	µg/l	=	-	-
Basin K1	3/14/2015		Pesticides	Chlordane	ND	pg/l	U	-	356000
Basin K1	10/25/2015		Pesticides	Chlordane	ND	pg/l	U	-	735000
Basin K1	1/17/2016		Pesticides	Chlordane	ND	pg/l	U	-	714000
Basin K1	10/26/2016		Pesticides	Chlordane	ND	pg/l	U	-	714000
Basin K1	2/15/2017		Pesticides	Chlordane	ND	pg/l	U	-	708000
Basin K1	6/8/2018		Pesticides	Chlordane	ND	pg/l	U	-	714000
Basin K1	10/5/2018		Pesticides	Chlordane	ND	pg/l	U	-	1420000
Basin K1	11/23/2018		Pesticides	Chlordane	ND	pg/l	U	-	708000
Basin K1	1/21/2019		Pesticides	Chlordane	ND	pg/l	U	-	708000
Basin K1	2/14/2019		Pesticides	Chlordane	ND	pg/l	U	-	714000
Basin D	3/24/2007	ISCO Composite	Metals	Chromium	7	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	Metals	Chromium	10.2	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite-DUP	Metals	Chromium	9.88	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite	Metals	Chromium	5.18	µg/l	=	-	-
Basin D	11/16/2007	ISCO Composite	Metals	Chromium	2.08	µg/l	=	-	-
Basin K1	10/14/2014	Grab	Metals	Chromium	2.78	µg/l	=	-	-
Basin K1	3/14/2015	Grab	Metals	Chromium	1.94	µg/l	=	-	-
Basin K1	10/25/2015	Grab	Metals	Chromium	2.67	µg/l	=	-	-
Basin K1	11/13/2015	Grab	Metals	Chromium	2.38	µg/l	=	-	-
Basin K1	1/17/2016	Grab	Metals	Chromium	1.1	µg/l	=	-	-
Basin K1	4/4/2016	Grab	Metals	Chromium	1.68	µg/l	=	-	-
Basin K1	10/26/2016	Grab	Metals	Chromium	1.4	µg/l	=	-	-
Basin K1	11/22/2016	Grab	Metals	Chromium	1.99	µg/l	=	-	-
Basin K1	2/15/2017	Grab	Metals	Chromium	5.89	µg/l	=	-	-
Basin K1	3/15/2017	Grab	Metals	Chromium	2.16	µg/l	=	-	-
Basin D	3/24/2007	ISCO Composite	PAHs	Chrysene	0.073	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Chrysene	0.021	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Chrysene	0.092	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Chrysene	0.02	µg/l	=	-	-

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin D	11/16/2007	ISCO Composite	PAHs	Chrysene	0.04	µg/l	=	-	-
Basin K1	10/14/2014	Grab	PAHs	Chrysene	3.85	µg/l	=	-	-
Basin K1	3/14/2015	Grab	PAHs	Chrysene	2.08	µg/l	=	-	-
Basin K1	4/10/2015	Grab	PAHs	Chrysene	0.095	µg/l	=	0.02	0.0034
Basin K1	5/11/2015	Grab	PAHs	Chrysene	0.56	µg/l	=	-	-
Basin K1	10/10/2015	Grab	PAHs	Chrysene	5.16	µg/l	M	0.192	0.192
Basin K1	10/25/2015	Grab	PAHs	Chrysene	4.01	µg/l	=	-	-
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Chrysene	3	µg/l	=	0.0385	0.0192
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Chrysene	3.99	µg/l	M	0.0385	0.0192
Basin K1	11/23/2015	Grab	PAHs	Chrysene	3.52	µg/l	=	0.0385	0.0192
Basin K1	1/17/2016	Grab	PAHs	Chrysene	2.65	µg/l	=	-	-
Basin K1	10/26/2016	Grab	PAHs	Chrysene	1.11	µg/l	M	-	-
Basin K1	2/15/2017	Grab	PAHs	Chrysene	2.63	µg/l	=	-	-
Basin K1	6/8/2018	Grab	PAHs	Chrysene	2.34	µg/l	M	-	-
Basin K1	10/5/2018	Grab	PAHs	Chrysene	4.84	µg/l	=	-	-
Basin K1	11/23/2018	Grab	PAHs	Chrysene	2.49	µg/l	=	-	-
Basin K1	1/21/2019	Grab	PAHs	Chrysene	ND	µg/l	U	-	0.971
Basin K1	2/14/2019	Grab	PAHs	Chrysene	1.66	µg/l	M	-	-
Basin D	3/24/2007	ISCO Composite	Metals	Copper	2.92	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	Metals	Copper	8.76	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite-DUP	Metals	Copper	8.64	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite	Metals	Copper	6.09	µg/l	=	-	-
Basin D	11/16/2007	ISCO Composite	Metals	Copper	3.09	µg/l	=	-	-
Basin K1	10/14/2014	Grab	Metals	Copper	17.1	µg/l	=	-	-
Basin K1	3/14/2015	Grab	Metals	Copper	11.3	µg/l	=	-	-
Basin K1	10/25/2015	Grab	Metals	Copper	13.2	µg/l	=	-	-
Basin K1	11/13/2015	Grab	Metals	Copper	11.6	µg/l	=	-	-
Basin K1	1/17/2016	Grab	Metals	Copper	24.3	µg/l	=	-	-
Basin K1	4/4/2016	Grab	Metals	Copper	11.3	µg/l	=	-	-
Basin K1	10/26/2016	Grab	Metals	Copper	8.7	µg/l	=	-	-
Basin K1	11/22/2016	Grab	Metals	Copper	7.71	µg/l	=	-	-
Basin K1	2/15/2017	Grab	Metals	Copper	14.6	µg/l	=	-	-
Basin K1	3/15/2017	Grab	Metals	Copper	10.5	µg/l	=	-	-

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	6/8/2018	Grab	Metals	Copper	79.2	µg/l	=	-	-
Basin K1	10/5/2018	Grab	Metals	Copper	32	µg/l	=	-	-
Basin K1	11/23/2018	Grab	Metals	Copper	18.6	µg/l	=	-	-
Basin K1	1/21/2019	Grab	Metals	Copper	8.78	µg/l	=	-	-
Basin K1	2/14/2019	Grab	Metals	Copper	8.85	µg/l	=	-	-
Basin D	3/24/2007	ISCO Composite	PAHs	cPAH/BaPeq	0.0843	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	cPAH/BaPeq	0.0362	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	cPAH/BaPeq	0.123	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	cPAH/BaPeq	0.0331	µg/l	=	-	-
Basin D	11/16/2007	ISCO Composite	PAHs	cPAH/BaPeq	0.0318	µg/l	=	-	0.0028
Basin K1	10/14/2014	Grab	PAHs	cPAH/BaPeq	8.31	µg/l	=	-	-
Basin K1	3/14/2015	Grab	PAHs	cPAH/BaPeq	4.28	µg/l	=	-	0.971
Basin K1	4/10/2015	Grab	PAHs	cPAH/BaPeq	0.208	µg/l	=	0.02	0.0043
Basin K1	5/11/2015	Grab	PAHs	cPAH/BaPeq	0.675	µg/l	=	-	-
Basin K1	10/10/2015	Grab	PAHs	cPAH/BaPeq	9.94	µg/l	=	0.192	0.192
Basin K1	10/25/2015	Grab	PAHs	cPAH/BaPeq	8.2	µg/l	=	-	-
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	cPAH/BaPeq	5.13	µg/l	=	0.762	0.381
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	cPAH/BaPeq	6.95	µg/l	=	0.762	0.381
Basin K1	11/23/2015	Grab	PAHs	cPAH/BaPeq	6.84	µg/l	=	0.762	0.381
Basin K1	1/17/2016	Grab	PAHs	cPAH/BaPeq	4.81	µg/l	=	-	0.952
Basin K1	10/26/2016	Grab	PAHs	cPAH/BaPeq	2.1	µg/l	=	-	0.95
Basin K1	2/15/2017	Grab	PAHs	cPAH/BaPeq	4.89	µg/l	=	-	0.943
Basin K1	6/8/2018	Grab	PAHs	cPAH/BaPeq	3.33	µg/l	=	-	0.943
Basin K1	10/5/2018	Grab	PAHs	cPAH/BaPeq	10.1	µg/l	=	-	-
Basin K1	11/23/2018	Grab	PAHs	cPAH/BaPeq	4.21	µg/l	=	-	0.943
Basin K1	1/21/2019	Grab	PAHs	cPAH/BaPeq	0.122	µg/l	=	-	0.971
Basin K1	2/14/2019	Grab	PAHs	cPAH/BaPeq	2.64	µg/l	=	-	0.952
Basin D	3/24/2007	ISCO Composite	PAHs	Dibenz[a,h]anthracene	0.013	µg/l	J	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Dibenz[a,h]anthracene	0.041	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Dibenz[a,h]anthracene	0.0094	µg/l	J,J3,J2	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Dibenz[a,h]anthracene	0.005	µg/l	J,J3,J2	-	-
Basin D	11/16/2007	ISCO Composite	PAHs	Dibenz[a,h]anthracene	ND	µg/l	U	-	0.0027
Basin K1	10/14/2014	Grab	PAHs	Dibenz[a,h]anthracene	1.09	µg/l	=	-	-

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	3/14/2015	Grab	PAHs	Dibenz[a,h]anthracene	ND	µg/l	U	-	0.971
Basin K1	4/10/2015	Grab	PAHs	Dibenz[a,h]anthracene	0.033	µg/l	=	0.02	0.0025
Basin K1	5/11/2015	Grab	PAHs	Dibenz[a,h]anthracene	0.085	µg/l	=	-	-
Basin K1	10/10/2015	Grab	PAHs	Dibenz[a,h]anthracene	1.28	µg/l	=	0.192	0.192
Basin K1	10/25/2015	Grab	PAHs	Dibenz[a,h]anthracene	1.09	µg/l	=	-	-
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Dibenz[a,h]anthracene	0.82	µg/l	=	0.0385	0.0192
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Dibenz[a,h]anthracene	1.06	µg/l	=	0.0385	0.0192
Basin K1	11/23/2015	Grab	PAHs	Dibenz[a,h]anthracene	1.01	µg/l	=	0.0385	0.0192
Basin K1	1/17/2016	Grab	PAHs	Dibenz[a,h]anthracene	ND	µg/l	U	-	0.952
Basin K1	10/26/2016	Grab	PAHs	Dibenz[a,h]anthracene	ND	µg/l	U	-	0.95
Basin K1	2/15/2017	Grab	PAHs	Dibenz[a,h]anthracene	ND	µg/l	U	-	0.943
Basin K1	6/8/2018	Grab	PAHs	Dibenz[a,h]anthracene	ND	µg/l	U	-	0.943
Basin K1	10/5/2018	Grab	PAHs	Dibenz[a,h]anthracene	1.47	µg/l	=	-	-
Basin K1	11/23/2018	Grab	PAHs	Dibenz[a,h]anthracene	ND	µg/l	U	-	0.943
Basin K1	1/21/2019	Grab	PAHs	Dibenz[a,h]anthracene	ND	µg/l	U	-	0.971
Basin K1	2/14/2019	Grab	PAHs	Dibenz[a,h]anthracene	ND	µg/l	U	-	0.952
Basin D	5/3/2007	ISCO Composite	PAHs	Dibenzofuran	0.0061	µg/l	J,J3	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Dibenzofuran	0.0064	µg/l	J,J3	-	-
Basin K1	4/10/2015	Grab	PAHs	Dibenzofuran	ND	µg/l	U	0.02	0.0093
Basin K1	5/11/2015	Grab	PAHs	Dibenzofuran	0.0099	µg/l	J	-	-
Basin K1	10/10/2015	Grab	PAHs	Dibenzofuran	ND	µg/l	U	0.192	0.192
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Dibenzofuran	ND	µg/l	U	0.0385	0.381
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Dibenzofuran	ND	µg/l	U	0.0385	0.025
Basin K1	11/23/2015	Grab	PAHs	Dibenzofuran	0.0239	µg/l	=	0.0385	0.0192
Basin D	4/7/2007		Phthalates	Dibutyl phthalate	0.15	µg/l	J,J3	-	-
Basin D	11/16/2007	Dup1	Phthalates	Dibutyl phthalate	0.27	µg/l	J3	-	-
Basin D	11/16/2007		Phthalates	Dibutyl phthalate	0.23	µg/l	J3	-	-
Basin L	10/23/2010		Phthalates	Dibutyl phthalate	ND	µg/l	U	-	0.45
Basin L	11/6/2010		Phthalates	Dibutyl phthalate	ND	µg/l	U	-	0.45
Basin L	2/12/2011		Phthalates	Dibutyl phthalate	ND	µg/l	U	-	0.5
Basin K1	10/14/2014		Pesticides	Dieldrin	ND	pg/l	U	-	21500
Basin K1	3/14/2015		Pesticides	Dieldrin	ND	pg/l	U	-	19200
Basin K1	10/25/2015		Pesticides	Dieldrin	ND	pg/l	U	-	39200

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	1/17/2016		Pesticides	Dieldrin	ND	pg/l	U	-	38100
Basin K1	10/26/2016		Pesticides	Dieldrin	ND	pg/l	U	-	38100
Basin K1	2/15/2017		Pesticides	Dieldrin	ND	pg/l	U	-	37700
Basin K1	6/8/2018		Pesticides	Dieldrin	ND	pg/l	U	-	57100
Basin K1	10/5/2018		Pesticides	Dieldrin	ND	pg/l	U	-	113000
Basin K1	11/23/2018		Pesticides	Dieldrin	ND	pg/l	U	-	56600
Basin K1	1/21/2019		Pesticides	Dieldrin	ND	pg/l	U	-	56600
Basin K1	2/14/2019		Pesticides	Dieldrin	ND	pg/l	U	-	57100
Basin D	4/7/2007		Phthalates	Diethyl phthalate	0.13	µg/l	J	-	-
Basin D	11/16/2007		Phthalates	Diethyl phthalate	0.11	µg/l	J	-	-
Basin D	11/16/2007	Dup1	Phthalates	Diethyl phthalate	0.13	µg/l	J	-	-
Basin L	10/23/2010		Phthalates	Diethyl phthalate	ND	µg/l	U	-	0.41
Basin L	11/6/2010		Phthalates	Diethyl phthalate	ND	µg/l	U	-	0.41
Basin L	2/12/2011		Phthalates	Diethyl phthalate	ND	µg/l	U	-	0.46
Basin D	4/7/2007		Phthalates	Dimethyl phthalate	0.28	µg/l	=	-	-
Basin D	11/16/2007		Phthalates	Dimethyl phthalate	0.4	µg/l	=	-	-
Basin D	11/16/2007	Dup1	Phthalates	Dimethyl phthalate	0.41	µg/l	=	-	-
Basin L	10/23/2010		Phthalates	Dimethyl phthalate	ND	µg/l	U	-	0.27
Basin L	11/6/2010		Phthalates	Dimethyl phthalate	ND	µg/l	U	-	0.27
Basin L	2/12/2011		Phthalates	Dimethyl phthalate	ND	µg/l	U	-	0.3
Basin D	4/7/2007		Phthalates	Di-n-octyl phthalate	ND	µg/l	U	-	0.2
Basin D	11/16/2007		Phthalates	Di-n-octyl phthalate	0.34	µg/l	=	-	-
Basin D	11/16/2007	Dup1	Phthalates	Di-n-octyl phthalate	0.3	µg/l	=	-	-
Basin L	10/23/2010		Phthalates	Di-n-octyl phthalate	2.1	µg/l	J	-	-
Basin L	11/6/2010		Phthalates	Di-n-octyl phthalate	ND	µg/l	U	-	0.48
Basin L	2/12/2011		Phthalates	Di-n-octyl phthalate	ND	µg/l	U	-	0.53
Basin D	3/24/2007	ISCO Composite	PAHs	Fluoranthene	0.091	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Fluoranthene	0.091	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Fluoranthene	0.048	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Fluoranthene	0.048	µg/l	=	-	-
Basin D	11/16/2007	ISCO Composite	PAHs	Fluoranthene	0.071	µg/l	=	-	-
Basin K1	10/14/2014	Grab	PAHs	Fluoranthene	3.72	µg/l	=	-	-
Basin K1	3/14/2015	Grab	PAHs	Fluoranthene	2.39	µg/l	=	-	-

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	4/10/2015	Grab	PAHs	Fluoranthene	0.073	µg/l	=	0.02	0.01
Basin K1	5/11/2015	Grab	PAHs	Fluoranthene	0.49	µg/l	=	-	-
Basin K1	10/10/2015	Grab	PAHs	Fluoranthene	4.47	µg/l	=	0.192	0.192
Basin K1	10/25/2015	Grab	PAHs	Fluoranthene	3.82	µg/l	=	-	-
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Fluoranthene	3.43	µg/l	=	0.762	0.381
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Fluoranthene	3.2	µg/l	=	0.762	0.381
Basin K1	11/23/2015	Grab	PAHs	Fluoranthene	3.24	µg/l	=	0.762	0.381
Basin K1	1/17/2016	Grab	PAHs	Fluoranthene	2.74	µg/l	=	-	-
Basin K1	10/26/2016	Grab	PAHs	Fluoranthene	1.02	µg/l	=	-	-
Basin K1	2/15/2017	Grab	PAHs	Fluoranthene	2.6	µg/l	=	-	-
Basin K1	6/8/2018	Grab	PAHs	Fluoranthene	2.06	µg/l	=	-	-
Basin K1	10/5/2018	Grab	PAHs	Fluoranthene	4.01	µg/l	=	-	-
Basin K1	11/23/2018	Grab	PAHs	Fluoranthene	2.03	µg/l	=	-	-
Basin K1	1/21/2019	Grab	PAHs	Fluoranthene	ND	µg/l	U	-	0.971
Basin K1	2/14/2019	Grab	PAHs	Fluoranthene	1.53	µg/l	=	-	-
Basin D	3/24/2007	ISCO Composite	PAHs	Fluorene	0.01	µg/l	J	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Fluorene	0.013	µg/l	J	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Fluorene	0.0061	µg/l	J,J3	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Fluorene	0.0069	µg/l	J,J3	-	-
Basin D	11/16/2007	ISCO Composite	PAHs	Fluorene	ND	µg/l	U	-	0.004
Basin K1	10/14/2014	Grab	PAHs	Fluorene	ND	µg/l	U	-	0.815
Basin K1	3/14/2015	Grab	PAHs	Fluorene	ND	µg/l	U	-	0.971
Basin K1	4/10/2015	Grab	PAHs	Fluorene	ND	µg/l	U	0.02	0.0038
Basin K1	5/11/2015	Grab	PAHs	Fluorene	0.016	µg/l	J	-	-
Basin K1	10/10/2015	Grab	PAHs	Fluorene	ND	µg/l	U	0.192	0.192
Basin K1	10/25/2015	Grab	PAHs	Fluorene	ND	µg/l	U	-	0.781
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Fluorene	0.041	µg/l	=	0.762	0.381
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Fluorene	ND	µg/l	U	0.762	0.381
Basin K1	11/23/2015	Grab	PAHs	Fluorene	0.0414	µg/l	=	0.762	0.381
Basin K1	1/17/2016	Grab	PAHs	Fluorene	ND	µg/l	U	-	0.952
Basin K1	10/26/2016	Grab	PAHs	Fluorene	ND	µg/l	U	-	0.95
Basin K1	2/15/2017	Grab	PAHs	Fluorene	ND	µg/l	U	-	0.943
Basin K1	6/8/2018	Grab	PAHs	Fluorene	ND	µg/l	U	-	0.943

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	10/5/2018	Grab	PAHs	Fluorene	ND	µg/l	U	-	0.952
Basin K1	11/23/2018	Grab	PAHs	Fluorene	ND	µg/l	U	-	0.943
Basin K1	1/21/2019	Grab	PAHs	Fluorene	ND	µg/l	U	-	0.971
Basin K1	2/14/2019	Grab	PAHs	Fluorene	ND	µg/l	U	-	0.952
Basin K1	3/14/2015		Pesticides	Hexachlorobenzene	ND	pg/l	U	-	19200
Basin K1	10/25/2015		Pesticides	Hexachlorobenzene	ND	pg/l	U	-	58800
Basin K1	1/17/2016		Pesticides	Hexachlorobenzene	ND	pg/l	U	-	57100
Basin K1	10/26/2016		Pesticides	Hexachlorobenzene	ND	pg/l	U	-	57100
Basin K1	2/15/2017		Pesticides	Hexachlorobenzene	ND	pg/l	U	-	56600
Basin K1	6/8/2018		Pesticides	Hexachlorobenzene	ND	pg/l	U	-	94300
Basin K1	10/5/2018		Pesticides	Hexachlorobenzene	ND	pg/l	U	-	95200
Basin K1	11/23/2018		Pesticides	Hexachlorobenzene	ND	pg/l	U	-	94300
Basin K1	1/21/2019		Pesticides	Hexachlorobenzene	ND	pg/l	U	-	97100
Basin K1	2/14/2019		Pesticides	Hexachlorobenzene	ND	pg/l	U	-	95200
Basin D	3/24/2007	ISCO Composite	PAHs	Indeno(1,2,3-cd)pyrene	0.057	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Indeno(1,2,3-cd)pyrene	0.027	µg/l	J3	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Indeno(1,2,3-cd)pyrene	0.089	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Indeno(1,2,3-cd)pyrene	0.02	µg/l	J3	-	-
Basin D	11/16/2007	ISCO Composite	PAHs	Indeno(1,2,3-cd)pyrene	0.03	µg/l	=	-	-
Basin K1	10/14/2014	Grab	PAHs	Indeno(1,2,3-cd)pyrene	4.99	µg/l	=	-	-
Basin K1	3/14/2015	Grab	PAHs	Indeno(1,2,3-cd)pyrene	3.02	µg/l	=	-	-
Basin K1	4/10/2015	Grab	PAHs	Indeno(1,2,3-cd)pyrene	0.17	µg/l	=	0.02	0.0026
Basin K1	5/11/2015	Grab	PAHs	Indeno(1,2,3-cd)pyrene	0.53	µg/l	=	-	-
Basin K1	10/10/2015	Grab	PAHs	Indeno(1,2,3-cd)pyrene	6.81	µg/l	=	0.192	0.192
Basin K1	10/25/2015	Grab	PAHs	Indeno(1,2,3-cd)pyrene	5.04	µg/l	=	-	-
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Indeno(1,2,3-cd)pyrene	5.04	µg/l	=	0.762	0.381
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Indeno(1,2,3-cd)pyrene	3.8	µg/l	=	0.762	0.381
Basin K1	11/23/2015	Grab	PAHs	Indeno(1,2,3-cd)pyrene	4.93	µg/l	=	0.762	0.381
Basin K1	1/17/2016	Grab	PAHs	Indeno(1,2,3-cd)pyrene	3.54	µg/l	=	-	-
Basin K1	10/26/2016	Grab	PAHs	Indeno(1,2,3-cd)pyrene	1.93	µg/l	=	-	-
Basin K1	2/15/2017	Grab	PAHs	Indeno(1,2,3-cd)pyrene	3.77	µg/l	=	-	-
Basin K1	6/8/2018	Grab	PAHs	Indeno(1,2,3-cd)pyrene	2.53	µg/l	=	-	-
Basin K1	10/5/2018	Grab	PAHs	Indeno(1,2,3-cd)pyrene	6.54	µg/l	=	-	-

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Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	11/23/2018	Grab	PAHs	Indeno(1,2,3-cd)pyrene	3.35	µg/l	=	-	-
Basin K1	1/21/2019	Grab	PAHs	Indeno(1,2,3-cd)pyrene	ND	µg/l	U	-	0.971
Basin K1	2/14/2019	Grab	PAHs	Indeno(1,2,3-cd)pyrene	2.42	µg/l	=	-	-
Basin K1	6/8/2018	Grab	Metals	Iron	7480	µg/l	=	-	-
Basin K1	10/5/2018	Grab	Metals	Iron	5800	µg/l	=	-	-
Basin K1	11/23/2018	Grab	Metals	Iron	7300	µg/l	=	-	-
Basin K1	1/21/2019	Grab	Metals	Iron	1810	µg/l	=	-	-
Basin K1	2/14/2019	Grab	Metals	Iron	3850	µg/l	=	-	-
Basin D	3/24/2007	ISCO Composite	Metals	Lead	31.4	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite-DUP	Metals	Lead	37.5	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	Metals	Lead	40.3	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite	Metals	Lead	26.2	µg/l	N	-	-
Basin D	11/16/2007	ISCO Composite	Metals	Lead	9.03	µg/l	=	-	-
Basin K1	10/14/2014	Grab	Metals	Lead	71.4	µg/l	=	-	-
Basin K1	3/14/2015	Grab	Metals	Lead	55.3	µg/l	=	-	-
Basin K1	10/25/2015	Grab	Metals	Lead	59.5	µg/l	=	-	-
Basin K1	11/13/2015	Grab	Metals	Lead	53.3	µg/l	=	-	-
Basin K1	1/17/2016	Grab	Metals	Lead	36.4	µg/l	=	-	-
Basin K1	4/4/2016	Grab	Metals	Lead	15	µg/l	=	-	-
Basin K1	10/26/2016	Grab	Metals	Lead	38.9	µg/l	=	-	-
Basin K1	11/22/2016	Grab	Metals	Lead	52.1	µg/l	=	-	-
Basin K1	2/15/2017	Grab	Metals	Lead	96.7	µg/l	=	-	-
Basin K1	3/15/2017	Grab	Metals	Lead	61.6	µg/l	=	-	-
Basin K1	6/8/2018	Grab	Metals	Lead	81.3	µg/l	=	-	-
Basin K1	10/5/2018	Grab	Metals	Lead	88.7	µg/l	=	-	-
Basin K1	11/23/2018	Grab	Metals	Lead	76.1	µg/l	=	-	-
Basin K1	1/21/2019	Grab	Metals	Lead	31.5	µg/l	=	-	-
Basin K1	2/14/2019	Grab	Metals	Lead	45.9	µg/l	=	-	-
Basin D	3/24/2007	ISCO Composite	Metals	Mercury	0.04	µg/l	B1	-	-
Basin D	5/3/2007	ISCO Composite	Metals	Mercury	0.03	µg/l	B1,J3	-	-
Basin D	5/3/2007	ISCO Composite-DUP	Metals	Mercury	0.03	µg/l	B1,J3	-	-
Basin D	5/20/2007	ISCO Composite	Metals	Mercury	ND	µg/l	U	-	0.2
Basin D	11/16/2007	ISCO Composite	Metals	Mercury	ND	µg/l	U	-	0.03

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	6/8/2018	Grab	Metals	Mercury	ND	µg/l	U	-	0.05
Basin K1	10/5/2018	Grab	Metals	Mercury	ND	µg/l	U	-	0.05
Basin K1	11/23/2018	Grab	Metals	Mercury	ND	µg/l	U	-	0.05
Basin K1	1/21/2019	Grab	Metals	Mercury	ND	µg/l	U	-	0.05
Basin K1	2/14/2019	Grab	Metals	Mercury	ND	µg/l	U	-	0.05
Basin D	3/24/2007	ISCO Composite	PAHs	Naphthalene	0.031	µg/l	J3	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Naphthalene	0.016	µg/l	J,J3	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Naphthalene	0.043	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Naphthalene	0.015	µg/l	J,J3	-	-
Basin D	11/16/2007	ISCO Composite	PAHs	Naphthalene	0.027	µg/l	=	-	-
Basin K1	4/10/2015	Grab	PAHs	Naphthalene	0.078	µg/l	=	0.02	0.0038
Basin K1	5/11/2015	Grab	PAHs	Naphthalene	0.024	µg/l	=	-	-
Basin K1	10/10/2015	Grab	PAHs	Naphthalene	ND	µg/l	U	0.385	0.385
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Naphthalene	ND	µg/l	U	1.52	0.762
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Naphthalene	ND	µg/l	U	1.52	0.025
Basin K1	11/23/2015	Grab	PAHs	Naphthalene	ND	µg/l	U	1.52	0.0385
Basin D	3/24/2007	ISCO Composite	Metals	Nickel	1.79	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite-DUP	Metals	Nickel	2.27	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	Metals	Nickel	2.39	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite	Metals	Nickel	1.93	µg/l	=	-	-
Basin D	11/16/2007	ISCO Composite	Metals	Nickel	0.82	µg/l	=	-	-
Basin K1	10/14/2014	Grab	Metals	Nickel	1.92	µg/l	=	-	-
Basin K1	3/14/2015	Grab	Metals	Nickel	1.1	µg/l	=	-	-
Basin K1	10/25/2015	Grab	Metals	Nickel	ND	µg/l	U	-	2
Basin K1	11/13/2015	Grab	Metals	Nickel	ND	µg/l	U	-	2
Basin K1	1/17/2016	Grab	Metals	Nickel	ND	µg/l	U	-	1
Basin K1	4/4/2016	Grab	Metals	Nickel	ND	µg/l	U	-	1
Basin K1	10/26/2016	Grab	Metals	Nickel	ND	µg/l	U	-	1
Basin K1	11/22/2016	Grab	Metals	Nickel	ND	µg/l	U	-	1
Basin K1	2/15/2017	Grab	Metals	Nickel	3.13	µg/l	=	-	-
Basin K1	3/15/2017	Grab	Metals	Nickel	1.34	µg/l	=	-	-
Basin D	3/24/2007	ISCO Composite	PAHs	Phenanthrene	0.081	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Phenanthrene	0.078	µg/l	J2	-	-

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin D	5/3/2007	ISCO Composite	PAHs	Phenanthrene	0.039	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Phenanthrene	0.047	µg/l	=	-	-
Basin D	11/16/2007	ISCO Composite	PAHs	Phenanthrene	0.067	µg/l	=	-	-
Basin K1	4/10/2015	Grab	PAHs	Phenanthrene	0.028	µg/l	=	0.02	0.005
Basin K1	5/11/2015	Grab	PAHs	Phenanthrene	0.23	µg/l	=	-	-
Basin K1	10/10/2015	Grab	PAHs	Phenanthrene	1.02	µg/l	=	0.192	0.192
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Phenanthrene	0.89	µg/l	=	0.0385	0.0192
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Phenanthrene	0.784	µg/l	=	0.0385	0.0192
Basin K1	11/23/2015	Grab	PAHs	Phenanthrene	0.796	µg/l	=	0.0385	0.0192
Basin D	3/24/2007	ISCO Composite	PAHs	Pyrene	0.082	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Pyrene	0.037	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Pyrene	0.081	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Pyrene	0.037	µg/l	=	-	-
Basin D	11/16/2007	ISCO Composite	PAHs	Pyrene	0.052	µg/l	=	-	-
Basin K1	10/14/2014	Grab	PAHs	Pyrene	3.47	µg/l	=	-	-
Basin K1	3/14/2015	Grab	PAHs	Pyrene	2.38	µg/l	=	-	-
Basin K1	4/10/2015	Grab	PAHs	Pyrene	0.12	µg/l	=	0.02	0.0053
Basin K1	5/11/2015	Grab	PAHs	Pyrene	0.66	µg/l	=	-	-
Basin K1	10/10/2015	Grab	PAHs	Pyrene	4.63	µg/l	=	0.192	0.192
Basin K1	10/25/2015	Grab	PAHs	Pyrene	3.87	µg/l	=	-	-
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Pyrene	3.48	µg/l	=	0.762	0.381
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Pyrene	3.4	µg/l	=	0.762	0.381
Basin K1	11/23/2015	Grab	PAHs	Pyrene	3.39	µg/l	=	0.762	0.381
Basin K1	1/17/2016	Grab	PAHs	Pyrene	2.79	µg/l	=	-	-
Basin K1	10/26/2016	Grab	PAHs	Pyrene	1.09	µg/l	=	-	-
Basin K1	2/15/2017	Grab	PAHs	Pyrene	2.72	µg/l	=	-	-
Basin K1	6/8/2018	Grab	PAHs	Pyrene	2.17	µg/l	=	-	-
Basin K1	10/5/2018	Grab	PAHs	Pyrene	4.09	µg/l	=	-	-
Basin K1	11/23/2018	Grab	PAHs	Pyrene	2.17	µg/l	=	-	-
Basin K1	1/21/2019	Grab	PAHs	Pyrene	ND	µg/l	U	-	0.971
Basin K1	2/14/2019	Grab	PAHs	Pyrene	1.64	µg/l	=	-	-
Basin D	3/24/2007	ISCO Composite	Metals	Selenium	ND	µg/l	U	-	0.02
Basin D	5/3/2007	ISCO Composite-DUP	Metals	Selenium	ND	µg/l	U	-	1

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin D	5/3/2007	ISCO Composite	Metals	Selenium	ND	µg/l	U	-	1
Basin D	5/20/2007	ISCO Composite	Metals	Selenium	ND	µg/l	U	-	0.2
Basin D	11/16/2007	ISCO Composite	Metals	Selenium	ND	µg/l	U	-	0.4
Basin D	3/24/2007	ISCO Composite	Metals	Silver	0.004	µg/l	B1,J2	-	-
Basin D	5/3/2007	ISCO Composite-DUP	Metals	Silver	0.012	µg/l	B1	-	-
Basin D	5/3/2007	ISCO Composite	Metals	Silver	0.016	µg/l	B1	-	-
Basin D	5/20/2007	ISCO Composite	Metals	Silver	0.041	µg/l	=	-	-
Basin D	11/16/2007	ISCO Composite	Metals	Silver	0.022	µg/l	=	-	-
Basin K1	10/14/2014		Pesticides	Total DDX	ND	pg/l	U	-	32300
Basin K1	3/14/2015		Pesticides	Total DDX	ND	pg/l	U	-	28800
Basin K1	10/25/2015		Pesticides	Total DDX	ND	pg/l	U	-	58800
Basin K1	1/17/2016		Pesticides	Total DDX	ND	pg/l	U	-	57100
Basin K1	10/26/2016		Pesticides	Total DDX	ND	pg/l	U	-	57100
Basin K1	2/15/2017		Pesticides	Total DDX	ND	pg/l	U	-	56600
Basin K1	6/8/2018		Pesticides	Total DDX	ND	pg/l	U	-	77100
Basin K1	10/5/2018		Pesticides	Total DDX	ND	pg/l	U	-	113000
Basin K1	11/23/2018		Pesticides	Total DDX	ND	pg/l	U	-	56600
Basin K1	1/21/2019		Pesticides	Total DDX	ND	pg/l	U	-	56600
Basin K1	2/14/2019		Pesticides	Total DDX	ND	pg/l	U	-	57100
Basin D	3/24/2007	ISCO Composite	PAHs	Total PAHs	0.744	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	PAHs	Total PAHs	0.322	µg/l	=	-	0.02
Basin D	5/3/2007	ISCO Composite	PAHs	Total PAHs	0.947	µg/l	=	-	-
Basin D	5/20/2007	ISCO Composite-DUP	PAHs	Total PAHs	0.327	µg/l	=	-	0.02
Basin D	11/16/2007	ISCO Composite	PAHs	Total PAHs	0.397	µg/l	=	-	0.0046
Basin K1	10/14/2014	Grab	PAHs	Total PAHs	36.1	µg/l	=	-	0.815
Basin K1	3/14/2015	Grab	PAHs	Total PAHs	20.8	µg/l	=	-	0.971
Basin K1	4/10/2015	Grab	PAHs	Total PAHs	1.22	µg/l	=	0.02	0.01
Basin K1	5/11/2015	Grab	PAHs	Total PAHs	4.83	µg/l	=	-	0.0034
Basin K1	10/10/2015	Grab	PAHs	Total PAHs	53.2	µg/l	=	0.385	0.385
Basin K1	10/25/2015	Grab	PAHs	Total PAHs	37.4	µg/l	=	-	0.781
Basin K1	11/7/2015	Grab (Split - ALS)	PAHs	Total PAHs	32.1	µg/l	=	1.52	0.381
Basin K1	11/7/2015	Grab (Split - Apex)	PAHs	Total PAHs	38.7	µg/l	=	1.52	0.762
Basin K1	11/23/2015	Grab	PAHs	Total PAHs	37.5	µg/l	=	1.52	0.381

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	1/17/2016	Grab	PAHs	Total PAHs	24.5	µg/l	S	-	0.952
Basin K1	10/26/2016	Grab	PAHs	Total PAHs	9.22	µg/l	S	-	0.95
Basin K1	2/15/2017	Grab	PAHs	Total PAHs	24.5	µg/l	S	-	0.943
Basin K1	6/8/2018	Grab	PAHs	Total PAHs	18.5	µg/l	S	-	0.943
Basin K1	10/5/2018	Grab	PAHs	Total PAHs	43.9	µg/l	S	-	0.952
Basin K1	11/23/2018	Grab	PAHs	Total PAHs	21.8	µg/l	S	-	0.943
Basin K1	1/21/2019	Grab	PAHs	Total PAHs	1.22	µg/l	S	-	0.971
Basin K1	2/14/2019	Grab	PAHs	Total PAHs	14.5	µg/l	S	-	0.952
Basin K1	10/14/2014		PCBs	Total PCB Aroclors	ND	µg/l	U	-	0.108
Basin K1	3/14/2015		PCBs	Total PCB Aroclors	ND	µg/l	U	-	0.0962
Basin K1	10/25/2015		PCBs	Total PCB Aroclors	ND	µg/l	U	-	0.098
Basin K1	1/17/2016		PCBs	Total PCB Aroclors	ND	µg/l	U	-	0.0952
Basin K1	10/26/2016		PCBs	Total PCB Aroclors	ND	µg/l	U	-	0.0952
Basin K1	6/8/2018		PCBs	Total PCB Aroclors	ND	µg/l	U	-	0.0935
Basin K1	10/5/2018		PCBs	Total PCB Aroclors	ND	µg/l	U	-	0.0962
Basin K1	11/23/2018		PCBs	Total PCB Aroclors	ND	µg/l	U	-	0.0943
Basin K1	1/21/2019		PCBs	Total PCB Aroclors	ND	µg/l	U	-	0.0962
Basin K1	2/14/2019		PCBs	Total PCB Aroclors	ND	µg/l	U	-	0.0943
Basin D	11/16/2007		PCBs	Total PCB congeners	0.00883	µg/l	B2	-	-
Basin D	11/16/2007	Dup1	PCBs	Total PCB congeners	0.00859	µg/l	B2	-	-
Basin D	1/15/2008		PCBs	Total PCB congeners	0.0149	µg/l	B2	-	-
Basin D	1/26/2008		PCBs	Total PCB congeners	0.0122	µg/l	B2	-	-
Basin D	3/29/2005		Misc	Total Suspended Solids	6	mg/l	=	-	-
Basin D	3/24/2007	ISCO Composite	Misc	Total Suspended Solids	14	mg/l	=	-	-
Basin D	4/7/2007		Misc	Total Suspended Solids	6	mg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	Misc	Total Suspended Solids	19	mg/l	=	-	-
Basin D	5/20/2007	ISCO Composite-DUP	Misc	Total Suspended Solids	19	mg/l	=	-	-
Basin D	11/16/2007	ISCO Composite	Misc	Total Suspended Solids	6	mg/l	=	-	-
Basin K1	10/14/2014	Grab	Misc	Total Suspended Solids	35	mg/l	=	-	-
Basin K1	3/14/2015	Grab	Misc	Total Suspended Solids	10	mg/l	=	-	-
Basin K1	4/10/2015	Grab	Misc	Total Suspended Solids	ND	mg/l	U	4	5
Basin K1	5/11/2015	Grab	Misc	Total Suspended Solids	28	mg/l	=	-	-
Basin K1	10/10/2015	Grab	Misc	Total Suspended Solids	55	mg/l	=	5	5

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	10/25/2015	Grab	Misc	Total Suspended Solids	26	mg/l	=	-	-
Basin K1	11/7/2015	Grab	Misc	Total Suspended Solids	26	mg/l	=	5	5
Basin K1	11/13/2015	Grab	Misc	Total Suspended Solids	ND	mg/l	U	-	5
Basin K1	11/23/2015	Grab	Misc	Total Suspended Solids	21	mg/l	=	5	5
Basin K1	1/17/2016	Grab	Misc	Total Suspended Solids	11	mg/l	=	-	-
Basin K1	4/4/2016	Grab	Misc	Total Suspended Solids	ND	mg/l	U	-	5
Basin K1	10/26/2016	Grab	Misc	Total Suspended Solids	5	mg/l	=	-	-
Basin K1	11/22/2016	Grab	Misc	Total Suspended Solids	7	mg/l	=	-	-
Basin K1	2/15/2017	Grab	Misc	Total Suspended Solids	13	mg/l	=	-	-
Basin K1	3/15/2017	Grab	Misc	Total Suspended Solids	ND	mg/l	U	-	5
Basin K1	6/8/2018	Grab	Misc	Total Suspended Solids	90	mg/l	=	-	-
Basin K1	10/5/2018	Grab	Misc	Total Suspended Solids	72	mg/l	=	-	-
Basin K1	11/23/2018	Grab	Misc	Total Suspended Solids	18	mg/l	=	-	-
Basin K1	1/21/2019	Grab	Misc	Total Suspended Solids	ND	mg/l	U	-	5
Basin K1	2/14/2019	Grab	Misc	Total Suspended Solids	10	mg/l	=	-	-
Basin D	3/24/2007	ISCO Composite	Metals	Zinc	28.9	µg/l	=	-	-
Basin D	5/3/2007	ISCO Composite	Metals	Zinc	57.4	µg/l	J2	-	-
Basin D	5/3/2007	ISCO Composite-DUP	Metals	Zinc	51.8	µg/l	J2	-	-
Basin D	5/20/2007	ISCO Composite	Metals	Zinc	46.3	µg/l	=	-	-
Basin D	11/16/2007	ISCO Composite	Metals	Zinc	38.4	µg/l	=	-	-
Basin K1	10/14/2014	Grab	Metals	Zinc	136	µg/l	=	-	-
Basin K1	3/14/2015	Grab	Metals	Zinc	111	µg/l	=	-	-
Basin K1	10/25/2015	Grab	Metals	Zinc	124	µg/l	=	-	-
Basin K1	11/13/2015	Grab	Metals	Zinc	109	µg/l	=	-	-
Basin K1	1/17/2016	Grab	Metals	Zinc	65.8	µg/l	=	-	-
Basin K1	4/4/2016	Grab	Metals	Zinc	60.1	µg/l	=	-	-
Basin K1	10/26/2016	Grab	Metals	Zinc	72.9	µg/l	=	-	-
Basin K1	11/22/2016	Grab	Metals	Zinc	77.2	µg/l	=	-	-
Basin K1	2/15/2017	Grab	Metals	Zinc	187	µg/l	=	-	-
Basin K1	3/15/2017	Grab	Metals	Zinc	131	µg/l	=	-	-
Basin K1	6/8/2018	Grab	Metals	Zinc	431	µg/l	=	-	-
Basin K1	10/5/2018	Grab	Metals	Zinc	207	µg/l	=	-	-
Basin K1	11/23/2018	Grab	Metals	Zinc	162	µg/l	=	-	-

Terminal 4 Slip 3 Stormwater Data

Location	Date Sampled	SampleType	Category	Analyte	Result	Units	Qualifier[1]	MRL	MDL
Basin K1	1/21/2019	Grab	Metals	Zinc	78.3	µg/l	=	-	-
Basin K1	2/14/2019	Grab	Metals	Zinc	103	µg/l	=	-	-

[1]Qualifiers have been carried over as-is from previous reports. Qualifiers are as follows:

= = Analyte is detected at the reported concentration

B1 = This result is an estimated concentration that is less than the Method Reporting Limit (MRL) and greater than the Method Detection Limit (MDL)

B2 = The compound was also detected in the method blank.

i = The MRL/MDL has been increased due to chromatographic interference

J = The result is an estimated concentration that is below the Method Reporting Limit (MRL) and above the Method Detection Limit (MDL)

J2 = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample; The precision goal of +/-30% was exceeded for this analyte by the results from the field duplicate or the lab duplicate

J3 = The detected concentration of this analyte is equal to or less than 5 times the concentration detected in the method blank

J6 = The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recovery for this analyte exceeded the control criteria

J7 = The matrix spike recovery for this analyte exceeded the control criteria.

M = Due to matrix interference, this analyte could not be accurately quantified. The reported result is estimated.

S = Data is not available for all analytes that typically contribute to this summation; summation is calculated using limited available results.

U = The analyte is not detected at or above the reported MDL

Terminal 4 Slip 3 Storm Solids Data

Location	Date Sampled	Category	Analyte	Result	Units	Qualifier[1]
Basin D	2/18/2005	Pesticides	2,4'-DDD	11000000	pg/kg	=
Basin D	2/18/2005	Pesticides	2,4'-DDE	ND	pg/kg	U
Basin D	2/18/2005	Pesticides	2,4'-DDT	6600000	pg/kg	J
Basin D	2/18/2005	Pesticides	4,4'-DDD	13000000	pg/kg	J
Basin D	2/18/2005	Pesticides	4,4'-DDE	14000000	pg/kg	J
Basin D	2/18/2005	Pesticides	4,4'-DDT	51000000	pg/kg	J
Basin D	1/22/2007	PAHs	Acenaphthene	300	µg/kg	=
Basin D	1/22/2007	PAHs	Anthracene	845	µg/kg	=
Basin D	2/18/2005	PCBs	Aroclor 1254	300	µg/kg	=
Basin D	2/18/2005	PCBs	Aroclor 1260	200	µg/kg	=
Basin D	1/22/2007	Metals	Arsenic	3.39	mg/kg	=
Basin D	1/22/2007	PAHs	Benz[a]anthracene	2200	µg/kg	=
Basin D	1/22/2007	PAHs	Benzo(a)pyrene	2500	µg/kg	=
Basin D	1/22/2007	PAHs	Benzo(g,h,i)perylene	1900	µg/kg	=
Basin D	1/22/2007	PAHs	Benzo[k]fluoranthene	13000	µg/kg	=
Basin D	1/22/2007	Phthalates	Bis(2-ethylhexyl) phthalate	17000	µg/kg	=
Basin D	1/22/2007	Metals	Cadmium	1.37	mg/kg	=
Basin D	1/22/2007	Metals	Chromium	160	mg/kg	=
Basin D	1/22/2007	PAHs	Chrysene	2700	µg/kg	=
Basin D	1/22/2007	Metals	Copper	65.8	mg/kg	=
Basin D	1/22/2007	PAHs	cPAH/BaPeq	4360	µg/kg	=
Basin D	1/22/2007	PAHs	Dibenz[a,h]anthracene	1300	µg/kg	=
Basin D	1/22/2007	PAHs	Fluoranthene	3000	µg/kg	=
Basin D	1/22/2007	PAHs	Fluorene	536	µg/kg	=
Basin D	1/22/2007	PAHs	Indeno(1,2,3-cd)pyrene	1900	µg/kg	=
Basin D	1/22/2007	Metals	Lead	713	mg/kg	=
Basin D	1/22/2007	Metals	Mercury	0.078	mg/kg	=
Basin D	1/22/2007	Metals	Nickel	28.2	mg/kg	=
Basin D	1/22/2007	PAHs	Phenanthrene	1170	µg/kg	=
Basin D	1/22/2007	PAHs	Pyrene	3200	µg/kg	=
Basin D	1/22/2007	Metals	Silver	0.272	mg/kg	=
Basin D	2/18/2005	Pesticides	Total DDX	96000000	pg/kg	=
Basin D	1/22/2007	PAHs	Total PAHs	34600	µg/kg	=

Terminal 4 Slip 3 Storm Solids Data

Location	Date Sampled	Category	Analyte	Result	Units	Qualifier[1]
Basin D	2/18/2005	PCBs	Total PCB Aroclors	500	µg/kg	=
Basin D	1/22/2007	PCBs	Total PCB Congeners	264	µg/kg	=
Basin D	1/22/2007	Metals	Zinc	517	mg/kg	=

[1]Qualifiers have been carried over as-is from previous reports. Qualifiers are as follows:

= = Analyte is detected at the reported concentration

J = The result is an estimated concentration that is below the Method Reporting Limit (MRL) and above the Method Detection Limit (MDL)

U = The analyte is not detected at or above the reported MDL

Geosyntec consultants

APPENDIX A
RANK ORDER CURVES

A.1 Methods

These rank order curves are modified from the 2019 Work Plan to include only data from Slip 3. Detailed methods are provided in the 2019 Work Plan (Geosyntec, 2019).

A.2 Stormwater Plots

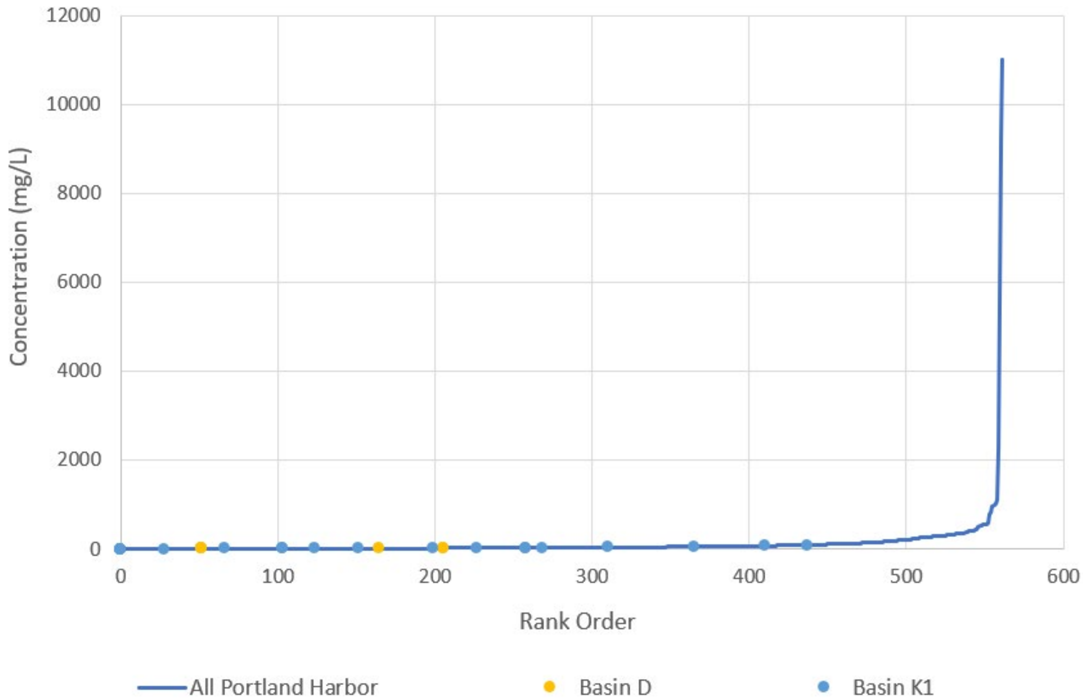

Figure A - 1. Total Suspended Solids in Stormwater at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

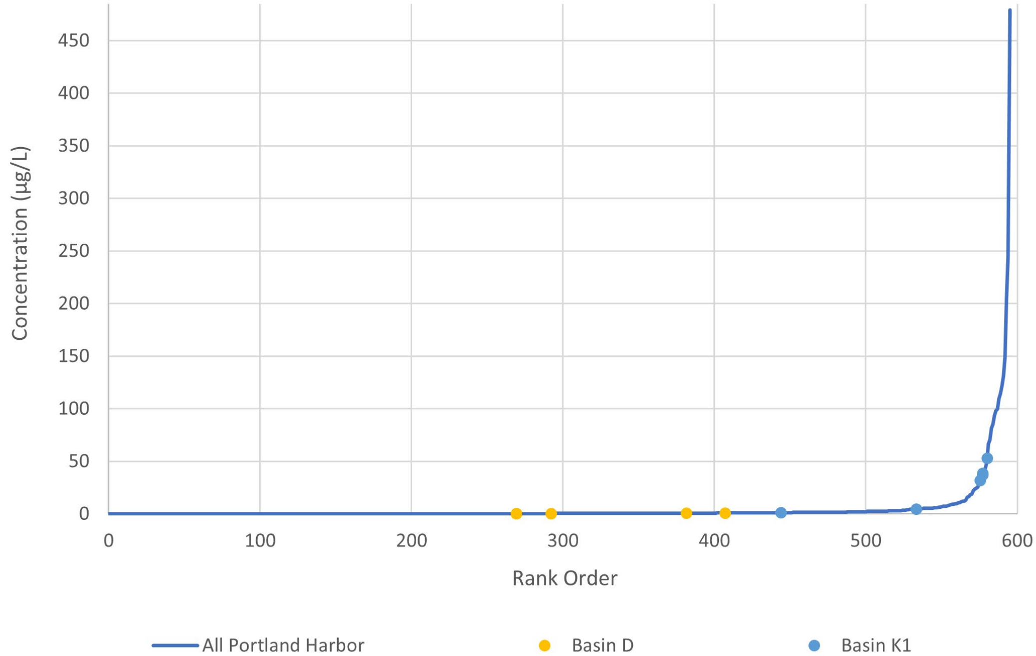

Figure A - 2. Total PAHs in Stormwater at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

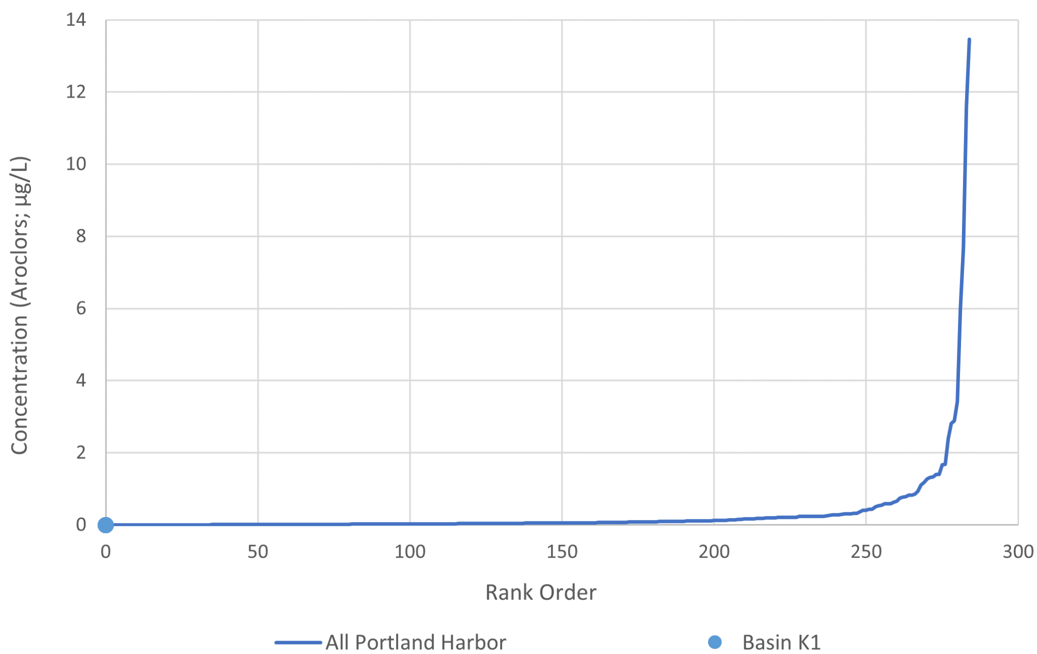

Figure A - 3. Total PCB Aroclors in Stormwater at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

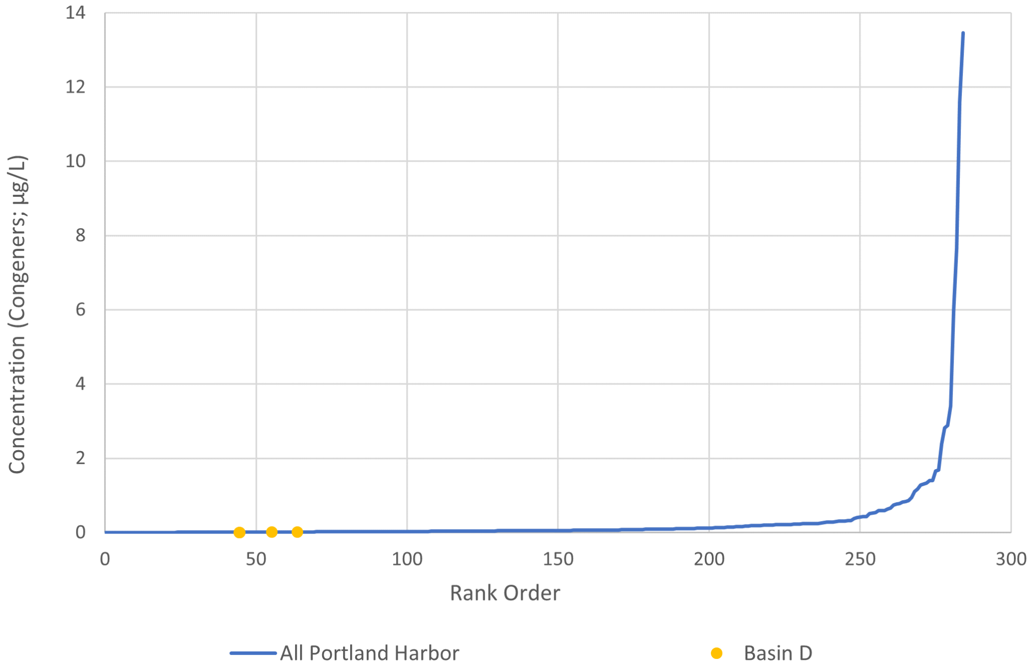

Figure A - 4. Total PCB Congeners in Stormwater at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

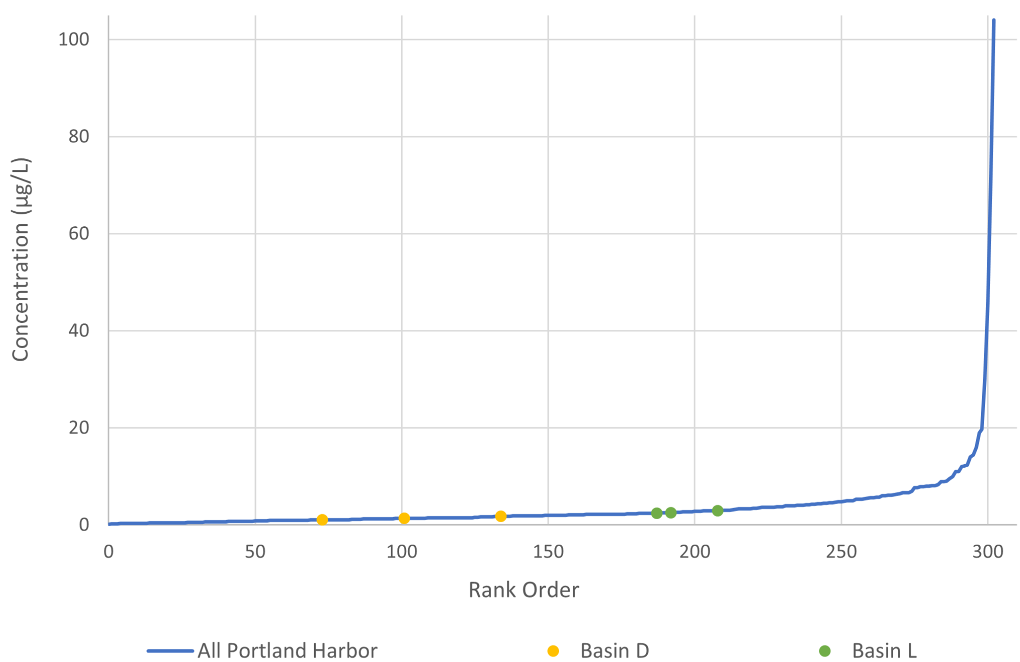

Figure A - 5. BEHP in Stormwater at T4 Compared to "Typical" Industrial Stormwater in

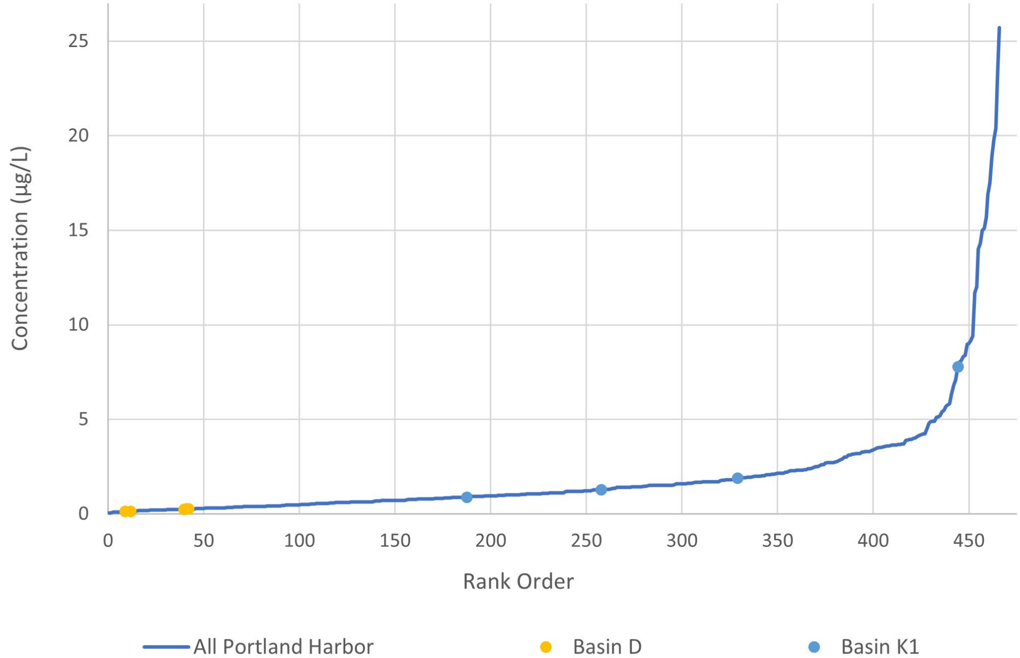

Figure A - 6. Arsenic in Stormwater at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

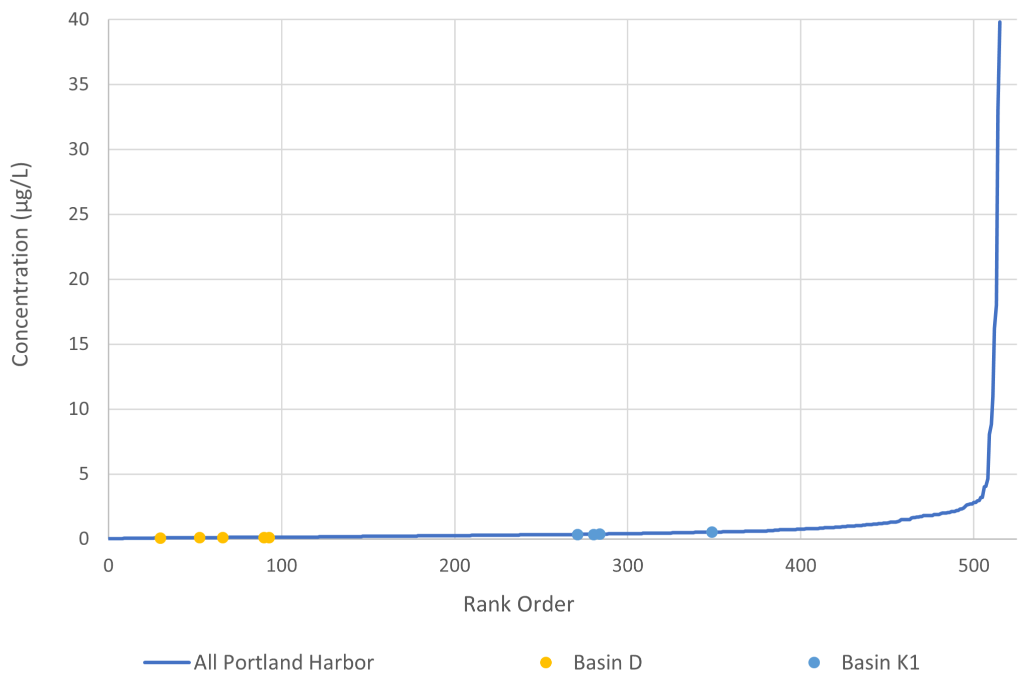

Figure A - 7. Cadmium in Stormwater at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

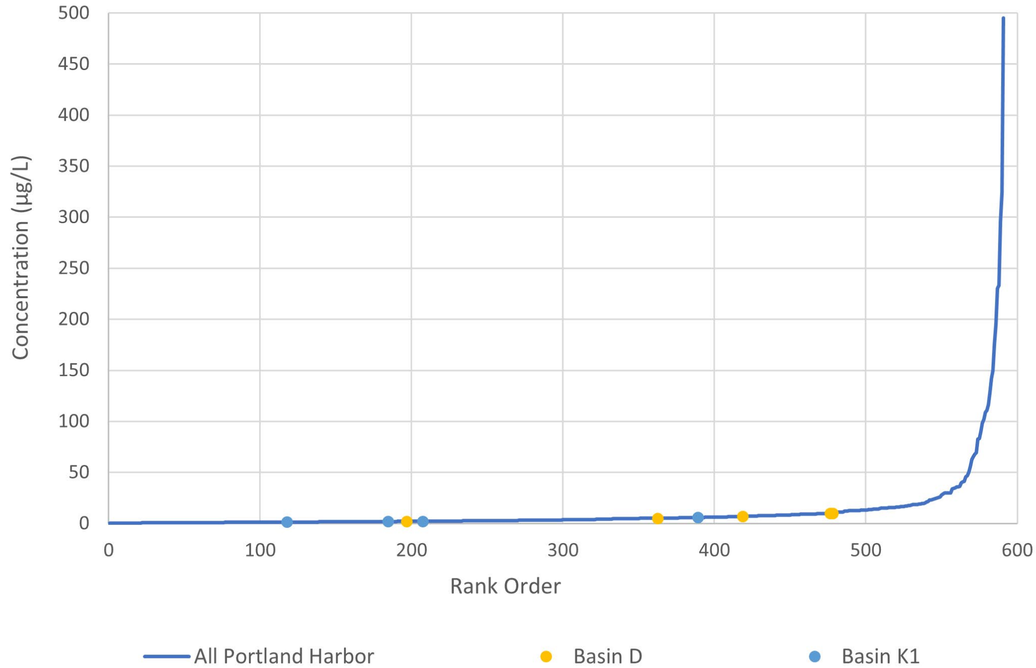

Figure A - 8. Chromium in Stormwater at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

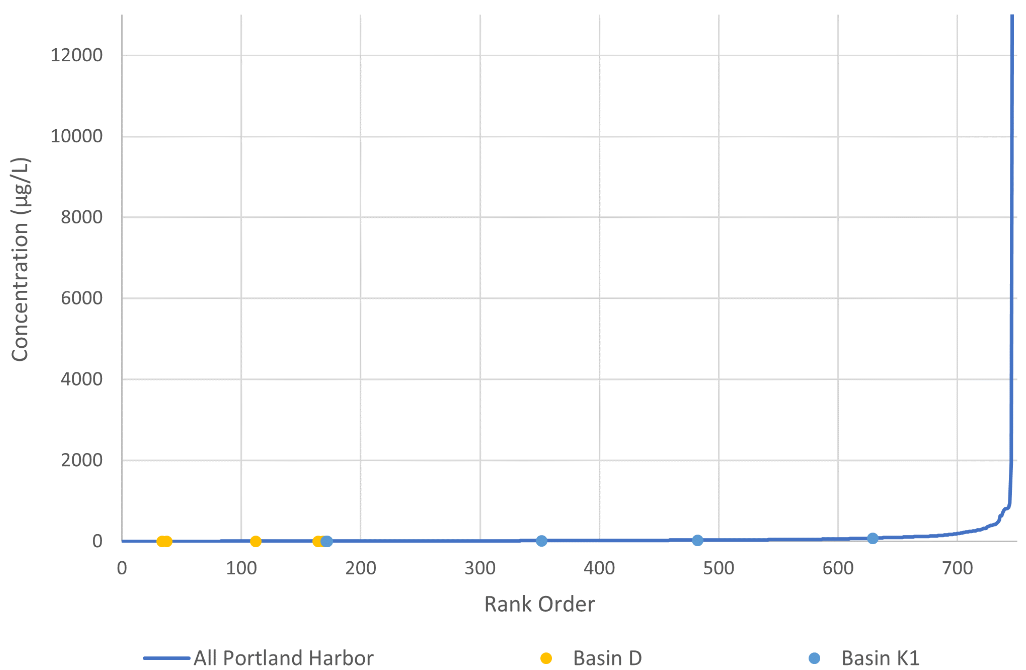

Figure A - 9. Copper in Stormwater at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

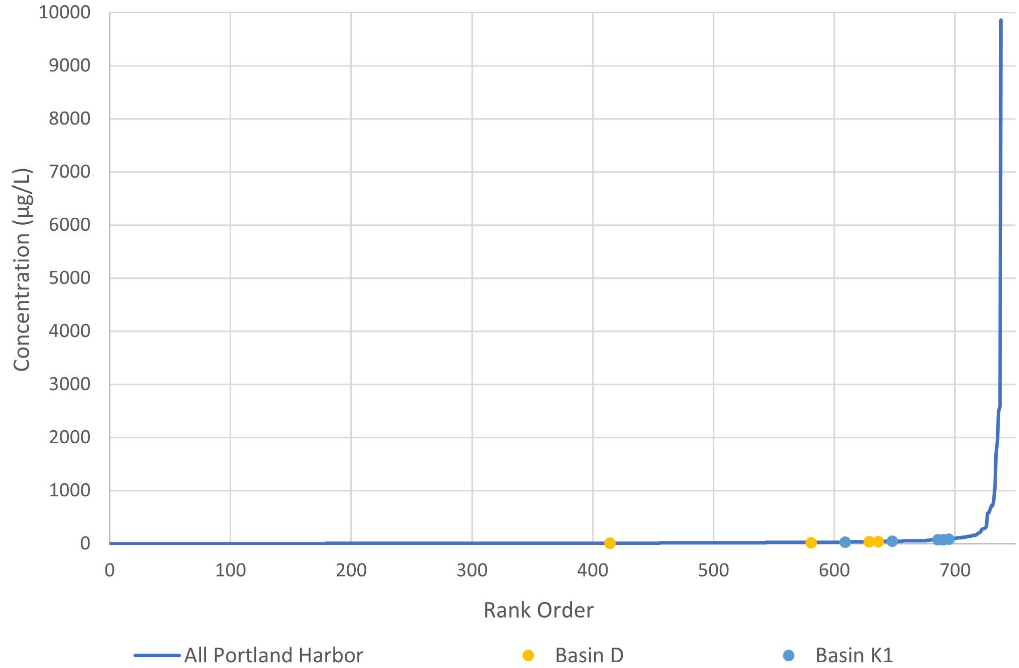

Figure A - 10. Lead in Stormwater at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

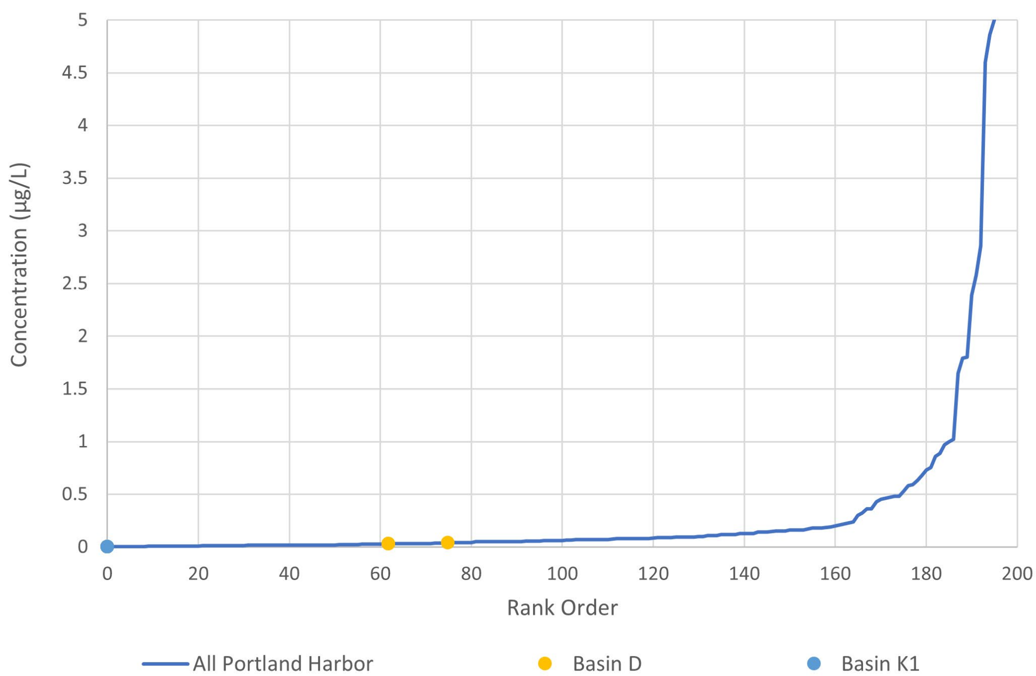

Figure A - 11. Mercury in Stormwater at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

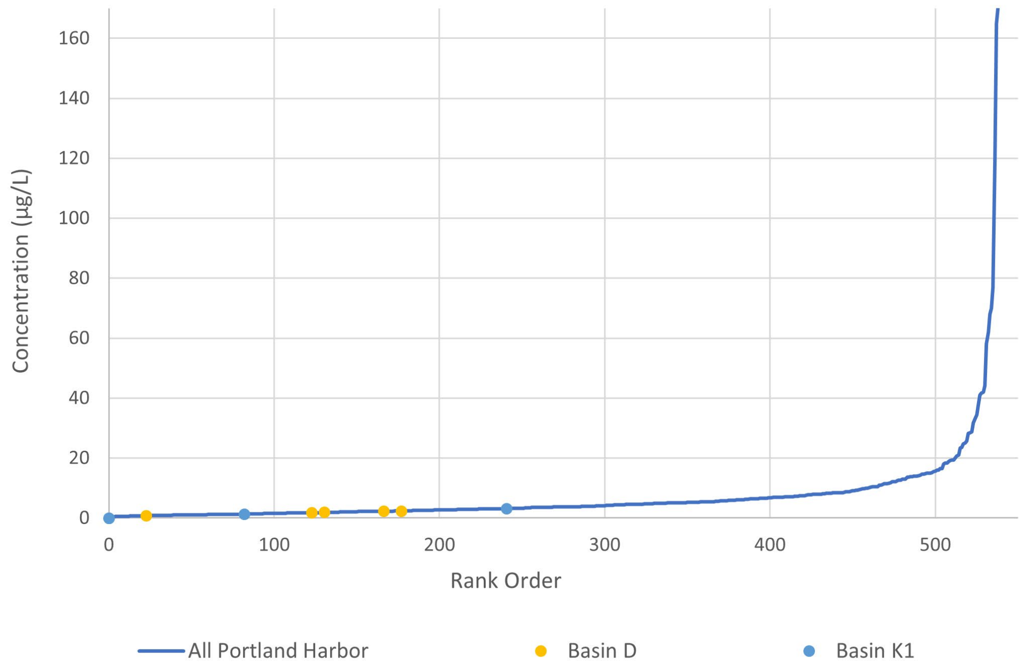

Figure A - 12. Nickel in Stormwater at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

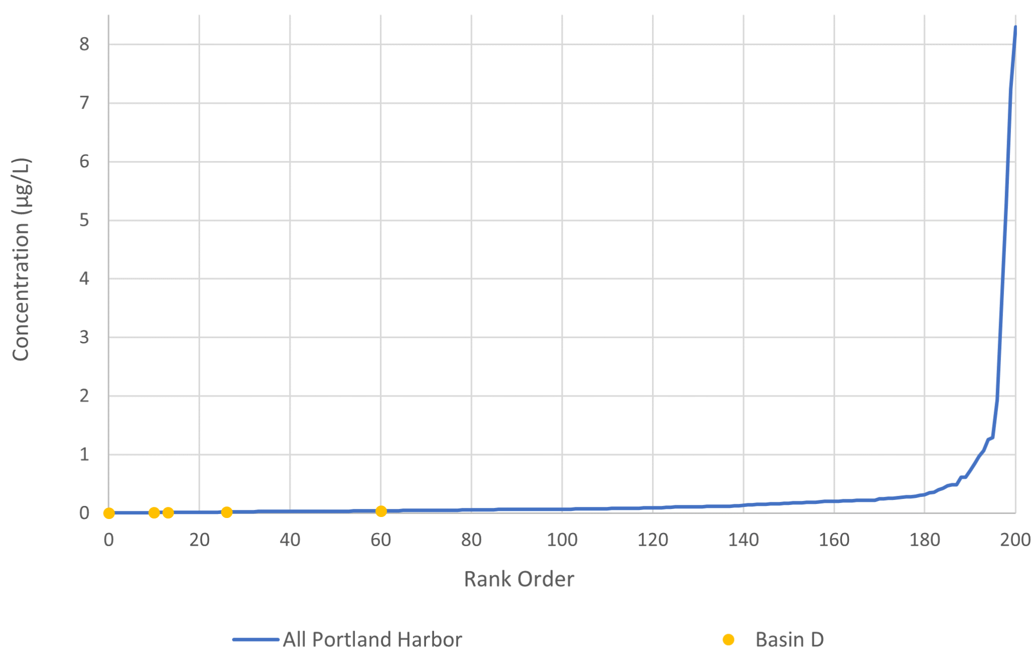

Figure A - 13. Silver in Stormwater at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

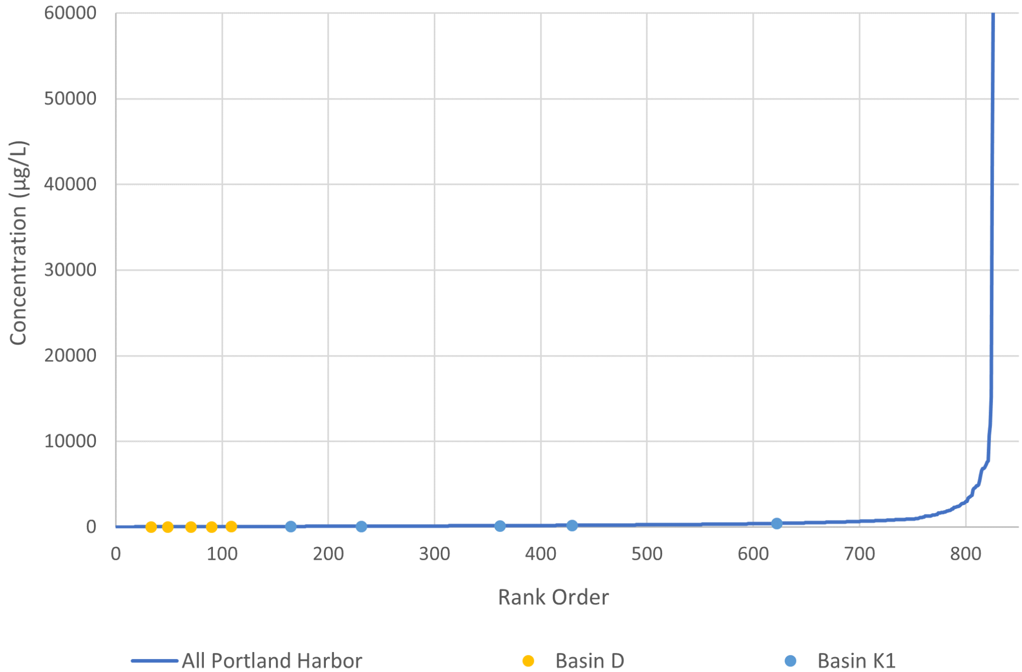

Figure A - 14. Zinc in Stormwater at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

Table A - 1. Sample Dates Used in Stormwater Knee of the Curve Plots, Non-Metals

Basin	TSS	PAHs	PCB Aroclors[1]	PCB congeners	BEHP
D	3/29/2005, 3/24/2007, 4/7/2007, 5/3/2007, 5/20/2007, 11/16/2007	3/24/2007, 4/7/2007, 5/3/2007, 5/3/2007 (D), 11/16/2007	none	11/16/2007, 11/16/2007 (D), 1/15/2008, 1/26/2008	4/7/2007, 11/16/2007, 11/16/2007 (D)
K1	10/14/2014, 3/14/2015, 4/10/2015, 5/11/2015, 10/10/2015, 10/25/2015, 11/7/2015, 11/13/2015, 11/23/2015, 1/17/2016, 4/4/2016, 10/26/2016, 11/22/2016, 2/15/2017, 3/15/2017, 6/8/2018, 10/5/2018, 11/23/2018, 1/21/2019, 2/14/2019	4/10/2015, 5/11/2015, 10/10/2015, 11/7/2015, 11/7/2015 (D), 11/23/2015	6/8/2018, 10/5/2018, 11/23/2018, 1/21/2019, 2/14/2019	none	none
L	N/A	N/A	N/A	N/A	10/23/2010, 11/6/2010, 2/12/2011

(D) = duplicate sample

[1]Aroclors 1262 and 1268 have not been measured for Basin K

Table A - 2. Sample Dates Used in Stormwater Knee of the Curve Plots, Metals

Basin	As	Cd	Cr	Cu	Pb	Hg	Ni	Ag	Zn
D	3/24/2007, 5/3/2007, 5/3/2007 (D), 5/20/2007, 11/16/2007	3/24/2007, 5/3/2007, 5/3/2007 (D), 5/20/2007, 11/16/2007	3/24/2007, 5/3/2007, 5/3/2007 (D), 5/20/2007, 11/16/2007	3/24/2007, 5/3/2007, 5/3/2007 (D), 5/20/2007, 11/16/2007	3/24/2007, 5/3/2007, 5/3/2007 (D), 5/20/2007, 11/16/2007	3/24/2007, 5/3/2007, 5/3/2007 (D), 5/20/2007, 11/16/2007	3/24/2007, 5/3/2007, 5/3/2007 (D), 5/20/2007, 11/16/2007	3/24/2007, 5/3/2007, 5/3/2007 (D), 5/20/2007, 11/16/2007	3/24/2007, 5/3/2007, 5/3/2007 (D), 5/20/2007, 11/16/2007
K1	4/10/2015, 5/11/2015, 11/7/2015, 11/23/2015	10/26/2016, 11/22/2016, 2/15/2017, 3/15/2017	10/26/2016, 11/22/2016, 2/15/2017, 3/15/2017	6/8/2018, 10/5/2018, 11/23/2018, 1/21/2019, 2/14/2019	6/8/2018, 10/5/2018, 11/23/2018, 1/21/2019, 2/14/2019	6/8/2018, 10/5/2018, 11/23/2018, 1/21/2019, 2/14/2019	10/26/2016, 11/22/2016, 2/15/2017, 3/15/2017	none	6/8/2018, 10/5/2018, 11/23/2018, 1/21/2019, 2/14/2019

(D) = duplicate sample

A.3 Stormwater Solids Plots

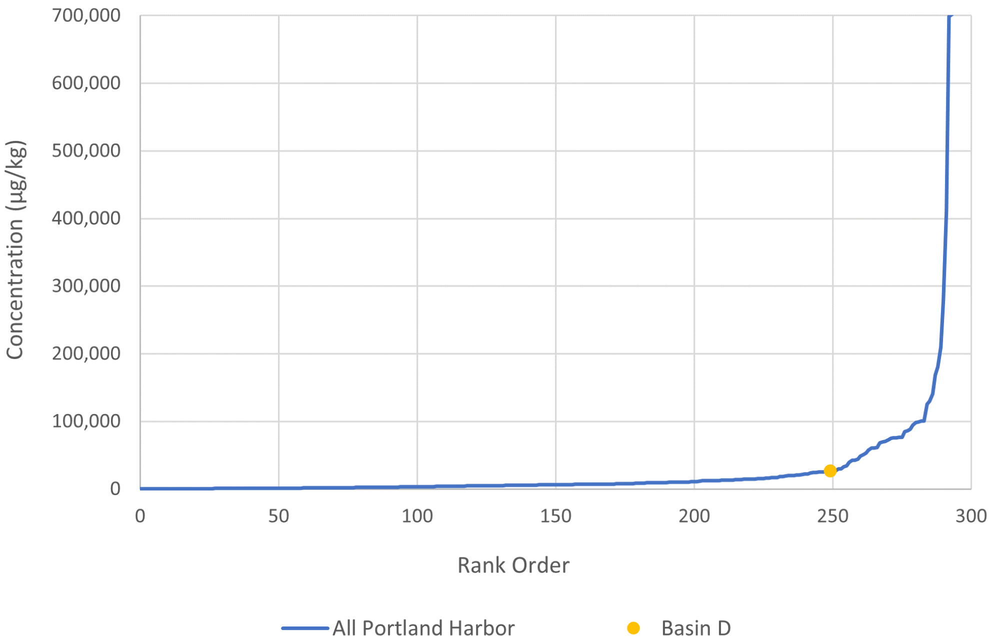

Figure A - 15. PAHs in Stormwater Solids at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

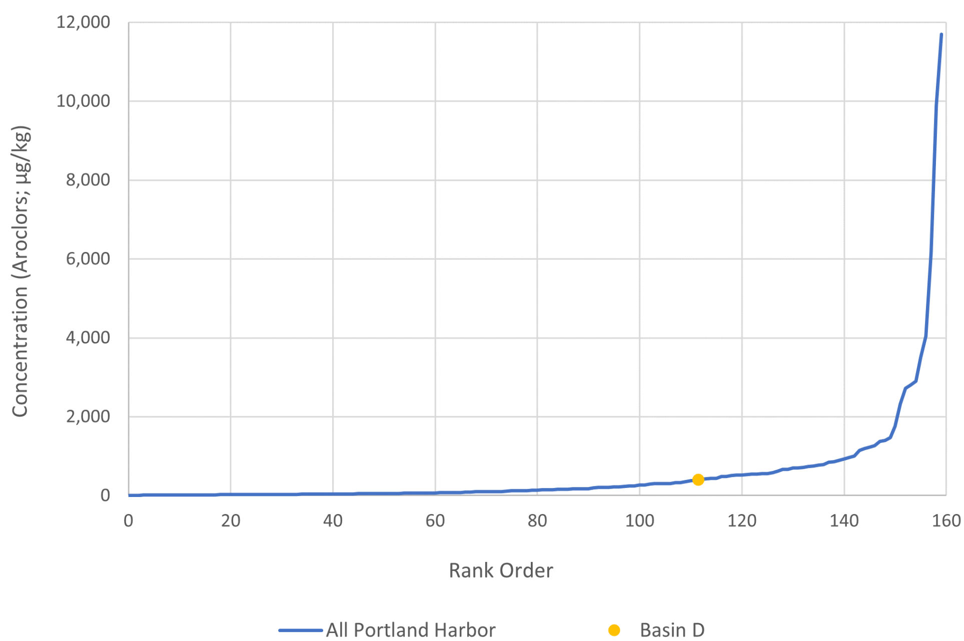

Figure A - 16. PCB Aroclors in Stormwater Solids at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

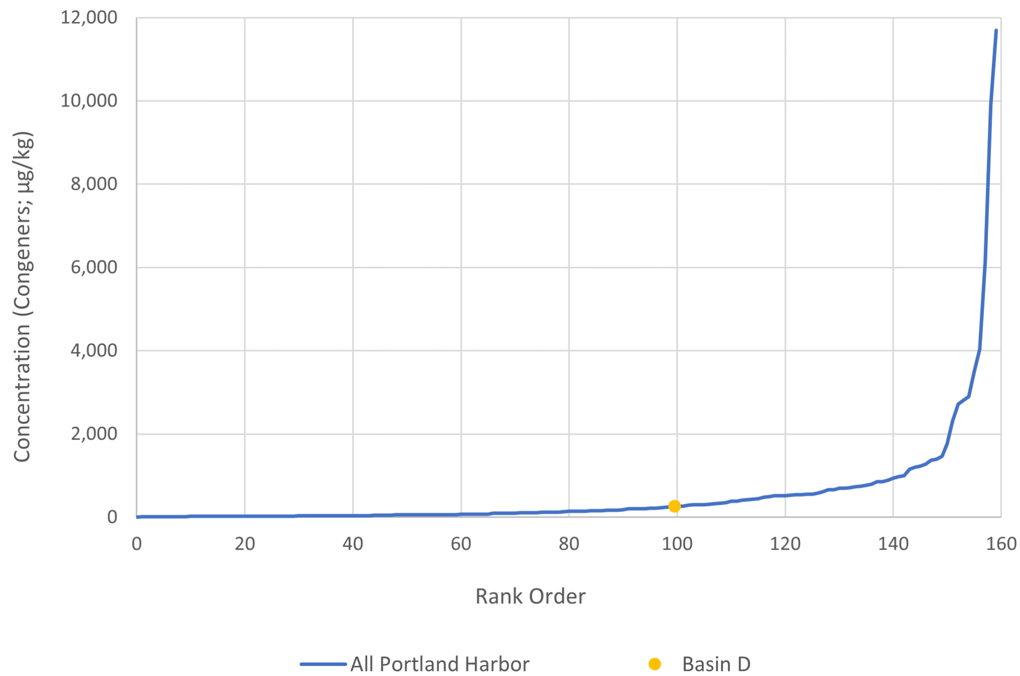

Figure A - 17. PCB Congeners in Stormwater Solids at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

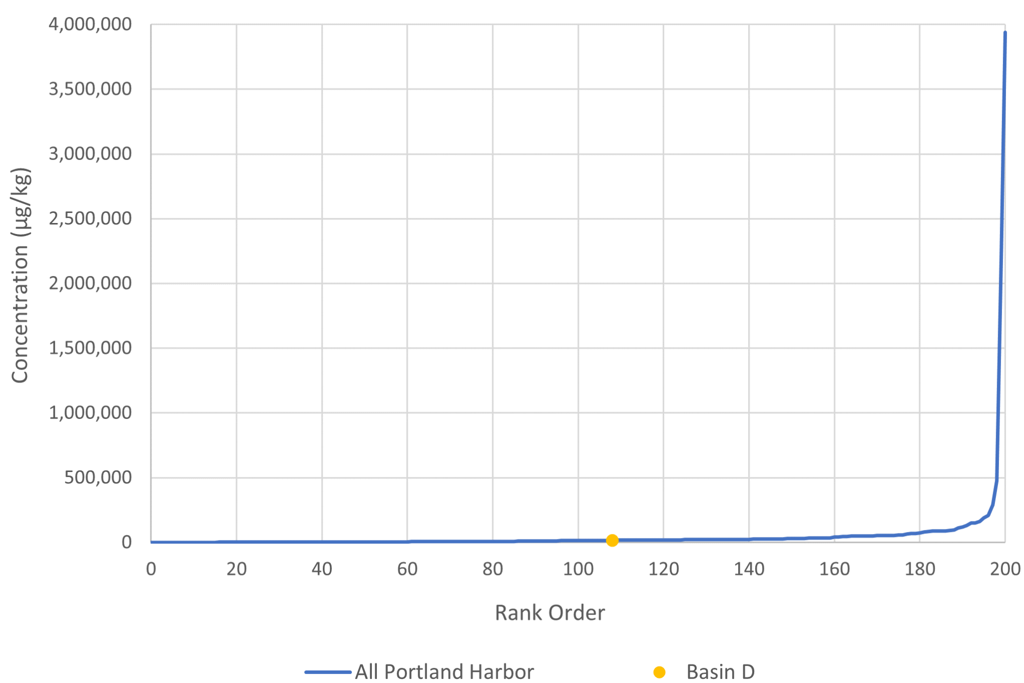

Figure A - 18. BEHP in Stormwater Solids at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

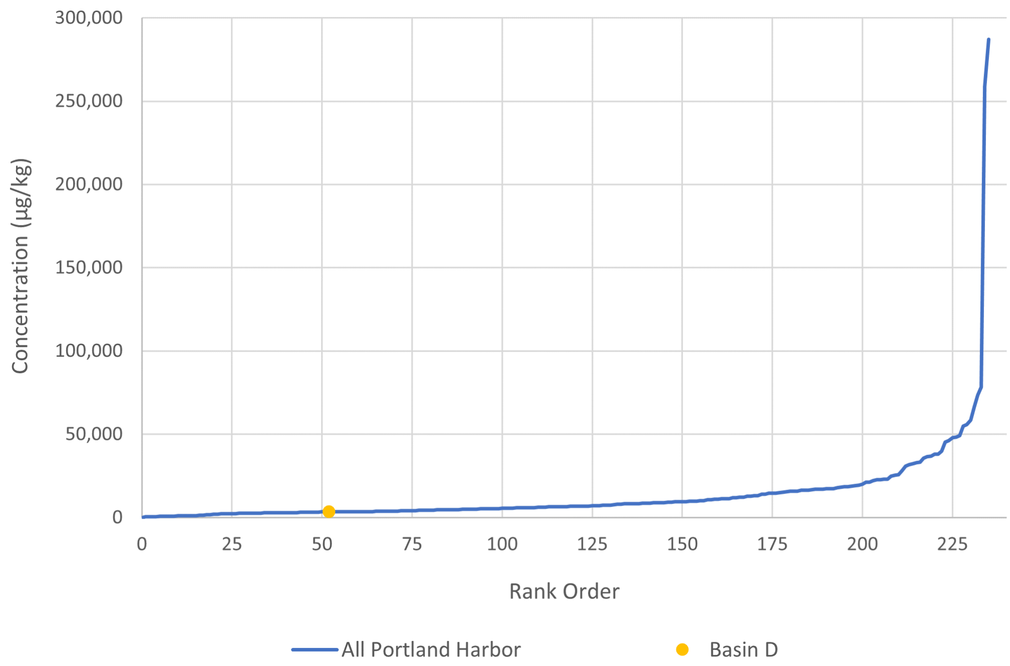

Figure A - 19. Arsenic in Stormwater Solids at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

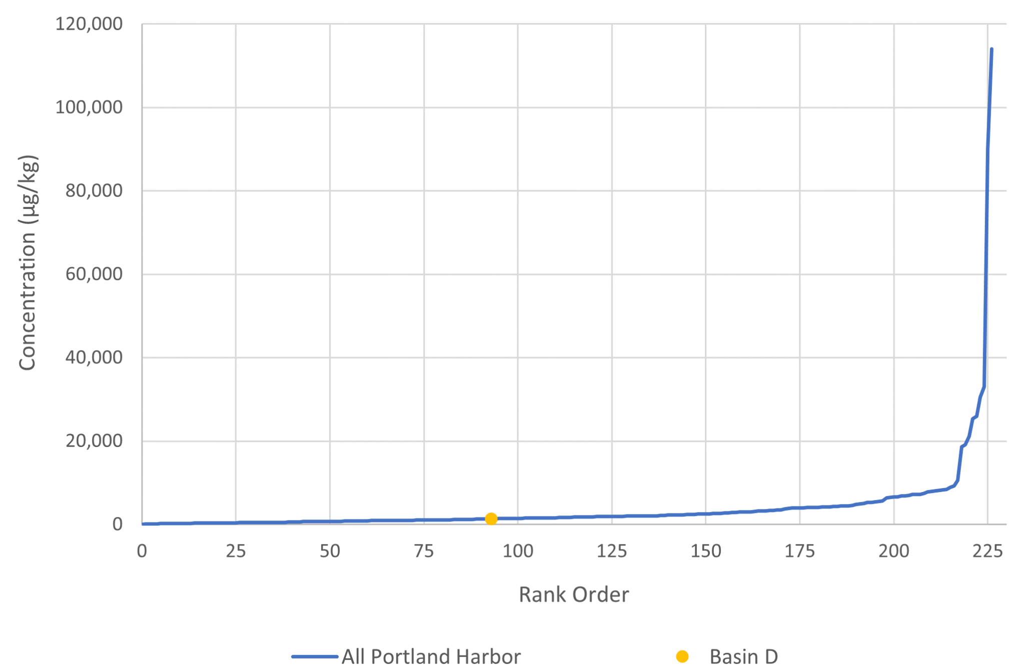

Figure A - 20. Cadmium in Stormwater Solids at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

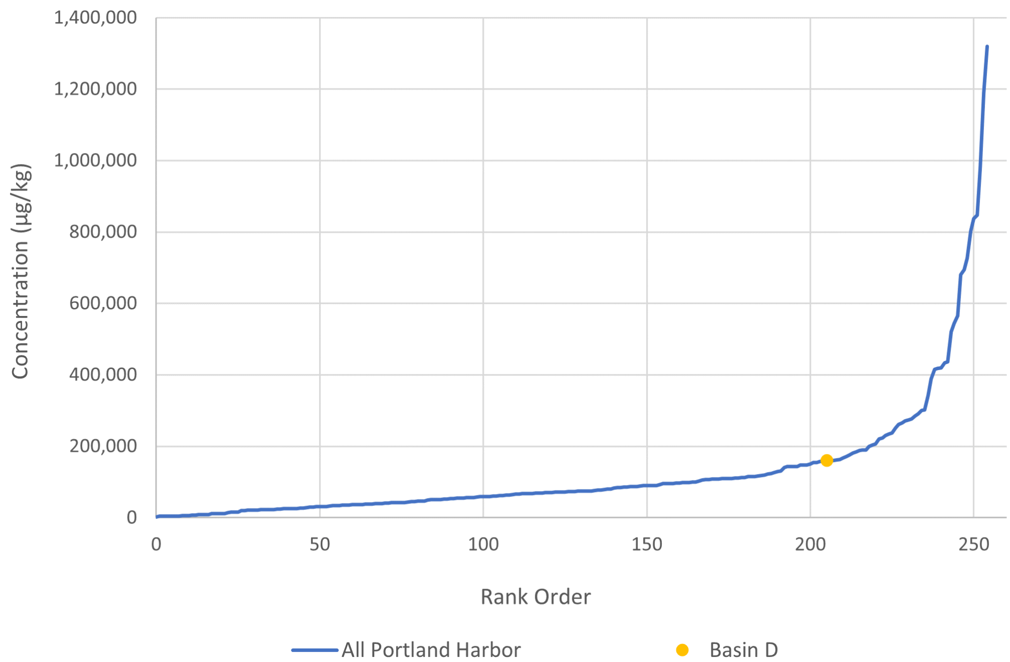

Figure A - 21. Chromium in Stormwater Solids at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

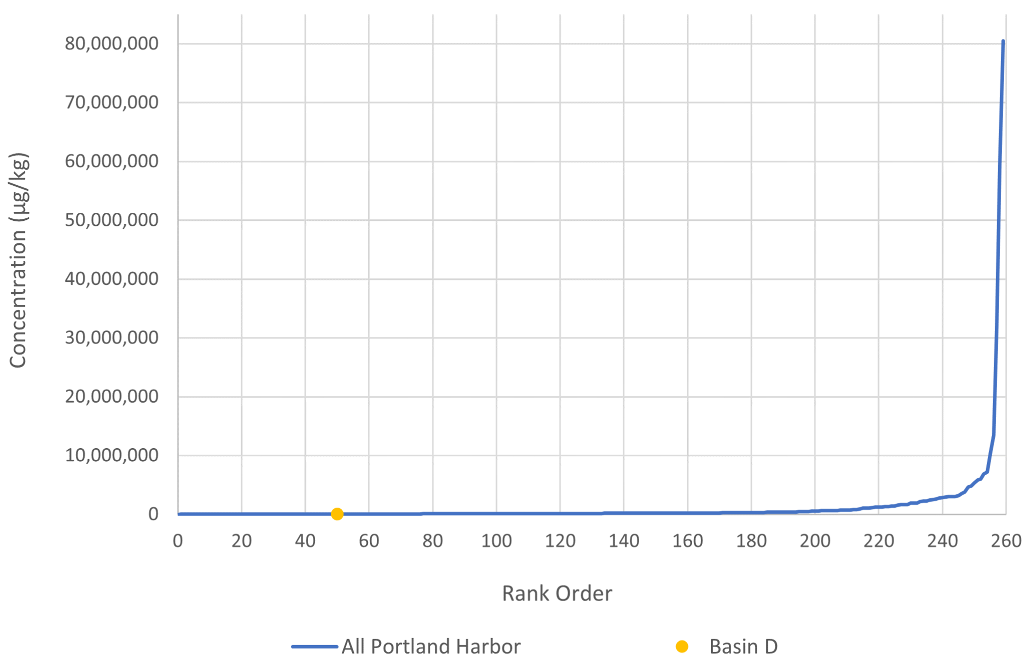

Figure A - 22. Copper in Stormwater Solids at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

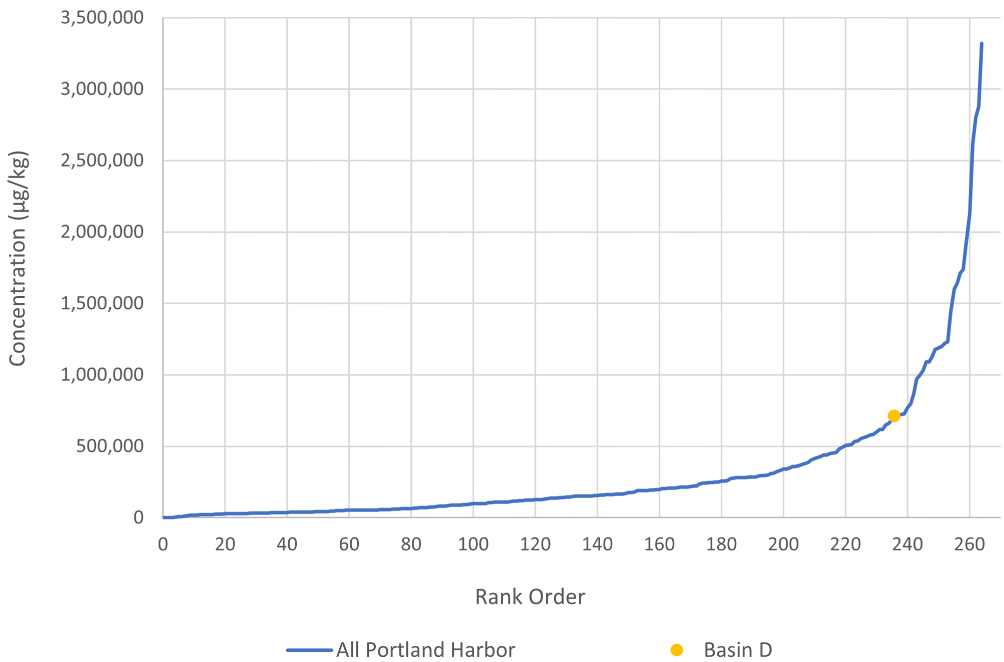

Figure A - 23. Lead in Stormwater Solids at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

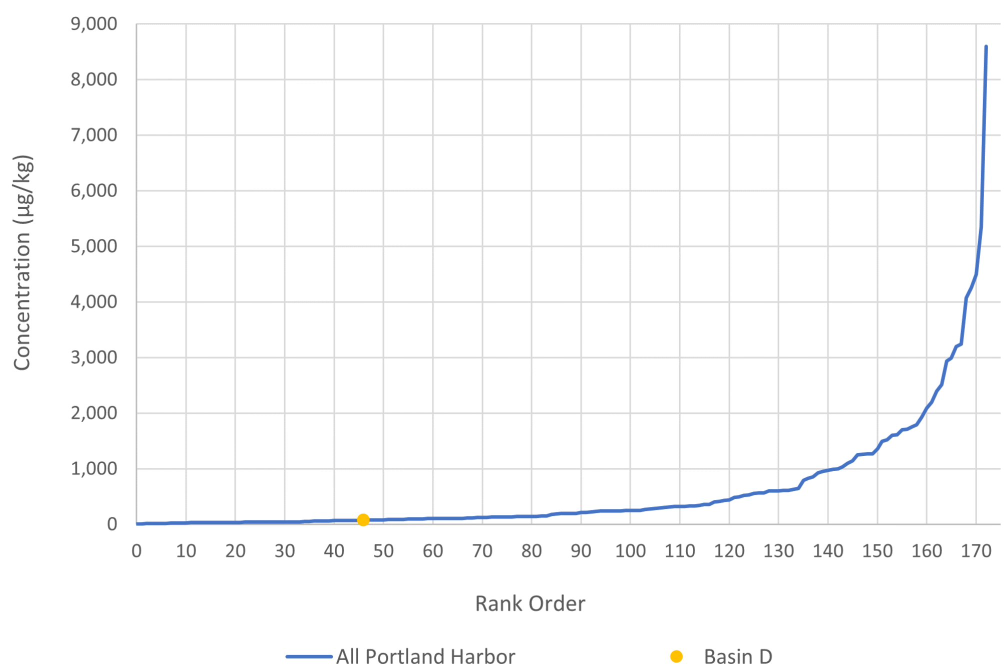

Figure A - 24. Mercury in Stormwater Solids at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

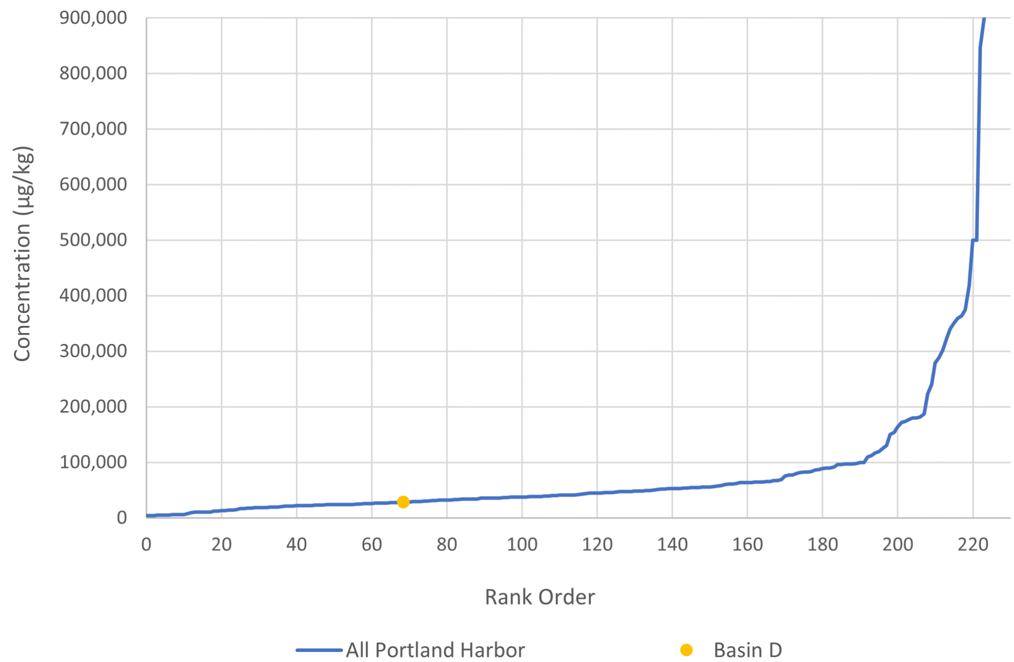

Figure A - 25. Nickel in Stormwater Solids at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

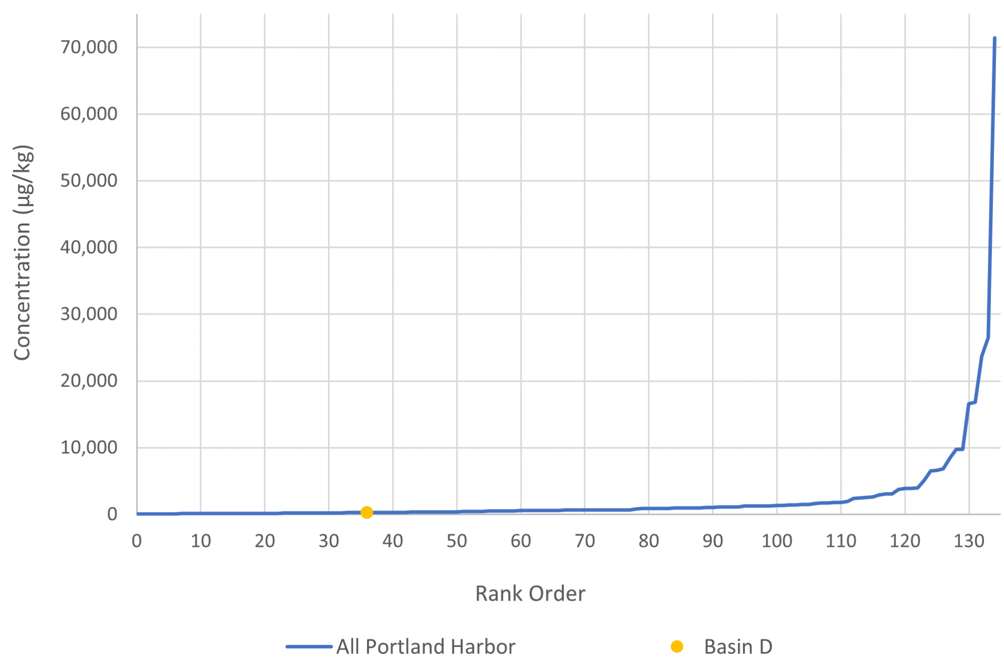

Figure A - 26. Silver in Stormwater Solids at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

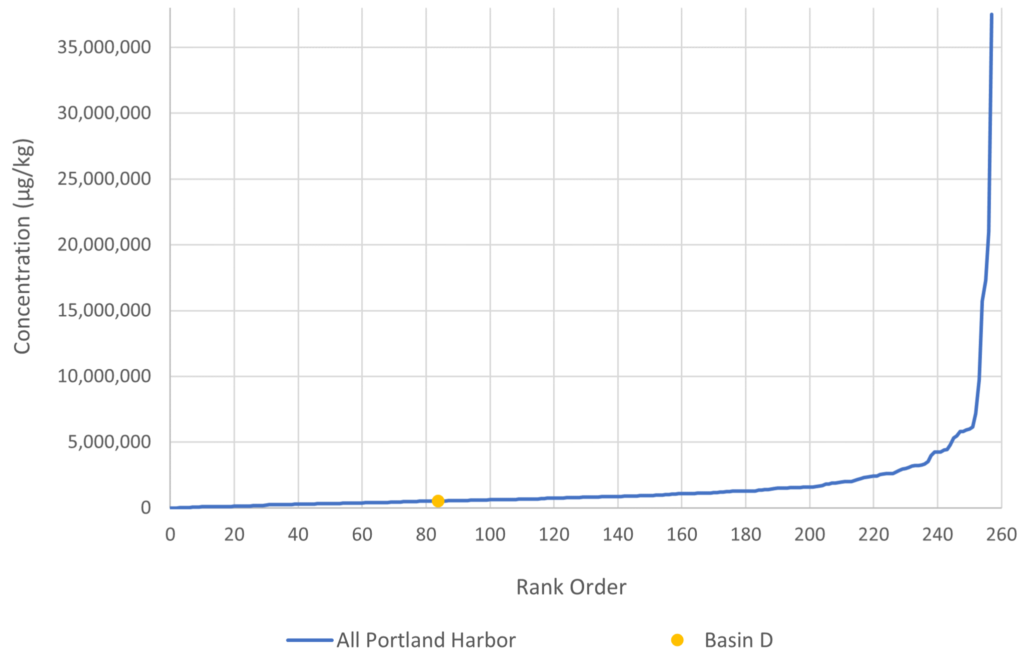

Figure A - 27. Zinc in Stormwater Solids at T4 Compared to "Typical" Industrial Stormwater in the Portland Harbor

Table A - 3. Sample Dates Used in Stormwater Solids Knee of the Curve Plots

Basin	PAHs	PCB Aroclors	PCB congeners	BEHP	All Metals
D	1/22/2007-6/27/2007 9/20/2007-2/15/2008	2/18/2005-6/2/2005	1/22/2007-6/27/2007 9/20/2007-2/15/2008	1/22/2007-6/27/2007 9/20/2007-2/15/2008	1/22/2007-6/27/2007 9/20/2007-2/15/2008