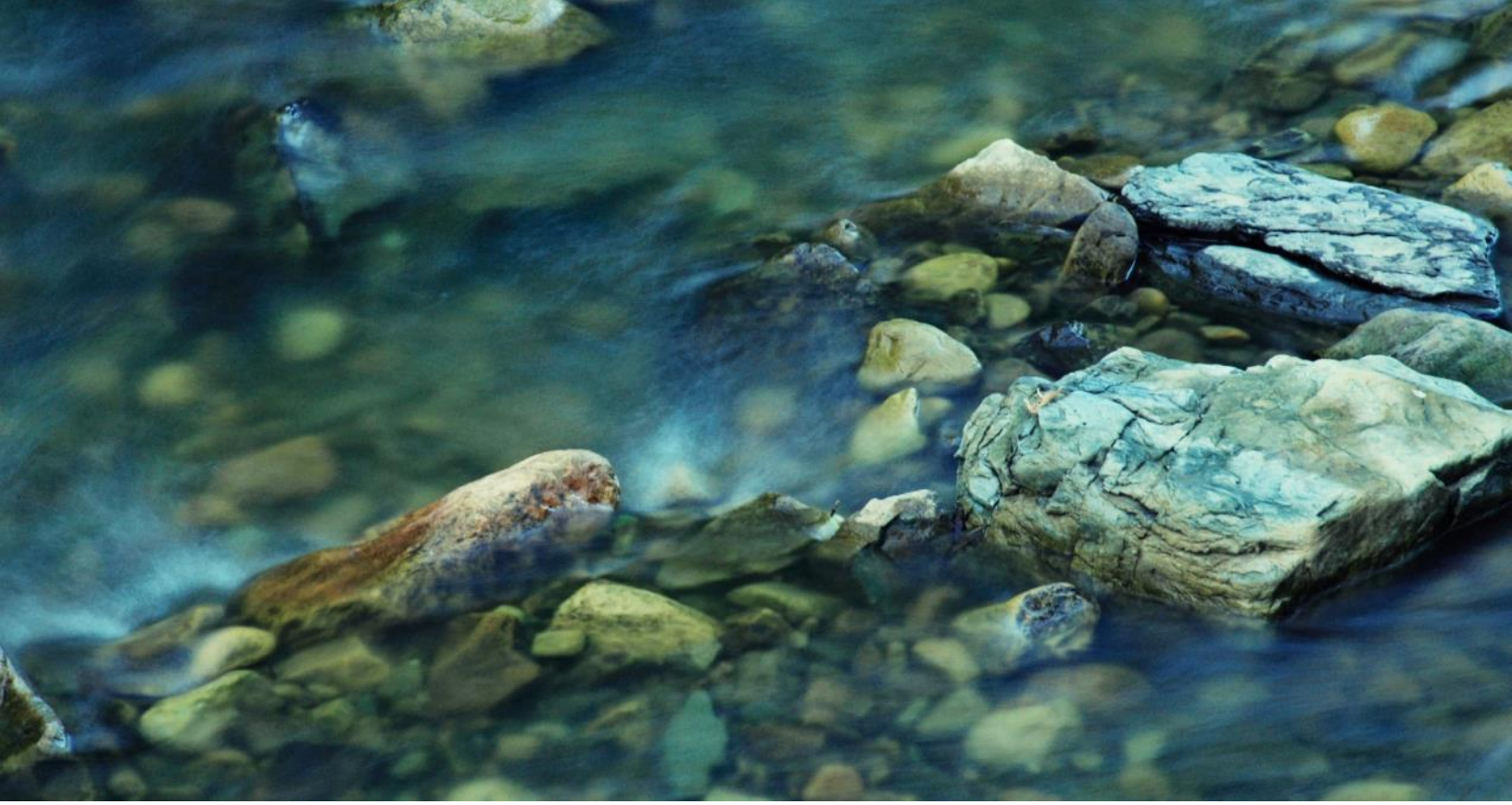

July 2019
India Basin, 900 Innes Avenue

Final Remedial Action Plan and Remedial Design Report

Prepared for the San Francisco Recreation and Parks Department

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India Basin, 900 Innes Avenue

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ABBREVIATIONS

µg/kg	microgram per kilogram
900 Innes	900 Innes Avenue property
AWA	area-weighted average
B(a)P	benzo(a)pyrene
BAAQMD	Bay Area Air Quality Management District
BAZ	biologically active zone
BCDC	San Francisco Bay Conservation and Development Commission
BFE	base flood elevations
bgs	below ground surface
BMP	best management practice
CDFW	California Department of Fish and Wildlife
COC	contaminant of concern
COPC	contaminants of potential concern
CRHR	California Register of Historical Resources
DPH	San Francisco Department of Public Health
DTSC	California Department of Toxic Substances Control
ERM	effects range median
ESL	Environmental Screening Level
FEMA	Federal Emergency Management Agency
GGN	Gustafson Guthrie and Nichol
HHSL	Human Health Screening Level
HMWP	Hazardous Materials and Waste Program
HPNS	Hunters Point Naval Shipyard
IBOS	India Basin Open Space
IBSP	India Basin Shoreline Park
LUC	Land Use Control
MHW	mean high water
MLLW	mean lower low water
NAVD88	North American Vertical Datum of 1988
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
Northgate	Northgate Environmental Management, Inc.
NTE	not-to-exceed
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PID	photoionization detector

RAO	remediation action objectives
RAP	Remedial Action Plan
RAP/RDR	Remedial Action Plan/Remedial Design Report
RG	Remedial Goal
ROD	Record of Decision
schooner boatyard	India Basin Scow Schooner Boatyard Vernacular Cultural Landscape
sf	square feet
SFRPD	San Francisco Recreation and Parks Department
SFRWQCB	San Francisco Regional Water Quality Control Board
SMP	Site Mitigation Plan
SSHSP	Site-Specific Health and Safety Plan
TPH	total petroleum hydrocarbons
TPH-d	total petroleum hydrocarbons (diesel)
TPH-mo	total petroleum hydrocarbons (motor oil)
TSCA	Toxic Substances Control Act
TTLC	Total Threshold Limit Concentration
U	compound not detected above detection limit
UCL	Upper Confidence Limit
URS; AECOM	URS Corporation
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
VOC	volatile organic compound
Weston	Weston Solutions, Inc.

Executive Summary

The San Francisco Recreation and Parks Department (SFRPD) is implementing a voluntary cleanup for the 900 Innes Avenue (900 Innes) and India Basin Shoreline Park (IBSP) properties along the shoreline of San Francisco Bay. The cleanup will involve a combination of landside soil excavation, nearshore dredging, backfilling with imported Clean Cover, and localized offshore sand cover, and will result in a site condition that is protective of future human health uses for the site so that it is ready for later use as shoreline parkland, restored habitat, and public recreational open space.

The details of the planned remedial action are presented in this Remedial Action Plan and Remedial Design Report, which has been developed for SFRPD in consultation with staff from the U.S. Environmental Protection Agency (USEPA) and San Francisco Regional Water Quality Control Board (SFRWQCB).

Site studies conducted over the past 7 years (and most recently in 2018) have indicated that elevated concentrations of metals, total petroleum hydrocarbons, polycyclic aromatic hydrocarbons, and polychlorinated biphenyls, are present in soil and sediment. The planned remedial action is intended to remove all soils and sediments that are considered hazardous waste, or which have chemical concentrations in excess of environmental threshold levels for human health and ecological protection.

To ensure complete removal and to provide an additional level of environmental protectiveness, all soils will be removed to depths of 2 to 5 feet from the site's landside area, and sediments will be removed from nearshore areas to a depth of 4 feet. Removed materials will be hauled off site by truck to one or more appropriately permitted solid waste landfill facilities.

Soil and sediment removal will be followed by backfilling with Clean Cover, restoring final surface grades which are close to their original levels and consistent with final site use goals. The Clean Cover has an added benefit of eliminating the pathway of exposure to underlying native soil which contains residual levels of site pollutants. On the landside area, a geotextile marker will be placed between the native soil and Clean Cover. This will allow future park construction or maintenance to ensure that native soil, if encountered, is handled properly and the Clean Cover remains intact. One local option for in-water Clean Cover is sandy material dredged from shoaled areas of the San Francisco Marina. Other sources are also expected to be available.

Because the property has historic character, having functioned as a ship repair facility for over 120 years, the Shipwright's Cottage will be protected and saved during the remedial work. Other structures are in poor condition and will be removed to allow for the full remedial action to occur. Former historic structures may undergo reconstruction during later phases of development.

The next steps for implementing the remedial action include the following:

- Completing engineering design and construction contract documents (mid to late 2019)
- Obtaining all necessary regulatory permits from federal, state, and local agencies (late 2019)
- Selecting and hiring an experienced remedial contractor (early 2020)
- Completing the construction and confirming the successful attainment of remedial goals (summer/fall 2020)

SFRPD will continue to move forward with project implementation in coordination with USEPA, SFRWQCB, and the surrounding community.

1 Introduction and Purpose of Document

The San Francisco Recreation and Parks Department (SFRPD) plans to redevelop the 900 Innes Avenue (900 Innes) and India Basin Shoreline Park (IBSP) properties along the India Basin shoreline of San Francisco Bay as part of the India Basin Mixed-Use Project (Figure 1). A developer plans to undertake public access and coastal habitat improvements along the India Basin Open Space (IBOS), located adjacent to 900 Innes to the east (Figure 2). The planned redevelopment will create a network of improved parkland and open space along the shoreline. The new park network will also extend the Blue Greenway and connect the San Francisco Bay Trail. As part of the India Basin Mixed use Project, the privately owned 700 Innes Avenue property is also planned for redevelopment, which includes residential and commercial development.

The 900 Innes property is a former maritime industrial site consisting of approximately 2.4 acres of shoreline, 0.6 acre of which is submerged. The property was used as a ship repair facility for over 120 years. SFRPD acquired the property in 2014. The site currently consists of historical and non-historical buildings, paved areas, boat launches, and docks. The planned redevelopment for the 900 Innes property includes remediation of historic contaminants and redevelopment of both the landside and waterside portions of the site to create publicly accessible passive shoreline and restored habitat.

SFRPD is implementing a voluntary cleanup at the 900 Innes property in cooperation with the San Francisco Regional Water Quality Control Board (SFRWQCB). The 900 Innes property was previously characterized in 2013, 2015, 2017, 2018, and 2019 (Weston 2013a, 2013b; URS 2015; Northgate 2017a; Anchor QEA 2019a, 2019b). Elevated concentrations of contaminants, including metals, total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs), were measured in sediment and soil. In sediment, the three primary contaminants of potential concern (COPCs) include lead, mercury, and PCBs, and in soil, the four COPCs include lead, nickel, PCBs, and benzo(a)pyrene (B[a]P). In both cases, other contaminants are co-located at stations with higher concentrations of these COPCs. As such, the remedial design presented in this document focuses on the three sediment COPCs and four soil COPCs. Achieving remedial targets spatially from these contaminants will ensure that all other potential COPCs will also be addressed.

No significant contamination has been detected in site groundwater during previous investigations; therefore, the current program does not include groundwater remediation. Slight exceedances of screening levels were detected in groundwater, but these levels are expected to attenuate as the groundwater migrates to the Bay and are not expected to pose a significant threat to water quality. In addition, the remedial actions being taken will remove any ongoing sources in soil or sediment which contribute to groundwater impacts, thereby resulting in the improvement of groundwater quality over time.

Proposed remedial goals (RGs) for the sediments offshore of the 900 Innes property were developed to protect future aquatic beneficial uses of the site. They include not-to-exceed (NTE) and area-weighted average (AWA) goals for lead, mercury, and PCBs, which are consistent with established cleanup levels for nearby sites (e.g., Yosemite Slough and Hunters Point Naval Shipyard [HPNS] Parcel F), National Oceanic and Atmospheric Administration (NOAA) effects range median (ERM) values (Long et al. 1995), and ambient concentrations in nearshore sediments. These goals will be achieved using a mix of nearshore dredging with off-site disposal and backfilling to the original grade using Clean Cover,[1] as well as potential areas of localized sand cover offshore from the 900 Innes shoreline.

Proposed RGs for landside soils were developed to protect future human health uses of the site, including potential exposure by construction workers during site development activities. These RGs include NTE and 95% Upper Confidence Limit (UCL) goals for lead, nickel, PCBs, and B(a)P equivalent values.[2] Thresholds chosen include Total Threshold Limit Concentration (TTLC), local background levels, action goals for a nearby reference site (Yosemite Slough), and SFRWQCB Construction Worker-Commercial Environmental Screening Levels (ESLs). These goals will be achieved using a combination of soil excavation and backfilling to proposed grade using Clean Cover suitable for unrestricted use. In addition to focusing the landside remedial efforts on achieving these risk-based RGs, an additional level of protection has been applied to the landside areas of the site through a planned removal effort that will replace the top 2 to 5 feet of all surface materials and backfill the void with Clean Cover.

This Remedial Action Plan/Remedial Design Report (RAP/RDR) was developed to summarize the nature and extent of contamination at the 900 Innes site, compare sediment and soil concentrations to risk-based RGs, define areas requiring management action, and detail a concept design for implementing a remediation program at the site, including compliance criteria for measuring success after construction. The details of this document have been developed in consultation with staff from the U.S. Environmental Protection Agency (USEPA) and SFRWQCB. This document has been updated to address the community's concerns based on comments received at the public meeting on April 16, 2019, and during the 30-day public comment period. The information contained in this document will be used to support permit applications with various regulatory and resources agencies to support construction efforts at the site, as well as the engineering design program for remediation.

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[1] Clean Cover includes imported fill material (soils or sediment) that meet Department of Toxic Substances Control (DTSC) *Information Advisory for Clean Imported Fill Material* (DTSC 2001) guidelines or San Francisco Bay ambient conditions (SFRWQCB 1998), respectively.

[2] B(a)P equivalent values were calculated following methods described in *Use of Northern and Southern California Polynuclear Aromatic Hydrocarbon (PAH) Studies in the Manufactured Gas Plant Site Cleanup Process* (DTSC 2009).

1.1 Purpose and Document Structure

The purpose of this document is to summarize potential site impacts resulting from historic industrial uses at 900 Innes and to describe the remedial approach for the site, which includes a combination of nearshore dredging and backfilling with Clean Cover, localized offshore sand cover, and landside soil excavation and backfilling with Clean Cover. This RAP/RDR describes the process by which the remediation will be managed, designed, planned, implemented, and monitored, and provides the basis of design for future documents. This document addresses the technical engineering design and regulatory agency permit and approval requirements for implementing the remediation.

Specifically, the RAP/RDR summarizes the following aspects of the project:

- Section 2: Project Background summarizes the progress of site development, including current site redevelopment plans, potential future uses, and appropriate remedial objectives.
- Section 3: Site Conditions summarizes current site conditions, including structures, and how they may affect remedial design considerations.
- Section 4: Characterization of Site, Soil, and Sediment provides an overview of site studies and sampling events and characteristics and chemical exceedances for landside soil and nearshore and offshore sediments.
- Section 5: Selection and Design of Remedial Components outlines the overall site remedy, which will be a combination of targeted material removal, Clean Cover, and long-term institutional controls intended to protect the public and the environment from residual chemical exceedances in soils and sediments.
- Section 6: Implementation of Remedial Action summarizes engineering design, permitting, contractor selection, construction management, and post-construction monitoring efforts, including documentation and reporting for each phase of work.
- Section 7: Project Schedule outlines the schedule for remedial design moving forward through construction.
- Section 8: Pre-Design Data Needs defines known data gaps and anticipated studies to be completed during or prior to engineering design.
- Section 9: References provides source information for reports and literature cited in this report.

This report also includes the following supporting data and information provided as appendices:

- Appendix A: Conceptual Design
- Appendix B: Historical Characterization Data
- Appendix C: Results of the 2018 Supplemental Sediment Characterization

2 Project Background

2.1 Site Location and Overview

The 900 Innes property is located on the eastern shore of the San Francisco Peninsula, in the Bayview -Hunters Point neighborhood of San Francisco, California (Figure 1). IBSP is located to the northwest and IBOS is located to the east (Figure 2). The site is bound by Innes Avenue to the southwest (Figure 2). India Basin, an extension of the San Francisco Bay, borders the northeastern shoreline of the site. Commercial and residential properties of the Bayview-Hunters Point neighborhood are in the vicinity of the site.

The 900 Innes property is a former maritime industrial site. The property functioned as a ship repair facility for over 120 years. SFRPD acquired the property in 2014. The site currently contains historical buildings, paved areas, boat launches, and docks. Figure 3 shows the site layout of historical industrial uses, primarily associated with boat building and repair. There are six historic buildings on the property and several historic structures that remain from past industrial activities (Figure 4).

The 900 Innes property consists of eight parcels totaling approximately 2.4 acres, and two rights-of-way. The underwater area offshore of the 900 Innes property consists of multiple parcels owned by SFRPD, Build, Inc., and other private owners (Figure 5). SFRPD is the lead organization implementing the voluntary cleanup in coordination with SFRWQCB. The waters immediately adjacent to the 900 Innes property are extremely shallow because the area is a highly depositional part of the San Francisco Bay. Current water depths range from approximately 2 to 7 feet North American Vertical Datum of 1988 (NAVD88).

2.2 Site Redevelopment Plans

SFRPD intends to redevelop the site to be part of the Blue Greenway public open space and to use the site as a public park with recreational access to the waterfront. Current planning and design development include constructing a park that helps connect the San Francisco Bay Trail and create recreational access. The landside portion of the site includes several buildings from the site's historical boatyard history: The Shipwright's Cottage, the Boatyard Office building, and the Tool Shed and Water Tank Building (Figure 4). All three buildings date from the late 1800s to the early 1900s, lack utilities, are in poor condition, and are uninhabitable. The Shipwright's Cottage will be retained and preserved during remedial activities. SFRPD is working with SFRWQCB and the prime design team, Gustafson Guthrie and Nichol (GGN), to evaluate potential options for preserving other aspects of the historical structures, besides the Shipwright's Cottage, in order to maintain the cultural heritage associated with the historical shipyard use at the site. However, because of their current condition and contaminants in soils underneath these structures that pose a risk to human health

and the environment, the other buildings will be demolished as part of the remedial work (potentially subject to reconstruction at a later date).

Tidal marsh will be created along the shoreline, and there will be areas of garden and terrestrial planting. In addition, a gravel beach is being considered, which would allow for public access to the waterfront. Imported materials will be used to construct final park surfaces, such as stone or concrete pavers, asphalt and concrete pavement, and wood timbers and decking. Creosote-treated wood piles historically used to support a water fence will be removed. The anticipated site development is shown in Figure 6. Concept design drawings for the site are presented in Appendix A.

2.3 Remediation Objectives

The overall remediation objectives for this site are the following:

- Remove all debris from the landside and in-water portions of the site and dispose of the material at a suitable landfill, except for those items of historical nature that may be restored and re-incorporated into the finished site design.
- Remove all contaminated materials that are considered hazardous waste according to California's TTLC values from the accessible landside and in-water areas of the site and backfill the void to the original grade with Clean Cover suitable for unrestricted ecological and human health uses.
- Remove all surface sediments (0 to 2 feet below ground surface [bgs]) with COPC concentrations above the ecological NTE thresholds presented in Table 1 and backfill the void to original grade with Clean Cover suitable for unrestricted ecological uses.
- Remove all surface soils (0 to 2 feet) from the remaining accessible landside portions of the site, regardless of their remedial goal exceedance, and backfill the void with Clean Cover suitable for unrestricted ecological and human heath uses.[3]
- Eliminate exposure to landside native soils following soil removal using Clean Cover and a visual and physical barrier (geotextile marker layer) installed between the excavated and backfilled materials to provide demarcation for future site users on the extent of excavation.

As previously described, lead, mercury, and PCBs are "driving" the spatial and vertical extent of contamination in nearshore and offshore sediment, at concentrations that have the potential to affect beneficial uses and key receptors at this site. Dual RGs (NTE and AWA goals) are proposed for each contaminant, as listed in Table 1. The proposed RGs were initially established based on analysis of two analogous nearby sites (Yosemite Slough and U.S. Navy HPNS Parcel F) that have cleanup levels derived from extensive human health and ecological risk evaluations (USEPA 2014) and NOAA

[3] Note that, during the final design, some landside areas away from the shoreline may also receive greater than 2 feet of excavation and backfill if the future development activities suggest that excavation below this depth will be needed (e.g., trenching for utilities).

ERM values (Long et al. 1995). RGs for Yosemite Slough were considered particularly relevant due to the site's proximity and similarity of site conditions, particularly regarding human and ecological receptor pathways.

The final RGs for PCBs are based on consideration of the human health and ecological risk assessments conducted for HPNS Parcel F as discussed in the Draft Final Record of Decision (ROD; Navy 2019) and ambient PCB concentrations in nearshore sediments of the San Francisco Bay (SFRWQCB 2019a). The HPNS Parcel F Draft Final ROD considers total PCB concentrations for the following three remediation action objectives (RAOs):

- RAO 1 – Protection of piscivorous birds based on a Site Use Factor of 0.5. Total PCB concentration of 1,240 micrograms per kilogram (µg/kg).
- RAO 2 – Reduce potential risk to human health from eating shellfish. Total PCB concentration of 1,350 µg/kg.
- RAO 3 – Reduce potential biomagnification of total PCBs at higher trophic levels in the food chain to reduce the potential risk to human health from eating sport fish. Total PCB concentrations calculated for this pathway range from 28 µg/kg to 95 µg/kg based on a $1x10^{-4}$ cancer risk and from 3.2 µg/kg to 11 µg/kg based on a hazard quotient of 1. All the calculated concentrations are below the nearshore San Francisco Bay ambient PCB sediment concentration, which was previously determined to be 200 µg/kg (SFRWQCB 2003).

For HPNS Parcel F, the NTE RG is 1,240 µg/kg to trigger active remediation (e.g., removal, treatment). In the Final Feasibility Study Report for Parcel F (Navy 2008), the Navy calculated that a surface-area weighted average of 386 µg/kg would remain in surface sediments after implementation of remedial action based on the 1,240 µg/kg NTE RG in Area X of Parcel F. In the 2019 Draft Final ROD, the Navy estimated that it would take 5 to 8 years of monitored natural recovery for surface sediments at HPNS Parcel F to achieve the ambient value of 200 µg/kg as an AWA. SFRWQCB staff have since calculated a slightly lower nearshore sediment ambient PCB concentration (148 µg/kg) based on the ninety-fifth percentile of a more recent (2015) dataset (San Francisco Estuary Institute 2018).

SFRWQCB has indicated that the revised nearshore ambient PCB sediment concentration of 148 µg/kg should be used as the sitewide AWA RG for India Basin (SFRWQCB 2019a) and other similar PCB-impacted sediment sites. As such, 148 µg/kg will be used by the City as the final surface AWA PCB remedial target for the India Basin remediation. The remediation plan presented in this document was developed to achieve the more conservative 148 µg/kg value.

The NTE RG for mercury was also based on the ecological risk assessment conducted for HPNS Parcel F. The AWA RG for mercury and both RGs for lead are based on NOAA ERM values for

protection of the benthic community.[4] Consistent with Yosemite Slough, the NTE RG for lead is two times the AWA RG (or ERM value) to eliminate any hot spots.

Both RGs need to be achieved for each contaminant in near-surface sediments upon completion of the sediment remedial action. The upper 2 feet of sediment is conservatively considered as representing the "near-surface," biologically active zone (BAZ), within which the RGs need to be attained. This is consistent with Yosemite Slough, where USEPA determined the site BAZ to be the upper 6 inches and included an additional 18-inch safety margin. Sediments below a 2-foot depth are not biologically available and therefore are not considered to require active remediation if they are covered by near-surface materials that meet all RGs.

Table 1
Proposed Remedial Goals for Sediment at India Basin

Contaminant	Proposed NTE Remedial Goal for Any Given Location	Proposed Sitewide AWA Remedial Goal	Reference/Nearby Example Sites
Total PCBs	1,240 µg/kg	148 µg/kg)	NTE - HPNS and Yosemite Slough; AWA – Nearshore Ambient
Lead	436 mg/kg	218 mg/kg	NTE - Yosemite Slough; AWA - NOAA ERM
Mercury	1.87 mg/kg	0.71 mg/kg	NTE - HPNS; AWA - NOAA ERM

Lead, nickel, PCBs, and B(a)P equivalent value drive the spatial and vertical extent of contamination in landside soil, at concentrations that have the potential to affect beneficial uses and key receptors at this site (Table 2).

Table 2
Proposed Remedial Goals for Soil at India Basin

Contaminant	NTE Remedial Goal for Any Given Location	Recommended Human Health-Based Screening Level for On-Site Management (95% UCL)	Reference for RG/HHSL
Lead	1,000 mg/kg[1]	160 mg/kg	TTLC/SFRWQCB Construction Worker-Commercial ESL (SFRWQCB 2019b[2])

[4] These values were developed from a large dataset where results of both benthic organism effects (e.g., toxicity tests and benthic assessments) and chemical concentrations were available for individual samples. Chemical values for paired data demonstrating benthic impairment were sorted in ascending chemical concentration. The 50th percentile of this rank order distribution was identified as the ERM value.

Nickel	2,000 mg/kg[1]	1,582 mg/kg	TTLC/Local Background Level (TRC 2009)
Total PCBs (Aroclors)	940 µg/kg	940 µg/kg	SFRWQCB Construction Worker-Commercial ESL (SFRWQCB 2019b[2])
B(a)P Equivalent Value	1,800 µg/kg	900 µg/kg	2xHHSL/Action Goal at Reference Site/Regional Background (DTSC 2009)

Notes:

1. TTLC criteria are listed as wet-weight measurements.
2. Refer to ESL Workbook Table S-1: Soil Direct Exposure Human Health Risk Screening Levels (mg/kg) from SFRWQCB (2019b). Direct Exposure ESLs = ESL for Direct Exposure (using the lower of the Commercial and Construction scenarios).

2.4 Regulatory Oversight

Once the remediation has been completed, land-based redevelopment of the site will be subject to provisions of the City and County of San Francisco's Maher Ordinance Program (Article 22A of the San Francisco Health Code), administered by the San Francisco Department of Public Health (DPH). Under the Maher Ordinance Program, a Site Mitigation Plan (SMP) is required to establish environmental mitigation measures that will be followed during redevelopment activities. The Maher Ordinance applies to land at elevations above the mean high-water line (MHW) that are bayward of the historic 1852 high tide line. The Land Use Control (LUC) and the associated Site Management Plan are intended to suffice as the SMP required under the Maher Ordinance Program.

Post-remediation redevelopment completed in the San Francisco Bay (defined here as bayside of current MHW) will be governed by resource agency permits issued by SFRWQCB, the U.S. Army Corps of Engineers (USACE), and the San Francisco Bay Conservation and Development Commission (BCDC).

2.5 Previous Investigations

In 2013, Weston Solutions, Inc., (Weston) conducted a Phase I and II Environmental Site Assessment at the 900 Innes property as part of a Targeted Brownfields Assessment (Weston 2013a, 2013b). In 2015, URS Corporation (URS, now AECOM) conducted additional sediment sampling in the foreshore areas of the 900 Innes property (URS 2015).

In 2016, AECOM prepared a data gap report for the 900 Innes property to identify data needs for the performance of a risk assessment on the redeveloped property (AECOM 2016). Based on data gaps identified in this report, Northgate Environmental Management, Inc., (Northgate) conducted additional site characterization at the 900 Innes property in 2016 and 2017 (Northgate 2017a). Soil, sediment, groundwater, and surface water were collected to support remedial action and mitigation planning for the site. In 2017, Northgate also conducted a site characterization at IBSP

(Northgate 2017c). In June 2017, a draft conceptual RAP was developed to address environmental impacts resulting from past industrial uses and describe a potential remedial approach (Northgate 2017d).

Historical sediment chemistry samples were generally restricted to surface sediment at the 900 Innes property. Insufficient data were available to confirm subsurface depths of contamination or extent of contamination offshore of the 900 Innes property. Therefore, further site characterization was initiated in the waterside areas to assist in developing the final remediation strategy. In 2018, Anchor QEA conducted additional sediment sampling and testing to determine the extent of contamination and support development of an effective remedial management strategy (Anchor QEA 2019a). In 2019, Anchor QEA conducted pre-design surface sediment grab sampling and testing to better delineate remedial boundaries (Anchor QEA 2019b).

This RAP/RDR supersedes the conceptual draft RAP developed by Northgate in 2017 (Northgate 2017d) and was developed using additional sediment characterization data. This RAP/RDR summarizes the remedial strategy and provides the basis of design for future documents.

3 Site Conditions

Physical site conditions at 900 Innes vary within the landside, waterfront and shoreline, and nearshore and offshore areas, which could influence the remediation approach in terms of design and construction logistics. This section describes the pertinent site conditions of 900 Innes, including bathymetric and topographic features, hydrology, general soil and sediment characteristics, presence of and fate of existing buildings and constructed features, archeological resources, sewer and stormwater features, and available site access for construction equipment and hauling.

3.1 Topography and Bathymetry

Meridian Surveying Engineering, Inc., performed a topographic survey of the landside portion of 900 Innes and IBSP in March 2018 (Meridian 2018), and a bathymetric survey of the nearshore and offshore portions of 900 Innes, IBSP, IBOS, Northside Park, and Heron's Head in May 2015 (Meridian 2015).

The landside portion of 900 Innes slopes from Innes Avenue down to the waterfront at an approximate 10% to 15% grade. To the northwest of India Basin, adjacent to IBSP, a vegetated bluff extends from an elevation of approximately 17 feet NAVD88 down to the waterline at an approximate 6% to 7% grade. Approximately 50 feet of the bluff shoreline north of the west marine way tracks is soft shoreline. However, the rest of the bluff shoreline running north to meet IBSP has concrete rubble in place between approximately 5 and 10 feet NAVD88. The draft Environmental Impact Report specifically noted that the concrete rubble along the shoreline shall be left in place to avoid destabilizing the embankment but that all other timber and metal debris along the shoreline shall be removed (AECOM 2017). The existing vegetated bluff appears stable and shows no signs of erosion (Moffatt & Nichol 2017).

The nearshore basin is relatively shallow, with elevations throughout the project area ranging between approximately 0 and -3 feet NAVD88. At the lowest tide, the mudflat is exposed for at least 40 feet off the shoreline in all locations of the basin, and further in many locations. These elevations continue throughout the India Basin nearshore. The offshore areas are shallow throughout the entire India Basin, and do not achieve greater depths until near Heron's Head Park, where their depth ranges between -4 and -10 feet NAVD88. This condition is important to note because it limits the ability to access the site for remediation activities via the water without significant challenges.

3.2 Hydrology

900 Innes lies within the Islais Valley groundwater basin of the San Francisco Hydrologic Region. Shallow groundwater is present in the fill materials near the interface with underlying native marine sediments, at approximately the elevation of the San Francisco Bay MHW. The groundwater flow direction beneath the site is expected to be northerly towards India Basin. The flow gradient is

expected to be relatively flat, given the proximity to the shoreline and tidal influences. Groundwater has been measured at depths ranging from approximately 4 to 19 feet bgs. The groundwater level is anticipated to vary due to seasonal and annual fluctuations associated with precipitation and tidal cycles affecting the water level of India Basin and the San Francisco Bay. Groundwater beneath the site is not considered suitable for drinking water because of low yield and general mineral water quality.

The conditions at the project site are generally similar to those of the San Francisco Bay, which is dominated by similar mixed semi-diurnal tides. A long-term NOAA tidal station does not exist within the immediate vicinity of India Basin. However, the station at Alameda, California (Station ID 9414750) is the most similar in terms of location and bay tidal system influences. Table 3 lists the tidal datum information from the Alameda station (NOAA 2019).

Table 3
Tidal Datum at Alameda, California (reference site)

Datum	MLLW (feet)	NAVD88 (feet)
Highest Observed Water Level (12/3/1983)	9.65	9.42
Mean Higher High Water	6.60	6.37
Mean High Water	5.98	5.75
Mean Tide Level	3.56	3.33
Mean Low Water	1.14	0.91
North American Vertical Datum 1983	0.23	0.00
Mean Lower Low Water	0.00	-0.23
Lowest Observed Water Level (1/11/2009)	-2.57	-2.80

Note:
Reference datums for NOAA Station ID 9414750 (NOAA 2019).

Preliminary Flood Insurance Rate Map designations of the site indicate a 1% probability of annual flooding in a given year, which is defined as the 100-year floodplain. Table 4 presents the base flood elevations (BFE; the minimum elevation specified by Federal Emergency Management Agency [FEMA] regulation for the elevation of structures to protect against flooding) for 900 Innes. The BFE values for the rest of India Basin are included for comparison (AECOM 2017).

Table 4
Preliminary Federal Emergency Management Agency Base Flood Elevations for 900 Innes and Adjacent Shoreline Properties

Property	Shoreline Reach	Preliminary FEMA Base Flood Elevation (feet NAVD88)
India Basin Shoreline Park	All	10
900 Innes	All	10
India Basin Open Space	Northeast-facing shoreline	12
	Northwest-facing shoreline	10

In 2015, Moffatt & Nichol performed a coastal processes analysis, which included an estimation of coastal erosional and depositional patterns. The nearshore portion of the 900 Innes basin is shown entirely as a depositional region, with sediment transport occurring from both the northwest and the northeast shorelines. Moffatt & Nichol estimated that future sedimentation at the site could be expected to continue at its current rate of 0 to 2 inches per year. The offshore portions of the basin may experience sedimentation at a rate of 2 to 4 inches per year. None of the 900 Innes basin was shown to be subject to erosion (Moffatt & Nichol 2017). The results of this previous investigation will be further evaluated during the final design process by also evaluating the potential for wind/wave scour to occur near the shoreline as a result of storm conditions.

3.3 Soil and Sediment General Characteristics

The entire IBOS property and much of the land at 900 Innes, IBSP, and 700 Innes was created using artificial fill over native marine sediment and is therefore in an identified liquefaction zone (SFPUC 2013; SFDEM 2014). Fill thickness varies throughout 900 Innes and can be generalized as 35 feet thick at the higher elevations near Innes Avenue, thinning to a few feet in the lower-elevation areas nearest the shoreline. Only a small portion of the original 900 Innes shoreline is visible; most of it has been modified with fill and marine construction features.

Fill materials generally contain artificial debris, such as rock, concrete, brick, glass, and wood fragments, in variable amounts. Fill soils consist of a heterogeneous mixture of clays, sands, and gravels. Native marine sediments underlying the fill materials consist of interbedded clays and sands, with lesser gravels (AECOM 2017).

The soil and sediment have been sampled and tested extensively, and characterization results are described in Section 4.

3.4 Buildings and Other Constructed Features

The India Basin Scow Schooner Boatyard Vernacular Cultural Landscape (schooner boatyard) comprises the landside, shoreline, and nearshore portions of 900 Innes and the IBSP. The schooner boatyard is eligible for listing in the California Register of Historical Resources (CRHR) under Criterion 1: Events, as a period of historical significance. It is established by several character-defining features, including historical buildings, marine structures, artifacts, and views of the bay. Therefore, during remediation and redevelopment design for 900 Innes, the features of the schooner boatyard will be taken into consideration to help determine whether its demolition or significant alteration (non-restorative) might impact the overall cultural landscape.

The landside portion of the property includes three buildings from the site's historical boatyard activities: The Shipwright's Cottage, the Boatyard Office building, and the Tool Shed and Water Tank Building (Figure 4). As noted above, all three buildings are over 80 years old, lack utilities, are in poor condition, and are uninhabitable. The Boatyard Office building and Tool Shed and Water Tank Building are in a state of collapse. A fourth building, the storage building, was constructed in the latter part of the 20th century and consists of a steel-framed canopy structure. It does not hold historical significance to the site.

The waterfront and shoreline portion of the site includes two buildings, a concrete deck leading to a wharf and launch ramp, the west marine way tracks, and the east marine way tracks. The buildings include the paint shop and compressor house and the blacksmith and machine shop. Like the landside buildings, both waterfront and shoreline buildings are old, lack utilities, and are in poor condition. The blacksmith and machine shop are in a state of collapse. The condition of the concrete deck, wharf, and launch ramps range from fair to significantly degraded. There are signs of settlement, and it appears through cracks in the exterior concrete casing of the wharf that the interior is filled with debris.

As previously discussed, the Shipwright's Cottage will be salvaged and restored during remedial construction. It is eligible for listing in the CRHR and has been designated as San Francisco Landmark No. 250 (AECOM 2017). SFRPD is working with SFRWQCB and the prime design team, GGN, to evaluate potential options for preserving other aspects of the historical structures, besides the Shipwright's Cottage, in order to maintain the cultural heritage associated with the historical shipyard use at the site. There are, however, several challenges which need to be addressed including safety requirements associated with the new park (e.g., seismic performance, structural conditions) and contaminants in soils underneath these structures which pose a risk to human health and the environment. SFRPD has hired structural and marine engineers to inspect all of the structures (buildings, concrete piers, and docks) for integrity and feasibility for repair. These assessments have determined that the structures are beyond their useful life and/or pose a risk to human health and safety. Based on the results of this assessment and contaminants in soils underneath these

structures, the other buildings and concrete wharf will be demolished. SFRPD is also working with a testing firm to collect samples from each of the structures to test the materials for the presence of known adverse products, such as lead and asbestos, which would also need to be remediated.

The west marine way tracks are a pair of inclined tracks that extend from land into the water for launching and hauling vessels. The rails were constructed of wood and metal and are very eroded. The wood portion of the structure will be demolished due to contamination with creosote (AECOM 2017). The metal portion will also be removed because its presence is a notable obstruction to complete shoreline remediation; however, the metal portion will be salvaged and replaced.

The nearshore and offshore portion of the site includes two dilapidated piers and approximately 32 creosote-treated piles. Twenty of the creosote-treated piles are associated with the existing two piers, and the remaining 12 piles were posts associated with a historical water fence along the northwest shoreline (AECOM 2017). Both piers and all piles will be removed during remediation.

Table 5 summarizes the existing buildings and constructed features on the 900 Innes property. All structures are shown in Figure 4.

Table 5
Summary of 900 Innes Buildings and Constructed Features

Structure		Location	Size	Anticipated Fate	Year Built	Character-Defining?[1]	Notes
1	Shipwright's Cottage	Landside	900 sf	Preserve	1875	Yes	CRHR eligible, designated San Francisco Landmark No. 250
2	Boatyard Office Building	Landside	286 sf	Demolish	Between 1919 and 1935	Yes	10 feet tall, wood-framed
3	Tool Shed and Water Tank Building	Landside	940 sf	Demolish	Before 1900	Yes	10 to 15 feet tall, wood-framed
4	Paint Shop and Compressor House	Waterfront/shoreline	1,700 sf	Demolish	Between 1938 and 1946	No	15 feet tall, wood-framed, on wharf
5	Blacksmith and Machine Shop	Waterfront/shoreline	1,460 sf	Demolish	Between 1938 and 1946	No	10 feet tall, on wharf
6	Storage Building	Landside	1,600 sf	Demolish	Between 1979 and 1989	No	20 to 25 feet tall, steel-framed canopy
7	West Marine Way Track	Waterfront/shoreline	Varies	Remove for Restoration	Prior to 1935	Yes	Timber and metal
8	Central Construction Way Ramp (and associated deck and wharf)	Waterfront/shoreline	0.5 acre (combined)	Demolish	1940s (deck and wharf 1989 to 1997)	No	Concrete
9	East Marine Way Track	Waterfront/shoreline	Varies	Demolish	Between 1938 and 1946	No	Timber and metal
10	Water Fence Posts	Nearshore/offshore	12 total	Demolish	Prior to 1935	Yes	Near northwest shoreline
11	Modern Dock (and piles)[2]	Nearshore/offshore	12 by 125 feet	Demolish	1980 to 1997	No	Concrete, floating
12	East Outfitting Dock (and piles)[2]	Nearshore/offshore	Original unknown	Demolish	1938-1946	No	Timber fixed pier, near collapse
13	Embankment stabilization[3]	Waterfront/shoreline	180 linear feet	Demolish[4]	Unknown	No	Concrete rubble, located between 5 and 10 feet MLLW

Notes:

1. Character-defining features of the schooner boatyard (AECOM 2017)
2. There are 20 piles associated with the two docks.
3. The 180 linear feet of concrete rubble for embankment stabilization spans the 900 Innes and IBSP properties. Measurement is approximate and based on the Meridian topographic survey delineation. Various locations of concrete remnants below 4 feet NAVD88 were also delineated (Meridian 2018). This feature is not considered a historical structure and is not included on Figure 4.
4. Demolition status pending slope stability assessment and final remediation and restoration design.

3.5 Archeological Resources

An archeological field survey of the entire India Basin was conducted in 2017. Although no in situ archeological resources were identified within 900 Innes, IBOS, or 700 Innes, abandoned ship remains and some scattered artifacts were identified within IBSP. The study findings do not preclude the potential presence of intact archeological resources in the subsurface of the other India Basin properties, because India Basin is considered to have elevated levels of archeological sensitivity for both prehistoric and historic periods (AECOM 2017). The current remediation strategy does not encroach on any of the areas within IBSP where archeological resources have been previously identified.

3.6 Sewer Outfalls and Stormwater Drainage

San Francisco has a combined sewer and stormwater system. A combined overflow pipe from Hudson Avenue passes through 900 Innes and leads to an outfall to the immediate southeast, within the waters of IBOS (AECOM 2017).

There is no stormwater collection feature at the site; therefore, it drains to the shoreline in a sheet flow. There is one existing storm drain inlet in IBSP. However, it is located far enough away that it does not capture any runoff from 900 Innes (AECOM 2017).

3.7 Site Access

Direct vehicular access to the site is via Griffith Street where it tees off Innes Avenue and leads to the southwest side of the site (Figure 2). From there, vehicles would travel down the paved road to access the shoreline. There is no formally designated parking area, although vehicles can be parked at various locations throughout the site.

Alternatively, vehicles can be parked in the established parking on of Hudson Avenue where it tees off Hunters Point Boulevard, to the northwest of the site (Figure 2). This area is paved and is approximately 0.35 acre. However, the area is at an elevation of approximately 25 feet NAVD88, so shoreline access would have to be completed on foot.

Immediately southeast of the Hudson Avenue parking lot, there is an almost half-acre asphalt concrete pad at an approximate elevation of 17 to 18 feet NAVD88. Vehicular access to the pad is currently not available. However, the pad could serve as a laydown area during construction and be connected to the project site and Hudson Avenue parking lot with minor access improvements. The pad is relatively flat and in poor condition, with areas of wear and sporadic vegetation growth.

Aquatic access to the offshore and nearshore portions of the site is extremely limited during periods of moderate to low tides. At the lowest daily tides, almost all the basin's mudflat is exposed.

4 Characterization of Site, Soil, and Sediment

4.1 Overview of Site Studies and Sampling Events

Site investigations, consisting of sediment, soil, groundwater, and surface water testing, were conducted at the 900 Innes property in 2013, 2015, and 2017 (Weston 2013a, URS 2015, and Northgate 2017a, respectively), and IBSP in 2017 (Northgate 2017c). Historical sampling locations at the 900 Innes property from 2013 to 2017 are shown in Figure 7. Based on the results of these investigations, contaminants of concern identified at the project site include metals (arsenic, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium, and zinc), TPH (diesel [TPH-d] and motor oil [TPH-mo]), PAHs, and PCBs. During these investigations, sediment samples were generally restricted to surface sediment (within the top 1 foot), with limited subsurface samples collected below this depth. In addition, only limited samples were collected outside the 900 Innes property; therefore, additional sediment data were needed to define the extent of contamination.

In 2018, additional sediment sampling and testing was performed to further delineate the vertical and horizontal extent of sediment contamination at the 900 Innes property, including the areas offshore of the property boundary and adjacent properties (Anchor QEA 2019a). Sampling locations from 2018 are shown in Figure 8. Most recently, in June 2019, pre-design sampling and testing was performed near the shoreline of 900 Innes and IBSP to determine the outer boundary for sediment removal and at the localized offshore area (station IB-08) to better define the spatial extent of surface contamination at this location (Anchor QEA 2019b). Pre-design sampling locations from 2019 are shown in Figure 9.

Each investigation is summarized in the following subsections. Summaries of landside soil and nearshore and offshore sediment conditions are presented in Sections 4.2 and 4.3, respectively. Neither groundwater nor surface water quality data collected as part of these investigations suggest that groundwater remediation would be necessary or that surface water was significantly impacted by the soil and sediment contamination.

4.1.1 Weston 2013

In 2013, Weston conducted a Phase I and II Environmental Site Assessment at the 900 Innes property as part of a Targeted Brownfields Assessment (Weston 2013a, 2013b). Surface sediment samples were collected from six stations and shallow soil samples were collected from 27 stations. Surface sediment and shallow soil samples were collected to a depth of 0.5 foot bgs. To assess the vertical extent of contamination, subsurface soil samples were collected at eight collocated stations. Subsurface soil samples were collected from 3 to 4 feet bgs. Two groundwater samples were targeted from subsurface borings; however, groundwater was not encountered at any station. Soil and sediment samples were analyzed for contaminants of concern (COCs). Sampling locations are

shown in Figure 7. Soil and sediment chemistry results, compared to ecological and human health screening levels, are presented in Tables B1 and B2 of Appendix B. Elevated concentrations of metals, TPH-d and TPH-mo, PAHs, and PCB Aroclors were measured in sediment and soil. Copper, lead, mercury, and nickel were greater than the TTLC in at least one sample, indicating that some material would need to be managed as a hazardous waste upon removal from the site.

4.1.2 URS 2015

In 2015, URS conducted additional sediment sampling in the foreshore areas of the 900 Innes property to further evaluate the potential need for remediation of sediments to allow for water access as part of the proposed development (URS 2015). Sediment samples were collected from 10 stations. Surface sediment from the top 1 foot (two 0.5-foot intervals) was analyzed for COCs. Sampling locations are shown in Figure 7. Sediment chemistry results, compared to ecological and human health screening levels, are presented in Tables B1 and B2 of Appendix B. Elevated concentrations of metals, TPH-d, PAHs, and PCB Aroclors were measured in sediment. Copper, lead, mercury, and zinc were greater than the TTLC in at least one sample, indicating that some material would need to be managed as a hazardous waste upon removal from the site.

4.1.3 Northgate 2016 and 2017

In 2016 and 2017, Northgate performed two site characterizations, including the 900 Innes property and IBSP (Northgate 2017a, 2017c). Site characterizations were performed to address data needs identified in the AECOM data gap report (AECOM 2016). For both characterizations, soil, sediment, groundwater, and surface water were collected. For IBSP, only sediment data are summarized in this report, as these data were used to determine the extent of contamination in the nearshore and offshore areas of the 900 Innes property.

4.1.3.1 900 Innes Property

In 2016 and 2017, Northgate conducted a site characterization at the 900 Innes property (Northgate 2017a). Soil, sediment, groundwater, and surface water were collected to support remedial action and mitigation planning for the site and address data gaps previously identified (AECOM 2016). Surface sediment samples from the top 1 foot were collected from 14 stations to assess the extent of impacted sediment in the offshore areas. At two stations, a second subsurface sediment sample was collected, consisting of material from 1 to 2 feet or 2 to 3 feet below the mudline. Surface and subsurface soil samples were collected from 42 stations to supplement previous data and evaluate the vertical extent of contamination. Groundwater samples were collected from four subsurface soil stations to evaluate baseline conditions and the potential of chemical migration into the bay. Surface water samples were collected from 10 stations to evaluate water quality in the nearshore area. Sampling locations are shown in Figure 7. Sediment, soil, groundwater, and surface water were analyzed for contaminants of concern.

Chemistry results with a comparison to ecological and human health screening levels are presented in Tables B3 through B12 of Appendix B. Elevated concentrations of metals, TPH-d, PAHs, and PCBs were measured in soil. Elevated concentrations of metals, TPH-d, TPH-mo, PAHs, and PCBs were measured in sediment. Total PCBs were greater than the Toxic Substances Control Act (TSCA) hazardous waste level (50 mg/kg) in one soil sample, indicating that some material would need to be handled and management separately at a hazardous waste landfill. Copper, lead, mercury, and zinc were greater than the TTLC in at least one sample, indicating that additional material would need to be managed as a hazardous waste upon removal from the site. Pesticides, volatile organic compounds (VOCs), and organotins were not identified as COPCs. Groundwater quality was typical of shallow, near-Bay conditions in urban settings. Surface water chemistry indicated slightly elevated metals (copper, nickel, and silver) that exceeded Basin Plan water quality objectives; however, concentrations likely reflect ambient conditions of India Basin. Neither groundwater nor surface water quality data collected as part of this investigation suggest that groundwater remediation would be necessary or that surface water was significantly impacted.

4.1.3.2 India Basin Shoreline Park

In 2017, Northgate conducted a site characterization at IBSP (Northgate 2017c), located northwest of the 900 Innes property. Soil, sediment, groundwater, and surface water were collected to support remedial action and mitigation planning for the site. Only sediment data are summarized in this report, as these data were used to determine the extent of contamination in the nearshore and offshore areas of the 900 Innes property. Surface sediment samples were collected from eight stations to assess sediment quality at the proposed gravel shore, trail access points, and tidal marsh area. Sediment from the top 1 foot was analyzed for COCs. Sediment chemistry results, compared to ecological and human health screening levels, are presented in Tables B13 through B18 of Appendix B. Elevated concentrations of metals, TPH-mo, PAHs, and PCBs were measured in sediment. All concentrations were below the TTLC, indicating that material would not need to be managed as a hazardous waste upon removal from the site. Pesticides and organotins were not identified as COPCs in sediments.

4.1.4 Anchor QEA 2018

In 2018, Anchor QEA conducted additional sediment sampling and testing at the 900 Innes property, including the areas offshore of the property boundary and adjacent properties, to further delineate the vertical and horizontal extent of sediment contamination (Anchor QEA 2019a). Sediment cores were collected at 24 stations. Twenty-two stations were located along seven transects running offshore of the 900 Innes property and adjacent properties, and two stations were located underneath existing shoreline structures at the 900 Innes property (Figure 8). Sediment cores were collected to a target depth of 6.5 feet below the mudline. Each sediment core was vertically segmented into 2-foot intervals. Core samples were analyzed for COPCs based on a phased

approach. The initial phase of testing included 10 stations (Figure 8). Based on those results, six additional stations were submitted for analysis to further delineate the extent of contamination. No dioxin/furan data existed for sediment from India Basin; therefore, composite samples were created and analyzed for dioxin/furans. Sediment chemistry results are presented in Tables B19 and B20 of Appendix B. The full sediment characterization report, including methods and results, is included as Appendix C. Elevated concentrations of metals, TPH-d, PAHs, and PCBs were measured in sediment. Copper and lead were greater than the TTLC in at least one sample, indicating that some material would need to be managed as a hazardous waste upon removal from the site. Based on the results of this investigation, lead, mercury, and PCBs appear to be driving the spatial and vertical extent of sediment contamination.

4.1.5 Anchor QEA 2019

In June 2019, Anchor QEA conducted pre-design sediment sampling and testing. Sampling was performed near the shoreline of 900 Innes and IBSP to determine the outer boundary for sediment removal and at the localized offshore area (station IB-08) to better define the spatial extent of surface contamination at this location (Anchor QEA 2019b). Surface grab samples were collected at 12 stations using a petite ponar (Figure 9). Sediment chemistry results are presented in the sampling and analysis results memorandum (Anchor QEA 2019b), included as Appendix D. All concentrations were less than NTE RGs. PCBs at three stations exceeded the AWA RG.

4.2 Groundwater

Previous groundwater studies conducted as part of characterization efforts (Northgate 2017a) suggest that groundwater remediation will not be necessary. Groundwater chemistry results are presented in Tables B21 to B25 of Appendix B. Groundwater has the potential to impact surface waters and aquatic receptors; therefore, groundwater concentrations were compared to aquatic habitat saltwater ecotoxicity ESLs. Based on future site uses, direct exposure with the public will not occur. In addition, as described in Section 3.2, groundwater beneath the Site is not considered suitable for drinking water because of low yield and general mineral water quality. Therefore, groundwater concentrations were not compared to human health direct exposure ESLs.

The metals barium, chromium, cobalt, copper, lead, molybdenum, nickel, silver, thallium, and zinc were detected in groundwater samples. Copper, lead, nickel, selenium, silver, and zinc were detected in groundwater at concentrations above their respective ESLs for aquatic habitat. Northgate (2017a) suggested that the presence of these metals in the groundwater likely reflects ambient conditions in the vicinity with the possible exception of the relatively higher copper, lead, and zinc detections. These detections may be related to historical activities at the site. TPH-d, TPH-mo, PAHs, and VOCs were detected in groundwater samples. TPH-d was detected in groundwater at concentrations above the ESL for aquatic habitat. PAHs and VOCs were not identified as COPCs for groundwater; all

concentrations were less than aquatic habitat screening levels. Maher Ordinance constituents of concern, including cyanide and chromium (VI), were detected in groundwater. Cyanide was detected in groundwater at a concentration above the ESL for aquatic habitat. Groundwater samples were not screened for PCBs, pesticides, or organotins.

Although there are some slight exceedances of aquatic habitat goals, these values are based on surface water criteria (e.g., the California Toxic Rule) and do not account for attenuation or dilution. Chemical concentrations will attenuate in soil as groundwater moves toward the surface water. Contaminated soils will be removed as part of the remediation and backfilled with Clean Cover, eliminating the source of contamination and helping to further attenuate chemical concentrations. Based on these factors, groundwater is not a significant threat to surface waters and aquatic receptors.

4.3 Landside Soils

4.3.1 Physical and Geotechnical Characteristics

Historical investigations showed that soil boring in the western and northwestern portions of the 900 Innes property consisted of a moist, dark olive brown poorly graded sand with gravel. With depth, the soil characteristics in this portion of the site vary from a very dark greenish gray clay at 9.5 feet bgs at Station INN-SB-GW-4 to a wet, black to greenish black poorly graded sand with gravel at 15 feet bgs at Station INN-SB-GW-4. In the central portion of the property, a moist, dark to very dark brown poorly graded sand thins out at the surface toward the southern portion of the property. A moist dark olive brown clay underlies the poorly graded sand for 0.5 to 2 feet bgs in the central portion of property but is encountered at the surface in the southern portion of the property. The clay layer changes to light brown with increasing fine sand content with depth. Shell, brick, asphalt, concrete, glass, and wood fragments were encountered in soil borings at varying depths across the site (Northgate 2017a).

A photoionization detector (PID) measured volatile organic compounds in multiple borings across the site. Organic odors were also detected in multiple borings across the site. In two borings (INN-SB-14 and INN-SB-GW-2) corresponding to depths of PID detections, a slight sheen was observed (Northgate 2017a).

Standing water or groundwater was observed in 13 soil boring across the site at depths ranging from 4.5 to 19.5 feet bgs. The depth of the water in the soil borings may be tidally influenced (Northgate 2017a).

4.3.2 Extent and Depth of Chemical Exceedances

Landside soil sampling and testing was conducted at the 900 Innes property in 2013, 2015, and 2017 (Weston 2013a; URS 2015; Northgate 2017a). As previously described, lead, nickel, PCBs, and B(a)P equivalent values are driving the spatial and vertical extent of contamination in soils at concentrations that are characterized as hazardous waste (i.e., greater than TTLC criteria). A statistical summary of historical landside soil chemistry results compared to NTE and HHSL RGs are presented in Table 6. Statistical analysis was performed using ProUCL. The pattern of soil contamination is parameter-specific. For example, the average and maximum concentrations of lead decreases with depth bgs. Nickel concentrations were similar across all depths; however, only two exceedances of the NTE RG occurred, which were in the 0- to 1-foot bgs and 3- to 4-foot bgs layers. Similar to lead, total PCBs generally decreased with depth; however, a result from a single sample location (INN-SB-11) in the 4- to 5-foot bgs layer resulted in total PCBs exceeding the NTE and HHSL RGs at this depth. B(a)P equivalent values also decreased with depth.

The horizontal and vertical extent of contamination from lead, nickel, PCBs, and B(a)P equivalent values in landside soils are presented in Figures 10, 11, 12, and 13, respectively. The highest concentrations of the four COPCs were measured in the 0- to 1-foot bgs depth at stations across the 900 Innes property. The highest PCB concentration was measured at station INN-SB-26 (77,900 µg/kg), which exceeded the TSCA hazardous waste level (50 mg/kg). In soils deeper than 1 foot bgs, the highest concentrations of the COPCs were located at stations within and adjacent to the historical boat launch area in the west central portion of the property. NTE RGs were not exceeded deeper than 5 feet bgs.

4.4 Nearshore and Offshore Sediments

4.4.1 Physical and Geotechnical Characteristics

During sediment sampling, observations included a qualitative assessment of the physical characteristics of each core. Nearshore and offshore sediments generally consisted of very dark gray to black saturated silt and clay. Consistency generally increased with depth, ranging from very soft at the sediment surface to medium stiff at depth. Trace to substantial shell fragments were observed at most stations and trace gravel and wood debris were observed at some locations. A slight creosote odor was associated with a few wood fragments. Generally, there was no sediment odor or a slight to moderate hydrogen sulfide odor; however, a slight petroleum-like odor was associated with a few core intervals.

Grain size analysis was performed as part of the 2018 sediment sampling program (Anchor QEA 2019a). Nearshore and offshore sediments consisted primarily of fines (58.1% to 98.2% silt and clay), except for two core intervals (54.1% and 54.4% sand). Only three core intervals consisted of less than

60% fines. Total solids from this investigation ranged from 39.5% to 79.5%. Moisture content was analyzed as part of the 2017 sediment sampling program (Northgate 2017a). Percent moisture in nearshore and offshore sediments ranged from 18% to 63%.

4.4.2 Extent and Depth of Chemical Exceedances

Sediment sampling and testing was conducted at the 900 Innes property and IBSP in 2013, 2015, 2017, 2018, and 2019 (Weston 2013a; URS 2015; Northgate 2017a, 2017c; Anchor QEA 2019a, 2019b). As previously described, lead, mercury, and PCBs are driving the spatial and vertical extent of contamination in nearshore and offshore sediments, at concentrations that have the potential to affect beneficial uses and key receptors at this site. A statistical summary of historical sediment chemistry results compared to NTE and AWA RGs are presented in Table 7. Statistical analysis was performed using ProUCL. Highest concentrations and the greatest number of RG exceedances were measured in near-surface sediments (upper 2 feet), with a reduction of concentrations at depth. From 4 to 6 feet bgs, all concentrations of contaminants were less than the NTE RG.

The horizontal and vertical extent of lead, mercury, and PCB contamination in nearshore and offshore sediments, including a comparison to the NTE and AWA RGs, are presented in Figures 14, 15, and 16, respectively. Highest concentrations of each COPC were measured at stations near the shoreline within the 900 Innes property. This includes all the NTE RG exceedances, except two (2 to 4 feet bgs at station IB-08 [lead] and 0 to 1 foot bgs at station INN-SE-10 [mercury]). Offshore of the 900 Innes property, elevated concentrations above the proposed RGs are primarily buried at depth under a cleaner surface layer, with some minor exceedances of AWA RGs and two isolated hot spots (stations IB-08 and INN-SE-10). At station IB-08, elevated concentrations of mercury and PCBs were measured in near-surface sediment above AWA RGs. At station INN-SE-10, elevated concentrations of mercury and PCBs were measured in surface sediment above the NTE RG and the AWA RG, respectively.

Table 6
Summary of Historical Soil Chemistry Results

Summary Statistic	Lead (mg/kg wet weight)				Nickel (mg/kg wet weight)				PCBs (µg/kg dry weight)				B(a)P Equivalent Value (µg/kg dry weight)			
	0 to 1 foot	3 to 4 feet	4 to 5 feet[3]	> 5 feet[4]	0 to 1 foot	3 to 4 feet	4 to 5 feet[3]	> 5 feet[4]	0 to 1 foot	3 to 4 feet	4 to 5 feet[3]	> 5 feet[4]	0 to 1 foot	3 to 4 feet	4 to 5 feet[3]	> 5 feet[4]
Number of Samples	54	39	18	12	54	39	18	12	36	19	6	3	43	24	10	3
Number of Samples Detected	54	39	18	12	54	39	18	12	23	6	2	1	23	11	8	2
Minimum	2.37	0.6	0.87	1.64	21.6	23.8	23.1	7.3	3.5 U	1.8	3.5 U	3.9 U	0.04	0.2	0.18	3.86
Maximum	12,320	2,805	1,914	655	2,047	2,002	1,914	1,001	77,900	2,130	11,400	112	53,410	12,462	1,144	728
Average[1]	620	254	257	115	307	456	521	392	2,452	175	1,920	38.6	2,199	841	144	245
95% UCL[2]	1,714	766	904	404	566	760	1,071	654	11,953	822	11,400[5]	112[5]	8,207	3,668	1,144[5]	728[5]
Number of Samples Exceeding NTE Remedial Goal	5	3	1	0	1	1	0	0	3	1	1	0	12	3	0	0
Does 95% UCL at Specified Depth Exceed HHSL?	Yes	Yes	Yes	Yes	No	No	No	No	Yes	No	Yes	No	Yes	Yes	Yes	No

Notes:
No soil samples collected in the 2- to 3-foot depth range
1. Average calculated using half the detection limit for non-detects
2. Calculated using ProUCL; for comparison to HHSL, metals values presented are mg/kg dry weight
3. Includes three samples collected in the 3- to 5-foot depth range (not all samples tested for all parameters)
4. Includes four samples collected in the 4- to 6-foot depth range (not all samples tested for all parameters)
5. For small sample sizes (fewer than 5) or when a 95% UCL exceeds the maximum value, the maximum detected value is used as a default value to estimate 95% UCL per USEPA guidance (USEPA 2013)

Table 7
Summary of Historical Sediment Chemistry Results

Summary Statistic	Lead (mg/kg)			Mercury (mg/kg)			PCBs (µg/kg)[2]		
	0 to 2 feet	2 to 4 feet	4 to 6 feet	0 to 2 feet	2 to 4 feet	4 to 6 feet	0 to 2 feet	2 to 4 feet	4 to 6 feet
Number of Samples	65	13	11	65	13	11	16	12	11
Number of Samples Detected	65	13	11	61	13	11	16	11	8
Minimum	9.7	18.2	10.7	0.0076 U	0.178	0.0662	1.39	0.59	0.33
Maximum	2,700	993	154	135	10.5	1.59	2,981	1,430	566
Average[1]	353	203	58.6	5.48	1.76	0.559	359	291	118
95% UCL[3]	695	411	135	13.6	5.25	1.35	1,138	874	224
Number of Samples Exceeding NTE Remedial Goal	14	1	0	22	2	0	1	1	0
Number of Samples Exceeding AWA RG	19	3	0	36	8	4	8	4	4

Notes:
1. Average calculated using half the detection limit for non-detects
2. Based on PCB congener data from 2018 (Anchor QEA 2019a); PCB data prior to 2018 only included Aroclors (Weston 2013; URS 2015; Northgate 2017a, 2017c) and are not included in this statistical summary
3. Calculated using ProUCL
--: not applicable

5 Selection and Design of Remedial Components

Remedial actions are needed for the areas in which landside soils and nearshore and offshore sediments do not meet the project RGs, as presented in Section 4. The landside areas and the offshore/intertidal areas are different in character and require different construction approaches, but the most appropriate remedial components are essentially the same for both. The overall site remedy will consist of the following components:

- Removal of all debris
- Landside and shoreline removal of impacted soils to specific depths followed by placement of a geotextile marker layer
- Nearshore and offshore removal of impacted sediments to specific depths
- Material disposal
- Backfill with Clean Cover to ensure that the final design surface is protective of human health and the environment
- Placement of sand cover at the localized hot spots offshore of the nearshore excavation area
- Adoption of long-term institutional controls at the Site, including implementation of a Site Management Plan and LUC. The Site Management Plan sets forth procedures for soil handling to be used both during and following park construction to protect human health and the environment and to make sure the Clean Cover is protected. The Site Management Plan will also ensure that deeper soil below the Clean Cover is handled properly and not brought to the surface. The LUC requires that the Site be used in a manner that protects the cleanup actions taken.

Figure 17 shows the approximate areas that will be targeted for remedial actions, based on the locations and apparent extents of RG exceedances in landside soils and in nearshore and offshore sediments. This figure shows the general excavation boundaries. All boundaries will be further refined during the engineering design process. Figure 18 shows a generalized cross-section through the site, presenting selected remedial areas and depths. The specific elements of remediation are described in more detail in the following sections.

5.1 Landside and Shoreline Soil Removal

Areas inland (west) of the MHW elevation contour are considered landside areas because they are largely free of tidal submergence. The lateral extents of landside soil removal are shown in Figure 17. As previously described, these boundaries will be further refined during the engineering design process.

The depth of soil removal in landside areas will be based largely on the degree of chemical exceedances involved and the locations involved. Landside soils will be excavated and removed to a depth of approximately either 2 feet below the existing ground surface across the entire upland area

with additional excavation and removal to a depth of approximately 5 feet, or the future design grade, whichever is deeper, in the shoreline areas and one localized spot centered around Station INN-SB-15 (Figure 17). Over-excavation will be performed in areas identified as future utility corridors to ensure underlying contaminated material is not uncovered during redevelopment.

Due to elevated PCBs above the TSCA hazardous waste level of 50 mg/kg at one station (INN-SB-26), a portion of the shoreline area will be handled and management separately at a hazardous waste landfill (Figure 17; see material disposal in Section 5.3). PCBs at the site are subject to cleanup and disposal in accordance with TSCA requirements in 40 Code of Federal Regulations (CFR) 761.61. SFRPD is currently working with USEPA to obtain a risk-based disposal approval in accordance with 40 CFR 761.61(c). The lateral extent of the TSCA hazardous waste removal area is defined by the locations of the nearest clean surface samples. This is consistent with the intent of TSCA regulations regarding the area of inference for individual chemically impacted samples (per 40 CFR 761.283). In the absence of a rigorously gridded sample system, removing soil all the way out to the nearest clean sample points is appropriate for compliance. Within this area, soil will be excavated and removed to a depth of approximately 5 feet bgs.

Landside soil removal will be completed using standard excavation equipment. Most of the site's landside area is currently surfaced with concrete and asphalt. An estimated 65,000 square feet of broken concrete and 12,000 square feet of asphalt is present at the site surface. The Shipwright's Cottage building will remain in place as a cultural asset; therefore, no soil removal will occur in the footprints of that structure. Most of the remaining shoreline features (the concrete wharf and launch ramps) will be removed to access to the underlying soils. At the Shipwright's Cottage, the foundation of the structure is expected to act as a physical barrier to underlying materials. Other existing features, such as the marine way tracks and portions of the concrete boat ramps, will be removed and the underlying soils excavated.

Groundwater is expected to be encountered at shallow depths in many or most landside excavation areas, because the site is at a low elevation and close to the shore. Water is therefore expected to enter some of the excavations, at rates that will depend on the permeability of the soils exposed, the timing of the excavation work, the tidal cycle, and proximity to shore. Sump pumps will be used to remove water from excavations, and the water will be stored in sedimentation tanks to allow management and disposal in accordance with applicable laws and regulations.

An estimate of the soil volume targeted for removal is roughly 11,650 cubic yards. This will be preceded by the removal of an estimated volume of 2,600 cubic yards of broken concrete and asphalt. This estimate assumes that the park design elevations are approximately the same as the current ground surface elevations. If final park design elevations are raised or lowered, then the depth of remediation relative to the current grade could change.

Confirmatory samples will be obtained from the excavated subgrade and potentially the excavation sidewalls to confirm that remedial objectives have been met by removing soil to appropriate extents and depths. If chemical exceedances continue to be evident at the full planned extents and depths of excavation, then further excavation can be done to remove the elevated concentrations.

Landside soil removal will be followed by placement of a geotextile marker layer before subsequent backfilling (discussed in Section 5.4) to mark the boundary between the native subgrade soil and the overlying fill.

5.2 Nearshore and Offshore Sediment Removal

Areas bayward (east) of the MHW elevation contour are tidally inundated either on a periodic basis (in the shallow nearshore zone) or permanently (farther offshore). Sediments in much of the nearshore zone have chemical concentrations in excess of RGs, and some in excess of Title 22 hazardous waste screening values, and are planned for removal, followed by backfilling with Clean Cover. For areas in the water near the shoreline, the planned depth of sediment removal is 4 feet (Figure 17).

In-water areas further offshore also contain elevated concentrations, but they are generally buried by at least 2 feet of clean material which is expected to continue to isolate the material from future exposure scenarios, except for the localized offshore locations described in Section 5.5. The estimated total volume of intertidal and subtidal sediment targeted for removal is roughly 7,200 cubic yards.

The sediment removal can be accomplished using long-reach excavators, otherwise, clamshell equipment will be necessary. However, due to the shallow and intermittent coverage of intertidal water over much of the area targeted for removal, it is not feasible for floating barge-mounted equipment to access the sediment removal area. Instead, a temporary water barrier will be installed along the bayward edge of the excavation area so that the sediment excavation can be accomplished on an exposed subgrade surface. The barrier can be constructed most cost-effectively as an impermeable fabric wall affixed to a supporting frame which can be readily assembled and taken down either during low tidal stages or with in-water diver crews during higher water.

Prior to sediment removal, existing debris and structural obstacles will be removed, including the historic marine way tracks, portions of the concrete marine ramps, steel pilings, and creosote-treated wood pilings. Approximately 50 or more timber or steel piles and miscellaneous debris are estimated to require removal from nearshore and offshore areas.

Remediated areas will be tested to confirm post-remediation conditions. Representative sediment samples will be collected from the subgrade surface and analyzed for COPCs to confirm RGs have been met.

5.3 Material Disposal

Exported materials will include excavated soil and sediment as well as removed debris, such as concrete, wood, steel pilings, and creosote-treated wood pilings. Excavated and removed materials will be stockpiled separately so that waste types requiring different disposal endpoints remain segregated without intermixing.

40 CFR 761.61 requires cleanup and disposal of PCBs be based on as-found concentrations. PCB-contaminated soils from the TSCA hazardous waste removal area (Figure 17) will be handled and management separately at a hazardous waste landfill.

All other excavated materials will be tested to fulfill waste profiling requirements. Samples of the excavated material will be analyzed for various constituents as necessary to satisfy regional disposal requirements. If total concentrations exceed ten times the California Soluble Threshold Limit Concentration, the samples will be additionally analyzed for soluble metals per the California Whole Effluent Toxicity and Toxicity Characteristic Leaching Procedure testing requirements.

Based on characterization efforts conducted to date, it is expected that excavated soils and sediments are likely to require disposal at a regional solid waste landfill facility, requiring the material to be hauled by truck directly from the site. Based on a total estimated excavation volume (debris, soil, and sediments) of 21,450 cubic yards, approximately 1,650 truckloads would be required to transport excavated soil and sediment off site. SFRPD, SFWQCB, and the engineering team are currently evaluating the potential for rail transport to the landfill. A rail option would include transporting the material from the site by truck to the Pier 96 rail spur and waste loading/recycling facility located less than 1 mile north of the site, where it would be loaded onto rail cars and delivered to the landfill. Transporting the material via barge is not an option due to the shallow water depths in the bay.

Any materials that are excavated in a wet and saturated condition, including nearshore and offshore sediments, as well as soils removed from water-filled excavations, will likely require dewatering before they are loaded onto trucks to ensure that the hauling process meets California Department of Transportation prohibitions against transporting solid waste containing free water (passing a paint-filter test). Material dewatering can be accomplished by allowing stockpiles sufficient time to passively air dry or by adding a water-binding additive (such as cement) to remove the free water. A cementitious additive would typically require 24 to 48 hours of time to take effect and bind the free water and would add weight to the haul tonnage. Passive treatment by air drying would require several days and regular reworking of the material.

Some of the material may contain sufficiently elevated chemical concentrations to qualify as a California hazardous waste and require disposal at a facility permitted for hazardous waste disposal landfill, such as at Buttonwillow, California. If the waste characterization process indicates that some

of the excavated materials are classified as hazardous waste, based on state and federal regulations, then an appropriately permitted landfill facility (as in Buttonwillow, California) would need to be used for disposal, requiring a longer truck hauling distance and a higher disposal fee. Another option would be to mix a cementitious additive (or similar treatment) into the sediment to reduce leachability of the elevated contaminants and potentially make the material a non-hazardous waste. Treatability testing is currently being performed to confirm the appropriate type and mix ratio of additive and whether it succeeds at changing the characterization profile of the material and is planned during the engineering design process.

5.4 Clean Cover

After landside excavation and nearshore and offshore sediment removal, Clean Cover will be imported to the site and used to backfill the excavated areas, bringing them to previous grades (or to desired design grades, if different). The total estimated quantity of Clean Cover is expected to be similar as the amount removed (approximately 20,000 cubic yards).

All imported fill material will be tested prior to use to confirm that it is clean and ensure that the final design surface is protective of public health and the environment. Each batch of fill will be evaluated by SFRPD and SFRWQCB for approval prior to being imported. Imported soils will be evaluated in accordance with the Department of Toxic Substances Control (DTSC) *Information Advisory for Clean Imported Fill Material* (DTSC 2001). The goal will be to obtain unimpacted soil, where no pollutants exceed SFRWQCB Tier I ESLs, except for metals where background concentrations exceed ESLs. Imported sediments for in-water cover will be at or below San Francisco Bay ambient conditions (SFRWQCB 1998). As an example, sandy material planned to be dredged from shoaled areas within the San Francisco Marina West Basin is known to have suitable physical and chemical properties to be reusable within the in-water areas at the 900 Innes site as Clean Cover. The West Basin sand would be delivered to the site by truck hauling or barge. Other suitable options for Clean Cover will be identified during the engineering design process and provided to the dredge contractors for consideration.

5.5 Localized Offshore Sand Cover

Two sample locations (station IB-08 and INN-SE-10) outside of the nearshore excavation area contain chemical concentrations higher than RGs (Section 4.4.2). These two locations are both north of the planned sediment removal area and will be remediated by placement of a localized clean sand cover 6 to 12 inches in thickness.

The exact cause of contamination is unknown; however, historical aerial photos of the site show boat docks and large vessels in the immediate vicinity. It is hypothesized that the elevated chemical concentrations may be the results of historical vessel maintenance activities or potential spills at this location. These areas were further investigated as part of the engineering design process

(Anchor QEA 2019b). Surface sediment samples were collected and analyzed for COPCs to fully delineate the spatial extent of contamination.

Based on the result of this additional testing, the lateral extent of each of the two sand cover areas is defined by the locations of the nearest clean surface samples. This is consistent with the intent of TSCA regulations regarding the area of inference for individual chemically impacted samples (per 40 CFR 761.283). In the absence of a rigorously gridded sample system, applying sand cover all the way out to the nearest clean sample points is appropriate for compliance.

5.6 Environmental and Public Protection

Several measures will be enacted by the construction contractor to provide protection to the public and to the surrounding environment. This section summarizes the main categories of environmental and public protection Best Management Practices (BMPs) that will be enacted. The regulatory permits issued for the project may require BMPs in addition to those listed here.

5.6.1 Dust Control

The primary anticipated exposure pathway for risks to human health at the site is the inhalation or ingestion of dust particles generated during construction activities that disturb soil. Site contractors will use standard dust-control practices to prevent the generation of dust during excavation and soil handling activities, including one or more of the following:

- Wetting of surface soil and soil stockpiles during excavation and soil handling operations, loading, and transport
- Control of soil handling and loading techniques to minimize dust generation, such as minimizing drop distances
- Loading of soil for off-site disposal only into trucks equipped with tarpaulin covers
- Covering of soil stockpiles when not in use, such as using plastic sheeting, clean fill, or other dust minimization systems, as appropriate
- Tracking of dirt and dust by trucks leaving the site will be minimized by cleaning the wheels upon exiting the site and cleaning the loading zone and exit area as needed

5.6.2 Stormwater Management and Erosion Protection

Measures will be implemented to minimize impacts from stormwater runoff into the bay and storm drains. BMPs will be enacted to ensure protection of temporary stockpiles of soil and sediment excavated from the project against surface water inflow, storm water erosion, and internal drainage and runoff.

Soil and sediment stockpiles will be constructed and managed in accordance with applicable laws, regulations, and BMPs for contaminated soil to protect human health and the environment, including

preventing runoff or erosion. Soil stockpiles and open excavations will be secured at the end of each working day to prevent unauthorized access to soil. Stockpile and open excavations will be managed in a way that limits fugitive dust emissions during non-working hours.

Hay bales or straw wattles can be used to control runoff into surrounding areas or storm drain catch basins.

5.6.3 Water Quality Protection During In-Water Work

Excavation of sediments from the nearshore and offshore areas will occur behind a water barrier, as described in Section 5.2. This barrier will prevent loss of suspended materials into Bay waters. Placement of the localized offshore Clean Cover has the potential to introduce suspended fine particles into the water column; therefore, an enclosure of floating silt curtains will be in place while the Clean Cover is placed.

5.6.4 Unforeseen Hazardous Chemicals or Free Product

Should petroleum hydrocarbons, free product, or other problematic and unforeseen instances of chemical contamination be encountered during site work, SFRPD will be notified, and the area secured. Such materials may include underground storage tanks (USTs) and associated product lines, sumps, or vaults, soil with significant odors or stains, and other suspect materials. SFRPD or its representative will notify SFRWQCB of the situation and of the proposed response actions. Any USTs will be removed under permit with the DPH Hazardous Materials and Waste Program and the San Francisco Fire Department. Unforeseen impacted soils will be evaluated using ESLs (SFRWQCB 2019b).

5.6.5 Public Safety and Traffic Control

Public safety will remain paramount throughout the construction work. Therefore, public access to the site will be prevented during the remediation construction activities. The site is currently fenced, with locked gates providing the only street access. Signage will be placed along existing fences, and additional temporary fencing will be placed at unprotected locations along the shoreline, if necessary. Public notification, which will identify the periods over which the site will be undergoing remediation, will be provided in advance of the work in the form of both meetings and flyers.

The site entrance and exit points will be established to minimize impacts on local traffic, be considerate of safety, and provide for optimum flow. The project laydown areas and soil and sediment stockpile management area will be designated inside of the existing fence line, within a paved surface area, and at least 20 feet from the shoreline.

IBSP and IBOS will remain open to the public during construction at 900 Innes. Members of the public that want to view the 900 Innes cleanup work should be able to view portions of the work from the existing IBSP and the IBOS properties.

5.7 Shoreline Restoration and Public Access

Once the remediation is complete, site conditions will be of similar quality to the two adjacent properties, and redevelopment can proceed per provisions of the Site Management Plan for inland redevelopment, and per resource agency permitting requirements for in-water work.

5.8 Environmental Effectiveness

The recommended remediation approach provides a high degree of environmental effectiveness in that it eliminates all human health and ecological exposure pathways to concentrations above RGs and thus potential for significant short- or long-term risks. All in-water sediments with COPC concentrations above the NTE RGs in surface sediments where exposure could occur will be removed and replaced with Clean Cover suitable for the target habitat types. Sediments with elevated COPCs at depths greater than 2 feet will remain isolated due to the physical constraints of the embayment (too shallow for boat traffic and depositional in nature) and the propensity for the chemicals to remain bound to the sediments.

For the upland environment, an even more conservative approach has been taken due to the expected human health exposure potential at the site. In this case, all surface soils will be removed and replaced to a minimum depth of 2 feet, regardless of its chemical composition. For areas with higher concentrations above the RGs, all soils will be excavated and replaced, regardless of the depth of occurrence. For the 900 Innes site, that target depth extends down to 5 feet for all areas along the shoreline.

Site groundwater is not impacted and is therefore not an element of the current site remediation approach. Likewise, surface water quality within India Basin is not impacted by soil and sediment contamination at the site and is also not considered as part of this remediation program. All surficial debris and structures (buildings, bulkheads, and pier remnants), except the Shipwright's Cottage, will be removed from the site and either disposed of in a landfill or restored for future use at the site.

6 Implementation of Remedial Action

6.1 Engineering Design

Engineering design will result in the production of a bid- and construction-ready design package consisting of a set of engineering drawings and accompanying specifications. The engineering drawings will show, in plan and section views, the excavation dimensions, a grading design, and surface restoration. The specifications will include both general requirements and technical specifications for performance of the work. Specifications will address worker health and safety, temporary facilities and controls, environmental controls, confirmation soil sampling and analysis, waste management and disposal, earthwork, soil stockpile management, excavation support and protection, and site restoration.

The combined drawings and specifications will be ready for use for bid solicitation from construction contractors and will form the legal contractual requirements for execution of the work.

6.2 Permits and Approvals

Permits that are required to conduct the soil and sediment excavation and grading work will be identified and obtained. These may include, but are not limited to, a construction general permit, a hazardous soil excavation permit per Bay Area Air Quality Management District (BAAQMD) requirements, and a grading permit through the City of San Francisco. Portions of the work will be completed within the jurisdictional areas of USACE and BCDC; therefore, additional permits or concurrence from these agencies will be required. In addition, consultation with resource agencies (the National Marine Fisheries Service [NMFS], U.S. Fish and Wildlife Service [USFWS], and California Department of Fish and Wildlife [CDFW]) will need to be conducted to complete permitting requirements. Table 8 summarizes potential permits from relevant regulatory agencies.

Table 8
Summary of Permits and Approvals Potentially Needed

Regulatory Agency	Permit/Approval
Local Agencies	
BAAQMD	Construction General Permit
BAAQMD	Hazardous Soil Excavation Permit
City of San Francisco	Grading Permit
State Agencies	
BCDC	Permit type to be determined
CDFW	Consultation
RWQCB	Water Quality Certification

Regulatory Agency	Permit/Approval
Federal Agencies	
USACE	Permit type to be determined
USEPA	PCB TSCA Exemption
USFWS	Consultation
NMFS	Consultation

SFRPD and its remediation contractors will obtain the necessary grading permits and comply with applicable rules and regulations for construction-related project activities, as necessary. A Stormwater Pollution Prevention Plan will be prepared and implemented, including associated stormwater BMPs. All field activities will be conducted in accordance with federal, state, and local requirements for worker safety, such as Occupational Safety and Health Administration regulations for excavation safety, equipment operation, and exposure to dust and other constituents.

6.3 Worker and Public Health and Safety

A site-specific health and safety plan (SSHSP) will be prepared and approved by a Certified Industrial Hygienist and implemented to notify and protect workers during construction activities. Copies of the SSHSP will be made available for review to construction workers during their orientation or regular health and safety meetings, as well as to SFRPD. The SSHSP will be submitted to SFRWQCB at least 2 weeks before the beginning of construction activities.

Based on the specific COPCs identified, the primary exposure pathways of concern are inhalation of dust from the subsurface, ingestion of soil particles, and dermal contact with contaminants during excavation and soil handling operations. Construction workers performing excavation activities and soil handling operations are likely to encounter heavy metals, PAHs, and PCBs at concentrations that exceed HHSLs. Therefore, worker notification and other risk management procedures should be implemented by SFRPD and their contractors to reduce potential human exposures during construction activities.

6.4 Contractor Selection Process

Soil and sediment excavation, grading, and placement will be performed by a licensed engineering contractor with a Class A License and Hazardous Substance Removal Certification, using heavy earthmoving equipment. Competitive bids will be solicited, and the bidder with the best combination of low cost and overall value selected for the work.

The selected contractor will be responsible for preparing pre-construction submittals, including the following:

- Contractor Work Plan
- SSHSP
- Traffic Control Plan
- Environmental Protection Plan
- Quality Assurance Project Plan
- Survey Plan
- Excavating and Offloading Work Plan
- Water Management and Treatment Plan

6.5 Construction Management and Oversight

In addition to administering the remediation construction contract, SFRPD will also implement construction management services by retaining a qualified engineering firm for technical support and oversight. During and immediately following construction, the responsibilities of SFRPD and their selected construction management team will include the following:

- Administering contract, project finances, and payments
- Overseeing and documenting the contractor's work to confirm adherence to the engineering drawings and specifications
- Reviewing and approving contractor submittals, invoices, and change order requests
- Coordinating and confirming waste manifesting procedures for soil and sediment off-haul
- Verifying and documenting compliance with all permit conditions and design requirements

A California-licensed professional engineer will be assigned by SFRPD to serve as Lead Construction Manager during remediation activities. The Lead Construction Manager's team will be responsible for verifying compliance with design documents, permits, and elements of the construction quality assurance/quality control program. The Lead Construction Manager will be aided by a competent and trained field observation staff who will provide field observation, sampling, and documentation/record-keeping services, consistent with the Final RAP/RDR and project design requirements.

The construction management team will also include an Environmental Health and Safety Officer who will manage issues related to working with contaminated soil and sediment and for implementing and monitoring conformance with the project Health and Safety Plan.

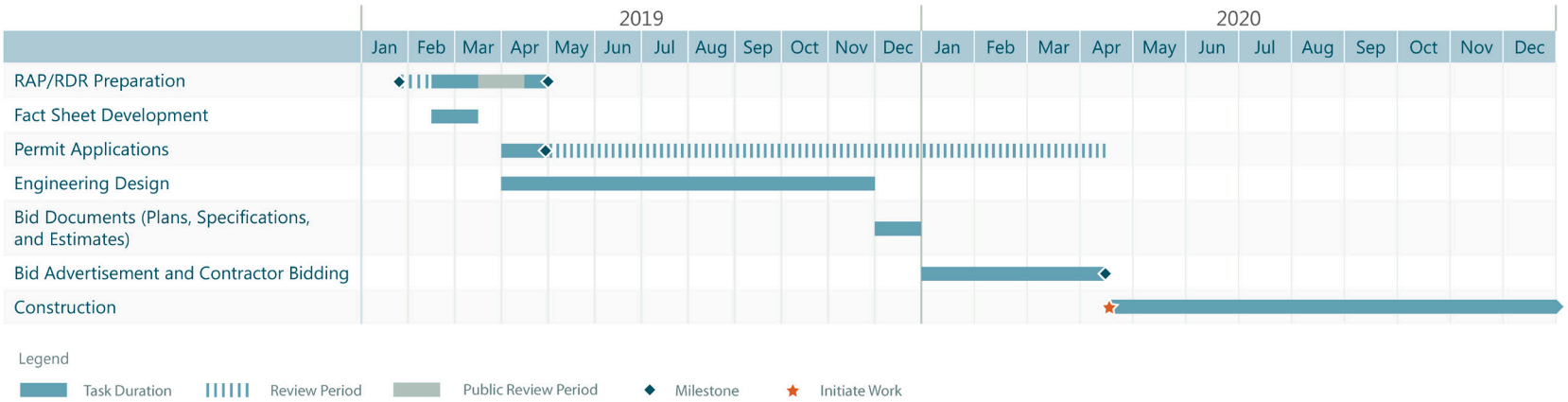
6.6 Documentation and Reporting

SFRPD's construction management team will maintain daily logs during all construction and implementation activities documenting compliance with the provisions of the Final RAP/RDR, project design documents, and regulatory permits. A Final Completion Report summarizing and certifying implementation of the RAP/RDR will be submitted to SFRWQCB. The Final Completion Report will present a chronology of the construction events and document the completion of remedial action activities, project earthwork and excavation, and final disposal of removed soils and sediments.

7 Project Schedule

Remediation activities at 900 Innes Avenue are expected to require 2 years to complete, as detailed in the following schedule. Engineering design commenced in April 2019 and will be completed in early December 2019. Contract bidding and selection will require approximately 5 months to complete with construction activities targeted for initiation in April 2020. The duration of construction should be between 6 and 8 months.

India Basin Project Schedule



8 Pre-Design Data Needs

Several data needs were identified during the development of this RAP/RDR that will need to be filled prior to completing the engineering design process. These data needs, and their relevance to the project remediation and redevelopment activities, are listed as follows:

- Surface sediment investigation at the localized offshore area (station IB-08; north side of the basin near the shoreline of IBSP) to delineate the spatial extent of contamination and determine the most appropriate management alternative (i.e., natural recovery, removal and backfilling, sand cover). Sampling was recently completed, and results are presented in Appendix D (Anchor QEA 2019b).
- Structural assessment of the concrete wharf to determine whether any portions of the structure can be salvaged. The structural assessment was recently completed, and as previously discussed, the concrete wharf will be demolished.
- Boundary survey to document property lines and control point surveying of project features and target excavation boundaries
- Debris field mapping of the near shore sediments and landside portions of the site for use in estimating debris removal costs
- Utility search and site mapping to ensure all active and historical utilities are located and removed or re-routed during site demolition
- Geotechnical field sampling of the nearshore sediments to provide information on sediment characteristics for selecting the most appropriate approach for removal and de-watering
- Soil/sediment treatability study to determine the most effective approach for de-watering and treating site materials prior to disposal
- Site assessment and abatement plan for the Shipwright's Cottage to determine a remediation approach for potential on-site hazards such as lead based paint and asbestos insulation

Each of these studies will be conducted at the onset of the engineering design process so they can inform City staff of existing site conditions and assist in developing the final set of construction drawings for site remediation.

9 References

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Figures

SOURCE: Basemap from Bing Maps.
HORIZONTAL DATUM: California State Plane, Zone 3, NAD83, U.S. Feet.

0 1
Miles

Publish Date: 2018/03/26 11:51 AM | User: mpratschner
Filepath: K:\Projects\0153-City and County of SF\India Basin\0153 RP-001 VIC.dwg FIG 1

ANCHOR QEA

Figure 1
Vicinity Map

India Basin - 900 Innes Avenue
San Francisco Recreation and Parks Department

SOURCE: Aerial from Bing Maps. Mean high water and project boundaries provided by Northgate Environmental Management, Inc.
HORIZONTAL DATUM: California State Plane, Zone 3, NAD83, U.S. Feet.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

LEGEND:

Property Boundary

Mean High Water Line

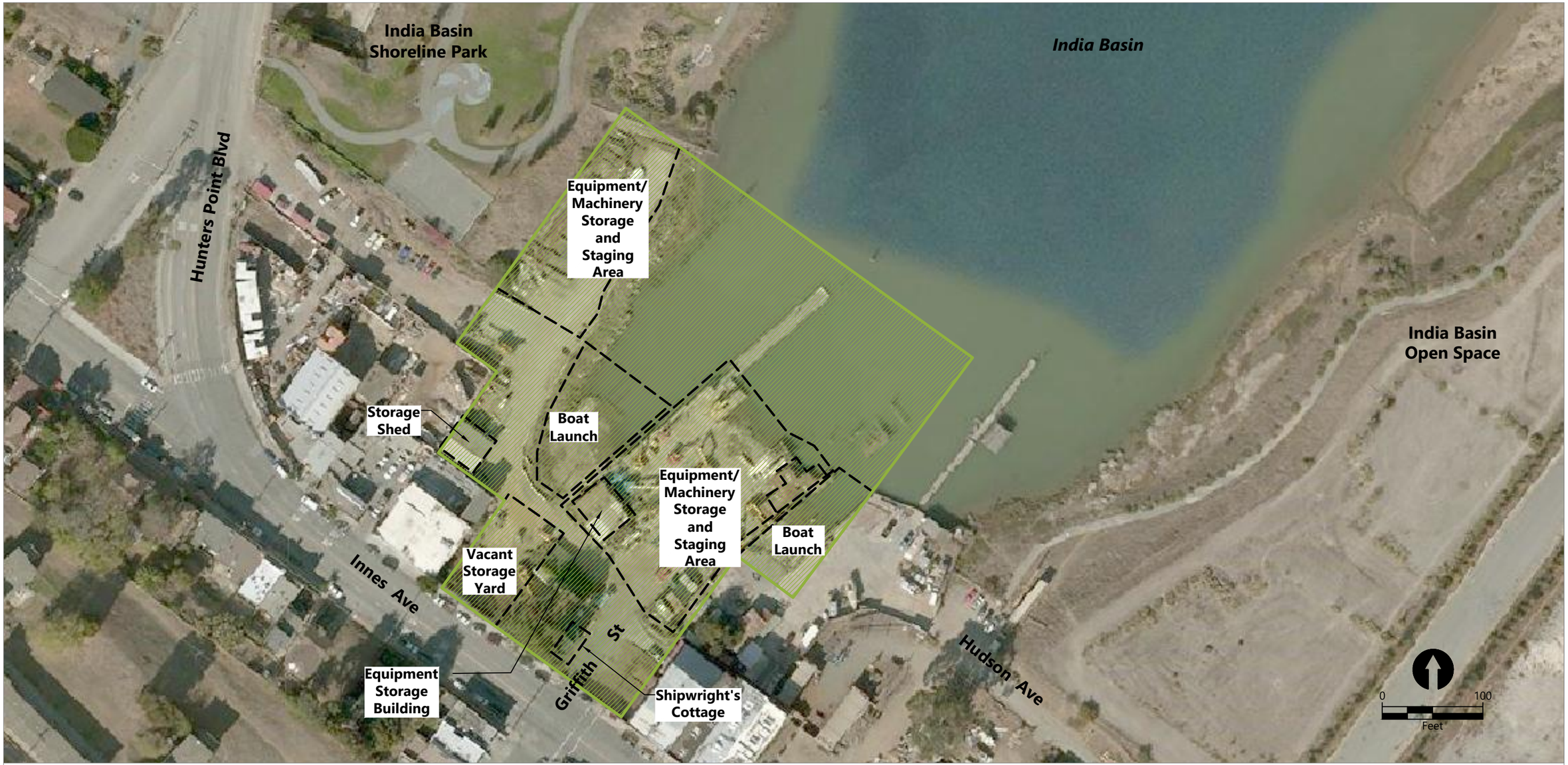
0 200
Feet

Publish Date: 2019/03/12 1:36 PM | User: mpratschner
Filepath: K:\Projects\0153-City and County of SF\India Basin\0153 RP-002 SITE.dwg FIG 2

ANCHOR QEA

Figure 2
Site Overview

India Basin - 900 Innes Avenue
San Francisco Recreation and Parks Department



SOURCE: Aerial from Bing Maps. Mean high water, Historical site uses and boundaries provided by Northgate Environmental Management, Inc.
HORIZONTAL DATUM: California State Plane, Zone 3, NAD83, U.S. Feet.

LEGEND:

Property Site

Historical Uses

Publish Date: 2019/03/12 9:17 AM | User: mpratschner
Filepath: K:\Projects\0153-City and County of SF\India Basin\0153 RP-011 SITE LAYOUT.dwg FIG 3

ANCHOR QEA

Figure 3
Site Layout and Historical Uses

India Basin - 900 Innes Avenue
San Francisco Recreation and Parks Department

Building and Historical Structures Description:	
1	Shipwright's Cottage
2	Boatyard Office Building
3	Tool Shed and Water Tank Building
4	Paint Shop and Compressor House
5	Blacksmith and Machine Shop
6	Storage Building
7	West Marine Way Track
8	Central Construction Way Ramp
9	East Marine Way Track
10	Water Fence Posts
11	Modern Dock
12	East Outfitting Dock

SOURCE: Aerial from Bing Maps. Mean high water, Historical site uses and boundaries provided by Northgate Environmental Management, Inc.
HORIZONTAL DATUM: California State Plane, Zone 3, NAD83, U.S. Feet.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

LEGEND:

Site Boundary

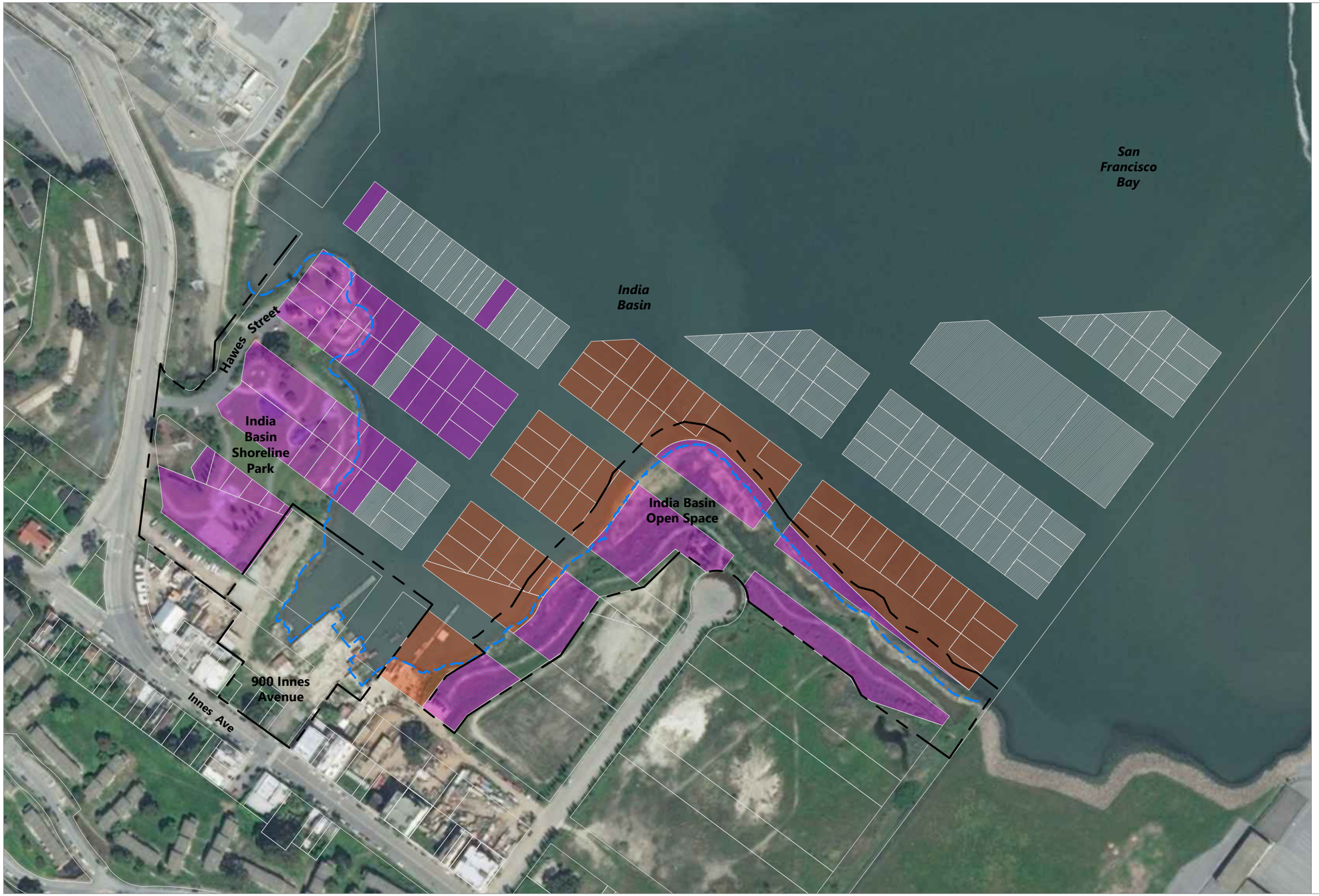
Mean High Water Line

Publish Date: 2019/03/12 2:21 PM | User: mpratschner
Filepath: K:\Projects\0153-City and County of SF\India Basin\0153 RP-012a EXIST FEATURES.dwg FIG 4

ANCHOR QEA

Figure 4
Existing Historical Features

India Basin - 900 Innes Avenue
San Francisco Recreation and Parks Department



SOURCE: Aerial from Bing Maps. Mean high water and project boundaries provided by Northgate Environmental Management, Inc.
HORIZONTAL DATUM: California State Plane, Zone 3, NAD83, U.S. Feet.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

LEGEND:

- Property Boundary
- Mean High Water Line
- Existing Parcel Lines
- Private Lots
- Build Inc. Lots
- Recreation and Park Department Property

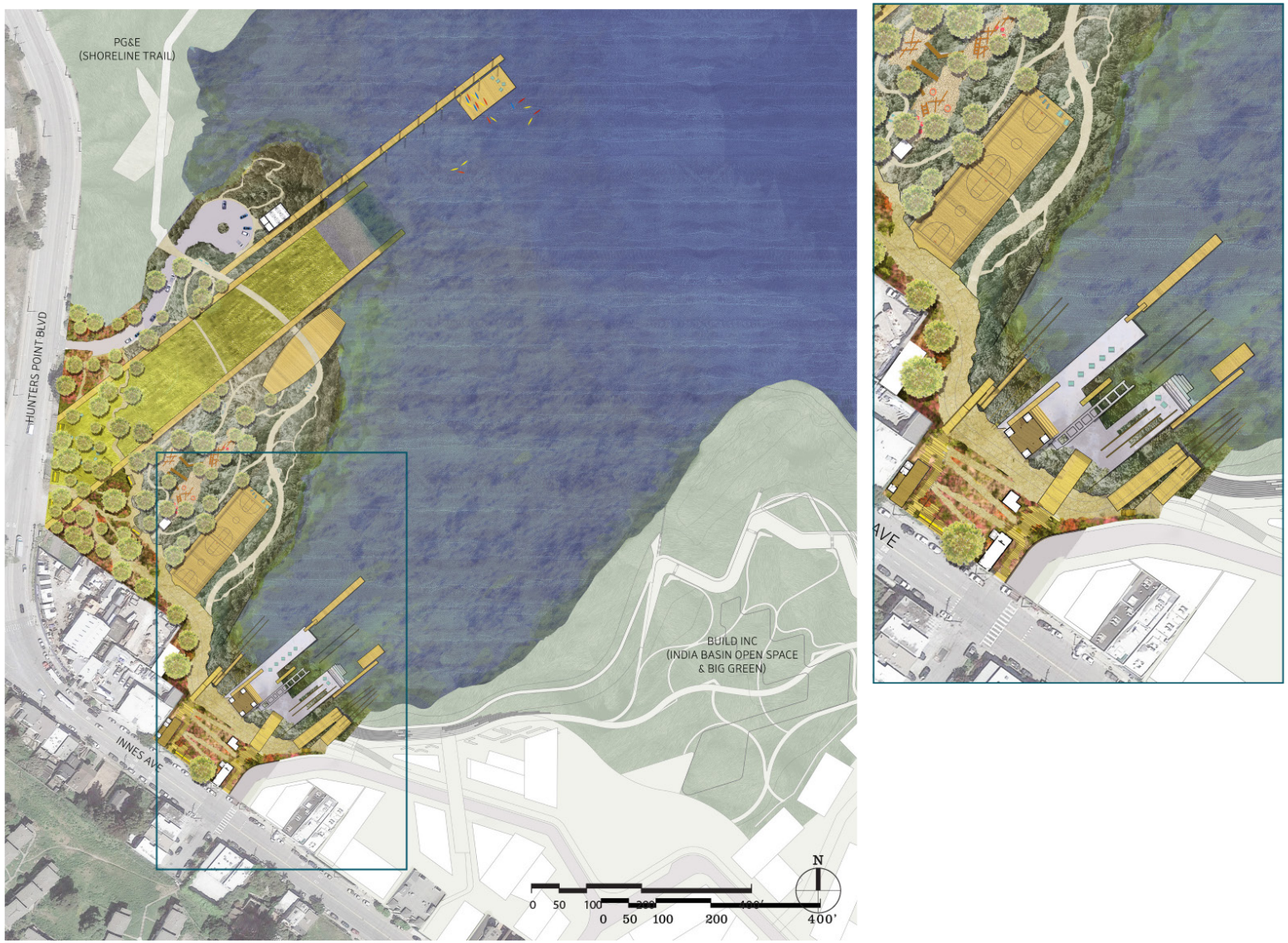
0 250
Feet

Publish Date: 2019/03/12 1:38 PM | User: mpratschner
Filepath: K:\Projects\0153-City and County of SF\India Basin\0153 RP-007 ACTUAL TRANSECTS.dwg FIG 5

ANCHOR QEA

Figure 5
Parcel Map

India Basin - 900 Innes Avenue
San Francisco Recreation and Parks Department



ANCHOR QEA

Figure 6
Conceptual Site Plan
India Basin – 900 Innes Avenue
San Francisco Recreation and Parks Department

LEGEND:

- Soil Boring with Groundwater, Northgate (2016-2017)
- Deeper Soil Boring at Previous Location, Northgate (2016-217)
- Soil Boring, Northgate (2016-2017)
- Risk Soil Boring, Northgate (2016-2017)
- Sediment Sample, Northgate (2016-2017)
- Surface Water and Sediment Sample, Northgate (2016-2017)
- Surface Water Sample, Northgate (2016-2017)
- Previous Sediment Sample, URS (2015)
- Previous Sediment Sample, Weston (2013)
- Previous Subsurface Soil Sample, Weston (2013)
- Previous Surface Soil Sample, Weston (2013)
- Property Boundary
- Mean High Water Line

0 50
Feet

Publish Date: 2019/02/28, 12:06 PM | User: ckiblinger
Filepath: \\orcas\gis\Jobs\CityAndCounty_SanFrancisco_0153\InnesIndiaBasin\Maps\RAP\India_Basin_Historical_Sampling_RAP.mxd

ANCHOR QEA

Figure 7
Historical Sampling Locations from 2013 to 2017
India Basin – 900 Innes Avenue
San Francisco Recreation and Parks Department

SOURCES: Aerial from Bing Maps. Mean high water, previous samples, and project boundaries provided by Northgate Environmental Management, Inc.
HORIZONTAL DATUM: California State Plane, Zone 3, NAD83, U.S. Feet.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

LEGEND:

- Property Boundary
- Mean High Water Line
- IB-# Sediment Sampling Location (Submitted for Testing)
- IB-# Sediment Sampling Location (Archive)
- IB-# Sediment Sampling Location (Nearfield Background; Archive)
- IB-# Sediment Sampling Location (Farfield Background; Archive)

Publish Date: 2019/03/12 2:13 PM | User: mpratschner
Filepath: K:\Projects\0153-City and County of SF\India Basin\0153 RP-009 ACTUAL TRANSECTS.dwg FIG 8

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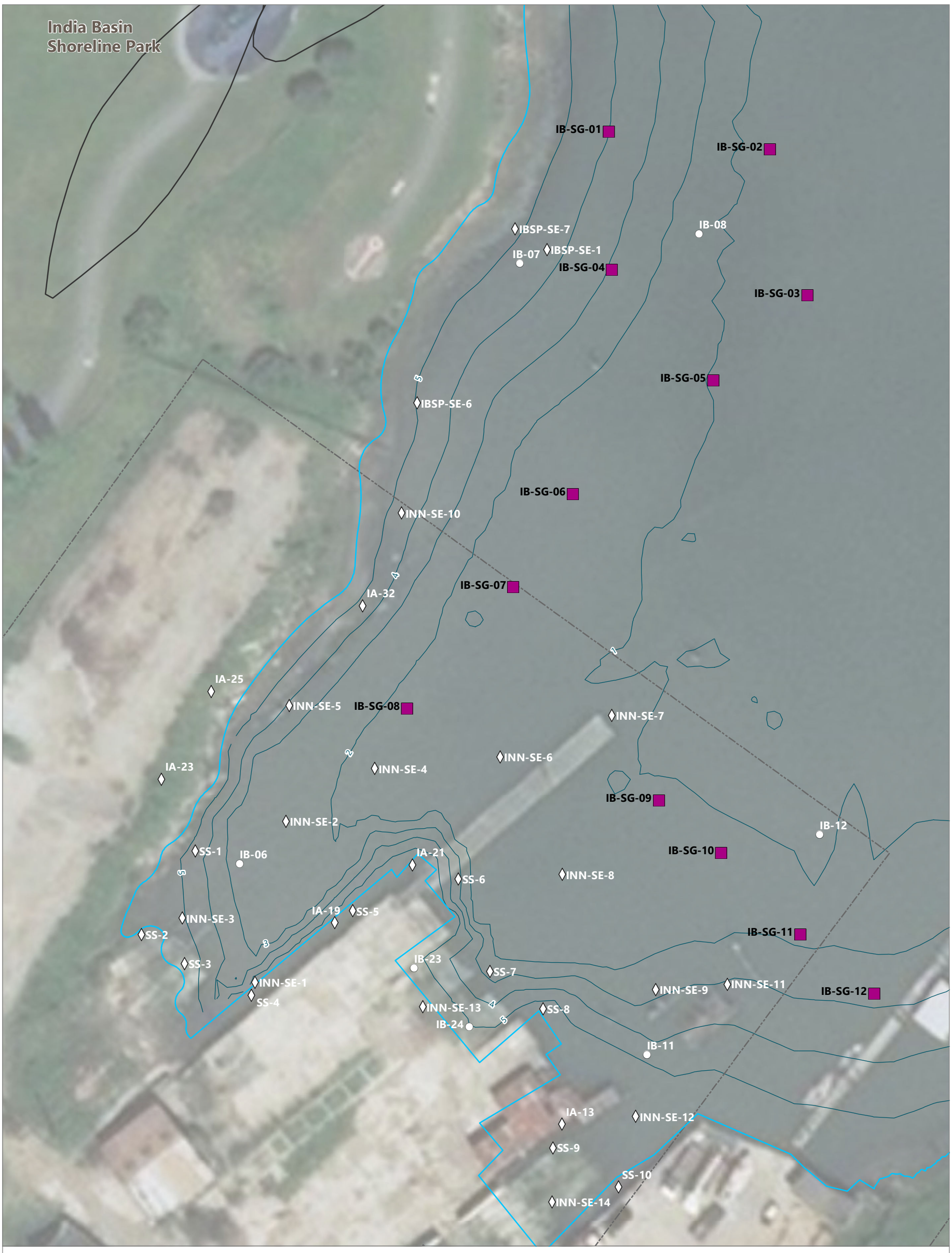
Figure 8
Sediment Sampling Locations from 2018
India Basin - 900 Innes Avenue
San Francisco Recreation and Parks Department



LEGEND:

- Sediment Sample (Anchor QEA 2018)
- Historical Data (Weston 2013, URS 2015, Northgate 2017)

Surface Sediment Sample

- Analyzed for PCBs, Lead, and Mercury
- Property Boundary
- Mean High Water Line (5.98 Feet MLLW)
- Shipwreck Vessels
- 1-Foot Contours, MLLW

0 50
Feet

Publish Date: 2019/06/27, 3:59 PM | User: kballou
Filepath: Q:\Jobs\CityAndCounty_SanFrancisco_0153\InnesIndiaBasin\Maps\RAP\India_Basin_Sampling_Locations.mxd

ANCHOR QEA

Figure 9
Sediment Sampling Locations from 2019
India Basin – 900 Innes Avenue
San Francisco Recreation and Parks Department

LEGEND:

- Soil Sample
- Property Boundary
- Mean High Water

Lead (mg/kg wet weight)

- 1 - 1,000
- 1,001 - 12,320
- No Data

NOTE:
Proposed not-to-exceed remedial goal for any single location = 1,000 mg/kg wet weight (TTLC)

0 50
Feet

Publish Date: 2019/03/11, 3:52 PM | User: ckiblinger
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ANCHOR QEA

Figure 10
Wet Weight Lead Concentrations in Landside Soils
India Basin – 900 Innes Avenue
San Francisco Recreation and Parks Department

LEGEND:

- Soil Sample
- Property Boundary
- Mean High Water

Nickel (mg/kg wet weight)

- 7 - 2,000
- 2,001 - 2,047
- No Data

NOTE:
Proposed not-to-exceed remedial goal for any single location = 2,000 mg/kg wet weight (TTLC)

0 50
Feet

Publish Date: 2019/03/11, 3:26 PM | User: ckiblinger
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ANCHOR QEA

Figure 11
Wet Weight Nickel Concentrations in Landside Soils
India Basin – 900 Innes Avenue
San Francisco Recreation and Parks Department

LEGEND:

- Soil Sample
- Property Boundary
- Mean High Water Line

Total PCB Aroclors (U=0, µg/kg)

- 2 - 940
- 941 - 64,900
- No Data

NOTE:
Proposed Remedial Goal: 940 µg/kg, based on San Francisco Regional Water Quality Control Board 2019 Direct Exposure Environmental Screening Levels = Environmental Screening Level for Direct Exposure (the lower of Commercial and Construction scenarios).

0 50
Feet

Publish Date: 2019/03/07, 3:41 PM | User: ckiblinger
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ANCHOR QEA

Figure 12
Total PCB Concentrations in Landside Soils
India Basin – 900 Innes Avenue
San Francisco Recreation and Parks Department

LEGEND:

- Soil Sample
- Property Boundary
- Mean High Water

B(a)P Equivalent Value (µg/kg)

- 0 - 1,800
- 1,801 - 53,410
- No Data

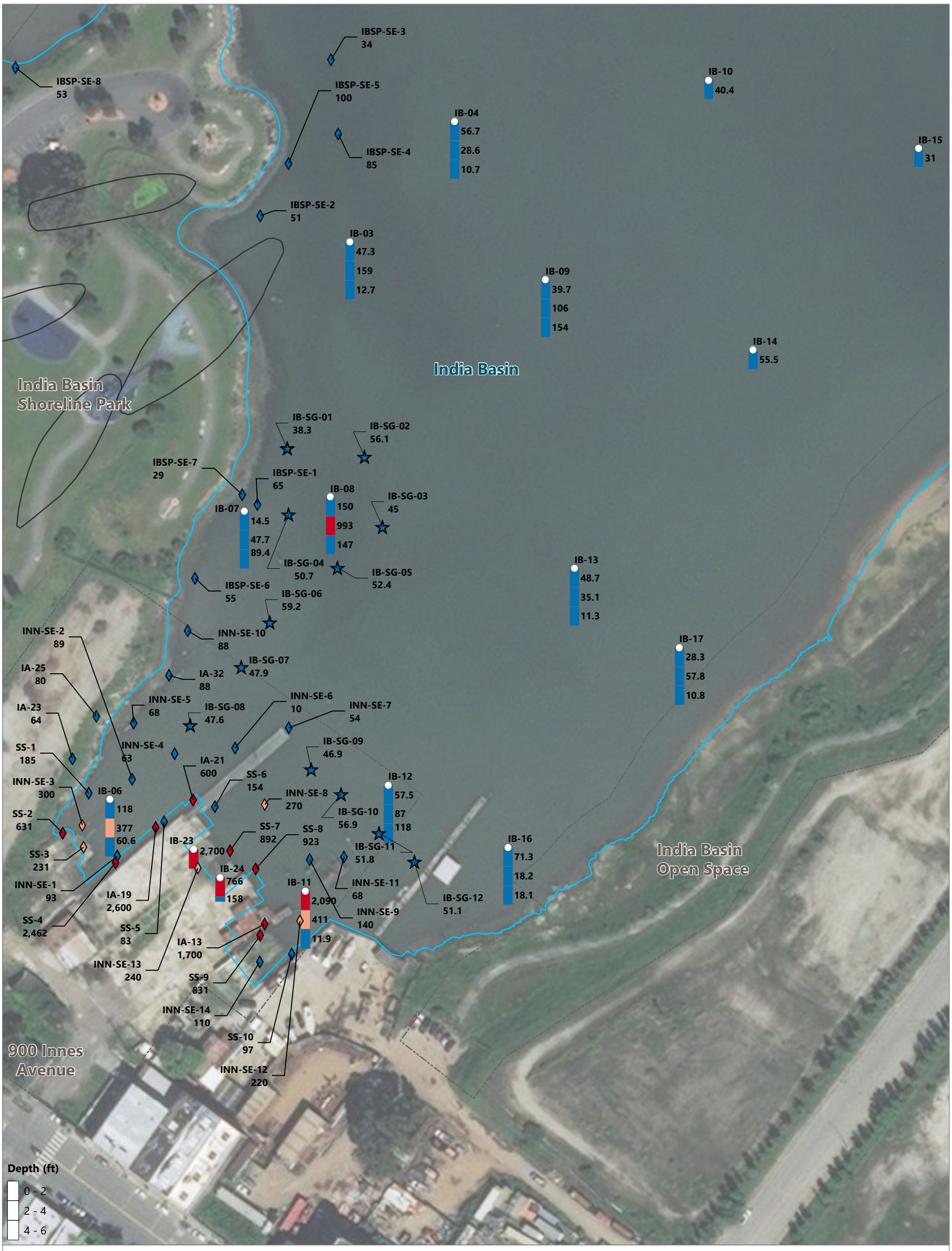
NOTE:
Proposed Remedial Goal: 1,800 µg/kg, based on two times the Human Health-Based Screening Level (HHSL) for On-Site Management

0 50
Feet

Publish Date: 2019/03/13, 3:42 PM | User: ckiblinger
Filepath: \\orcas\gis\Jobs\CityAndCounty_SanFrancisco_0153\InnesIndiaBasin\Analysis\2019_01_Soils\India_Basin_Soils_StickPlots_DDP.mxd

ANCHOR QEA

Figure 13
Benzo(a)pyrene Equivalent Value Concentrations in Landside Soils
India Basin – 900 Innes Avenue
San Francisco Recreation and Parks Department



LEGEND:

- Sediment Sample (Anchor QEA 2018)
- Sediment Sample (Anchor QEA 2019)

Lead (mg/kg)

- < 218
- 218 - 436
- > 436

Historical Data
(Weston 2013, URS 2015, Northgate 2017)

- Maximum, 0 - 1 foot interval

- Property Boundary
- Mean High Water Line
- Shipwreck Vessels

NOTES:
Proposed site-wide area-weighted average remedial goal = 218 mg/kg
Proposed not-to-exceed (NTE) remedial goal for any given location = 436 mg/kg
Reference / Nearby Example Site(s): NTE Remedial Goal from Yosemite Slough risk assessment; area-weighted average is NOAA effects-range median (ERM)

0 100
Feet

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ANCHOR QEA

Figure 14
Lead Concentrations in Nearshore and Offshore Sediments
India Basin – 900 Innes Avenue
San Francisco Recreation and Parks Department

LEGEND:

- Sediment Sample (Anchor QEA 2018)
- Sediment Sample (Anchor QEA 2019)

Mercury (mg/kg)

- < 0.71
- 0.71 - 1.87
- > 1.87

Historical Data
(Weston 2013, URS 2015, Northgate 2017)

- Maximum, 0 - 1 foot interval

- Property Boundary
- Mean High Water Line
- Shipwreck Vessels

NOTES:
Proposed site-wide area-weighted average remedial goal = 0.71 mg/kg
Proposed not-to-exceed (NTE) remedial goal for any given location = 1.87 mg/kg
Reference / Nearby Example Site(s): NTE Remedial Goal from Hunters Point Naval Shipyard (HPNS); area-weighted average is NOAA effects-range median (ERM)

0 100
Feet

Publish Date: 2019/06/26, 3:46 PM | User: kballou
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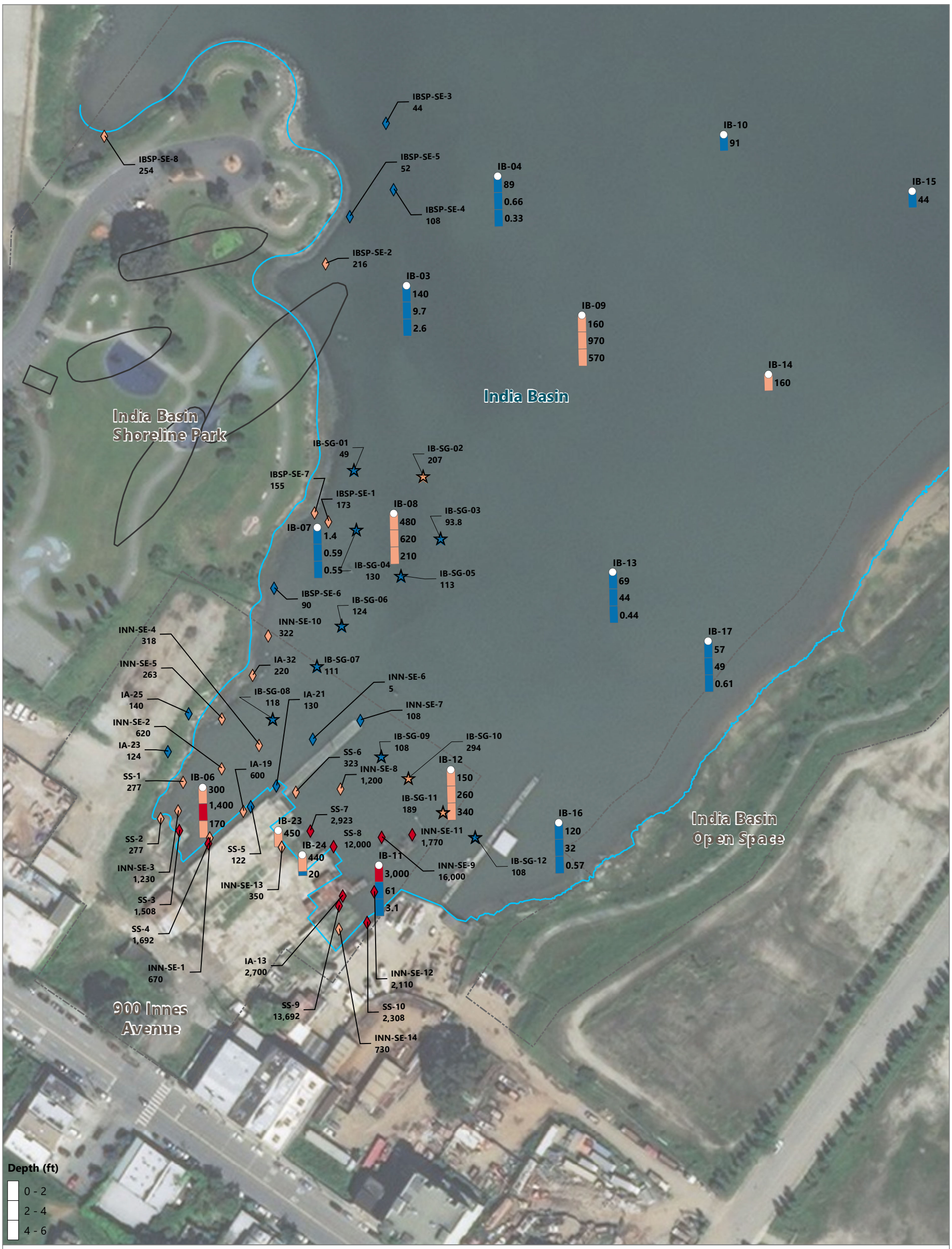
ANCHOR QEA

Figure 15
Mercury Concentrations in Nearshore and Offshore Sediments
India Basin – 900 Innes Avenue
San Francisco Recreation and Parks Department



LEGEND:

- Sediment Sample (Anchor QEA 2018)
- Sediment Sample (Anchor QEA 2019)

Total PCB Congener (SFEI 40) (U=0, µg/kg)

- < 148
- 148 - 1,240
- > 1,240

Historical data - Based on Total PCB Aroclors (Weston 2013, URS 2015, Northgate 2017)

- Maximum, 0 - 1 foot interval
- Property Boundary
- Mean High Water Line
- Shipwreck Vessels

NOTES:
Proposed site-wide area-weighted average remedial goal = 148 µg/kg
Proposed not-to-exceed (NTE) remedial goal for any given location = 1,240 µg/kg
Reference / Nearby Example Site(s): NTE Remedial Goal from Hunters Point Naval Shipyard (HPNS) and Yosemite Slough; area-weighted average based on nearshore ambient
Coordinate System = NAD 83 (2011) San Francisco CS13 (US Feet)

0 100
Feet

Publish Date: 2019/07/29, 6:47 PM | User: kballou
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ANCHOR QEA

Figure 16
Total PCB Concentrations in Nearshore and Offshore Sediments
India Basin – 900 Innes Avenue
San Francisco Recreation and Parks Department

LEGEND:

- Sediment Sample
- Soil Sample

Volume Estimates

- Landside soils (2 feet removed)
- Landside soils (5 feet removed)
- Nearshore sediments (4 feet removed)

- Offshore Clean Sand Cover Area
- Section A-A' (See Figure 18)
- Temporary Water Barrier Installation
- Property Boundary
- Mean High Water Line
- Shipwreck Vessels

NOTE:
All boundaries are approximate and subject to refinement or modification during design.

0 75
Feet

Publish Date: 2019/08/14, 3:56 PM | User: jquinley
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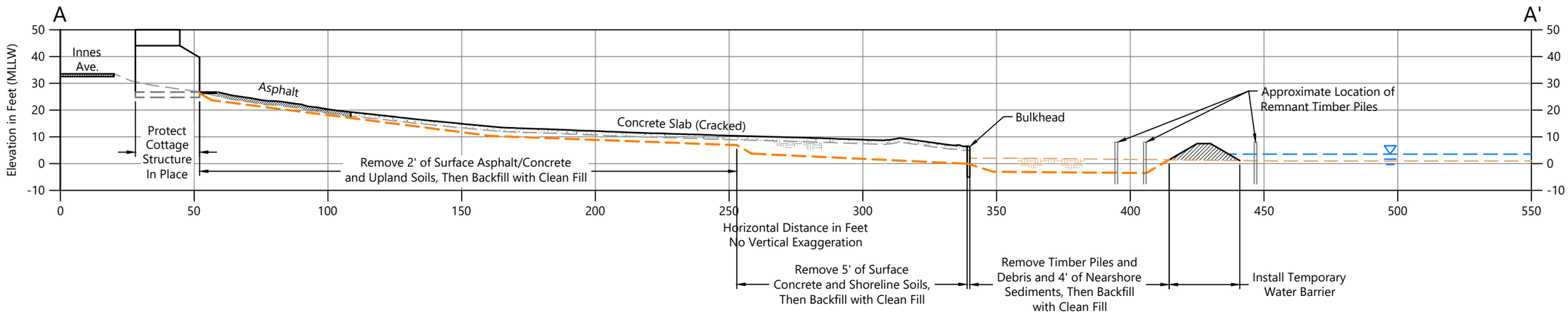
ANCHOR QEA

Figure 17
Remedial Areas
India Basin – 900 Innes Avenue
San Francisco Recreation and Parks Department



SOURCE: Mean High Water, project boundaries provided by Northgate Environmental Management, Inc.
HORIZONTAL DATUM: California State Plane, Zone 3, NAD83, U.S. Feet.

LEGEND:

- Planned Depth of Material Removal
- Existing Ground Surface
- Existing Sediment Surface

Publish Date: 2019/07/29 3:23 PM | User: mpratschner
Filepath: K:\Projects\0153-City and County of SF\India Basin\0153 RP-013 SECTION.dwg FIG 18

ANCHOR QEA

Figure 18
Example Soil/Sediment Removal/Cap Cross Section

India Basin - 900 Innes Avenue
San Francisco Recreation and Parks Department

Appendix A
Conceptual Design

GGN

900 Innes & India Basin Shoreline Park

Magnusson Klemencic Associates • Rana Creek • Turnbull Griffin Haesloop Architects • Greenlee And Associates

BAY TRAIL &
BLUE GREENWAY
ISLAIS CREEK
PIER 94 WETLAND
INDIA BASIN
WATERFRONT PARKS
THIRD AVENUE
THE SHIPYARD
YOSEMITE
SLOUGH
CANDLESTICK PARK

HERON'S HEAD PARK
HUNTERS POINT SHORELINE
INDIA BASIN SHORELINE PARK
INDIA BASIN OPEN SPACE
NORTHSIDE PARK
900 INNES
BIG GREEN

INDIA BASIN
SHORELINE PARK
900 INNES

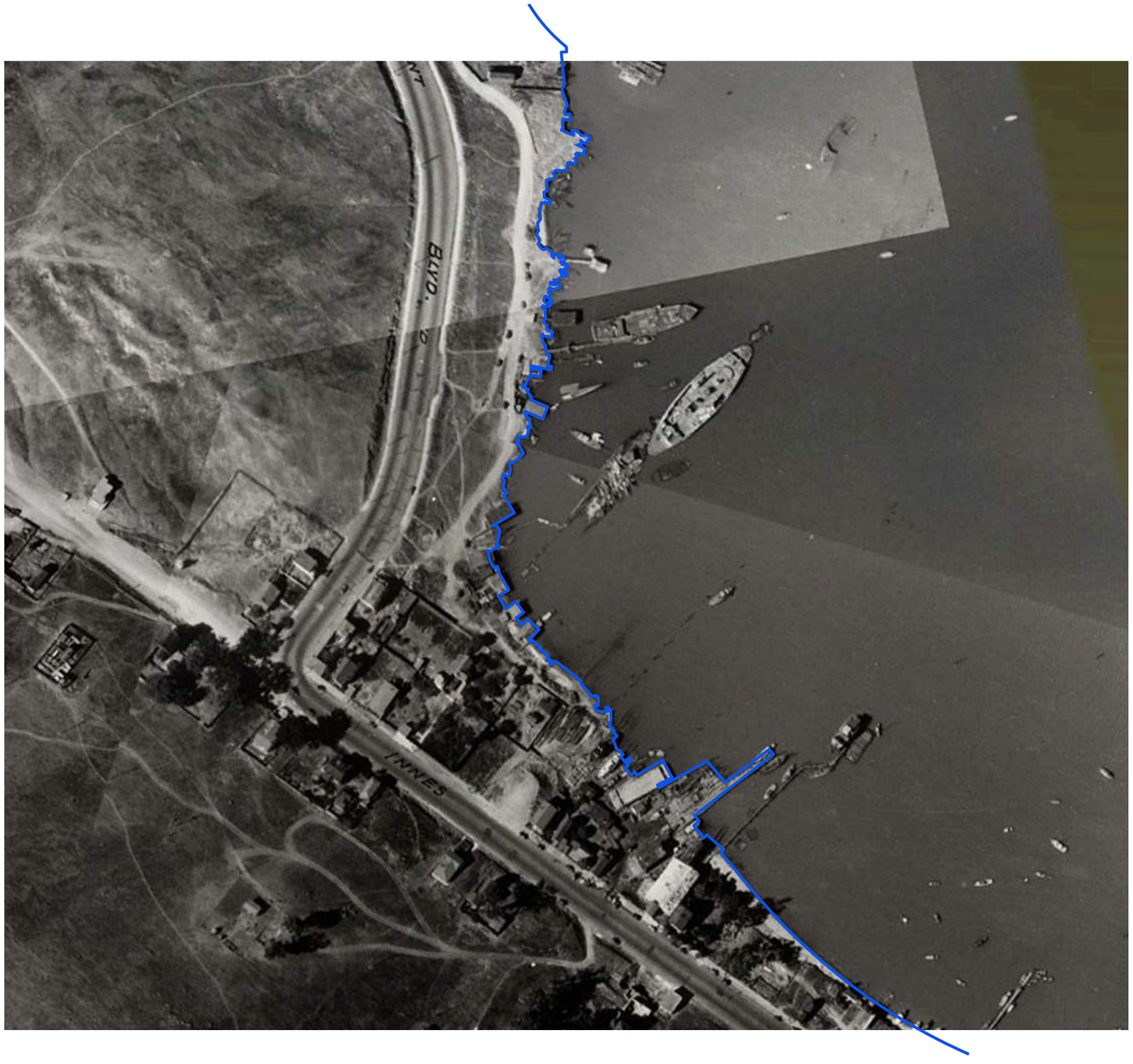
INDIA BASIN
SHORELINE PARK
900 INNES

Community Priorities

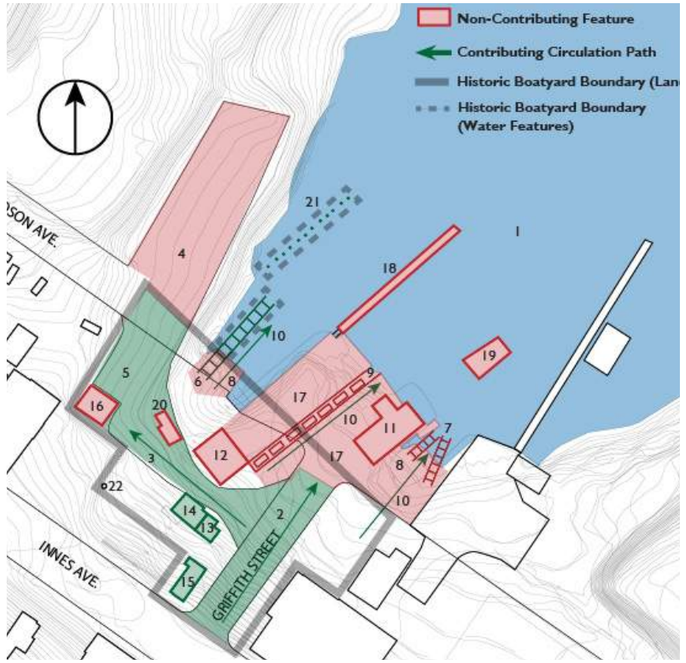
- Gathering Space
- Concessions
- Play & Fitness
- History
- Naturalistic Areas
- Sea Level Rise
- Water Resources

Gathering Space: Porch Swings, Social Seating

History: Shoreline



History: Historic Resources Evaluation Contributing Features



Contributing Features:

1. India Basin / San Francisco Bay
2. Griffith Street right-of-way
3. Path between Griffith Street and west marine ways
5. Historic storage and staging area
6. West marine way tracks
10. Circulation routes and water access at marine ways
13. Boatyard office building
14. Tool shed and water tank building
15. Shipwright's Cottage
21. Water fence posts

- Views east towards SF Bay and East Bay hills
- Gradual slope from Innes Avenue to India Basin

* Shipwreck

Contributing Features Kept in Design:

1. India Basin / San Francisco Bay
2. Griffith Street right-of-way
3. Path between Griffith Street and west marine ways
5. Historic storage and staging area
10. Circulation routes and water access at marine ways
13. Boatyard office building
15. Shipwright's Cottage

- Views east towards SF Bay and East Bay hills
- Gradual slope from Innes Avenue to India Basin

* Shipwreck

Contributing Features Not Kept in Design:

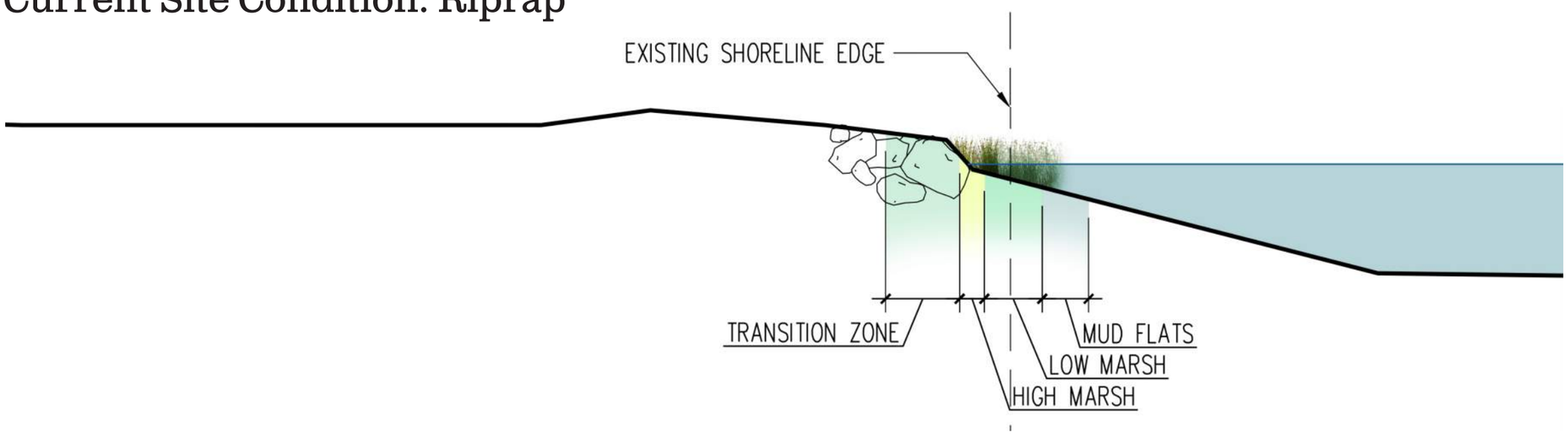
6. West marine way tracks (contaminated wood, to be replaced with clean timbers)
14. Tool shed and water tank building
21. Water fence posts (contaminated wood)

Non-Contributing Features Kept in Design:

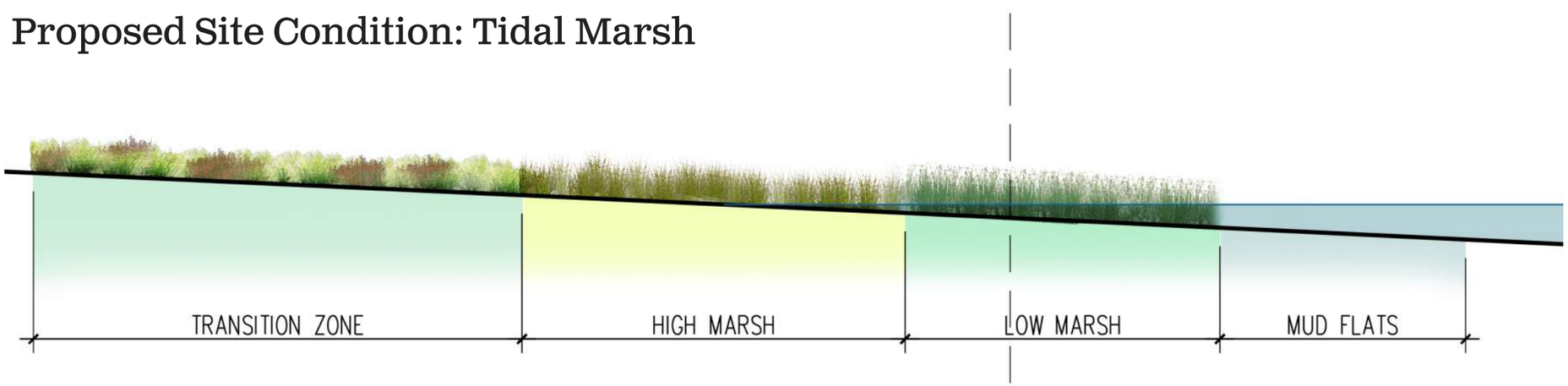
9. Central construction way ramp and marineway foundation
12. Paint shop and compressor house (footprint)
17. Concrete wharf
18. Modern dock

Naturalistic Areas - Riprap To Tidal Marsh

Current Site Condition: Riprap



Proposed Site Condition: Tidal Marsh



Sea Level Rise - Current Mean High Water +5.75’

Water Resources - Treating Runoff Within The Site

Site Plan

PG&E
(SHORELINE
TRAIL)
HUNTERS POINT BLVD
HAWES ST
INNES AVE
BUILD INC
(INDIA BASIN OPEN
SPACE & BIG GREEN)

0 50 100 200 400'
N

Park Spaces

LEGEND

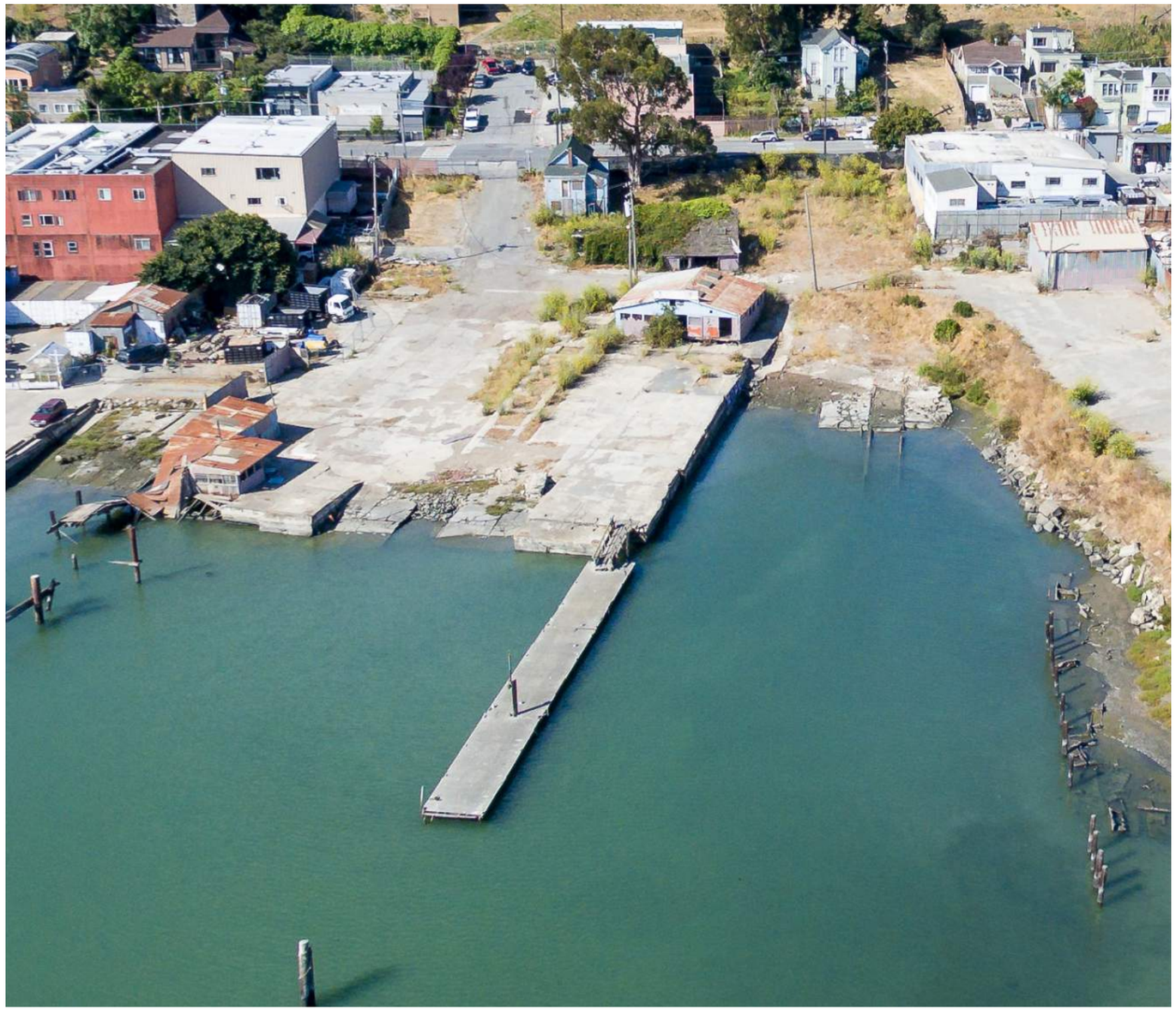
- Neighborhood Edge
- The Marineway
- Sage Slopes
- Marsh Edge
- Scow Schooner Boatyard
- Historic Shorewalk

0 50 100 200 400'

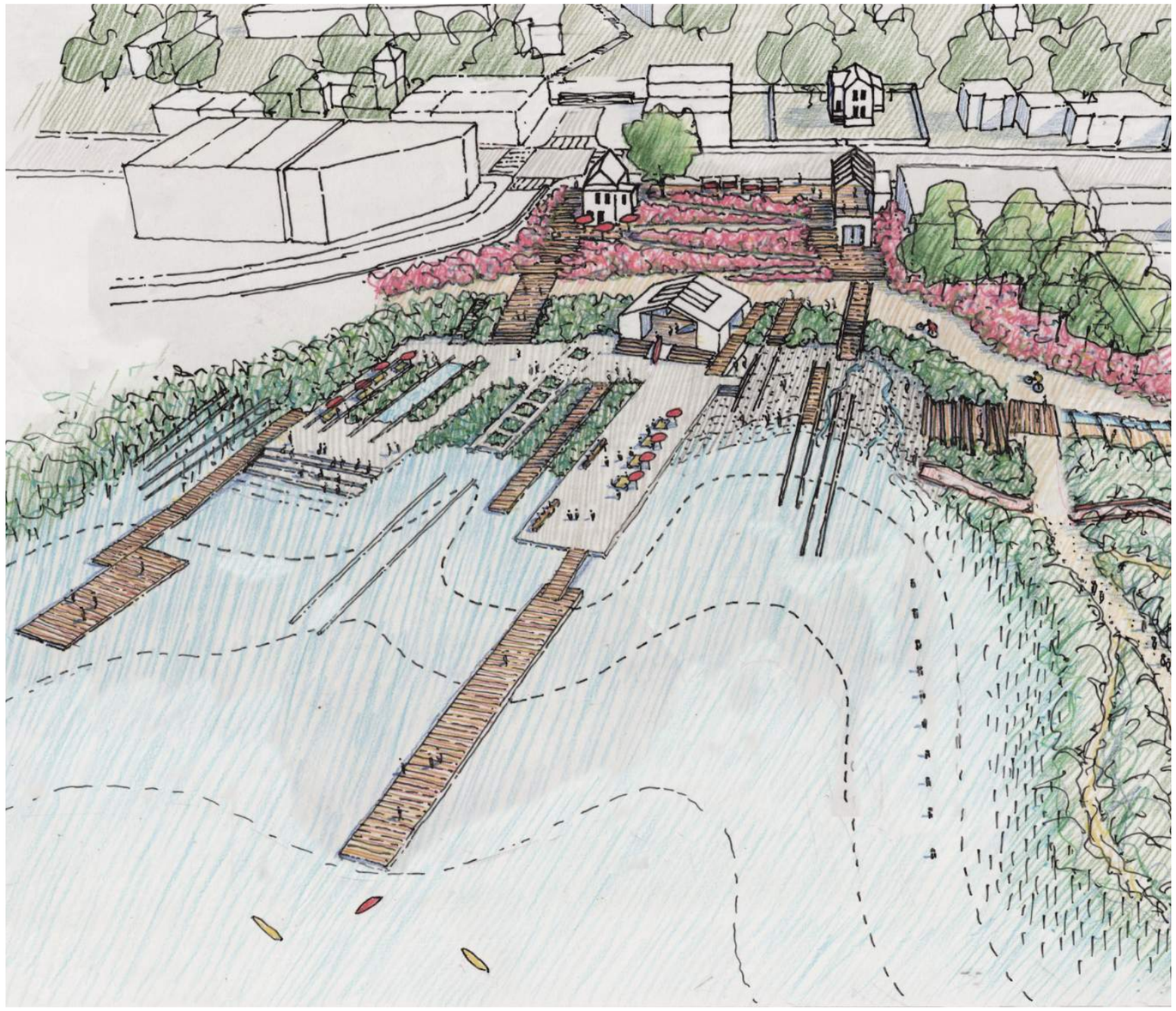
N

The Original Shoreline

900 Innes Boatyard: Existing



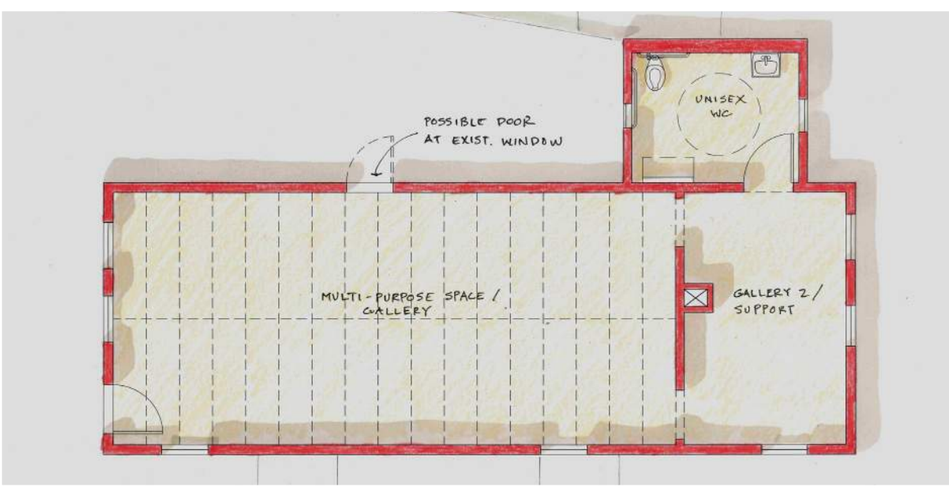
900 Innes Boatyard: Proposed



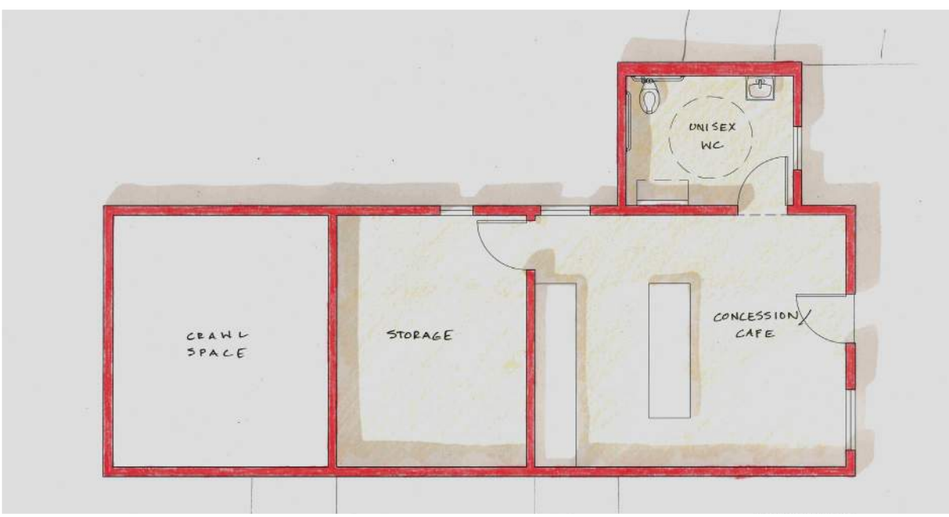
900 Innes Buildings: Existing

900 Innes Buildings: Proposed

900 Innes Buildings: Restored Shipwright's Cottage

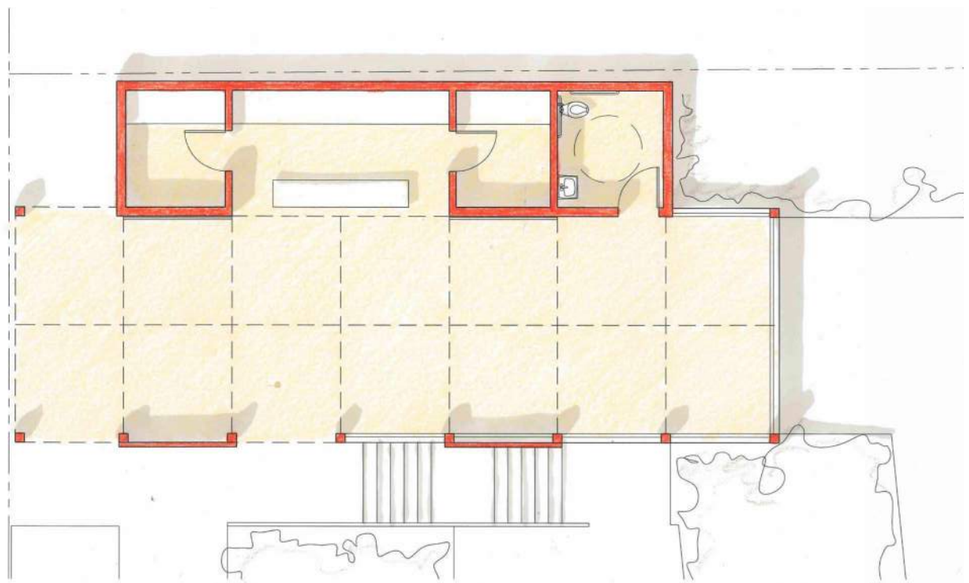


Innes Level

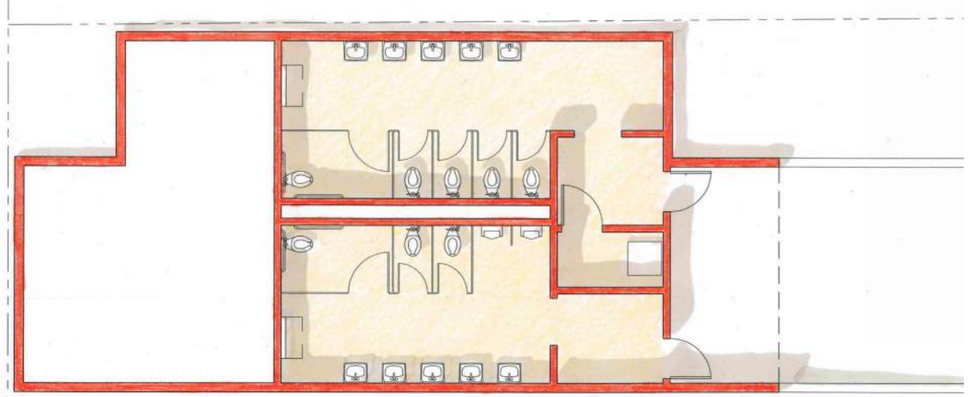


Lower Level

900 Innes Buildings: Overlook Pavilion

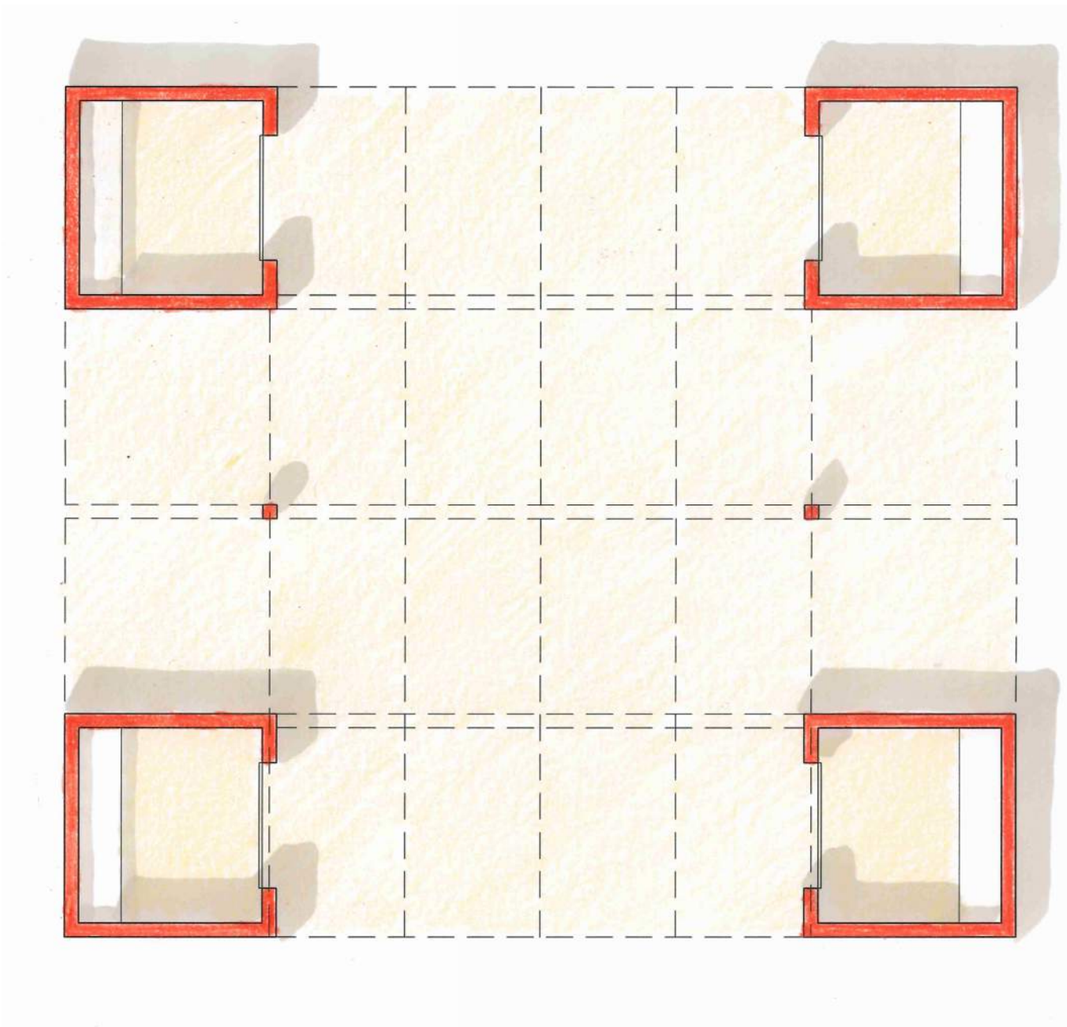


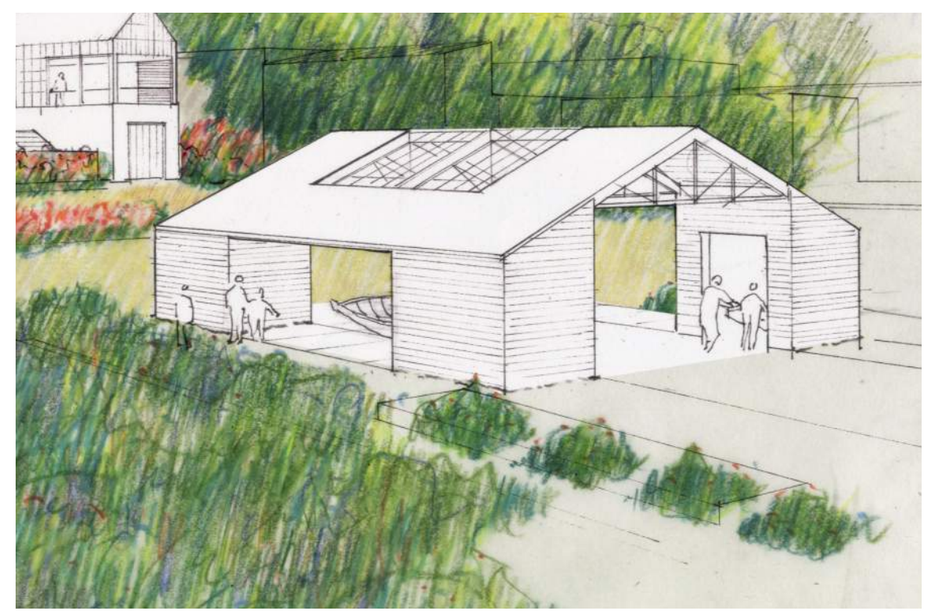
Innes Level



Lower Level

900 Innes Buildings: The Shop

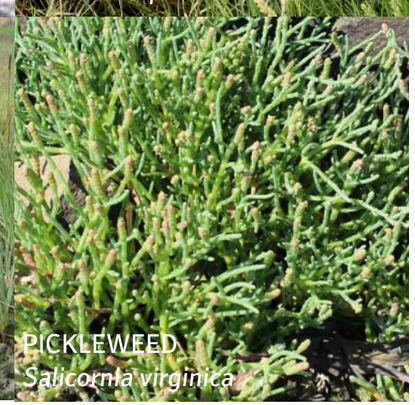




900 Innes Boatyard: Existing

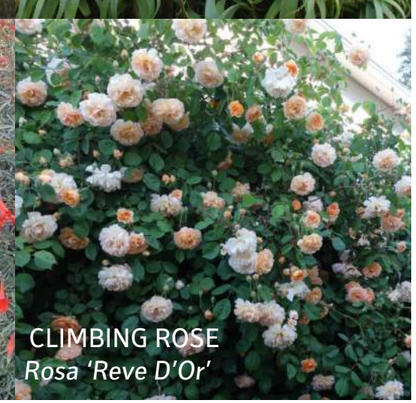
900 Innes Boatyard: Proposed

Planting: Tidal Marsh & Shoreline

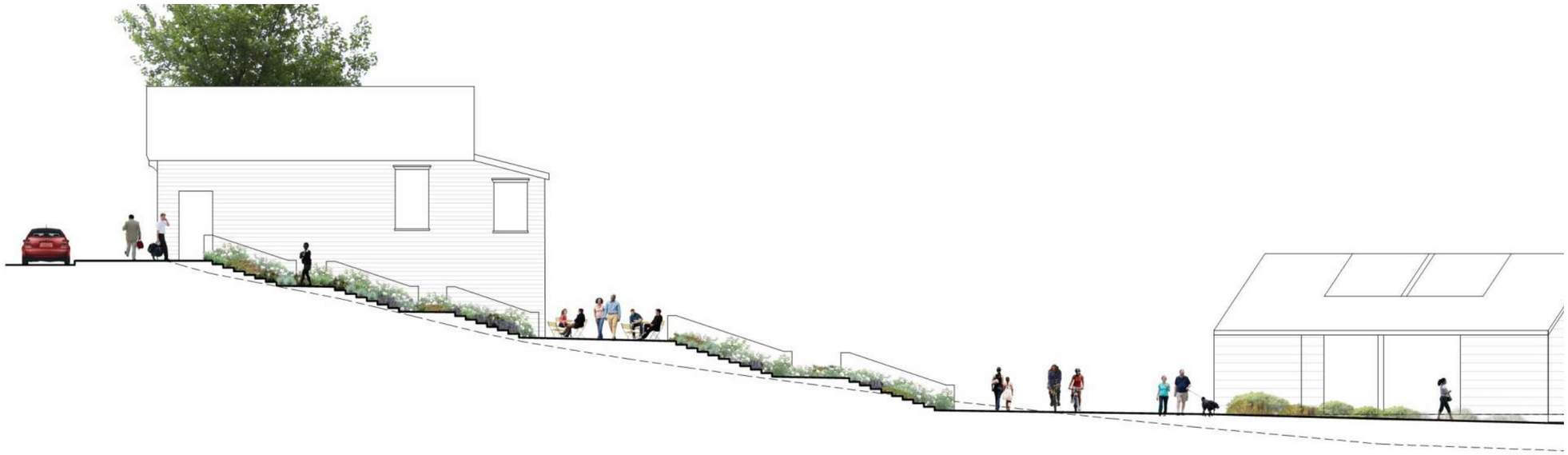


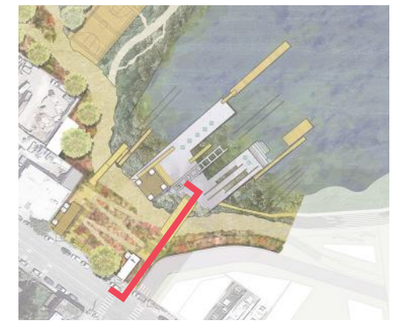
Planting: Sage Slopes

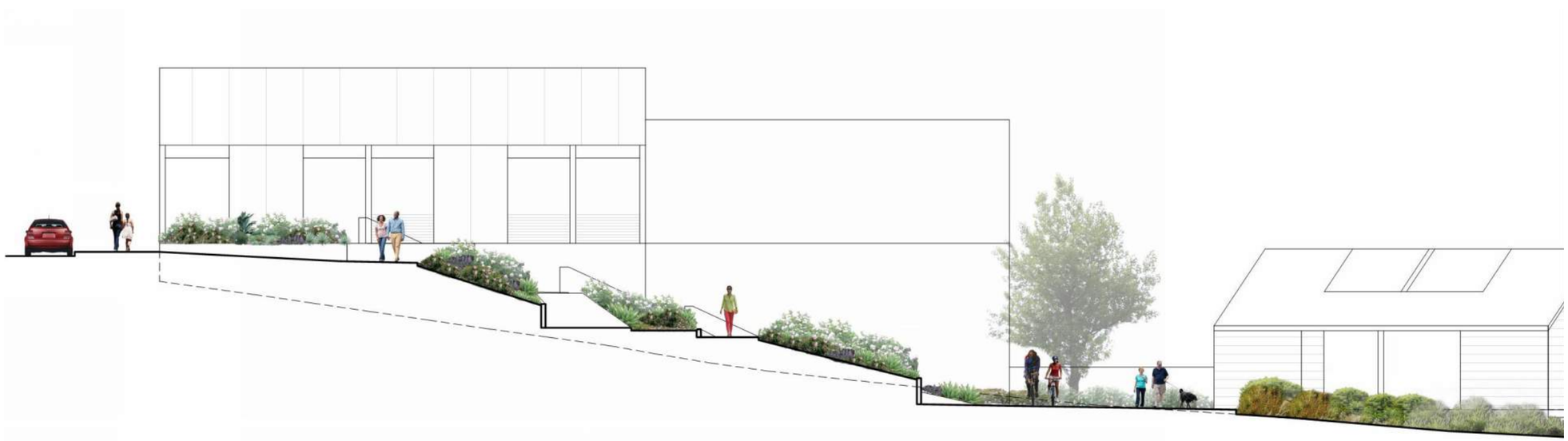
Planting: Heritage Garden



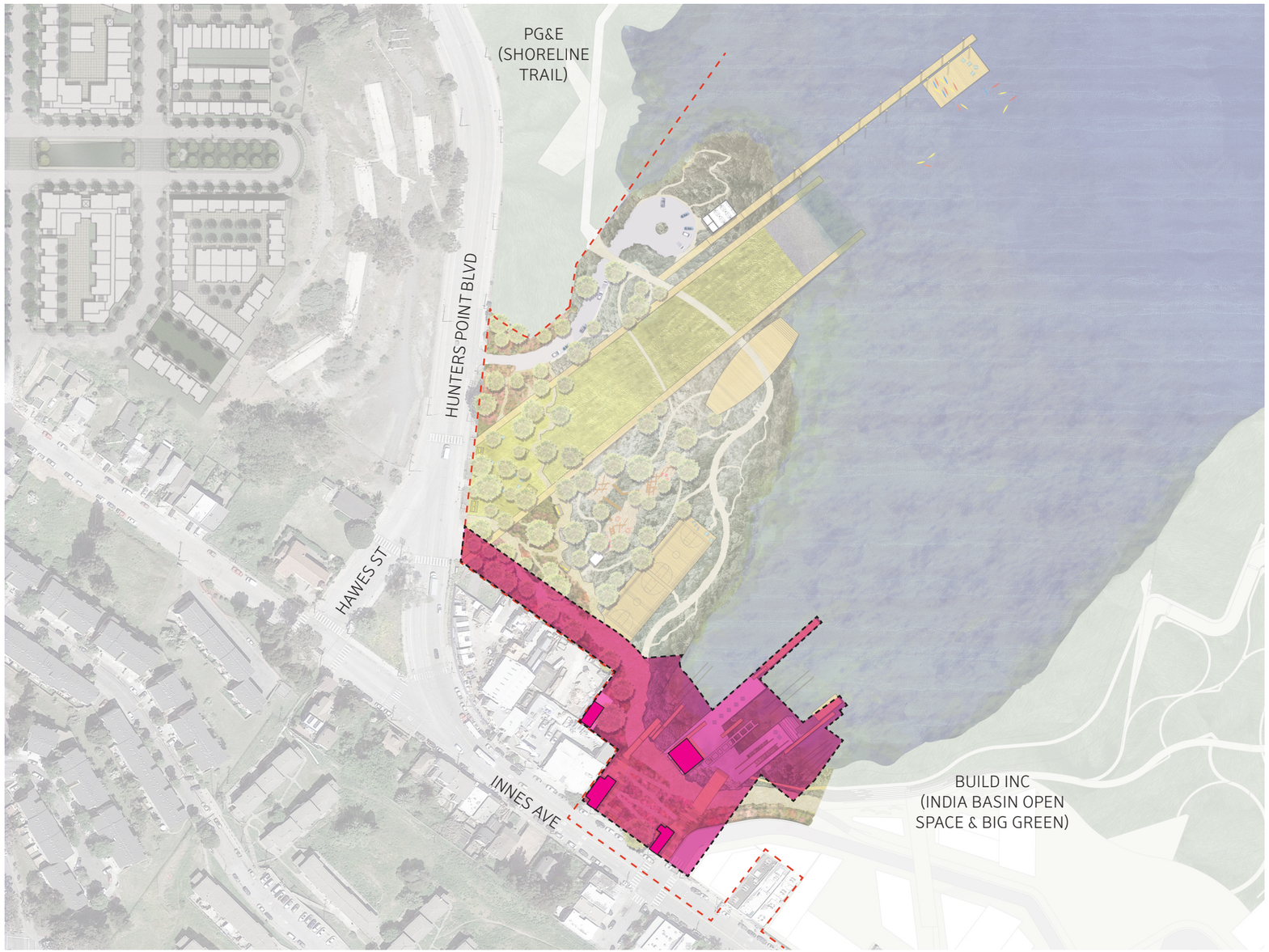
Site Sections







Proposed Phase 1 Construction



Legend

- Project Site Boundary
- Phase 1 Area Constructed
- Phase 1 Buildings

0 50 100 200 400'

N

Proposed Phase 2 Construction

Legend

- Project Site Boundary
- Phase 1 Area Constructed
- Phase 1 Buildings

0 50 100 200 400'

N

Existing Site

0 50 100 200 400'

N

Proposed Site Plan

NEIGHBORHOOD EDGE & HISTORIC SHOREWALK

1. Restored Shipwright's Cottage Welcome Center
2. Innes Ave Porch Swings
3. Overlook Porch Pavilion
4. Garden Path + Accessible Ramp
5. Griffith Street Steps
6. Heritage Garden
7. Parking
8. Shorewalk Promenade

SCOW SCHOONER BOATYARD

9. Historic Scow Schooner Boatyard Artifacts
10. Floating Piers
11. Shop Building
12. Original Shoreline

SAGE SLOPES

13. Adventure Play Area
14. 1/4 Mile Recreation Loop
15. Adult Fitness Stations
16. Skate Bypass Wave Paths
17. Basketball Courts
18. Parking and Bus Drop-Off
19. Outfitter Pavilion
20. Boatdeck and Seat Steps

THE MARINEWAY

21. BBQ and Picnic Bosque
22. Play Lawn
23. Sloped Lawn
24. Gravel Beach
25. Floating Dock

Restroom
Bay Trail / Blue Greenway Route
Class 1 Bikeway Route

0 50 100 200 400'

N

Appendix B
Historical Characterization Data

Table B1
Soil and Sediment Sample Analytical Results for Metals (2013 and 2015)

											Task	IndiaBasin-2015WURS	IndiaBasin-2015WURS
											Location Name	IA-01	IA-02
											Sample Name	IA-01	IA-02A
											Sample Date	8/15/2013	8/15/2013
											Depth	0 - 0.5 ft	0 - 0.5 ft
											Matrix	SO	SO
	Human Health Comparative Values							Ecological Habitat Comparative Values (Sediment Only)					
	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]	LBNL Background Values [3]	Local Hunters Point Site Background [4]	TTLC [5]	SF Bay Ambient 90% UTL [6]	SF Bay Ambient Average [7]	Effects Range - Low (ER-L) [8]	Effects Range-Median (ER-M) [9]		
Conventional Parameters (pct)													
Moisture, percent	--	--	--	--	--	--	--	--	--	--	--	**2**	**10**
Metals (mg/kg)													
Antimony	11	160	50	31	6	--	500	--	--	--	--	**2.3**	0.58 U
Arsenic	0.067	0.31	0.98	0.68	24	--	500	13.9	8.74	8.2	70	**7.1**	**2.6**
Barium	15,000	220,000	3,000	15,000	410	--	10,000	103	66.8	--	--	**160**	**120**
Beryllium	16	230	27	160	1	--	75	--	--	--	--	**0.23**	**0.32**
Cadmium	78	1,100	51	71	5.6	--	100	0.33	0.21	1.2	9.6	**1.5**	**0.38**
Chromium	--	--	--	120,000	120	464.24	2,500	141	98	81	370	**150**	**140**
Cobalt	23	350	28	23	25	84	8,000	20.1	14.7	--	--	**34**	**31**
Copper	3,100	47,000	14,000	3,100	63	--	2,500	53.9	39	34	270	**150**	**63**
Lead	80	320	160	400	43	--	1,000	25.1	19.5	46.7	218	**260**	**230**
Mercury	13	190	44	11	0.42	--	20	0.33	0.33	0.15	0.71	**0.7**	**0.28**
Molybdenum	390	5,800	1,800	390	4.8	--	3,500	0.75	0.5	--	--	**12**	0.29 U
Nickel	820	11,000	86	820	272	1581.81	2,000	98.3	78.5	20.9	51.6	**470**	**560**
Selenium	390	5,800	1,700	390	4.9	--	100	0.36	0.23	--	--	0.52 U	0.58 U
Silver	390	5,800	1,800	390	2.9	--	500	0.32	0.19	1	3.7	0.26 U	0.29 U
Thallium	0.78	12	3.5	0.78	10	--	700	--	--	--	--	0.52 U	0.58 U
Vanadium	390	5,800	470	390	90	--	2,400	--	--	--	--	**47**	**42**
Zinc	23,000	350,000	110,000	23,000	140	--	5,000	136	103.8	150	410	**460**	**170**

Table B1
Soil and Sediment Sample Analytical Results for Metals (2013 and 2015)

	IndiaBasin-2015WURS IA-02 IA-02B 8/15/2013 3 - 4 ft SO	IndiaBasin-2015WURS IA-03 IA-03 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-04 IA-04 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-05 IA-05 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-06 IA-06 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-06 IA-34 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-07 IA-07 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-08 IA-08A 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-08 IA-08B 8/15/2013 3 - 4 ft SO
Conventional Parameters (pct)									
Moisture, percent	**10**	**8**	**5**	**2**	**6**	**3**	**7**	**5**	**13**
Metals (mg/kg)									
Antimony	0.51 U	**1.5**	**1.6**	**2.7**	0.55 U	0.55 U	0.51 U	0.57 U	0.6 U
Arsenic	**2.3**	**7.5**	**7**	**4.8**	**1.9**	**3.9**	**3.7**	**3.7**	**1.9**
Barium	**69**	**170**	**940**	**170**	**77**	**170**	**310**	**110**	**64**
Beryllium	**0.34**	**0.27**	**0.28**	**0.24**	**0.28**	**0.28**	**0.71**	**0.28**	**0.36**
Cadmium	0.25 U	**0.53**	**3.9**	**1.1**	0.27 U	**0.87**	**0.35**	**0.34**	0.3 U
Chromium	**110**	**74**	**220**	**79**	**69**	**120**	**39**	**48**	**110**
Cobalt	**23**	**13**	**40**	**11**	**9.5**	**34**	**24**	**15**	**26**
Copper	**13**	**200**	**290**	**190**	**16**	**140**	**170**	**140**	**16**
Lead	**5.2**	**300**	**4600**	**150**	**42**	**400**	**85**	**180**	**4.9**
Mercury	**0.028**	**1.4**	**1.7**	**0.55**	**0.064**	**0.92**	**0.72**	**0.37**	**0.15**
Molybdenum	0.25 U	**1.3**	**0.5**	**4.9**	0.27 U	**0.87**	**2.6**	0.28 U	0.3 U
Nickel	**710**	**120**	**700**	**110**	**58**	**480**	**45**	**140**	**740**
Selenium	0.51 U	0.51 U	**0.79**	0.55 U	0.55 U	**0.99**	0.51 U	0.57 U	0.6 U
Silver	0.25 U	0.25 U	0.26 U	0.28 U	0.27 U	0.27 U	0.25 U	0.28 U	0.3 U
Thallium	0.51 U	0.51 U	0.52 U	0.55 U	0.55 U	0.55 U	0.51 U	0.57 U	0.6 U
Vanadium	**47**	**44**	**50**	**42**	**51**	**43**	**57**	**47**	**41**
Zinc	**38**	**350**	**1100**	**780**	**79**	**320**	**170**	**180**	**36**

Table B1
Soil and Sediment Sample Analytical Results for Metals (2013 and 2015)

	IndiaBasin-2015WURS IA-09 IA-09 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-10 IA-10A 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-10 IA-10B 8/15/2013 3 - 4 ft SO	IndiaBasin-2015WURS IA-10 IA-37 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-11 IA-11A 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-11 IA-11B 8/15/2013 3 - 4 ft SO	IndiaBasin-2015WURS IA-12 IA-12 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-13D IA-13D 8/16/2013 0 - 0.5 ft SE	IndiaBasin-2015WURS IA-14 IA-14A 8/15/2013 0 - 0.5 ft SO
Conventional Parameters (pct)									
Moisture, percent	**3**	**8**	**14**	**4**	**11**	**18**	**1**	**49**	**9**
Metals (mg/kg)									
Antimony	0.51 U	**2.3**	0.63 U	**2**	0.56 U	0.68 U	0.51 U	**20**	**1.6**
Arsenic	**3.8**	**6.2**	**1.4**	**9**	**2**	**3.5**	**6**	**42**	**16**
Barium	**150**	**260**	**100**	**740**	**24**	**110**	**890**	**480**	**990**
Beryllium	**0.28**	**0.32**	**0.36**	**0.29**	0.11 U	**0.38**	**0.16**	0.21 U	**0.34**
Cadmium	**0.81**	0.29 U	0.31 U	**5.7**	**0.38**	0.34 U	**0.62**	**2.4**	**1.6**
Chromium	**160**	**54**	**140**	**190**	**830**	**140**	**51**	**110**	**65**
Cobalt	**39**	**11**	**61**	**40**	**93**	**49**	**7.1**	**21**	**23**
Copper	**130**	**100**	**15**	**310**	**20**	**30**	**110**	**3100**	**1100**
Lead	**320**	**170**	**6.7**	**1900**	**24**	**19**	**4200**	**1700**	**1000**
Mercury	**0.77**	**1.3**	0.02 U	**13**	**0.11**	**0.2**	**0.18**	**29**	**5.1**
Molybdenum	**0.63**	0.29 U	0.31 U	**0.51**	0.28 U	0.34 U	**11**	**13**	**0.59**
Nickel	**640**	**72**	**760**	**670**	**2300**	**540**	**56**	**110**	**70**
Selenium	0.51 U	0.57 U	0.63 U	0.57 U	0.56 U	0.68 U	0.51 U	*1 U*	**0.94**
Silver	0.26 U	0.29 U	0.31 U	0.29 U	0.28 U	0.34 U	0.26 U	*0.52 U*	0.28 U
Thallium	0.51 U	0.57 U	0.63 U	0.57 U	0.56 U	0.68 U	0.51 U	*1 U*	0.56 U
Vanadium	**45**	**34**	**47**	**48**	**32**	**45**	**27**	**54**	**57**
Zinc	**310**	**340**	**43**	**1000**	**46**	**88**	**420**	**4000**	**810**

Table B1
Soil and Sediment Sample Analytical Results for Metals (2013 and 2015)

	IndiaBasin-2015WURS IA-14 IA-14B 8/15/2013 3 - 4 ft SO	IndiaBasin-2015WURS IA-15 IA-15 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-16 IA-16 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-17 IA-17 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-18 IA-18 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-19D IA-19D 8/16/2013 0 - 0.5 ft SE	IndiaBasin-2015WURS IA-20 IA-20 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-21D IA-21D 8/16/2013 0 - 0.5 ft SE	IndiaBasin-2015WURS IA-22 IA-22 8/15/2013 0 - 0.5 ft SO
Conventional Parameters (pct)									
Moisture, percent	**15**	**8**	0 U	**7**	**10**	**63**	**1**	**67**	**1**
Metals (mg/kg)									
Antimony	**11**	0.52 U	0.52 U	**6.9**	0.57 U	**4.5**	0.54 U	1.6 U	**1**
Arsenic	**21**	**3.9**	**3.4**	**52**	**6**	**33**	**5.3**	**9.8**	**13**
Barium	**1400**	**76**	**88**	**350**	**98**	**410**	**140**	**510**	**140**
Beryllium	**0.24**	**0.44**	**0.22**	**0.27**	**0.52**	**0.33**	**0.32**	**0.39**	**0.37**
Cadmium	**1.9**	0.26 U	0.26 U	**1.4**	0.29 U	**2.6**	**0.53**	*0.82 U*	**1.1**
Chromium	**140**	**170**	**51**	**110**	**85**	**470**	**59**	**1500**	**160**
Cobalt	**28**	**25**	**7.5**	**20**	**22**	**46**	**12**	**150**	**31**
Copper	**2600**	**95**	**31**	**2600**	**79**	**550**	**81**	**440**	**870**
Lead	**3300**	**69**	**150**	**800**	**80**	**2600**	**100**	**600**	**140**
Mercury	**0.65**	**0.39**	**0.41**	**19**	**0.09**	**1.4**	**0.18**	**0.41**	**0.19**
Molybdenum	0.28 U	0.26 U	0.26 U	**9**	0.29 U	*0.74 U*	**1.4**	*0.82 U*	**46**
Nickel	**390**	**400**	**37**	**160**	**240**	**670**	**88**	**3100**	**300**
Selenium	0.56 U	**1.8**	0.52 U	**3.2**	**1.4**	*1.5 U*	0.54 U	**5.5**	**2.9**
Silver	0.28 U	0.26 U	0.26 U	0.29 U	0.29 U	*0.74 U*	0.27 U	*0.82 U*	0.27 U
Thallium	0.56 U	0.52 U	0.52 U	0.58 U	0.57 U	*1.5 U*	0.54 U	*1.6 U*	0.55 U
Vanadium	**36**	**50**	**51**	**43**	**40**	**97**	**47**	**120**	**50**
Zinc	**1100**	**120**	**120**	**1400**	**150**	**2000**	**210**	**520**	**430**

Table B1
Soil and Sediment Sample Analytical Results for Metals (2013 and 2015)

	IndiaBasin-2015WURS IA-23D IA-23D 8/15/2013 0 - 0.5 ft SE	IndiaBasin-2015WURS IA-24 IA-24A 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-24 IA-24B 8/15/2013 3 - 4 ft SO	IndiaBasin-2015WURS IA-25D IA-25D 8/15/2013 0 - 0.5 ft SE	IndiaBasin-2015WURS IA-26 IA-26 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-27 IA-27 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-28 IA-28 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-29 IA-29A 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-29 IA-29B 8/15/2013 3 - 4 ft SO
Conventional Parameters (pct)									
Moisture, percent	--	5	10	--	16	1	1	6	8
Metals (mg/kg)									
Antimony	0.71 U	0.51 U	0.58 U	1.2 U	0.59 U	0.51 U	4.9	0.48 U	0.53 U
Arsenic	5.7	7.1	3.8	10	3	13	55	3.4	2.8
Barium	170	66	130	70	150	200	260	110	130
Beryllium	0.29	0.74	0.47	0.67	0.51	0.4	0.25	0.42	0.23
Cadmium	1.2	0.26 U	0.29 U	*0.62 U*	0.29 U	0.89	1.9	0.24 U	0.51
Chromium	90	44	110	120	280	170	210	180	41
Cobalt	17	14	20	17	45	29	23	35	8.1
Copper	270	51	72	160	36	350	680	32	31
Lead	64	19	97	80	7.6	230	500	11	200
Mercury	0.27	0.11	0.18	0.68	0.036	0.28	0.46	0.026	1.3
Molybdenum	3.6	0.26 U	0.29 U	1.9	0.29 U	11	33	0.24 U	0.27 U
Nickel	110	64	250	130	860	340	190	660	31
Selenium	1	0.51 U	0.58 U	*1.2 U*	0.73	2	4.5	0.89	0.53 U
Silver	*0.35 U*	0.26 U	0.29 U	*0.62 U*	0.29 U	0.25 U	0.25 U	0.24 U	0.27 U
Thallium	0.71 U	0.51 U	0.58 U	*1.2 U*	0.59 U	0.51 U	0.51 U	0.48 U	0.53 U
Vanadium	58	49	48	78	83	57	45	52	51
Zinc	160	68	130	200	56	470	1100	46	290

Table B1
Soil and Sediment Sample Analytical Results for Metals (2013 and 2015)

	IndiaBasin-2015WURS IA-30 IA-30 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-31 IA-31 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-32D IA-32D 8/15/2013 0 - 0.5 ft SE	IndiaBasin-2015WURS IA-33 IA-33A 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-33 IA-33B 8/15/2013 3 - 4 ft SO	IndiaBasin-2015WURS SS-1 SS-1-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-1 SS-1-1' 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-2 SS-2-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-2 SS-2-1' 6/1/2015 0.5 - 1 ft SE
Conventional Parameters (pct)									
Moisture, percent	0 U	0 U	--	**5**	**10**	--	--	--	--
Metals (mg/kg)									
Antimony	0.51 U	0.46 U	1.1 U	0.54 U	**2.9**	1.7 U	1.4 U	1.6 U	**5**
Arsenic	**2.8**	**7.4**	**11**	**1.4**	**3.3**	**11**	**13**	**8**	**25**
Barium	**82**	**140**	**69**	**81**	**190**	**89**	**106**	**118**	**149**
Beryllium	**0.17**	**0.29**	**0.62**	**0.22**	**0.31**	0.33 U	0.29 U	0.33 U	0.37 U
Cadmium	**0.28**	**0.78**	*0.57 U*	0.27 U	**1.8**	*0.41 U*	*0.36 U*	*0.41 U*	**3.54**
Chromium	**76**	**110**	**130**	**130**	**70**	**105**	**98**	**57**	**200**
Cobalt	**10**	**17**	**16**	**28**	**13**	**17**	**18**	**13**	**28**
Copper	**58**	**260**	**170**	**25**	**96**	**277**	**569**	**185**	**1000**
Lead	**100**	**150**	**88**	**18**	**500**	**117**	**185**	**215**	**631**
Mercury	**0.16**	**1**	**0.75**	**0.033**	**2**	**0.83**	**4.92**	**0.75**	**2.77**
Molybdenum	**2.8**	**3.9**	*0.57 U*	0.27 U	0.28 U	*1.7 U*	**3.38**	**2.92**	**26**
Nickel	**92**	**140**	**150**	**460**	**140**	**138**	**135**	**91**	**54**
Selenium	0.51 U	**1.5**	*1.1 U*	**1.3**	0.56 U	*3.3 U*	*2.9 U*	*3.3 U*	*3.7 U*
Silver	0.26 U	0.23 U	*0.57 U*	0.27 U	0.28 U	*0.83 U*	*0.72 U*	*0.82 U*	*0.92 U*
Thallium	0.51 U	0.46 U	*1.1 U*	0.54 U	0.56 U	*1.7 U*	*1.4 U*	*1.6 U*	*1.8 U*
Vanadium	**36**	**48**	**74**	**60**	**48**	**62**	**57**	**38**	**43**
Zinc	**150**	**220**	**200**	**42**	**520**	**215**	**338**	**1123**	**3692**

Table B1
Soil and Sediment Sample Analytical Results for Metals (2013 and 2015)

	IndiaBasin-2015WURS SS-3 SS-3-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-3 SS-3-1' 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-4 SS-4-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-4 SS-4-1' 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-5 SS-5-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-5 SS-5-1' 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-6 SS-6-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-6 SS-6-1' 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-7 SS-7-0.5' 6/1/2015 0 - 0.5 ft SE
Conventional Parameters (pct)									
Moisture, percent	--	--	--	--	--	--	--	--	--
Metals (mg/kg)									
Antimony	0.41 U	1.9 U	**5**	**6**	0.37 U	0.42 U	0.44 U	1.6 U	**5**
Arsenic	**7**	**25**	**31**	**31**	**7**	**11**	**9**	**17**	**17**
Barium	**43**	**200**	**277**	**385**	**42**	**75**	**54**	**68**	**262**
Beryllium	0.083 U	0.38 U	0.34 U	0.34 U	**0.25**	**0.28**	**0.26**	0.33 U	0.28 U
Cadmium	0.01 U	**0.75**	**0.72**	**51**	0.0093 U	**0.15**	0.11 U	*0.41 U*	*0.35 U*
Chromium	**63**	**126**	**145**	**154**	**60**	**74**	**71**	**120**	**117**
Cobalt	**10**	**29**	**15**	**40**	**9**	**11**	**10**	**15**	**15**
Copper	**123**	**1692**	**1077**	**1308**	**115**	**308**	**185**	**585**	**600**
Lead	**43**	**231**	**538**	**2462**	**71**	**83**	**57**	**154**	**892**
Mercury	**0.75**	**7.08**	**135.38**	**14**	**1.85**	**2.15**	**1.52**	**2.92**	**3.54**
Molybdenum	0.41 U	**31**	**3.08**	**15**	**0.6**	**5.85**	**1.34**	**15**	**20**
Nickel	**63**	**125**	**114**	**145**	**58**	**86**	**62**	**154**	**102**
Selenium	*0.83 U*	*3.8 U*	*3.4 U*	*3.4 U*	*0.75 U*	*0.83 U*	*0.88 U*	*3.3 U*	*2.8 U*
Silver	*0.21 U*	*0.94 U*	*0.86 U*	*0.85 U*	0.19 U	*0.21 U*	*0.22 U*	*0.81 U*	*0.69 U*
Thallium	0.41 U	*1.9 U*	*1.7 U*	*1.7 U*	0.37 U	0.42 U	0.44 U	*1.6 U*	*1.4 U*
Vanadium	**45**	**68**	**45**	**48**	**40**	**46**	**45**	**60**	**43**
Zinc	**123**	**677**	**1015**	**2923**	**123**	**200**	**145**	**277**	**3077**

Table B1
Soil and Sediment Sample Analytical Results for Metals (2013 and 2015)

	IndiaBasin-2015WURS SS-7 SS-7-1' 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-8 SS-8-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-8 FD-1 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-8 SS-8-1' 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-9 SS-9-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-9 SS-9-1' 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-10 SS-10-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-10 SS-10-1' 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-10 FD-2 6/1/2015 0.5 - 1 ft SE
Conventional Parameters (pct)									
Moisture, percent	--	--	--	--	--	--	--	--	--
Metals (mg/kg)									
Antimony	**6**	1.5 U	1.7 U	1.6 U	2.8 U	1.1 U	0.45 U	1.3 U	0.41 U
Arsenic	**17**	**9.5**	**9.7**	**37**	**58**	**115**	**13**	**18**	**9.5**
Barium	**138**	**120**	**140**	**148**	**185**	**169**	**55**	**54**	**38**
Beryllium	0.38 U	0.3 U	0.34 U	0.32 U	0.22 U	0.23 U	0.09 U	0.27 U	0.082 U
Cadmium	*0.48 U*	*0.37 U*	*0.42 U*	**0.66**	**2.15**	**1.32**	**0.31**	*0.33 U*	**0.28**
Chromium	**185**	**82**	**82**	**131**	**169**	**215**	**86**	**95**	**63**
Cobalt	**15**	**11**	**10**	**15**	**22**	**32**	**10**	**10**	**7.2**
Copper	**1000**	**620**	**540**	**1846**	**41538**	**3692**	**477**	**1292**	**670**
Lead	**462**	**190**	**220**	**923**	**738**	**831**	**63**	**97**	**60**
Mercury	**4.77**	**4.7**	**5.1**	**15**	**15**	**35**	**4**	**7**	**4.1**
Molybdenum	**12**	**2.7**	**3.2**	**5.23**	**15**	**2.15**	**1.2**	**2.46**	**1.6**
Nickel	**118**	**67**	**59**	**95**	**143**	**554**	**65**	**82**	**49**
Selenium	*3.8 U*	*3 U*	*3.4 U*	*3.2 U*	*2.2 U*	*2.3 U*	*0.9 U*	*2.7 U*	*0.82 U*
Silver	*0.95 U*	*0.75 U*	*0.84 U*	*0.8 U*	**1.45**	*0.57 U*	*0.23 U*	*0.67 U*	*0.2 U*
Thallium	*1.9 U*	*1.5 U*	*1.7 U*	*1.6 U*	*2.8 U*	*1.1 U*	0.45 U	*1.3 U*	0.41 U
Vanadium	**43**	**35**	**34**	**46**	**37**	**40**	**49**	**45**	**29**
Zinc	**692**	**370**	**350**	**677**	**6154**	**831**	**262**	**369**	**260**

Table B1
Soil and Sediment Sample Analytical Results for Metals (2013 and 2015)

Notes:
Detected concentration is greater than one or more listed Human Health Comparative Values
Detected concentration is greater than one or more Ecological Habitat Comparative Values
Italics: non-detected concentration is above one or more identified screening levels
Bold: Detected result
Results reported in dry weight basis.
Source: Northgate 2017a
1. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. January 2019.
2. United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
3. Lawrence Berkeley National Laboratory (LBNL) Analysis of Background Distributions of Metals in Bay Area Regional Soils, Upper Estimate Values, 2009.
4. Final Remediation Investigation Report, Hunters Point Power Plant, San Francisco, CA, TRC, 2009
5. TTLC: Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.
6. A 90% Upper Threshold Limit (UTL) calculated in ProUCL v5.0 using the 2003-2012 data provided in the Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
7. Ambient for San Francisco Bay sediments, 2007-2012, Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
8. ER-L: Effects Range Low. Long, E.R., D.D. MacDonald, S. L. Smith, and F.D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
9. ER-M: Effects Range-Median. Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
--: results not reported or not applicable
ft: feet
J: Estimated value
mg/kg: milligrams per kilogram
pct: percent
SE: sediment matrix
SO: soil matrix
U: Compound analyzed, but not detected above detection limit

Table B2
Soil and Sediment Sample Analytical Results for Organics (2013 and 2015)

										Task	IndiaBasin-2015WURS	IndiaBasin-2015WURS
										Location Name	IA-01	IA-02
										Sample Name	IA-01	IA-02A
										Sample Date	8/15/2013	8/15/2013
										Depth	0 - 0.5 ft	0 - 0.5 ft
										Matrix	SO	SO
	Human Health Comparative Values						Ecological Habitat Comparative Values (Sediment Only)					
	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]	DTSC BaP Ambient Conditions for Northern California [3]	TTLC [4]	SF Bay Ambient 90% UTL [5]	SF Bay Ambient Average [6]	Effects Range - Low (ER-L) [7]	Effects Range-Median (ER-M) [8]		
Conventional Parameters (pct)												
Moisture, percent	--	--	--	--	--	--	--	--	--	--	**2**	**10**
Polycyclic Aromatic Hydrocarbons (µg/kg)												
2-Methylnaphthalene	240,000	3,000,000	670,000	240,000	--	--	--	--	70	670	**--**	**--**
Acenaphthene	3,600,000	45,000,000	10,000,000	3,600,000	--	--	--	--	16	500	**--**	**--**
Acenaphthylene	--	--	--	--	--	--	--	--	44	640	**--**	**--**
Anthracene	18,000,000	230,000,000	50,000,000	18,000,000	--	--	--	--	85.3	1,100	**--**	**--**
Benzo(a)anthracene	1,100	20,000	110,000	160	--	--	--	--	261	1,600	**--**	**--**
Benzo(a)pyrene	110	2,100	10,000	16	--	--	--	--	430	1,600	**--**	**--**
Benzo(b)fluoranthene	1,100	21,000	110,000	160	--	--	--	--	--	--	**--**	**--**
Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	--	**--**	**--**
Benzo(k)fluoranthene	11,000	210,000	910,000	1,600	--	--	--	--	--	--	**--**	**--**
Chrysene	110,000	2,100,000	9,100,000	16,000	--	--	--	--	384	2,800	**--**	**--**
Dibenzo(a,h)anthracene	110	2,100	11,000	16	--	--	--	--	63.4	260	**--**	**--**
Fluoranthene	2,400,000	30,000,000	6,700,000	2,400,000	--	--	--	--	600	5,100	**--**	**--**
Fluorene	2,400,000	30,000,000	6,700,000	2,400,000	--	--	--	--	19	540	**--**	**--**
Indeno(1,2,3-c,d)pyrene	1,100	21,000	110,000	160	--	--	--	--	--	--	**--**	**--**
Naphthalene	3,800	17,000	400,000	3,800	--	--	--	--	160	2,100	**--**	**--**
Phenanthrene	--	--	--	--	--	--	--	--	240	1,500	**--**	**--**
Pyrene	1,800,000	23,000,000	5,000,000	1,799,999	--	--	--	--	665	2,600	**--**	**--**
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	--	--	--	--	900	--	--	--	--	--	**--**	**--**
Total PAH (U = 0)	--	--	--	--	--	--	--	--	4,022	44,792	**--**	**--**
PCB Aroclors (µg/kg)												
Aroclor 1016	--	--	--	4,100	--	--	--	--	--	--	**--**	**--**
Aroclor 1221	--	--	--	200	--	--	--	--	--	--	**--**	**--**
Aroclor 1232	--	--	--	170	--	--	--	--	--	--	**--**	**--**
Aroclor 1242	--	--	--	230	--	--	--	--	--	--	**--**	**--**
Aroclor 1248	--	--	--	230	--	--	--	--	--	--	**--**	**--**
Aroclor 1254	--	--	--	240	--	--	--	--	--	--	**--**	**--**
Aroclor 1260	--	--	--	240	--	--	--	--	--	--	--	**--**
Total PCB Aroclors (U = 0)[9]	230	940	5,500	--	--	50,000	18	9	22.7	180	**--**	**--**
Total PCB Aroclors (reported, not calculated)[10]	230	940	5,500	--	--	50,000	18	9	22.7	180	**--**	**--**
Total Petroleum Hydrocarbons (mg/kg)												
Diesel range organics (C10 - C24)	260	1,200	1,100	520	--	--	--	--	--	--	**130**	**5.9**
Diesel range organics (C10 - C28)	260	1,200	1,100	520	--	--	--	--	--	--	**--**	**--**
Motor oil range hydrocarbons (C24-C36)	12,000	180,000	54,000	230,000	--	--	--	--	--	--	**410**	**17**

Table B2
Soil and Sediment Sample Analytical Results for Organics (2013 and 2015)

	IndiaBasin-2015WURS IA-02 IA-02B 8/15/2013 3 - 4 ft SO	IndiaBasin-2015WURS IA-03 IA-03 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-04 IA-04 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-05 IA-05 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-06 IA-06 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-06 IA-34 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-07 IA-07 8/15/2013 0 - 0.5 ft SO
Conventional Parameters (pct)							
Moisture, percent	**10**	**8**	**5**	**2**	**6**	**3**	**7**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	--	--	--	--	--	--	--
Total PAH (U = 0)	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)							
Aroclor 1016	--	13 U	--	--	13 U	--	13 U
Aroclor 1221	--	26 U	--	--	26 U	--	25 U
Aroclor 1232	--	13 U	--	--	13 U	--	13 U
Aroclor 1242	--	13 U	--	--	13 U	--	13 U
Aroclor 1248	--	13 U	--	--	13 U	--	13 U
Aroclor 1254	--	**140**	--	--	13 U	--	**22**
Aroclor 1260	--	**130**	--	--	13 U	--	13 U
Total PCB Aroclors (U = 0)[9]	--	**270**	--	--	26 U	--	**22**
Total PCB Aroclors (reported, not calculated)[10]	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel range organics (C10 - C24)	5.5 U	**100**	**96**	**240**	**20**	**110**	**41**
Diesel range organics (C10 - C28)	--	--	--	--	--	--	--
Motor oil range hydrocarbons (C24-C36)	**1.3**	**380**	**230**	**720**	**58**	**450**	**160**

Table B2
Soil and Sediment Sample Analytical Results for Organics (2013 and 2015)

	IndiaBasin-2015WURS IA-08 IA-08A 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-08 IA-08B 8/15/2013 3 - 4 ft SO	IndiaBasin-2015WURS IA-09 IA-09 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-10 IA-10A 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-10 IA-10B 8/15/2013 3 - 4 ft SO	IndiaBasin-2015WURS IA-10 IA-37 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-11 IA-11A 8/15/2013 0 - 0.5 ft SO
Conventional Parameters (pct)							
Moisture, percent	**5**	**13**	**3**	**8**	**14**	**4**	**11**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	--	--	--	--	--	--	--
Total PAH (U = 0)	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)							
Aroclor 1016	44 U	14 U	--	13 U	14 U	--	13 U
Aroclor 1221	87 U	27 U	--	26 U	28 U	--	27 U
Aroclor 1232	44 U	14 U	--	13 U	14 U	--	13 U
Aroclor 1242	44 U	14 U	--	13 U	14 U	--	13 U
Aroclor 1248	44 U	14 U	--	13 U	14 U	--	13 U
Aroclor 1254	44 U	14 U	--	13 U	14 U	--	13 U
Aroclor 1260	44 U	14 U	--	**76**	14 U	--	13 U
Total PCB Aroclors (U = 0)[9]	87 U	27 U	--	**76**	28 U	--	27 U
Total PCB Aroclors (reported, not calculated)[10]	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel range organics (C10 - C24)	**22**	**1.7**	**67**	**180**	**1.2**	**110**	**25**
Diesel range organics (C10 - C28)	--	--	--	--	--	--	--
Motor oil range hydrocarbons (C24-C36)	**190**	**8.7**	**350**	**330**	5.8 U	**180**	**99**

Table B2
Soil and Sediment Sample Analytical Results for Organics (2013 and 2015)

	IndiaBasin-2015WURS IA-11 IA-11B 8/15/2013 3 - 4 ft SO	IndiaBasin-2015WURS IA-12 IA-12 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-13D IA-13D 8/16/2013 0 - 0.5 ft SE	IndiaBasin-2015WURS IA-14 IA-14A 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-14 IA-14B 8/15/2013 3 - 4 ft SO	IndiaBasin-2015WURS IA-15 IA-15 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-16 IA-16 8/15/2013 0 - 0.5 ft SO
Conventional Parameters (pct)							
Moisture, percent	**18**	**1**	**49**	**9**	**15**	**8**	0 U
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	--	--	--	--	--	--	--
Total PAH (U = 0)	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)							
Aroclor 1016	15 U	170 U	160 U	13 U	14 U	13 U	12 U
Aroclor 1221	29 U	*340 U*	*320 U*	26 U	28 U	26 U	24 U
Aroclor 1232	15 U	170 U	160 U	13 U	14 U	13 U	12 U
Aroclor 1242	15 U	170 U	160 U	13 U	14 U	13 U	12 U
Aroclor 1248	15 U	170 U	160 U	13 U	14 U	13 U	12 U
Aroclor 1254	15 U	**250**	160 U	**70**	14 U	13 U	12 U
Aroclor 1260	15 U	170 U	**2700**	**97**	14 U	**26**	12 U
Total PCB Aroclors (U = 0)[9]	29 U	**250**	**2700**	**167**	28 U	**26**	24 U
Total PCB Aroclors (reported, not calculated)[10]	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel range organics (C10 - C24)	**5.9**	**2900**	**470**	**410**	**570**	**1000**	**14**
Diesel range organics (C10 - C28)	--	--	--	--	--	--	--
Motor oil range hydrocarbons (C24-C36)	**8.8**	**15000**	**980**	**510**	**610**	**510**	**150**

Table B2
Soil and Sediment Sample Analytical Results for Organics (2013 and 2015)

	IndiaBasin-2015WURS IA-17 IA-17 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-18 IA-18 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-19D IA-19D 8/16/2013 0 - 0.5 ft SE	IndiaBasin-2015WURS IA-20 IA-20 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-21D IA-21D 8/16/2013 0 - 0.5 ft SE	IndiaBasin-2015WURS IA-22 IA-22 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-23D IA-23D 8/15/2013 0 - 0.5 ft SE
Conventional Parameters (pct)							
Moisture, percent	**7**	**10**	**63**	**1**	**67**	**1**	**--**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	--	--	--	--	--	--	--
Total PAH (U = 0)	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)							
Aroclor 1016	90 U	13 U	32 U	9.7 U	36 U	9.7 U	16 U
Aroclor 1221	180 U	27 U	65 U	19 U	73 U	19 U	32 U
Aroclor 1232	90 U	13 U	32 U	9.7 U	36 U	9.7 U	16 U
Aroclor 1242	90 U	13 U	32 U	9.7 U	36 U	9.7 U	16 U
Aroclor 1248	90 U	13 U	32 U	9.7 U	36 U	9.7 U	16 U
Aroclor 1254	**5200**	13 U	**300**	9.7 U	36 U	**120**	**79**
Aroclor 1260	**860**	13 U	**300**	**12**	**130**	**29**	**45**
Total PCB Aroclors (U = 0)[9]	**6060**	27 U	**600**	**12**	**130**	**149**	**124**
Total PCB Aroclors (reported, not calculated)[10]	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel range organics (C10 - C24)	**240**	**10**	**86**	**93**	**40**	**46**	**100**
Diesel range organics (C10 - C28)	--	--	--	--	--	--	--
Motor oil range hydrocarbons (C24-C36)	**390**	**70**	**250**	**650**	**110**	**260**	**640**

Table B2
Soil and Sediment Sample Analytical Results for Organics (2013 and 2015)

	IndiaBasin-2015WURS IA-23D IA-38D 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-24 IA-24A 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-24 IA-24B 8/15/2013 3 - 4 ft SO	IndiaBasin-2015WURS IA-25D IA-25D 8/15/2013 0 - 0.5 ft SE	IndiaBasin-2015WURS IA-26 IA-26 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-27 IA-27 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-28 IA-28 8/15/2013 0 - 0.5 ft SO
Conventional Parameters (pct)							
Moisture, percent	--	**5**	**10**	--	**16**	**1**	**1**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	--	--	--	--	--	--	--
Total PAH (U = 0)	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)							
Aroclor 1016	14 U	13 U	13 U	21 U	11 U	9.6 U	9.6 U
Aroclor 1221	28 U	25 U	26 U	42 U	23 U	19 U	19 U
Aroclor 1232	14 U	13 U	13 U	21 U	11 U	9.6 U	9.6 U
Aroclor 1242	14 U	13 U	13 U	21 U	11 U	9.6 U	9.6 U
Aroclor 1248	14 U	13 U	13 U	21 U	11 U	9.6 U	9.6 U
Aroclor 1254	14 U	13 U	13 U	21 U	11 U	**120**	9.6 U
Aroclor 1260	**40**	**18**	13 U	**140**	11 U	**39**	**36**
Total PCB Aroclors (U = 0)[9]	**40**	**18**	26 U	**140**	23 U	**159**	**36**
Total PCB Aroclors (reported, not calculated)[10]	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel range organics (C10 - C24)	--	**120**	**140**	**150**	**83**	**52**	**580**
Diesel range organics (C10 - C28)	--	--	--	--	--	--	--
Motor oil range hydrocarbons (C24-C36)	--	**310**	**320**	**300**	**570**	**440**	**1300**

Table B2
Soil and Sediment Sample Analytical Results for Organics (2013 and 2015)

	IndiaBasin-2015WURS IA-29 IA-29A 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-29 IA-29B 8/15/2013 3 - 4 ft SO	IndiaBasin-2015WURS IA-29 IA-39B 8/15/2013 3 - 4 ft SO	IndiaBasin-2015WURS IA-30 IA-30 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-31 IA-31 8/15/2013 0 - 0.5 ft SO	IndiaBasin-2015WURS IA-32D IA-32D 8/15/2013 0 - 0.5 ft SE	IndiaBasin-2015WURS IA-33 IA-33A 8/15/2013 0 - 0.5 ft SO
Conventional Parameters (pct)							
Moisture, percent	**6**	**8**	--	0 U	0 U	--	**5**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	--	--	--	--	--	--	--
Total PAH (U = 0)	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)							
Aroclor 1016	10 U	10 U	13 U	33 U	9.5 U	20 U	10 U
Aroclor 1221	20 U	21 U	27 U	66 U	19 U	41 U	20 U
Aroclor 1232	10 U	10 U	13 U	33 U	9.5 U	20 U	10 U
Aroclor 1242	10 U	10 U	13 U	33 U	9.5 U	20 U	10 U
Aroclor 1248	10 U	10 U	13 U	33 U	9.5 U	20 U	10 U
Aroclor 1254	10 U	10 U	13 U	**270**	**97**	20 U	10 U
Aroclor 1260	10 U	**24**	13 U	**730**	**38**	**220**	10 U
Total PCB Aroclors (U = 0)[9]	20 U	**24**	27 U	**1000**	**135**	**220**	20 U
Total PCB Aroclors (reported, not calculated)[10]	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel range organics (C10 - C24)	**320**	**120**	--	**69**	**28**	**140**	**260**
Diesel range organics (C10 - C28)	--	--	--	--	--	--	--
Motor oil range hydrocarbons (C24-C36)	**1700**	**800**	--	**380**	**240**	**320**	**1900**

Table B2
Soil and Sediment Sample Analytical Results for Organics (2013 and 2015)

	IndiaBasin-2015WURS IA-33 IA-33B 8/15/2013 3 - 4 ft SO	IndiaBasin-2015WURS SS-1 SS-1-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-1 SS-1-1' 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-10 FD-2 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-10 SS-10-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-10 SS-10-1' 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-2 SS-2-0.5' 6/1/2015 0 - 0.5 ft SE
Conventional Parameters (pct)							
Moisture, percent	**10**	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	*670 U*	*1300 U*	*130 U*	66 U	*130 U*	*670 U*
Acenaphthene	--	*670 U*	*1300 U*	*130 U*	*66 U*	*130 U*	*670 U*
Acenaphthylene	--	*670 U*	*1300 U*	*130 U*	*66 U*	*130 U*	*670 U*
Anthracene	--	*670 U*	*1300 U*	**130**	66 U	*130 U*	*670 U*
Benzo(a)anthracene	--	*3300 U*	*6600 U*	*650 U*	*330 U*	*650 U*	*3300 U*
Benzo(a)pyrene	--	*670 U*	*1300 U*	**210**	**72**	**160**	*670 U*
Benzo(b)fluoranthene	--	*670 U*	*1300 U*	**310**	**93**	**210**	*670 U*
Benzo(g,h,i)perylene	--	670 U	1300 U	130 U	66 U	130 U	670 U
Benzo(k)fluoranthene	--	670 U	1300 U	130 U	66 U	130 U	670 U
Chrysene	--	*670 U*	**27000**	**240**	**69**	**130**	*670 U*
Dibenzo(a,h)anthracene	--	*670 U*	*1300 U*	*130 U*	*66 U*	*130 U*	*670 U*
Fluoranthene	--	*670 U*	*1300 U*	**450**	**100**	**200**	*670 U*
Fluorene	--	*670 U*	*1300 U*	*130 U*	*66 U*	*130 U*	*670 U*
Indeno(1,2,3-c,d)pyrene	--	*670 U*	*1300 U*	**130**	66 U	130 U	*670 U*
Naphthalene	--	*670 U*	*1300 U*	130 U	66 U	130 U	*670 U*
Phenanthrene	--	*670 U*	**4400**	**430**	**66**	130 U	*670 U*
Pyrene	--	*670 U*	*1300 U*	**750**	**160**	**430**	*670 U*
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	--	670 U	**270**	**256.4**	**81.99**	**182.3**	670 U
Total PAH (U = 0)	--	3300 U	**31400**	**2650**	**560**	**1130**	3300 U
PCB Aroclors (µg/kg)							
Aroclor 1016	11 U	49 U	50 U	250 U	99 U	490 U	50 U
Aroclor 1221	21 U	49 U	50 U	*250 U*	99 U	*490 U*	50 U
Aroclor 1232	11 U	49 U	50 U	*250 U*	99 U	*490 U*	50 U
Aroclor 1242	11 U	49 U	50 U	*250 U*	99 U	*490 U*	50 U
Aroclor 1248	11 U	49 U	50 U	*250 UJ*	99 U	**1500 J**	50 U
Aroclor 1254	**430**	**74**	**180**	*250 U*	99 U	*490 U*	**54**
Aroclor 1260	**32**	49 U	50 U	**870 J**	**360 J**	*490 UJ*	50 U
Total PCB Aroclors (U = 0)[9]	**462**	**74**	**180**	**870 J**	**360 J**	**1500 J**	**54**
Total PCB Aroclors (reported, not calculated)[10]	--	**114**	**277**	--	**554**	**2308**	**83**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel range organics (C10 - C24)	**47**	**277**	**400**	--	**60**	**185**	**492**
Diesel range organics (C10 - C28)	--	--	--	**100**	--	--	--
Motor oil range hydrocarbons (C24-C36)	**400**	**646**	**938**	**190**	**120**	**354**	**985**

Table B2
Soil and Sediment Sample Analytical Results for Organics (2013 and 2015)

	IndiaBasin-2015WURS SS-2 SS-2-1' 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-3 SS-3-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-3 SS-3-1' 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-4 SS-4-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-4 SS-4-1' 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-5 SS-5-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-5 SS-5-1' 6/1/2015 0.5 - 1 ft SE
Conventional Parameters (pct)							
Moisture, percent	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	670 U	130 U	270 U	270 U	4800	330 U	330 U
Acenaphthene	670 U	170	270 U	270 U	1800	3300 U	330 U
Acenaphthylene	670 U	130 U	270 U	270 U	1300 U	3300 U	330 U
Anthracene	670 U	620	330	580	2300	460	340
Benzo(a)anthracene	3300 U	660 U	1300 U	270 U	6600 U	1600 U	1600 U
Benzo(a)pyrene	670 U	440	1100	1100	1300 U	870	1200
Benzo(b)fluoranthene	670 U	630	1800	1600	1300 U	1300	1800
Benzo(g,h,i)perylene	670 U	200	620	720	1300 U	450	650
Benzo(k)fluoranthene	670 U	230	730	560	1300 U	530	740
Chrysene	670 U	940	930	1500	1300 U	1100	1200
Dibenzo(a,h)anthracene	670 U	130 U	270 U	60 U	1300 U	330 U	330 U
Fluoranthene	670 U	2000	3600	2600	2600	760	670
Fluorene	670 U	200	270 U	270 U	2300	3300 U	330 U
Indeno(1,2,3-c,d)pyrene	670 U	220	620	610	1300 U	480	680
Naphthalene	670 U	130 U	270 U	270 U	1400	3300 U	330 U
Phenanthrene	670 U	1000	440	1500	7600	3300 U	450
Pyrene	730	2000	7600	3100	3700	1000	1700
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	670 U	557.4	1424.3	1392	1300 U	1112	1534
Total PAH (U = 0)	730	8650	17770	13870	26500	6950	9430
PCB Aroclors (µg/kg)							
Aroclor 1016	50 U	49 U	250 U	250 U	240 U	49 U	50 U
Aroclor 1221	50 U	49 U	250 U	250 U	240 U	49 U	50 U
Aroclor 1232	50 U	49 U	250 U	250 U	240 U	49 U	50 U
Aroclor 1242	50 U	49 U	250 U	250 U	240 U	49 U	50 U
Aroclor 1248	50 U	49 U	250 U	250 U	240 U	49 U	50 U
Aroclor 1254	180	980	980	920	1100	59	79
Aroclor 1260	50 U	49 U	250 U	250 U	240 U	49 U	50 U
Total PCB Aroclors (U = 0)[9]	180	49 U	980	920	1100	59	79
Total PCB Aroclors (reported, not calculated)[10]	277	49 U	1508	1415	1692	91	122
Total Petroleum Hydrocarbons (mg/kg)							
Diesel range organics (C10 - C24)	554	169	523	569	8462	60	185
Diesel range organics (C10 - C28)	--	--	--	--	--	--	--
Motor oil range hydrocarbons (C24-C36)	1231	215	877	954	4462	114	323

Table B2
Soil and Sediment Sample Analytical Results for Organics (2013 and 2015)

	IndiaBasin-2015WURS SS-6 SS-6-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-6 SS-6-1' 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-7 SS-7-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-7 SS-7-1' 6/1/2015 0.5 - 1 ft SE	IndiaBasin-2015WURS SS-8 FD-1 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-8 SS-8-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-8 SS-8-1' 6/1/2015 0.5 - 1 ft SE
Conventional Parameters (pct)							
Moisture, percent	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	270 U	270 U	1300 U	660 U	330 U	62 U	330 U
Acenaphthene	270 U	270 U	1300 U	660 U	330 U	38 U	330 U
Acenaphthylene	270 U	270 U	1300 U	660 U	330 U	56 U	330 U
Anthracene	270 U	270 U	1300 U	660 U	330 U	43 U	**700**
Benzo(a)anthracene	1300 U	1300 U	1300 U	660 U	1600 U	180 U	1600 U
Benzo(a)pyrene	270 U	**400**	1300 U	**780**	**830**	**1100**	**1700**
Benzo(b)fluoranthene	270 U	**630**	1300 U	**1000**	**1100**	**1400**	**3100**
Benzo(g,h,i)perylene	270 U	**270**	1300 U	660 U	**490**	200 U	**810**
Benzo(k)fluoranthene	270 U	270 U	1300 U	660 U	**470**	**700**	**3000**
Chrysene	270 U	**470**	1300 U	660 U	**800**	**900**	**880**
Dibenzo(a,h)anthracene	270 U	270 U	1300 U	660 U	330 U	150 U	330 U
Fluoranthene	270 U	**320**	1300 U	**860**	**990**	**1400**	**1400**
Fluorene	270 U	270 U	1300 U	660 U	330 U	40 U	330 U
Indeno(1,2,3-c,d)pyrene	270 U	270 U	1300 U	660 U	**490**	130 U	**770**
Naphthalene	270 U	270 U	1300 U	660 U	330 U	48 U	330 U
Phenanthrene	270 U	270 U	1300 U	660 U	**580**	**960**	**1100**
Pyrene	**280**	**990**	1300 U	**1500**	**1200**	**1900**	**3500**
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	270 U	**467.7**	1300 U	**880**	**1044**	**1319**	**2395.8**
Total PAH (U = 0)	**280**	**3080**	1300 U	**4140**	**6950**	**8360**	**16960**
PCB Aroclors (µg/kg)							
Aroclor 1016	49 U	49 U	97 U	480 U	2500 U	250 U	500 U
Aroclor 1221	49 U	49 U	97 U	480 U	2500 U	250 U	500 U
Aroclor 1232	49 U	49 U	97 U	480 U	2500 U	250 U	500 U
Aroclor 1242	49 U	49 U	97 U	**1900**	2500 U	250 U	500 U
Aroclor 1248	**50**	49 U	**410**	480 U	2500 U	250 U	**1600**
Aroclor 1254	49 U	**210**	97 U	480 U	2500 U	250 U	500 U
Aroclor 1260	49 U	49 U	97 U	480 U	**7800 J**	**710 J**	52 U
Total PCB Aroclors (U = 0)[9]	**50**	**210**	**410**	**1900**	**7800 J**	**710 J**	**1600**
Total PCB Aroclors (reported, not calculated)[10]	**77**	**323**	**631**	**2923**	**12000**	**1092**	**2462**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel range organics (C10 - C24)	**91**	**231**	**369**	**338**	**323**	--	**462**
Diesel range organics (C10 - C28)	--	--	--	--	--	**260**	--
Motor oil range hydrocarbons (C24-C36)	**154**	**246**	**862**	**708**	**390**	**480**	**969**

Table B2
Soil and Sediment Sample Analytical Results for Organics (2013 and 2015)

	IndiaBasin-2015WURS SS-9 SS-9-0.5' 6/1/2015 0 - 0.5 ft SE	IndiaBasin-2015WURS SS-9 SS-9-1' 6/1/2015 0.5 - 1 ft SE
Conventional Parameters (pct)		
Moisture, percent	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)		
2-Methylnaphthalene	*670 U*	*660 U*
Acenaphthene	*670 U*	*660 U*
Acenaphthylene	*670 U*	*660 U*
Anthracene	*670 U*	*660 U*
Benzo(a)anthracene	*3300 U*	*3300 U*
Benzo(a)pyrene	*670 U*	**800**
Benzo(b)fluoranthene	**880**	**1100**
Benzo(g,h,i)perylene	670 U	660 U
Benzo(k)fluoranthene	670 U	660 U
Chrysene	**750**	**1100**
Dibenzo(a,h)anthracene	*670 U*	*660 U*
Fluoranthene	**1400**	**3000**
Fluorene	*670 U*	*660 U*
Indeno(1,2,3-c,d)pyrene	*670 U*	*660 U*
Naphthalene	*670 U*	*660 U*
Phenanthrene	**720**	**1100**
Pyrene	**1300**	**3200**
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	**95.5**	**921**
Total PAH (U = 0)	**5050**	**10300**
PCB Aroclors (µg/kg)		
Aroclor 1016	490 U	2500 U
Aroclor 1221	*490 U*	*2500 U*
Aroclor 1232	*490 U*	*2500 U*
Aroclor 1242	*490 U*	*2500 U*
Aroclor 1248	**2500**	**8900**
Aroclor 1254	*490 U*	*2500 U*
Aroclor 1260	*490 U*	*2500 U*
Total PCB Aroclors (U = 0)[9]	**2500**	**8900**
Total PCB Aroclors (reported, not calculated)[10]	**3846**	**13692**
Total Petroleum Hydrocarbons (mg/kg)		
Diesel range organics (C10 - C24)	**923**	**1200**
Diesel range organics (C10 - C28)	--	--
Motor oil range hydrocarbons (C24-C36)	**1692**	**2769**

Table B2
Soil and Sediment Sample Analytical Results for Organics (2013 and 2015)

Notes:
Detected concentration is greater than one or more listed Human Health Comparative Values
Detected concentration is greater than one or more Ecological Habitat Comparative Values
Italics: non-detected concentration is above one or more identified screening levels
Bold: Detected result
Results reported in dry weight basis.
Unless otherwise noted, totals are calculated by Anchor QEA as the sum of all detected results (U=0). If all results are not detected, the highest method detection limit value is reported as the sum.
Total PCB Aroclors (reported, not calculated) is the total value of SS samples reported in the Table 8B of the Site Characterization Report (Northgate 2017a).
Total PCB Aroclors (U = 0) is the total of all PCB Aroclors listed in this table.
Total PAHs is the total of all PAHs listed in this table.
Total PAH and PCB results for IA samples that were calculated by Northgate were not captured in the Anchor QEA database and are not shown on this table.
Total Benzo(a)pyrene (BaP) equivalent value calculation includes benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-c,d)pyrene per *Use of the Northern and Southern California PAH Studies in the MGP Site Cleanup Process* by the California Department of Toxic Substances Control (July 2009).
Diesel range organics (C10 - C24) results for samples FD-2 and SS-8-0.5' (parent sample of FD-1) are not available in Table 8B of the Northgate Site Characterization Report. Diesel range organics (C10 - C28) results were taken from Appendix G Table 2.
Source: Northgate 2017a
1. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. January 2019.
2. United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
3. California Department of Toxic Substances Control (DTSC), Use of the Northern and Southern California PAH Studies in the MGP Site Cleanup Process, July 2009
4. TTLC: Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.
5. A 90% Upper Threshold Limit (UTL) calculated in ProUCL v5.0 using the 2003-2012 data provided in the Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
6. Ambient for San Francisco Bay sediments, 2007-2012, Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
7. ER-L: Effects Range Low. Long, E.R., D.D. MacDonald, S. L. Smith, and F.D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
8. ER-M: Effects Range-Median. Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
9. Total PCB Aroclors (U = 0) is the total of all PCB Aroclors listed in this table calculated by Anchor QEA.
10. Total PCB Aroclors (reported, not calculated) is the total value of SS samples reported in the Table 8B of the Site Characterization Report (Northgate 2017a; based on results from data gaps report [AECOM 2016]). Results were dry weight corrected by AECOM based on an assumed 35% moisture.
--: results not reported or not applicable
µg/kg: micrograms per kilogram
ft: feet
J: Estimated value
mg/kg: milligrams per kilogram
PAH: polycyclic aromatic hydrocarbons
PCB: polychlorinated biphenyls
pct: percent
SE: sediment matrix
SO: soil matrix
U: Compound analyzed, but not detected above detection limit

Table B3
Soil and Sediment Sample Analytical Results for Metals, Dry Weight (2017)

												Task	**IndiaBasin-2017RAP**	**IndiaBasin-2017RAP**
												Location Name	**INN-SB-1**	**INN-SB-1**
												Sample Name	**INN-SB-1-4.5**	**INN-SB-1-6.5**
												Sample Date	**12/14/2016**	**12/14/2016**
												Depth	**4 - 5 ft**	**6 - 7 ft**
												Matrix	**SO**	**SO**
		Human Health Comparative Values							**Ecological Habitat Comparative Values (Sediment Only)**					
	Method	**SFBay 2019 ESL Residential [1]**	**SFBay 2019 ESL Industrial [1]**	**SFBay 2019 ESL Construction [1]**	**USEPA 2016 Residential RSLs [2]**	**LBNL Background Values [3]**	**Local Hunters Point Site Background [4]**	**TTLC [5]**	**SF Bay Ambient 90% UTL [6]**	**SF Bay Ambient Average [7]**	**Effects Range - Low (ER-L) [8]**	**Effects Range-Median (ER-M) [9]**		
Conventional Parameters (pct)														
Moisture, percent	D2216	--	--	--	--	--	--	--	--	--	--	--	**16**	**18**
Metals (mg/kg)														
Antimony	SW6010B	11	160	50	31	6	--	500	--	--	--	--	0.17 U	0.19 U
Arsenic	SW6010B	0.067	0.31	0.98	0.68	24	--	500	13.9	8.74	8.2	70	*0.083 U*	*0.09 U*
Barium	SW6010B	15000	220000	3000	15000	410	--	10000	103	66.8	--	--	**120**	**93**
Beryllium	SW6010B	16	230	27	160	1.0	--	75	--	--	--	--	**0.33**	**0.28**
Cadmium	SW6010B	78	1100	51	71.0	5.6	--	100	0.33	0.21	1.2	9.6	**1.2**	**1.1**
Chromium	SW6010B	--	--	--	120000	120	464.24	2500	141	98	81	370	**110**	**100**
Cobalt	SW6010B	23	350	28	23	25	84	8000	20.1	14.7	--	--	**41**	**29**
Copper	SW6010B	3100	47000	14000	3100	63	--	2500	53.9	39	34	270	**8.5**	**10**
Lead	SW6010B	80	320	160	400	43	--	1000	25.1	19.5	46.7	218	**4.8**	**4.1**
Mercury	SW7471A	13	190	44	11.0	0.42	--	20	0.33	0.33	0.15	0.71	**0.06**	**0.06**
Molybdenum	SW6010B	390	5800	1800	390	4.8	--	3500	0.75	0.50	--	--	**0.28 J**	**0.27 J**
Nickel	SW6010B	820	11000	86	820	272	1581.81	2000	98.3	78.5	20.9	51.6	**700**	**700**
Selenium	SW6010B	390	5800	1700	390	4.9	--	100	0.36	0.23	--	--	0.18 U	0.2 U
Silver	SW6010B	390	5800	1800	390	2.9	--	500	0.32	0.19	1	3.7	0.046 U	0.05 U
Thallium	SW6010B	0.78	12	3.5	0.78	10	--	700	--	--	--	--	0.16 U	0.17 U
Vanadium	SW6010B	390	5800	470	390	90	--	2400	--	--	--	--	**58**	**54**
Zinc	SW6010B	23000	350000	110000	23000	140	--	5000	136	103.8	150	410	**52**	**47**

Table B3
Soil and Sediment Sample Analytical Results for Metals, Dry Weight (2017)

	IndiaBasin-2017RAP INN-SB-2 INN-SB-2-4.5 12/9/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-2 INN-SB-2-6.5 12/9/2016 6 - 7 ft SO	IndiaBasin-2017RAP INN-SB-3 INN-SB-3-0.5 12/30/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-3 INN-SB-3-4.5 12/30/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-3 INN-SB-3-6.5 12/30/2016 6 - 7 ft SO	IndiaBasin-2017RAP INN-SB-4 INN-SB-4-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-4 INN-SB-4-4.5 12/16/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-4 INN-SB-4-6.5 12/16/2016 6 - 7 ft SO	IndiaBasin-2017RAP INN-SB-5 INN-SB-5-0.5 12/9/2016 0 - 0.5 ft SO
Conventional Parameters (pct)									
Moisture, percent	**9**	**8**	**20**	**16**	**17**	**10**	**21**	**19**	**11**
Metals (mg/kg)									
Antimony	0.17 U	0.16 U	**1 J**	**0.92 J**	**0.64 J**	0.16 U	0.18 U	0.19 U	0.18 U
Arsenic	**5.5**	**45**	**6**	**1**	**2.1**	**2**	*0.087 U*	**0.19 J**	**1.9**
Barium	**130**	**170**	**130**	**75**	**83**	**84**	**83**	**69**	**74**
Beryllium	**0.35 J**	**0.25 J**	**0.33**	**0.17**	**0.16**	**0.12**	**0.21**	**0.19**	**0.12 J**
Cadmium	**1.7**	**4.9**	**1.2**	**1.1**	**1.1**	**0.95**	**1.3**	**1.1**	**0.66**
Chromium	**82**	**54**	**130**	**100**	**100**	**32**	**180**	**120**	**80**
Cobalt	**16**	**27**	**73**	**33**	**41**	**12**	**60**	**30**	**18**
Copper	**38**	**500**	**14**	**8.4**	**9.4**	**95**	**9.3**	**15**	**17**
Lead	**82**	**230**	**16**	**3.5**	**3.4**	**64**	**4.7**	**11**	**9.1**
Mercury	**0.07**	**0.25**	**0.052**	**0.016 J**	**0.028**	**0.44**	**0.05**	**0.05**	0.02 U
Molybdenum	**0.63**	**3.9**	**0.28 J**	**0.22 J**	**0.33**	**1.4**	**0.14 J**	**0.29 J**	**0.56**
Nickel	**99**	**63**	**780**	**660**	**740**	**67**	**1100**	**570**	**250**
Selenium	0.18 U	0.17 U	**0.14 J**	0.077 U	**0.18 J**	0.18 U	0.19 U	0.21 U	0.19 U
Silver	0.046 U	0.042 U	**0.046 J**	0.031 U	0.037 U	0.044 U	0.048 U	0.051 U	0.048 U
Thallium	0.16 U	0.15 U	0.064 U	0.055 U	**0.13 J**	0.15 U	**0.23 J**	**0.31 J**	**0.4 J**
Vanadium	**48**	**46**	**41**	**49**	**55**	**50**	**39**	**43**	**35**
Zinc	**510**	**1500**	**45**	**39**	**43**	**120**	**45**	**52**	**39**

Table B3
Soil and Sediment Sample Analytical Results for Metals, Dry Weight (2017)

	IndiaBasin-2017RAP INN-SB-5 INN-SB-5-4.5 12/9/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-5 INN-SB-5-6.5 12/9/2016 6 - 7 ft SO	IndiaBasin-2017RAP INN-SB-6 INN-SB-6-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-6 INN-SB-6-4.5 12/16/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-7 INN-SB-7-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-7 INN-SB-7-4.5 12/16/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-8 INN-SB-8-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-8 INN-SB-8-4.5 12/16/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-9 INN-SB-9-3.5 12/14/2016 3 - 4 ft SO
Conventional Parameters (pct)									
Moisture, percent	**11**	**9**	**23**	**22**	**16**	**17**	**14**	**15**	**17**
Metals (mg/kg)									
Antimony	0.19 U	0.15 U	0.21 U	0.2 U	0.18 U	0.17 U	0.18 U	0.17 U	0.17 U
Arsenic	**1.8**	**7.2**	**0.7**	**2.7**	**1.8**	**1.5**	*0.089 U*	**2.3**	**1.9**
Barium	**290**	**90**	**71**	**870**	**110**	**93**	**77**	**86**	**95**
Beryllium	**0.21 J**	**0.11 J**	**0.24**	**0.2**	**0.2**	**0.2**	**0.18**	**0.15**	**0.38**
Cadmium	**0.85**	**1**	**1.6**	**1.6**	**1.2**	**1.1**	**1**	**1.1**	**1.1**
Chromium	**56**	**55**	**200**	**280**	**120**	**110**	**120**	**99**	**120**
Cobalt	**11**	**9.7**	**66**	**110**	**38**	**29**	**31**	**37**	**36**
Copper	**16**	**23**	**7.8**	**43**	**7.9**	**8.5**	**5.5**	**9.5**	**7.9**
Lead	**330**	**68**	**7.2**	**51**	**3.4**	**3.9**	**3.3**	**3.7**	**7.8**
Mercury	**0.03**	**0.1**	**0.04**	**0.19**	**0.03**	**0.03**	**0.03**	**0.03**	**0.1**
Molybdenum	**0.64**	**1.1**	**0.18 J**	**0.64**	**0.29 J**	**0.21 J**	**0.22 J**	**0.27 J**	**0.15 J**
Nickel	**26**	**100**	**1300**	**1600**	**760**	**640**	**560**	**660**	**540**
Selenium	0.2 U	0.16 U	0.23 U	0.21 U	0.19 U	0.18 U	0.2 U	0.19 U	0.18 U
Silver	0.05 U	0.041 U	0.056 U	0.052 U	0.047 U	0.044 U	0.049 U	0.046 U	0.044 U
Thallium	0.18 U	0.14 U	**0.67 J**	0.18 U	0.17 U	0.16 U	0.17 U	0.16 U	0.16 U
Vanadium	**50**	**35**	**50**	**51**	**60**	**55**	**51**	**55**	**49**
Zinc	**200**	**110**	**51**	**70**	**50**	**51**	**41**	**44**	**36**

Table B3
Soil and Sediment Sample Analytical Results for Metals, Dry Weight (2017)

	IndiaBasin-2017RAP INN-SB-9 INN-SB-9-4.5 12/14/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-10 INN-SB-10-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-10 INN-SB-10-4.5 12/14/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-11 INN-SB-11-4.0 12/14/2016 3 - 5 ft SO	IndiaBasin-2017RAP INN-SB-12 INN-SB-12-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-12 INN-SB-12-4.5 12/14/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-13 INN-SB-13-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-13 INN-SB-13-4.5 12/14/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-14 INN-SB-14-3.5 12/16/2016 3 - 4 ft SO
Conventional Parameters (pct)									
Moisture, percent	**18**	**18**	**18**	**19**	**12**	**13**	**5**	**11**	**16**
Metals (mg/kg)									
Antimony	0.2 U	0.2 U	0.17 U	0.19 U	0.15 U	0.17 U	0.14 U	0.16 U	0.19 U
Arsenic	*0.096 U*	*0.097 U*	*0.084 U*	**25**	*0.075 U*	**2.4**	*0.07 U*	*0.076 U*	**16**
Barium	**91**	**140**	**110**	**240**	**19**	**11**	**33**	**16**	**150**
Beryllium	**0.27**	**0.43**	**0.29**	**0.14**	0.013 U	0.014 U	0.012 U	0.013 U	0.016 U
Cadmium	**1.2**	**1.2**	**1.1**	**2.7**	**1.6**	**1.5**	**0.4**	**0.4**	**1.5**
Chromium	**120**	**130**	**110**	**220**	**430**	**650**	**37**	**46**	**190**
Cobalt	**31**	**67**	**40**	**47**	**92**	**98**	**6**	**6.6**	**15**
Copper	**11**	**7**	**9**	**1500**	**4.6**	0.096 U	**5.8**	**0.88**	**600**
Lead	**3.9**	**5.2**	**4.4**	**1100**	**0.68**	**1**	**65**	**7.4**	**590**
Mercury	**0.03**	**0.05**	**0.06**	**14.9**	**0.03**	0.04 U	**0.09**	**0.05**	**3.24**
Molybdenum	**0.27 J**	**0.18 J**	**0.21 J**	**25**	**0.1 J**	0.056 U	**0.2 J**	**0.14 J**	**0.68**
Nickel	**800**	**640**	**720**	**750**	**2000**	**2200**	**25**	**27**	**360**
Selenium	0.21 U	0.21 U	0.18 U	0.21 U	0.17 U	0.18 U	0.15 U	0.17 U	**2.4 J**
Silver	0.053 U	0.053 U	0.046 U	**0.24 J**	0.041 U	**1.7**	0.039 U	0.041 U	**0.24 J**
Thallium	0.19 U	0.19 U	0.16 U	0.18 U	0.15 U	0.16 U	0.14 U	0.15 U	**0.19 J**
Vanadium	**56**	**62**	**58**	**43**	**56**	**22**	**36**	**44**	**22**
Zinc	**47**	**46**	**46**	**860**	**32**	**27**	**59**	**47**	**790**

Table B3
Soil and Sediment Sample Analytical Results for Metals, Dry Weight (2017)

	IndiaBasin-2017RAP INN-SB-14 INN-SB-14-4.5 12/16/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-15 INN-SB-15-4.0 12/9/2016 3 - 5 ft SO	IndiaBasin-2017RAP INN-SB-16 INN-SB-16-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-16 INN-SB-16-4.5 12/9/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-17 INN-SB-17-4.0 12/9/2016 3 - 5 ft SO	IndiaBasin-2017RAP INN-SB-18 INN-SB-18-3.5 12/21/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-18 INN-SB-18-4.5 12/21/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-19 INN-SB-19-0.5 12/14/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-19 INN-SB-19-3.5 12/14/2016 3 - 4 ft SO
Conventional Parameters (pct)									
Moisture, percent	13	11	12	11	12	34	33	18	18
Metals (mg/kg)									
Antimony	0.16 U	0.16 U	0.16 U	0.16 U	0.18 U	0.4 J	0.84 J	0.17 U	0.18 U
Arsenic	57	9.3	11	4.1	7.8	12	12	3.2	2.7
Barium	720	290	180	210	150	82	120	250	79
Beryllium	0.1 J	0.85 J	0.23 J	0.49 J	0.18 J	0.42	0.37 J	0.34	0.36
Cadmium	8.3	2.1	1.8	0.89	2.6	1.2	0.44	1.3	1.1
Chromium	210	42	81	42	130	94	160	100	120
Cobalt	53	21	13	17	22	15	25	69	31
Copper	1400	46	110	54	94	140	500	100	8.4
Lead	2200	1100	440	58	270	120	180	720	3.7
Mercury	1.18	0.14	0.39	0.1	0.4	0.84	0.83	6.37	0.06
Molybdenum	3.7	2	0.6	0.62	1.4	0.71	15	0.17 J	0.21 J
Nickel	650	110	100	35	300	150	250	530	710
Selenium	0.17 U	0.17 U	0.17 U	0.17 U	0.19 U	0.35 J	0.34 J	0.18 U	0.19 U
Silver	0.079 J	0.043 U	0.044 U	0.043 U	0.047 U	0.5	0.53	0.045 U	0.047 U
Thallium	0.26 J	0.15 U	0.16 J	0.15 U	0.16 U	0.18 J	0.14 J	0.16 U	0.16 U
Vanadium	41	54	42	47	42	52	52	40	46
Zinc	3200	340	660	90	320	190	220	280	35

Table B3
Soil and Sediment Sample Analytical Results for Metals, Dry Weight (2017)

	IndiaBasin-2017RAP INN-SB-20 INN-SB-20-0.5 12/30/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-20 INN-SB-20-3.5 12/30/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-21 INN-SB-21-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-21 INN-SB-21-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-22 INN-SB-22-1.0 12/16/2016 0 - 1 ft SO	IndiaBasin-2017RAP INN-SB-22 INN-SB-22-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-22 INN-SB-22-5.0 12/16/2016 4 - 6 ft SO	IndiaBasin-2017RAP INN-SB-23 INN-SB-23-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-23 INN-SB-23-3.5 12/16/2016 3 - 4 ft SO
Conventional Parameters (pct)									
Moisture, percent	**21**	**16**	**21**	**17**	**12**	**18**	**19**	**10**	**26**
Metals (mg/kg)									
Antimony	**2 J**	**0.9 J**	0.19 U	0.2 U	0.18 U	0.18 U	0.18 U	0.15 U	0.19 U
Arsenic	**3.7**	**2.1**	**0.1 J**	**1.4**	**4.3**	**5.3**	**4.6**	**2.5**	**5.7**
Barium	**150**	**110**	**140**	**92**	**170**	**420**	**140**	**34**	**130**
Beryllium	**0.23**	**0.25**	**0.3**	**0.18**	**0.19**	**0.16**	**0.19 J**	0.013 U	0.016 U
Cadmium	**1.8**	**1.2**	**1.3**	**1.2**	**0.94**	**3**	**1.9**	**0.45**	**2.2**
Chromium	**150**	**120**	**160**	**120**	**57**	**230**	**190**	**36**	**180**
Cobalt	**51**	**46**	**46**	**36**	**13**	**39**	**53**	**5.6**	**35**
Copper	**87**	**7.6**	**20**	**7.8**	**74**	**340**	**330**	**62**	**220**
Lead	**210**	**4**	**79**	**3.7**	**110**	**1600**	**220**	**48**	**270**
Mercury	**0.49**	**0.031**	**0.24**	**0.03**	**2.39**	**1.45**	**2.5**	**14.1**	**2.38**
Molybdenum	**0.63**	**0.16 J**	**0.39**	**0.23 J**	**1.3**	**6.1**	**4.7**	**0.2 J**	**0.83**
Nickel	**640**	**760**	**810**	**740**	**100**	**810**	**730**	**24**	**780**
Selenium	0.21 U	0.084 U	0.21 U	0.21 U	0.2 U	0.2 U	0.19 U	0.16 U	0.21 U
Silver	0.053 U	**0.049 J**	0.051 U	0.053 U	0.049 U	0.049 U	0.047 U	0.041 U	0.051 U
Thallium	**0.13 J**	**0.085 J**	0.18 U	0.19 U	**0.18 J**	0.17 U	**0.44 J**	0.14 U	0.18 U
Vanadium	**52**	**56**	**41**	**56**	**42**	**51**	**57**	**32**	**51**
Zinc	**220**	**47**	**79**	**49**	**180**	**700**	**270**	**57**	**160**

Table B3
Soil and Sediment Sample Analytical Results for Metals, Dry Weight (2017)

	IndiaBasin-2017RAP INN-SB-23 INN-SB-23-5.0 12/16/2016 4 - 6 ft SO	IndiaBasin-2017RAP INN-SB-23 INN-SB-23-9.0 12/16/2016 8 - 10 ft SO	IndiaBasin-2017RAP INN-SB-24 INN-SB-24-1.0 12/16/2016 0 - 1 ft SO	IndiaBasin-2017RAP INN-SB-24 INN-SB-24-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-24 INN-SB-24-5.0 12/16/2016 4 - 6 ft SO	IndiaBasin-2017RAP INN-SB-25 INN-SB-25-1.0 12/16/2016 0 - 1 ft SO	IndiaBasin-2017RAP INN-SB-25 INN-SB-25-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-25 INN-SB-25-7.0 12/16/2016 6 - 8 ft SO	IndiaBasin-2017RAP INN-SB-26 INN-SB-26-0.5 12/16/2016 0 - 0.5 ft SO
Conventional Parameters (pct)									
Moisture, percent	**19**	**17**	**17**	**14**	**16**	**20**	**23**	**18**	**12**
Metals (mg/kg)									
Antimony	--	0.2 U	0.18 U	0.18 U	0.18 U	**35**	0.18 U	0.18 U	0.16 U
Arsenic	--	*0.095 U*	**57**	**6.6**	*0.088 U*	**31**	**0.82**	*0.089 U*	**290**
Barium	--	**100**	**1200**	**28**	**110**	**100**	**38**	**160**	**150**
Beryllium	--	**0.21**	**0.14**	0.015 U	**0.26 J**	**0.043 J**	0.015 U	**0.092 J**	**0.017 J**
Cadmium	--	**1.5**	**6.9**	**1.4**	**1.4**	**3**	**2.6**	**0.69**	**5**
Chromium	--	**160**	**150**	**110**	**140**	**210**	**880**	**18**	**100**
Cobalt	--	**49**	**21**	**38**	**39**	**17**	**120**	**8**	**11**
Copper	--	**11**	**4200**	**170**	**14**	**2000**	**28**	**5.7**	**7100**
Lead	--	**4.2**	**4600**	**130**	**5.3**	**2500**	**11**	**2**	**14000**
Mercury	--	**0.06**	**21.2**	**0.81**	**0.14**	**1.8**	**0.15**	**0.49**	**158**
Molybdenum	--	**0.31 J**	**0.67**	**0.98**	**0.3 J**	**19**	**0.43**	**0.24 J**	**20**
Nickel	--	**780**	**230**	**160**	**560**	**210**	**2600**	**8.9**	**96**
Selenium	--	0.21 U	0.19 U	0.2 U	0.19 U	0.2 U	0.19 U	0.2 U	**7.4**
Silver	--	0.052 U	**1.2**	0.049 U	0.048 U	0.05 U	**1.9**	0.049 U	**1.2**
Thallium	--	0.18 U	**0.35 J**	0.17 U	0.17 U	**0.33 J**	**0.2 J**	0.17 U	**0.75**
Vanadium	--	**61**	**52**	**31**	**64**	**17**	**38**	**38**	**11**
Zinc	--	**57**	**1900**	**300**	**53**	**5300**	**47**	**41**	**2100**

Table B3
Soil and Sediment Sample Analytical Results for Metals, Dry Weight (2017)

	IndiaBasin-2017RAP INN-SB-26 INN-SB-26-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-26 INN-SB-26-5.0 12/16/2016 4 - 6 ft SO	IndiaBasin-2017RAP INN-SB-27 INN-SB-27-0.5 12/21/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-28 INN-SB-28-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-28 INN-SB-28-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-29 INN-SB-29-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-29 INN-SB-29-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-30 INN-SB-30-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-30 INN-SB-30-3.5 12/9/2016 3 - 4 ft SO
Conventional Parameters (pct)									
Moisture, percent	18	9	33	4	11	5	9	4	9
Metals (mg/kg)									
Antimony	0.19 U	0.17 U	1.3 J	0.17 U	0.18 U	0.16 U	0.18 U	0.17 U	0.17 U
Arsenic	23	19	8.2	3	7.6	20	4.7	3.6	7.7
Barium	530	100	120	47	240	55	160	99	180
Beryllium	0.048 J	0.014 U	0.52	0.5 J	0.42 J	0.49 J	0.45 J	0.59 J	0.35 J
Cadmium	2.2	6.6	0.62	0.98	0.97	1.1	1.1	1.1	1
Chromium	300	280	81	27	33	25	56	42	30
Cobalt	33	50	19	9.2	20	12	15	12	13
Copper	2200	280	370	18	34	36	53	22	25
Lead	1700	720	160	9.1	16	8.7	36	27	14
Mercury	4.58	0.41	0.97	0.03	0.03	0.06	0.09	0.14	0.02 U
Molybdenum	1.4	1.7	4.2	0.91	5.3	1.2	0.68	0.69	0.71
Nickel	610	1100	120	26	47	32	120	59	41
Selenium	3.2 J	0.18 U	0.4 J	0.18 U	0.2 U	0.17 U	0.19 U	0.18 U	0.18 U
Silver	7.1	0.045 U	0.42	0.046 U	0.049 U	0.043 U	0.048 U	0.045 U	0.045 U
Thallium	1.2	1.7	0.11 J	0.16 U	0.17 U	0.15 U	0.2 J	0.16 U	0.16 U
Vanadium	28	36	61	42	33	43	36	45	31
Zinc	940	1100	260	50	95	55	110	78	94

Table B3
Soil and Sediment Sample Analytical Results for Metals, Dry Weight (2017)

	IndiaBasin-2017RAP INN-SB-31 INN-SB-31-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-31 INN-SB-31-3.0 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-32 INN-SB-32-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-33 INN-SB-33-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-33 INN-SB-33-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-33 INN-SB-33-7.0 12/9/2016 6 - 8 ft SO	IndiaBasin-2017RAP INN-SB-34 INN-SB-34-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-34 INN-SB-34-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-35 INN-SB-35-0.5 12/9/2016 0 - 0.5 ft SO
Conventional Parameters (pct)									
Moisture, percent	**9**	**12**	**11**	**19**	**10**	**10**	**12**	**13**	**9**
Metals (mg/kg)									
Antimony	0.15 U	0.18 U	0.17 U	0.19 U	0.16 U	0.17 U	0.18 U	0.17 U	0.18 U
Arsenic	**5.8**	**6**	**0.98**	*0.091 U*	**1.9**	**4.9**	**1.3**	**3**	**4.6**
Barium	**51**	**150**	**96**	**130**	**82**	**130**	**100**	**190**	**140**
Beryllium	**0.62 J**	**0.23 J**	**0.15 J**	**0.077 J**	**0.075 J**	**0.19 J**	**0.22 J**	**0.21 J**	**0.2 J**
Cadmium	**0.92**	**1.1**	**1.1**	**1.6**	**0.88**	**1.3**	**0.99**	**1.4**	**0.65**
Chromium	**38**	**40**	**340**	**710**	**73**	**51**	**190**	**52**	**24**
Cobalt	**14**	**7.1**	**45**	**110**	**11**	**8.7**	**34**	**11**	**5.1**
Copper	**14**	**36**	**27**	**25**	**19**	**74**	**24**	**88**	**16**
Lead	**5.4**	**130**	**14**	**10**	**240**	**150**	**12**	**410**	**2.6**
Mercury	**0.04**	**0.15**	**0.2**	**0.07**	**0.07**	**0.13**	**0.05**	**1.6**	**0.03**
Molybdenum	**0.6**	**0.63**	**0.39**	**0.4**	**0.36**	**0.72**	**0.28 J**	**0.54**	**1.5**
Nickel	**63**	**36**	**1100**	**2200**	**100**	**57**	**580**	**49**	**25**
Selenium	0.16 U	0.2 U	0.18 U	0.2 U	0.17 U	0.18 U	0.19 U	0.18 U	0.19 U
Silver	0.041 U	0.049 U	0.045 U	**0.93**	0.043 U	0.046 U	0.047 U	0.045 U	0.048 U
Thallium	0.14 U	**0.42 J**	0.16 U	**0.37 J**	0.15 U	0.16 U	**0.24 J**	0.16 U	**0.32 J**
Vanadium	**49**	**29**	**44**	**56**	**42**	**39**	**45**	**49**	**28**
Zinc	**48**	**200**	**48**	**44**	**130**	**140**	**39**	**560**	**34**

Table B3
Soil and Sediment Sample Analytical Results for Metals, Dry Weight (2017)

	IndiaBasin-2017RAP INN-SB-35 INN-SB-35-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-35 INN-SB-35-7.0 12/9/2016 6 - 8 ft SO	IndiaBasin-2017RAP INN-SB-40 INN-SB-40-0.5 12/21/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-40 INN-SB-40-3.5 12/21/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-41 INN-SB-41-0.5 12/14/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-41 INN-SB-41-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-42 INN-SB-42-0.5 3/15/2017 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-GW-1 INN-SB-GW-1-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-GW-1 INN-SB-GW-1-3.5 12/16/2016 3 - 4 ft SO
Conventional Parameters (pct)									
Moisture, percent	**18**	**8**	**21**	**36**	**7**	**15**	**14**	**8**	**20**
Metals (mg/kg)									
Antimony	0.19 U	0.17 U	**3.5**	**4.9**	0.17 U	0.18 U	0.16 U	0.18 U	0.2 U
Arsenic	*0.092 U*	**0.77**	**12**	**47**	**11**	**3.1**	**2.8**	**5.2**	**0.46**
Barium	**63**	**110**	**100**	**340**	**51**	**140**	**330**	**490**	**99**
Beryllium	**0.1 J**	**0.11 J**	**0.32**	**0.37**	**0.59**	**0.22**	**0.37 J**	**0.38**	**0.28**
Cadmium	**1.9**	**1.8**	**1.3**	**4.5**	**0.93**	**0.88**	**0.45**	**2.6**	**1.3**
Chromium	**820**	**120**	**75**	**160**	**42**	**100**	**140**	**38**	**140**
Cobalt	**50**	**15**	**16**	**34**	**13**	**19**	**39**	**18**	**34**
Copper	**14**	**26**	**750**	**520**	**39**	**31**	**270**	**460**	**7**
Lead	**3.1**	**120**	**220**	**1500**	**6.5**	**240**	**180**	**400**	**4.1**
Mercury	**0.07**	**0.11**	**16**	**2.5**	**0.08**	**0.18**	**1.6**	**4.5**	**0.06**
Molybdenum	**0.99**	**0.69**	**10**	**2.1**	**0.59**	**0.4**	**21**	**0.54**	**0.17 J**
Nickel	**2000**	**150**	**110**	**510**	**37**	**200**	**540**	**49**	**700**
Selenium	0.2 U	0.18 U	**0.32 J**	**0.75 J**	0.18 U	0.19 U	0.27 U	0.19 U	0.21 U
Silver	**1.2**	0.044 U	**0.24 J**	**2.9**	0.046 U	0.047 U	0.061 U	0.047 U	0.052 U
Thallium	**0.6 J**	0.16 U	0.059 U	**0.34 J**	0.16 U	0.17 U	0.18 U	0.17 U	0.18 U
Vanadium	**54**	**46**	**37**	**50**	**38**	**46**	**55**	**38**	**54**
Zinc	**44**	**700**	**480**	**1300**	**47**	**110**	**390**	**560**	**51**

Table B3
Soil and Sediment Sample Analytical Results for Metals, Dry Weight (2017)

	IndiaBasin-2017RAP INN-SB-GW-2 INN-SB-GW-2-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-GW-2 INN-SB-GW-2-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-GW-3 INN-SB-GW-3-0.5 12/14/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-GW-3 INN-SB-GW-3-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-GW-4 INN-SB-GW-4-0.5 12/14/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-GW-4 INN-SB-GW-4-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SE-1 INN-SE-1-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-1 INN-SE-1-3.0 3/13/2017 2 - 3 ft SE	IndiaBasin-2017RAP INN-SE-10 INN-SE-10-1.0 3/14/2017 0 - 1 ft SE
Conventional Parameters (pct)									
Moisture, percent	**6**	**12**	**10**	**10**	**10**	**15**	**48**	**62**	**40**
Metals (mg/kg)									
Antimony	0.14 U	0.16 U	0.18 U	0.16 U	0.18 U	0.19 U	0.26 U	0.34 U	0.2 U
Arsenic	**6.2**	**6**	**8.6**	**6.1**	**0.21 J**	*0.09 U*	**3.7**	**6.3**	**18**
Barium	**46**	**170**	**69**	**180**	**130**	**60**	**51**	**84**	**79**
Beryllium	**0.86**	**0.14**	**1.1**	**0.31**	**0.22**	**0.12 J**	**0.39**	**0.62**	**0.41**
Cadmium	**1.2**	**1.9**	**1.3**	**2.1**	**1.1**	**0.93**	**0.69**	**1.1**	**1**
Chromium	**34**	**84**	**37**	**53**	**210**	**200**	**72**	**110**	**140**
Cobalt	**14**	**24**	**19**	**15**	**45**	**35**	**10**	**15**	**17**
Copper	**1.6**	**720**	**15**	**73**	**26**	**18**	**180**	**290**	**360**
Lead	**3.2**	**240**	**8.2**	**160**	**29**	**6.2**	**93**	**160**	**88**
Mercury	**0.06**	**8.64**	**0.05**	**0.26**	**0.03**	**0.09**	**2.2**	**4.8**	**6.1**
Molybdenum	**0.81**	**1.4**	**0.79**	**0.69**	**0.63**	**0.36**	**0.72**	**2.7**	**0.93**
Nickel	**31**	**78**	**41**	**62**	**710**	**520**	**67**	**100**	**190**
Selenium	0.15 U	0.17 U	0.2 U	0.17 U	0.19 U	0.2 U	**2.2 J**	**3 J**	*0.34 U*
Silver	0.039 U	0.042 U	0.049 U	0.043 U	0.048 U	0.049 U	0.099 U	0.13 U	0.076 U
Thallium	0.14 U	0.15 U	0.17 U	0.15 U	0.17 U	0.17 U	0.3 U	0.39 U	0.23 U
Vanadium	**56**	**120**	**62**	**54**	**46**	**45**	**61**	**92**	**56**
Zinc	**49**	**250**	**79**	**280**	**50**	**47**	**180**	**280**	**150**

Table B3
Soil and Sediment Sample Analytical Results for Metals, Dry Weight (2017)

	IndiaBasin-2017RAP INN-SE-11 INN-SE-11-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-12 INN-SE-12-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-13 INN-SE-13-1.0 3/15/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-14 INN-SE-14-1.0 3/15/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-2 INN-SE-2-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-3 INN-SE-3-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-4 INN-SE-4-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-4 INN-SE-4-2.0 3/13/2017 1 - 2 ft SE	IndiaBasin-2017RAP INN-SE-5 INN-SE-5-1.0 3/13/2017 0 - 1 ft SE
Conventional Parameters (pct)									
Moisture, percent	**49**	**51**	**18**	**25**	**56**	**38**	**63**	**62**	**53**
Metals (mg/kg)									
Antimony	0.28 U	0.29 U	0.15 U	0.19 U	0.28 U	0.2 U	0.37 U	0.34 U	0.27 U
Arsenic	**4.4**	**110**	**5.2**	**28**	**4.1**	**14**	**4**	**3.1**	**2.5**
Barium	**49**	**100**	**130**	**120**	**65**	**200**	**60**	**63**	**55**
Beryllium	**0.45**	**0.99**	**0.27 J**	**0.44 J**	**0.59**	**0.53**	**0.62**	**0.65**	**0.51**
Cadmium	0.11 U	**3.3**	**0.45**	**0.82**	**0.66**	**0.93**	**0.63 J**	**0.64**	**0.56**
Chromium	**78**	**110**	**63**	**37**	**110**	**110**	**100**	**100**	**96**
Cobalt	**11**	**13**	**11**	**12**	**16**	**25**	**16**	**17**	**14**
Copper	**180**	**2300**	**290**	**470**	**310**	**1300**	**100**	**170**	**120**
Lead	**68**	**220**	**240**	**110**	**89**	**300**	**63**	**77**	**68**
Mercury	0.01 U	0.01 U	**1.2**	**11**	**1.4**	**4.9**	**0.66**	**0.62**	**0.63**
Molybdenum	**1.2**	**0.77**	**17**	**0.84**	**1**	**12**	0.16 U	**0.18 J**	**0.52 J**
Nickel	**72**	**87**	**95**	**44**	**110**	**130**	**110**	**110**	**110**
Selenium	*0.48 U*	*0.5 U*	*0.25 U*	*0.33 U*	**3.6 J**	**5.4**	**2.3 J**	**3.3 J**	**1.5 J**
Silver	0.11 U	0.11 U	0.056 U	0.072 U	0.11 U	0.075 U	0.14 U	0.13 U	0.1 U
Thallium	0.32 U	0.33 U	0.17 U	0.22 U	0.32 U	0.22 U	0.43 U	0.38 U	0.31 U
Vanadium	**62**	**82**	**38**	**44**	**87**	**80**	**94**	**95**	**74**
Zinc	**170**	**390**	**260**	**140**	**210**	**480**	**180**	**200**	**160**

Table B3
Soil and Sediment Sample Analytical Results for Metals, Dry Weight (2017)

	IndiaBasin-2017RAP INN-SE-6 INN-SE-6-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-7 INN-SE-7-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-8 INN-SE-8-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-9 INN-SE-9-1.0 3/14/2017 0 - 1 ft SE
Conventional Parameters (pct)				
Moisture, percent	**39**	**62**	**41**	**59**
Metals (mg/kg)				
Antimony	0.2 U	0.32 U	0.23 U	0.3 U
Arsenic	**3.7**	*0.49 U*	**6**	**6.6**
Barium	**30**	**61**	**94**	**100**
Beryllium	**0.52**	**0.76**	**0.34**	**0.71**
Cadmium	**0.47**	0.12 U	**1.9**	**0.62**
Chromium	**100**	**100**	**230**	**120**
Cobalt	**15**	**15**	**23**	**17**
Copper	**32**	**97**	**260**	**400**
Lead	**9.7**	**54**	**270**	**140**
Mercury	**0.084**	**0.7**	0.0081 U	**3.6**
Molybdenum	**1.6**	0.13 U	**3.8**	**2.3**
Nickel	**120**	**97**	**480**	**110**
Selenium	*0.34 U*	*0.55 U*	*0.4 U*	*0.51 U*
Silver	0.076 U	0.12 U	0.088 U	0.11 U
Thallium	0.23 U	0.37 U	0.27 U	0.34 U
Vanadium	**71**	**89**	**56**	**90**
Zinc	**71**	**160**	**430**	**240**

Table B3
Soil and Sediment Sample Analytical Results for Metals, Dry Weight (2017)

Notes:
Detected concentration is greater than one or more listed Human Health Comparative Values
Detected concentration is greater than one or more Ecological Habitat Comparative Values
Italics: non-detected concentration is above one or more identified screening levels
Bold: Detected result
Results reported in dry weight basis.
Source: Northgate 2017a
1. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. January 2019.
2. United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
3. Lawrence Berkeley National Laboratory (LBNL) Analysis of Background Distributions of Metals in Bay Area Regional Soils, Upper Estimate Values, 2009.
4. Final Remediation Investigation Report, Hunters Point Power Plant, San Francisco, CA, TRC, 2009
5. TTLC: Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.
6. A 90% Upper Threshold Limit (UTL) calculated in ProUCL v5.0 using the 2003-2012 data provided in the Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
7. Ambient for San Francisco Bay sediments, 2007-2012, Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
8. ER-L: Effects Range Low. Long, E.R., D.D. MacDonald, S. L. Smith, and F.D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
9. ER-M: Effects Range-Median. Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage* . 19(1):81-97.
--: results not reported or not applicable
ft: feet
J: Estimated value
mg/kg: milligrams per kilogram
pct: percent
SE: sediment matrix
SO: soil matrix
U: Compound analyzed, but not detected above detection limit

Table B4
Soil Sample Analytical Results for Metals, Wet Weight (2017)

			IndiaBasin-2017RAP INN-SB-1 INN-SB-1-4.5 12/14/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-1 INN-SB-1-6.5 12/14/2016 6 - 7 ft SO	IndiaBasin-2017RAP INN-SB-2 INN-SB-2-4.5 12/9/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-2 INN-SB-2-6.5 12/9/2016 6 - 7 ft SO	IndiaBasin-2017RAP INN-SB-3 INN-SB-3-0.5 12/30/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-3 INN-SB-3-4.5 12/30/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-3 INN-SB-3-6.5 12/30/2016 6 - 7 ft SO	IndiaBasin-2017RAP INN-SB-4 INN-SB-4-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-4 INN-SB-4-4.5 12/16/2016 4 - 5 ft SO
	Method	**TTLC [1]**									
Conventional Parameters (pct)											
Moisture, percent	D2216	--	**16**	**18**	**9**	**8**	**20**	**16**	**17**	**10**	**21**
Metals (mg/kg)											
Copper	SW6010B	2500	**7.14**	**8.2**	**34.58**	**460**	**11.2**	**7.056**	**7.802**	**85.5**	**7.347**
Lead	SW6010B	1000	**4.032**	**3.362**	**74.62**	**211.6**	**12.8**	**2.94**	**2.822**	**57.6**	**3.713**
Mercury	SW7471A	20	**0.0504**	**0.0492**	**0.0637**	**0.23**	**0.0416**	**0.01344 J**	**0.02324**	**0.396**	**0.0395**
Nickel	SW6010B	2000	**588**	**574**	**90.09**	**57.96**	**624**	**554.4**	**614.2**	**60.3**	**869**

Table B4
Soil Sample Analytical Results for Metals, Wet Weight (2017)

			IndiaBasin-2017RAP INN-SB-4 INN-SB-4-6.5 12/16/2016 6 - 7 ft SO	IndiaBasin-2017RAP INN-SB-5 INN-SB-5-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-5 INN-SB-5-4.5 12/9/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-5 INN-SB-5-6.5 12/9/2016 6 - 7 ft SO	IndiaBasin-2017RAP INN-SB-6 INN-SB-6-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-6 INN-SB-6-4.5 12/16/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-7 INN-SB-7-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-7 INN-SB-7-4.5 12/16/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-8 INN-SB-8-3.5 12/16/2016 3 - 4 ft SO
	Method	**TTLC [1]**									
Conventional Parameters (pct)											
Moisture, percent	D2216	--	**19**	**11**	**11**	**9**	**23**	**22**	**16**	**17**	**14**
Metals (mg/kg)											
Copper	SW6010B	2500	**12.15**	**15.13**	**14.24**	**20.93**	**6.006**	**33.54**	**6.636**	**7.055**	**4.73**
Lead	SW6010B	1000	**8.91**	**8.099**	**293.7**	**61.88**	**5.544**	**39.78**	**2.856**	**3.237**	**2.838**
Mercury	SW7471A	20	**0.0405**	0.0178 U	**0.0267**	**0.091**	**0.0308**	**0.1482**	**0.0252**	**0.0249**	**0.0258**
Nickel	SW6010B	2000	**461.7**	**222.5**	**23.14**	**91**	**1001**	**1248**	**638.4**	**531.2**	**481.6**

Table B4
Soil Sample Analytical Results for Metals, Wet Weight (2017)

			IndiaBasin-2017RAP INN-SB-8 INN-SB-8-4.5 12/16/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-9 INN-SB-9-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-9 INN-SB-9-4.5 12/14/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-10 INN-SB-10-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-10 INN-SB-10-4.5 12/14/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-11 INN-SB-11-4.0 12/14/2016 3 - 5 ft SO	IndiaBasin-2017RAP INN-SB-12 INN-SB-12-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-12 INN-SB-12-4.5 12/14/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-13 INN-SB-13-3.5 12/14/2016 3 - 4 ft SO
	Method	**TTLC [1]**									
Conventional Parameters (pct)											
Moisture, percent	D2216	--	**15**	**17**	**18**	**18**	**18**	**19**	**12**	**13**	**5**
Metals (mg/kg)											
Copper	SW6010B	2500	**8.075**	**6.557**	**9.02**	**5.74**	**7.38**	**1215**	**4.048**	0.08352 U	**5.51**
Lead	SW6010B	1000	**3.145**	**6.474**	**3.198**	**4.264**	**3.608**	**891**	**0.5984**	**0.87**	**61.75**
Mercury	SW7471A	20	**0.0255**	**0.083**	**0.0246**	**0.041**	**0.0492**	**12.069**	**0.0264**	0.0348 U	**0.0855**
Nickel	SW6010B	2000	**561**	**448.2**	**656**	**524.8**	**590.4**	**607.5**	**1760**	**1914**	**23.75**

Table B4
Soil Sample Analytical Results for Metals, Wet Weight (2017)

			IndiaBasin-2017RAP INN-SB-13 INN-SB-13-4.5 12/14/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-14 INN-SB-14-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-14 INN-SB-14-4.5 12/16/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-15 INN-SB-15-4.0 12/9/2016 3 - 5 ft SO	IndiaBasin-2017RAP INN-SB-16 INN-SB-16-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-16 INN-SB-16-4.5 12/9/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-17 INN-SB-17-4.0 12/9/2016 3 - 5 ft SO	IndiaBasin-2017RAP INN-SB-18 INN-SB-18-3.5 12/21/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-18 INN-SB-18-4.5 12/21/2016 4 - 5 ft SO
	Method	**TTLC [1]**									
Conventional Parameters (pct)											
Moisture, percent	D2216	--	**11**	**16**	**13**	**11**	**12**	**11**	**12**	**34**	**33**
Metals (mg/kg)											
Copper	SW6010B	2500	**0.7832**	**504**	**1218**	**40.94**	**96.8**	**48.06**	**82.72**	**92.4**	**335**
Lead	SW6010B	1000	**6.586**	**495.6**	**1914**	**979**	**387.2**	**51.62**	**237.6**	**79.2**	**120.6**
Mercury	SW7471A	20	**0.0445**	**2.7216**	**1.0266**	**0.1246**	**0.3432**	**0.089**	**0.352**	**0.5544**	**0.5561**
Nickel	SW6010B	2000	**24.03**	**302.4**	**565.5**	**97.9**	**88**	**31.15**	**264**	**99**	**167.5**

Table B4
Soil Sample Analytical Results for Metals, Wet Weight (2017)

			IndiaBasin-2017RAP INN-SB-19 INN-SB-19-0.5 12/14/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-19 INN-SB-19-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-20 INN-SB-20-0.5 12/30/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-20 INN-SB-20-3.5 12/30/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-21 INN-SB-21-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-21 INN-SB-21-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-22 INN-SB-22-1.0 12/16/2016 0 - 1 ft SO	IndiaBasin-2017RAP INN-SB-22 INN-SB-22-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-22 INN-SB-22-5.0 12/16/2016 4 - 6 ft SO
	Method	**TTLC [1]**									
Conventional Parameters (pct)											
Moisture, percent	D2216	--	**18**	**18**	**21**	**16**	**21**	**17**	**12**	**18**	**19**
Metals (mg/kg)											
Copper	SW6010B	2500	**82**	**6.888**	**68.73**	**6.384**	**15.8**	**6.474**	**65.12**	**278.8**	**267.3**
Lead	SW6010B	1000	**590.4**	**3.034**	**165.9**	**3.36**	**62.41**	**3.071**	**96.8**	**1312**	**178.2**
Mercury	SW7471A	20	**5.2234**	**0.0492**	**0.3871**	**0.02604**	**0.1896**	**0.0249**	**2.1032**	**1.189**	**2.025**
Nickel	SW6010B	2000	**434.6**	**582.2**	**505.6**	**638.4**	**639.9**	**614.2**	**88**	**664.2**	**591.3**

Table B4
Soil Sample Analytical Results for Metals, Wet Weight (2017)

			IndiaBasin-2017RAP INN-SB-23 INN-SB-23-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-23 INN-SB-23-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-23 INN-SB-23-5.0 12/16/2016 4 - 6 ft SO	IndiaBasin-2017RAP INN-SB-23 INN-SB-23-9.0 12/16/2016 8 - 10 ft SO	IndiaBasin-2017RAP INN-SB-24 INN-SB-24-1.0 12/16/2016 0 - 1 ft SO	IndiaBasin-2017RAP INN-SB-24 INN-SB-24-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-24 INN-SB-24-5.0 12/16/2016 4 - 6 ft SO	IndiaBasin-2017RAP INN-SB-25 INN-SB-25-1.0 12/16/2016 0 - 1 ft SO	IndiaBasin-2017RAP INN-SB-25 INN-SB-25-3.5 12/16/2016 3 - 4 ft SO
	Method	**TTLC [1]**									
Conventional Parameters (pct)											
Moisture, percent	D2216	--	**10**	**26**	**19**	**17**	**17**	**14**	**16**	**20**	**23**
Metals (mg/kg)											
Copper	SW6010B	2500	**55.8**	**162.8**	**--**	**9.13**	**3486**	**146.2**	**11.76**	**1600**	**21.56**
Lead	SW6010B	1000	**43.2**	**199.8**	**--**	**3.486**	**3818**	**111.8**	**4.452**	**2000**	**8.47**
Mercury	SW7471A	20	**12.69**	**1.7612**	**--**	**0.0498**	**17.596**	**0.6966**	**0.1176**	**1.44**	**0.1155**
Nickel	SW6010B	2000	**21.6**	**577.2**	**--**	**647.4**	**190.9**	**137.6**	**470.4**	**168**	**2002**

Table B4
Soil Sample Analytical Results for Metals, Wet Weight (2017)

			IndiaBasin-2017RAP INN-SB-25 INN-SB-25-7.0 12/16/2016 6 - 8 ft SO	IndiaBasin-2017RAP INN-SB-26 INN-SB-26-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-26 INN-SB-26-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-26 INN-SB-26-5.0 12/16/2016 4 - 6 ft SO	IndiaBasin-2017RAP INN-SB-27 INN-SB-27-0.5 12/21/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-28 INN-SB-28-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-28 INN-SB-28-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-29 INN-SB-29-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-29 INN-SB-29-3.5 12/9/2016 3 - 4 ft SO
	Method	**TTLC [1]**									
Conventional Parameters (pct)											
Moisture, percent	D2216	--	**18**	**12**	**18**	**9**	**33**	**4**	**11**	**5**	**9**
Metals (mg/kg)											
Copper	SW6010B	2500	**4.674**	**6248**	**1804**	**254.8**	**247.9**	**17.28**	**30.26**	**34.2**	**48.23**
Lead	SW6010B	1000	**1.64**	**12320**	**1394**	**655.2**	**107.2**	**8.736**	**14.24**	**8.265**	**32.76**
Mercury	SW7471A	20	**0.4018**	**139.04**	**3.7556**	**0.3731**	**0.6499**	**0.0288**	**0.0267**	**0.057**	**0.0819**
Nickel	SW6010B	2000	**7.298**	**84.48**	**500.2**	**1001**	**80.4**	**24.96**	**41.83**	**30.4**	**109.2**

Table B4
Soil Sample Analytical Results for Metals, Wet Weight (2017)

			IndiaBasin-2017RAP INN-SB-30 INN-SB-30-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-30 INN-SB-30-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-31 INN-SB-31-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-31 INN-SB-31-3.0 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-32 INN-SB-32-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-33 INN-SB-33-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-33 INN-SB-33-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-33 INN-SB-33-7.0 12/9/2016 6 - 8 ft SO	IndiaBasin-2017RAP INN-SB-34 INN-SB-34-0.5 12/9/2016 0 - 0.5 ft SO
	Method	**TTLC [1]**									
Conventional Parameters (pct)											
Moisture, percent	D2216	--	**4**	**9**	**9**	**12**	**11**	**19**	**10**	**10**	**12**
Metals (mg/kg)											
Copper	SW6010B	2500	**21.12**	**22.75**	**12.74**	**31.68**	**24.03**	**20.25**	**17.1**	**66.6**	**21.12**
Lead	SW6010B	1000	**25.92**	**12.74**	**4.914**	**114.4**	**12.46**	**8.1**	**216**	**135**	**10.56**
Mercury	SW7471A	20	**0.1344**	0.0182 U	**0.0364**	**0.132**	**0.178**	**0.0567**	**0.063**	**0.117**	**0.044**
Nickel	SW6010B	2000	**56.64**	**37.31**	**57.33**	**31.68**	**979**	**1782**	**90**	**51.3**	**510.4**

Table B4
Soil Sample Analytical Results for Metals, Wet Weight (2017)

			IndiaBasin-2017RAP INN-SB-34 INN-SB-34-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-35 INN-SB-35-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-35 INN-SB-35-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-35 INN-SB-35-7.0 12/9/2016 6 - 8 ft SO	IndiaBasin-2017RAP INN-SB-40 INN-SB-40-0.5 12/21/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-40 INN-SB-40-3.5 12/21/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-41 INN-SB-41-0.5 12/14/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-41 INN-SB-41-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-42 INN-SB-42-0.5 3/15/2017 0 - 0.5 ft SO
	Method	**TTLC [1]**									
Conventional Parameters (pct)											
Moisture, percent	D2216	--	**13**	**9**	**18**	**8**	**21**	**36**	**7**	**15**	**14**
Metals (mg/kg)											
Copper	SW6010B	2500	**76.56**	**14.56**	**11.48**	**23.92**	**592.5**	**332.8**	**36.27**	**26.35**	**232.2**
Lead	SW6010B	1000	**356.7**	**2.366**	**2.542**	**110.4**	**173.8**	**960**	**6.045**	**204**	**154.8**
Mercury	SW7471A	20	**1.392**	**0.0273**	**0.0574**	**0.1012**	**12.64**	**1.6**	**0.0744**	**0.153**	**1.376**
Nickel	SW6010B	2000	**42.63**	**22.75**	**1640**	**138**	**86.9**	**326.4**	**34.41**	**170**	**464.4**

Table B4
Soil Sample Analytical Results for Metals, Wet Weight (2017)

			IndiaBasin-2017RAP INN-SB-GW-1 INN-SB-GW-1-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-GW-1 INN-SB-GW-1-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-GW-2 INN-SB-GW-2-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-GW-2 INN-SB-GW-2-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-GW-3 INN-SB-GW-3-0.5 12/14/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-GW-3 INN-SB-GW-3-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-GW-4 INN-SB-GW-4-0.5 12/14/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-GW-4 INN-SB-GW-4-3.5 12/14/2016 3 - 4 ft SO
	Method	**TTLC [1]**								
Conventional Parameters (pct)										
Moisture, percent	D2216	--	**8**	**20**	**6**	**12**	**10**	**10**	**10**	**15**
Metals (mg/kg)										
Copper	SW6010B	2500	**423.2**	**5.6**	**1.504**	**633.6**	**13.5**	**65.7**	**23.4**	**15.3**
Lead	SW6010B	1000	**368**	**3.28**	**3.008**	**211.2**	**7.38**	**144**	**26.1**	**5.27**
Mercury	SW7471A	20	**4.14**	**0.048**	**0.0564**	**7.6032**	**0.045**	**0.234**	**0.027**	**0.0765**
Nickel	SW6010B	2000	**45.08**	**560**	**29.14**	**68.64**	**36.9**	**55.8**	**639**	**442**

Table B4
Soil Sample Analytical Results for Metals, Wet Weight (2017)

Notes:
Detected concentration is greater than TTLC
Italics: non-detected concentration is above one or more identified screening levels
Bold: Detected result
Results reported in wet weight basis.
Source: Northgate 2017a
1. TTLC: Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.
--: results not reported or not applicable
ft: feet
J: Estimated value
mg/kg: milligrams per kilogram
pct: percent
SO: soil matrix
U: Compound analyzed, but not detected above detection limit

Table B5
Soil and Sediment Sample Analytical Results for Polychlorinated Biphenyls (2017)

										Task	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP
										Location Name	INN-SB-1	INN-SB-3	INN-SB-4
										Sample Name	INN-SB-1-4.5	INN-SB-3-0.5	INN-SB-4-0.5
										Sample Date	12/14/2016	12/30/2016	12/16/2016
										Depth	4 - 5 ft	0 - 0.5 ft	0 - 0.5 ft
										Depth	SO	SO	SO
		Human Health Comparative Values					Ecological Habitat Comparative Values (Sediment Only)						
	Method	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]	TTLC [3]	SF Bay Ambient 90% UTL [4]	SF Bay Ambient Average [5]	Effects Range - Low (ER-L) [6]	Effects Range-Median (ER-M) [7]			
Conventional Parameters (pct)													
Moisture, percent	D2216	--	--	--	--	--	--	--	--	--	**16**	**20**	**10**
PCB Aroclors (µg/kg)													
Aroclor 1016	SW8082	--	--	--	4100	--	--	--	--	--	1.4 U	1.5 U	1.3 U
Aroclor 1221	SW8082	--	--	--	200	--	--	--	--	--	3.8 U	4 U	3.6 U
Aroclor 1232	SW8082	--	--	--	170	--	--	--	--	--	1.9 U	1.9 U	1.7 U
Aroclor 1242	SW8082	--	--	--	230	--	--	--	--	--	1.7 U	1.8 U	1.6 U
Aroclor 1248	SW8082	--	--	--	230	--	--	--	--	--	1.8 U	1.9 U	1.7 U
Aroclor 1254	SW8082	--	--	--	240	--	--	--	--	--	1.5 U	1.5 U	1.4 U
Aroclor 1260	SW8082	--	--	--	240	--	--	--	--	--	0.92 U	0.96 U	**28**
Total PCB Aroclors (U = 0)	--	230	940	5500	--	50000	18	9	22.7	180	3.8 U	4 U	**28**

Table B5
Soil and Sediment Sample Analytical Results for Polychlorinated Biphenyls (2017)

	IndiaBasin-2017RAP INN-SB-4 INN-SB-4-4.5 12/16/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-6 INN-SB-6-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-9 INN-SB-9-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-10 INN-SB-10-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-11 INN-SB-11-4.0 12/14/2016 3 - 5 ft SO	IndiaBasin-2017RAP INN-SB-13 INN-SB-13-4.5 12/14/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-14 INN-SB-14-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-14 INN-SB-14-4.5 12/16/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-15 INN-SB-15-4.0 12/9/2016 3 - 5 ft SO	IndiaBasin-2017RAP INN-SB-16 INN-SB-16-3.5 12/9/2016 3 - 4 ft SO
Conventional Parameters (pct)										
Moisture, percent	**21**	**23**	**17**	**18**	**19**	**11**	**16**	**13**	**11**	**12**
PCB Aroclors (µg/kg)										
Aroclor 1016	1.5 U	1.6 U	1.4 U	1.4 U	1.5 U	1.3 U	28 U	68 U	1.3 U	1.4 U
Aroclor 1221	4 U	4.2 U	3.8 U	3.9 U	3.9 U	3.5 U	75 U	180 U	3.6 U	3.7 U
Aroclor 1232	1.9 U	2 U	1.9 U	1.9 U	1.9 U	1.7 U	36 U	89 U	1.8 U	1.8 U
Aroclor 1242	1.8 U	1.9 U	1.7 U	1.8 U	1.8 U	1.6 U	34 U	82 U	1.6 U	1.7 U
Aroclor 1248	1.9 U	2 U	1.8 U	1.9 U	**6100**	1.7 U	**1400**	87 U	1.7 U	1.8 U
Aroclor 1254	1.5 U	1.6 U	1.5 U	1.5 U	**4400**	1.4 U	**570**	70 U	1.4 U	**190**
Aroclor 1260	0.97 U	1 U	0.92 U	0.95 U	**900**	0.86 U	**160**	44 U	**22**	**87**
Total PCB Aroclors (U = 0)	4 U	4.2 U	3.8 U	3.9 U	**11400**	3.5 U	**2130**	180 U	**22**	**277**

Table B5
Soil and Sediment Sample Analytical Results for Polychlorinated Biphenyls (2017)

	IndiaBasin-2017RAP INN-SB-19 INN-SB-19-0.5 12/14/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-23 INN-SB-23-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-23 INN-SB-23-5.0 12/16/2016 4 - 6 ft SO	IndiaBasin-2017RAP INN-SB-23 INN-SB-23-9.0 12/16/2016 8 - 10 ft SO	IndiaBasin-2017RAP INN-SB-24 INN-SB-24-1.0 12/16/2016 0 - 1 ft SO	IndiaBasin-2017RAP INN-SB-24 INN-SB-24-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-25 INN-SB-25-1.0 12/16/2016 0 - 1 ft SO	IndiaBasin-2017RAP INN-SB-25 INN-SB-25-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-25 INN-SB-25-7.0 12/16/2016 6 - 8 ft SO	IndiaBasin-2017RAP INN-SB-26 INN-SB-26-0.5 12/16/2016 0 - 0.5 ft SO
Conventional Parameters (pct)										
Moisture, percent	**18**	**10**	**19**	**17**	**17**	**14**	**20**	**23**	**18**	**12**
PCB Aroclors (µg/kg)										
Aroclor 1016	1.4 U	1.3 U	1.4 U	1.4 U	1.4 U	68 U	1.5 U	1.5 U	1.4 U	**13000**
Aroclor 1221	3.9 U	3.6 U	3.9 U	3.9 U	3.8 U	180 U	4 U	4.1 U	3.9 U	*360 U*
Aroclor 1232	1.9 U	1.7 U	1.9 U	1.9 U	1.9 U	90 U	1.9 U	2 U	1.9 U	*180 U*
Aroclor 1242	1.7 U	1.6 U	1.8 U	1.7 U	1.7 U	83 U	1.8 U	1.8 U	1.7 U	160 U
Aroclor 1248	1.9 U	1.7 U	1.9 U	**54**	1.8 U	88 U	1.9 U	2 U	1.8 U	**33000**
Aroclor 1254	**190**	1.4 U	1.5 U	**44**	1.5 U	71 U	**70**	1.6 U	1.5 U	**26000**
Aroclor 1260	**100**	**12**	0.95 U	**14**	0.93 U	45 U	**26**	1 U	0.94 U	**5900**
Total PCB Aroclors (U = 0)	**290**	**12**	3.9 U	**112**	3.8 U	180 U	**96**	4.1 U	3.9 U	**77900**

Table B5
Soil and Sediment Sample Analytical Results for Polychlorinated Biphenyls (2017)

	IndiaBasin-2017RAP INN-SB-26 INN-SB-26-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-27 INN-SB-27-0.5 12/21/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-29 INN-SB-29-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-29 INN-SB-29-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-34 INN-SB-34-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-34 INN-SB-34-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-40 INN-SB-40-0.5 12/21/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-40 INN-SB-40-3.5 12/21/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-41 INN-SB-41-0.5 12/14/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-42 INN-SB-42-0.5 3/15/2017 0 - 0.5 ft SO
Conventional Parameters (pct)										
Moisture, percent	**18**	**33**	**5**	**9**	**12**	**13**	**21**	**36**	**7**	**14**
PCB Aroclors (µg/kg)										
Aroclor 1016	71 U	1.8 U	1.3 U	1.3 U	1.3 U	1.4 U	30 U	92 U	1.3 U	1.4 U
Aroclor 1221	190 U	4.8 U	3.4 U	3.5 U	3.6 U	3.7 U	80 U	*250 U*	3.5 U	3.7 U
Aroclor 1232	94 U	2.3 U	1.7 U	1.7 U	1.8 U	1.8 U	39 U	120 U	1.7 U	1.8 U
Aroclor 1242	87 U	2.2 U	1.5 U	1.6 U	1.6 U	1.7 U	36 U	110 U	1.6 U	1.7 U
Aroclor 1248	92 U	**170**	1.6 U	1.7 U	1.7 U	1.8 U	38 U	120 U	1.7 U	**160**
Aroclor 1254	74 U	**270**	1.3 U	1.3 U	1.4 U	**35**	31 U	95 U	1.3 U	**230**
Aroclor 1260	47 U	**120**	**4 J**	**1.8 J**	0.88 U	**14**	**390**	60 U	0.85 U	**89**
Total PCB Aroclors (U = 0)	190 U	**560**	**4 J**	**1.8 J**	3.6 U	**49**	**390**	*250 U*	3.5 U	**479**

Table B5
Soil and Sediment Sample Analytical Results for Polychlorinated Biphenyls (2017)

	IndiaBasin-2017RAP INN-SB-GW-4 INN-SB-GW-4-0.5 12/14/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-GW-4 INN-SB-GW-4-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SE-1 INN-SE-1-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-1 INN-SE-1-3.0 3/13/2017 2 - 3 ft SE	IndiaBasin-2017RAP INN-SE-2 INN-SE-2-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-3 INN-SE-3-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-4 INN-SE-4-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-4 INN-SE-4-2.0 3/13/2017 1 - 2 ft SE	IndiaBasin-2017RAP INN-SE-5 INN-SE-5-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-6 INN-SE-6-1.0 3/13/2017 0 - 1 ft SE
Conventional Parameters (pct)										
Moisture, percent	**10**	**15**	**48**	**62**	**56**	**38**	**63**	**62**	**53**	**39**
PCB Aroclors (µg/kg)										
Aroclor 1016	1.3 U	1.4 U	2.3 U	3.1 U	2.7 U	1.9 U	3.2 U	3.1 U	2.5 U	1.9 U
Aroclor 1221	3.5 U	3.7 U	6.2 U	8.3 U	7.3 U	5.1 U	8.6 U	8.4 U	6.8 U	5.2 U
Aroclor 1232	1.7 U	1.8 U	3 U	4.1 U	3.6 U	2.5 U	4.2 U	4.1 U	3.3 U	2.5 U
Aroclor 1242	1.6 U	1.7 U	2.8 U	3.8 U	3.3 U	2.3 U	3.9 U	3.8 U	3.1 U	2.3 U
Aroclor 1248	1.7 U	1.8 U	**170**	**380**	**120**	**420**	**68**	4 U	**56**	2.5 U
Aroclor 1254	1.3 U	1.4 U	**280**	**450**	**270**	**620**	**120**	**74**	**97**	2 U
Aroclor 1260	0.85 U	0.91 U	**220**	**190**	**230**	**190**	**130**	**140**	**110**	1.3 U
Total PCB Aroclors (U = 0)	3.5 U	3.7 U	**670**	**1020**	**620**	**1230**	**318**	**214**	**263**	5.2 U

Table B5
Soil and Sediment Sample Analytical Results for Polychlorinated Biphenyls (2017)

	IndiaBasin-2017RAP INN-SE-7 INN-SE-7-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-8 INN-SE-8-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-9 INN-SE-9-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-10 INN-SE-10-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-11 INN-SE-11-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-12 INN-SE-12-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-13 INN-SE-13-1.0 3/15/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-14 INN-SE-14-1.0 3/15/2017 0 - 1 ft SE
Conventional Parameters (pct)								
Moisture, percent	**62**	**41**	**59**	**40**	**49**	**51**	**18**	**25**
PCB Aroclors (µg/kg)								
Aroclor 1016	3.1 U	2 U	58 U	1.9 U	2.3 U	24 U	1.4 U	1.6 U
Aroclor 1221	8.4 U	5.5 U	160 U	5.2 U	6.3 U	65 U	3.8 U	4.3 U
Aroclor 1232	4.1 U	2.7 U	76 U	2.6 U	3.1 U	32 U	1.9 U	2.1 U
Aroclor 1242	3.8 U	2.5 U	70 U	2.4 U	2.8 U	29 U	1.7 U	1.9 U
Aroclor 1248	4 U	2.6 U	75 U	**83**	**790**	**800**	**100**	**340**
Aroclor 1254	**34**	**730**	60 U	**59**	**350**	**310**	**140**	**270**
Aroclor 1260	**74**	**470**	**16000**	**180**	**630**	**1000**	**110**	**120**
Total PCB Aroclors (U = 0)	**108**	**1200**	**16000**	**322**	**1770**	**2110**	**350**	**730**

Table B5
Soil and Sediment Sample Analytical Results for Polychlorinated Biphenyls (2017)

Notes:
Detected concentration is greater than one or more listed Human Health Comparative Values
Detected concentration is greater than one or more Ecological Habitat Comparative Values
Italics: non-detected concentration is above one or more identified screening levels
Bold: Detected result
Results reported in dry weight basis.
Totals are calculated by Anchor QEA as the sum of all detected results (U=0). If all results are not detected, the highest method detection limit value is reported as the sum.
Total PCB Aroclors is the total of all PCB Aroclors listed in this table.
Source: Northgate 2017a
1. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. January 2019.
2. United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
3. TTLC: Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.
4. A 90% Upper Threshold Limit (UTL) calculated in ProUCL v5.0 using the 2003-2012 data provided in the Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
5. Ambient for San Francisco Bay sediments, 2007-2012, Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
6. ER-L: Effects Range Low. Long, E.R., D.D. MacDonald, S. L. Smith, and F.D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
7. ER-M: Effects Range-Median. Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
--: results not reported or not applicable
ft: feet
J: Estimated value
mg/kg: milligrams per kilogram
PCB: polychlorinated biphenyls
pct: percent
SE: sediment matrix
SO: soil matrix
U: Compound analyzed, but not detected above detection limit

Table B6
Soil and Sediment Sample Analytical Results for Total Petroleum Hydrocarbons (2017)

					Task	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP
					Location Name	INN-SB-1	INN-SB-2	INN-SB-3	INN-SB-3	INN-SB-4
					Sample Name	INN-SB-1-4.5	INN-SB-2-4.5	INN-SB-3-0.5	INN-SB-3-4.5	INN-SB-4-0.5
					Sample Date	12/14/2016	12/9/2016	12/30/2016	12/30/2016	12/16/2016
					Depth	4 - 5 ft	4 - 5 ft	0 - 0.5 ft	4 - 5 ft	0 - 0.5 ft
					Depth	SO	SO	SO	SO	SO
		Human Health Comparative Values								
	Method	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]					
Conventional Parameters (pct)										
Moisture, percent	D2216	--	--	--	--	**16**	**9**	**20**	**16**	**10**
Total Petroleum Hydrocarbons (mg/kg)										
Diesel range organics (C10 - C24)	SW8015	260	1200	1100	520	**2.8**	**470**	**20**	**6.9**	**230**
Diesel range organics (C10 - C24) silica gel treated	SW8015	260	1200	1100	520	**--**	**530**	**--**	**--**	**--**
Motor oil range hydrocarbons (C24-C36)	SW8015	12000	180000	54000	230000	**7.1**	**2300**	**50**	**8.7**	**890**
Motor oil range hydrocarbons (C24-C36) silica gel treated	SW8015	12000	180000	54000	230000	**--**	**2200**	**--**	**--**	**--**

Table B6
Soil and Sediment Sample Analytical Results for Total Petroleum Hydrocarbons (2017)

					Task	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP
					Location Name	INN-SB-4	INN-SB-5	INN-SB-6	INN-SB-6	INN-SB-9
					Sample Name	INN-SB-4-4.5	INN-SB-5-4.5	INN-SB-6-3.5	INN-SB-6-4.5	INN-SB-9-3.5
					Sample Date	12/16/2016	12/9/2016	12/16/2016	12/16/2016	12/14/2016
					Depth	4 - 5 ft	4 - 5 ft	3 - 4 ft	4 - 5 ft	3 - 4 ft
					Depth	SO	SO	SO	SO	SO
		Human Health Comparative Values								
	Method	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]					
Conventional Parameters (pct)										
Moisture, percent	D2216	--	--	--	--	**21**	**11**	**23**	**22**	**17**
Total Petroleum Hydrocarbons (mg/kg)										
Diesel range organics (C10 - C24)	SW8015	260	1200	1100	520	**2**	**11**	**3.9**	**3.8**	**0.73 J**
Diesel range organics (C10 - C24) silica gel treated	SW8015	260	1200	1100	520	--	--	--	--	--
Motor oil range hydrocarbons (C24-C36)	SW8015	12000	180000	54000	230000	**5.7 J**	**53**	**13**	**12**	**2.4 J**
Motor oil range hydrocarbons (C24-C36) silica gel treated	SW8015	12000	180000	54000	230000	--	--	--	--	--

Table B6
Soil and Sediment Sample Analytical Results for Total Petroleum Hydrocarbons (2017)

					Task	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP
					Location Name	INN-SB-10	INN-SB-11	INN-SB-12	INN-SB-14	INN-SB-14
					Sample Name	INN-SB-10-3.5	INN-SB-11-4.0	INN-SB-12-3.5	INN-SB-14-3.5	INN-SB-14-4.5
					Sample Date	12/14/2016	12/14/2016	12/14/2016	12/16/2016	12/16/2016
					Depth	3 - 4 ft	3 - 5 ft	3 - 4 ft	3 - 4 ft	4 - 5 ft
					Depth	SO	SO	SO	SO	SO
		Human Health Comparative Values								
	Method	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]					
Conventional Parameters (pct)										
Moisture, percent	D2216	--	--	--	--	**18**	**19**	**12**	**16**	**13**
Total Petroleum Hydrocarbons (mg/kg)										
Diesel range organics (C10 - C24)	SW8015	260	1200	1100	520	**7**	**220**	**2.3**	**23000**	**7100**
Diesel range organics (C10 - C24) silica gel treated	SW8015	260	1200	1100	520	**--**	**200**	**--**	**--**	**--**
Motor oil range hydrocarbons (C24-C36)	SW8015	12000	180000	54000	230000	**5.6 J**	**850**	**3.4 J**	**4600**	**3200**
Motor oil range hydrocarbons (C24-C36) silica gel treated	SW8015	12000	180000	54000	230000	**--**	**750**	**--**	**--**	**--**

Table B6
Soil and Sediment Sample Analytical Results for Total Petroleum Hydrocarbons (2017)

					Task	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP
					Location Name	INN-SB-15	INN-SB-16	INN-SB-17	INN-SB-19	INN-SB-19
					Sample Name	INN-SB-15-4.0	INN-SB-16-3.5	INN-SB-17-4.0	INN-SB-19-0.5	INN-SB-19-3.5
					Sample Date	12/9/2016	12/9/2016	12/9/2016	12/14/2016	12/14/2016
					Depth	3 - 5 ft	3 - 4 ft	3 - 5 ft	0 - 0.5 ft	3 - 4 ft
					Depth	SO	SO	SO	SO	SO
		Human Health Comparative Values								
	Method	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]					
Conventional Parameters (pct)										
Moisture, percent	D2216	--	--	--	--	**11**	**12**	**12**	**18**	**18**
Total Petroleum Hydrocarbons (mg/kg)										
Diesel range organics (C10 - C24)	SW8015	260	1200	1100	520	**28**	**210**	**160**	**600**	**0.99 J**
Diesel range organics (C10 - C24) silica gel treated	SW8015	260	1200	1100	520	**--**	**160**	**--**	**470**	**--**
Motor oil range hydrocarbons (C24-C36)	SW8015	12000	180000	54000	230000	**200**	**990**	**670**	**2800**	**2.5 J**
Motor oil range hydrocarbons (C24-C36) silica gel treated	SW8015	12000	180000	54000	230000	**--**	**780**	**--**	**2200**	**--**

Table B6
Soil and Sediment Sample Analytical Results for Total Petroleum Hydrocarbons (2017)

					Task	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP
					Location Name	INN-SB-21	INN-SB-21	INN-SB-23	INN-SB-23	INN-SB-26
					Sample Name	INN-SB-21-0.5	INN-SB-21-3.5	INN-SB-23-0.5	INN-SB-23-9.0	INN-SB-26-0.5
					Sample Date	12/16/2016	12/16/2016	12/16/2016	12/16/2016	12/16/2016
					Depth	0 - 0.5 ft	3 - 4 ft	0 - 0.5 ft	8 - 10 ft	0 - 0.5 ft
					Depth	SO	SO	SO	SO	SO
		Human Health Comparative Values								
	Method	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]					
Conventional Parameters (pct)										
Moisture, percent	D2216	--	--	--	--	**21**	**17**	**10**	**17**	**12**
Total Petroleum Hydrocarbons (mg/kg)										
Diesel range organics (C10 - C24)	SW8015	260	1200	1100	520	**8.7**	**2.4**	**630**	**320**	**14000**
Diesel range organics (C10 - C24) silica gel treated	SW8015	260	1200	1100	520	--	--	--	--	--
Motor oil range hydrocarbons (C24-C36)	SW8015	12000	180000	54000	230000	**28**	**4.7 J**	**1800**	**68**	**5600**
Motor oil range hydrocarbons (C24-C36) silica gel treated	SW8015	12000	180000	54000	230000	--	--	--	--	--

Table B6
Soil and Sediment Sample Analytical Results for Total Petroleum Hydrocarbons (2017)

					Task	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP
					Location Name	INN-SB-26	INN-SB-26	INN-SB-27	INN-SB-29	INN-SB-29
					Sample Name	INN-SB-26-3.5	INN-SB-26-5.0	INN-SB-27-0.5	INN-SB-29-0.5	INN-SB-29-3.5
					Sample Date	12/16/2016	12/16/2016	12/21/2016	12/9/2016	12/9/2016
					Depth	3 - 4 ft	4 - 6 ft	0 - 0.5 ft	0 - 0.5 ft	3 - 4 ft
					Depth	SO	SO	SO	SO	SO
		Human Health Comparative Values								
	Method	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]					
Conventional Parameters (pct)										
Moisture, percent	D2216	--	--	--	--	**18**	**9**	**33**	**5**	**9**
Total Petroleum Hydrocarbons (mg/kg)										
Diesel range organics (C10 - C24)	SW8015	260	1200	1100	520	**5800**	**1500**	**120**	**20 J**	**150**
Diesel range organics (C10 - C24) silica gel treated	SW8015	260	1200	1100	520	**--**	**--**	**--**	**--**	**120**
Motor oil range hydrocarbons (C24-C36)	SW8015	12000	180000	54000	230000	**5000**	**1200**	**510**	**250 J**	**1800**
Motor oil range hydrocarbons (C24-C36) silica gel treated	SW8015	12000	180000	54000	230000	**--**	**--**	**--**	**--**	**1300**

Table B6
Soil and Sediment Sample Analytical Results for Total Petroleum Hydrocarbons (2017)

					Task	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP
					Location Name	INN-SB-30	INN-SB-30	INN-SB-32	INN-SB-34	INN-SB-34
					Sample Name	INN-SB-30-0.5	INN-SB-30-3.5	INN-SB-32-0.5	INN-SB-34-0.5	INN-SB-34-3.5
					Sample Date	12/9/2016	12/9/2016	12/9/2016	12/9/2016	12/9/2016
					Depth	0 - 0.5 ft	3 - 4 ft	0 - 0.5 ft	0 - 0.5 ft	3 - 4 ft
					Depth	SO	SO	SO	SO	SO
		Human Health Comparative Values								
	Method	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]					
Conventional Parameters (pct)										
Moisture, percent	D2216	--	--	--	--	**4**	**9**	**11**	**12**	**13**
Total Petroleum Hydrocarbons (mg/kg)										
Diesel range organics (C10 - C24)	SW8015	260	1200	1100	520	**36 J**	**1.2**	34 U	**9.8 J**	**47**
Diesel range organics (C10 - C24) silica gel treated	SW8015	260	1200	1100	520	--	--	--	--	--
Motor oil range hydrocarbons (C24-C36)	SW8015	12000	180000	54000	230000	**380**	**7.5**	**460 J**	**84**	**260**
Motor oil range hydrocarbons (C24-C36) silica gel treated	SW8015	12000	180000	54000	230000	--	--	--	--	--

Table B6
Soil and Sediment Sample Analytical Results for Total Petroleum Hydrocarbons (2017)

					Task	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP
					Location Name	INN-SB-40	INN-SB-40	INN-SB-41	INN-SB-41	INN-SB-42
					Sample Name	INN-SB-40-0.5	INN-SB-40-3.5	INN-SB-41-0.5	INN-SB-41-3.5	INN-SB-42-0.5
					Sample Date	12/21/2016	12/21/2016	12/14/2016	12/14/2016	3/15/2017
					Depth	0 - 0.5 ft	3 - 4 ft	0 - 0.5 ft	3 - 4 ft	0 - 0.5 ft
					Depth	SO	SO	SO	SO	SO
		Human Health Comparative Values								
	Method	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]					
Conventional Parameters (pct)										
Moisture, percent	D2216	--	--	--	--	**21**	**36**	**7**	**15**	**14**
Total Petroleum Hydrocarbons (mg/kg)										
Diesel range organics (C10 - C24)	SW8015	260	1200	1100	520	**190**	**1400**	**45**	**27**	**74**
Diesel range organics (C10 - C24) silica gel treated	SW8015	260	1200	1100	520	--	--	--	--	--
Motor oil range hydrocarbons (C24-C36)	SW8015	12000	180000	54000	230000	**600**	**2300**	**210**	**260**	**390**
Motor oil range hydrocarbons (C24-C36) silica gel treated	SW8015	12000	180000	54000	230000	--	--	--	--	--

Table B6
Soil and Sediment Sample Analytical Results for Total Petroleum Hydrocarbons (2017)

					Task	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP
					Location Name	INN-SB-GW-1	INN-SB-GW-1	INN-SB-GW-4	INN-SB-GW-4	INN-SE-1
					Sample Name	INN-SB-GW-1-0.5	INN-SB-GW-1-3.5	INN-SB-GW-4-0.5	INN-SB-GW-4-3.5	INN-SE-1-1.0
					Sample Date	12/16/2016	12/16/2016	12/14/2016	12/14/2016	3/13/2017
					Depth	0 - 0.5 ft	3 - 4 ft	0 - 0.5 ft	3 - 4 ft	0 - 1 ft
					Depth	SO	SO	SO	SO	SE
		Human Health Comparative Values								
	Method	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]					
Conventional Parameters (pct)										
Moisture, percent	D2216	--	--	--	--	**8**	**20**	**10**	**15**	**48**
Total Petroleum Hydrocarbons (mg/kg)										
Diesel range organics (C10 - C24)	SW8015	260	1200	1100	520	**1300**	**2.8**	**25**	**14**	**180**
Diesel range organics (C10 - C24) silica gel treated	SW8015	260	1200	1100	520	--	--	--	--	--
Motor oil range hydrocarbons (C24-C36)	SW8015	12000	180000	54000	230000	**4800**	**6.1 J**	**380**	**210**	**450**
Motor oil range hydrocarbons (C24-C36) silica gel treated	SW8015	12000	180000	54000	230000	--	--	--	--	--

Table B6
Soil and Sediment Sample Analytical Results for Total Petroleum Hydrocarbons (2017)

					Task	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP
					Location Name	INN-SE-1	INN-SE-2	INN-SE-3	INN-SE-4	INN-SE-4
					Sample Name	INN-SE-1-3.0	INN-SE-2-1.0	INN-SE-3-1.0	INN-SE-4-1.0	INN-SE-4-2.0
					Sample Date	3/13/2017	3/13/2017	3/13/2017	3/13/2017	3/13/2017
					Depth	2 - 3 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	1 - 2 ft
					Depth	SE	SE	SE	SE	SE
		Human Health Comparative Values								
	Method	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]					
Conventional Parameters (pct)										
Moisture, percent	D2216	--	--	--	--	**62**	**56**	**38**	**63**	**62**
Total Petroleum Hydrocarbons (mg/kg)										
Diesel range organics (C10 - C24)	SW8015	260	1200	1100	520	**360**	**120**	**530**	**57**	**69**
Diesel range organics (C10 - C24) silica gel treated	SW8015	260	1200	1100	520	--	--	--	--	--
Motor oil range hydrocarbons (C24-C36)	SW8015	12000	180000	54000	230000	**650**	**410**	**1000**	**180**	**200**
Motor oil range hydrocarbons (C24-C36) silica gel treated	SW8015	12000	180000	54000	230000	--	--	--	--	--

Table B6
Soil and Sediment Sample Analytical Results for Total Petroleum Hydrocarbons (2017)

					Task	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP
					Location Name	INN-SE-5	INN-SE-6	INN-SE-7	INN-SE-8	INN-SE-9
					Sample Name	INN-SE-5-1.0	INN-SE-6-1.0	INN-SE-7-1.0	INN-SE-8-1.0	INN-SE-9-1.0
					Sample Date	3/13/2017	3/13/2017	3/14/2017	3/14/2017	3/14/2017
					Depth	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft
					Depth	SE	SE	SE	SE	SE
		Human Health Comparative Values								
	Method	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]					
Conventional Parameters (pct)										
Moisture, percent	D2216	--	--	--	--	**53**	**39**	**62**	**41**	**59**
Total Petroleum Hydrocarbons (mg/kg)										
Diesel range organics (C10 - C24)	SW8015	260	1200	1100	520	**140**	**39**	**29**	**950**	**350**
Diesel range organics (C10 - C24) silica gel treated	SW8015	260	1200	1100	520	--	--	--	--	--
Motor oil range hydrocarbons (C24-C36)	SW8015	12000	180000	54000	230000	**360**	**77**	**79**	**2200**	**890**
Motor oil range hydrocarbons (C24-C36) silica gel treated	SW8015	12000	180000	54000	230000	--	--	--	--	--

Table B6
Soil and Sediment Sample Analytical Results for Total Petroleum Hydrocarbons (2017)

					Task	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP
					Location Name	INN-SE-10	INN-SE-11	INN-SE-12	INN-SE-13	INN-SE-14
					Sample Name	INN-SE-10-1.0	INN-SE-11-1.0	INN-SE-12-1.0	INN-SE-13-1.0	INN-SE-14-1.0
					Sample Date	3/14/2017	3/14/2017	3/14/2017	3/15/2017	3/15/2017
					Depth	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft
					Depth	SE	SE	SE	SE	SE
		Human Health Comparative Values								
	Method	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]					
Conventional Parameters (pct)										
Moisture, percent	D2216	--	--	--	--	**40**	**49**	**51**	**18**	**25**
Total Petroleum Hydrocarbons (mg/kg)										
Diesel range organics (C10 - C24)	SW8015	260	1200	1100	520	**240**	**46**	**630**	**210**	**400**
Diesel range organics (C10 - C24) silica gel treated	SW8015	260	1200	1100	520	--	--	--	--	--
Motor oil range hydrocarbons (C24-C36)	SW8015	12000	180000	54000	230000	**770**	**110**	**1000**	**1400**	**110**
Motor oil range hydrocarbons (C24-C36) silica gel treated	SW8015	12000	180000	54000	230000	--	--	--	--	--

Table B6
Soil and Sediment Sample Analytical Results for Total Petroleum Hydrocarbons (2017)

Notes:
Detected concentration is greater than SFBay 2019 ESL Residential screening level
Detected concentration is greater than SFBay 2019 ESL Industrial screening level
Detected concentration is greater than SFBay 2019 ESL Construction screening level
Detected concentration is greater than USEPA 2016 Residential RSLs screening level
Italics: non-detected concentration is above one or more identified screening levels
Bold: Detected result
Results reported in dry weight basis.
Source: Northgate 2017a
1. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. January 2019.
2. United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
--: results not reported or not applicable
ft: feet
J: Estimated value
mg/kg: milligrams per kilogram
pct: percent
SE: sediment matrix
SO: soil matrix
U: Compound analyzed, but not detected above detection limit

Table B7
Soil and Sediment Sample Analytical Results for Polyaromatic Hydrocarbons (2017)

										Task	**IndiaBasin-2017RAP**
										Location Name	**INN-SB-1**
										Sample Name	**INN-SB-1-4.5**
										Sample Date	**12/14/2016**
										Depth	**4 - 5 ft**
										Matrix	**SO**
		Human Health Comparative Values					**Ecological Habitat Comparative Values (Sediment Only)**				
	Method	**SFBay 2019 ESL Residential [1]**	**SFBay 2019 ESL Industrial [1]**	**SFBay 2019 ESL Construction [1]**	**USEPA 2016 Residential RSLs [2]**	**DTSC BaP Ambient Conditions for Northern California [3]**	**SF Bay Ambient 90% UTL [4]**	**SF Bay Ambient Average [5]**	**Effects Range - Low (ER-L) [6]**	**Effects Range-Median (ER-M) [7]**	
Conventional Parameters (pct)											
Moisture, percent	D2216	--	--	--	--	--	--	--	--	--	**16**
Polycyclic Aromatic Hydrocarbons (µg/kg)											
Chrysene	SW8270CSIM	110000	2100000	9100000	16000	--	252	108	384	2800	1.2 U
Dibenzo(a,h)anthracene	SW8270CSIM	110	2100	11000	16	--	50	21	63.4	260	1.2 U
Fluoranthene	SW8270CSIM	2400000	30000000	6700000	2400000	--	620	282	600	5100	**1.5 J**
Fluorene	SW8270CSIM	2400000	30000000	6700000	2400000	--	27.1	14	19	540	1.2 U
Indeno(1,2,3-c,d)pyrene	SW8270CSIM	1100	21000	110000	160	--	337	178	--	--	1.2 U
Naphthalene	SW8270CSIM	3800	17000	400000	3800	--	56	33	160	2100	0.8 U
Phenanthrene	SW8270CSIM	--	--	--	--	--	176	102	240	1500	**2.3 J**
Pyrene	SW8270CSIM	1800000	23000000	5000000	1799999	--	790	366	665	2600	**1.4 J**
Total PAH (15) (U = 0)	--	--	--	--	--	--	--	--	4022	44792	**5.2 J**
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	--	--	--	--	--	900	--	--	--	--	0.408 U

Table B7
Soil and Sediment Sample Analytical Results for Polyaromatic Hydrocarbons (2017)

	IndiaBasin-2017RAP INN-SB-2 INN-SB-2-4.5 12/9/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-3 INN-SB-3-0.5 12/30/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-3 INN-SB-3-4.5 12/30/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-4 INN-SB-4-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-4 INN-SB-4-4.5 12/16/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-5 INN-SB-5-4.5 12/9/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-6 INN-SB-6-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-6 INN-SB-6-4.5 12/16/2016 4 - 5 ft SO
Conventional Parameters (pct)								
Moisture, percent	**9**	**20**	**16**	**10**	**21**	**11**	**23**	**22**
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Chrysene	**590**	1.3 U	1.2 U	**100**	**3.1 J**	**6.4**	**40**	**5 J**
Dibenzo(a,h)anthracene	**120 J**	1.3 U	1.2 U	**16 J**	1.3 U	**1.6 J**	**9.9**	1.3 U
Fluoranthene	**1100**	**1.3 J**	1.2 U	**170**	**3.8 J**	**7**	**34**	**6.6**
Fluorene	**44 J**	1.3 U	1.2 U	**12 J**	1.3 U	1.1 U	1.3 U	1.3 U
Indeno(1,2,3-c,d)pyrene	**270**	1.3 U	1.2 U	**49**	**1.5 J**	**4.4 J**	**25**	**3.8 J**
Naphthalene	28 U	1.5 U	0.7 U	11 U	1.6 U	**1.7 J**	**1.4 J**	**1.4 J**
Phenanthrene	**770**	1.3 U	1.2 U	**90**	**1.5 J**	**3.2 J**	**15**	**3.2 J**
Pyrene	**1300**	**1.6 J**	1.2 U	**220**	**4.6 J**	**5.4 J**	**37**	**6.2 J**
Total PAH (15) (U = 0)	**4194 J**	**2.9 J**	1.2 U	**657 J**	**14.5 J**	**29.7 J**	**162.3 J**	**26.2 J**
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	**73.7 J**	0.442 U	0.408 U	**11.34 J**	**0.181 J**	**1.048 J**	**6.266**	**0.43 J**

Table B7
Soil and Sediment Sample Analytical Results for Polyaromatic Hydrocarbons (2017)

	IndiaBasin-2017RAP INN-SB-9 INN-SB-9-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-10 INN-SB-10-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-11 INN-SB-11-4.0 12/14/2016 3 - 5 ft SO	IndiaBasin-2017RAP INN-SB-12 INN-SB-12-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-14 INN-SB-14-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-14 INN-SB-14-4.5 12/16/2016 4 - 5 ft SO	IndiaBasin-2017RAP INN-SB-15 INN-SB-15-4.0 12/9/2016 3 - 5 ft SO	IndiaBasin-2017RAP INN-SB-16 INN-SB-16-3.5 12/9/2016 3 - 4 ft SO
Conventional Parameters (pct)								
Moisture, percent	**17**	**18**	**19**	**12**	**16**	**13**	**11**	**12**
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Chrysene	1.2 U	1.2 U	**1400**	1.1 U	**1700**	**11000**	**43**	**340**
Dibenzo(a,h)anthracene	1.2 U	1.2 U	**290 J**	1.1 U	**160 J**	**1600**	**7.9 J**	**50**
Fluoranthene	1.2 U	1.2 U	**2700**	1.1 U	**3500**	**19000**	**53**	**560**
Fluorene	1.2 U	1.2 U	**180 J**	1.1 U	**9500**	**4200**	**3.6 J**	**27 J**
Indeno(1,2,3-c,d)pyrene	1.2 U	1.2 U	**740**	1.1 U	**490**	**4900**	**15 J**	**140**
Naphthalene	0.8 U	**2.1 J**	61 U	**1.5 J**	**3800**	**570**	3.4 U	**36 J**
Phenanthrene	**1.8 J**	1.2 U	**1500**	1.1 U	**14000**	**19000**	**24**	**330**
Pyrene	1.2 U	1.2 U	**2600**	1.1 U	**5400**	**23000**	**54**	**570**
Total PAH (15) (U = 0)	**1.8 J**	**2.1 J**	**9410 J**	**1.5 J**	**38550 J**	**83270**	**200.5 J**	**2053 J**
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	0.408 U	0.408 U	**186.6 J**	0.374 U	**120.4 J**	**1144**	**4.616 J**	**34.4**

Table B7
Soil and Sediment Sample Analytical Results for Polyaromatic Hydrocarbons (2017)

	IndiaBasin-2017RAP INN-SB-17 INN-SB-17-4.0 12/9/2016 3 - 5 ft SO	IndiaBasin-2017RAP INN-SB-19 INN-SB-19-0.5 12/14/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-19 INN-SB-19-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-21 INN-SB-21-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-21 INN-SB-21-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-23 INN-SB-23-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-23 INN-SB-23-5.0 12/16/2016 4 - 6 ft SO	IndiaBasin-2017RAP INN-SB-23 INN-SB-23-9.0 12/16/2016 8 - 10 ft SO
Conventional Parameters (pct)								
Moisture, percent	**12**	**18**	**18**	**21**	**17**	**10**	**19**	**17**
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Chrysene	**190**	**210**	1.2 U	**16**	1.2 U	**8200**	6.1 U	**76**
Dibenzo(a,h)anthracene	**46 J**	**35**	1.2 U	**3.9 J**	1.2 U	**1400**	6.1 U	**5 J**
Fluoranthene	**270**	**380**	1.2 U	**25**	1.2 U	**15000**	6.1 U	**360**
Fluorene	**23 J**	**14**	1.2 U	1.2 U	1.2 U	**1100**	6.1 U	**230**
Indeno(1,2,3-c,d)pyrene	**130**	**99**	1.2 U	**10**	1.2 U	**4100**	6.1 U	**14**
Naphthalene	**40 J**	**7.4**	1.5 U	**6.2 J**	1.4 U	**610**	6.1 U	**650**
Phenanthrene	**210**	**230**	1.2 U	**9.5**	1.2 U	**9800**	6.1 U	**700**
Pyrene	**270**	**370**	1.2 U	**18**	1.2 U	**14000**	6.1 U	**260**
Total PAH (15) (U = 0)	**1179 J**	**1345.4**	1.5 U	**88.6 J**	1.4 U	**54210**	6.1 U	**2295 J**
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	**30.54 J**	**23.9**	0.408 U	**2.486 J**	0.408 U	**968**	2.074 U	**3.86 J**

Table B7
Soil and Sediment Sample Analytical Results for Polyaromatic Hydrocarbons (2017)

	IndiaBasin-2017RAP INN-SB-26 INN-SB-26-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-26 INN-SB-26-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-26 INN-SB-26-5.0 12/16/2016 4 - 6 ft SO	IndiaBasin-2017RAP INN-SB-27 INN-SB-27-0.5 12/21/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-29 INN-SB-29-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-29 INN-SB-29-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-30 INN-SB-30-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-30 INN-SB-30-3.5 12/9/2016 3 - 4 ft SO
Conventional Parameters (pct)								
Moisture, percent	**12**	**18**	**9**	**33**	**5**	**9**	**4**	**9**
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Chrysene	**7000**	**31000**	**5700**	**390**	100 U	**260**	**52 J**	**3.1 J**
Dibenzo(a,h)anthracene	**610**	**4100**	**710**	**80 J**	*100 U*	**45**	*21 U*	1.1 U
Fluoranthene	**20000**	**64000**	**11000**	**620**	100 U	**510**	**32 J**	**5.2 J**
Fluorene	**8800**	**18000**	**290 J**	**37 J**	100 U	**13 J**	21 U	1.1 U
Indeno(1,2,3-c,d)pyrene	**1600**	**13000**	**4300**	**230**	100 U	**200**	21 U	**1.8 J**
Naphthalene	**6400**	**1600**	**150 J**	36 U	130 U	1 U	25 U	1.3 U
Phenanthrene	**24000**	**54000**	**2100**	**330**	100 U	**210**	**23 J**	**2.9 J**
Pyrene	**14000**	**69000**	**18000**	**830**	100 U	**630**	**40 J**	**5.7**
Total PAH (15) (U = 0)	**82410**	**254700**	**42250 J**	**2517 J**	130 U	**1868 J**	**147 J**	**18.7 J**
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	**437.4**	**3004**	**728.4**	**54.1 J**	34 U	**37.9**	**0.52 J**	**0.211 J**

Table B7
Soil and Sediment Sample Analytical Results for Polyaromatic Hydrocarbons (2017)

	IndiaBasin-2017RAP INN-SB-32 INN-SB-32-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-34 INN-SB-34-0.5 12/9/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-34 INN-SB-34-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-40 INN-SB-40-0.5 12/21/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-40 INN-SB-40-3.5 12/21/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-41 INN-SB-41-0.5 12/14/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-41 INN-SB-41-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-42 INN-SB-42-0.5 3/15/2017 0 - 0.5 ft SO
Conventional Parameters (pct)								
Moisture, percent	**11**	**12**	**13**	**21**	**36**	**7**	**15**	**14**
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Chrysene	**5.3 J**	**12 J**	**20 J**	**1400**	**16000**	**4.1 J**	**260**	**130**
Dibenzo(a,h)anthracene	**1.4 J**	7.1 U	15 U	**190**	**2000**	3.2 U	**45**	**20 J**
Fluoranthene	**6.6**	**20 J**	**18 J**	**2200**	**48000**	**5.6 J**	**360**	**220**
Fluorene	1.1 U	7.1 U	14 U	**93 J**	**4600**	**5.1 J**	**8.6**	**10 J**
Indeno(1,2,3-c,d)pyrene	**2.3 J**	7.2 U	15 U	**490**	**13000**	3.2 U	**150**	**56**
Naphthalene	1.4 U	7.1 U	1.1 U	**45 J**	**13**	**19**	0.7 U	5.8 U
Phenanthrene	**3.2 J**	**10 J**	14 U	**700**	**18000**	**15 J**	**170**	**120**
Pyrene	**6.5**	**16 J**	**15 J**	**2100**	**21000**	**6 J**	**360**	**250**
Total PAH (15) (U = 0)	**25.3 J**	**58 J**	**53 J**	**7218 J**	**122613**	**54.8 J**	**1353.6**	**806 J**
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	**0.759 J**	**0.12 J**	**0.2 J**	**127.6**	**2140**	**0.041 J**	**32.9**	**13.7 J**

Table B7
Soil and Sediment Sample Analytical Results for Polyaromatic Hydrocarbons (2017)

	IndiaBasin-2017RAP INN-SB-GW-1 INN-SB-GW-1-0.5 12/16/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-GW-1 INN-SB-GW-1-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-GW-4 INN-SB-GW-4-0.5 12/14/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-GW-4 INN-SB-GW-4-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SE-1 INN-SE-1-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-1 INN-SE-1-3.0 3/13/2017 2 - 3 ft SE	IndiaBasin-2017RAP INN-SE-2 INN-SE-2-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-3 INN-SE-3-1.0 3/13/2017 0 - 1 ft SE
Conventional Parameters (pct)								
Moisture, percent	**8**	**20**	**10**	**15**	**48**	**62**	**56**	**38**
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Chrysene	**2 J**	1.2 U	**33 J**	30 U	**300**	**2100**	**520**	**880**
Dibenzo(a,h)anthracene	1.1 U	1.2 U	*22 U*	*30 U*	**73 J**	**250**	**110**	**150**
Fluoranthene	**3.7 J**	1.2 U	22 U	30 U	**390**	**5200**	**700**	**600**
Fluorene	1.1 U	1.2 U	22 U	30 U	**34 J**	**140 J**	**44 J**	**73 J**
Indeno(1,2,3-c,d)pyrene	**1.5 J**	1.2 U	22 U	30 U	**200**	**730**	**390**	**370**
Naphthalene	1.3 U	1.5 U	27 U	0.7 U	**26 J**	**92 J**	**37 J**	**170**
Phenanthrene	**2.3 J**	1.2 U	22 U	30 U	**160**	**2100**	**340**	**330**
Pyrene	**8**	**1.4 J**	22 U	30 U	**910**	**5200**	**1000**	**2200**
Total PAH (15) (U = 0)	**17.5 J**	**1.4 J**	**33 J**	30 U	**2093 J**	**15812 J**	**3141 J**	**4773 J**
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	**0.17 J**	0.408 U	**0.33 J**	10.2 U	**47.82 J**	**179**	**81.6**	**96.8**

Table B7
Soil and Sediment Sample Analytical Results for Polyaromatic Hydrocarbons (2017)

	IndiaBasin-2017RAP INN-SE-4 INN-SE-4-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-4 INN-SE-4-2.0 3/13/2017 1 - 2 ft SE	IndiaBasin-2017RAP INN-SE-5 INN-SE-5-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-6 INN-SE-6-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-7 INN-SE-7-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-8 INN-SE-8-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-9 INN-SE-9-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-11 INN-SE-11-1.0 3/14/2017 0 - 1 ft SE
Conventional Parameters (pct)								
Moisture, percent	**63**	**62**	**53**	**39**	**62**	**41**	**59**	**49**
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Chrysene	**160**	**170**	**230**	**150**	**150**	**2400**	**750**	**340**
Dibenzo(a,h)anthracene	**29 J**	**39 J**	**33 J**	16 U	*27 U*	**300**	*41 U*	*20 U*
Fluoranthene	**240**	**230**	**400**	**210**	**200**	**4600**	**1300**	**410**
Fluorene	*27 U*	*26 U*	*21 U*	*16 U*	*27 U*	**630**	*41 U*	*20 U*
Indeno(1,2,3-c,d)pyrene	**130 J**	**170**	**120**	**240**	**150**	**880**	**340**	**230**
Naphthalene	27 U	26 U	21 U	16 U	27 U	*43 U*	*41 U*	20 U
Phenanthrene	**69 J**	**87 J**	**150**	16 U	27 U	**4700**	**940**	**210**
Pyrene	**360**	**430**	**470**	**530**	**410**	**5900**	**1300**	**640**
Total PAH (15) (U = 0)	**988 J**	**1126 J**	**1403 J**	**1130**	**910**	**19410**	**4630**	**1830**
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	**24.46 J**	**31.96 J**	**25.52 J**	**25.5**	**16.5**	**214**	**41.5**	**26.4**

Table B7
Soil and Sediment Sample Analytical Results for Polyaromatic Hydrocarbons (2017)

	IndiaBasin-2017RAP INN-SE-12 INN-SE-12-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-13 INN-SE-13-1.0 3/15/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-14 INN-SE-14-1.0 3/15/2017 0 - 1 ft SE
Conventional Parameters (pct)			
Moisture, percent	**51**	**18**	**25**
Polycyclic Aromatic Hydrocarbons (µg/kg)			
Chrysene	**380**	**200**	**57**
Dibenzo(a,h)anthracene	*20 U*	**26 J**	**8.7 J**
Fluoranthene	**560**	**370**	**120**
Fluorene	*20 U*	**32 J**	6.6 U
Indeno(1,2,3-c,d)pyrene	**170**	**64 J**	**25 J**
Naphthalene	20 U	**22 J**	6.6 U
Phenanthrene	**390**	**250**	**65**
Pyrene	**900**	**380**	**140**
Total PAH (15) (U = 0)	**2400**	**1344 J**	**415.7 J**
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	**20.8**	**17.24 J**	**6.028 J**

Table B7
Soil and Sediment Sample Analytical Results for Polyaromatic Hydrocarbons (2017)

Notes:
Detected concentration is greater than one or more listed Human Health Comparative Values
Detected concentration is greater than one or more Ecological Habitat Comparative Values
Italics: non-detected concentration is above one or more identified screening levels
Bold: Detected result
Results reported in dry weight basis.
Totals are calculated by Anchor QEA as the sum of all detected results (U=0). If all results are not detected, the highest method detection limit value is reported as the sum.
Total PAH (15) is the sum of acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(g,h,i)perylene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, phenanthrene, and pyrene.
Total Benzo(a)pyrene (BaP) equivalent value calculation includes benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-c,d)pyrene.
Per California Department of Toxic Substances Control (DTSC), Use of the Northern and Southern California PAH Studies in the MGP Site Cleanup Process, July 2009.

Acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, and benzo(k)fluoranthene were not reported in Table 5E of the Site Characterization Report (Northgate 2017a), which may cause the Anchor QEA-calculated BaP equivalent values to be biased low.
Source: Northgate 2017a; totals and BaP Equivalents calculated by Anchor QEA
1. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. January 2019.
2. United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
3. California Department of Toxic Substances Control (DTSC), Use of the Northern and Southern California PAH Studies in the MGP Site Cleanup Process, July 2009
4. A 90% Upper Threshold Limit (UTL) calculated in ProUCL v5.0 using the 2003-2012 data provided in the Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
5. Ambient for San Francisco Bay sediments, 2007-2012, Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
6. ER-L: Effects Range Low. Long, E.R., D.D. MacDonald, S. L. Smith, and F.D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
7. ER-M: Effects Range-Median. Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
--: results not reported or not applicable
µg/kg: micrograms per kilogram
ft: feet
J: Estimated value
mg/kg: milligrams per kilogram
PAH: polycyclic aromatic hydrocarbons
pct: percent
SE: sediment matrix
SO: soil matrix
U: Compound analyzed, but not detected above detection limit

Table B8
Soil and Sediment Sample Analytical Results for Pesticides (2017)

										Task	**IndiaBasin-2017RAP**	**IndiaBasin-2017RAP**	**IndiaBasin-2017RAP**
										Location Name	**INN-SB-4**	**INN-SB-19**	**INN-SB-34**
										Sample Name	**INN-SB-4-0.5**	**INN-SB-19-0.5**	**INN-SB-34-0.5**
										Sample Date	**12/16/2016**	**12/14/2016**	**12/9/2016**
										Depth	**0 - 0.5 ft**	**0 - 0.5 ft**	**0 - 0.5 ft**
										Depth	**SO**	**SO**	**SO**
		Human Health Comparative Values					**Ecological Habitat Comparative Values (Sediment Only)**						
	Method	**SFBay 2019 ESL Residential [1]**	**SFBay 2019 ESL Industrial [1]**	**SFBay 2019 ESL Construction [1]**	**USEPA 2016 Residential RSLs [2]**	**TTLC [3]**	**SF Bay Ambient 90% UTL [4]**	**SF Bay Ambient Average [5]**	**Effects Range - Low (ER-L) [6]**	**Effects Range-Median (ER-M) [7]**			
Conventional Parameters (pct)													
Moisture, percent	D2216	--	--	--	--	--	--	--	--	--	**10**	**18**	**12**
Pesticides (µg/kg)													
4,4'-DDD (p,p'-DDD)	SW8081A	2700	12000	81000	2300	--	1.98	1.16	2	20	3.9 U	24 U	11 U
4,4'-DDE (p,p'-DDE)	SW8081A	1800	8300	57000	2000	--	1.98	1.35	2.2	27	5.3 U	24 U	11 U
4,4'-DDT (p,p'-DDT)	SW8081A	1900	8500	57000	1900	--	0.27	0.168	1	7	37 U	17 U	5.4 U
Chlordane, alpha- (Chlordane, cis-)	SW8081A	--	--	--	--	--	--	0.069	--	--	2.7 U	5.1 U	2.4 U
Chlordane, gamma-	SW8081A	--	--	--	--	--	--	--	--	--	3.4 U	3.6 U	1.7 U
Dieldrin	SW8081A	37	160	1100	34	8000	0.16	0.0785	0.02	8	4.9 U	14 U	6.5 U
Endosulfan sulfate	SW8081A	--	--	--	--	--	--	--	--	--	37 U	13 U	6.1 U
Endrin	SW8081A	--	--	--	19000	200	0.01	0.0066	--	--	5.6 U	24 U	11 U
Heptachlor epoxide	SW8081A	62	280	1900	70	4700	--	0.0023	--	--	3 U	4.7 U	2.2 U
Hexachlorocyclohexane (BHC), alpha-	SW8081A	--	--	--	86	--	--	0.007	--	--	2.8 U	4.6 U	2.2 U
Hexachlorocyclohexane (BHC), beta-	SW8081A	--	--	--	300	--	--	0.0101	--	--	19 U	7.3 U	3.4 U
Hexachlorocyclohexane (BHC), delta-	SW8081A	--	--	--	--	--	--	0.0013	--	--	19 U	5 U	2.4 U
Hexachlorocyclohexane (BHC), gamma- (Lindane)	SW8081A	550	2500	16000	570	4000	--	0.0031	--	--	2.5 U	4.3 U	2 U
Total BHC (U = 0)	--	--	--	--	--	--	0.05	0.0198	--	--	19 U	7.3 U	3.4 U
Total Chlordane (U = 0)	--	0.48	2.2	14	--	2500	0.34	0.219	0.5	6	*3.4 U*	*5.1 U*	*2.4 U*
Total DDx (U = 0)	--	--	--	--	--	1000	4.68	2.97	1.58	46.1	37 U	24 U	11 U

Table B8
Soil and Sediment Sample Analytical Results for Pesticides (2017)

	IndiaBasin-2017RAP INN-SB-40 INN-SB-40-0.5 12/21/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-40 INN-SB-40-3.5 12/21/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-41 INN-SB-41-0.5 12/14/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-41 INN-SB-41-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SE-1 INN-SE-1-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-1 INN-SE-1-3.0 3/13/2017 2 - 3 ft SE	IndiaBasin-2017RAP INN-SE-2 INN-SE-2-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-3 INN-SE-3-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-4 INN-SE-4-1.0 3/13/2017 0 - 1 ft SE
Conventional Parameters (pct)									
Moisture, percent	**21**	**36**	**7**	**15**	**48**	**62**	**56**	**38**	**63**
Pesticides (µg/kg)									
4,4'-DDD (p,p'-DDD)	5.7 U	7.1 U	5.4 U	12 U	*3.5 U*	*4.7 U*	*4.2 U*	*2.9 U*	*4.9 U*
4,4'-DDE (p,p'-DDE)	**11 J**	5.2 U	5.4 U	12 U	*2.8 U*	*3.8 U*	*3.4 U*	*2.4 U*	*4 U*
4,4'-DDT (p,p'-DDT)	**6.4 J**	**23 J**	3.8 U	8.3 U	*3.4 U*	**11 J**	*4 U*	*2.8 U*	*22 U*
Chlordane, alpha- (Chlordane, cis-)	2.3 U	2.8 U	1.2 U	**13 J**	*1 U*	*1.3 U*	*1.2 U*	*0.83 U*	*1.4 U*
Chlordane, gamma-	2.2 U	**81 J**	0.8 U	1.7 U	1.2 U	1.6 U	1.4 U	0.98 U	1.7 U
Dieldrin	4.6 U	5.7 U	3.1 U	**7.4 J**	*1.9 U*	**7.3 J**	*2.3 U*	*1.6 U*	*2.7 U*
Endosulfan sulfate	**5.4 J**	5.2 U	2.9 U	6.3 U	**3.8 J**	3.3 U	2.9 U	2.1 U	3.5 U
Endrin	5.2 U	**20 J**	5.4 U	12 U	*2.7 U*	*3.6 U*	*3.2 U*	*2.2 U*	*3.8 U*
Heptachlor epoxide	2.7 U	**7.3 J**	1.1 U	2.3 U	*1.1 U*	*1.4 U*	*1.3 U*	*0.88 U*	*1.5 U*
Hexachlorocyclohexane (BHC), alpha-	3.3 U	4.1 U	1 U	2.3 U	*0.96 U*	*1.3 U*	*1.1 U*	*0.8 U*	*1.3 U*
Hexachlorocyclohexane (BHC), beta-	4.7 U	**13 J**	1.6 U	3.6 U	**2.9 J**	*2.7 U*	*2.4 U*	**3 J**	*2.8 U*
Hexachlorocyclohexane (BHC), delta-	3.3 U	4.2 U	1.1 U	2.5 U	*1.3 U*	*1.8 U*	*1.6 U*	*1.1 U*	*1.9 U*
Hexachlorocyclohexane (BHC), gamma- (Lindane)	3.8 U	4.7 U	0.97 U	2.1 U	*1 U*	*1.4 U*	*1 U*	*0.87 U*	*1.5 U*
Total BHC (U = 0)	4.7 U	**13 J**	1.6 U	3.6 U	**2.9 J**	*2.7 U*	*2.4 U*	**3 J**	*2.8 U*
Total Chlordane (U = 0)	*2.3 U*	**81 J**	*1.2 U*	**13 J**	*1.2 U*	*1.6 U*	*1.4 U*	*0.98 U*	*1.7 U*
Total DDx (U = 0)	**17.4 J**	**23 J**	5.4 U	12 U	*3.5 U*	**11 J**	*4.2 U*	*2.9 U*	*22 U*

Table B8
Soil and Sediment Sample Analytical Results for Pesticides (2017)

	IndiaBasin-2017RAP INN-SE-4 INN-SE-4-2.0 3/13/2017 1 - 2 ft SE	IndiaBasin-2017RAP INN-SE-5 INN-SE-5-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-6 INN-SE-6-1.0 3/13/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-7 INN-SE-7-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-8 INN-SE-8-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-9 INN-SE-9-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-11 INN-SE-11-1.0 3/14/2017 0 - 1 ft SE	IndiaBasin-2017RAP INN-SE-12 INN-SE-12-1.0 3/14/2017 0 - 1 ft SE
Conventional Parameters (pct)								
Moisture, percent	**62**	**53**	**39**	**62**	**41**	**59**	**49**	**51**
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	*4.8 U*	*3.9 U*	*2.9 U*	*4.8 U*	*6.2 U*	*5.6 U*	*3.6 U*	*3.7 U*
4,4'-DDE (p,p'-DDE)	*3.9 U*	*3.1 U*	*2.4 U*	*3.9 U*	*5 U*	*4.1 U*	*2.9 U*	*3 U*
4,4'-DDT (p,p'-DDT)	*4.7 U*	*3.8 U*	*2.9 U*	*4.7 U*	*6.1 U*	**55**	*3.5 U*	*3.6 U*
Chlordane, alpha- (Chlordane, cis-)	*1.4 U*	*1.1 U*	*0.83 U*	*1.4 U*	*1.8 U*	*2.2 U*	*1 U*	*1.1 U*
Chlordane, gamma-	1.6 U	1.3 U	0.99 U	1.6 U	2.1 U	2.1 U	1.2 U	1.3 U
Dieldrin	*2.6 U*	*2.1 U*	*1.6 U*	*2.6 U*	*3.4 U*	*4.5 U*	*2 U*	*2 U*
Endosulfan sulfate	3.4 U	2.7 U	2.1 U	3.4 U	4.4 U	4.1 U	2.5 U	2.6 U
Endrin	*3.7 U*	*3 U*	*2.3 U*	*3.7 U*	*4.8 U*	*5.1 U*	*2.8 U*	*2.9 U*
Heptachlor epoxide	*1.5 U*	*1.2 U*	*0.89 U*	*1.5 U*	*1.9 U*	**45**	*1.1 U*	*1.1 U*
Hexachlorocyclohexane (BHC), alpha-	*1.3 U*	*1.1 U*	*0.8 U*	*1.3 U*	*1.7 U*	*3.3 U*	*0.98 U*	*1 U*
Hexachlorocyclohexane (BHC), beta-	*2.7 U*	*2.2 U*	*1.7 U*	*2.7 U*	*3.5 U*	*4.6 U*	*2 U*	*2.1 U*
Hexachlorocyclohexane (BHC), delta-	*1.8 U*	*1.5 U*	*1.1 U*	*1.8 U*	*2.4 U*	*3.3 U*	*1.4 U*	*1.4 U*
Hexachlorocyclohexane (BHC), gamma- (Lindane)	*1.4 U*	*1.1 U*	*0.87 U*	*1.4 U*	*1.8 U*	*3.7 U*	*1.1 U*	*1.1 U*
Total BHC (U = 0)	*2.7 U*	*2.2 U*	*1.7 U*	*2.7 U*	*3.5 U*	*4.6 U*	*2 U*	*2.1 U*
Total Chlordane (U = 0)	*1.6 U*	*1.3 U*	*0.99 U*	*1.6 U*	*2.1 U*	*2.2 U*	*1.2 U*	*1.3 U*
Total DDx (U = 0)	*4.8 U*	*3.9 U*	*2.9 U*	*4.8 U*	*6.2 U*	**55**	*3.6 U*	*3.7 U*

Table B8
Soil and Sediment Sample Analytical Results for Pesticides (2017)

Notes:
Detected concentration is greater than one or more listed Human Health Comparative Values
Detected concentration is greater than one or more Ecological Habitat Comparative Values
Italics: non-detected concentration is above one or more identified screening levels
Bold: Detected result
Results reported in dry weight basis.
Totals are calculated by Anchor QEA as the sum of all detected results (U=0). If all results are not detected, the highest method detection limit value is reported as the sum.
Total BHC is the sum of alpha-, beta-, delta-, and gamma-hexachlorocyclohexane (BHC).
Total chlordane is the sum of alpha-chlordane and gamma-chlordane.
Total DDx is the sum of 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT.
Source: Northgate 2017a; totals calculated by Anchor QEA
1. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. January 2019.
2. United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
3. TTLC: Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.
4. A 90% Upper Threshold Limit (UTL) calculated in ProUCL v5.0 using the 2003-2012 data provided in the Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
5. Ambient for San Francisco Bay sediments, 2007-2012, Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
6. ER-L: Effects Range Low. Long, E.R., D.D. MacDonald, S. L. Smith, and F.D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
7. ER-M: Effects Range-Median. Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
--: results not reported or not applicable
µg/kg: micrograms per kilogram
BHC: benzenehexachloride or hexachlorocyclohexane (HCH)
ft: feet
J: Estimated value
mg/kg: milligrams per kilogram
pct: percent
SE: sediment matrix
SO: soil matrix
U: Compound analyzed, but not detected above detection limit

Table B9
Soil Sample Analytical Results for Volatile Organic Compounds (2017)

					Task	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP
					Location Name	INN-SB-1	INN-SB-14	INN-SB-23	INN-SB-26	INN-SB-29	INN-SB-3
					Sample Name	INN-SB-1-4.5	INN-SB-14-3.5	INN-SB-23-9.0	INN-SB-26-3.5	INN-SB-29-3.5	INN-SB-3-4.5
					Sample Date	12/14/2016	12/16/2016	12/16/2016	12/16/2016	12/9/2016	12/30/2016
					Depth	4 - 5 ft	3 - 4 ft	8 - 10 ft	3 - 4 ft	3 - 4 ft	4 - 5 ft
					Matrix	SO	SO	SO	SO	SO	SO
	Method	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]						
Conventional Parameters (pct)											
Moisture, percent	D2216	--	--	--	--	**16**	**16**	**17**	**18**	**9**	**16**
Volatile Organics (µg/kg)											
1,2,4-Trimethylbenzene	SW8260B	--	--	--	24,000	0.6 U	8.4 U	8.5 U	**99**	0.6 U	0.7 U
1,3,5-Trimethylbenzene (Mesitylene)	SW8260B	--	--	--	780,000	0.5 U	56 U	57 U	**40 J**	0.6 U	0.5 U
Acetone	SW8260B	61,000,000	670,000,000	270,000,000	61,000,000	**6.3 J**	200 U	200 U	**180 J**	3.3 U	3.4 U
Carbon disulfide	SW8260B	--	--	--	770,000	0.5 U	44 U	44 U	**54 J**	0.7 U	1.1 U
Cymene, p- (4-Isopropyltoluene)	SW8260B	--	--	--	--	0.4 U	**280 J**	**13 J**	**790**	0.6 U	0.5 U
Dichloromethane (Methylene chloride)	SW8260B	1,900	25,000	490,000	57,000	3.9 U	61 U	62 U	14 U	1.1 U	1.3 U
Ethylbenzene	SW8260B	5,900	26,000	540,000	5,800	0.5 U	14 U	14 U	**17 J**	0.7 U	0.6 U
Isopropylbenzene (Cumene)	SW8260B	--	--	--	--	0.5 U	**270 J**	14 U	**13 J**	0.6 U	0.5 U
m,p-Xylene	SW8260B	--	--	--	550,000	1.2 U	24 U	25 U	**21 J**	1.4 U	0.8 U
Methyl ethyl ketone (2-Butanone)	SW8260B	27,000,000	200,000,000	120,000,000	27,000,000	1.2 U	46 U	47 U	**22 J**	1.3 U	1.5 U
Naphthalene	SW8260B	3,800	17,000	400,000	3,800	0.71 U	**3800**	**650**	**1600**	0.99 U	0.7 U
n-Butylbenzene	SW8260B	--	--	--	3,900,000	0.6 U	**750**	17 U	4.6 U	0.6 U	0.7 U
n-Propylbenzene	SW8260B	--	--	--	3,800,000	0.5 U	**620**	13 U	**16 J**	0.7 U	0.6 U
o-Xylene	SW8260B	--	--	--	650,000	0.5 U	**30 J**	16 U	**16 J**	0.6 U	0.6 U
tert-Butylbenzene	SW8260B	--	--	--	7,800,000	0.5 U	**46 J**	**33 J**	4.9 U	0.7 U	0.6 U

Table B9
Soil Sample Analytical Results for Volatile Organic Compounds (2017)

	IndiaBasin-2017RAP INN-SB-34 INN-SB-34-3.5 12/9/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-40 INN-SB-40-3.5 12/21/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-41 INN-SB-41-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-9 INN-SB-9-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-GW-4 INN-SB-GW-4-3.5 12/14/2016 3 - 4 ft SO
Conventional Parameters (pct)					
Moisture, percent	**13**	**36**	**15**	**17**	**15**
Volatile Organics (µg/kg)					
1,2,4-Trimethylbenzene	0.7 U	0.9 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	0.7 U	0.9 U	0.5 U	0.5 U	0.5 U
Acetone	3.6 U	**49**	4.3 U	**7 J**	4.1 U
Carbon disulfide	0.7 U	**2.1 J**	0.5 U	0.5 U	0.5 U
Cymene, p- (4-Isopropyltoluene)	0.7 U	0.9 U	0.4 U	0.4 U	0.4 U
Dichloromethane (Methylene chloride)	1.2 U	**4.6 J**	3.7 U	3.9 U	3.5 U
Ethylbenzene	0.8 U	1 U	0.5 U	0.5 U	0.4 U
Isopropylbenzene (Cumene)	0.7 U	0.9 U	0.4 U	0.4 U	0.4 U
m,p-Xylene	1.5 U	2 U	1.1 U	1.2 U	1.1 U
Methyl ethyl ketone (2-Butanone)	1.4 U	**8.2 J**	1.2 U	1.2 U	1.1 U
Naphthalene	1.03 U	**13**	0.71 U	0.72 U	0.71 U
n-Butylbenzene	0.6 U	0.9 U	0.6 U	0.6 U	0.6 U
n-Propylbenzene	0.7 U	1 U	0.5 U	0.5 U	0.4 U
o-Xylene	0.6 U	0.9 U	0.5 U	0.5 U	0.5 U
tert-Butylbenzene	0.8 U	1 U	0.4 U	0.5 U	0.4 U

Table B9
Soil Sample Analytical Results for Volatile Organic Compounds (2017)

Notes:
Detected concentration is greater than SFBay 2019 ESL Residential screening level
Detected concentration is greater than SFBay 2019 ESL Industrial screening level
Detected concentration is greater than SFBay 2019 ESL Construction screening level
Detected concentration is greater than USEPA 2016 Residential RSLs screening level
Italics: non-detected concentration is above one or more identified screening levels
Bold: Detected result
Results reported in dry weight basis.
Source: Northgate 2017a
1. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. January 2019.
2. United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
--: results not reported or not applicable
µg/kg: micrograms per kilogram
ft: feet
J: Estimated value
pct: percent
SO: soil matrix
U: Compound analyzed, but not detected above detection limit

Table B10
Soil Sample Analytical Results for Maher Ordinance Constituents (Cyanide, Hexavalent Chromium, Fluoride, and pH) (2017)

						Task	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP	IndiaBasin-2017RAP
						Location Name	INN-SB-1	INN-SB-11	INN-SB-19	INN-SB-34	INN-SB-34	INN-SB-4
						Sample Name	INN-SB-1-4.5	INN-SB-11-4.0	INN-SB-19-0.5	INN-SB-34-0.5	INN-SB-34-3.5	INN-SB-4-0.5
						Sample Date	12/14/2016	12/14/2016	12/14/2016	12/9/2016	12/9/2016	12/16/2016
						Depth	4 - 5 ft	3 - 5 ft	0 - 0.5 ft	0 - 0.5 ft	3 - 4 ft	0 - 0.5 ft
						Matrix	SO	SO	SO	SO	SO	SO
	Method	SFBay 2019 ESL Residential [1]	SFBay 2019 ESL Industrial [1]	SFBay 2019 ESL Construction [1]	USEPA 2016 Residential RSLs [2]	TTLC [3]						
Conventional Parameters												
Moisture, percent	D2216	--	--	--	--	--	**16**	**19**	**18**	**12**	**13**	**10**
Cyanide (mg/kg)	SM4500CNE	5.5	25	22	23	--	0.06 U	**0.13 J**	0.06 U	**0.17 J**	**0.26 J**	**0.48 J**
Chromium VI (mg/kg)	SW7196A	0.3	6.2	2.8	0.3	500	**0.33 J**	**2.1**	**0.31 J**	**0.23 J**	**0.26 J**	**0.5**
Fluoride (mg/kg)	E300.0	--	--	--	3000	18000	0.2 U	**1.6**	**0.33 J**	**2.2**	**2**	**1.2**
pH (unitless)	SW9040C	--	--	--	--	--	**7.3**	**7.4**	**6.9**	**8.1**	**8.1**	**7.3**

Table B10
Soil Sample Analytical Results for Maher Ordinance Constituents (Cyanide, Hexavalent Chromium, Fluoride, and pH) (2017)

	IndiaBasin-2017RAP INN-SB-40 INN-SB-40-0.5 12/21/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-40 INN-SB-40-3.5 12/21/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-41 INN-SB-41-0.5 12/14/2016 0 - 0.5 ft SO	IndiaBasin-2017RAP INN-SB-41 INN-SB-41-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-6 INN-SB-6-3.5 12/16/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-9 INN-SB-9-3.5 12/14/2016 3 - 4 ft SO	IndiaBasin-2017RAP INN-SB-GW-4 INN-SB-GW-4-0.5 12/14/2016 0 - 0.5 ft SO
Conventional Parameters							
Moisture, percent	**21**	**36**	**7**	**15**	**23**	**17**	**10**
Cyanide (mg/kg)	**0.11 J**	**1.8**	0.05 U	**0.12 J**	**0.09 J**	0.06 U	**0.06 J**
Chromium VI (mg/kg)	0.16 U	0.2 U	**0.31 J**	**0.56**	**0.32 J**	**0.27 J**	**0.41 J**
Fluoride (mg/kg)	**1.8**	**1.4 J**	**3.7**	**2.1**	0.2 U	**0.44 J**	**1.5**
pH (unitless)	**8.6**	**8.5**	**8.6**	**8**	**6.8**	**7**	**8.4**

Table B10

Soil Sample Analytical Results for Maher Ordinance Constituents (Cyanide, Hexavalent Chromium, Fluoride, and pH) (2017)

Notes:

Detected concentration is greater than SFBay 2019 ESL Residential screening level

Detected concentration is greater than SFBay 2019 ESL Industrial screening level

Detected concentration is greater than SFBay 2019 ESL Construction screening level

Detected concentration is greater than USEPA 2016 Residential RSLs screening level

Detected concentration is greater than TTLC screening level

Italics: non-detected concentration is above one or more identified screening levels

Bold: Detected result

Results reported in dry weight basis.

Source: Northgate 2017a

1. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. January 2019.

2. United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.

3. TTLC: Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.

--: results not reported or not applicable

ft: feet

J: Estimated value

mg/kg: milligrams per kilogram

pct: percent

SO: soil matrix

U: Compound analyzed, but not detected above detection limit

Table B11
Sediment Sample Analytical Results for Total Organic Carbon and Organotins (2017)

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (feet bgs)	Analyte	Moisture, Percent	Total Organic Carbon	Organotins			
						Dibutyltin	Monobutyltin	Tetrabutyltin	Tributyltin (cation)
			Units	%	%	µg/kg	µg/kg	µg/kg	µg/kg
			Laboratory Method	ASTM D2216/CLP	Walkley-Black	Krone et al.	Krone et al.	Krone et al.	Krone et al.
			Sample Date						
INN-SE-1-1.0	0 to 1	1.0	3/13/2017	48	1.8	110	< 2.7 ND	< 1.4 ND	18
INN-SE-2-1.0	0 to 1	1.0	3/13/2017	56	1.4	70	< 3.2 ND	< 1.7 ND	12
INN-SE-3-1.0	0 to 1	1.0	3/13/2017	38	1.2	1,600	120	21	1,200
INN-SE-4-1.0	0 to 1	1.0	3/13/2017	63	1.8	30	< 3.8 ND	< 2.0 ND	< 4.1 ND
INN-SE-5-1.0	0 to 1	1.0	3/13/2017	53	1.6	77	< 3.0 ND	< 1.6 ND	18
INN-SE-6-1.0	0 to 1	1.0	3/13/2017	39	na	< 1.2 ND	< 2.3 ND	< 1.2 ND	< 2.5 ND
INN-SE-7-1.0	0 to 1	1.0	3/14/2017	62	na	19	< 3.7 ND	< 1.9 ND	< 3.9 ND
INN-SE-8-1.0	0 to 1	1.0	3/14/2017	41	na	8.3	< 2.4 ND	< 1.3 ND	6.6
INN-SE-9-1.0	0 to 1	1.0	3/14/2017	59	na	370	46	< 1.8 ND	41
INN-SE-11-1.0	0 to 1	1.0	3/14/2017	49	na	710	47	< 1.5 ND	120
INN-SE-12-1.0	0 to 1	1.0	3/14/2017	51	na	1,900	150	10	1,300
Data Statistics									
				Sample Count	5	11	11	11	11
				Frequency of Detection (%)	100%	91%	36%	18%	73%
				Maximum	1.8	1,900	150	21	1,300
				Minimum	1.2	< 1.2	< 2.3	< 1.2	< 2.5
				Mean [1]	1.6	445.0	34.0	3.5	247.4
Human Health Comparative Values									
				SFRWQCB 2019 Residential Direct Exposure ESLs [2]	ne	ne	ne	ne	ne
				SFRWQCB 2019 Commercial Direct Exposure ESLs [2]	ne	ne	ne	ne	ne
				SFRWQCB 2019 Construction Worker Direct Exposure ESLs [2]	ne	ne	ne	ne	ne
				USEPA 2016 Residential RSLs [3]	ne	19,000	ne	ne	19,000
				TTLC [4]	**ne**	**ne**	**ne**	**ne**	**ne**
Ecological Habitat Comparative Values (Sediment Only)									
				San Francisco Bay Ambient 90 % UTL [5]	ne	ne	ne	ne	ne
				San Francisco Bay Ambient Average [6]	ne	ne	ne	ne	ne
				Effects Range - Low (ER-L) [7]	ne	ne	ne	ne	ne
				Effects Range - Median (ER-M) [8]	ne	ne	ne	ne	ne

Notes:
Bold indicates an individual sample location result exceeds the 2019 Residential Direct Exposure ESL.
Red Bolded indicates an individual sample location exceeds the TTLC where established.
Values are listed as dry weight unless otherwise noted.
Source: Northgate 2017a
1. Mean calculated using half the detection limit value for non-detects.

Table B11
Sediment Sample Analytical Results for Total Organic Carbon and Organotins (2017)

2. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. January 2019.
3. United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
4. TTLC: Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.
5. A 90% Upper Threshold Limit (UTL) calculated in ProUCL v5.0 using the 2003-2012 data provided in the Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
6. Ambient concentrations for San Francisco Bay Sediments 2007-2012. Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
7. ER-L: Effects Range Low. Long, E.R., D.D. MacDonald, S. L. Smith, and F.D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
8. ER-M: Effects Range-Median. Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97

bgs: below ground surface
J: estimated value
mg/kg: milligrams per kilogram
na: not analyzed
ND: not detected above the method detection limit (< MDL)
ne: not established

Table B12
Soil Sample Analytical Results for Selected Soluble Metals, Wet Weight (2017)

Sample ID	Sample Depth (feet bgs)	Analyte	Metals (Wet Weight Basis)					
			Lead	Lead - STLC	Lead - TCLP	Mercury	Mercury - STLC	Mercury - TCLP
		Units	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/L
		Laboratory Method	EPA 6010B	EPA 6010B	EPA 6010B	EPA 7471A	EPA 7471A	EPA 7471A
		Sample Date						
Northgate 2016/2017 Data								
INN-SB-14-4.5	4.5	3/13/2017	**1,900**	na	0.017 J	1.0	na	na
INN-SB-15-4.0	4.0	3/13/2017	**1,000**	na	1.70	0.14	na	na
INN-SB-22-3.5	3.5	3/13/2017	**1,300**	na	0.24	1.2	na	na
INN-SB-24-1.0	1.0	3/13/2017	**3,800**	na	**5.70**	18	na	na
INN-SB-25-1.0	1.0	3/13/2017	**2,000**	na	1.80	1.4	na	na
INN-SB-26-0.5	0.5	3/14/2017	**13,000**	na	0.55	**139**	na	0.00087 J
INN-SB-26-3.5	3.5	3/14/2017	**1,400**	na	1.70	3.8	na	na
Selected Weston/URS 2015 Data								
SS-1-1	1.0	2015	120	4.1	< 0.050	3.2	0.0050 J	na
SS-2-1	1.0	2015	410	**40**	**13**	1.8	na	na
SS-4-0.5	0.5	2015	350	**24**	0.16	**88**	na	0.0020 J
SS-4-1	1.0	2015	**1,600**	na	< 0.050	9.1	0.0050 J	< 0.0020
SS-7-0.5	0.5	2015	580	4.8	< 0.050	2.3	0.0050 J	na
SS-8-1	1.0	2015	600	< 0.050	< 0.050	10	0.0050 J	< 0.0020
SS-9-1	1.0	2015	540	< 0.050	< 0.050	**23**	na	0.0020 J
SS-10-1	1.0	2015	63	2.0	na	4.6	0.0050 J	0.0020 J
Waste Characterization Standards								
		TTLC (mg/kg) [1]	**1,000**	**1,000**	**1,000**	**20**	**20**	**20**
		STLC (mg/L) [2]	**5**	**5**	**5**	**0.2**	**0.2**	**0.2**
		TCLP (mg/L) [3]	**5**	**5**	**5**	**0.2**	**0.2**	**0.2**

Notes:
Red Bolded indicates an individual sample location exceeds the TTLC or STLC where established.
Highlighted indicates an individual sample location exceeds the TCLP where established.
Values are listed as dry weight unless otherwise noted.
Source: Northgate 2017a
1. TTLC: Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.
2. STLC = Soluble Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24.
3. TCLP = Toxicity Characteristic Leaching Procedure for defining a waste as a characteristic hazardous waste. TCLP values are from CFR, Title 40, Chapter 1, Subchapter 1, Part 261, Subpart C, Section 261.24.
<: Analyte was not detected above the method detection limit (< MDL)
bgs: below ground surface
J: estimated value
mg/kg: milligrams per kilogram
mg/L: milligrams per liter
na: not analyzed

Table B13

India Basin Shoreline Park Sediment Sample Analytical Results for Metals (2017)

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (feet bgs)	Sample Type	Analyte	Moisture, Percent	Metals																
				Units	%	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
				Laboratory Method	ASTM D2216/CLP	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
				Sample Date		EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 7471A	EPA 6010B	EPA 6010B	EPA 6010B/6020	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
IBSP-SE-1-1.0	0 to 1	1.0	Sediment	3/14/2017	54	< 0.31 ND	5.2	70	0.58 J	0.85	120	15	74	65	0.44	0.45 J	140	< 0.54 ND	< 0.12 ND	< 0.36 ND	74	140
IBSP-SE-2-1.0	0 to 1	1.0	Sediment	3/15/2017	39	< 0.23 ND	3.3	50	0.38 J	0.53	79	11	54	51	< 0.0076 ND	< 0.095 ND	84	< 0.39 ND	< 0.086 ND	< 0.26 ND	55	97
IBSP-SE-3-1.0	0 to 1	1.0	Sediment	3/15/2017	46	< 0.23 ND	3.5	43	0.45 J	0.43 J	76	11	46	34	1.30	< 0.098 ND	89	< 0.40 ND	< 0.089 ND	< 0.27 ND	56	89
IBSP-SE-4-1.0	0 to 1	1.0	Sediment	3/15/2017	44	< 0.24 ND	9.1	66	0.45 J	1.00	110	15	82	**85**	0.68	0.12 J	160	< 0.40 ND	< 0.089 ND	< 0.27 ND	59	150
IBSP-SE-5-1.0	0 to 1	1.0	Sediment	3/15/2017	22	< 0.15 ND	14	64	0.36 J	1.10	120	16	110	**100**	0.38	0.69	200	0.44 J	< 0.059 ND	< 0.18 ND	49	140
IBSP-SE-6-1.0	0 to 1	1.0	Sediment	3/14/2017	65	< 0.40 ND	2.2	61	0.77 J	0.60 J	100	14	100	55	0.59	< 0.17 ND	90	< 0.68 ND	< 0.15 ND	< 0.45 ND	92	160
IBSP-SE-7-1.0	0 to 1	1.0	Sediment	3/14/2017	37	< 0.23 ND	6.3	30	0.37 J	0.44	98	12	39	29	0.17	0.20 J	110	< 0.39 ND	< 0.086 ND	< 0.26 ND	55	80
IBSP-SE-8-1.0	0 to 1	1.0	Sediment	3/14/2017	60	< 0.34 ND	3.6	57	0.66 J	0.47 J	92	13	120	53	0.57	< 0.14 ND	85	< 0.59 ND	< 0.13 ND	< 0.39 ND	83	140
Data Statistics																						
Sample Count						8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Frequency of Detection (%)						0%	100%	100%	100%	100%	100%	100%	100%	100%	88%	50%	100%	13%	0%	0%	100%	100%
Maximum						< 0.4	14	70	0.77	1.10	120	16	120	**100**	1.30	0.69	200	< 0.68	< 0.15	< 0.45	92	160
Minimum						< 0.15	2.2	30	0.36	0.43	76	11	39	29	< 0.0076	< 0.095	84	< 0.39	< 0.059	< 0.18	49	80
Mean [1]						0.13	5.90	55.13	0.50	0.68	99.38	13.38	78.13	59	0.52	0.21	119.8	0.27	0.05	0.15	65.38	124.5
Human Health Comparative Values																						
SFRWQCB 2019 Residential Direct Exposure ESLs [2]						**11**	0.067	**15,000**	**16**	**78**	**120,000**	23	**3,100**	**80**	**13.0**	**390**	820	**390**	**390**	0.78	**390**	**23,000**
SFRWQCB 2019 Commercial Direct Exposure ESLs [2]						160	0.31	220,000	230	1100	1,800,000	350	47,000	320	190.0	5,800	11,000	5,800	5,800	12	5,800	350,000
SFRWQCB 2019 Construction Worker Direct Exposure ESLs [2]						50	0.98	3,000	27	51	530,000	28	14,000	160	44.0	1,800	86	1,700	1,800	3.5	470	110,000
USEPA 2016 Residential RSLs [3]						**31**	0.68	**15,000**	160	71.0	**120,000**	23	**3,100**	400	11.0	**390**	820	**390**	**390**	0.78	390	**23,000**
LBNL Background Values [4]						< 6	**24**	410	1.0	5.6	120	25	63	43	0.42	4.8	272	4.9	2.9	**10**	90	140
Local Hunters Point Site Background (2009) [5]						ne	ne	ne	ne	ne	464.24	**84**	ne	ne	ne	ne	**1581.81**	ne	ne	ne	ne	ne
TTLC [6]						**500**	**500**	**10,000**	**75**	**100**	**2,500**	**8,000**	**2,500**	**1,000**	**20.0**	**3,500**	**2,000**	**100**	**500**	**700**	**2,400**	**5,000**
Ecological Habitat Comparative Values (Sediment Only)																						
San Francisco Bay Ambient 90 % UTL [7]						ne	13.9	103	ne	0.33	141	20.1	53.9	25.1	0.33	0.75	98.3	0.36	0.32	ne	ne	136
San Francisco Bay Ambient Average [8]						ne	8.74	66.8	ne	0.21	98	14.7	39	19.5	0.33	0.50	78.5	0.23	0.19	ne	ne	103.8
Effects Range - Low (ER-L) [9]						ne	8.2	ne	ne	1.2	81	ne	34	46.7	0.15	ne	20.9	ne	1.0	ne	ne	150
Effects Range - Median (ER-M) [10]						ne	70	ne	ne	9.6	370	ne	270	218	0.71	ne	51.6	ne	3.7	ne	ne	410

Notes:

Bold indicates an individual sample location result exceeds the 2019 Residential Direct Exposure ESL, or background concentration, whichever is greater.

Highlighted indicates an individual sample location result exceeds the 2019 Commercial Direct Exposure ESL, or the 2019 Construction Worker Direct Exposure ESL, whichever is lower.

Red Bolded indicates an individual sample location exceeds the TTLC where established.

Light stippling indicates value equals or exceeds the ER-L or S.F. Bay Ambient 90%UTL, whichever is higher.

Dark stippling indicates value equals or exceeds the ER-M or S.F. Bay Ambient 90%UTL, whichever is higher.

Values are listed as dry weight unless otherwise noted.

Source: Northgate 2017c

1. Mean calculated using half the detection limit value for non-detects.
2. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. January 2019.
3. United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
4. Lawrence Berkeley National Laboratory (LBNL) Analysis of Background Distributions of Metals in Bay Area Regional Soils, Upper Estimate Values, 2009.
5. Final Remediation Investigation Report, Hunters Point Power Plant, San Francisco, CA, TRC, 2009
6. TTLC: Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.
7. A 90% Upper Threshold Limit (UTL) calculated in ProUCL v5.0 using the 2003-2012 data provided in the Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
8. Ambient for San Francisco Bay sediments, 2007-2012, Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
9. ER-L: Effects Range Low. Long, E.R., D.D. MacDonald, S. L. Smith, and F.D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
10. ER-M: Effects Range-Median. Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.

b: Lab case narrative notes a calibration bias for this result OR sample was prepared outside of hold time

bgs: below ground surface

J: estimated value

mg/kg: milligrams per kilogram

ND: not detected above the method detection limit (< MDL)

ne: not established

Table B14
India Basin Shoreline Park Sediment Sample Analytical Results for Polychlorinated Biphenyls (2017)

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (feet bgs)	Sample Type	Analyte	Moisture, Percent	PCBs							
						Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Total PCBs
				Units	%	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
				Laboratory Method	ASTM D2216/CLP	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	(sum of Aroclors)
				Sample Date									
IBSP-SE-1-1.0	0 to 1	1.0	Sediment	3/14/2017	54	< 2.6 ND	< 6.9 ND	< 3.4 ND	< 3.1 ND	< 3.3 ND	53	120	173
IBSP-SE-2-1.0	0 to 1	1.0	Sediment	3/15/2017	39	< 1.9 ND	< 5.2 ND	< 2.6 ND	< 2.4 ND	< 2.5 ND	96	120	216
IBSP-SE-3-1.0	0 to 1	1.0	Sediment	3/15/2017	46	< 2.2 ND	< 5.9 ND	< 2.9 ND	< 2.6 ND	< 2.8 ND	17	27	44
IBSP-SE-4-1.0	0 to 1	1.0	Sediment	3/15/2017	44	< 2.1 ND	< 5.7 ND	< 2.8 ND	< 2.6 ND	< 2.7 ND	39	69	108
IBSP-SE-5-1.0	0 to 1	1.0	Sediment	3/15/2017	22	< 1.5 ND	< 4.1 ND	< 2.0 ND	< 1.8 ND	< 2.0 ND	18	34	52
IBSP-SE-6-1.0	0 to 1	1.0	Sediment	3/14/2017	65	< 3.4 ND	< 9.1 ND	< 4.4 ND	< 4.1 ND	< 4.4 ND	< 3.5 ND	90	90
IBSP-SE-7-1.0	0 to 1	1.0	Sediment	3/14/2017	37	< 9.3 ND	< 25 ND	< 12 ND	< 11 ND	< 12 ND	45	110	155
IBSP-SE-8-1.0	0 to 1	1.0	Sediment	3/14/2017	60	< 2.9 ND	< 7.9 ND	< 3.8 ND	< 3.5 ND	< 3.8 ND	64	190	**254**
Data Statistics													
				Sample Count		8	8	8	8	8	8	8	8
				Frequency of Detection (%)		0%	0%	0%	0%	0%	88%	100%	100%
				Maximum		< 9.3	< 25	< 12	< 11	< 12	96	190	**254**
				Minimum		< 1.5	< 4.1	< 2.0	< 1.8	< 2.0	< 3.5	27	44
				Mean [1]		1.62	4.36	2.12	1.94	2.09	41.72	95.00	136.5
Human Health Comparative Values													
				SFRWQCB 2019 Residential Direct Exposure ESLs [2]		ne	ne	ne	ne	ne	ne	ne	**230**
				SFRWQCB 2019 Commercial Direct Exposure ESLs [2]		ne	ne	ne	ne	ne	ne	ne	940
				SFRWQCB 2019 Construction Worker Direct Exposure ESLs [2]		ne	ne	ne	ne	ne	ne	ne	5,500
				USEPA 2016 Residential RSLs [3]		4,100	200	170	230	230	240	240	ne
				TTLC [4]		ne	ne	ne	ne	ne	ne	ne	**50,000**
Ecological Habitat Comparative Values (Sediment Only)													
				San Francisco Bay Ambient 90 % UTL [5]		ne	ne	ne	ne	ne	ne	ne	18
				San Francisco Bay Ambient Average [6]		ne	ne	ne	ne	ne	ne	ne	9
				Effects Range - Low (ER-L) [7]		ne	ne	ne	ne	ne	ne	ne	22.7
				Effects Range - Median (ER-M) [8]		ne	ne	ne	ne	ne	ne	ne	180

Notes:
Bold indicates an individual sample location result exceeds the 2019 Residential Direct Exposure ESL.
Highlighted indicates an individual sample location result exceeds the 2019 Commercial Direct Exposure ESL.
Red Bolded indicates an individual sample location exceeds the TTLC where established.
Light stippling indicates value equals or exceeds the ER-L or SF Bay Ambient 90%UTL, whichever is higher.
Dark stippling indicates value equals or exceeds the ER-M or SF Bay Ambient 90%UTL, whichever is higher.
Values are listed as dry weight unless otherwise noted.
Source: Northgate 2017c; totals calculated by Anchor QEA
1. Mean calculated using half the detection limit value for non-detects.
2. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. January 2019.
3. United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.

Table B14
India Basin Shoreline Park Sediment Sample Analytical Results for Polychlorinated Biphenyls (2017)

4. TTLC: Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.
5. A 90% Upper Threshold Limit (UTL) calculated in ProUCL v5.0 using the 2003-2012 data provided in the Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
6. Ambient for San Francisco Bay sediments, 2007-2012, Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
7. ER-L: Effects Range Low. Long, E.R., D.D. MacDonald, S. L. Smith, and F.D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
8. ER-M: Effects Range-Median. Long, E.R., D.D. MacDonald, S. L. Smith, and F.D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.

µg/kg: micrograms per kilogram
bgs: below ground surface
J: estimated value
ND: not detected above the method detection limit (< MDL)
ne: not established

Table B15
India Basin Shoreline Park Sediment Sample Analytical Results for Total Petroleum Hydrocarbons (2017)

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (feet bgs)	Sample Type	Analyte	Moisture, Percent	TPH	
						Diesel C10-C24	Motor Oil C24-C36
				Units	%	mg/kg	mg/kg
				Laboratory Method	ASTM D2216/CLP	EPA 8015	EPA 8015
				Sample Date			
IBSP-SE-1-1.0	0 to 1	1.0	Sediment	3/14/2017	54	150 Y	440
IBSP-SE-2-1.0	0 to 1	1.0	Sediment	3/15/2017	39	110 Y	260
IBSP-SE-3-1.0	0 to 1	1.0	Sediment	3/15/2017	46	35 Y	100
IBSP-SE-4-1.0	0 to 1	1.0	Sediment	3/15/2017	44	85 Y	220
IBSP-SE-5-1.0	0 to 1	1.0	Sediment	3/15/2017	22	170 Y	270
IBSP-SE-6-1.0	0 to 1	1.0	Sediment	3/14/2017	65	28 Y	74
IBSP-SE-7-1.0	0 to 1	1.0	Sediment	3/14/2017	37	28 Y	100
IBSP-SE-8-1.0	0 to 1	1.0	Sediment	3/14/2017	60	30 Y	83
Data Statistics							
					Sample Count	8	8
					Frequency of Detection	100%	100%
					Maximum	170	440
					Minimum	28	74
					Mean [1]	79.50	193.4
Human Health Comparative Values							
					SFRWQCB 2019 Residential Direct Exposure ESLs [2]	**260**	**12,000**
					SFRWQCB 2019 Commercial Direct Exposure ESLs [2]	1,200	180,000
					SFRWQCB 2019 Construction Worker Direct Exposure ESLs [2]	1,100	54,000
					USEPA 2016 Residential RSLs [3]	520	230,000
					TTLC [4]	**ne**	**ne**
Ecological Habitat Comparative Values (Sediment Only)							
					San Francisco Bay Ambient 90 % UTL [5]	ne	ne
					San Francisco Bay Ambient Average [6]	ne	ne
					Effects Range - Low (ER-L) [7]	ne	ne
					Effects Range - Median (ER-M) [8]	ne	ne

Notes:
Bold indicates an individual sample location result exceeds the 2019 Residential Direct Exposure ESL.
Highlighted indicates an individual sample location result exceeds the 2019 Construction Worker Direct Exposure ESL.
Red Bolded indicates an individual sample location exceeds the TTLC where established.
Values are listed as dry weight unless otherwise noted.
Source: Northgate 2017c
1. Mean calculated using half the detection limit value for non-detects.
2. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. January 2019.
3. United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
4. TTLC: Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.
5. A 90% Upper Threshold Limit (UTL) calculated in ProUCL v5.0 using the 2003-2012 data provided in the Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
6. Ambient for San Francisco Bay sediments, 2007-2012, Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).

Table B15
India Basin Shoreline Park Sediment Sample Analytical Results for Total Petroleum Hydrocarbons (2017)

7. ER-L: Effects Range Low. Long, E.R., D.D. MacDonald, S. L. Smith, and F.D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
8. ER-M: Effects Range-Median. Long, E.R., D.D. MacDonald, S. L. Smith, and F.D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.

b: Lab case narrative notes a calibration bias for this result OR sample was prepared outside of hold time
bgs: Below ground surface
mg/kg: milligrams per kilogram
ND: not detected above the method detection limit (< MDL)
ne: not established
SGCU: silica gel cleanup
Y: Sample exhibits chromatographic pattern which does not resemble standard.

Table B16
India Basin Shoreline Park Sediment Sample Analytical Results for Polyaromatic Hydrocarbons (2017)

Sample ID	Depth from Existing Surface (feet bgs)	Sample Depth (feet bgs)	Sample Type	Analyte / Units / Laboratory Method / Sample Date	Moisture, Percent	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a)pyrene	Benzo(b) fluoranthene
				Units	%	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
				Laboratory Method	ASTM D2216/CLP	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM
IBSP-SE-1-1.0	0 to 1	1.0	Sediment	3/14/2017	54	< 27 ND	140	310	740	**900**	830
IBSP-SE-2-1.0	0 to 1	1.0	Sediment	3/15/2017	39	< 27 ND	37 J	73 J	240	**380**	360
IBSP-SE-3-1.0	0 to 1	1.0	Sediment	3/15/2017	46	< 19 ND	32 J	53 J	180	**320**	290
IBSP-SE-4-1.0	0 to 1	1.0	Sediment	3/15/2017	44	21 J	92	220	470	**790**	750
IBSP-SE-5-1.0	0 to 1	1.0	Sediment	3/15/2017	22	49	190	410	**1100**	**1600**	**1400**
IBSP-SE-6-1.0	0 to 1	1.0	Sediment	3/14/2017	65	< 28 ND	< 28 ND	< 28 ND	76 J	**170**	190
IBSP-SE-7-1.0	0 to 1	1.0	Sediment	3/14/2017	37	< 16 ND	< 16 ND	< 16 ND	30 J	51 J	52 J
IBSP-SE-8-1.0	0 to 1	1.0	Sediment	3/14/2017	60	< 25 ND	< 25 ND	29 J	69 J	**110** J	130
Data Statistics											
Sample Count						8	8	8	8	8	8
Frequency of Detection (%)						25%	63%	75%	100%	100%	100%
Maximum						49	190	410	**1100**	**1600**	**1400**
Minimum						< 16	< 16	< 16	30	51	52.0
Mean [1]						17.625	65.688	139.625	363.125	**540.125**	500.25
Human Health Comparative Values											
SFRWQCB 2019 Residential Direct Exposure ESLs [2]						**3,600,000**	ne	**18,000,000**	**1,100**	**110**	**1,100**
SFRWQCB 2019 Commercial Direct Exposure ESLs [2]						45,000,000	ne	230,000,000	20,000	2,100	21,000
SFRWQCB 2019 Construction Worker Direct Exposure ESLs [2]						10,000,000	ne	50,000,000	110,000	10,000	110,000
USEPA 2016 Residential RSLs [3]						3,600,000	ne	1,800,000	160	16	160
DTSC B(a)P Ambient Conditions for Northern California [4]						ne	ne	ne	ne	ne	ne
TTLC [5]						**ne**	**ne**	**ne**	**ne**	**ne**	**ne**
Ecological Habitat Comparative Values (Sediment Only)											
San Francisco Bay Ambient 90 % UTL [6]						14	33	80	212	428	227
San Francisco Bay Ambient Average [7]						7	19	38	96	175	125
Effects Range - Low (ER-L) [8]						16	44	85.3	261	430	ne
Effects Range - Median (ER-M) [9]						500	640	1100	1600	1600	ne

Table B16
India Basin Shoreline Park Sediment Sample Analytical Results for Polyaromatic Hydrocarbons (2017)

Sample ID	Depth from Existing Surface (feet bgs)	Sample Depth (feet bgs)	Sample Type	Analyte / Units / Laboratory Method / Sample Date	Moisture, Percent	PAHs						
						Benzo(g,h,i)perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene
				Units	%	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
				Laboratory Method	ASTM D2216/CLP	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM
				Sample Date								
IBSP-SE-1-1.0	0 to 1	1.0	Sediment	3/14/2017	54	700	240	840	**110** J	2300	93 J	520
IBSP-SE-2-1.0	0 to 1	1.0	Sediment	3/15/2017	39	330	94 J	300	60 J	510	28 J	220
IBSP-SE-3-1.0	0 to 1	1.0	Sediment	3/15/2017	46	300	90 J	220	41 J	370	< 19 ND	210
IBSP-SE-4-1.0	0 to 1	1.0	Sediment	3/15/2017	44	730	170	530	**110**	960	60 J	490
IBSP-SE-5-1.0	0 to 1	1.0	Sediment	3/15/2017	22	1400	350	1200	**210**	2000	120	980
IBSP-SE-6-1.0	0 to 1	1.0	Sediment	3/14/2017	65	180	61 J	110 J	< 28 ND	140 J	< 28 ND	130 J
IBSP-SE-7-1.0	0 to 1	1.0	Sediment	3/14/2017	37	52 J	17 J	37 J	< 16 ND	69 J	< 16 ND	35 J
IBSP-SE-8-1.0	0 to 1	1.0	Sediment	3/14/2017	60	100 J	45 J	110 J	< 25 ND	140	< 25 ND	73 J
Data Statistics												
					Sample Count	8	8	8	8	8	8	8
					Frequency of Detection (%)	100%	100%	100%	63%	100%	50%	100%
					Maximum	1400	350	1200	**210**	2300	120	980
					Minimum	52	17	37	< 16.0	69.0	16.0	35
					Mean [1]	474	133.4	418.375	70.69	811.125	43.13	**332.3**
Human Health Comparative Values												
					SFRWQCB 2019 Residential Direct Exposure ESLs [2]	ne	**11,000**	**110,000**	**110**	**2,400,000**	**2,400,000**	**1,100**
					SFRWQCB 2019 Commercial Direct Exposure ESLs [2]	ne	210,000	2,100,000	2,100	30,000,000	30,000,000	21,000
					SFRWQCB 2019 Construction Worker Direct Exposure ESLs [2]	ne	910,000	9,100,000	11,000	6,700,000	6,700,000	110,000
					USEPA 2016 Residential RSLs [3]	ne	1,600	16,000	16	2,400,000	2,400,000	160
					DTSC B(a)P Ambient Conditions for Northern California [4]	ne	ne	ne	ne	ne	ne	ne
					TTLC [5]	**ne**	**ne**	**ne**	**ne**	**ne**	**ne**	**ne**
Ecological Habitat Comparative Values (Sediment Only)												
					San Francisco Bay Ambient 90 % UTL [6]	416	231	252	50	620	27.1	337
					San Francisco Bay Ambient Average [7]	209	95	108	21	282	14	178
					Effects Range - Low (ER-L) [8]	ne	ne	384	63.4	600	19	ne
					Effects Range - Median (ER-M) [9]	ne	ne	2800	260	5100	540	ne

Table B16
India Basin Shoreline Park Sediment Sample Analytical Results for Polyaromatic Hydrocarbons (2017)

Sample ID	Depth from Existing Surface (feet bgs)	Sample Depth (feet bgs)	Sample Type	Analyte / Units / Laboratory Method / Sample Date	Moisture, Percent	Naphthalene	Phenanthrene	Pyrene	Total PAHs	BaP Equivalent Value
				Units	%	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
				Laboratory Method	ASTM D2216/CLP	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM	Sum	Sum
IBSP-SE-1-1.0	0 to 1	1.0	Sediment	3/14/2017	54	34 J	1700	2800	12257	**1,178.8**
IBSP-SE-2-1.0	0 to 1	1.0	Sediment	3/15/2017	39	< 27 ND	230	740	3602	494.8
IBSP-SE-3-1.0	0 to 1	1.0	Sediment	3/15/2017	46	< 19 ND	140	630	2876	413.14
IBSP-SE-4-1.0	0 to 1	1.0	Sediment	3/15/2017	44	40 J	540	1600	7573	**1,020.7**
IBSP-SE-5-1.0	0 to 1	1.0	Sediment	3/15/2017	22	65	1000	3800	15874	**2,066.4**
IBSP-SE-6-1.0	0 to 1	1.0	Sediment	3/14/2017	65	< 28 ND	50 J	290	1397	216.8
IBSP-SE-7-1.0	0 to 1	1.0	Sediment	3/14/2017	37	< 16 ND	24 J	110	477	64.77
IBSP-SE-8-1.0	0 to 1	1.0	Sediment	3/14/2017	60	< 25 ND	48 J	200	1054	142.8
Data Statistics										
					Sample Count	8	8	8	8	8
					Frequency of Detection (%)	38%	100%	100%	100%	100%
					Maximum	65	1700	3800	15874	**2066.4**
					Minimum	< 16	24.0	110.0	477	64.77
					Mean [1]	24.6	466.5	1271.25	5638.75	699.8
Human Health Comparative Values										
					SFRWQCB 2019 Residential Direct Exposure ESLs [2]	**3,800**	ne	**1,800,000**	ne	ne
					SFRWQCB 2019 Commercial Direct Exposure ESLs [2]	17,000	ne	23,000,000	ne	ne
					SFRWQCB 2019 Construction Worker Direct Exposure ESLs [2]	400,000	ne	5,000,000	ne	ne
					USEPA 2016 Residential RSLs [3]	3,800	ne	1,799,999	ne	ne
					DTSC B(a)P Ambient Conditions for Northern California [4]	ne	ne	ne	ne	**900**
					TTLC [5]	**ne**	**ne**	**ne**	**ne**	**ne**
Ecological Habitat Comparative Values (Sediment Only)										
					San Francisco Bay Ambient 90 % UTL [6]	56	176	790	ne	ne
					San Francisco Bay Ambient Average [7]	33	102	366	ne	ne
					Effects Range - Low (ER-L) [8]	160	240	665	4022	ne
					Effects Range - Median (ER-M) [9]	2100	1500	2600	44792	ne

Table B16

India Basin Shoreline Park Sediment Sample Analytical Results for Polyaromatic Hydrocarbons (2017)

Notes:

Bold indicates an individual sample location result exceeds the 2019 Residential Direct Exposure ESL, or background concentration, whichever is greater.

Highlighted indicates an individual sample location result exceeds the 2019 Commercial Direct Exposure ESL, or the 2019 Construction Worker Direct Exposure ESL, whichever is lower. For B(a)P equivalent value, comparative value from DTSC Ambient Conditions for Northern California is used.

Red Bolded indicates an individual sample location exceeds the TTLC where established.

Light stippling indicates value equals or exceeds the ER-L or S.F. Bay Ambient 90%UTL, whichever is higher.

Dark stippling indicates value equals or exceeds the ER-M or S.F. Bay Ambient 90%UTL, whichever is higher.

Values are listed as dry weight unless otherwise noted.

Source: Northgate 2017c; totals and BaP Equivalents calculated by Anchor QEA; BaP Equivalents calculated following DTSC 2009

1. Mean calculated using half the detection limit value for non-detects.

2. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. January 2019.

3. United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.

4. California Department of Toxic Substances Control (DTSC), Use of the Northern and Southern California PAH Studies in the MGP Site Cleanup Process, July 2009

5. TTLC: Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.

6. A 90% Upper Threshold Limit (UTL) calculated in ProUCL v5.0 using the 2003-2012 data provided in the Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).

7. Ambient for San Francisco Bay sediments, 2007-2012, Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).

8. ER-L: Effects Range Low. Long, E.R., D.D. MacDonald, S. L. Smith, and F.D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.

9. ER-M: Effects Range-Median. Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.

µg/kg: micrograms per kilogram

b: Lab case narrative notes a calibration bias for this result OR sample was prepared outside of hold time

BaP: benzo(a)pyrene equivalent value

bgs: below ground surface

J: estimated value

ND: not detected above the method detection limit (< MDL)

ne: not established

Table B17
India Basin Shoreline Park Sediment Sample Analytical Results for Pesticides (2017)

Sample ID	Depth from Existing Surface (feet bgs)	Sample Depth (feet bgs)	Sample Type	Analyte / Units / Laboratory Method / Sample Date	Moisture, Percent / % / ASTM D2216/CLP	4,4'-DDD µg/kg EPA 8081A	4,4'-DDE µg/kg EPA 8081A	4,4'-DDT µg/kg EPA 8081A	Total DDTs µg/kg Sum	alpha-Chlordane µg/kg EPA 8081A	gamma-Chlordane µg/kg EPA 8081A	Total Chlordanes µg/kg Sum	Endosulfan sulfate µg/kg EPA 8081A	Endrin aldehyde µg/kg EPA 8081A	Heptachlor epoxide µg/kg EPA 8081A
IBSP-SE-1-1.0	0 to 1	1.0	Sediment	3/14/2017	54	< 7.9 ND	< 6.4 ND	< 7.7 ND	< 7.9	< 2.2 ND	< 2.7 ND	< 2.7	< 5.6 ND	< 3.6 ND	< 2.4 ND
IBSP-SE-2-1.0	0 to 1	1.0	Sediment	3/15/2017	39	< 6.0 ND	< 4.8 ND	< 5.8 ND	< 6	< 1.7 ND	< 2.0 ND	< 2.0	< 4.2 ND	< 2.8 ND	< 1.8 ND
IBSP-SE-3-1.0	0 to 1	1.0	Sediment	3/15/2017	46	< 3.3 ND	< 2.7 ND	< 3.3 ND	< 3.3	< 0.95 ND	< 1.1 ND	< 1.1	< 2.4 ND	< 1.6 ND	< 1.0 ND
IBSP-SE-4-1.0	0 to 1	1.0	Sediment	3/15/2017	44	< 3.3 ND	< 2.6 ND	< 3.2 ND	< 3.3	< 0.92 ND	< 1.1 ND	< 1.1	< 2.3 ND	< 1.5 ND	< 0.98 ND
IBSP-SE-5-1.0	0 to 1	1.0	Sediment	3/15/2017	22	< 4.7 ND	< 3.8 ND	< 21 #ND	< 21	< 1.3 ND	< 1.6 ND	< 1.6	< 3.3 ND	< 2.2 ND	< 1.4 ND
IBSP-SE-6-1.0	0 to 1	1.0	Sediment	3/14/2017	65	< 5.2 ND	< 4.2 ND	< 5.1 ND	< 5.2	< 1.5 ND	< 1.8 ND	< 1.8	< 3.7 ND	< 2.4 ND	< 1.6 ND
IBSP-SE-7-1.0	0 to 1	1.0	Sediment	3/14/2017	37	< 2.9 ND	< 2.3 ND	< 2.8 ND	< 2.9	< 0.81 ND	< 0.97 ND	< 0.97	< 2.0 ND	< 1.3 ND	< 0.87 ND
IBSP-SE-8-1.0	0 to 1	1.0	Sediment	3/14/2017	60	< 4.5 ND	< 3.6 ND	< 20 #ND	< 20	< 1.3 ND	< 1.5 ND	< 1.5	< 3.2 ND	< 2.1 ND	< 1.4 ND
Data Statistics															
					Sample Count	8	8	8	8	8	8	8	8	8	8
					Frequency of Detection (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
					Maximum	< 7.9	< 6.4	< 21	< 21	< 2.2	< 2.7	< 2.7	< 5.6	< 3.6	< 2.4
					Minimum	< 2.9	< 2.3	< 2.8	< 2.9	< 0.81	< 0.97	< 0.97	< 2.0	< 1.3	< 0.87
					Mean [1]	2.36	1.9	4.306	4.4	0.7	0.8	0.8	1.7	1.1	0.7
Human Health Comparative Values															
					SFRWQCB 2019 Residential Direct Exposure ESLs [2]	**2,700**	**1,800**	**1,900**	ne	ne	ne	ne	ne	ne	**62**
					SFRWQCB 2019 Commercial Direct Exposure ESLs [2]	12,000	8,300	8,500	ne	ne	ne	ne	ne	ne	280
					SFRWQCB 2019 Construction Worker Direct Exposure ESLs [2]	81,000	57,000	57,000	ne	ne	ne	ne	ne	ne	1,900
					USEPA 2016 Residential RSLs [3]	2,300	2,000	1,900	ne	ne	ne	ne	ne	ne	70
					TTLC [4]	**1,000**	**1,000**	**1,000**	**ne**	**ne**	**ne**	**ne**	**ne**	**ne**	**ne**
Ecological Habitat Comparative Values (Sediment Only)															
					San Francisco Bay Ambient 90 % UTL [5]	1.98	1.98	0.27	4.68	ne	ne	0.34	ne	ne	ne
					San Francisco Bay Ambient Average [6]	1.16	1.35	0.168	2.96829	0.069	ne	0.21917	ne	ne	0.0023
					Effects Range - Low (ER-L) [7]	2	2.2	1	1.58	ne	ne	0.5	ne	ne	ne
					Effects Range - Median (ER-M) [8]	20	27	7	46.1	ne	ne	6	ne	ne	ne

Notes:
Bold indicates an individual sample location result exceeds the 2019 Residential Direct Exposure ESL.
Highlighted indicates an individual sample location result exceeds the 2019 Commercial Direct Exposure ESL, or the 2019 Construction Worker Direct Exposure ESL, whichever is lower.
Red Bolded indicates an individual sample location exceeds the TTLC where established.
Light stippling indicates value equals or exceeds the ER-L or SF Bay Ambient 90%UTL, whichever is higher.
Dark stippling indicates value equals or exceeds the ER-M or SF Bay Ambient 90%UTL, whichever is higher.
Values are listed as dry weight unless otherwise noted.
Only detected constituents shown.
Source: Northgate 2017c; totals calculated by Anchor QEA
1. Mean calculated using half the detection limit value for non-detects.
2. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. January 2019.
3. United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
4. TTLC: Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.
5. A 90% Upper Threshold Limit (UTL) calculated in ProUCL v5.0 using the 2003-2012 data provided in the Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
6. Ambient for San Francisco Bay sediments, 2007-2012, Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
7. ER-L: Effects Range Low. Long, E.R., D.D. MacDonald, S. L. Smith, and F.D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.

Table B17
India Basin Shoreline Park Sediment Sample Analytical Results for Pesticides (2017)

8. ER-M: Effects Range-Median. Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
#: sample was diluted due to the color of the extract
µg/kg: micrograms per kilogram
bgs: below ground surface
C: presence confirmed, but relative percent difference between columns exceeds 40%
J: estimated value
ND: not detected above the method detection limit (< MDL)
ne: not established

Table B18
India Basin Shoreline Park Sediment Sample Analytical Results for Total Organic Carbon and Organotins (2017)

Sample ID	Depth from Existing Surface (feet bgs)	Sample Depth (feet bgs)	Analyte	Moisture, Percent		Organotins			
					Total Organic Carbon	Dibutyltin	Monobutyltin	Tetrabutyltin	Tributyltin (cation)
			Units	%	%	µg/kg	µg/kg	µg/kg	µg/kg
			Laboratory Method	ASTM D2216/CLP	Walkley-Black	Krone et al.	Krone et al.	Krone et al.	Krone et al.
			Sample Date						
IBSP-SE-1-1.0	0 to 1	1.0	3/14/2017	54	1.3	17	< 3.0 ND	< 1.6 ND	< 3.3 ND
IBSP-SE-2-1.0	0 to 1	1.0	3/15/2017	39	1.3	< 1.2 ND	< 2.3 ND	< 1.2 ND	< 2.5 ND
IBSP-SE-3-1.0	0 to 1	1.0	3/15/2017	46	1.2	< 1.3 ND	< 2.6 ND	< 1.4 ND	< 2.8 ND
IBSP-SE-4-1.0	0 to 1	1.0	3/15/2017	44	1.2	21	< 2.5 ND	< 1.3 ND	7.1
IBSP-SE-5-1.0	0 to 1	1.0	3/15/2017	22	0.88	< 0.92 ND	< 1.8 ND	< 0.95 ND	< 1.9 ND
IBSP-SE-6-1.0	0 to 1	1.0	3/14/2017	65	1.7	31	< 4.0 ND	< 2.1 ND	< 4.3 ND
IBSP-SE-7-1.0	0 to 1	1.0	3/14/2017	37	0.82	< 1.2 ND	< 2.2 ND	< 1.2 ND	< 2.4 ND
IBSP-SE-8-1.0	0 to 1	1.0	3/14/2017	60	1.5	50	< 3.3 ND	< 1.8 ND	< 3.5 ND
Data Statistics									
				Sample Count	8	8	8	8	8
				Frequency of Detection (%)	100%	50%	0%	0%	13%
				Maximum	1.7	50	< 4.0	< 2.1	7.1
				Minimum	0.82	< 0.92	< 1.8	< 0.95	< 1.9
				Mean [1]	1.2	15.2	1.4	0.7	2.2
Human Health Comparative Values									
				SFRWQCB 2019 Residential Direct Exposure ESLs [2]	ne	ne	ne	ne	ne
				SFRWQCB 2019 Commercial Direct Exposure ESLs [2]	ne	ne	ne	ne	ne
				SFRWQCB 2019 Construction Worker Direct Exposure ESLs [2]	ne	ne	ne	ne	ne
				USEPA 2016 Residential RSLs [3]	ne	19,000	ne	ne	19,000
				TTLC [4]	**ne**	**ne**	**ne**	**ne**	**ne**
Ecological Habitat Comparative Values (Sediment Only)									
				San Francisco Bay Ambient 90 % UTL [5]	ne	ne	ne	ne	ne
				San Francisco Bay Ambient Average [6]	ne	ne	ne	ne	ne
				Effects Range - Low (ER-L) [7]	ne	ne	ne	ne	ne
				Effects Range - Median (ER-M) [8]	ne	ne	ne	ne	ne

Notes:
Bold indicates an individual sample location result exceeds the 2019 Residential Direct Exposure ESL.
Highlighted indicates an individual sample location result exceeds the 2019 Construction Worker Direct Exposure ESL.
Red Bolded indicates an individual sample location exceeds the TTLC where established.
Values are listed as dry weight unless otherwise noted.
Source: Northgate 2017c
1. Mean calculated using half the detection limit value for non-detects.
2. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. January 2019.
3. United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
4. TTLC: Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.
5. A 90% Upper Threshold Limit (UTL) calculated in ProUCL v5.0 using the 2003-2012 data provided in the Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).
6. Ambient for San Francisco Bay sediments, 2007-2012, Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (http://sfei.org/rmp).

Table B18

India Basin Shoreline Park Sediment Sample Analytical Results for Total Organic Carbon and Organotins (2017)

7. ER-L: Effects Range Low. Long, E.R., D.D. MacDonald, S. L. Smith, and F.D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.
8. ER-M: Effects Range-Median. Long, E.R., D.D. MacDonald, S. L. Smith, and F.D. Calder, 1995. "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." *Environ. Manage.* 19(1):81-97.

µg/kg: micrograms per kilogram

bgs: below ground surface

ND: not detected above the method detection limit (< MDL)

ne: not established

Table B19
Sediment Sample Analytical Results (2018)

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	**IB-03**	**IB-03**	**IB-03**	**IB-04**	**IB-04**	**IB-04**	**IB-06**	**IB-06**	**IB-06**	**IB-07**	**IB-07**
Sample Name	**IB-03 0.0-2.0 091218**	**IB-03 2.0-4.0 091218**	**IB-03 4.0-6.0 091218**	**IB-04 0.0-2.0 091318**	**IB-04 2.0-4.0 091318**	**IB-04 4.0-6.0 091318**	**IB-06 0.0-2.0 091018**	**IB-06 2.0-4.0 091018**	**IB-06 4.0-6.0 091018**	**IB-07 0.0-2.0 091118**	**IB-07 100 2.0-4.0 091118**
Sample Date	**9/12/2018**	**9/12/2018**	**9/12/2018**	**9/13/2018**	**9/13/2018**	**9/13/2018**	**9/10/2018**	**9/10/2018**	**9/10/2018**	**9/11/2018**	**9/11/2018**
Depth	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**2 - 4 feet**
Conventional Parameters (mg/kg)											
Sulfide	--	--	--	--	--	--	**230**	**190**	**1.1**	**5.2**	**21**
Conventional Parameters (%)											
Total organic carbon	--	--	--	--	--	--	**1.6**	**2.1**	**0.92**	**1**	**1.4**
Total solids	**48.1**	**53.7**	**54.4**	**48.7**	**48.1**	**54.2**	**44**	**49.6**	**66.1**	**57.9**	**60.6**
Grain Size (%)											
Gravel (>2mm)	--	--	--	--	--	--	0.01 U	0.01 U	0.01 U	0.01 U	--
Sand (2.00mm - 1.00mm)	--	--	--	--	--	--	0.01 U	0.01 U	0.01 U	0.01 U	--
Sand, coarse	--	--	--	--	--	--	0.01 U	0.01 U	**0.56**	0.01 U	--
Sand, medium	--	--	--	--	--	--	0.01 U	**0.24**	**26.78**	**0.25**	--
Sand, fine	--	--	--	--	--	--	**2.3**	**13.59**	**21.35**	**13.64**	--
Sand, very fine	--	--	--	--	--	--	**5.48**	**10.24**	**5.37**	**12.29**	--
Silt	--	--	--	--	--	--	**69.66**	**58.8**	**33.26**	**53.94**	--
Clay (<4µm)	--	--	--	--	--	--	**22.56**	**17.13**	**12.68**	**19.88**	--
Total fines (silt + clay)	--	--	--	--	--	--	**92.22**	**75.93**	**45.94**	**73.82**	--
Metals (mg/kg)											
Arsenic	--	--	--	--	--	--	**13.6**	**27.5**	**56.2**	**12.6**	**18.3**
Cadmium	--	--	--	--	--	--	**0.462 J**	**1.38 J**	**0.39 J**	**0.295**	**1.01 J**
Chromium	--	--	--	--	--	--	**89.4 J**	**172 J**	**103 J**	**77.9 J**	**111 J**
Cobalt	--	--	--	--	--	--	**14.8**	**20.8**	**15**	**15.1**	**19.1**
Copper	--	--	--	--	--	--	**318 J**	**1,070 J**	**3,340 J**	**34.9**	**92.1 J**
Lead	**47.3**	**159**	**12.7**	**56.7**	**28.6**	**10.7**	**118 J**	**377 J**	**60.6 J**	**14.5**	**91.9 J**
Mercury	**0.428**	**0.854**	**0.0817**	**0.598**	**0.21**	**0.0662**	**1.24**	**10.5**	**1.59**	**0.065**	**0.698**
Nickel	--	--	--	--	--	--	**103 J**	**240 J**	**188 J**	**102**	**175**
Selenium	--	--	--	--	--	--	**0.29**	**0.36**	**0.22**	**0.38**	**0.4**
Silver	--	--	--	--	--	--	**1.08**	**2**	**0.596**	**0.633**	**0.884**
Zinc	--	--	--	--	--	--	**292 J**	**503 J**	**107 J**	**82**	**276 J**
Organometallic Compounds (µg/kg)											
Butyltin (n-Butyltin)	--	--	--	--	--	--	**6 J**	**13 J**	2 U	2.3 U	2.2 U
Dibutyltin	--	--	--	--	--	--	**210**	**880**	**19**	1.2 U	1.1 U
Tributyltin	--	--	--	--	--	--	**32**	**450**	**7.3**	2.5 U	2.3 U
Tetrabutyltin	--	--	--	--	--	--	**2.8 J**	**8.3 J**	1.1 U	1.3 U	1.2 U
Total butyltin (U = 0)	--	--	--	--	--	--	**250 J**	**1,400 J**	**26**	2.5 U	2.3 U
Polycyclic Aromatic Hydrocarbons (µg/kg)											
1-Methylnaphthalene	--	--	--	--	--	--	**12 J**	**110**	**13 J**	8 U	**14 J**
1-Methylphenanthrene	--	--	--	--	--	--	**35 J**	**190**	**74**	8.6 U	**140**
2,3,5-Trimethylnaphthalene (1,6,7-Trimethylnaphthalene)	--	--	--	--	--	--	**11 J**	**110**	**28 J**	6.7 U	**43**
2,6-Dimethylnaphthalene	--	--	--	--	--	--	**26 J**	**130**	**25 J**	5.9 U	**23 J**
2-Methylnaphthalene	--	--	--	--	--	--	**16 J**	**55**	**19 J**	8 U	**16 J**
Acenaphthene	--	--	--	--	--	--	**96**	**1,900**	**390 J**	8.1 U	**67**
Acenaphthylene	--	--	--	--	--	--	**62**	**220**	**31**	6.2 U	**150**
Anthracene	--	--	--	--	--	--	**190**	**930**	**210 J**	12 U	**550**

Table B19
Sediment Sample Analytical Results (2018)

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	**IB-03**	**IB-03**	**IB-03**	**IB-04**	**IB-04**	**IB-04**	**IB-06**	**IB-06**	**IB-06**	**IB-07**	**IB-07**
Sample Name	**IB-03 0.0-2.0 091218**	**IB-03 2.0-4.0 091218**	**IB-03 4.0-6.0 091218**	**IB-04 0.0-2.0 091318**	**IB-04 2.0-4.0 091318**	**IB-04 4.0-6.0 091318**	**IB-06 0.0-2.0 091018**	**IB-06 2.0-4.0 091018**	**IB-06 4.0-6.0 091018**	**IB-07 0.0-2.0 091118**	**IB-07 100 2.0-4.0 091118**
Sample Date	**9/12/2018**	**9/12/2018**	**9/12/2018**	**9/13/2018**	**9/13/2018**	**9/13/2018**	**9/10/2018**	**9/10/2018**	**9/10/2018**	**9/11/2018**	**9/11/2018**
Depth	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**2 - 4 feet**
Benzo(a)anthracene	--	--	--	--	--	--	**370**	**1,800**	**630 J**	**35**	**2,300**
Benzo(a)pyrene	--	--	--	--	--	--	**670**	**1,800**	**720 J**	**46**	**5,100**
Benzo(b)fluoranthene	--	--	--	--	--	--	**740**	**2,200**	**710 J**	**36**	**3,400**
Benzo(e)pyrene	--	--	--	--	--	--	**450**	**1,700**	**450**	**31 J**	**3,000**
Benzo(g,h,i)perylene	--	--	--	--	--	--	**320**	**1,000**	**500 J**	**48**	**4,200**
Benzo(k)fluoranthene	--	--	--	--	--	--	**540**	**1,900**	**440 J**	**27 J**	**2,600 J**
Biphenyl (1,1'-Biphenyl)	--	--	--	--	--	--	**11 J**	**51**	**12 J**	6.4 U	**27 J**
Chrysene	--	--	--	--	--	--	**700**	**2,200**	**710 J**	**27 J**	**2,900**
Dibenzo(a,h)anthracene	--	--	--	--	--	--	**120**	**410**	**110 J**	**7.4 J**	**600**
Dibenzothiophene	--	--	--	--	--	--	6 U	**180**	**71**	4.7 U	**95**
Fluoranthene	--	--	--	--	--	--	**690**	**5,400**	**2,300 J**	**55**	**6,700**
Fluorene	--	--	--	--	--	--	**97**	**890**	**300 J**	11 U	**130**
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	**300**	**980**	**380 J**	**32 J**	**2,900**
Naphthalene	--	--	--	--	--	--	**41 J**	**470**	**92 J**	12 U	**130**
Perylene	--	--	--	--	--	--	**170**	**540**	**200**	**83**	**1,200**
Phenanthrene	--	--	--	--	--	--	**480**	**1,600**	**760 J**	**27 J**	**1,300**
Pyrene	--	--	--	--	--	--	**1,400**	**11,000**	**2,200 J**	**99**	**9,700**
Total HPAH (12 of 25) (U = 0)	--	--	--	--	--	--	**6,500**	**31,000**	**9,400 J**	**530 J**	**45,000 J**
Total LPAH (13 of 25) (U = 0)	--	--	--	--	--	--	**1,100 J**	**6,800**	**2,000 J**	**27 J**	**2,700 J**
Total PAH (25) (U = 0)	--	--	--	--	--	--	**7,500 J**	**38,000**	**11,000 J**	**550 J**	**47,000 J**
PCB Congeners (µg/kg)											
PCB-005/008	**0.55 J**	0.14 U	0.14 U	**0.53 J**	0.16 U	0.14 U	**0.92**	**12**	**2**	0.13 U	0.13 U
PCB-018	**1.2**	0.12 U	0.12 U	**0.8**	0.13 U	0.12 U	**3.2 J**	**68 J**	**9.5 J**	0.11 U	0.11 U
PCB-028	**1.2**	0.13 U	0.13 U	**0.94**	0.14 U	0.13 U	**3.4**	**48**	**7.5**	0.12 U	0.11 U
PCB-031	**0.79**	0.094 U	0.092 U	**0.94**	0.1 U	0.093 U	**3.4**	**62**	**8.3**	0.087 U	0.083 U
PCB-033	**1.5**	0.071 U	0.07 U	0.078 U	0.079 U	0.07 U	**1.9**	**18**	**2.2**	0.066 U	0.062 U
PCB-044	**2.2**	0.28 U	0.28 U	0.31 U	0.31 U	0.28 U	**12**	**75**	**9.8**	0.26 U	0.25 U
PCB-049	**1.4**	0.092 U	0.09 U	0.1 U	0.1 U	0.091 U	**5.5**	**80**	**9.7**	0.086 U	0.081 U
PCB-052	**2**	0.35 U	0.35 U	**2.7**	0.39 U	0.35 U	**12 J**	**100 J**	**13 J**	0.33 UJ	0.31 UJ
PCB-056	**0.45**	0.14 U	0.14 U	0.15 U	0.16 U	0.14 U	**2.8**	**24**	**3**	0.13 U	0.12 U
PCB-060	**0.43**	0.098 U	0.095 U	0.11 U	0.11 U	0.097 U	0.12 U	0.11 U	0.079 U	0.091 U	0.086 U
PCB-066	**1.7**	0.23 U	0.22 U	**1.6**	0.26 U	0.23 U	**8**	**64**	**7.2**	0.21 U	0.2 U
PCB-070	**1.5**	0.13 U	0.13 U	**1.6**	0.15 U	0.13 U	**9.5**	**67**	**6.6**	0.12 U	0.12 U
PCB-074	**0.87**	0.17 U	0.16 U	0.18 U	0.19 U	0.17 U	**3.9**	**21**	**2.8**	0.16 U	0.15 U
PCB-087	**1.6**	0.21 U	0.2 U	0.23 U	0.23 U	0.21 U	**6**	**16**	**1.4**	0.19 U	0.18 U
PCB-095	**4**	0.2 U	0.19 U	**2.9**	0.22 U	0.2 U	**14**	**66**	**7.4**	0.18 U	0.17 U
PCB-097	**1.2**	0.086 U	0.084 U	**1.2**	0.096 U	0.085 U	**5.2**	**21**	**2.1**	0.08 U	0.076 U
PCB-099	**2.7**	**1.3**	0.086 U	**1.8**	0.098 U	0.088 U	**8.5**	**44**	**4.7**	0.082 U	0.077 U
PCB-101	**6.1**	**0.73**	0.081 U	**4.4**	0.092 U	0.082 U	**19**	**77**	**8.2**	0.076 U	0.072 U
PCB-105	**1.7**	0.1 U	0.097 U	0.11 U	0.11 U	0.099 U	**6.1**	**22**	**2.3**	0.092 U	0.087 U
PCB-110	**4.2**	0.063 U	0.062 U	**2.9**	0.07 U	0.062 U	**16**	**80**	**9.2**	0.058 U	0.055 U
PCB-118	**3.5**	0.064 U	0.063 U	**2.4**	0.072 U	0.064 U	**15**	**51**	**7.6**	0.06 U	0.057 U

Table B19
Sediment Sample Analytical Results (2018)

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	**IB-03**	**IB-03**	**IB-03**	**IB-04**	**IB-04**	**IB-04**	**IB-06**	**IB-06**	**IB-06**	**IB-07**	**IB-07**
Sample Name	**IB-03 0.0-2.0 091218**	**IB-03 2.0-4.0 091218**	**IB-03 4.0-6.0 091218**	**IB-04 0.0-2.0 091318**	**IB-04 2.0-4.0 091318**	**IB-04 4.0-6.0 091318**	**IB-06 0.0-2.0 091018**	**IB-06 2.0-4.0 091018**	**IB-06 4.0-6.0 091018**	**IB-07 0.0-2.0 091118**	**IB-07 100 2.0-4.0 091118**
Sample Date	**9/12/2018**	**9/12/2018**	**9/12/2018**	**9/13/2018**	**9/13/2018**	**9/13/2018**	**9/10/2018**	**9/10/2018**	**9/10/2018**	**9/11/2018**	**9/11/2018**
Depth	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**2 - 4 feet**
PCB-128	**1.3**	0.22 U	0.22 U	**1**	0.25 U	0.22 U	**3**	**8.5**	**1.3**	0.21 U	0.2 U
PCB-132/153	**19**	**2.1**	**1.2**	**12**	**0.66 J**	**0.33 J**	**30**	**92**	**9.9**	**0.74**	0.26 U
PCB-138/158	**12**	0.66 U	**0.67 J**	**8.1**	0.73 U	0.65 U	**21**	**59**	**6.9**	0.61 U	0.58 U
PCB-141	**2.2**	0.091 U	0.089 U	**1.5**	0.1 U	0.09 U	**3.4**	**11**	**1.3**	0.085 U	0.08 U
PCB-149	**12**	**1.5**	**0.76**	**8**	0.24 U	0.22 U	**17**	**61**	**6.6**	0.2 U	0.19 U
PCB-151	**4.2**	**1**	0.16 U	**2.6**	0.18 U	0.16 U	**5.4**	**14**	**1.4**	0.15 U	0.14 U
PCB-156	**1.2**	0.14 U	0.14 U	0.16 U	0.16 U	0.14 U	**2.2**	**5.5**	**1.1**	0.13 U	0.13 U
PCB-170	**7**	0.21 U	0.2 U	**4.7**	0.23 U	0.2 U	**8.1**	**26**	**3.1**	0.19 U	0.18 U
PCB-174	**5**	0.078 U	0.076 U	**3.1**	0.087 U	0.077 U	**5.4**	**16**	**1.6**	0.072 U	0.069 U
PCB-177	**3.4**	0.22 U	0.21 U	**2.3**	0.24 U	0.22 U	**3.8**	**9.3**	**0.97**	0.2 U	0.19 U
PCB-180	**13**	**1.6**	0.17 U	**9.5**	0.19 U	0.17 U	**15**	**44**	**4.3**	**0.34 J**	0.15 U
PCB-183	**3.7**	**0.5**	0.17 U	**2.4**	0.19 U	0.17 U	**4.4**	**11**	**1.2**	0.16 U	0.15 U
PCB-187	**7.1**	**1**	0.19 U	**4.9**	0.21 U	0.19 U	**10**	**25**	**2.1**	**0.31 J**	0.17 U
PCB-194	**3.8**	0.14 U	0.13 U	**2.1**	0.15 U	0.14 U	**4.6**	**12**	**1.2**	0.13 U	0.12 U
PCB-195	**1.5**	0.11 U	0.11 U	0.12 U	0.12 U	0.11 U	**1.8**	**4.6**	0.09 U	0.1 U	0.098 U
PCB-201	**0.93**	0.063 U	0.062 U	0.07 U	0.07 U	0.063 U	**0.81**	**1.7**	0.051 U	0.059 U	0.056 U
PCB-203	**3.6**	0.11 U	0.1 U	**2.4**	0.12 U	0.11 U	**4.4**	**13**	**1.2**	0.1 U	0.094 U
Total PCB Congener (U = 0)	**140 J**	**9.7**	**2.6 J**	**89 J**	**0.66 J**	**0.33 J**	**300 J**	**1,400 J**	**170 J**	**1.4 J**	0.58 UJ
Total Petroleum Hydrocarbons (mg/kg)											
Diesel range organics (C10 - C36)	--	--	--	--	--	--	**94**	**330**	**68**	2.1 U	**22**

Table B19
Sediment Sample Analytical Results (2018)

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	IB-07	IB-07	IB-08	IB-08	IB-08	IB-09	IB-09	IB-09	IB-10	IB-11	IB-11
Sample Name	IB-07 2.0-4.0 091118	IB-07 4.0-6.0 091118	IB-08 0.0-2.0 091018	IB-08 2.0-4.0 091018	IB-08 4.0-6.0 091018	IB-09 0.0-2.0 091318	IB-09 2.0-4.0 091318	IB-09 4.0-6.0 091318	IB-10 0.0-2.0 091218	IB-11 0.0-2.0 091018	IB-11 2.0-4.0 091018
Sample Date	9/11/2018	9/11/2018	9/10/2018	9/10/2018	9/10/2018	9/13/2018	9/13/2018	9/13/2018	9/12/2018	9/10/2018	9/10/2018
Depth	2 - 4 feet	4 - 6 feet	0 - 2 feet	2 - 4 feet	4 - 6 feet	0 - 2 feet	2 - 4 feet	4 - 6 feet	0 - 2 feet	0 - 2 feet	2 - 4 feet
Conventional Parameters (mg/kg)											
Sulfide	15	7.6	110	250	89	--	--	--	--	240	53
Conventional Parameters (%)											
Total organic carbon	1.3	1.7	1.8	2.2	2.1	--	--	--	--	1.6	1.6
Total solids	60	62.3	46.8	51.8	50.7	44.2	47	49.8	45.3	45.1	61.7
Grain Size (%)											
Gravel (>2mm)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--	--	--	0.01 U	0.01 U
Sand (2.00mm - 1.00mm)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--	--	--	0.01 U	0.01 U
Sand, coarse	2.86	0.01 U	3.39	0.01 U	0.01 U	--	--	--	--	0.01 U	0.01 U
Sand, medium	5.79	0.36	12.74	0.086	0.029	--	--	--	--	0.01 U	0.1
Sand, fine	10.46	10.55	11.66	7.66	6.87	--	--	--	--	10.87	7.04
Sand, very fine	11.3	12.38	10.2	11.23	7.37	--	--	--	--	9.52	9.48
Silt	52.05	58.46	47.99	60.48	63.69	--	--	--	--	59.06	60.32
Clay (<4µm)	17.54	18.25	14.03	20.54	22.04	--	--	--	--	20.54	23.06
Total fines (silt + clay)	69.59	76.71	62.02	81.02	85.73	--	--	--	--	79.6	83.38
Metals (mg/kg)											
Arsenic	14.6	20.5	17.4	19.4	18.8	--	--	--	--	24.1	19.8
Cadmium	0.64 J	0.843	1.17 J	2.78 J	2.35 J	--	--	--	--	1.43 J	1.2 J
Chromium	94.2 J	122 J	134 J	154 J	96.5 J	--	--	--	--	136 J	112 J
Cobalt	16.4	21.2	18.1	17.8	16.8	--	--	--	--	19.6	19.5
Copper	60.7 J	103	155 J	158 J	125 J	--	--	--	--	732 J	194 J
Lead	47.7 J	89.4	150 J	993 J	147 J	39.7	106	154	40.4	2,090 J	411 J
Mercury	0.925	0.58 J	0.851	1.18	1.13	0.356	1.39	1.19	0.359	7.85	0.854
Nickel	148	225	145 J	153 J	122 J	--	--	--	--	198 J	207 J
Selenium	0.38	0.42	0.43	0.48	0.49	--	--	--	--	0.36	0.48
Silver	0.707	0.833	2.01	3.66	2.61	--	--	--	--	1.72	1.05
Zinc	115 J	152	273 J	394 J	291 J	--	--	--	--	466 J	244 J
Organometallic Compounds (µg/kg)											
Butyltin (n-Butyltin)	2.3 U	2.1 U	3 U	2.5 U	2.6 U	--	--	--	--	32	2.1 U
Dibutyltin	1.2 U	1.1 U	23	19	6	--	--	--	--	570	8.4
Tributyltin	2.5 U	2.3 U	3.2 J	2.7 U	2.8 U	--	--	--	--	92	2.3 U
Tetrabutyltin	1.2 U	1.1 U	1.6 U	1.4 U	1.4 U	--	--	--	--	3.1 U	1.1 U
Total butyltin (U = 0)	2.5 U	2.3 U	26 J	19	6	--	--	--	--	690	8.4
Polycyclic Aromatic Hydrocarbons (µg/kg)											
1-Methylnaphthalene	10 J	17 J	21 J	29 J	9.1 J	--	--	--	--	11 J	15 J
1-Methylphenanthrene	100	140	34 J	39	72	--	--	--	--	29 J	82
2,3,5-Trimethylnaphthalene (1,6,7-Trimethylnaphthalene)	21 J	23 J	17 J	26 J	70	--	--	--	--	9.9 J	15 J
2,6-Dimethylnaphthalene	16 J	19 J	53	74	41	--	--	--	--	22 J	21 J
2-Methylnaphthalene	14 J	19 J	48	71	16 J	--	--	--	--	17 J	26 J
Acenaphthene	64	45	17 J	24 J	49	--	--	--	--	23 J	72
Acenaphthylene	120	130	48	47	41	--	--	--	--	37 J	94
Anthracene	450	460	100	170	180	--	--	--	--	94	340

Table B19
Sediment Sample Analytical Results (2018)

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	**IB-07**	**IB-07**	**IB-08**	**IB-08**	**IB-08**	**IB-09**	**IB-09**	**IB-09**	**IB-10**	**IB-11**	**IB-11**
Sample Name	**IB-07 2.0-4.0 091118**	**IB-07 4.0-6.0 091118**	**IB-08 0.0-2.0 091018**	**IB-08 2.0-4.0 091018**	**IB-08 4.0-6.0 091018**	**IB-09 0.0-2.0 091318**	**IB-09 2.0-4.0 091318**	**IB-09 4.0-6.0 091318**	**IB-10 0.0-2.0 091218**	**IB-11 0.0-2.0 091018**	**IB-11 2.0-4.0 091018**
Sample Date	**9/11/2018**	**9/11/2018**	**9/10/2018**	**9/10/2018**	**9/10/2018**	**9/13/2018**	**9/13/2018**	**9/13/2018**	**9/12/2018**	**9/10/2018**	**9/10/2018**
Depth	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**0 - 2 feet**	**2 - 4 feet**
Benzo(a)anthracene	**2,000**	**1,300**	**350**	**480**	**490**	--	--	--	--	**340**	**1,400**
Benzo(a)pyrene	**4,500**	**3,300**	**790**	**870**	**820**	--	--	--	--	**790**	**2,700**
Benzo(b)fluoranthene	**3,600**	**2,300**	**610**	**680**	**690**	--	--	--	--	**840**	**2,200**
Benzo(e)pyrene	**2,700**	**2,000**	**470**	**570**	**530**	--	--	--	--	**520**	**1,800**
Benzo(g,h,i)perylene	**4,300**	**2,700**	**670**	**530**	**480**	--	--	--	--	**400**	**2,200**
Benzo(k)fluoranthene	**1,600 J**	**1,900**	**350**	**490**	**400**	--	--	--	--	**570**	**1,000**
Biphenyl (1,1'-Biphenyl)	**26 J**	**26 J**	**18 J**	**25 J**	**18 J**	--	--	--	--	**9.1 J**	**22 J**
Chrysene	**2,500**	**1,600**	**410**	**570**	**710**	--	--	--	--	**440**	**2,200**
Dibenzo(a,h)anthracene	**530**	**410**	**130**	**110**	**97**	--	--	--	--	**150**	**390**
Dibenzothiophene	**79**	**81**	**24 J**	**34 J**	**41**	--	--	--	--	5.8 U	**44**
Fluoranthene	**6,000**	**3,100**	**730**	**1,100**	**1,400**	--	--	--	--	**630**	**2,900**
Fluorene	**92**	**120**	**39 J**	**59**	**77**	--	--	--	--	**33 J**	**100**
Indeno(1,2,3-c,d)pyrene	**2,900**	**1,900**	**490**	**440**	**390**	--	--	--	--	**360**	**1,500**
Naphthalene	**130**	**120**	**53**	**73**	**48**	--	--	--	--	**39 J**	**190**
Perylene	**1,200**	**1,000**	**210**	**260**	**240**	--	--	--	--	**160**	**710**
Phenanthrene	**1,000**	**1,400**	**310**	**380**	**420**	--	--	--	--	**250**	**530**
Pyrene	**8,800**	**6,200**	**1,100**	**1,800**	**1,800**	--	--	--	--	**1,000**	**6,700**
Total HPAH (12 of 25) (U = 0)	**41,000 J**	**28,000**	**6,300**	**7,900**	**8,000**	--	--	--	--	**6,200**	**26,000**
Total LPAH (13 of 25) (U = 0)	**2,100 J**	**2,600 J**	**780 J**	**1,100 J**	**1,100 J**	--	--	--	--	**570 J**	**1,600 J**
Total PAH (25) (U = 0)	**43,000 J**	**30,000 J**	**7,100 J**	**9,000 J**	**9,100 J**	--	--	--	--	**6,800 J**	**27,000 J**
PCB Congeners (µg/kg)											
PCB-005/008	0.13 U	0.12 U	**1.4**	0.15 U	0.15 U	**0.66 J**	**2.2**	**2.3**	**0.41 J**	**31**	0.12 U
PCB-018	0.11 U	0.1 U	**3.6 J**	**7.9 J**	**5.7 J**	**1.2**	**8.3**	**7.1**	0.14 U	**170 J**	**4.8 J**
PCB-028	0.12 U	0.11 U	**3.1**	**7.4**	**3.3**	**1.3**	**6.5**	**7.6**	**0.69**	**65**	**2.7**
PCB-031	0.084 U	0.08 U	**3**	**7.4**	**4.3**	**0.97**	**6.7**	**10**	**0.55**	**150**	**3**
PCB-033	0.064 U	0.06 U	**2.2**	**3.3**	0.075 U	**0.97**	**4.8**	**5.1**	0.084 U	**51**	**1.8**
PCB-044	0.25 U	0.24 U	**5.2**	**12**	**7.5**	**1.8**	**8.6**	**12**	**1**	**140**	**4.9**
PCB-049	0.083 U	0.078 U	**4.5**	**11**	**3.5**	**1.3**	**5.8**	**8**	**0.86**	**140**	**1.7**
PCB-052	0.32 UJ	0.3 UJ	**7.9 J**	**23 J**	**8 J**	**2.5**	**14**	**20**	**1.4**	**210 J**	**2.5 J**
PCB-056	0.13 U	0.12 U	**2.1**	**4**	**2**	0.17 U	**2.9**	**4.7**	0.17 U	**40**	0.12 U
PCB-060	0.087 U	0.083 U	**1.2**	0.1 U	0.1 U	0.12 U	0.11 U	0.1 U	0.12 U	**13**	0.085 U
PCB-066	0.21 U	0.19 U	**5**	**9.7**	**4.8**	**1.7**	**8.5**	**12**	**1.1**	**120**	**2.1**
PCB-070	0.12 U	0.11 U	**5.8**	**14**	**6.4**	**2**	**11**	**16**	**1.1**	**140**	**2.2**
PCB-074	0.15 U	0.14 U	**2.4**	**5.1**	**3.1**	**1.9**	**4.7**	**8.1**	**0.64**	**53**	**1.4**
PCB-087	0.19 U	0.18 U	**5.3**	**10**	**4.2**	0.25 U	**9.2**	**8.7**	**1**	**15**	0.18 U
PCB-095	0.18 U	0.17 U	**16**	**25**	**9.5**	**5.6**	**33**	**24**	**2.9**	**100**	**2.4**
PCB-097	0.077 U	0.073 U	**3.8**	**8.8**	**3.4**	**1.8**	**6.9**	**7.9**	**1.3**	**37**	0.075 U
PCB-099	0.079 U	0.075 U	**11**	**15**	**5.6**	**2.3**	**10**	**12**	**1.8**	**88**	**2**
PCB-101	0.074 U	0.07 U	**22**	**36**	**13**	**7.2**	**44**	**33**	**4.2**	**120**	**2.6**
PCB-105	0.089 U	0.084 U	**8**	**9.7**	**4.9**	**2.3**	**12**	**18**	**1.8**	**27**	**2.1**
PCB-110	0.056 U	0.053 U	**14**	**28**	**10**	**4.6**	**27**	**26**	**2.6**	**110**	**2.1**
PCB-118	0.058 U	0.054 U	**12**	**23**	**9.7**	**3.7**	**21**	**23**	**2.7**	**120**	**2.9**

Table B19
Sediment Sample Analytical Results (2018)

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	**IB-07**	**IB-07**	**IB-08**	**IB-08**	**IB-08**	**IB-09**	**IB-09**	**IB-09**	**IB-10**	**IB-11**	**IB-11**
Sample Name	**IB-07 2.0-4.0 091118**	**IB-07 4.0-6.0 091118**	**IB-08 0.0-2.0 091018**	**IB-08 2.0-4.0 091018**	**IB-08 4.0-6.0 091018**	**IB-09 0.0-2.0 091318**	**IB-09 2.0-4.0 091318**	**IB-09 4.0-6.0 091318**	**IB-10 0.0-2.0 091218**	**IB-11 0.0-2.0 091018**	**IB-11 2.0-4.0 091018**
Sample Date	**9/11/2018**	**9/11/2018**	**9/10/2018**	**9/10/2018**	**9/10/2018**	**9/13/2018**	**9/13/2018**	**9/13/2018**	**9/12/2018**	**9/10/2018**	**9/10/2018**
Depth	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**0 - 2 feet**	**2 - 4 feet**
PCB-128	0.2 U	0.19 U	**3.9**	**5.9**	**3**	**1.2**	**7.1**	**7.4**	**0.9**	**9.3**	0.19 U
PCB-132/153	0.27 U	0.26 U	**70**	**70**	**21**	**21**	**130**	**61**	**12**	**200**	**4.2**
PCB-138/158	0.59 U	0.55 U	**40**	**47**	**15**	**14**	**91**	**44**	**8.3**	**110**	**2.8**
PCB-141	0.082 U	0.077 U	**9.1**	**11**	**4.1**	**3.2**	**22**	**7.9**	**1.9**	**22**	0.079 U
PCB-149	0.2 U	0.19 U	**43**	**46**	**14**	**14**	**90**	**39**	**7.3**	**110**	**2.4**
PCB-151	0.15 U	0.14 U	**14**	**14**	**4.5**	**4.7**	**33**	**12**	**2.6**	**38**	**0.97**
PCB-156	0.13 U	0.12 U	**2.8**	**3.8**	**1.5**	**0.93**	**6.1**	**3.3**	**0.75**	**7.9**	0.13 U
PCB-170	0.19 U	0.17 U	**23**	**27**	**7.1**	**7.5**	**51**	**20**	**4.2**	**72**	**1.2**
PCB-174	0.07 U	0.066 U	**17**	**16**	**4.1**	**5.6**	**41**	**14**	**3.3**	**55**	**0.84**
PCB-177	0.2 U	0.18 U	**10**	**9.1**	**2.5**	**4**	**24**	**8.6**	**2.1**	**32**	0.19 U
PCB-180	0.15 U	0.14 U	**46**	**43**	**12**	**16**	**100**	**34**	**9.1**	**150**	**2.8**
PCB-183	0.16 U	0.15 U	**12**	**11**	**3.6**	**3.8**	**25**	**9.3**	**2.4**	**38**	**0.73**
PCB-187	0.17 U	0.16 U	**27**	**22**	**5.7**	**7.9**	**48**	**17**	**5.1**	**91**	**1.6**
PCB-194	0.12 U	0.12 U	**10**	**11**	**3.1**	**3.4**	**21**	**7.7**	**2**	**39**	**0.97**
PCB-195	0.1 U	0.095 U	**4.4**	**4.2**	0.12 U	**1.8**	**9.4**	**4.2**	**1**	**17**	0.097 U
PCB-201	0.057 U	0.054 U	**1.6**	**1.8**	**0.62**	0.077 U	**3.4**	**1.3**	0.075 U	**5.6**	0.055 U
PCB-203	0.096 U	0.091 U	**11**	**12**	**3.3**	**3.5**	**25**	**9.6**	**2.2**	**44**	**1.4**
Total PCB Congener (U = 0)	0.59 UJ	0.55 UJ	**480 J**	**620 J**	**210 J**	**160 J**	**970**	**570**	**91 J**	**3,000 J**	**61 J**
Total Petroleum Hydrocarbons (mg/kg)											
Diesel range organics (C10 - C36)	**14**	**22**	**130**	**310**	**110**	--	--	--	--	**150**	**160**

Table B19
Sediment Sample Analytical Results (2018)

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	IB-11	IB-12	IB-12	IB-12	IB-12	IB-12	IB-13	IB-13	IB-13	IB-14	IB-15
Sample Name	IB-11 4.0-6.0 091018	IB-12 0.0-2.0 091018	IB-12 100 0.0-2.0 091018	IB-12 100 4.0-6.0 091018	IB-12 2.0-4.0 091018	IB-12 4.0-6.0 091018	IB-13 0.0-2.0 091118	IB-13 2.0-4.0 091118	IB-13 4.0-6.0 091118	IB-14 0.0-2.0 091318	IB-15 0.0-2.0 091318
Sample Date	9/10/2018	9/10/2018	9/10/2018	9/10/2018	9/10/2018	9/10/2018	9/11/2018	9/11/2018	9/11/2018	9/13/2018	9/13/2018
Depth	4 - 6 feet	0 - 2 feet	0 - 2 feet	4 - 6 feet	2 - 4 feet	4 - 6 feet	0 - 2 feet	2 - 4 feet	4 - 6 feet	0 - 2 feet	0 - 2 feet
Conventional Parameters (mg/kg)											
Sulfide	0.17	61	70	190	61	140	54	1.9	0.44	--	--
Conventional Parameters (%)											
Total organic carbon	0.98	1.7	1.4	1.4	1.4	1.5	1.6	1.2	1.5	--	--
Total solids	58.3	39.5	40.5	46.3	41.8	45.8	42	53.6	56.4	48.8	45.9
Grain Size (%)											
Gravel (>2mm)	0.01 U	0.01 U	--	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--
Sand (2.00mm - 1.00mm)	0.01 U	0.01 U	--	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--
Sand, coarse	0.01 U	0.01 U	--	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--
Sand, medium	0.11	0.01 U	--	--	0.01 U	0.01 U	0.17	1.48	0.72	--	--
Sand, fine	9.61	1.25	--	--	0.65	0.01 U	5.65	3.54	5.8	--	--
Sand, very fine	6.82	4.57	--	--	3.49	1.78	9.36	5.44	6.57	--	--
Silt	61.75	70.19	--	--	69.92	71.58	64.65	68.06	64.75	--	--
Clay (<4µm)	21.71	23.99	--	--	25.94	26.64	20.18	21.48	22.16	--	--
Total fines (silt + clay)	83.46	94.18	--	--	95.86	98.22	84.83	89.54	86.91	--	--
Metals (mg/kg)											
Arsenic	18.1	11.6	13	15.4	13.5	14.6	12	15.5	14.3	--	--
Cadmium	0.399 J	0.291 J	0.313 J	0.799 J	0.547 J	0.911 J	0.317	0.422	0.343	--	--
Chromium	111 J	83.8 J	84.2 J	114 J	99.4 J	126 J	77.8 J	85.2 J	68.3 J	--	--
Cobalt	20.9	14.3	14.7	17.6	15.6	19	15	15.6	15.5	--	--
Copper	32.3 J	130 J	125 J	344 J	241 J	366 J	82.2	82.2	35.3	--	--
Lead	11.9 J	57.5 J	54.5 J	115 J	87 J	118 J	48.7	35.1	11.3	55.5	31
Mercury	0.0708	0.489	0.603	1.12	0.935	1.19	0.324	0.273	0.0663	0.433	0.254
Nickel	201 J	90 J	92.5 J	118 J	98.6 J	129 J	96.4	118	81.2	--	--
Selenium	0.45	0.4	0.4	0.41	0.45	0.41	0.41	0.4	0.45	--	--
Silver	0.715	0.951	0.902	1.81	1.43	1.87	0.778	0.771	0.586	--	--
Zinc	79.8 J	168 J	166 J	274 J	232 J	281 J	148	115	86.4	--	--
Organometallic Compounds (µg/kg)											
Butyltin (n-Butyltin)	2.3 U	14	11	67	36	49	3.3 U	2.5 U	2.5 U	--	--
Dibutyltin	4.2 J	56	55	380	220	400	17	10	1.3 U	--	--
Tributyltin	2.5 U	3.7 U	3.6 U	29	18	31	3.5 U	2.7 U	2.6 U	--	--
Tetrabutyltin	1.2 U	1.8 U	1.8 U	1.5 U	1.7 U	1.6 U	1.8 U	1.3 U	1.3 U	--	--
Total butyltin (U = 0)	4.2 J	70	66	480	270	480	17	10	2.6 U	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)											
1-Methylnaphthalene	12 J	12 U	11 U	9.8 U	11 U	10 J	11 U	8.5 U	8.1 U	--	--
1-Methylphenanthrene	8.3 U	13 U	12 U	22 J	12 U	14 J	12 J	16 J	8.6 U	--	--
2,3,5-Trimethylnaphthalene (1,6,7-Trimethylnaphthalene)	6.5 U	9.8 U	9.5 U	8.2 U	9.2 U	8.4 U	9.1 U	7.1 U	6.7 U	--	--
2,6-Dimethylnaphthalene	12 J	12 J	13 J	41 J	18 J	26 J	13 J	12 J	7.3 J	--	--
2-Methylnaphthalene	21 J	12 U	11 U	23 J	18 J	24 J	11 U	11 J	8.1 U	--	--
Acenaphthene	47	12 U	11 U	11 J	11 U	11 J	11 U	12 J	8.1 U	--	--
Acenaphthylene	6 U	12 J	12 J	20 J	18 J	18 J	12 J	16 J	6.2 U	--	--
Anthracene	12 U	31 J	24 J	51	36 J	48	31 J	50	12 U	--	--

Table B19
Sediment Sample Analytical Results (2018)

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	**IB-11**	**IB-12**	**IB-12**	**IB-12**	**IB-12**	**IB-12**	**IB-13**	**IB-13**	**IB-13**	**IB-14**	**IB-15**
Sample Name	**IB-11 4.0-6.0 091018**	**IB-12 0.0-2.0 091018**	**IB-12 100 0.0-2.0 091018**	**IB-12 100 4.0-6.0 091018**	**IB-12 2.0-4.0 091018**	**IB-12 4.0-6.0 091018**	**IB-13 0.0-2.0 091118**	**IB-13 2.0-4.0 091118**	**IB-13 4.0-6.0 091118**	**IB-14 0.0-2.0 091318**	**IB-15 0.0-2.0 091318**
Sample Date	**9/10/2018**	**9/10/2018**	**9/10/2018**	**9/10/2018**	**9/10/2018**	**9/10/2018**	**9/11/2018**	**9/11/2018**	**9/11/2018**	**9/13/2018**	**9/13/2018**
Depth	**4 - 6 feet**	**0 - 2 feet**	**0 - 2 feet**	**4 - 6 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**0 - 2 feet**
Benzo(a)anthracene	**20 J**	**100**	**94**	**140**	**110**	**110**	**110**	**150**	**32 J**	--	--
Benzo(a)pyrene	**33 J**	**200**	**220**	**290 J**	**250**	**160 J**	**220**	**350**	**53**	--	--
Benzo(b)fluoranthene	**32 J**	**240**	**230**	**360 J**	**260**	**220 J**	**200**	**310**	**35**	--	--
Benzo(e)pyrene	**24 J**	**130**	**140**	**230**	**160**	**150**	**140**	**200**	**30 J**	--	--
Benzo(g,h,i)perylene	**30 J**	**140**	**190**	**130 J**	**110**	6.6 UJ	**180**	**310**	**43**	--	--
Benzo(k)fluoranthene	**22 J**	**130**	**140**	**250 J**	**210**	**160 J**	**130**	**180**	**33 J**	--	--
Biphenyl (1,1'-Biphenyl)	6.2 U	9.4 U	9.1 U	**8.6 J**	8.8 U	**9.3 J**	8.7 U	6.8 U	6.5 U	--	--
Chrysene	**25 J**	**100**	**110**	**180**	**120**	**140**	**120**	**190**	**34 J**	--	--
Dibenzo(a,h)anthracene	6.5 U	**30 J**	**35 J**	**38 J**	**23 J**	8.4 U	**32 J**	**49**	**8.2 J**	--	--
Dibenzothiophene	4.5 U	6.8 U	6.6 U	5.7 U	6.4 U	5.8 U	6.3 U	4.9 U	4.7 U	--	--
Fluoranthene	**90**	**190**	**170**	**360**	**220**	**300**	**230**	**350**	**59**	--	--
Fluorene	**45**	16 U	15 U	**21 J**	15 U	**20 J**	15 U	**15 J**	11 U	--	--
Indeno(1,2,3-c,d)pyrene	**18 J**	**120**	**140**	**120 J**	**120**	6.8 UJ	**140**	**210**	**29 J**	--	--
Naphthalene	**200**	18 U	17 U	**30 J**	**28 J**	**31 J**	16 U	**36 J**	12 U	--	--
Perylene	**55**	**73**	**81**	**97**	**36 J**	**39 J**	**75**	**98**	**57**	--	--
Phenanthrene	**54**	**74**	**64**	**140**	**91**	**130**	**83**	**120**	**25 J**	--	--
Pyrene	**240**	**280**	**270**	**700**	**330**	**650**	**320**	**750**	**100**	--	--
Total HPAH (12 of 25) (U = 0)	**590 J**	**1,700 J**	**1,800 J**	**2,900 J**	**1,900 J**	**1,900 J**	**1,900 J**	**3,100**	**510 J**	--	--
Total LPAH (13 of 25) (U = 0)	**390 J**	**130 J**	**110 J**	**370 J**	**210 J**	**340 J**	**150 J**	**290 J**	**32 J**	--	--
Total PAH (25) (U = 0)	**980 J**	**1,900 J**	**1,900 J**	**3,300 J**	**2,200 J**	**2,300 J**	**2,000 J**	**3,400 J**	**550 J**	--	--
PCB Congeners (µg/kg)											
PCB-005/008	0.13 U	**0.51 J**	**0.48 J**	0.16 U	**1.6**	**1.5**	0.18 U	0.14 U	0.13 U	**0.59 J**	0.17 U
PCB-018	**0.67 J**	**0.77 J**	**1.3 J**	0.14 UJ	**3.8 J**	**8.5 J**	**0.58**	**0.44**	0.11 U	**0.83**	0.14 U
PCB-028	0.12 U	**1.2**	**1.3**	0.15 UJ	**4**	**4.8 J**	**0.73**	**0.43**	0.12 U	**1.2**	**0.41 J**
PCB-031	**0.37**	**0.99**	**1.1**	0.11 UJ	**3.2**	**5.5 J**	**0.76**	**0.39**	0.088 U	0.1 U	0.11 U
PCB-033	0.064 U	**0.91**	**0.78**	0.081 UJ	**3.5**	**4.5 J**	0.089 U	0.07 U	0.066 U	**1.2**	0.083 U
PCB-044	0.25 U	**1.4**	**1.8**	**12**	**6.9**	**9.6**	0.36 U	**0.57**	0.26 U	**1.8**	0.33 U
PCB-049	0.083 U	**1.6**	**1.8**	**7.6**	**5.7**	**6.6**	**0.56**	**0.44**	0.086 U	**1.5**	**0.73**
PCB-052	0.32 UJ	**2.6 J**	**2.5 J**	**12 J**	**9.2 J**	**12 J**	**1.2 J**	**0.84 J**	0.33 UJ	**2**	**0.92**
PCB-056	0.13 U	**0.87**	**0.85**	**3.9**	**2.8**	**2.9**	**0.4 J**	0.14 U	0.13 U	**0.72**	0.16 U
PCB-060	0.088 U	0.13 U	0.13 U	**1.6**	0.12 U	**1.5**	0.12 U	0.095 U	0.091 U	0.1 U	0.11 U
PCB-066	0.21 U	**2.4**	**2.3**	**12**	**7.7**	**9.8**	**1.2**	**0.7**	0.21 U	**2.4**	**0.78**
PCB-070	0.12 U	**2.2**	**2.1**	**11**	**6.7**	**11**	**0.99**	**0.81**	0.12 U	**2.1**	**0.83**
PCB-074	0.15 U	**0.98**	**1.1**	**5.1**	**3.1**	**4.4**	**0.59**	**0.43**	0.16 U	**1.1**	**0.5**
PCB-087	0.19 U	**1.1**	**1.2**	**4.3**	**2.6**	**3.4**	**0.49**	**0.43**	0.19 U	**1.9**	0.24 U
PCB-095	0.18 U	**4.8**	**4.5**	**13**	**10**	**13**	**2**	**1.3**	0.19 U	**5**	**1.6**
PCB-097	0.077 U	**1.1**	**1.5**	**5.2**	**3.4**	**3.8**	**0.52**	**0.4**	0.08 U	**2.1**	0.1 U
PCB-099	0.079 U	**3.3**	**3.6**	**8**	**6.2**	**7.7**	**1.7**	**1.1**	0.082 U	**3.6**	**1.4**
PCB-101	0.074 U	**6.9**	**6.3**	**18**	**14**	**17**	**3**	**2.1**	0.077 U	**7.4**	**2.1**
PCB-105	0.089 U	**2.3**	**1.9**	**5.7**	**3.8**	**5.5**	0.12 U	**0.77**	0.092 U	**2.7**	**0.97**
PCB-110	0.057 U	**3.9**	**3.7**	**13**	**10**	**12**	**2.2**	**1.4**	0.059 U	**5.5**	**1.7**
PCB-118	0.058 U	**3.3**	**3.3**	**12**	**8.1**	**11**	**2.1**	**1.3**	0.06 U	**5.2**	**1.9**

Table B19
Sediment Sample Analytical Results (2018)

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	**IB-11**	**IB-12**	**IB-12**	**IB-12**	**IB-12**	**IB-12**	**IB-13**	**IB-13**	**IB-13**	**IB-14**	**IB-15**
Sample Name	**IB-11 4.0-6.0 091018**	**IB-12 0.0-2.0 091018**	**IB-12 100 0.0-2.0 091018**	**IB-12 100 4.0-6.0 091018**	**IB-12 2.0-4.0 091018**	**IB-12 4.0-6.0 091018**	**IB-13 0.0-2.0 091118**	**IB-13 2.0-4.0 091118**	**IB-13 4.0-6.0 091118**	**IB-14 0.0-2.0 091318**	**IB-15 0.0-2.0 091318**
Sample Date	**9/10/2018**	**9/10/2018**	**9/10/2018**	**9/10/2018**	**9/10/2018**	**9/10/2018**	**9/11/2018**	**9/11/2018**	**9/11/2018**	**9/13/2018**	**9/13/2018**
Depth	**4 - 6 feet**	**0 - 2 feet**	**0 - 2 feet**	**4 - 6 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**0 - 2 feet**
PCB-128	0.2 U	**0.88**	**1.2**	**2.8**	**1.9**	**3.1**	**0.72**	0.22 U	0.21 U	**1.4 J**	0.26 U
PCB-132/153	**0.83**	**22**	**20**	**39**	**29**	**37**	**9.4**	**5.7**	**0.44 J**	**20**	**6.1**
PCB-138/158	0.59 U	**12**	**11**	**25**	**17**	**23**	**11**	**3.7**	0.61 U	**15**	**4.4**
PCB-141	0.082 U	**2.2**	**1.9**	**5**	**3.3**	**4**	0.11 U	**0.7**	0.085 U	**2.7**	**0.69**
PCB-149	**0.57**	**12**	**12**	**26**	**19**	**24**	**5.3**	**3.5**	0.2 U	**13**	**3.4**
PCB-151	0.15 U	**4.4**	**4.1**	**7.9**	**5.9**	**7.3**	**1.8**	**1.3**	0.15 U	**4.1**	**1.3**
PCB-156	0.13 U	**0.69**	**0.52**	**1.8**	**1**	**1.8**	**0.54**	**0.44**	0.13 U	**1.3**	0.17 U
PCB-170	0.19 U	**7.6**	**6.7**	**12**	**9.7**	**13**	**2.8**	**1.9**	0.19 U	**6.7**	**1.9**
PCB-174	0.07 U	**5.4**	**5**	**9.9**	**7**	**9.1**	**2.1**	**1.3**	0.073 U	**5.8**	**1.4**
PCB-177	0.2 U	**3.7**	**3.5**	**6.7**	**4.3**	**5.6**	**1.7**	**1.1**	0.2 U	**4.2**	**1.2**
PCB-180	**0.66**	**15**	**13**	**27**	**18**	**24**	**6.1**	**4**	0.16 U	**16 J**	**4.3**
PCB-183	0.16 U	**4.4**	**3.8**	**7.4**	**4.6**	**6.7**	**1.4**	**1.1**	0.16 U	**4**	**1**
PCB-187	0.17 U	**9.1**	**9.3**	**16**	**11**	**14**	**3.2**	**2.4**	0.18 U	**8.5 J**	**2.6**
PCB-194	0.12 U	**4.2**	**4.1**	**5.9**	**5**	**6.3**	**1.5**	**1.1**	0.13 U	**3.3**	**1.1**
PCB-195	0.1 U	**1.9**	**1.8**	**2.5**	**1.9**	**2.1**	**0.61**	**0.38**	0.1 U	**1.6**	0.13 U
PCB-201	0.057 U	**0.83**	**0.62**	**1.5**	**0.68**	**0.96**	**0.3 J**	**0.25 J**	0.059 U	**0.7**	0.074 U
PCB-203	0.097 U	**4.5**	**3.8**	**6.9**	**4.9**	**6.9**	**1.5**	**0.93**	0.1 U	**3.8**	**1.1**
Total PCB Congener (U = 0)	**3.1 J**	**150 J**	**150 J**	**350 J**	**260 J**	**340 J**	**69 J**	**44 J**	**0.44 J**	**160 J**	**44 J**
Total Petroleum Hydrocarbons (mg/kg)											
Diesel range organics (C10 - C36)	2.3 U	**15**	**12**	**100**	**48**	**77**	2.9 U	2.2 U	2.1 U	--	--

Table B19
Sediment Sample Analytical Results (2018)

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed		
Location Name	IB-16	IB-16	IB-16	IB-17	IB-17	IB-17	IB-23	IB-24	IB-24		
Sample Name	IB-16 0.0-2.0 091118	IB-16 2.0-4.0 091118	IB-16 4.0-6.0 091118	IB-17 0.0-2.0 091118	IB-17 2.0-4.0 091118	IB-17 4.0-6.0 091118	IB-23 0.0-2.0 091118	IB-24 0.0-2.0 091118	IB-24 2.0-4.0 091118		
Sample Date	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018		
Depth	0 - 2 feet	2 - 4 feet	4 - 6 feet	0 - 2 feet	2 - 4 feet	4 - 6 feet	0 - 2 feet	0 - 2 feet	2 - 2.5 feet	ERM	TTLC
Conventional Parameters (mg/kg)											
Sulfide	**9.8**	**3**	**2**	**17**	**8**	**4.4**	0.11 U	**7**	--	--	--
Conventional Parameters (%)											
Total organic carbon	**0.76**	**1**	**1.1**	**0.93**	**1.3**	**1.2**	**1.7**	**2.2**	**0.46**	--	--
Total solids	**56.2**	**57.7**	**61.7**	**58.2**	**59.5**	**56.7**	**79.2**	**75**	**79.5**	--	--
Grain Size (%)											
Gravel (>2mm)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--	--	--	--
Sand (2.00mm - 1.00mm)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--	--	--	--
Sand, coarse	**5.55**	**1.34**	0.01 U	**0.16**	0.01 U	0.01 U	--	--	--	--	--
Sand, medium	**21.41**	**15.25**	**0.27**	**11.33**	**2.49**	**0.23**	--	--	--	--	--
Sand, fine	**14.47**	**12.22**	**8.73**	**12.79**	**6.24**	**4.58**	--	--	--	--	--
Sand, very fine	**13**	**13.09**	**8.01**	**10.91**	**10.61**	**8.11**	--	--	--	--	--
Silt	**34.39**	**43.36**	**61.49**	**48.23**	**60.51**	**65.22**	--	--	--	--	--
Clay (<4µm)	**11.17**	**14.74**	**21.5**	**16.6**	**20.14**	**21.86**	--	--	--	--	--
Total fines (silt + clay)	**45.56**	**58.1**	**82.99**	**64.83**	**80.65**	**87.08**	--	--	--	--	--
Metals (mg/kg)											
Arsenic	**12.5**	**12.1**	**12.8**	**10.7**	**20.3**	**13.2**	**12.7**	**11.8**	**2.69**	70	500
Cadmium	**0.379**	**0.309**	**0.334**	**0.274**	**1.05**	**0.337**	**0.52**	**1.22**	**0.171**	9.6	100
Chromium	**90.1 J**	**67.1 J**	**82.9 J**	**63.9 J**	**94.7 J**	**79.2 J**	**38 J**	**153 J**	**488 J**	370	2,500
Cobalt	**13.8**	**13.8**	**14.4**	**12.1**	**17.2**	**16.3**	**39.3**	**34.6**	**48.4**	--	8,000
Copper	**130**	**41.2**	**36.5**	**71.2**	**80.4**	**35.7**	**764**	**935**	**375**	270	2,500
Lead	**71.3**	**18.2**	**18.1**	**28.3**	**57.8**	**10.8**	**2,700**	**766**	**158**	218	1,000
Mercury	**0.905**	**0.181**	**0.111**	**0.171**	**0.58**	**0.0716**	**3.93**	**1.38**	**0.178**	0.71	20
Nickel	**136**	**91.8**	**111**	**75.5**	**116**	**90.5**	**85.1**	**418**	**1,020**	51.6[1]	2,000
Selenium	**0.27**	**0.42**	**0.39**	**0.31**	**0.45**	**0.44**	**0.08 J**	**0.09 J**	0.03 U	--	100
Silver	**0.754**	**0.617**	**0.544**	**0.645**	**1.08**	**0.683**	**0.431**	**0.725**	**0.149**	3.7	500
Zinc	**133**	**84**	**72.2**	**98.2**	**148**	**87.7**	**1,070**	**833**	**364**	410	5,000
Organometallic Compounds (µg/kg)											
Butyltin (n-Butyltin)	**6.1**	2.4 U	2.1 U	2.3 U	2.3 U	2.4 U	**12**	1.8 U	1.7 U	--	--
Dibutyltin	**76**	**7.4**	1.1 U	**19**	1.2 U	1.3 U	**35**	**9.2**	**29**	--	--
Tributyltin	**12**	2.6 UJ	2.3 U	**4.9 J**	2.5 U	2.6 U	1.8 U	2 U	1.9 U	--	--
Tetrabutyltin	1.3 U	1.3 UJ	1.1 U	1.3 U	1.2 U	1.3 U	0.9 U	0.99 U	0.93 U	--	--
Total butyltin (U = 0)	**94**	**7.4 J**	2.3 U	**24 J**	2.5 U	2.6 U	**47**	**9.2**	**29**	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)											
1-Methylnaphthalene	8.2 U	7.9 U	7.5 U	7.8 U	7.6 U	4 U	**6.2 J**	**710**	**25**	--	--
1-Methylphenanthrene	**32 J**	8.4 U	**38**	**17 J**	**34**	4.3 U	**24 J**	**320**	**11 J**	--	--
2,3,5-Trimethylnaphthalene (1,6,7-Trimethylnaphthalene)	6.8 U	6.6 U	**6.7 J**	6.6 U	6.4 U	3.3 U	**7.9 J**	**1,700**	**50**	--	--
2,6-Dimethylnaphthalene	**9.6 J**	**8.2 J**	**10 J**	**10 J**	**12 J**	**7.8 J**	**6.2 J**	**1,900**	**58**	--	--
2-Methylnaphthalene	8.2 U	7.9 U	7.5 U	7.8 U	7.6 U	4 U	**7.4 J**	**1,000**	**36**	670	--
Acenaphthene	**13 J**	**17 J**	**33**	7.9 U	**9.3 J**	4 U	**27**	**86 J**	**5 J**	500	--
Acenaphthylene	**23 J**	**8.3 J**	**51**	**11 J**	**33**	3.1 U	**17 J**	**83 J**	**3 J**	640	--
Anthracene	**86**	**26 J**	**240**	**51**	**110**	6 U	**58**	45 U	4.3 U	1,100	--

Table B19
Sediment Sample Analytical Results (2018)

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed		
Location Name	IB-16	IB-16	IB-16	IB-17	IB-17	IB-17	IB-23	IB-24	IB-24		
Sample Name	IB-16 0.0-2.0 091118	IB-16 2.0-4.0 091118	IB-16 4.0-6.0 091118	IB-17 0.0-2.0 091118	IB-17 2.0-4.0 091118	IB-17 4.0-6.0 091118	IB-23 0.0-2.0 091118	IB-24 0.0-2.0 091118	IB-24 2.0-4.0 091118		
Sample Date	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018		
Depth	0 - 2 feet	2 - 4 feet	4 - 6 feet	0 - 2 feet	2 - 4 feet	4 - 6 feet	0 - 2 feet	0 - 2 feet	2 - 2.5 feet	ERM	TTLC
Benzo(a)anthracene	**240**	**84**	**1,300**	**140**	**290**	**13 J**	**180**	**150**	**19**	1,600	--
Benzo(a)pyrene	**420**	**140**	**900**	**210**	**590**	**15 J**	**200**	**170**	**19**	1,600	--
Benzo(b)fluoranthene	**410**	**150**	**990**	**200**	**440**	**15 J**	**200**	**210**	**23**	--	--
Benzo(e)pyrene	**230**	**93**	**530**	**130**	**350**	**11 J**	**140**	**160**	**16**	--	--
Benzo(g,h,i)perylene	**300**	**130**	**600**	**160**	**450**	**13 J**	**150**	**150**	**8.4 J**	--	--
Benzo(k)fluoranthene	**240**	**86**	**610**	**140**	**290**	**10 J**	**130**	**140**	**18**	--	--
Biphenyl (1,1'-Biphenyl)	6.5 U	6.3 U	6 U	6.3 U	6.1 U	3.2 U	4.7 U	**160**	**5.3 J**	--	--
Chrysene	**290**	**110**	**1,500**	**160**	**320**	**13 J**	**220**	**140**	**22**	2,800	--
Dibenzo(a,h)anthracene	**76**	**25 J**	**130**	**35**	**76**	3.4 U	**52**	**55 J**	**4.1 J**	260	--
Dibenzothiophene	4.7 U	4.6 U	**20 J**	4.5 U	4.4 U	2.3 U	**11 J**	**120 J**	**6.2 J**	--	--
Fluoranthene	**480**	**200**	**1,700**	**260**	**570**	**19**	**370**	**180**	**65**	5,100	--
Fluorene	**22 J**	**16 J**	**45**	11 U	**24 J**	**6.3 J**	**29**	**420**	**23**	540	--
Indeno(1,2,3-c,d)pyrene	**240**	**89**	**450**	**120**	**320**	**9.1 J**	**100**	**120 J**	**8.7 J**	--	--
Naphthalene	**17 J**	**12 J**	**35**	12 U	**26 J**	6 U	8.8 U	**300**	**15**	2,100	--
Perylene	**92**	**100**	**240**	**70**	**140**	**46**	**75**	**57 J**	**5.4 J**	--	--
Phenanthrene	**260**	**68**	**250**	**120**	**270**	**18**	**250**	**760**	**59**	1,500	--
Pyrene	**600**	**270**	**2,100**	**350**	**1,000**	**30**	**330**	**310**	**61**	2,600	--
Total HPAH (12 of 25) (U = 0)	**3,600**	**1,500 J**	**11,000**	**2,000**	**4,800**	**190 J**	**2,100**	**1,800 J**	**270 J**	9,600	--
Total LPAH (13 of 25) (U = 0)	**460 J**	**160 J**	**730 J**	**210 J**	**520 J**	**32 J**	**440 J**	**7,600 J**	**300 J**	3,160	--
Total PAH (25) (U = 0)	**4,100 J**	**1,600 J**	**12,000 J**	**2,200 J**	**5,400 J**	**230 J**	**2,600 J**	**9,400 J**	**570 J**	44,792	--
PCB Congeners (µg/kg)											
PCB-005/008	**0.47 J**	0.13 U	0.12 U	0.13 U	0.13 U	0.13 U	0.097 U	1 U	0.096 U	--	--
PCB-018	**2.2**	**0.53**	0.1 U	**0.71**	**1.2**	0.11 U	**6**	0.84 U	0.081 U	--	--
PCB-028	**1.4**	**0.52**	0.11 U	**0.75**	**0.74**	0.12 U	**2.6**	0.9 U	0.086 U	--	--
PCB-031	**1.2**	0.086 U	0.081 U	**0.53**	**0.77**	0.087 U	0.064 U	0.66 U	0.063 U	--	--
PCB-033	**1.3**	0.065 U	0.061 U	0.064 U	0.063 U	0.066 U	0.048 U	0.5 U	0.048 U	--	--
PCB-044	**2.5**	**1.6**	0.24 U	**1.3**	0.25 U	0.26 U	**21**	**17**	**1**	--	--
PCB-049	**1.8**	**0.69**	0.08 U	**0.83**	**1.8**	0.085 U	**13**	**9.7**	0.062 U	--	--
PCB-052	**2.9 J**	**0.88 J**	0.31 UJ	**1.6 J**	**1.7 J**	0.33 UJ	**20 J**	**16 J**	**0.72 J**	--	--
PCB-056	**1.1**	0.13 U	0.12 U	**0.43**	0.12 U	0.13 U	**10**	**7.7**	0.094 U	--	--
PCB-060	0.092 U	0.089 U	0.084 U	**0.33 J**	0.086 U	0.09 U	**3.1**	**2.9**	0.065 U	--	--
PCB-066	**3.7**	**1.3**	0.2 U	**1.5**	**1.1**	0.21 U	**29**	**19**	**0.82**	--	--
PCB-070	**3.3**	**1.1**	0.11 U	**1.6**	**1.3**	0.12 U	**26**	**18**	**0.8**	--	--
PCB-074	**1.4**	**0.89**	0.14 U	**0.78**	0.15 U	0.16 U	**7.5**	**7.1**	**0.54**	--	--
PCB-087	**1.3**	**0.74**	0.18 U	**1**	0.18 U	0.19 U	**16**	**17**	0.14 U	--	--
PCB-095	**3.9**	**1.2**	0.17 U	**2**	**2.3**	0.18 U	**31**	**20**	**0.88**	--	--
PCB-097	**1.8**	**0.61**	0.074 U	**1**	**1.5**	0.08 U	**13**	**10**	0.058 U	--	--
PCB-099	**2.9**	**1**	0.076 U	**1.3**	**1**	0.082 U	**16**	**15**	**0.6**	--	--
PCB-101	**5.9**	**1.7**	0.071 U	**3**	**3.1**	0.076 U	**33**	**26**	**1.4**	--	--
PCB-105	**2.2**	**0.66**	0.086 U	**1.4**	0.088 U	0.092 U	**18**	**12**	**0.6**	--	--
PCB-110	**4.7**	**1.8**	0.054 U	**2.4**	**3.4**	0.058 U	**44**	**28**	**1.2**	--	--
PCB-118	**4.8**	**1.6**	0.056 U	**2.2**	**2.4**	0.06 U	**30**	**21**	**1.3**	--	--

Table B19
Sediment Sample Analytical Results (2018)

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed		
Location Name	**IB-16**	**IB-16**	**IB-16**	**IB-17**	**IB-17**	**IB-17**	**IB-23**	**IB-24**	**IB-24**		
Sample Name	**IB-16 0.0-2.0 091118**	**IB-16 2.0-4.0 091118**	**IB-16 4.0-6.0 091118**	**IB-17 0.0-2.0 091118**	**IB-17 2.0-4.0 091118**	**IB-17 4.0-6.0 091118**	**IB-23 0.0-2.0 091118**	**IB-24 0.0-2.0 091118**	**IB-24 2.0-4.0 091118**		
Sample Date	**9/11/2018**	**9/11/2018**	**9/11/2018**	**9/11/2018**	**9/11/2018**	**9/11/2018**	**9/11/2018**	**9/11/2018**	**9/11/2018**		
Depth	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**2 - 4 feet**	**4 - 6 feet**	**0 - 2 feet**	**0 - 2 feet**	**2 - 2.5 feet**	**ERM**	**TTLC**
PCB-128	**1.1**	0.2 U	0.19 U	**0.85**	**0.6**	0.21 U	**5.8**	**5.4**	0.15 U	--	--
PCB-132/153	**13**	**3.2**	0.26 U	**6.6**	**5.4**	0.28 U	**24**	**28**	**1.6**	--	--
PCB-138/158	**8.6**	**2.1**	0.57 U	**4.7**	**4.1**	0.61 U	**25**	**21**	**1.2**	--	--
PCB-141	**1.3**	**0.37**	0.079 U	**0.76**	**0.82**	0.084 U	**3.5**	**5.3**	0.061 U	--	--
PCB-149	**7.4**	**1.8**	0.19 U	**3.8**	**3.4**	0.2 U	**17**	**19**	**1.2**	--	--
PCB-151	**2.5**	**0.8**	0.14 U	**1.2**	**1.2**	0.15 U	**5.4**	**8.7**	**0.67**	--	--
PCB-156	**0.69**	0.13 U	0.12 U	**0.42**	0.13 U	0.13 U	**3.3**	1 U	0.096 U	--	--
PCB-170	**4**	**0.8**	0.18 U	**1.9**	**1.6**	0.19 U	**5**	**8.1**	**0.91**	--	--
PCB-174	**2.9**	**0.72**	0.067 U	**1.3**	**1.1**	0.072 U	**3**	**11**	0.052 U	--	--
PCB-177	**2**	**0.43**	0.19 U	**0.98**	**0.69**	0.2 U	**1.6**	**5.9**	0.15 U	--	--
PCB-180	**8.4**	**1.7**	0.15 U	**3.7**	**3.2**	0.16 U	**8.3**	**29**	**1.8**	--	--
PCB-183	**2.2**	**0.58**	0.15 U	**1.1**	**0.9**	0.16 U	**1.9**	**8.1**	**0.67**	--	--
PCB-187	**5.3**	**1.3**	0.16 U	**2.5**	**1.8**	0.18 U	**4.3**	**19**	**1.2**	--	--
PCB-194	**2.5**	**0.84**	0.12 U	**1.3**	**1.2**	0.13 U	**2.2**	**8.5**	**0.63**	--	--
PCB-195	**1.1**	0.1 U	0.096 U	**0.26 J**	0.099 U	0.1 U	**0.42**	**3.6**	0.075 U	--	--
PCB-201	**0.46**	0.058 U	0.055 U	0.057 U	0.056 U	0.059 U	**0.34**	**1.7 J**	0.042 U	--	--
PCB-203	**2.4**	**0.62**	0.093 U	**0.99**	**1.1**	0.099 U	**2**	**11**	**0.56**	--	--
Total PCB Congener (U = 0)	**120 J**	**32 J**	0.57 UJ	**57 J**	**49 J**	0.61 UJ	**450 J**	**440 J**	**20 J**	180	50,000
Total Petroleum Hydrocarbons (mg/kg)											
Diesel range organics (C10 - C36)	**12**	2.1 U	**5.4 J**	2.1 U	**6.2 J**	2.2 U	**5600**	**300**	**61**	--	--

Table B19
Sediment Sample Analytical Results (2018)

Notes:

Detected concentration is greater than the ERM screening level

Detected concentration is greater than the TTLC (California Code of Regulations, Title 22, Division 4.5, Chapter 11, Article 3)

Bold: detected result

Totals are calculated as the sum of all detected results (U=0). If all results are not detected, the highest method detection limit value is reported as the sum.

Total butyltin is the sum of mono-, di-, tri-, and tetrabultyin.

Total LPAH (13 of 25) is the sum of 1-methylnaphthalene, 1-methylphenanthrene, 1,6,7-trimethylnaphthalene, 2,6-dimethylnaphthalene, 2-methylnapthalene, acenaphthene, acenaphthylene, anthracene, biphenyl, dibenzothiophene, fluorene, naphthalene, and phenanthrene.

Total HPAH (12 of 25) is the sum of benzo(a)anthracene, benzo(a)pyrene, benzo(e)pyrene, benzo(b)fluoranthenes, benzo(k)fluoranthenes, benzo(g,h,i)perylene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-c,d)pyrene, perylene, and pyrene.

Dioxin/furan TEQ values were calculated with 1998 and 2005 World Health Organization (WHO) toxicity equivalency factor (TEF) values for mammals.

Total PCB congeners is the sum of the following PCB congeners: 008, 018, 028, 031, 033, 044, 049, 052, 056, 060, 066, 070, 074, 087, 095, 097, 099, 101, 105, 110, 118, 128, 132, 138, 141, 149, 151, 153, 156, 158, 170, 174, 177, 180, 183, 187, 194, 195, 201, and 203.

USEPA Stage 2A data validation was completed by Anchor QEA.

Source: Anchor QEA 2019

1. San Francisco Bay ambient condition for nickel is 112 mg/kg, which exceeds the ERM.

--: results not reported or not applicable

µg/kg: micrograms per kilogram

µm: micrometers

BHC: benzenehexachloride or hexachlorocyclohexane (HCH)

ERM: effects range median

HPAH: high molecular weight PAH

J: estimated value

LPAH: low molecular weight PAH

mg/kg: milligrams per kilogram

mm: millimeters

N: normal environmental sample

SE: sediment matrix

TEQ: toxic equivalency quotient

TTLC: Total Threshold Limit Concentration

U: compound analyzed but not detected at levels greater than the detection limit

UJ: compound analyzed but not detected at levels greater than the estimated detection limit

Table B20
Sediment Sample Analytical Results for Dioxin/Furan (2018)

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	SF Bay Bioaccumulation Trigger
Location Name	IB-INNER	IB-INNER	IB-INNER	IB-INNER	IB-MIDDLE	IB-MIDDLE	IB-MIDDLE	
Sample Name	IB-INNER 0.0-2.0 091118	IB-INNER 100 2.0-4.0 091118	IB-INNER 2.0-4.0 091118	IB-INNER 4.0-6.0 091118	IB-MIDDLE 0.0-2.0 091118	IB-MIDDLE 2.0-4.0 091118	IB-MIDDLE 4.0-6.0 091118	
Sample Date	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	
Depth	0 - 2 feet	2 - 4 feet	2 - 4 feet	4 - 6 feet	0 - 2 feet	2 - 4 feet	4 - 6 feet	
Conventional Parameters (%)								
Moisture	**38.6**	**45**	**44.9**	**40.8**	**49.9**	**45.6**	**45.3**	--
Dioxin/Furans (ng/kg)								
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.141 U	0.127 U	0.152 U	0.105 U	0.149 U	0.168 U	0.116 U	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.475 U	0.379 U	0.387 U	0.249 U	0.333 U	0.454 U	0.282 U	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.327 U	0.283 U	0.319 U	0.252 U	0.279 U	0.329 U	0.207 U	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	**32.4**	**21.6**	**26.1**	0.272 U	**10.5**	**12.2**	0.205 U	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	**13.3**	**9.78**	**10.2**	0.281 U	0.248 U	0.318 U	0.209 U	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	**929**	**612**	**751**	**163**	**164**	**198**	**68.2**	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	**8,800 J**	**5,150**	**6,840**	**1,220**	**1,370**	**1,380**	**402**	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	**5.71**	**2.71**	**2.84**	0.234 U	**3.11**	**4.83**	**2.14 J**	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.218 U	0.199 U	0.195 U	0.127 U	0.167 U	0.253 U	0.163 U	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	**15.2**	**9.12**	**9.83**	0.0984 U	0.14 U	**9.24**	0.139 U	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	**10.4**	0.192 U	0.28 U	0.105 U	0.144 U	0.205 U	0.14 U	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	**10.5**	0.194 U	0.279 U	0.108 U	0.151 U	0.205 U	0.14 U	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.263 U	0.22 U	0.314 U	0.125 U	0.157 U	0.24 U	0.161 U	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	**16.5**	0.192 U	**9.99**	0.108 U	0.148 U	0.21 U	0.139 U	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	**274**	**131 J**	**192 J**	**30.8**	**35.7**	**45.5**	**16.5**	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	**13.9**	**8.84**	**13.7**	0.114 U	0.15 U	0.2 U	0.112 U	--
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	**1,230**	**708 J**	**1120 J**	**138**	**131**	**123**	**47.4**	--
Total Dioxin/Furan (U = 0)	**11,000 J**	**6,650 J**	**8,980 J**	**1,550**	**1,710**	**1,770**	**536 J**	--
Total Dioxin/Furan TEQ 1998 (Mammal) (U = 0)	**30 J**	**16.1 J**	**20.2 J**	**2.07**	**3.51**	**8.91**	**1.11 J**	10
Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0)	**29 J**	**15.4 J**	**19.8 J**	**2.35**	**3.81**	**7.36**	**1.2 J**	--

Notes:

Detected concentration is greater than San Francisco Bay Bioaccumulation Trigger (2016-2019)

Bold: detected result

Totals are calculated as the sum of all detected results (U=0). If all results are not detected, the highest method detection limit value is reported as the sum.

Dioxin/furan TEQ values were calculated with 1998 and 2005 World Health Organization (WHO) toxicity equivalency factor (TEF) values for mammals.

USEPA Stage 2A data validation was completed by Anchor QEA.

Source: Anchor QEA 2019

--: results not reported or not applicable

J: estimated value

ng/kg: nanograms per kilograms

U: compound analyzed but not detected at levels greater than the detection limit

TEQ: toxic equivalency quotient

Table B21
Groundwater Sample Analytical Results for Metals (2016)

		Task	IndiaBasin-2016GW	IndiaBasin-2016GW	IndiaBasin-2016GW	IndiaBasin-2016GW
		Sample Name	INN-GW-1	INN-GW-2	INN-GW-3	INN-GW-4
		Sample Date	12/16/2016	12/16/2016	12/14/2016	12/14/2016
		Depth	18 - 23 ft	7 - 12 ft	10 - 20 ft	7 - 17 ft
	Method	SFRWQCB 2019 Groundwater Aquatic Habitat Saltwater Ecotox [1]				
Metals, Dissolved (µg/L)						
Antimony	SW6010B	500	2 U	2 U	2 U	2 U
Arsenic	SW6010B	36	1.3 U	1.3 U	1.3 U	1.3 U
Barium	SW6010B	--	**15**	**130**	**150**	**87**
Beryllium	SW6010B	--	0.25 U	0.25 U	0.25 U	0.25 U
Cadmium	SW6010B	9.3	0.6 U	0.6 U	0.6 U	0.6 U
Chromium	SW6010B	--	1 U	**1 J**	1 U	**3.1 J**
Cobalt	SW6010B	--	**1.6 J**	**7.5**	**2.4 J**	**9**
Copper	SW6010B	3.1	1 U	**33**	**1.3 J**	**63**
Lead	SW6010B	8.1	1 U	1 U	1 U	**24**
Mercury	SW7471A	0.025	*0.04 U*	*0.04 U*	*0.04 U*	*0.04 U*
Molybdenum	SW6010B	--	**38**	**3.6 J**	**12**	**11**
Nickel	SW6010B	8.2	**4.5 J**	**25**	**14**	**16**
Selenium	SW6010B	0.5	*2.2 U*	**6.9 J**	*2.2 U*	*2.2 U*
Silver	SW6010B	0.19	*1.1 U*	**1.5 J**	**2.1 J**	**1.3 J**
Thallium	SW6010B	210	1.9 U	1.9 U	**5.6 J**	**2.3 J**
Vanadium	SW6010B	--	**1.1 J**	0.57 U	**1 J**	**16**
Zinc	SW6010B	81	5 U	**320**	5 U	**47**

Table B21

Groundwater Sample Analytical Results for Metals (2016)

Notes:

Detected concentration is greater than SFRWQCB 2019 Groundwater Aquatic Habitat Saltwater Ecotox

Italics: non-detected concentration is above one or more identified screening levels

Bold: Detected result

Source: Northgate 2017a; totals calculated by Anchor QEA

1. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 ESLs = Environmental Screening Level for Aquatic Habitat Goals. San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table GW-2. January 2019.

--: results not reported or not applicable

µg/L: micrograms per liter

ft: feet

J: Estimated value

pct: percent

U: Compound analyzed, but not detected above detection limit

Table B22

Groundwater Sample Analytical Results for Total Petroleum Hydrocarbons (2016)

		Task	IndiaBasin-2016GW	IndiaBasin-2016GW	IndiaBasin-2016GW	IndiaBasin-2016GW
		Sample Name	INN-GW-1	INN-GW-2	INN-GW-3	INN-GW-4
		Sample Date	12/16/2016	12/16/2016	12/14/2016	12/14/2016
		Depth	18 - 23 ft	7 - 12 ft	10 - 20 ft	7 - 17 ft
	Method	SFRWQCB 2019 Groundwater Aquatic Habitat Saltwater Ecotox [1]				
Total Petroleum Hydrocarbons (mg/L)						
Diesel range organics (C10 - C24)	SW8015	0.64	**0.028 J**	**1.7**	**0.31**	**2.2**
Motor oil range hydrocarbons (C24-C36)	SW8015	--	0.09 U	**0.95**	**1.2**	**3.6**

Notes:

Detected concentration is greater than SFRWQCB 2019 Groundwater Aquatic Habitat Saltwater Ecotox

Italics: non-detected concentration is above one or more identified screening levels

Bold: Detected result

Source: Northgate 2017a; totals calculated by Anchor QEA

1. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 ESLs = Environmental Screening Level for Aquatic Habitat Goals. San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table GW-2. January 2019.

--: Results not reported or not applicable

ft: feet

J: Estimated value

mg/L: milligrams per liter

U: Compound analyzed, but not detected above detection limit

Table B23
Groundwater Sample Analytical Results for Polyaromatic Hydrocarbons (2016)

		Task	IndiaBasin-2016GW	IndiaBasin-2016GW	IndiaBasin-2016GW	IndiaBasin-2016GW
		Sample Name	INN-GW-1	INN-GW-2	INN-GW-3	INN-GW-4
		Sample Date	12/16/2016	12/16/2016	12/14/2016	12/14/2016
		Depth	18 - 23 ft	7 - 12 ft	10 - 20 ft	7 - 17 ft
	Method	SFRWQCB 2019 Groundwater Aquatic Habitat Saltwater Ecotox [1]				
Semivolatile Organics (µg/L)						
Acenaphthene	SW8270C	15	0.2 U	**5.3**	**0.05 J**	0.08 U
Acenaphthylene	SW8270C	15	0.2 U	**0.2**	**0.03 J**	**0.08 J**
Anthracene	SW8270C	15	0.2 U	**1.4**	**0.09 J**	**0.2 J**
Benzo(a)anthracene	SW8270C	15	*0.2 U*	**1.6**	**0.1**	**0.1 J**
Benzo(a)pyrene	SW8270C	15	0.2 U	**1**	**0.2**	**0.1 J**
Benzo(b)fluoranthene	SW8270C	15	0.2 U	**1.1**	**0.2**	**0.2 J**
Benzo(g,h,i)perylene	SW8270C	15	0.2 U	**0.6**	**0.1**	**0.1 J**
Benzo(k)fluoranthene	SW8270C	15	0.2 U	**0.4**	**0.05 J**	0.08 U
Chrysene	SW8270C	15	0.2 U	**1.3**	**0.1**	**0.1 J**
Dibenzo(a,h)anthracene	SW8270C	15	*0.2 U*	**0.2**	**0.02 J**	*0.08 U*
Fluoranthene	SW8270C	8	0.2 U	**7.8**	**0.4**	**0.3 J**
Fluorene	SW8270C	15	0.2 U	**4.1**	**0.04 J**	0.08 U
Indeno(1,2,3-c,d)pyrene	SW8270C	15	0.2 U	**0.5**	**0.09 J**	**0.09 J**
Naphthalene	SW8270C	15	*0.2 U*	**0.2**	**0.1**	**0.1 J**
Phenanthrene	SW8270C	4.6	0.2 U	**3**	**0.2**	**0.1 J**
Pyrene	SW8270C	15	**0.2 J**	**6.1**	**0.8**	**0.4 J**
Total Benzo(a)pyrene (BaP) equivalent value (DTSC 2009) (U = 0)	--	--	0.2 U	**1.441**	**0.2518 J**	**0.14 J**
Total HPAH (9 of 15) (U = 0)	--	--	**0.2 J**	**20.6**	**2.06 J**	**1.39 J**
Total LPAH (6 of 15) (U = 0)	--	--	0.2 U	**14.2**	**0.51 J**	**0.48 J**
Total PAH (15) (U = 0)	--	--	**0.2 J**	**34.8**	**2.57 J**	**1.87 J**

Table B23
Groundwater Sample Analytical Results for Polyaromatic Hydrocarbons (2016)

Notes:

Totals are calculated by Anchor QEA as the sum of all detected results (U=0). If all results are not detected, the highest method detection limit value is reported as the sum.

Total HPAH (9 of 15) is the sum of benzo(a)anthracene, benzo(a)pyrene, benzo(g,h,i)perylene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-c,d)pyrene, and pyrene.

Total LPAH (6 of 15) is the sum of acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, and phenanthrene.

Total Benzo(a)pyrene (BaP) equivalent value calculation includes benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-c,d)pyrene. Per California Department of Toxic Substances Control (DTSC), Use of the Northern and Southern California PAH Studies in the MGP Site Cleanup Process, July 2009.

Detected concentration is greater than SFRWQCB 2019 Groundwater Aquatic Habitat Saltwater Ecotox

Italics: non-detected concentration is above one or more identified screening levels

Bold: Detected result

Source: Northgate 2017a; totals calculated by Anchor QEA

1. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 ESLs = Environmental Screening Level for Aquatic Habitat Goals. San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table GW-2. January 2019.

--: Results not reported or not applicable

µg/L: micrograms per liter

ft: feet

HPAH: high molecular weight PAH

J: Estimated value

LPAH: low molecular weight PAH

PAH: polycyclic aromatic hydrocarbons

U: Compound analyzed, but not detected above detection limit

Table B24

Groundwater Sample Analytical Results for Volatile Organic Compounds (2016)

		Task	IndiaBasin-2016GW	IndiaBasin-2016GW	IndiaBasin-2016GW	IndiaBasin-2016GW
		Sample Name	INN-GW-1	INN-GW-2	INN-GW-3	INN-GW-4
		Sample Date	12/16/2016	12/16/2016	12/14/2016	12/14/2016
		Depth	18 - 23 ft	7 - 12 ft	10 - 20 ft	7 - 17 ft
	Method	SFRWQCB 2019 Groundwater Aquatic Habitat Saltwater Ecotox [1]				
Volatile Organics (µg/L)						
1,1-Dichloroethane	SW8260B	--	0.1 U	**0.1 J**	**0.3 J**	0.5 U
1,2-Dichloroethene, cis-	SW8260B	22000	0.1 U	**0.5**	**1**	**0.9 J**
4-Methyl-2-pentanone (Methyl isobutyl ketone)	SW8260B	--	0.2 U	**0.4 J**	0.3 U	0.5 U
Benzene	SW8260B	350	0.1 U	**0.1 J**	0.3 U	0.5 U
Carbon disulfide	SW8260B	--	0.1 U	0.1 U	**0.6 J**	**0.8 J**
m,p-Xylene	SW8260B	--	0.1 U	**0.2 J**	0.2 U	0.4 U
Methyl ethyl ketone (2-Butanone)	SW8260B	--	0.3 U	0.3 U	1 U	**1.7 J**
Tetrachloroethene (PCE)	SW8260B	230	0.1 U	**0.3 J**	0.3 U	**1 J**
Toluene	SW8260B	2500	**0.3 J**	**0.5 J**	0.2 U	0.4 U
Trichloroethene (TCE)	SW8260B	200	0.1 U	**0.2 J**	0.2 U	**0.5 J**
Vinyl chloride	SW8260B	--	0.1 U	**0.2 J**	0.2 U	0.3 U

Notes:

Detected concentration is greater than SFRWQCB 2019 Groundwater Aquatic Habitat Saltwater Ecotox

Italics: non-detected concentration is above one or more identified screening levels

Bold: Detected result

Source: Northgate 2017a; totals calculated by Anchor QEA

1. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Aquatic Habitat Goals. San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table GW-2. January 2019.

--: Results not reported or not applicable

µg/L: micrograms per liter

ft: feet

J: Estimated value

U: Compound analyzed, but not detected above detection limit

Table B25

Groundwater Sample Analytical Results for Maher Ordinance Constituents (Cyanide Hexavalent Chromium, Fluoride, and pH) (2016)

		Task	IndiaBasin-2016GW	IndiaBasin-2016GW	IndiaBasin-2016GW	IndiaBasin-2016GW
		Sample Name	INN-GW-1	INN-GW-2	INN-GW-3	INN-GW-4
		Sample Date	12/16/2016	12/16/2016	12/14/2016	12/14/2016
		Depth	18 - 23 ft	7 - 12 ft	10 - 20 ft	7 - 17 ft
	Method	**SFRWQCB 2019 Groundwater Aquatic Habitat Saltwater Ecotox [1]**				
Conventional Parameters						
Cyanide (mg/L)	SM4500CNE	0.001	**0.002 J**	**0.0009 J**	**0.006 J**	**0.005 J**
Chromium VI (µg/L)	SW7196A	50	*2 U*	**2 J**	*2 U*	**2 J**
Fluoride (mg/L)	E300.0	--	0.02 U	**0.38**	0.2 U	**1.3**
pH (unitless)	SW9040C	--	**7.3**	**6.9**	**7**	**7.3**

Notes:

Detected concentration is greater than SFRWQCB 2019 Groundwater Aquatic Habitat Saltwater Ecotox

Italics: non-detected concentration is above one or more identified screening levels

Bold: Detected result

Source: Northgate 2017a; totals calculated by Anchor QEA

1. San Francisco Regional Water Quality Control Board (SFRWQCB) 2019 Direct Exposure ESLs = Environmental Screening Level for Aquatic Habitat Goals. San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table GW-2. January 2019.

--: Results not reported or not applicable

µg/L: micrograms per liter

ft: feet

J: Estimated value

mg/L: milligrams per liter

U: Compound analyzed, but not detected above detection limit

Table B26
Surface Water Sample Analytical Results for Metals (2017)

		Metals																
	Analyte	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
	Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	Laboratory Method	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 7471A	EPA 6010B	EPA 6010B	EPA 6010B/6020	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
Sample ID	Sample Date																	
INN-SW-1	3/13/2017	< 2.8 ND	**18**	29	0.83 J	**1.6** J	< 0.56 ND	< 1.0 ND	**5.6**	< 1.2 ND	< 0.040 ND	3.1 J	< 0.34 ND	< 2.8 ND	**4.4** J	< 0.18 ND	22	< 4.7 ND
INN-SW-2	3/13/2017	< 2.8 ND	**36**	24	0.93 J	**2.0** J	< 0.56 ND	< 1.0 ND	**4.4** J	< 1.2 ND	< 0.040 ND	3.5 J	< 0.34 ND	< 2.8 ND	**4.7** J	< 0.094 ND	25	5.7 J
INN-SW-3	3/13/2017	< 2.8 ND	**31**	28	0.95	**1.8** J	< 0.56 ND	< 1.0 ND	**4.4** J	< 1.2 ND	< 0.040 ND	2.2 J	< 0.34 ND	< 2.8 ND	**5.0** J	< 0.094 ND	23	< 4.7 ND
INN-SW-4	3/13/2017	< 2.8 ND	**33**	25	0.89 J	**1.9** J	< 0.56 ND	< 1.0 ND	**8.5**	< 1.2 ND	< 0.040 ND	3.4 J	< 0.34 ND	< 2.8 ND	**4.3** J	< 0.094 ND	18	7.7 J
INN-SW-5	3/13/2017	5.1 J	**31**	25	0.93 J	**1.6** J	< 0.56 ND	< 1.0 ND	**3.9** J	< 1.2 ND	< 0.040 ND	3.4 J	< 0.34 ND	< 2.8 ND	**4.3** J	< 0.18 ND	19	5.7 J
INN-SW-6	12/12/2016	< 10 ND	< 6.5 ND	18 J	< 1.3 ND	< **3.0** ND	< **5.0** ND	< 5.0 ND	< **5.0** ND	< **5.1** ND	< 0.040 ND	13 J	**9.6** J	< 11 ND	< **5.4** ND	< 0.094 ND	4.3 J	< **25** ND
INN-SW-7	12/12/2016	< 10 ND	< 6.5 ND	18 J	< 1.3 ND	< **3.0** ND	< **5.0** ND	< 5.0 ND	< **5.0** ND	< **5.1** ND	< 0.040 ND	13 J	**10** J	< 11 ND	< **5.4** ND	< 0.094 ND	4.1 J	< **25** ND
INN-SW-8	12/12/2016	< 10 ND	< 6.5 ND	17 J	< 1.3 ND	< **3.0** ND	< **5.0** ND	< 5.0 ND	< **5.0** ND	< **5.1** ND	< 0.040 ND	12 J	**8.4** J	< 11 ND	< **5.4** ND	0.11 J	3.4 J	< **25** ND
INN-SW-9	3/14/2017	< 2.8 ND	**29**	24	1.2 J	**1.4** J	< 0.56 ND	< 1.0 ND	**5.8**	< 1.2 ND	< 0.040 ND	1.8 J	< 0.34 ND	< 2.8 ND	**3.3** J	< 0.11 ND	27	< 4.7 ND
INN-SW-10	3/14/2017	< 2.8 ND	**36**	23	0.77 J	**1.9** J	< 0.56 ND	< 1.0 ND	**5.4**	< 1.2 ND	< 0.040 ND	1.5 J	< 0.34 ND	< 2.8 ND	**3.1** J	< 0.11 ND	23	< 4.7 ND
Comparative Values																		
2015 SF Bay Basin Plan MWQOs for Surface Water [1]		ne	36	ne	ne	9.3	ne	ne	6.0	8.1	0.025	ne	8.2	ne	1.9 [a]	ne	ne	81
2015 Cal Ocean Plan Objectives [2]		ne	8.0	ne	ne	1.0	2.0	ne	3.0	2.0	0.04	ne	5.0	15	0.7	ne	ne	20

Notes:

Comparative Value Formatting Key for Individual Samples:

Bolded indicates individual sample location result exceeds the SWRCB Cal Ocean Plan Objective for Protection of Marine Aquatic Life.

Red bolded indicates an individual sample location result exceeds the SFRWQCB SF Bay Basin Plan Marine Water Quality Objective.

Red (not bolded) indicates the Mercury MDL exceeds the SFRWQCB SF Bay Basin Plan Marine Water Quality Objective.

Source: Northgate 2017a

a. One-hour average

1. San Francisco Regional Water Quality Control Board (SFRWQCB) Plan for San Francisco Bay Basin. March 20, 2015. Table 3-3: Marine Water Quality Objectives for Toxic Pollutants for Surface Waters, 4-day Average.

2 State Water Resources Control Board (SWRCB) California Environmental Protection Agency. 2015. California Ocean Plan, Objectives for Protection of Marine Aquatic Life, Table 1, 6-Month Median.

µg/L: micrograms per liter

J: estimated value

ND: not detected above the method detection limit (< MDL)

ne: not established

Table B27
Surface Water Sample Analytical Results for Polychlorinated Biphenyls (2017)

		PCBs							
	Analyte	**Aroclor-1016**	**Aroclor-1221**	**Aroclor-1232**	**Aroclor-1242**	**Aroclor-1248**	**Aroclor-1254**	**Aroclor-1260**	**Total PCBs**
	Units	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**
	Laboratory Method	**EPA 8082**	**EPA 8082**	**EPA 8082**	**EPA 8082**	**EPA 8082**	**EPA 8082**	**EPA 8082**	**(sum of Aroclors)**
Sample ID	**Sample Date**								
INN-SW-1	3/13/2017	< 0.064 ND	< 0.13 ND	< 0.057 ND	< 0.063 ND	< 0.064 ND	< 0.063 ND	< 0.054 ND	< 0.13
INN-SW-3	3/13/2017	< 0.064 ND	< 0.13 ND	< 0.057 ND	< 0.063 ND	< 0.064 ND	< 0.063 ND	< 0.054 ND	< 0.13
INN-SW-6	12/12/2016	< 0.15 NDb	< 0.31 ND	< 0.13 ND	< 0.15 ND	< 0.15 ND	< 0.15 ND	< 0.13 NDb	< 0.31
INN-SW-7	12/12/2016	< 0.15 NDb	< 0.31 ND	< 0.13 ND	< 0.15 ND	< 0.15 ND	< 0.15 ND	< 0.13 NDb	< 0.31
INN-SW-8	12/12/2016	< 0.15 NDb	< 0.31 ND	< 0.13 ND	< 0.15 ND	< 0.15 ND	< 0.15 ND	< 0.13 NDb	< 0.31
INN-SW-9	3/14/2017	< 0.061 ND	< 0.12 ND	< 0.054 ND	< 0.060 ND	< 0.061 ND	< 0.059 ND	< 0.051 ND	< 0.12
Comparative Values									
2015 SF Bay Basin Plan MWQOs for Surface Water [1]		ne	ne	ne	ne	ne	ne	ne	ne
2015 Cal Ocean Plan Objectives [2]		ne	ne	ne	ne	ne	ne	ne	ne

Notes:
Source: Northgate 2017a; totals calculated by Anchor QEA
b. High responses were observed for Aroclor-1016 and Aroclor-1260 in the continuing calibration verification analyzed; these analytes were not detected at or above the reporting limit in the associated samples.
1. San Francisco Regional Water Quality Control Board (SFRWQCB) Plan for San Francisco Bay Basin. March 20, 2015. Table 3-3: Marine Water Quality Objectives for Toxic Pollutants for Surface Waters, 4-day Average.
2 State Water Resources Control Board (SWRCB) California Environmental Protection Agency. 2015. California Ocean Plan, Objectives for Protection of Marine Aquatic Life, Table 1, 6-Month Median.
µg/L: micrograms per liter
J: estimated value
ND: not detected above the method detection limit (< MDL)
ne: not established

Table B28
Surface Water Sample Analytical Results for Total Petroleum Hydrocarbons and Organotins (2017)

		TPH		Organotins			
	Analyte	**Diesel C10-C24**	**Motor Oil C24-C36**	**Dibutyltin**	**Monobutyltin**	**Tetrabutyltin**	**Tributyltin**
	Units	**µg/L**	**µg/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**
	Laboratory Method	**EPA 8015**	**EPA 8015**	**Krone et al.**	**Krone et al.**	**Krone et al.**	**Krone et al.**
Sample ID	**Sample Date**						
INN-SW-1	3/13/2017	2,900 Y	150 J	36	160	< 6.0 ND	< 6.0 ND
INN-SW-2	3/13/2017	< 16 ND	< 90 ND	na	na	na	na
INN-SW-3	3/13/2017	< 17 ND	< 100 ND	42	96	< 6.0 ND	< 6.0 ND
INN-SW-4	3/13/2017	20 JY	< 90 ND	na	na	na	na
INN-SW-5	3/13/2017	< 16 ND	< 92 ND	< 6.0 ND	< 6.0 ND	< 6.0 ND	< 6.0 ND
INN-SW-6	12/12/2016	56 Y	< 90 ND	20	< 6.0 ND	< 6.0 ND	< 6.0 ND
INN-SW-7	12/12/2016	56 Y	< 90 ND	20	< 6.0 ND	< 6.0 ND	< 6.0 ND
INN-SW-8	12/12/2016	32 J	< 90 ND	na	na ND	na	na
INN-SW-9	3/14/2017	16 JY	< 90 ND	< 6.0 ND	< 6.0 ND	< 6.0 ND	< 6.0 ND
INN-SW-10	3/14/2017	< 16 ND	< 92 ND	na	na	na	na
Comparative Values							
2015 SF Bay Basin Plan MWQOs for Surface Water [1]		ne	ne	ne	ne	ne	ne
2015 Cal Ocean Plan Objectives [2]		ne	ne	ne	ne	ne	ne

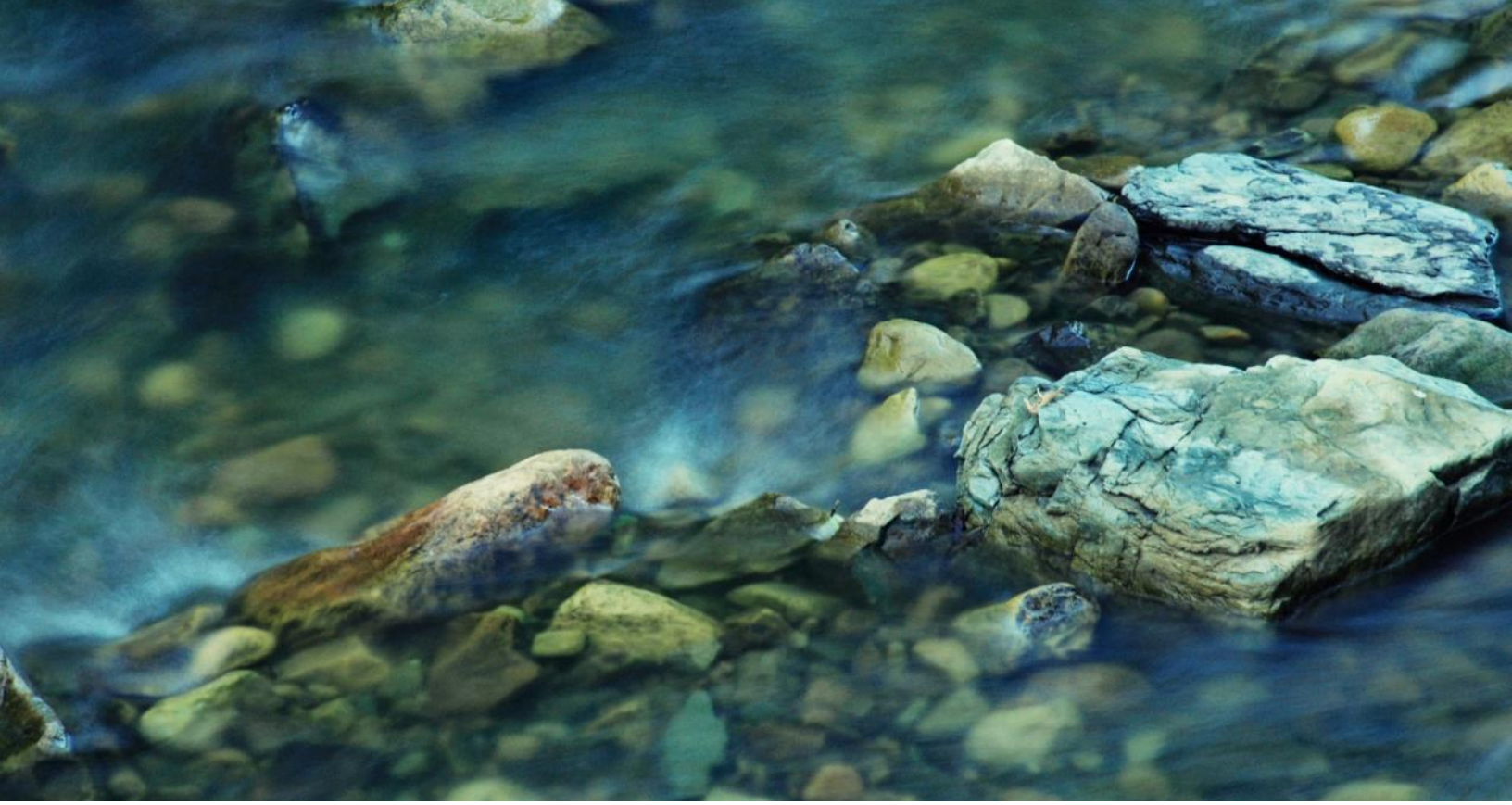
Notes:
Source: Northgate 2017a
a. One-hour average
1. San Francisco Regional Water Quality Control Board (SFRWQCB) Plan for San Francisco Bay Basin. March 20, 2015. Table 3-3: Marine Water Quality Objectives for Toxic Pollutants for Surface Waters, 4-day Average.
2. State Water Resources Control Board
µg/L: micrograms per liter
J: estimated value
na: not analyzed
ND: not detected above the method detection limit (< MDL)
ne: not established
ng/L: nanograms per liter
Y: Sample exhibits chromatographic pattern which does not resemble standard

Table B29
Surface Water Sample Analytical Results for Detected Polyaromatic Hydrocarbons (2017)

	Analyte	PAHs										
		Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(b)fluoranthene	Chrysene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Total PAHs
	Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	Laboratory Method	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM	EPA 8270C-SIM	
Sample ID	**Sample Date**											**Sum of Detected PAHs**
INN-SW-1	3/13/2017	0.2	0.09 J	0.04 J	0.03 J	0.05 J	0.3	0.1	0.1 J	0.3	0.2	1.41
INN-SW-2	3/13/2017	0.03 J	< 0.02 ND	< 0.02 ND	< 0.02 ND	< 0.02 ND	0.04 J	0.03 J	0.08 J	0.06 J	0.02 J	0.26
INN-SW-3	3/13/2017	0.06 J	< 0.02 ND	< 0.02 ND	< 0.02 ND	< 0.02 ND	0.07 J	0.05 J	0.04 J	0.1	0.04 J	0.36
INN-SW-4	3/13/2017	< 0.02 ND	< 0.02 ND	0.02 J	< 0.02 ND	0.03 J	0.2	< 0.02 ND	0.02 J	0.09 J	0.09 J	0.45
INN-SW-5	3/13/2017	< 0.02 ND	< 0.02 ND	< 0.02 ND	< 0.02 ND	< 0.02 ND	0.02 J	< 0.02 ND	0.03 J	0.03 J	< 0.02 ND	0.08
INN-SW-6	12/12/2016	< 0.02 ND	< 0.02 ND	< 0.02 ND	< 0.02 ND	< 0.02 ND	0.04 J	< 0.02 ND	< 0.02 ND	0.03 J	0.03 J	0.10
INN-SW-7	12/12/2016	< 0.02 ND	< 0.02 ND	< 0.02 ND	0.03 J	0.03 J	0.04 J	< 0.02 ND	< 0.02 ND	0.03 J	0.04 J	0.17
INN-SW-8	12/12/2016	< 0.02 ND	< 0.03 ND	< 0.02 ND	< 0.02 ND	< 0.03 ND	0.04 J	< 0.02 ND	< 0.02 ND	0.03 J	< 0.02 ND	0.07
INN-SW-9	3/14/2017	0.02 J	< 0.02 ND	< 0.02 ND	< 0.02 ND	< 0.02 ND	0.04 J	0.02 J	0.1	0.05 J	0.03 J	0.26
Comparative Values												
2015 SF Bay Basin Plan MWQOs for Surface Water [1]		ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	15 [a]
2015 Cal Ocean Plan Objectives [2]		ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne

Notes:
Source: Northgate 2017a; totals calculated by Anchor QEA
a. One-hour average
1. San Francisco Regional Water Quality Control Board (SFRWQCB) Plan for San Francisco Bay Basin. March 20, 2015. Table 3-3: Marine Water Quality Objectives for Toxic Pollutants for Surface Waters, 4-day Average.
2. State Water Resources
µg/L: micrograms per liter
J: estimated value
ND: not detected above the method detection limit (< MDL)
ne: not established

Appendix C
Results of the 2018 Supplemental Sediment Characterization



February 2019
San Francisco Recreation and Parks Department
India Basin, 900 Innes Avenue

Sampling and Analysis Report

Prepared for the San Francisco Recreation and Parks Department

February 2019
San Francisco Recreation and Parks Department
India Basin, 900 Innes Avenue

Sampling and Analysis Report

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ABBREVIATIONS

--	Results not reported or not applicable
900 Innes	900 Innes Avenue
µg/kg	micrograms per kilogram
µm	micrometer
BCDC	San Francisco Bay Conservation and Development Commission
BHC	benzenehexachloride or hexachlorocyclohexane (HCH)
ECI	Eurofins Calscience, Inc.
ft	feet
g	grams
HPAH	high molecular weight polycyclic aromatic hydrocarbon
IBSP	India Basin Shoreline Park
J	estimated value
LPAH	low molecular weight polycyclic aromatic hydrocarbon
mg/kg	milligrams per kilogram
MLLW	mean lower low water
mm	millimeters
N/A	not applicable
ng/kg	nanogram per kilogram
NR	not recorded; core taken above water line
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
pct	percent
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RAP	Remedial Action Plan
RDR	Remedial Design Report
RWQCB	San Francisco Regional Water Quality Control Board
SAP	Sampling and Analysis Plan
SAR	Sampling and Analysis Report
SE	sediment matrix
SFRPD	San Francisco Recreation and Parks Department
TEF	toxic equivalence factor
TEG	TEG Oceanographic Services
TEQ	toxic equivalence quotient
TOC	total organic carbon

TPH	total petroleum hydrocarbons
TS	total solids
U	Compound analyzed, but not detected above detection limit
UJ	Compound analyzed, but not detected above estimated detection limit
USACE	U.S. Army Corps of Engineers

1 Introduction

As part of the India Basin Mixed-Use Project, the San Francisco Recreation and Parks Department (SFRPD) plans to redevelop the 900 Innes Avenue (900 Innes) and India Basin Shoreline Park (IBSP) properties along the India Basin shoreline of San Francisco Bay (Figure 1). A developer plans to undertake public access and coastal habitat improvements at the India Basin Open Space, located adjacent and to the east of the 900 Innes property (Figure 2). The planned redevelopment would create a network of improved parkland and open space along the shoreline. The new park network would also extend the Blue Greenway and connect the San Francisco Bay Trail. As part of the overall project, the privately owned 700 Innes Avenue property is also planned for redevelopment, which includes residential and commercial development.

The 900 Innes property is a former maritime industrial site consisting of approximately 2.4 acres of shoreline, 0.6 acre of which is submerged. The property functioned as a ship repair facility for over 120 years. SFRPD acquired the property in 2014. The site currently contains historical buildings, paved areas, boat launches, and docks. The planned redevelopment of the 900 Innes property includes remediation of historical contaminants and redevelopment of both the landside and waterside portions of the site to create publicly accessible passive shoreline and restored habitat.

The 900 Innes property was previously characterized in 2013, 2015, and 2017 (Weston 2013a, 2013b; URS 2015; Northgate 2017a). Elevated concentrations of contaminants, including metals, total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs), were measured in soil and sediment. SFRPD is implementing a voluntary cleanup at the 900 Innes property in cooperation with the San Francisco Regional Water Quality Control Board (RWQCB). In June 2017, a draft conceptual Remedial Action Plan (RAP; Northgate 2017b) was developed to address environmental impacts resulting from past industrial uses and describe a potential remedial approach for the site that includes a mix of dredging with off-site disposal and capping back to the original grade using clean material.

Prior to development of the final RAP, which requires further definition of the planned remedial approach and its anticipated effectiveness, further site characterization was needed to fill data gaps related to existing site chemical conditions because available data were not sufficient to fully delineate the horizontal and vertical extent of contamination in the waterside areas. Therefore, additional sediment sampling and testing was conducted to determine the extent of contamination and support development of an effective remedial management strategy. This Sampling and Analysis Report (SAR) summarizes the sampling event and provides data results. Further evaluation of data results will be provided in the final RAP.

SOURCE: Basemap from Bing Maps.
HORIZONTAL DATUM: California State Plane, Zone 3, NAD83, U.S. Feet.

0 1
Miles

Publish Date: 2018/03/26 11:51 AM | User: mpratschner
Filepath: K:\Projects\0153-City and County of SF\India Basin\0153 RP-001 VIC.dwg FIG 1

ANCHOR QEA

Figure 1
Vicinity Map

India Basin - 900 Innes Avenue
San Francisco Recreation and Parks Department

SOURCE: Aerial from Bing Maps. Mean high water and project boundaries provided by Northgate Environmental Management, Inc.
HORIZONTAL DATUM: California State Plane, Zone 3, NAD83, U.S. Feet.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

LEGEND:

Property Boundary

Mean High Water Line

0 200
Feet

Publish Date: 2019/01/25 3:17 PM | User: mpratschner
Filepath: K:\Projects\0153-City and County of SF\India Basin\0153 RP-002 SITE.dwg FIG 2

ANCHOR QEA

Figure 2
Site Overview

India Basin - 900 Innes Avenue
San Francisco Recreation and Parks Department

1.1 Objectives of Sediment Investigation

The objectives of this sediment characterization were as follows:

- Further delineate the vertical and horizontal extent of sediment contamination at the 900 Innes property, including the areas offshore of the property boundary and adjacent properties
- Determine the extent of sediment contamination underneath existing shoreline structures
- Better define the volume of contaminated sediment that needs to be managed
- Collect physical and chemical data to support the development of an effective management strategy, including potentially designing a cap that will effectively isolate underlying contaminants of concern
- Support development of the final RAP and Remedial Design Report (RDR)
- Provide data needed to submit construction permits to the U.S. Army Corps of Engineers (USACE), RWQCB, and San Francisco Bay Conservation and Development Commission (BCDC) for in-water activities

1.2 Sampling and Testing Approach

As described in the Sampling and Analysis Plan (SAP; Anchor QEA 2018a) and Quality Assurance Project Plan (QAPP; Anchor QEA 2018b), sediment investigations were conducted at the 900 Innes property in 2013, 2015, and 2017 (Weston 2013a, URS 2015, and Northgate 2017a, respectively), and IBSP in 2017 (Northgate 2017c). Historical sediment samples were generally restricted to surface sediment (within the top 1 foot), with limited subsurface samples collected below this depth. In addition, only limited samples were collected outside the 900 Innes property; therefore, additional data were needed to define the extent of contamination.

Twenty-four stations were identified for sediment core sampling, including 22 stations along seven transects running offshore of the 900 Innes property and adjacent properties, and two stations underneath existing shoreline structures at the 900 Innes property (Figure 3). Station locations were chosen to determine the horizontal extent of contamination beyond the 900 Innes property boundary and fill data gaps under existing shoreline structures that will be removed as part of the remediation. Six of the transect sampling locations were identified as background stations, including four nearfield and two farfield background stations. Background stations were selected to evaluate potential contamination from potential off-site sources. One potential off-site source is the Hunters Point Naval Shipyard, located southeast of the project site. Past shipyard activities at the Hunters Point Naval Shipyard have resulted in PCB, copper, lead, and mercury contamination in sediment.

Sediment cores were collected to a target depth of 6.5 feet[1] below the mudline to determine the depth of contamination. Each sediment core was vertically segmented into 2-foot intervals. Sediment cores were analyzed based on a phased approach. Initially, ten stations located closest to the 900 Innes property were submitted for physical and chemical analyses. Fourteen stations, including the background stations, located farthest from the 900 Innes property were archived and only analyzed if sediment chemistry results at the other stations did not define the extent of contamination.

Based on the results of previous sediment investigations, contaminants of concern identified at the project site include metals (arsenic, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium, and zinc), TPH (diesel and motor oil), PAHs, and PCBs. The current investigation focused on the same contaminants of concern, with minor changes. No dioxin/furan data exist for sediment from India Basin; therefore, composite samples were created and analyzed for dioxin/furans. Composite samples were created for each depth interval within four areas (inner, middle, and two outer areas) moving away from the 900 Innes property (Figure 4). Although organotins were not identified as a contaminant of concern in the draft conceptual RAP, core intervals were analyzed for organotins to better assess the magnitude and extent of contamination. Pesticides were not identified as a contaminant of concern and were not included in the current investigation. Archive samples were collected from all core intervals and from the Z layer at each station to facilitate additional testing, if deemed necessary.

[1] Anticipated remedial options include dredging to clean, partial dredging and then backfilling with clean material, or capping only. A 6-foot maximum dredge depth was selected due to expected remedial costs for dredging and off-site disposal. The target sample depth provides sufficient information about contaminant concentrations to a depth of 6 feet below the mudline, plus a potential Z layer concentration if left exposed following dredging. The sample depth also allows for the ability to adequately design a cap over partially dredged material, if that option is selected.

SOURCES: Aerial from Bing Maps. Mean high water, previous samples, and project boundaries provided by Northgate Environmental Management, Inc.
HORIZONTAL DATUM: California State Plane, Zone 3, NAD83, U.S. Feet.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

LEGEND:

- Property Boundary
- Mean High Water Line
- IB-# Sediment Sampling Location (Phase I Testing)
- IB-# Sediment Sampling Location (Phase II Testing)
- IB-# Sediment Sampling Location (Archive)
- IB-# Sediment Sampling Location (Nearfield Background; Archive)
- IB-# Sediment Sampling Location (Farfield Background; Archive)

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ANCHOR QEA

Figure 3
Sediment Sampling Locations

India Basin - 900 Innes Avenue
San Francisco Recreation and Parks Department

SOURCES: Aerial from Bing Maps. Mean high water, previous samples, and project boundaries provided by Northgate Environmental Management, Inc.
HORIZONTAL DATUM: California State Plane, Zone 3, NAD83, U.S. Feet.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

LEGEND:

- Property Boundary
- Mean High Water Line
- IB-# Sediment Sampling Location
- IB-# Sediment Sampling Location (Nearfield Background)
- IB-# Sediment Sampling Location (Farfield Background)
- Inner Composite Area (Analyzed)
- Middle Composite Area (Analyzed)
- Outer Composite Area 1 (Archived)
- Outer Composite Area 2 (Archived)

0 250
Feet

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ANCHOR QEA

Figure 4
Composite Areas for Dioxin/Furans

India Basin - 900 Innes Avenue
San Francisco Recreation and Parks Department

2 Sediment Collection and Sample Processing

All sample collection, handling, and processing procedures were implemented in accordance with the SAP (Anchor QEA 2018a) and QAPP (Anchor QEA 2018b). Sample collection and processing activities are summarized in Sections 2.1 and 2.2, respectively. Deviations from the SAP and QAPP are presented in Section 2.3. Field logs and core photographs are provided in Appendix A.

2.1 Summary of Sample Collection Activities

All field activities were performed by Leidos under the direction of Anchor QEA. TEG Oceanographic Services provided the vessel and equipment needed to collect sediment cores. Sediment cores were collected on September 10 to 14, 2018. Cores were collected at 24 stations, consisting of 22 stations along seven transects running offshore of the 900 Innes property and adjacent properties (IB-01 to IB-22), and two stations underneath existing shoreline structures at the 900 Innes property (IB-23 and IB-24). Station locations are presented in Figure 3. Sediment cores were collected to a target depth of 6.5 feet below the mudline. Nearshore transect sampling locations were sampled using an electric vibracore. Stations underneath existing shoreline structures were sampled using a piston core and/or hand auger. A concrete saw was used to access the sediment underneath the structure. At stations IB-23 and IB-24, the target depth was not achieved. Refusal was encountered due to gravel, cobble, or debris (e.g., wood, brick). Sampling data for each station are summarized in Table 1.

2.2 Summary of Sample Processing Activities

Sediment samples were processed in accordance with the procedures detailed in the SAP (Anchor QEA 2018a) and QAPP (Anchor QEA 2018b). Sediment cores were vertically segmented into 2-foot intervals to a depth of 6 feet below the mudline. A Z-layer sample was collected from 6 to 6.5 feet below the mudline. All samples were placed into appropriate sample jars for physical and chemical analyses. Core samples were analyzed based on a phased approach. Initially, the ten stations located closest to the 900 Innes property were submitted for physical and chemical analyses (Figure 3). The 14 stations located farthest from the 900 Innes property were archived to allow for additional analysis if sediment chemistry results at the other stations did not define the extent of contamination. Based on the initial phase of testing, six additional stations were submitted for limited chemical analysis (Figure 3). The Z-layer sample from each station was archived to allow for additional chemical analyses, if necessary. Sample intervals and testing for each core are presented in Table 1.

For dioxin/furans, composite samples were created for each depth interval within four areas (inner, middle, outer 1, and outer 2) moving away from the 900 Innes property (Figure 4). A proportionate volume of homogenized sediment from each core interval was combined to create 12 composite samples. The outer composite samples were archived to allow for additional analysis if dioxin/furan results indicated contamination within the inner and middle areas. The sediment sample compositing scheme for dioxin/furans is presented in Table 2.

All samples were appropriately labeled and stored in coolers with ice. Sediment chemistry and archive samples were picked up by courier, then shipped to Eurofins Calscience, Inc., (ECI) in Garden Grove, California. Proper chain-of-custody procedures were followed.

Table 1
Station Coordinates, Mudline Elevations, Retrieved Core Lengths, Sample Intervals, and Testing for Each Station

Station Type	Station ID	Attempt	Sampling Method	Latitude[1]	Longitude[1]	Mudline Elevation (feet MLLW)	Core Length Retrieved (feet)[2]	Sample ID	Sample Interval (feet)	Sediment Testing
Nearshore transects	IB-01	1	Vibracore	N37° 44.1135'	W122° 22.486'	0.6	6.5	IB-01 0.0-2.0 091218	0 to 2	Archive
								IB-01 2.0-4.0 091218	2 to 4	Archive
								IB-01 4.0-6.0 091218	4 to 6	Archive
								IB-01 6.0-6.5 091218	6 to 6.5	Archive
	IB-02	1	Vibracore	N37° 44.1409'	W122° 22.4588'	0.6	6.5	IB-02 0.0-2.0 091218	0 to 2	Archive
								IB-02 2.0-4.0 091218	2 to 4	Archive
								IB-02 4.0-6.0 091218	4 to 6	Archive
								IB-02 6.0-6.5 091218	6 to 6.5	Archive
	IB-03	1	Vibracore	N37° 44.0763'	W122° 22.4801'	1.3	6.5	IB-03 0.0-2.0 091218	0 to 2	TS, lead, mercury, PCBs
								IB-03 2.0-4.0 091218	2 to 4	TS, lead, mercury, PCBs
								IB-03 4.0-6.0 091218	4 to 6	TS, lead, mercury, PCBs
								IB-01 6.0-6.5 091218	6 to 6.5	Archive
	IB-04	1	Vibracore	N37° 44.0974'	W122° 22.4579'	0.5	6.5	IB-04 0.0-2.0 091318	0 to 2	TS, lead, mercury, PCBs
								IB-04 2.0-4.0 091318	2 to 4	TS, lead, mercury, PCBs
								IB-04 4.0-6.0 091318	4 to 6	TS, lead, mercury, PCBs
								IB-04 6.0-6.5 091318	6 to 6.5	Archive
	IB-05	1	Vibracore	N37° 44.1245'	W122° 22.4319'	0.1	6.5	IB-05 0.0-2.0 091218	0 to 2	Archive
								IB-05 2.0-4.0 091218	2 to 4	Archive
								IB-05 4.0-6.0 091218	4 to 6	Archive
								IB-05 6.0-6.5 091218	6 to 6.5	Archive
	IB-06	1	Vibracore	N37° 43.9876'	W122° 22.5294'	3.1	6.5[3]	--	--	--
	IB-06	2	Vibracore	N37° 43.9795'	W122° 22.5297'	3.0	6.5	IB-06 0.0-2.0 091018	0 to 2	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-06 2.0-4.0 091018	2 to 4	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-06 4.0-6.0 091018	4 to 6	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-06 6.0-6.5 091018	6 to 6.5	Archive
	IB-07	1	Vibracore	N37° 44.0296'	W122° 22.5018'	2.3	6.5	IB-07 0.0-2.0 091118	0 to 2	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-07 2.0-4.0 091118	2 to 4	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-07 4.0-6.0 091118	4 to 6	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-07 6.0-6.5 091118	6 to 6.5	Archive
	IB-08	1	Vibracore	N37° 44.0328'	W122° 22.4828'	1.7	6.5[3]	--	--	--
	IB-08	2	Vibracore	N37° 44.0323'	W122° 22.4832'	1.3	6.5	IB-08 0.0-2.0 091018	0 to 2	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-08 2.0-4.0 091018	2 to 4	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-08 4.0-6.0 091018	4 to 6	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH

Station Type	Station ID	Attempt	Sampling Method	Latitude[1]	Longitude[1]	Mudline Elevation (feet MLLW)	Core Length Retrieved (feet)[2]	Sample ID	Sample Interval (feet)	Sediment Testing
Nearshore transects								IB-08 6.0-6.5 091018	6 to 6.5	Archive
	IB-09	1	Vibracore	N37° 44.0705'	W122° 22.4375'	0.6	6.5	IB-09 0.0-2.0 091318	0 to 2	TS, lead, mercury, PCBs
								IB-09 2.0-4.0 091318	2 to 4	TS, lead, mercury, PCBs
								IB-09 4.0-6.0 091318	4 to 6	TS, lead, mercury, PCBs
								IB-09 6.0-6.5 091318	6 to 6.5	Archive
	IB-10	1	Vibracore	N37° 44.1054'	W122° 22.403'	0.0	6.5	IB-10 0.0-2.0 091218	0 to 2	TS, lead, mercury, PCBs
								IB-10 2.0-4.0 091218	2 to 4	Archive
								IB-10 4.0-6.0 091218	4 to 6	Archive
								IB-10 6.0-6.5 091218	6 to 6.5	Archive
	IB-11	1	Vibracore	N37° 43.9646'	W122° 22.487'	2.1	6.5[3]	--	--	--
	IB-11	2	Vibracore	N37° 43.9644'	W122° 22.4869'	3.0	6.5	IB-11 0.0-2.0 091018	0 to 2	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-11 2.0-4.0 091018	2 to 4	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-11 4.0-6.0 091018	4 to 6	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-11 6.0-6.5 091018	6 to 6.5	Archive
	IB-12	1	Vibracore	N37° 43.9829'	W122° 22.4694'	1.3	6.5	IB-12 0.0-2.0 091018	0 to 2	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-12 2.0-4.0 091018	2 to 4	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-12 4.0-6.0 091018	4 to 6	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-12 6.0-6.5 091018	6 to 6.5	Archive
	IB-13	1	Vibracore	N37° 44.0209'	W122° 22.43'	0.9	6.5	IB-13 0.0-2.0 091118	0 to 2	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-13 2.0-4.0 091118	2 to 4	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-13 4.0-6.0 091118	4 to 6	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-13 6.0-6.5 091118	6 to 6.5	Archive
	IB-14	1	Vibracore	N37° 44.0591'	W122° 22.3922'	0.6	6.5	IB-14 0.0-2.0 091318	0 to 2	TS, lead, mercury, PCBs
								IB-14 2.0-4.0 091318	2 to 4	Archive
								IB-14 4.0-6.0 091318	4 to 6	Archive
								IB-14 6.0-6.5 091318	6 to 6.5	Archive
	IB-15	1	Vibracore	N37° 44.0944'	W122° 22.3572'	-0.3	6.5	IB-15 0.0-2.0 091318	0 to 2	TS, lead, mercury, PCBs
								IB-15 2.0-4.0 091318	2 to 4	Archive
								IB-15 4.0-6.0 091318	4 to 6	Archive
								IB-15 6.0-6.5 091318	6 to 6.5	Archive
	IB-16	1	Vibracore	N37° 43.9726'	W122° 22.4432'	2.6	6.5	IB-16 0.0-2.0 091118	0 to 2	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-16 2.0-4.0 091118	2 to 4	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-16 4.0-6.0 091118	4 to 6	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-16 6.0-6.5 091118	6 to 6.5	Archive
	IB-17	1	Vibracore	N37° 44.0082'	W122° 22.4073'	1.3	6.5[3]	--	--	--
	IB-17	2	Vibracore	N37° 44.0076'	W122° 22.4069'	2.1	6.5	IB-17 0.0-2.0 091118	0 to 2	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH

Station Type	Station ID	Attempt	Sampling Method	Latitude[1]	Longitude[1]	Mudline Elevation (feet MLLW)	Core Length Retrieved (feet)[2]	Sample ID	Sample Interval (feet)	Sediment Testing
Nearshore transects								IB-17 2.0-4.0 091118	2 to 4	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-17 4.0-6.0 091118	4 to 6	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-17 6.0-6.5 091118	6 to 6.5	Archive
	IB-18	1	Vibracore	N37° 44.047'	W122° 22.3691'	1.9	6.5[3]	--	--	--
	IB-18	2	Vibracore	N37° 44.0465'	W122° 22.3688'	1.9	6.5	IB-18 0.0-2.0 091218	0 to 2	Archive
								IB-18 2.0-4.0 091218	2 to 4	Archive
								IB-18 4.0-6.0 091218	4 to 6	Archive
								IB-18 6.0-6.5 091218	6 to 6.5	Archive
	IB-19	1	Vibracore	N37° 44.0665'	W122° 22.3055'	-0.1	6.5	IB-19 0.0-2.0 091318	0 to 2	Archive
								IB-19 2.0-4.0 091318	2 to 4	Archive
								IB-19 4.0-6.0 091318	4 to 6	Archive
								IB-19 6.0-6.5 091318	6 to 6.5	Archive
	IB-20	1	Vibracore	N37° 44.1102'	W122° 22.2714'	-1.2	6.5[3]	--	--	--
	IB-20	2	Vibracore	N37° 44.1006'	W122° 22.2711'	-1.1	6.5	IB-20 0.0-2.0 091418	0 to 2	Archive
								IB-20 2.0-4.0 091418	2 to 4	Archive
								IB-20 4.0-6.0 091418	4 to 6	Archive
								IB-20 6.0-6.5 091418	6 to 6.5	Archive
	IB-21	1	Vibracore	N37° 44.0066'	W122° 22.1978'	-1.2	6.5[3]	--	--	--
	IB-21	2	Vibracore	N37° 44.0064'	W122° 22.1974'	-1.2	6.5	IB-21 0.0-2.0 091318	0 to 2	Archive
								IB-21 2.0-4.0 091318	2 to 4	Archive
								IB-21 4.0-6.0 091318	4 to 6	Archive
								IB-21 6.0-6.5 091318	6 to 6.5	Archive
	IB-22	1	Vibracore	N37° 44.042'	W122° 22.162'	-1.3	6.5	IB-22 0.0-2.0 091418	0 to 2	Archive
								IB-22 2.0-4.0 091418	2 to 4	Archive
								IB-22 4.0-6.0 091418	4 to 6	Archive
								IB-22 6.0-6.5 091418	6 to 6.5	Archive
Under shoreline structures	IB-23	1	Piston Core/Hand Auger	N37° 43.971179	W122° 22.51133	NR	2.0	IB-23 0.0-2.0 091118	0 to 2	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
	IB-24	1	Piston Core/Hand Auger	N37° 43.966425	W122° 22.505473	NR	2.5	IB-24 0.0-2.0 091118	0 to 2	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH
								IB-24 2.0-4.0 091118	2 to 2.5	TS, TOC, GS, sulfides, metals, PAHs, PCBs, organotins, TPH

Notes:

1. Geographic coordinates, North American Datum of 1983, shown in degrees and minutes.
2. Core lengths adjusted for compaction.
3. Core discarded due to low percent recovery. Second core collected and retained for analysis.

Table 2
Sediment Sample Compositing Scheme and Testing Strategy for Dioxin/Furans

Composite Area	Station ID	Composite Intervals	Sediment Testing
Inner	IB-06	0 to 2 feet 2 to 4 feet 4 to 6 feet	Dioxin/furans (each composite interval)
	IB-07		
	IB-11		
	IB-12		
	IB-16		
	IB-23		
	IB-24		
Middle	IB-08	0 to 2 feet 2 to 4 feet 4 to 6 feet	Dioxin/furans (each composite interval)
	IB-13		
	IB-17		
Outer 1	IB-03	0 to 2 feet 2 to 4 feet 4 to 6 feet	Archive (each composite interval)
	IB-09		
	IB-14		
	IB-18		
Outer 2	IB-04	0 to 2 feet 2 to 4 feet 4 to 6 feet	Archive (each composite interval)
	IB-05		
	IB-10		
	IB-15		

2.3 Deviations from the Sampling and Analysis Plan and Quality Assurance Project Plan

Deviations from the SAP (Anchor QEA 2018a) and QAPP (Anchor 2018b), with respect to sample collection and processing activities, are described in the following sections.

2.3.1 Sample Collection

Station IB-07 was sampled approximately 160 feet north of the target location due to an error inputting station coordinates. As previously discussed, the target sampling depth was not achieved at stations IB-23 and IB-24. At these stations, refusal was encountered due to gravel, cobble, or debris (e.g., wood, brick). At both stations, near surface sediment from 0 to 2 feet was collected and submitted for analysis. At station IB-24, additional sediment from 2 to 2.5 feet was also collected and submitted for analysis.

2.3.2 Sample Processing

No deviations associated with sample processing occurred.

3 Physical and Chemical Analyses

Sediment samples were analyzed for the physical and chemical parameters specified in Table 6 of the SAP (Anchor QEA 2018a) and Table 9 of the QAPP (Anchor QEA 2018b). Physical and conventional analyses included grain size, total solids, total organic carbon (TOC), and sulfides. Chemical analyses included metals, PAHs, PCB congeners, organotins, and dioxin/furans. As previously described, dioxin/furans were only analyzed on composite samples. Pesticides are not a contaminant of concern at the site; therefore, they were not included in this investigation. PAHs included the expanded list from the Programmatic Essential Fish Habitat consultation. PCBs included the list of 40 congeners used by the Regional Monitoring Program in San Francisco Bay, which is the same list used for San Francisco Bay Total Maximum Daily Loads and recommended by the U.S. Environmental Protection Agency for dredged material evaluations in the region.

Analytical testing was performed by ECI in Garden Grove, California. Method detection limits, reporting limits, and raw data for the analyses are presented in the chemistry laboratory reports in Appendix B. A summary of analytical results for core interval and composite samples, quality assurance/quality control (QA/QC), and deviations from the SAP and QAPP are presented in the following sections.

3.1 Core Interval and Composite Sample Results

Results of physical and chemical analyses of individual core intervals are presented in Table 3. Core samples were analyzed based on a phased approach. The initial phase of testing included 10 stations (Figure 3). Nearshore and offshore sediments consisted primarily of fines (58.1% to 98.2% silt and clay), except for two core intervals which had slightly higher percentages of sand (54.1% and 54.4% sand). Only three core intervals consisted of less than 60% fines. TOC ranged from 0.46% to 2.2%. Total solids ranged from 39.5% to 79.5%. Elevated concentrations of metals, TPH-diesel, PAHs, and PCBs were measured in sediment. Based on the initial phase of testing, six additional stations were submitted for limited analysis to further delineate the extent of lead, mercury, and PCB contamination. Highest concentrations of each contaminant were measured at stations near the shoreline within the 900 Innes property, including the area under shoreline structures, and generally decreased moving offshore. Offshore of the 900 Innes property, elevated concentrations of contaminants of concern were generally buried at depth, except station IB-08. At this station, elevated concentrations of mercury and PCBs were measured in near-surface sediment, as well as underlying intervals (2 to 4 feet and/or 4 to 6 feet intervals).

Results of dioxin/furans analysis of composite samples are presented in Table 4. Total dioxin/furan TEQs ranged from 1.11 to 30 ng/kg. The highest concentration was measured in the near surface depth interval of the inner composite area and decreased with depth and moving offshore of the 900 Innes property. Based on the results of testing, the vertical and horizontal extent of contamination was defined; therefore, the outer composite samples were not submitted for dioxin/furans analysis.

Table 3
Summary of Individual Core Interval Sediment Chemistry Results

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	IB-03	IB-03	IB-03	IB-04	IB-04	IB-04	IB-06	IB-06	IB-06	IB-07
Sample Name	IB-03 0.0-2.0 091218	IB-03 2.0-4.0 091218	IB-03 4.0-6.0 091218	IB-04 0.0-2.0 091318	IB-04 2.0-4.0 091318	IB-04 4.0-6.0 091318	IB-06 0.0-2.0 091018	IB-06 2.0-4.0 091018	IB-06 4.0-6.0 091018	IB-07 0.0-2.0 091118
Sample Date	9/12/2018	9/12/2018	9/12/2018	9/13/2018	9/13/2018	9/13/2018	9/10/2018	9/10/2018	9/10/2018	9/11/2018
Depth	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft
Conventional Parameters (mg/kg)										
Sulfide	--	--	--	--	--	--	**230**	**190**	**1.1**	**5.2**
Conventional Parameters (pct)										
Total organic carbon	--	--	--	--	--	--	**1.6**	**2.1**	**0.92**	**1**
Total Solids	**48.1**	**53.7**	**54.4**	**48.7**	**48.1**	**54.2**	**44**	**49.6**	**66.1**	**57.9**
Grain Size (pct)										
Gravel (>2mm)	--	--	--	--	--	--	0.01 U	0.01 U	0.01 U	0.01 U
Sand (2.00mm - 1.00mm)	--	--	--	--	--	--	0.01 U	0.01 U	0.01 U	0.01 U
Sand, coarse	--	--	--	--	--	--	0.01 U	0.01 U	**0.56**	0.01 U
Sand, medium	--	--	--	--	--	--	0.01 U	**0.24**	**26.78**	**0.25**
Sand, fine	--	--	--	--	--	--	**2.3**	**13.59**	**21.35**	**13.64**
Sand, very fine	--	--	--	--	--	--	**5.48**	**10.24**	**5.37**	**12.29**
Silt	--	--	--	--	--	--	**69.66**	**58.8**	**33.26**	**53.94**
Clay (<4µm)	--	--	--	--	--	--	**22.56**	**17.13**	**12.68**	**19.88**
Total Fines (silt + clay)	--	--	--	--	--	--	**92.22**	**75.93**	**45.94**	**73.82**
Metals (mg/kg)										
Arsenic	--	--	--	--	--	--	**13.6**	**27.5**	**56.2**	**12.6**
Cadmium	--	--	--	--	--	--	**0.462 J**	**1.38 J**	**0.39 J**	**0.295**
Chromium	--	--	--	--	--	--	**89.4 J**	**172 J**	**103 J**	**77.9 J**
Cobalt	--	--	--	--	--	--	**14.8**	**20.8**	**15**	**15.1**
Copper	--	--	--	--	--	--	**318 J**	**1,070 J**	**3,340 J**	**34.9**
Lead	**47.3**	**159**	**12.7**	**56.7**	**28.6**	**10.7**	**118 J**	**377 J**	**60.6 J**	**14.5**
Mercury	**0.428**	**0.854**	**0.0817**	**0.598**	**0.21**	**0.0662**	**1.24**	**10.5**	**1.59**	**0.065**
Nickel	--	--	--	--	--	--	**103 J**	**240 J**	**188 J**	**102**
Selenium	--	--	--	--	--	--	**0.29**	**0.36**	**0.22**	**0.38**
Silver	--	--	--	--	--	--	**1.08**	**2**	**0.596**	**0.633**
Zinc	--	--	--	--	--	--	**292 J**	**503 J**	**107 J**	**82**
Organometallic Compounds (µg/kg)										
Butyltin (n-Butyltin)	--	--	--	--	--	--	**6 J**	**13 J**	2 U	2.3 U
Dibutyltin	--	--	--	--	--	--	**210**	**880**	**19**	1.2 U
Tributyltin	--	--	--	--	--	--	**32**	**450**	**7.3**	2.5 U
Tetrabutyltin	--	--	--	--	--	--	**2.8 J**	**8.3 J**	1.1 U	1.3 U
Total Butyltin (U = 0)	--	--	--	--	--	--	**250 J**	**1400 J**	**26**	2.5 U

Table 3
Summary of Individual Core Interval Sediment Chemistry Results

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	IB-07	IB-07	IB-08	IB-08	IB-08	IB-09	IB-09	IB-09	IB-10	IB-11
Sample Name	IB-07 2.0-4.0 091118	IB-07 4.0-6.0 091118	IB-08 0.0-2.0 091018	IB-08 2.0-4.0 091018	IB-08 4.0-6.0 091018	IB-09 0.0-2.0 091318	IB-09 2.0-4.0 091318	IB-09 4.0-6.0 091318	IB-10 0.0-2.0 091218	IB-11 0.0-2.0 091018
Sample Date	9/11/2018	9/11/2018	9/10/2018	9/10/2018	9/10/2018	9/13/2018	9/13/2018	9/13/2018	9/12/2018	9/10/2018
Depth	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft
Conventional Parameters (mg/kg)										
Sulfide	**15**	**7.6**	**110**	**250**	**89**	--	--	--	--	**240**
Conventional Parameters (pct)										
Total organic carbon	**1.3**	**1.7**	**1.8**	**2.2**	**2.1**	--	--	--	--	**1.6**
Total Solids	**60**	**62.3**	**46.8**	**51.8**	**50.7**	**44.2**	**47**	**49.8**	**45.3**	**45.1**
Grain Size (pct)										
Gravel (>2mm)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--	--	--	0.01 U
Sand (2.00mm - 1.00mm)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--	--	--	0.01 U
Sand, coarse	**2.86**	0.01 U	**3.39**	0.01 U	0.01 U	--	--	--	--	0.01 U
Sand, medium	**5.79**	**0.36**	**12.74**	**0.086**	**0.029**	--	--	--	--	0.01 U
Sand, fine	**10.46**	**10.55**	**11.66**	**7.66**	**6.87**	--	--	--	--	**10.87**
Sand, very fine	**11.3**	**12.38**	**10.2**	**11.23**	**7.37**	--	--	--	--	**9.52**
Silt	**52.05**	**58.46**	**47.99**	**60.48**	**63.69**	--	--	--	--	**59.06**
Clay (<4µm)	**17.54**	**18.25**	**14.03**	**20.54**	**22.04**	--	--	--	--	**20.54**
Total Fines (silt + clay)	**69.59**	**76.71**	**62.02**	**81.02**	**85.73**	--	--	--	--	**79.6**
Metals (mg/kg)										
Arsenic	**14.6**	**20.5**	**17.4**	**19.4**	**18.8**	--	--	--	--	**24.1**
Cadmium	**0.64 J**	**0.843**	**1.17 J**	**2.78 J**	**2.35 J**	--	--	--	--	**1.43 J**
Chromium	**94.2 J**	**122 J**	**134 J**	**154 J**	**96.5 J**	--	--	--	--	**136 J**
Cobalt	**16.4**	**21.2**	**18.1**	**17.8**	**16.8**	--	--	--	--	**19.6**
Copper	**60.7 J**	**103**	**155 J**	**158 J**	**125 J**	--	--	--	--	**732 J**
Lead	**47.7 J**	**89.4**	**150 J**	**993 J**	**147 J**	**39.7**	**106**	**154**	**40.4**	**2,090 J**
Mercury	**0.925**	**0.58 J**	**0.851**	**1.18**	**1.13**	**0.356**	**1.39**	**1.19**	**0.359**	**7.85**
Nickel	**148**	**225**	**145 J**	**153 J**	**122 J**	--	--	--	--	**198 J**
Selenium	**0.38**	**0.42**	**0.43**	**0.48**	**0.49**	--	--	--	--	**0.36**
Silver	**0.707**	**0.833**	**2.01**	**3.66**	**2.61**	--	--	--	--	**1.72**
Zinc	**115 J**	**152**	**273 J**	**394 J**	**291 J**	--	--	--	--	**466 J**
Organometallic Compounds (µg/kg)										
Butyltin (n-Butyltin)	2.3 U	2.1 U	3 U	2.5 U	2.6 U	--	--	--	--	**32**
Dibutyltin	1.2 U	1.1 U	**23**	**19**	**6**	--	--	--	--	**570**
Tributyltin	2.5 U	2.3 U	**3.2 J**	2.7 U	2.8 U	--	--	--	--	**92**
Tetrabutyltin	1.2 U	1.1 U	1.6 U	1.4 U	1.4 U	--	--	--	--	3.1 U
Total Butyltin (U = 0)	2.5 U	2.3 U	**26 J**	**19**	**6**	--	--	--	--	**690**

Table 3
Summary of Individual Core Interval Sediment Chemistry Results

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	IB-11	IB-11	IB-12	IB-12	IB-12	IB-13	IB-13	IB-13	IB-14	IB-15
Sample Name	IB-11 2.0-4.0 091018	IB-11 4.0-6.0 091018	IB-12 0.0-2.0 091018	IB-12 2.0-4.0 091018	IB-12 4.0-6.0 091018	IB-13 0.0-2.0 091118	IB-13 2.0-4.0 091118	IB-13 4.0-6.0 091118	IB-14 0.0-2.0 091318	IB-15 0.0-2.0 091318
Sample Date	9/10/2018	9/10/2018	9/10/2018	9/10/2018	9/10/2018	9/11/2018	9/11/2018	9/11/2018	9/13/2018	9/13/2018
Depth	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft
Conventional Parameters (mg/kg)										
Sulfide	**53**	**0.17**	**61**	**61**	**140**	**54**	**1.9**	**0.44**	--	--
Conventional Parameters (pct)										
Total organic carbon	**1.6**	**0.98**	**1.7**	**1.4**	**1.5**	**1.6**	**1.2**	**1.5**	--	--
Total Solids	**61.7**	**58.3**	**39.5**	**41.8**	**45.8**	**42**	**53.6**	**56.4**	**48.8**	**45.9**
Grain Size (pct)										
Gravel (>2mm)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--
Sand (2.00mm - 1.00mm)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--
Sand, coarse	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--
Sand, medium	**0.1**	**0.11**	0.01 U	0.01 U	0.01 U	**0.17**	**1.48**	**0.72**	--	--
Sand, fine	**7.04**	**9.61**	**1.25**	**0.65**	0.01 U	**5.65**	**3.54**	**5.8**	--	--
Sand, very fine	**9.48**	**6.82**	**4.57**	**3.49**	**1.78**	**9.36**	**5.44**	**6.57**	--	--
Silt	**60.32**	**61.75**	**70.19**	**69.92**	**71.58**	**64.65**	**68.06**	**64.75**	--	--
Clay (<4µm)	**23.06**	**21.71**	**23.99**	**25.94**	**26.64**	**20.18**	**21.48**	**22.16**	--	--
Total Fines (silt + clay)	**83.38**	**83.46**	**94.18**	**95.86**	**98.22**	**84.83**	**89.54**	**86.91**	--	--
Metals (mg/kg)										
Arsenic	**19.8**	**18.1**	**11.6**	**13.5**	**14.6**	**12**	**15.5**	**14.3**	--	--
Cadmium	**1.2 J**	**0.399 J**	**0.291 J**	**0.547 J**	**0.911 J**	**0.317**	**0.422**	**0.343**	--	--
Chromium	**112 J**	**111 J**	**83.8 J**	**99.4 J**	**126 J**	**77.8 J**	**85.2 J**	**68.3 J**	--	--
Cobalt	**19.5**	**20.9**	**14.3**	**15.6**	**19**	**15**	**15.6**	**15.5**	--	--
Copper	**194 J**	**32.3 J**	**130 J**	**241 J**	**366 J**	**82.2**	**82.2**	**35.3**	--	--
Lead	**411 J**	**11.9 J**	**57.5 J**	**87 J**	**118 J**	**48.7**	**35.1**	**11.3**	**55.5**	**31**
Mercury	**0.854**	**0.0708**	**0.489**	**0.935**	**1.19**	**0.324**	**0.273**	**0.0663**	**0.433**	**0.254**
Nickel	**207 J**	**201 J**	**90 J**	**98.6 J**	**129 J**	**96.4**	**118**	**81.2**	--	--
Selenium	**0.48**	**0.45**	**0.4**	**0.45**	**0.41**	**0.41**	**0.4**	**0.45**	--	--
Silver	**1.05**	**0.715**	**0.951**	**1.43**	**1.87**	**0.778**	**0.771**	**0.586**	--	--
Zinc	**244 J**	**79.8 J**	**168 J**	**232 J**	**281 J**	**148**	**115**	**86.4**	--	--
Organometallic Compounds (µg/kg)										
Butyltin (n-Butyltin)	2.1 U	2.3 U	**14**	**36**	**49**	3.3 U	2.5 U	2.5 U	--	--
Dibutyltin	**8.4**	**4.2 J**	**56**	**220**	**400**	**17**	**10**	1.3 U	--	--
Tributyltin	2.3 U	2.5 U	3.7 U	**18**	**31**	3.5 U	2.7 U	2.6 U	--	--
Tetrabutyltin	1.1 U	1.2 U	1.8 U	1.7 U	1.6 U	1.8 U	1.3 U	1.3 U	--	--
Total Butyltin (U = 0)	**8.4**	**4.2 J**	**70**	**270**	**480**	**17**	**10**	2.6 U	--	--

Table 3
Summary of Individual Core Interval Sediment Chemistry Results

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	IB-16	IB-16	IB-16	IB-17	IB-17	IB-17	IB-23	IB-24	IB-24
Sample Name	IB-16 0.0-2.0 091118	IB-16 2.0-4.0 091118	IB-16 4.0-6.0 091118	IB-17 0.0-2.0 091118	IB-17 2.0-4.0 091118	IB-17 4.0-6.0 091118	IB-23 0.0-2.0 091118	IB-24 0.0-2.0 091118	IB-24 2.0-4.0 091118
Sample Date	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018
Depth	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	2 - 2.5 ft
Conventional Parameters (mg/kg)									
Sulfide	**9.8**	**3**	**2**	**17**	**8**	**4.4**	0.11 U	**7**	--
Conventional Parameters (pct)									
Total organic carbon	**0.76**	**1**	**1.1**	**0.93**	**1.3**	**1.2**	**1.7**	**2.2**	**0.46**
Total Solids	**56.2**	**57.7**	**61.7**	**58.2**	**59.5**	**56.7**	**79.2**	**75**	**79.5**
Grain Size (pct)									
Gravel (>2mm)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--	--
Sand (2.00mm - 1.00mm)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--	--
Sand, coarse	**5.55**	**1.34**	0.01 U	**0.16**	0.01 U	0.01 U	--	--	--
Sand, medium	**21.41**	**15.25**	**0.27**	**11.33**	**2.49**	**0.23**	--	--	--
Sand, fine	**14.47**	**12.22**	**8.73**	**12.79**	**6.24**	**4.58**	--	--	--
Sand, very fine	**13**	**13.09**	**8.01**	**10.91**	**10.61**	**8.11**	--	--	--
Silt	**34.39**	**43.36**	**61.49**	**48.23**	**60.51**	**65.22**	--	--	--
Clay (<4µm)	**11.17**	**14.74**	**21.5**	**16.6**	**20.14**	**21.86**	--	--	--
Total Fines (silt + clay)	**45.56**	**58.1**	**82.99**	**64.83**	**80.65**	**87.08**	--	--	--
Metals (mg/kg)									
Arsenic	**12.5**	**12.1**	**12.8**	**10.7**	**20.3**	**13.2**	**12.7**	**11.8**	**2.69**
Cadmium	**0.379**	**0.309**	**0.334**	**0.274**	**1.05**	**0.337**	**0.52**	**1.22**	**0.171**
Chromium	**90.1 J**	**67.1 J**	**82.9 J**	**63.9 J**	**94.7 J**	**79.2 J**	**38 J**	**153 J**	**488 J**
Cobalt	**13.8**	**13.8**	**14.4**	**12.1**	**17.2**	**16.3**	**39.3**	**34.6**	**48.4**
Copper	**130**	**41.2**	**36.5**	**71.2**	**80.4**	**35.7**	**764**	**935**	**375**
Lead	**71.3**	**18.2**	**18.1**	**28.3**	**57.8**	**10.8**	**2,700**	**766**	**158**
Mercury	**0.905**	**0.181**	**0.111**	**0.171**	**0.58**	**0.0716**	**3.93**	**1.38**	**0.178**
Nickel	**136**	**91.8**	**111**	**75.5**	**116**	**90.5**	**85.1**	**418**	**1,020**
Selenium	**0.27**	**0.42**	**0.39**	**0.31**	**0.45**	**0.44**	**0.08 J**	**0.09 J**	0.03 U
Silver	**0.754**	**0.617**	**0.544**	**0.645**	**1.08**	**0.683**	**0.431**	**0.725**	**0.149**
Zinc	**133**	**84**	**72.2**	**98.2**	**148**	**87.7**	**1,070**	**833**	**364**
Organometallic Compounds (µg/kg)									
Butyltin (n-Butyltin)	**6.1**	2.4 U	2.1 U	2.3 U	2.3 U	2.4 U	**12**	1.8 U	1.7 U
Dibutyltin	**76**	**7.4**	1.1 U	**19**	1.2 U	1.3 U	**35**	**9.2**	**29**
Tributyltin	**12**	2.6 UJ	2.3 U	**4.9 J**	2.5 U	2.6 U	1.8 U	2 U	1.9 U
Tetrabutyltin	1.3 U	1.3 UJ	1.1 U	1.3 U	1.2 U	1.3 U	0.9 U	0.99 U	0.93 U
Total Butyltin (U = 0)	**94**	**7.4 J**	2.3 U	**24 J**	2.5 U	2.6 U	**47**	**9.2**	**29**

Table 3
Summary of Individual Core Interval Sediment Chemistry Results

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	IB-03	IB-03	IB-03	IB-04	IB-04	IB-04	IB-06	IB-06	IB-06	IB-07
Sample Name	IB-03 0.0-2.0 091218	IB-03 2.0-4.0 091218	IB-03 4.0-6.0 091218	IB-04 0.0-2.0 091318	IB-04 2.0-4.0 091318	IB-04 4.0-6.0 091318	IB-06 0.0-2.0 091018	IB-06 2.0-4.0 091018	IB-06 4.0-6.0 091018	IB-07 0.0-2.0 091118
Sample Date	9/12/2018	9/12/2018	9/12/2018	9/13/2018	9/13/2018	9/13/2018	9/10/2018	9/10/2018	9/10/2018	9/11/2018
Depth	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft
Polycyclic Aromatic Hydrocarbons (µg/kg)										
1-Methylnaphthalene	--	--	--	--	--	--	**12 J**	**110**	**13 J**	8 U
1-Methylphenanthrene	--	--	--	--	--	--	**35 J**	**190**	**74**	8.6 U
2,3,5-Trimethylnaphthalene (1,6,7-Trimethylnaphthalene)	--	--	--	--	--	--	**11 J**	**110**	**28 J**	6.7 U
2,6-Dimethylnaphthalene	--	--	--	--	--	--	**26 J**	**130**	**25 J**	5.9 U
2-Methylnaphthalene	--	--	--	--	--	--	**16 J**	**55**	**19 J**	8 U
Acenaphthene	--	--	--	--	--	--	**96**	**1,900**	**390 J**	8.1 U
Acenaphthylene	--	--	--	--	--	--	**62**	**220**	**31**	6.2 U
Anthracene	--	--	--	--	--	--	**190**	**930**	**210 J**	12 U
Benzo(a)anthracene	--	--	--	--	--	--	**370**	**1,800**	**630 J**	**35**
Benzo(a)pyrene	--	--	--	--	--	--	**670**	**1,800**	**720 J**	**46**
Benzo(b)fluoranthene	--	--	--	--	--	--	**740**	**2,200**	**710 J**	**36**
Benzo(e)pyrene	--	--	--	--	--	--	**450**	**1,700**	**450**	**31 J**
Benzo(g,h,i)perylene	--	--	--	--	--	--	**320**	**1,000**	**500 J**	**48**
Benzo(k)fluoranthene	--	--	--	--	--	--	**540**	**1,900**	**440 J**	**27 J**
Biphenyl (1,1'-Biphenyl)	--	--	--	--	--	--	**11 J**	**51**	**12 J**	6.4 U
Chrysene	--	--	--	--	--	--	**700**	**2,200**	**710 J**	**27 J**
Dibenzo(a,h)anthracene	--	--	--	--	--	--	**120**	**410**	**110 J**	**7.4 J**
Dibenzothiophene	--	--	--	--	--	--	6 U	**180**	**71**	4.7 U
Fluoranthene	--	--	--	--	--	--	**690**	**5,400**	**2,300 J**	**55**
Fluorene	--	--	--	--	--	--	**97**	**890**	**300 J**	11 U
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	**300**	**980**	**380 J**	**32 J**
Naphthalene	--	--	--	--	--	--	**41 J**	**470**	**92 J**	12 U
Perylene	--	--	--	--	--	--	**170**	**540**	**200**	**83**
Phenanthrene	--	--	--	--	--	--	**480**	**1,600**	**760 J**	**27 J**
Pyrene	--	--	--	--	--	--	**1,400**	**11,000**	**2,200 J**	**99**
Total HPAH (12 of 25) (U = 0)	--	--	--	--	--	--	**6,500**	**31,000**	**9,400 J**	**530 J**
Total LPAH (13 of 25) (U = 0)	--	--	--	--	--	--	**1,100 J**	**6,800**	**2,000 J**	**27 J**
Total PAH (25) (U = 0)	--	--	--	--	--	--	**7,500 J**	**38,000**	**11,000 J**	**550 J**

Table 3
Summary of Individual Core Interval Sediment Chemistry Results

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	IB-07	IB-07	IB-08	IB-08	IB-08	IB-09	IB-09	IB-09	IB-10	IB-11
Sample Name	IB-07 2.0-4.0 091118	IB-07 4.0-6.0 091118	IB-08 0.0-2.0 091018	IB-08 2.0-4.0 091018	IB-08 4.0-6.0 091018	IB-09 0.0-2.0 091318	IB-09 2.0-4.0 091318	IB-09 4.0-6.0 091318	IB-10 0.0-2.0 091218	IB-11 0.0-2.0 091018
Sample Date	9/11/2018	9/11/2018	9/10/2018	9/10/2018	9/10/2018	9/13/2018	9/13/2018	9/13/2018	9/12/2018	9/10/2018
Depth	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft
Polycyclic Aromatic Hydrocarbons (µg/kg)										
1-Methylnaphthalene	**10 J**	**17 J**	**21 J**	**29 J**	**9.1 J**	--	--	--	--	**11 J**
1-Methylphenanthrene	**100**	**140**	**34 J**	**39**	**72**	--	--	--	--	**29 J**
2,3,5-Trimethylnaphthalene (1,6,7-Trimethylnaphthalene)	**21 J**	**23 J**	**17 J**	**26 J**	**70**	--	--	--	--	**9.9 J**
2,6-Dimethylnaphthalene	**16 J**	**19 J**	**53**	**74**	**41**	--	--	--	--	**22 J**
2-Methylnaphthalene	**14 J**	**19 J**	**48**	**71**	**16 J**	--	--	--	--	**17 J**
Acenaphthene	**64**	**45**	**17 J**	**24 J**	**49**	--	--	--	--	**23 J**
Acenaphthylene	**120**	**130**	**48**	**47**	**41**	--	--	--	--	**37 J**
Anthracene	**450**	**460**	**100**	**170**	**180**	--	--	--	--	**94**
Benzo(a)anthracene	**2,000**	**1,300**	**350**	**480**	**490**	--	--	--	--	**340**
Benzo(a)pyrene	**4,500**	**3,300**	**790**	**870**	**820**	--	--	--	--	**790**
Benzo(b)fluoranthene	**3,600**	**2,300**	**610**	**680**	**690**	--	--	--	--	**840**
Benzo(e)pyrene	**2,700**	**2,000**	**470**	**570**	**530**	--	--	--	--	**520**
Benzo(g,h,i)perylene	**4,300**	**2,700**	**670**	**530**	**480**	--	--	--	--	**400**
Benzo(k)fluoranthene	**1,600 J**	**1,900**	**350**	**490**	**400**	--	--	--	--	**570**
Biphenyl (1,1'-Biphenyl)	**26 J**	**26 J**	**18 J**	**25 J**	**18 J**	--	--	--	--	**9.1 J**
Chrysene	**2,500**	**1,600**	**410**	**570**	**710**	--	--	--	--	**440**
Dibenzo(a,h)anthracene	**530**	**410**	**130**	**110**	**97**	--	--	--	--	**150**
Dibenzothiophene	**79**	**81**	**24 J**	**34 J**	**41**	--	--	--	--	5.8 U
Fluoranthene	**6,000**	**3,100**	**730**	**1,100**	**1,400**	--	--	--	--	**630**
Fluorene	**92**	**120**	**39 J**	**59**	**77**	--	--	--	--	**33 J**
Indeno(1,2,3-c,d)pyrene	**2,900**	**1,900**	**490**	**440**	**390**	--	--	--	--	**360**
Naphthalene	**130**	**120**	**53**	**73**	**48**	--	--	--	--	**39 J**
Perylene	**1,200**	**1,000**	**210**	**260**	**240**	--	--	--	--	**160**
Phenanthrene	**1,000**	**1,400**	**310**	**380**	**420**	--	--	--	--	**250**
Pyrene	**8,800**	**6,200**	**1,100**	**1,800**	**1,800**	--	--	--	--	**1,000**
Total HPAH (12 of 25) (U = 0)	**41,000 J**	**28,000**	**6,300**	**7,900**	**8,000**	--	--	--	--	**6,200**
Total LPAH (13 of 25) (U = 0)	**2,100 J**	**2,600 J**	**780 J**	**1,100 J**	**1,100 J**	--	--	--	--	**570 J**
Total PAH (25) (U = 0)	**43,000 J**	**30,000 J**	**7,100 J**	**9,000 J**	**9,100 J**	--	--	--	--	**6,800 J**

Table 3
Summary of Individual Core Interval Sediment Chemistry Results

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	IB-11	IB-11	IB-12	IB-12	IB-12	IB-13	IB-13	IB-13	IB-14	IB-15
Sample Name	IB-11 2.0-4.0 091018	IB-11 4.0-6.0 091018	IB-12 0.0-2.0 091018	IB-12 2.0-4.0 091018	IB-12 4.0-6.0 091018	IB-13 0.0-2.0 091118	IB-13 2.0-4.0 091118	IB-13 4.0-6.0 091118	IB-14 0.0-2.0 091318	IB-15 0.0-2.0 091318
Sample Date	9/10/2018	9/10/2018	9/10/2018	9/10/2018	9/10/2018	9/11/2018	9/11/2018	9/11/2018	9/13/2018	9/13/2018
Depth	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft
Polycyclic Aromatic Hydrocarbons (µg/kg)										
1-Methylnaphthalene	**15 J**	**12 J**	12 U	11 U	**10 J**	11 U	8.5 U	8.1 U	--	--
1-Methylphenanthrene	**82**	8.3 U	13 U	12 U	**14 J**	**12 J**	**16 J**	8.6 U	--	--
2,3,5-Trimethylnaphthalene (1,6,7-Trimethylnaphthalene)	**15 J**	6.5 U	9.8 U	9.2 U	8.4 U	9.1 U	7.1 U	6.7 U	--	--
2,6-Dimethylnaphthalene	**21 J**	**12 J**	**12 J**	**18 J**	**26 J**	**13 J**	**12 J**	**7.3 J**	--	--
2-Methylnaphthalene	**26 J**	**21 J**	12 U	**18 J**	**24 J**	11 U	**11 J**	8.1 U	--	--
Acenaphthene	**72**	**47**	12 U	11 U	**11 J**	11 U	**12 J**	8.1 U	--	--
Acenaphthylene	**94**	6 U	**12 J**	**18 J**	**18 J**	**12 J**	**16 J**	6.2 U	--	--
Anthracene	**340**	12 U	**31 J**	**36 J**	**48**	**31 J**	**50**	12 U	--	--
Benzo(a)anthracene	**1,400**	**20 J**	**100**	**110**	**110**	**110**	**150**	**32 J**	--	--
Benzo(a)pyrene	**2,700**	**33 J**	**200**	**250**	**160 J**	**220**	**350**	**53**	--	--
Benzo(b)fluoranthene	**2,200**	**32 J**	**240**	**260**	**220 J**	**200**	**310**	**35**	--	--
Benzo(e)pyrene	**1,800**	**24 J**	**130**	**160**	**150**	**140**	**200**	**30 J**	--	--
Benzo(g,h,i)perylene	**2,200**	**30 J**	**140**	**110**	6.6 UJ	**180**	**310**	**43**	--	--
Benzo(k)fluoranthene	**1,000**	**22 J**	**130**	**210**	**160 J**	**130**	**180**	**33 J**	--	--
Biphenyl (1,1'-Biphenyl)	**22 J**	6.2 U	9.4 U	8.8 U	**9.3 J**	8.7 U	6.8 U	6.5 U	--	--
Chrysene	**2,200**	**25 J**	**100**	**120**	**140**	**120**	**190**	**34 J**	--	--
Dibenzo(a,h)anthracene	**390**	6.5 U	**30 J**	**23 J**	8.4 U	**32 J**	**49**	**8.2 J**	--	--
Dibenzothiophene	**44**	4.5 U	6.8 U	6.4 U	5.8 U	6.3 U	4.9 U	4.7 U	--	--
Fluoranthene	**2,900**	**90**	**190**	**220**	**300**	**230**	**350**	**59**	--	--
Fluorene	**100**	**45**	16 U	15 U	**20 J**	15 U	**15 J**	11 U	--	--
Indeno(1,2,3-c,d)pyrene	**1,500**	**18 J**	**120**	**120**	6.8 UJ	**140**	**210**	**29 J**	--	--
Naphthalene	**190**	**200**	18 U	**28 J**	**31 J**	16 U	**36 J**	12 U	--	--
Perylene	**710**	**55**	**73**	**36 J**	**39 J**	**75**	**98**	**57**	--	--
Phenanthrene	**530**	**54**	**74**	**91**	**130**	**83**	**120**	**25 J**	--	--
Pyrene	**6,700**	**240**	**280**	**330**	**650**	**320**	**750**	**100**	--	--
Total HPAH (12 of 25) (U = 0)	**26,000**	**590 J**	**1,700 J**	**1,900 J**	**1,900 J**	**1,900 J**	**3,100**	**510 J**	--	--
Total LPAH (13 of 25) (U = 0)	**1,600 J**	**390 J**	**130 J**	**210 J**	**340 J**	**150 J**	**290 J**	**32 J**	--	--
Total PAH (25) (U = 0)	**27,000 J**	**980 J**	**1,900 J**	**2,200 J**	**2,300 J**	**2,000 J**	**3,400 J**	**550 J**	--	--

Table 3
Summary of Individual Core Interval Sediment Chemistry Results

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	IB-16	IB-16	IB-16	IB-17	IB-17	IB-17	IB-23	IB-24	IB-24
Sample Name	IB-16 0.0-2.0 091118	IB-16 2.0-4.0 091118	IB-16 4.0-6.0 091118	IB-17 0.0-2.0 091118	IB-17 2.0-4.0 091118	IB-17 4.0-6.0 091118	IB-23 0.0-2.0 091118	IB-24 0.0-2.0 091118	IB-24 2.0-4.0 091118
Sample Date	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018
Depth	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	2 - 2.5 ft
Polycyclic Aromatic Hydrocarbons (µg/kg)									
1-Methylnaphthalene	8.2 U	7.9 U	7.5 U	7.8 U	7.6 U	4 U	**6.2 J**	**710**	**25**
1-Methylphenanthrene	**32 J**	8.4 U	**38**	**17 J**	**34**	4.3 U	**24 J**	**320**	**11 J**
2,3,5-Trimethylnaphthalene (1,6,7-Trimethylnaphthalene)	6.8 U	6.6 U	**6.7 J**	6.6 U	6.4 U	3.3 U	**7.9 J**	**1,700**	**50**
2,6-Dimethylnaphthalene	**9.6 J**	**8.2 J**	**10 J**	**10 J**	**12 J**	**7.8 J**	**6.2 J**	**1,900**	**58**
2-Methylnaphthalene	8.2 U	7.9 U	7.5 U	7.8 U	7.6 U	4 U	**7.4 J**	**1,000**	**36**
Acenaphthene	**13 J**	**17 J**	**33**	7.9 U	**9.3 J**	4 U	**27**	**86 J**	**5 J**
Acenaphthylene	**23 J**	**8.3 J**	**51**	**11 J**	**33**	3.1 U	**17 J**	**83 J**	**3 J**
Anthracene	**86**	**26 J**	**240**	**51**	**110**	6 U	**58**	45 U	4.3 U
Benzo(a)anthracene	**240**	**84**	**1,300**	**140**	**290**	**13 J**	**180**	**150**	**19**
Benzo(a)pyrene	**420**	**140**	**900**	**210**	**590**	**15 J**	**200**	**170**	**19**
Benzo(b)fluoranthene	**410**	**150**	**990**	**200**	**440**	**15 J**	**200**	**210**	**23**
Benzo(e)pyrene	**230**	**93**	**530**	**130**	**350**	**11 J**	**140**	**160**	**16**
Benzo(g,h,i)perylene	**300**	**130**	**600**	**160**	**450**	**13 J**	**150**	**150**	**8.4 J**
Benzo(k)fluoranthene	**240**	**86**	**610**	**140**	**290**	**10 J**	**130**	**140**	**18**
Biphenyl (1,1'-Biphenyl)	6.5 U	6.3 U	6 U	6.3 U	6.1 U	3.2 U	4.7 U	**160**	**5.3 J**
Chrysene	**290**	**110**	**1,500**	**160**	**320**	**13 J**	**220**	**140**	**22**
Dibenzo(a,h)anthracene	**76**	**25 J**	**130**	**35**	**76**	3.4 U	**52**	**55 J**	**4.1 J**
Dibenzothiophene	4.7 U	4.6 U	**20 J**	4.5 U	4.4 U	2.3 U	**11 J**	**120 J**	**6.2 J**
Fluoranthene	**480**	**200**	**1,700**	**260**	**570**	**19**	**370**	**180**	**65**
Fluorene	**22 J**	**16 J**	**45**	11 U	**24 J**	**6.3 J**	**29**	**420**	**23**
Indeno(1,2,3-c,d)pyrene	**240**	**89**	**450**	**120**	**320**	**9.1 J**	**100**	**120 J**	**8.7 J**
Naphthalene	**17 J**	**12 J**	**35**	12 U	**26 J**	6 U	8.8 U	**300**	**15**
Perylene	**92**	**100**	**240**	**70**	**140**	**46**	**75**	**57 J**	**5.4 J**
Phenanthrene	**260**	**68**	**250**	**120**	**270**	**18**	**250**	**760**	**59**
Pyrene	**600**	**270**	**2,100**	**350**	**1,000**	**30**	**330**	**310**	**61**
Total HPAH (12 of 25) (U = 0)	**3,600**	**1,500 J**	**11,000**	**2,000**	**4,800**	**190 J**	**2,100**	**1,800 J**	**270 J**
Total LPAH (13 of 25) (U = 0)	**460 J**	**160 J**	**730 J**	**210 J**	**520 J**	**32 J**	**440 J**	**7,600 J**	**300 J**
Total PAH (25) (U = 0)	**4,100 J**	**1,600 J**	**12,000 J**	**2,200 J**	**5,400 J**	**230 J**	**2,600 J**	**9,400 J**	**570 J**

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Summary of Individual Core Interval Sediment Chemistry Results

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	IB-03	IB-03	IB-03	IB-04	IB-04	IB-04	IB-06	IB-06	IB-06	IB-07
Sample Name	IB-03 0.0-2.0 091218	IB-03 2.0-4.0 091218	IB-03 4.0-6.0 091218	IB-04 0.0-2.0 091318	IB-04 2.0-4.0 091318	IB-04 4.0-6.0 091318	IB-06 0.0-2.0 091018	IB-06 2.0-4.0 091018	IB-06 4.0-6.0 091018	IB-07 0.0-2.0 091118
Sample Date	9/12/2018	9/12/2018	9/12/2018	9/13/2018	9/13/2018	9/13/2018	9/10/2018	9/10/2018	9/10/2018	9/11/2018
Depth	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft
PCB Congeners (µg/kg)										
PCB-005/008	**0.55 J**	0.14 U	0.14 U	**0.53 J**	0.16 U	0.14 U	**0.92**	**12**	**2**	0.13 U
PCB-018	**1.2**	0.12 U	0.12 U	**0.8**	0.13 U	0.12 U	**3.2 J**	**68 J**	**9.5 J**	0.11 U
PCB-028	**1.2**	0.13 U	0.13 U	**0.94**	0.14 U	0.13 U	**3.4**	**48**	**7.5**	0.12 U
PCB-031	**0.79**	0.094 U	0.092 U	**0.94**	0.1 U	0.093 U	**3.4**	**62**	**8.3**	0.087 U
PCB-033	**1.5**	0.071 U	0.07 U	0.078 U	0.079 U	0.07 U	**1.9**	**18**	**2.2**	0.066 U
PCB-044	**2.2**	0.28 U	0.28 U	0.31 U	0.31 U	0.28 U	**12**	**75**	**9.8**	0.26 U
PCB-049	**1.4**	0.092 U	0.09 U	0.1 U	0.1 U	0.091 U	**5.5**	**80**	**9.7**	0.086 U
PCB-052	**2**	0.35 U	0.35 U	**2.7**	0.39 U	0.35 U	**12 J**	**100 J**	**13 J**	0.33 UJ
PCB-056	**0.45**	0.14 U	0.14 U	0.15 U	0.16 U	0.14 U	**2.8**	**24**	**3**	0.13 U
PCB-060	**0.43**	0.098 U	0.095 U	0.11 U	0.11 U	0.097 U	0.12 U	0.11 U	0.079 U	0.091 U
PCB-066	**1.7**	0.23 U	0.22 U	**1.6**	0.26 U	0.23 U	**8**	**64**	**7.2**	0.21 U
PCB-070	**1.5**	0.13 U	0.13 U	**1.6**	0.15 U	0.13 U	**9.5**	**67**	**6.6**	0.12 U
PCB-074	**0.87**	0.17 U	0.16 U	0.18 U	0.19 U	0.17 U	**3.9**	**21**	**2.8**	0.16 U
PCB-087	**1.6**	0.21 U	0.2 U	0.23 U	0.23 U	0.21 U	**6**	**16**	**1.4**	0.19 U
PCB-095	**4**	0.2 U	0.19 U	**2.9**	0.22 U	0.2 U	**14**	**66**	**7.4**	0.18 U
PCB-097	**1.2**	0.086 U	0.084 U	**1.2**	0.096 U	0.085 U	**5.2**	**21**	**2.1**	0.08 U
PCB-099	**2.7**	**1.3**	0.086 U	**1.8**	0.098 U	0.088 U	**8.5**	**44**	**4.7**	0.082 U
PCB-101	**6.1**	**0.73**	0.081 U	**4.4**	0.092 U	0.082 U	**19**	**77**	**8.2**	0.076 U
PCB-105	**1.7**	0.1 U	0.097 U	0.11 U	0.11 U	0.099 U	**6.1**	**22**	**2.3**	0.092 U
PCB-110	**4.2**	0.063 U	0.062 U	**2.9**	0.07 U	0.062 U	**16**	**80**	**9.2**	0.058 U
PCB-118	**3.5**	0.064 U	0.063 U	**2.4**	0.072 U	0.064 U	**15**	**51**	**7.6**	0.06 U
PCB-128	**1.3**	0.22 U	0.22 U	**1**	0.25 U	0.22 U	**3**	**8.5**	**1.3**	0.21 U
PCB-132/153	**19**	**2.1**	**1.2**	**12**	**0.66 J**	**0.33 J**	**30**	**92**	**9.9**	**0.74**
PCB-138/158	**12**	0.66 U	**0.67 J**	**8.1**	0.73 U	0.65 U	**21**	**59**	**6.9**	0.61 U
PCB-141	**2.2**	0.091 U	0.089 U	**1.5**	0.1 U	0.09 U	**3.4**	**11**	**1.3**	0.085 U
PCB-149	**12**	**1.5**	**0.76**	**8**	0.24 U	0.22 U	**17**	**61**	**6.6**	0.2 U
PCB-151	**4.2**	**1**	0.16 U	**2.6**	0.18 U	0.16 U	**5.4**	**14**	**1.4**	0.15 U
PCB-156	**1.2**	0.14 U	0.14 U	0.16 U	0.16 U	0.14 U	**2.2**	**5.5**	**1.1**	0.13 U
PCB-170	**7**	0.21 U	0.2 U	**4.7**	0.23 U	0.2 U	**8.1**	**26**	**3.1**	0.19 U
PCB-174	**5**	0.078 U	0.076 U	**3.1**	0.087 U	0.077 U	**5.4**	**16**	**1.6**	0.072 U
PCB-177	**3.4**	0.22 U	0.21 U	**2.3**	0.24 U	0.22 U	**3.8**	**9.3**	**0.97**	0.2 U
PCB-180	**13**	**1.6**	0.17 U	**9.5**	0.19 U	0.17 U	**15**	**44**	**4.3**	**0.34 J**
PCB-183	**3.7**	**0.5**	0.17 U	**2.4**	0.19 U	0.17 U	**4.4**	**11**	**1.2**	0.16 U
PCB-187	**7.1**	**1**	0.19 U	**4.9**	0.21 U	0.19 U	**10**	**25**	**2.1**	**0.31 J**
PCB-194	**3.8**	0.14 U	0.13 U	**2.1**	0.15 U	0.14 U	**4.6**	**12**	**1.2**	0.13 U
PCB-195	**1.5**	0.11 U	0.11 U	0.12 U	0.12 U	0.11 U	**1.8**	**4.6**	0.09 U	0.1 U
PCB-201	**0.93**	0.063 U	0.062 U	0.07 U	0.07 U	0.063 U	**0.81**	**1.7**	0.051 U	0.059 U
PCB-203	**3.6**	0.11 U	0.1 U	**2.4**	0.12 U	0.11 U	**4.4**	**13**	**1.2**	0.1 U
Total PCB Congener (U = 0)	**140 J**	**9.7**	**2.6 J**	**89 J**	**0.66 J**	**0.33 J**	**300 J**	**1,400 J**	**170 J**	**1.4 J**
Total Petroleum Hydrocarbons (mg/kg)										
Diesel range organics (C10 - C36)	--	--	--	--	--	--	**94**	**330**	**68**	2.1 U

Table 3
Summary of Individual Core Interval Sediment Chemistry Results

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	IB-07	IB-07	IB-08	IB-08	IB-08	IB-09	IB-09	IB-09	IB-10	IB-11
Sample Name	IB-07 2.0-4.0 091118	IB-07 4.0-6.0 091118	IB-08 0.0-2.0 091018	IB-08 2.0-4.0 091018	IB-08 4.0-6.0 091018	IB-09 0.0-2.0 091318	IB-09 2.0-4.0 091318	IB-09 4.0-6.0 091318	IB-10 0.0-2.0 091218	IB-11 0.0-2.0 091018
Sample Date	9/11/2018	9/11/2018	9/10/2018	9/10/2018	9/10/2018	9/13/2018	9/13/2018	9/13/2018	9/12/2018	9/10/2018
Depth	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft
PCB Congeners (µg/kg)										
PCB-005/008	0.13 U	0.12 U	**1.4**	0.15 U	0.15 U	**0.66 J**	**2.2**	**2.3**	**0.41 J**	**31**
PCB-018	0.11 U	0.1 U	**3.6 J**	**7.9 J**	**5.7 J**	**1.2**	**8.3**	**7.1**	0.14 U	**170 J**
PCB-028	0.12 U	0.11 U	**3.1**	**7.4**	**3.3**	**1.3**	**6.5**	**7.6**	**0.69**	**65**
PCB-031	0.084 U	0.08 U	**3**	**7.4**	**4.3**	**0.97**	**6.7**	**10**	**0.55**	**150**
PCB-033	0.064 U	0.06 U	**2.2**	**3.3**	0.075 U	**0.97**	**4.8**	**5.1**	0.084 U	**51**
PCB-044	0.25 U	0.24 U	**5.2**	**12**	**7.5**	**1.8**	**8.6**	**12**	**1**	**140**
PCB-049	0.083 U	0.078 U	**4.5**	**11**	**3.5**	**1.3**	**5.8**	**8**	**0.86**	**140**
PCB-052	0.32 UJ	0.3 UJ	**7.9 J**	**23 J**	**8 J**	**2.5**	**14**	**20**	**1.4**	**210 J**
PCB-056	0.13 U	0.12 U	**2.1**	**4**	**2**	0.17 U	**2.9**	**4.7**	0.17 U	**40**
PCB-060	0.087 U	0.083 U	**1.2**	0.1 U	0.1 U	0.12 U	0.11 U	0.1 U	0.12 U	**13**
PCB-066	0.21 U	0.19 U	**5**	**9.7**	**4.8**	**1.7**	**8.5**	**12**	**1.1**	**120**
PCB-070	0.12 U	0.11 U	**5.8**	**14**	**6.4**	**2**	**11**	**16**	**1.1**	**140**
PCB-074	0.15 U	0.14 U	**2.4**	**5.1**	**3.1**	**1.9**	**4.7**	**8.1**	**0.64**	**53**
PCB-087	0.19 U	0.18 U	**5.3**	**10**	**4.2**	0.25 U	**9.2**	**8.7**	**1**	**15**
PCB-095	0.18 U	0.17 U	**16**	**25**	**9.5**	**5.6**	**33**	**24**	**2.9**	**100**
PCB-097	0.077 U	0.073 U	**3.8**	**8.8**	**3.4**	**1.8**	**6.9**	**7.9**	**1.3**	**37**
PCB-099	0.079 U	0.075 U	**11**	**15**	**5.6**	**2.3**	**10**	**12**	**1.8**	**88**
PCB-101	0.074 U	0.07 U	**22**	**36**	**13**	**7.2**	**44**	**33**	**4.2**	**120**
PCB-105	0.089 U	0.084 U	**8**	**9.7**	**4.9**	**2.3**	**12**	**18**	**1.8**	**27**
PCB-110	0.056 U	0.053 U	**14**	**28**	**10**	**4.6**	**27**	**26**	**2.6**	**110**
PCB-118	0.058 U	0.054 U	**12**	**23**	**9.7**	**3.7**	**21**	**23**	**2.7**	**120**
PCB-128	0.2 U	0.19 U	**3.9**	**5.9**	**3**	**1.2**	**7.1**	**7.4**	**0.9**	**9.3**
PCB-132/153	0.27 U	0.26 U	**70**	**70**	**21**	**21**	**130**	**61**	**12**	**200**
PCB-138/158	0.59 U	0.55 U	**40**	**47**	**15**	**14**	**91**	**44**	**8.3**	**110**
PCB-141	0.082 U	0.077 U	**9.1**	**11**	**4.1**	**3.2**	**22**	**7.9**	**1.9**	**22**
PCB-149	0.2 U	0.19 U	**43**	**46**	**14**	**14**	**90**	**39**	**7.3**	**110**
PCB-151	0.15 U	0.14 U	**14**	**14**	**4.5**	**4.7**	**33**	**12**	**2.6**	**38**
PCB-156	0.13 U	0.12 U	**2.8**	**3.8**	**1.5**	**0.93**	**6.1**	**3.3**	**0.75**	**7.9**
PCB-170	0.19 U	0.17 U	**23**	**27**	**7.1**	**7.5**	**51**	**20**	**4.2**	**72**
PCB-174	0.07 U	0.066 U	**17**	**16**	**4.1**	**5.6**	**41**	**14**	**3.3**	**55**
PCB-177	0.2 U	0.18 U	**10**	**9.1**	**2.5**	**4**	**24**	**8.6**	**2.1**	**32**
PCB-180	0.15 U	0.14 U	**46**	**43**	**12**	**16**	**100**	**34**	**9.1**	**150**
PCB-183	0.16 U	0.15 U	**12**	**11**	**3.6**	**3.8**	**25**	**9.3**	**2.4**	**38**
PCB-187	0.17 U	0.16 U	**27**	**22**	**5.7**	**7.9**	**48**	**17**	**5.1**	**91**
PCB-194	0.12 U	0.12 U	**10**	**11**	**3.1**	**3.4**	**21**	**7.7**	**2**	**39**
PCB-195	0.1 U	0.095 U	**4.4**	**4.2**	0.12 U	**1.8**	**9.4**	**4.2**	**1**	**17**
PCB-201	0.057 U	0.054 U	**1.6**	**1.8**	**0.62**	0.077 U	**3.4**	**1.3**	0.075 U	**5.6**
PCB-203	0.096 U	0.091 U	**11**	**12**	**3.3**	**3.5**	**25**	**9.6**	**2.2**	**44**
Total PCB Congener (U = 0)	0.59 UJ	0.55 UJ	**480 J**	**620 J**	**210 J**	**160 J**	**970**	**570**	**91 J**	**3,000 J**
Total Petroleum Hydrocarbons (mg/kg)										
Diesel range organics (C10 - C36)	**14**	**22**	**130**	**310**	**110**	--	--	--	--	**150**

Table 3
Summary of Individual Core Interval Sediment Chemistry Results

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	IB-11	IB-11	IB-12	IB-12	IB-12	IB-13	IB-13	IB-13	IB-14	IB-15
Sample Name	IB-11 2.0-4.0 091018	IB-11 4.0-6.0 091018	IB-12 0.0-2.0 091018	IB-12 2.0-4.0 091018	IB-12 4.0-6.0 091018	IB-13 0.0-2.0 091118	IB-13 2.0-4.0 091118	IB-13 4.0-6.0 091118	IB-14 0.0-2.0 091318	IB-15 0.0-2.0 091318
Sample Date	9/10/2018	9/10/2018	9/10/2018	9/10/2018	9/10/2018	9/11/2018	9/11/2018	9/11/2018	9/13/2018	9/13/2018
Depth	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft
PCB Congeners (µg/kg)										
PCB-005/008	0.12 U	0.13 U	**0.51 J**	**1.6**	**1.5**	0.18 U	0.14 U	0.13 U	**0.59 J**	0.17 U
PCB-018	**4.8 J**	**0.67 J**	**0.77 J**	**3.8 J**	**8.5 J**	**0.58**	**0.44**	0.11 U	**0.83**	0.14 U
PCB-028	**2.7**	0.12 U	**1.2**	**4**	**4.8 J**	**0.73**	**0.43**	0.12 U	**1.2**	**0.41 J**
PCB-031	**3**	**0.37**	**0.99**	**3.2**	**5.5 J**	**0.76**	**0.39**	0.088 U	0.1 U	0.11 U
PCB-033	**1.8**	0.064 U	**0.91**	**3.5**	**4.5 J**	0.089 U	0.07 U	0.066 U	**1.2**	0.083 U
PCB-044	**4.9**	0.25 U	**1.4**	**6.9**	**9.6**	0.36 U	**0.57**	0.26 U	**1.8**	0.33 U
PCB-049	**1.7**	0.083 U	**1.6**	**5.7**	**6.6**	**0.56**	**0.44**	0.086 U	**1.5**	**0.73**
PCB-052	**2.5 J**	0.32 UJ	**2.6 J**	**9.2 J**	**12 J**	**1.2 J**	**0.84 J**	0.33 UJ	**2**	**0.92**
PCB-056	0.12 U	0.13 U	**0.87**	**2.8**	**2.9**	**0.4 J**	0.14 U	0.13 U	**0.72**	0.16 U
PCB-060	0.085 U	0.088 U	0.13 U	0.12 U	**1.5**	0.12 U	0.095 U	0.091 U	0.1 U	0.11 U
PCB-066	**2.1**	0.21 U	**2.4**	**7.7**	**9.8**	**1.2**	**0.7**	0.21 U	**2.4**	**0.78**
PCB-070	**2.2**	0.12 U	**2.2**	**6.7**	**11**	**0.99**	**0.81**	0.12 U	**2.1**	**0.83**
PCB-074	**1.4**	0.15 U	**0.98**	**3.1**	**4.4**	**0.59**	**0.43**	0.16 U	**1.1**	**0.5**
PCB-087	0.18 U	0.19 U	**1.1**	**2.6**	**3.4**	**0.49**	**0.43**	0.19 U	**1.9**	0.24 U
PCB-095	**2.4**	0.18 U	**4.8**	**10**	**13**	**2**	**1.3**	0.19 U	**5**	**1.6**
PCB-097	0.075 U	0.077 U	**1.1**	**3.4**	**3.8**	**0.52**	**0.4**	0.08 U	**2.1**	0.1 U
PCB-099	**2**	0.079 U	**3.3**	**6.2**	**7.7**	**1.7**	**1.1**	0.082 U	**3.6**	**1.4**
PCB-101	**2.6**	0.074 U	**6.9**	**14**	**17**	**3**	**2.1**	0.077 U	**7.4**	**2.1**
PCB-105	**2.1**	0.089 U	**2.3**	**3.8**	**5.5**	0.12 U	**0.77**	0.092 U	**2.7**	**0.97**
PCB-110	**2.1**	0.057 U	**3.9**	**10**	**12**	**2.2**	**1.4**	0.059 U	**5.5**	**1.7**
PCB-118	**2.9**	0.058 U	**3.3**	**8.1**	**11**	**2.1**	**1.3**	0.06 U	**5.2**	**1.9**
PCB-128	0.19 U	0.2 U	**0.88**	**1.9**	**3.1**	**0.72**	0.22 U	0.21 U	**1.4 J**	0.26 U
PCB-132/153	**4.2**	**0.83**	**22**	**29**	**37**	**9.4**	**5.7**	**0.44 J**	**20**	**6.1**
PCB-138/158	**2.8**	0.59 U	**12**	**17**	**23**	**11**	**3.7**	0.61 U	**15**	**4.4**
PCB-141	0.079 U	0.082 U	**2.2**	**3.3**	**4**	0.11 U	**0.7**	0.085 U	**2.7**	**0.69**
PCB-149	**2.4**	**0.57**	**12**	**19**	**24**	**5.3**	**3.5**	0.2 U	**13**	**3.4**
PCB-151	**0.97**	0.15 U	**4.4**	**5.9**	**7.3**	**1.8**	**1.3**	0.15 U	**4.1**	**1.3**
PCB-156	0.13 U	0.13 U	**0.69**	**1**	**1.8**	**0.54**	**0.44**	0.13 U	**1.3**	0.17 U
PCB-170	**1.2**	0.19 U	**7.6**	**9.7**	**13**	**2.8**	**1.9**	0.19 U	**6.7**	**1.9**
PCB-174	**0.84**	0.07 U	**5.4**	**7**	**9.1**	**2.1**	**1.3**	0.073 U	**5.8**	**1.4**
PCB-177	0.19 U	0.2 U	**3.7**	**4.3**	**5.6**	**1.7**	**1.1**	0.2 U	**4.2**	**1.2**
PCB-180	**2.8**	**0.66**	**15**	**18**	**24**	**6.1**	**4**	0.16 U	**16 J**	**4.3**
PCB-183	**0.73**	0.16 U	**4.4**	**4.6**	**6.7**	**1.4**	**1.1**	0.16 U	**4**	**1**
PCB-187	**1.6**	0.17 U	**9.1**	**11**	**14**	**3.2**	**2.4**	0.18 U	**8.5 J**	**2.6**
PCB-194	**0.97**	0.12 U	**4.2**	**5**	**6.3**	**1.5**	**1.1**	0.13 U	**3.3**	**1.1**
PCB-195	0.097 U	0.1 U	**1.9**	**1.9**	**2.1**	**0.61**	**0.38**	0.1 U	**1.6**	0.13 U
PCB-201	0.055 U	0.057 U	**0.83**	**0.68**	**0.96**	**0.3 J**	**0.25 J**	0.059 U	**0.7**	0.074 U
PCB-203	**1.4**	0.097 U	**4.5**	**4.9**	**6.9**	**1.5**	**0.93**	0.1 U	**3.8**	**1.1**
Total PCB Congener (U = 0)	**61 J**	**3.1 J**	**150 J**	**260 J**	**340 J**	**69 J**	**44 J**	**0.44 J**	**160 J**	**44 J**
Total Petroleum Hydrocarbons (mg/kg)										
Diesel range organics (C10 - C36)	**160**	2.3 U	**15**	**48**	**77**	2.9 U	2.2 U	2.1 U	--	--

Table 3
Summary of Individual Core Interval Sediment Chemistry Results

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	IB-16	IB-16	IB-16	IB-17	IB-17	IB-17	IB-23	IB-24	IB-24
Sample Name	IB-16 0.0-2.0 091118	IB-16 2.0-4.0 091118	IB-16 4.0-6.0 091118	IB-17 0.0-2.0 091118	IB-17 2.0-4.0 091118	IB-17 4.0-6.0 091118	IB-23 0.0-2.0 091118	IB-24 0.0-2.0 091118	IB-24 2.0-4.0 091118
Sample Date	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018
Depth	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	2 - 2.5 ft
PCB Congeners (µg/kg)									
PCB-005/008	**0.47 J**	0.13 U	0.12 U	0.13 U	0.13 U	0.13 U	0.097 U	1 U	0.096 U
PCB-018	**2.2**	**0.53**	0.1 U	**0.71**	**1.2**	0.11 U	**6**	0.84 U	0.081 U
PCB-028	**1.4**	**0.52**	0.11 U	**0.75**	**0.74**	0.12 U	**2.6**	0.9 U	0.086 U
PCB-031	**1.2**	0.086 U	0.081 U	**0.53**	**0.77**	0.087 U	0.064 U	0.66 U	0.063 U
PCB-033	**1.3**	0.065 U	0.061 U	0.064 U	0.063 U	0.066 U	0.048 U	0.5 U	0.048 U
PCB-044	**2.5**	**1.6**	0.24 U	**1.3**	0.25 U	0.26 U	**21**	**17**	**1**
PCB-049	**1.8**	**0.69**	0.08 U	**0.83**	**1.8**	0.085 U	**13**	**9.7**	0.062 U
PCB-052	**2.9 J**	**0.88 J**	0.31 UJ	**1.6 J**	**1.7 J**	0.33 UJ	**20 J**	**16 J**	**0.72 J**
PCB-056	**1.1**	0.13 U	0.12 U	**0.43**	0.12 U	0.13 U	**10**	**7.7**	0.094 U
PCB-060	0.092 U	0.089 U	0.084 U	**0.33 J**	0.086 U	0.09 U	**3.1**	**2.9**	0.065 U
PCB-066	**3.7**	**1.3**	0.2 U	**1.5**	**1.1**	0.21 U	**29**	**19**	**0.82**
PCB-070	**3.3**	**1.1**	0.11 U	**1.6**	**1.3**	0.12 U	**26**	**18**	**0.8**
PCB-074	**1.4**	**0.89**	0.14 U	**0.78**	0.15 U	0.16 U	**7.5**	**7.1**	**0.54**
PCB-087	**1.3**	**0.74**	0.18 U	**1**	0.18 U	0.19 U	**16**	**17**	0.14 U
PCB-095	**3.9**	**1.2**	0.17 U	**2**	**2.3**	0.18 U	**31**	**20**	**0.88**
PCB-097	**1.8**	**0.61**	0.074 U	**1**	**1.5**	0.08 U	**13**	**10**	0.058 U
PCB-099	**2.9**	**1**	0.076 U	**1.3**	**1**	0.082 U	**16**	**15**	**0.6**
PCB-101	**5.9**	**1.7**	0.071 U	**3**	**3.1**	0.076 U	**33**	**26**	**1.4**
PCB-105	**2.2**	**0.66**	0.086 U	**1.4**	0.088 U	0.092 U	**18**	**12**	**0.6**
PCB-110	**4.7**	**1.8**	0.054 U	**2.4**	**3.4**	0.058 U	**44**	**28**	**1.2**
PCB-118	**4.8**	**1.6**	0.056 U	**2.2**	**2.4**	0.06 U	**30**	**21**	**1.3**
PCB-128	**1.1**	0.2 U	0.19 U	**0.85**	**0.6**	0.21 U	**5.8**	**5.4**	0.15 U
PCB-132/153	**13**	**3.2**	0.26 U	**6.6**	**5.4**	0.28 U	**24**	**28**	**1.6**
PCB-138/158	**8.6**	**2.1**	0.57 U	**4.7**	**4.1**	0.61 U	**25**	**21**	**1.2**
PCB-141	**1.3**	**0.37**	0.079 U	**0.76**	**0.82**	0.084 U	**3.5**	**5.3**	0.061 U
PCB-149	**7.4**	**1.8**	0.19 U	**3.8**	**3.4**	0.2 U	**17**	**19**	**1.2**
PCB-151	**2.5**	**0.8**	0.14 U	**1.2**	**1.2**	0.15 U	**5.4**	**8.7**	**0.67**
PCB-156	**0.69**	0.13 U	0.12 U	**0.42**	0.13 U	0.13 U	**3.3**	1 U	0.096 U
PCB-170	**4**	**0.8**	0.18 U	**1.9**	**1.6**	0.19 U	**5**	**8.1**	**0.91**
PCB-174	**2.9**	**0.72**	0.067 U	**1.3**	**1.1**	0.072 U	**3**	**11**	0.052 U
PCB-177	**2**	**0.43**	0.19 U	**0.98**	**0.69**	0.2 U	**1.6**	**5.9**	0.15 U
PCB-180	**8.4**	**1.7**	0.15 U	**3.7**	**3.2**	0.16 U	**8.3**	**29**	**1.8**
PCB-183	**2.2**	**0.58**	0.15 U	**1.1**	**0.9**	0.16 U	**1.9**	**8.1**	**0.67**
PCB-187	**5.3**	**1.3**	0.16 U	**2.5**	**1.8**	0.18 U	**4.3**	**19**	**1.2**
PCB-194	**2.5**	**0.84**	0.12 U	**1.3**	**1.2**	0.13 U	**2.2**	**8.5**	**0.63**
PCB-195	**1.1**	0.1 U	0.096 U	**0.26 J**	0.099 U	0.1 U	**0.42**	**3.6**	0.075 U
PCB-201	**0.46**	0.058 U	0.055 U	0.057 U	0.056 U	0.059 U	**0.34**	**1.7 J**	0.042 U
PCB-203	**2.4**	**0.62**	0.093 U	**0.99**	**1.1**	0.099 U	**2**	**11**	**0.56**
Total PCB Congener (U = 0)	**120 J**	**32 J**	0.57 UJ	**57 J**	**49 J**	0.61 UJ	**450 J**	**440 J**	**20 J**
Total Petroleum Hydrocarbons (mg/kg)									
Diesel range organics (C10 - C36)	**12**	2.1 U	**5.4 J**	2.1 U	**6.2 J**	2.2 U	**5600**	**300**	**61**

Table 3
Summary of Individual Core Interval Sediment Chemistry Results

Notes:
Totals are calculated as the sum of all detected results (U=0). If all results are not detected, the highest method detection limit value is reported as the sum.
Total butyltin is the sum of mono-, di-, tri-, and tetrabultyin.
Total LPAH (13 of 25) is the sum of 1-methylnaphthalene, 1-methylphenanthrene, 1,6,7-trimethylnaphthalene, 2,6-dimethylnaphthalene, 2-methylnapthalene, acenaphthene, acenaphthylene, anthracene, biphenyl, dibenzothiophene, fluorene, naphthalene, and phenanthrene.
Total HPAH (12 of 25) is the sum of benzo(a)anthracene, benzo(a)pyrene, benzo(e)pyrene, benzo(b)fluoranthenes, benzo(k)fluoranthenes, benzo(g,h,i)perylene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-c,d)pyrene, perylene, and pyrene.
Dioxin/furan TEQ values were calculated with 1998 and 2005 World Health Organization (WHO) TEF values for mammals.
Total PCB congeners is the sum of the following PCB congeners: 008, 018, 028, 031, 033, 044, 049, 052, 056, 060, 066, 070, 074, 087, 095, 097, 099, 101, 105, 110, 118, 128, 132, 138, 141, 149, 151, 153, 156, 158, 170, 174, 177, 180, 183, 187, 194, 195, 201, and 203.
USEPA Stage 2A data validation was completed by Anchor QEA.
Bold: Detected result

Table 4
Summary of Composite Sample Dioxin/Furan Chemistry Results

Task	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed	IndiaBasin-2018Sed
Location Name	IB-INNER	IB-INNER	IB-INNER	IB-MIDDLE	IB-MIDDLE	IB-MIDDLE
Sample Name	IB-INNER 0.0-2.0 091118	IB-INNER 2.0-4.0 091118	IB-INNER 4.0-6.0 091118	IB-MIDDLE 0.0-2.0 091118	IB-MIDDLE 2.0-4.0 091118	IB-MIDDLE 4.0-6.0 091118
Sample Date	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018
Depth	0 - 2 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	4 - 6 ft
Conventional Parameters (pct)						
Moisture, percent	**38.6**	**44.9**	**40.8**	**49.9**	**45.6**	**45.3**
Dioxin Furans (ng/kg)						
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.141 U	0.152 U	0.105 U	0.149 U	0.168 U	0.116 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.475 U	0.387 U	0.249 U	0.333 U	0.454 U	0.282 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.327 U	0.319 U	0.252 U	0.279 U	0.329 U	0.207 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	**32.4**	**26.1**	0.272 U	**10.5**	**12.2**	0.205 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	**13.3**	**10.2**	0.281 U	0.248 U	0.318 U	0.209 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	**929**	**751**	**163**	**164**	**198**	**68.2**
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	**8800 J**	**6840**	**1220**	**1370**	**1380**	**402**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	**5.71**	**2.84**	0.234 U	**3.11**	**4.83**	**2.14 J**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.218 U	0.195 U	0.127 U	0.167 U	0.253 U	0.163 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	**15.2**	**9.83**	0.0984 U	0.14 U	**9.24**	0.139 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	**10.4**	0.28 U	0.105 U	0.144 U	0.205 U	0.14 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	**10.5**	0.279 U	0.108 U	0.151 U	0.205 U	0.14 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.263 U	0.314 U	0.125 U	0.157 U	0.24 U	0.161 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	**16.5**	**9.99**	0.108 U	0.148 U	0.21 U	0.139 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	**274**	**192 J**	**30.8**	**35.7**	**45.5**	**16.5**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	**13.9**	**13.7**	0.114 U	0.15 U	0.2 U	0.112 U
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	**1230**	**1120 J**	**138**	**131**	**123**	**47.4**
Total Dioxin/Furan (U = 0)	**11000 J**	**8980 J**	**1550**	**1710**	**1770**	**536 J**
Total Dioxin/Furan TEQ 1998 (Mammal) (U = 0)	**30 J**	**20.2 J**	**2.07**	**3.51**	**8.91**	**1.11 J**
Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0)	**29 J**	**19.8 J**	**2.35**	**3.81**	**7.36**	**1.2 J**

Notes:
Totals are calculated as the sum of all detected results (U=0). If all results are not detected, the highest method detection limit value is reported as the sum.
Dioxin/furan TEQ values were calculated with 1998 and 2005 World Health Organization (WHO) TEF values for mammals.
USEPA Stage 2A data validation was completed by Anchor QEA.
Bold: Detected result

3.2 Quality Assurance/Quality Control

A review of analytical results was conducted to evaluate the laboratories' performance in meeting QA/QC guidelines outlined in the SAP (Anchor QEA 2018a) and QAPP (Anchor QEA 2018b). The data validation reports prepared by Anchor QEA are presented in Appendix C.

All samples were received in good condition and within the recommended temperature range. Samples were appropriately preserved and analyzed within holding times. Three equipment blank samples were collected in association with these sample sets to assess contamination from the equipment, ambient conditions, sample containers, transit, and the laboratory. Four field duplicate samples were collected in association with these sample sets to assess field variability. Laboratory QC samples included matrix replicates, matrix spikes, surrogate spikes (for organic analyses), laboratory control samples, and method blanks. Results of this assessment concluded that most data were acceptable as reported and all other data were acceptable as qualified. The measurement quality objective of 95% for completeness was met.

3.3 Deviations from the Sampling and Analysis Plan and Quality Assurance Project Plan

There were no deviations from the SAP (Anchor QEA 2018a) or QAPP (Anchor QEA 2018b) associated with physical and chemical analyses of sediment.

4 Conclusions

Physical and chemical analyses of sediments were conducted to further delineate the vertical and horizontal extent of sediment contamination at the 900 Innes property, including the areas offshore of the property boundary and adjacent properties and underneath existing shoreline structures. Based on the results of testing, the following conclusions may be drawn:

- Nearshore and offshore sediments are primarily fine-grained materials
- The primary contaminants of concern driving the spatial extent of contamination include lead, mercury, and PCBs
- Highest concentrations of contaminants of concern were measured near the shoreline within the 900 Innes property, including the area under shoreline structures, with concentrations decreasing offshore
- Offshore of the 900 Innes property, elevated concentrations of contaminants of concern were generally buried at depth, except for one isolated hot spot (station IB-08)

Data from this investigation will be used to better define the volume of contaminated sediment that needs to be managed, support the development of an effective management strategy, and support development of the final RAP and RDR. Further evaluation of data results will be provided in the final RAP.

5 References

Anchor QEA, 2018a. *Sampling and Analysis Plan, 900 Innes Avenue*. April 2018.

Anchor QEA, 2018b. *Quality Assurance Project Plan, 900 Innes Avenue*. April 2018.

Northgate (Northgate Environmental Management, Inc.), 2017a. *Site Characterization Report, India Basin Redevelopment Project, 900 Innes Avenue, San Francisco, California*. Prepared for the San Francisco Recreation and Parks Department. May 2017.

Northgate, 2017b. *Conceptual Remedial Action Plan, India Basin Redevelopment Project, 900 Innes Avenue, San Francisco, California*. Prepared for the San Francisco Recreation and Parks Department. June 2017.

Northgate, 2017c. *Site Characterization Report, India Basin Redevelopment Project, India Basin Shoreline Park, San Francisco, California*. Prepared for the San Francisco Recreation and Parks Department. May 2017.

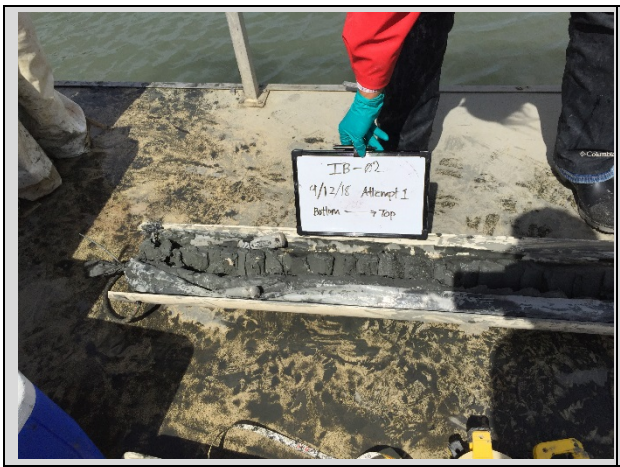
URS (URS Corporation), 2015. *Technical Memorandum: Foreshore Sediment, 900 Innes Avenue, San Francisco, California*. September 2015.

Weston (Weston Solutions, Inc.), 2013a. *Final Report: Phase I/II Investigation, Targeted Brownfields Assessment, 900 Innes Avenue Site, San Francisco, San Francisco County, California*. September 2013.

Weston, 2013b. *Analysis of Brownfield Cleanup Alternatives, 900 Innes Avenue Site, San Francisco, San Francisco County, California*. September 2013.

Appendix A
Field Logs and Core Photographs

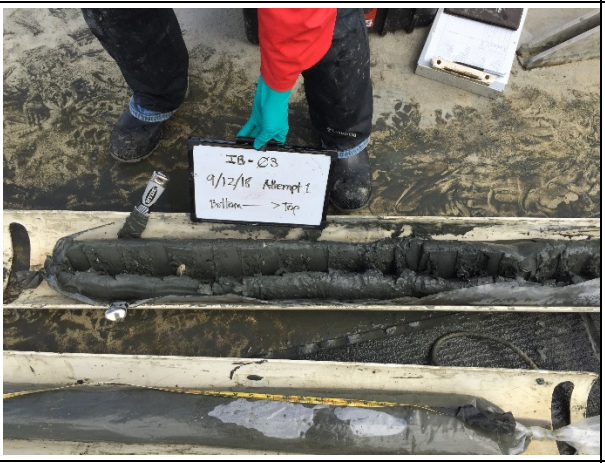
Appendix A
Core Photographs



IB-01 (1 of 2)

IB-01 (2 of 2)

IB-02 (1 of 1)



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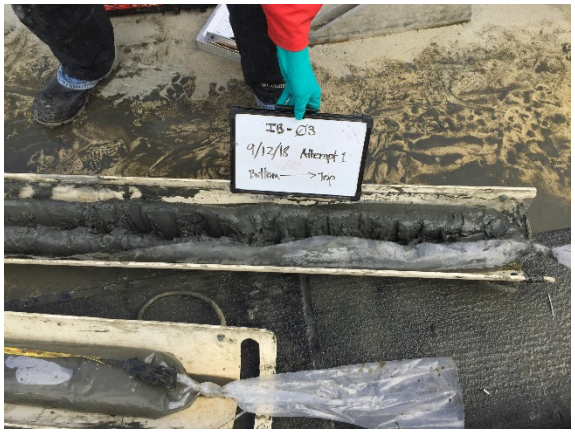

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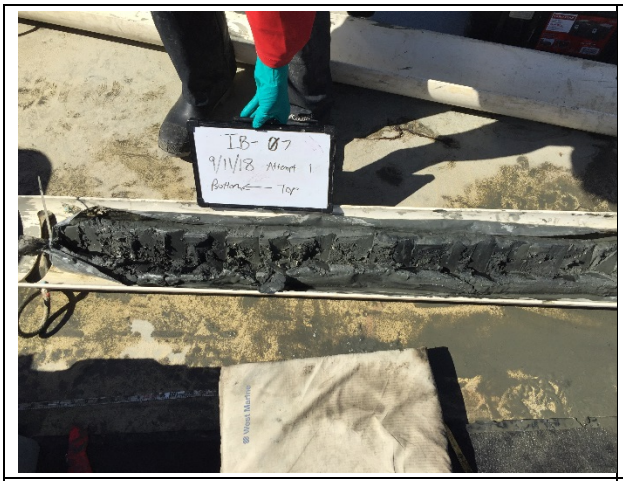
IB-05 (2 of 2)

IB-06 (1 of 2)

IB-06 (2 of 2)



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IB-07 (2 of 2)

IB-08 (1 of 2)

IB-08 (2 of 2)

IB-09 (1 of 2)

IB-09 (2 of 2)

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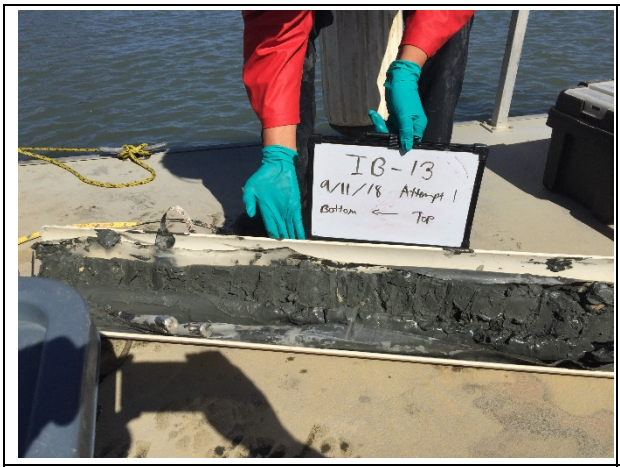
IB-11 (1 of 2)

IB-11 (2 of 2)

IB-12 (1 of 2)

IB-12 (2 of 2)



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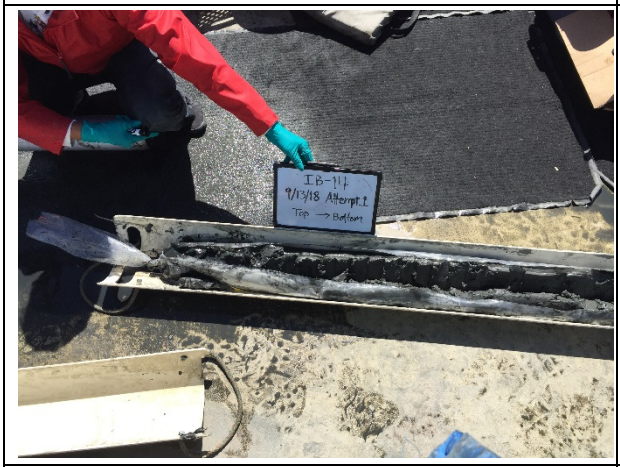

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IB-14 (2 of 2)

IB-15 (1 of 2)

IB-15 (2 of 2)

IB-16 (1 of 2)

IB-16 (2 of 2)

IB-17 (1 of 2)

IB-17 (2 of 2)

IB-18 (1 of 2)

IB-18 (2 of 2)

IB-19 (1 of 2)

IB-19 (2 of 2)

IB-20 (1 of 2)

IB-20 (2 of 2)

IB-21 (1 of 2)

IB-21 (2 of 2)

IB-22 (1 of 2)		IB-22 (2 of 2)

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 12, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID:	IB-01	Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length:	6.5'	Vertical Datum:	MLLW / Other
Weather Conditions:	62°, Sunny		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37° 44.1135'		
Longitude:	122° 22.4860'		
Time:	1155		
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	-3.3		
(B) Tide Height (MLLW)	3.9		
(C) Mudline Elevation (MLLW)	~~7.2~~ 0.6		
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5		
Total Core Penetration (FT)	6.5		
Total Core Length Recovered (FT)	5.2		
Core Recovery %	80%		
Description of Core Drive	Steady		
Refusal Encountered?	☒ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	—		
Core Collection Comments:			

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Homogeneous		

Core Characteristic Comments:

Core Collection Recorded By: S. Cehlle

Page: 1 of 1

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SEDIMENT CORE LOG

Core Station ID: IB-01

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PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~7.2~~ 0.6
DATE:	September 12 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	—	TOTAL CORE RECOVERED (FT):	5.2
TIME CORE COLLECTED:	1155	CORE RECOVERY (%)	80%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37°44.1135'
		LONGITUDE:	122°22.4860'
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY	OBSERVATIONS
0.0						CL	CLAY, 90% F, 10% S, very dark gray (3/N) wet, very soft	
2.0				1.6				
							@ 2.3': As above, shell fragments	
							@ 2.5': As above. abundant shell fragments and intact shells. Soft	
4.0				3.2				
							@ 3.5': As above. decreasing shells. Minor fragments only. 95% F, 5% S. very dark greenish gray (10Y 3/1)	
6.0				4.8				
				5.2			@ 5': Large intact clam shell. Core terminated at 5.2 ft.	
8.0								
10.0								
12.0								
14.0								

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 12, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID:	IB-02	Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length:	6.5'	Vertical Datum:	MLLW / Other
Weather Conditions:	Sunny, 61°F		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37° 44.1409'		
Longitude:	122° 22.4588		
Time:	1104		
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	- 2.4		
(B) Tide Height (MLLW)	+3.0'		
(C) Mudline Elevation (MLLW)	~~5.4~~ 0.6		
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5		
Total Core Penetration (FT)	6.5		
Total Core Length Recovered (FT)	5.5		
Core Recovery %	85%		
Description of Core Drive	Steady		
Refusal Encountered?	☒ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	—		
Core Collection Comments:			

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Shell layering.		

Core Characteristic Comments:

Core Collection Recorded By: S. Cehlle

Page: _____ of _____

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SEDIMENT CORE LOG

Core Station ID: IB-02

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PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~5.4~~ SAC 0.6
DATE:	September 12 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	—	TOTAL CORE RECOVERED (FT):	5.5
TIME CORE COLLECTED:	1104	CORE RECOVERY (%)	85%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37° 44.1409
		LONGITUDE:	122° 22.4588
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY	OBSERVATIONS
0.0						CL	CLAY: 95% F, 5% S, greenish black (10Y 2.5/1); wet; very soft; minor shells / shell fragments	
2.0				1.7			@ 1 ft: As above; no shells	
4.0				3.4			@3': As above; abundant shell fragments minor medium sand; wood fragments; soft. @4': As above; moderate shell fragments with some whole shells (up to 1.5" diam); no wood fragments; slight H_2S odor.	
6.0				5.1			@5.1 ft: As above; decreasing shells/shell fragments	
				5.5			5.5 ft = Core bottom.	
8.0								
10.0								
12.0								
14.0								

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 12 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID:	IB-03	Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length:	6.5	Vertical Datum:	MLLW Other
Weather Conditions:	63° breezy, sunny		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37°44.~~0763'~~ JF	.0637 11/26/18	
Longitude:	122°22.4801'		
Time:	1340		
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	-5.3		
(B) Tide Height (MLLW)	+6.6		
(C) Mudline Elevation (MLLW)	~~1.9~~ SMC 1.3		
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5'		
Total Core Penetration (FT)	5.5'		
Total Core Length Recovered (FT)	5.0'		
Core Recovery %	77%		
Description of Core Drive	Steady		
Refusal Encountered?	☑ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	—		
Core Collection Comments:			

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, dark brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Homogeneous		

Core Characteristic Comments:

Core Collection Recorded By: S. Gehlk

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SEDIMENT CORE LOG

Core Station ID: IB-3

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PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~11.9~~ 1.3
DATE:	September 12 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:		TOTAL CORE RECOVERED (FT):	5.0
TIME CORE COLLECTED:	1340	CORE RECOVERY (%)	77%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS: Slight ~~hydro~~ SAG H_2S odor.		LATITUDE:	37° 44.0763'
		LONGITUDE:	122° 22.4801
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0						CL	Lean CLAY; 95% F, 5% S. Very dark greenish gray (10Y 3/1); wet, very soft; shell fragments
2.0				1.54			@ 1 ft: As above w/ intact whole shells.
4.0				3.08			@ 1.5': As above, soft; increasing shells / shell fragments. Very dark gray (3/N)
6.0				4.62			@ 3.5: Decreasing shells / fragments
				5.0			@ 4.3: Intact clam shell, approx 2". Core terminated at 5.0 ft
8.0							
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 13, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID:	IB-04	Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length:	6.5'	Vertical Datum:	MLLW / Other
Weather Conditions:	61°F, Sunny, breezy		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37°44.0974		
Longitude:	122° 22.4576		
Time:	1115		
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	-2.4		
(B) Tide Height (MLLW)	+2.9		
(C) Mudline Elevation (MLLW)	~~5.3~~ 0.5		
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5		
Total Core Penetration (FT)	6.5		
Total Core Length Recovered (FT)	5.2		
Core Recovery %	80%		
Description of Core Drive	Steady		
Refusal Encountered?	☒ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	—		
Core Collection Comments:			

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Shell layering.		

Core Characteristic Comments:

Core Collection Recorded By: S. Gehlke

Page: 1 of 1

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SEDIMENT CORE LOG

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Core Station ID:	IB-04		
PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~5.3~~ SMG 0.5
DATE:	September 13 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	–	TOTAL CORE RECOVERED (FT):	5.2
TIME CORE COLLECTED:	1115	CORE RECOVERY (%)	80%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:	Slight H_2S odor near bottom 0.5 ft of sample.	LATITUDE:	37°44.0974
		LONGITUDE:	122°22.4576
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0						CL	CLAY, 95% F, 5% S, greenish black (10Y 2.5/1), wet, very soft.
2.0				1.6			@ 1.4 ft: As above: shell fragments and intact clam shells. Soft.
							@ 1.8 ft: As above, abundant shells
4.0				3.2			@ 2.7 ft: As above, decreasing shells and shell fragments
							@ 3.7 ft: 2" layer of abundant shells
6.0				4.8			@ 4.3 ft: As above at 2.7 ft w/ abundant shells and shell fragments
				5.2			@ 5.0 ft: As above, no shells, slight H_2S odor.
8.0							Core terminated at 5.2 ft.
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 12, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID:	IB-05	Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length:	6.5	Vertical Datum:	MLLW / Other
Weather Conditions:	Sunny, 61°		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37° 44.1245'		
Longitude:	122° 22.4319'		
Time:	1015		
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	-1.8		
(B) Tide Height (MLLW)	+1.9		
(C) Mudline Elevation (MLLW)	~~3.7~~ 0.1		
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5		
Total Core Penetration (FT)	6.5		
Total Core Length Recovered (FT)	5.3		
Core Recovery %	82%		
Description of Core Drive	Steady		
Refusal Encountered?	☒ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	N/A		
Core Collection Comments:			

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Homogeneous		

Core Characteristic Comments:

Core Collection Recorded By: S. Gehlke

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SEDIMENT CORE LOG

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Core Station ID:	IB-05		
PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~3.1~~ 0.1
DATE:	September 12 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	—	TOTAL CORE RECOVERED (FT):	5.3
TIME CORE COLLECTED:	1015	CORE RECOVERY (%)	82%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37°44.1245'
Moderate H_2S odor.		LONGITUDE:	122°22.4319'
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0						CL	Lean CLAY. 95% F 5% S; black (2.5/N); wet; very soft.
							@1': As above. minor shells and shell fragments
2.0				1.6			@2: One fragment of charcoal.
							@2.1': As above at 1'; soft.
4.0				3.3			@4.1': Increasing shell fragments and whole intact shells.
6.0				4.9			
				5.3			Core terminated at 5.3'.
8.0							
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 10, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID: IB-06		Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length: 6.5'		Vertical Datum:	MLLW / Other
Weather Conditions: Sunny, 68°F			

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37°43.9876'	37°43.9795'	
Longitude:	122°22.5294'	122°22.5297	
Time:	1350	1406	
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	-3.9	-3.9	
(B) Tide Height (MLLW)	7.0	6.9	
(C) Mudline Elevation (MLLW)	~~10.9~~ SIC 3.1	~~10.8~~ SIC 3.0	
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5'	6.5'	
Total Core Penetration (FT)	6.5'	6.5'	
Total Core Length Recovered (FT)	4.6'	5.0'	
Core Recovery %	72%	77%	
Description of Core Drive	—	—	
Refusal Encountered?	☒ No ☐ Yes	☒ No ☐ Yes	☐ No ☐ Yes
~~Description of Refusal~~ Core Drive	Steady w/ resistance in last foot	Steady w/ resistance in last foot.	
Core Collection Comments:	Not logged.		

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Mostly homogeneous		

Core Characteristic Comments: High shell content with some wood fragments

Core Collection Recorded By: S. Gehlke

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SEDIMENT CORE LOG

Core Station ID: JB-06

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PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	3.0
DATE:	September 10 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:		TOTAL CORE RECOVERED (FT):	5.0
TIME CORE COLLECTED:	1406	CORE RECOVERY (%)	77%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37°43.9795'
		LONGITUDE:	-122°22.5297
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0						CL	Clay; black (2.5N); 95% F 5% S; wet; very soft; shell fragments
2.0				1.54			
4.0				3.08			@3'; 0.5 ft long wood fragment w/ creosote type odor. @3.5' Intact clam shells and large shell fragments; increasing density, soft
6.0				4.62			3.8 to 4': Lens of Clayey Sand (70% F, 30% S)
				5.0'			5' = Bottom of Core.
8.0							
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 11, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID:	IB-07	Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length:	6.5	Vertical Datum:	MLLW / Other
Weather Conditions:	Sunny, 68°		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37°44.0296'		
Longitude:	122°22.5018		
Time:	1437		
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	-4.7		
(B) Tide Height (MLLW)	+7.0		
(C) Mudline Elevation (MLLW)	~~11.7~~ 2.3		
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5		
Total Core Penetration (FT)	6.5		
Total Core Length Recovered (FT)	5.5		
Core Recovery %	85%		
Description of Core Drive	Steady, no resistance.		
Refusal Encountered?	☒ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	N/A		
Core Collection Comments:			

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Some layering w/ increased fine sand.		

Core Characteristic Comments: Station relocated further offshore due to concrete located adjacent to bank.

Core Collection Recorded By: S. Gehlke

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SEDIMENT CORE LOG

Core Station ID: IB-07

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PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~1.7~~ -2.3
DATE:	September 11 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:		TOTAL CORE RECOVERED (FT):	5.5
TIME CORE COLLECTED:	1437	CORE RECOVERY (%)	85%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37°44.0296'
9 meters from proposed point.		LONGITUDE:	122°22.5018'
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0						CL	CLAY; 95%F, 5%S, greenish black (10Y 2.5/1), wet; soft; abundant shell fragments
2.0				1.7			
							@2': color change to black (2.5N), 90%F, 10%S; decreased shell fragments
4.0				3.4			@3': 1" lens of 75%F, 25%S
							@3.1' to 3.5': 80%F, 20%S
							@4': 90%F 10%S
6.0				5.1			@4.5': Increasing stiffness; abundant shell fragments
				5.5			
							Core terminated at 5.5 ft.
8.0							
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 10, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID: IB-08		Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length:	6.5'	Vertical Datum:	MLLW / Other
Weather Conditions:	Sunny, 69°F		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37°44.0328'	37°44.0323'	
Longitude:	122°22.4828'	122°22.4832'	
Time:	1516	1530	
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	4.0	4.0	
(B) Tide Height (MLLW)	+5.7'	+5.3	
(C) Mudline Elevation (MLLW)	1.7 ~~10.6~~ 9 ~~7~~	~~9.3~~ 1.3	
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5'	6.5'	
Total Core Penetration (FT)	6.5	6.5'	
Total Core Length Recovered (FT)	4.4'	4.7	
Core Recovery %	68%	72%	
Description of Core Drive	Resistance in last foot.	No resistance	
Refusal Encountered?	☒ No ☐ Yes	☒ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	N/A	N/A	
Core Collection Comments:	Not logged.		

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous		Homogeneous	

Core Characteristic Comments:

Core Collection Recorded By: S. Gohlke

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SEDIMENT CORE LOG

Core Station ID: IB-08

PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~9.3'~~ 1.3
DATE:	September 10 2018	TOTAL CORE PENETRATION (FT):	6.5'
HARBOR AREA:	—	TOTAL CORE RECOVERED (FT):	4.7
TIME CORE COLLECTED:	1530	CORE RECOVERY (%)	72%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37°44.0323
		LONGITUDE:	122°22.4832
		NORTHING:	----
		EASTING:	----

CORE DEPTH		SAMPLING			SEDIMENT TYPE		
Below Sediment Surface / Mudline (FT)	Sediment Elevation (MLLW)	Core Sample ID	INTERVAL	Core Length(FT)		USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0						CL	CLAY: 95%K, 5%S, Greenish black (10Y 2.5/1) wet; soft; minor shell fragments, up to 1" diameter.
2.0				1.44			As above: black (2.5/N)
4.0				2.88			2" wood fragment at 2.7'. @3': As above: increasing stiffness/density.
6.0				4.32			
				4.7			Core terminated at 6.5' (core length 4.7')
8.0							
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 13, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID:	IB-09	Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length:	6.5	Vertical Datum:	MLLW / Other
Weather Conditions:	60°, Fair, Breezy		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37° 44.0705'		
Longitude:	122° 22.4375'		
Time:	1022		
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	1.2		
(B) Tide Height (MLLW)	4 1.8		
(C) Mudline Elevation (MLLW)	~~3.0~~ 0.6		
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5		
Total Core Penetration (FT)	6.5		
Total Core Length Recovered (FT)	5.5		
Core Recovery %	85%		
Description of Core Drive	Steady		
Refusal Encountered?	☒ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	—		
Core Collection Comments:			

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Homogeneous		

Core Characteristic Comments: Hydrocarbon staining / odor, starting at 5.0 ft.

Core Collection Recorded By: S. Cehlla

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SEDIMENT CORE LOG

Core Station ID: IB-09

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PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~3.0~~ 0.6
DATE:	September 13 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	—	TOTAL CORE RECOVERED (FT):	5.5
TIME CORE COLLECTED:	1022	CORE RECOVERY (%)	85%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37°44.0705'
		LONGITUDE:	122°22.4375
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0						CL	CLAY, black (2.5 N), 95% F, 5% S, wet, very soft
2.0				1.7			
4.0				3.4			@3': As above, increasing density (soft)
6.0				5.1			@5': Dark black; moderate hydrocarbon odor.
				5.5			Core terminated at 5.5ft ~~bs~~
8.0							
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 12, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID:	IB-10	Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / ~~Leadline~~
Total Target Core Length:	6.5'	Vertical Datum:	MLLW / Other
Weather Conditions:	Sunny, 59°F		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37°44.1054'		
Longitude:	122°22.4030'		
Time:	0940		
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	1.3		
(B) Tide Height (MLLW)	+1.3		
(C) Mudline Elevation (MLLW)	~~2.6~~ 0.0		
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5		
Total Core Penetration (FT)	6.5		
Total Core Length Recovered (FT)	5.3		
Core Recovery %	82%		
Description of Core Drive	Steady		
Refusal Encountered?	☒ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	—		
Core Collection Comments:			

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Homogeneous to 4'		

Core Characteristic Comments: Petroleum staining / odor encountered at 4.7'

Core Collection Recorded By: S. Gehlk

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SEDIMENT CORE LOG

Core Station ID: IB-10

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PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~2.6~~ 0.0
DATE:	September 12 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	–	TOTAL CORE RECOVERED (FT):	5.3
TIME CORE COLLECTED:	0940	CORE RECOVERY (%)	82%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:	Petroleum staining / odor starting at 4.7'.	LATITUDE:	37°44.1054
		LONGITUDE:	122°22.4030
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0						CL	Clay. 95% F, 5% S; black (2.5/N). wet; very soft; low to no plasticity
2.0				1.6			As above: soft.
4.0				3.3			
6.0				4.9			@4': Lenses of sandy material (75% F, 25% S) between 4 and 4.5'.
				5.3			@4.7 to 5.3': As above at 0–4 ft w/ darker black coloration; slight hydrocarbon odor.
8.0							Core terminated at 5.3'.
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 10, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID: IB-11		Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length: 6.5'		Vertical Datum:	MLLW / Other
Weather Conditions: Sunny, 64°F			

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37°43.9646'	37°43.9644'	
Longitude:	-122°22.4870'	-122°22.4869'	
Time:	1211	1300	
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	3.9	3.9	
(B) Tide Height (MLLW)	+ 6.0	+ 6.9	
(C) Mudline Elevation (MLLW)	sta ~~9.9~~ 2.1	sta ~~10.8~~ 3.0	
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5'	6.5	
Total Core Penetration (FT)	6.5'	6.5	
Total Core Length Recovered (FT)	4.3	5.0	
Core Recovery %	66%	77%	
Description of Core Drive	Steady, slow during last foot.	Steady until last foot. Resistance.	
Refusal Encountered?	☒ No ☐ Yes	☒ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	N/A	N/A	
Core Collection Comments:	2" diameter wood fragment 2' from bottom		

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Homogeneous w/ debris	Some Layering w/ debris	

Core Characteristic Comments:

Core Collection Recorded By: S. Gehlke

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SEDIMENT CORE LOG

Core Station ID: IB-11

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PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~9.9'~~ SFC 3.0
DATE:	September 10 2018	TOTAL CORE PENETRATION (FT):	6.5'
HARBOR AREA:	—	TOTAL CORE RECOVERED (FT):	6.5
TIME CORE COLLECTED:	1211	CORE RECOVERY (%)	77%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37°43.9646'
Only attempt 2 logged.		LONGITUDE:	-122°22.4870'
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0						CL	Lean CLAY, black 100% F, wet; very soft
							@0.5': shell fragments, increasing sand, 80% F, 20% S
2.0				1.54			
							@2': As above, about 95% F, 5% S, 1" diameter wood fragments
4.0				3.08			@2.5': No wood fragments. Large shell fragments up to 1" diameter,
							@3': Increasing density; soft.
6.0				4.62 5.0'			@4.6': Increasing sand: 80% F, 20% S
							5.0 feet = bottom of core
8.0							
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 10, 2018
Site Name: IB -12		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID: IB-12		Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length: 6.5'		Vertical Datum:	MLLW / Other
Weather Conditions: Sunny 61°F			

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37° 43.9829'		
Longitude:	122° 22.4694'		
Time:	1027		
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	-2.3'		
(B) Tide Height (MLLW)	+3.6'		
(C) Mudline Elevation (MLLW)	~~5.9'~~ 1.3'		
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5		
Total Core Penetration (FT)	6.5		
Total Core Length Recovered (FT)	5.4		
Core Recovery %	83%		
Description of Core Drive	Steady		
Refusal Encountered?	☒ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	N/A		
Core Collection Comments:			

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Homogeneous		

Core Characteristic Comments:

Core Collection Recorded By: S. Gehlka

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SEDIMENT CORE LOG

Core Station ID: IB-12

PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~5.94~~ 1.3
DATE:	September 9 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	N/A	TOTAL CORE RECOVERED (FT):	5.4
TIME CORE COLLECTED:	10:22	CORE RECOVERY (%)	83%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37°43.9829'
		LONGITUDE:	122° 22.4694'
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY	OBSERVATIONS
0.0						CL	Clay, 95% F 5% S, very dark gray (Gley1 3/N), wet, very soft, homogeneous.	
2.0				1.66'				
4.0				3.32'			As above, soft.	
6.0				4.98'			@5.5': As above, minor shell fragments	
				5.4'			Core terminated at 6.5' below surface.	
8.0								
10.0								
12.0								
14.0								

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 11, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID:	IB-13	Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length:	6.5'	Vertical Datum:	MLLW / Other
Weather Conditions:	Sunny, 65°		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37° 44. ~~4209'~~ SAC 0209		
Longitude:	122° 22. 4300'		
Time:	1013		
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	1.5		
(B) Tide Height (MLLW)	+ 2.4		
(C) Mudline Elevation (MLLW)	SAC ~~3.9~~ 0.9		
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5'		
Total Core Penetration (FT)	6.5'		
Total Core Length Recovered (FT)	5.9'		
Core Recovery %	91%		
Description of Core Drive	Steady, Soft.		
Refusal Encountered?	☑ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	—		
Core Collection Comments:			

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Homogeneous		

Core Characteristic Comments:

Core Collection Recorded By: S. Cuhlke

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SEDIMENT CORE LOG

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Core Station ID: IB-13

PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	0.9
DATE:	September 11 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	—	TOTAL CORE RECOVERED (FT):	5.9
TIME CORE COLLECTED:	1013	CORE RECOVERY (%)	91%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37°44.~~4209'~~ 0209 SHC
		LONGITUDE:	122°22.4300'
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0						CL	CLAY; 90%F, 10%S; Very dark gray (3/N); wet, very soft
2.0				1.8			As above: greenish black (10Y 2.5/1); 95%F, 5%S; increasing density shell fragments; intact clam shell at 2.5'. Extensive Clam shells and shell fragments between 2.5 to 3'.
4.0				3.6			@4': Decreasing shell fragments. Slight H_2S odor.
6.0				5.5			@5.5': Increasing shells / shell fragments
				5.9			@5.9' = Bottom of core
8.0							
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

PAGE 1 OF

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 13, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID:	IB-14	Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length:	6.5'	Vertical Datum:	MLLW / Other
Weather Conditions:	63°, Sunny		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37°44.0591'		
Longitude:	122°22.3922'		
Time:	1215		
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	-3.6		
(B) Tide Height (MLLW)	+4.2		
(C) Mudline Elevation (MLLW)	~~7.8~~ 0.6		
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5		
Total Core Penetration (FT)	6.5		
Total Core Length Recovered (FT)	5.4		
Core Recovery %	83%		
Description of Core Drive	Steady		
Refusal Encountered?	☒ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	—		
Core Collection Comments:			

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Homogeneous w/ some		
Core Characteristic Comments:	layering of shells		

Core Collection Recorded By: S. Gehlke

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SEDIMENT CORE LOG

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Core Station ID:	IB-14		
PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~7.8~~ 0.6
DATE:	September 13 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	—	TOTAL CORE RECOVERED (FT):	5.4
TIME CORE COLLECTED:	1215	CORE RECOVERY (%)	83%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37°44.0591'
		LONGITUDE:	122°22.3922
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY	OBSERVATIONS
0.0						CL	CLAY; 95% F, 5% S; black (2.5/N), wet; very soft.	
2.0				1.66			@ 2.4': As above: minor shell fragments	
4.0				3.3			@ 2.5': Whole clam shell. @ 3' Whole clam shell @ 3.5' Whole clam shell	
6.0				5.0			@ 4.0': As above; increasing shells and shell fragments; soft.	
				5.4			@ 5.0': As above: No shells/fragments	
							Core terminated at 5.4 ft.	
8.0								
10.0								
12.0								
14.0								

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 13, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID:	IB-15	Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length:	6.5	Vertical Datum:	MLLW / Other
Weather Conditions:	Clear, Windy, 59°F		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37°44.0944'		
Longitude:	122°22.3572'		
Time:	0942		
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	-1.7		
(B) Tide Height (MLLW)	+1.4		
(C) Mudline Elevation (MLLW)	~~3.1~~ -0.3		
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5		
Total Core Penetration (FT)	6.5		
Total Core Length Recovered (FT)	5.1		
Core Recovery %	78%		
Description of Core Drive	Steady		
Refusal Encountered?	☒ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	N/A		
Core Collection Comments:			

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Homogeneous		

Core Characteristic Comments:

Core Collection Recorded By: S. White

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SEDIMENT CORE LOG

Core Station ID: IB-15

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PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~3.1~~ SIC -0.3
DATE:	September 13 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	–	TOTAL CORE RECOVERED (FT):	5.1
TIME CORE COLLECTED:	0942	CORE RECOVERY (%)	78%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37°44.0944'
		LONGITUDE:	122°23.3572'
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0							CLAY, black (2.5/N), 95%F, 5%S, wet, very soft.
2.0				1.57			@1.7': As above, minor shells @1.8': As above, no shells
4.0				3.12			@3': As above, soft 3.5 to 3.8': Shell fragments and whole clam shells
6.0				4.68			
				5.1			Core terminated at 5.1'.
8.0							
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

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CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		**Date:**	September 11, 2018
Site Name: IB		**Project Number:**	326230.00.1.100.00.00.00001000
Core Station ID:	IB-16	**Survey Vessel:**	Chinook (TEG)
Core Depth (ft MLLW):		**Northing:**	—
Core Overdepth:		**Easting:**	—
Core Z-layer:		**Water Depth Measured by:**	Sounder / Leadline
Total Target Core Length:	6.5'	**Vertical Datum:**	MLLW / Other
Weather Conditions:	67° Sunny		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37°43.9726'		
Longitude:	122°22.4432'		
Time:	1328		
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	-4.2		
(B) Tide Height (MLLW)	+6.8		
(C) Mudline Elevation (MLLW)	~~11.0~~ 2.6		
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5		
Total Core Penetration (FT)	6.5		
Total Core Length Recovered (FT)	4.7		
Core Recovery %	72%		
Description of Core Drive	Steady, barrel appears scraped.		
Refusal Encountered?	☒ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	—		
Core Collection Comments:			

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Homogeneous		

Core Characteristic Comments:

Core Collection Recorded By: S. Gehlke

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SEDIMENT CORE LOG

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Core Station ID: IB-16

PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	2.6
DATE:	September 11 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	—	TOTAL CORE RECOVERED (FT):	4.7
TIME CORE COLLECTED:	1328	CORE RECOVERY (%)	72%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37°43.9726'
		LONGITUDE:	122°22.4432'
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0						CL	CLAY, 90% F, 10% S; greenish black (10Y 2.5/1); wet; very soft; minor shells.
2.0				1.44			@ 0.8 ft: As above. 85% F 15% S; black (2.5/N); increasing shells and shell fragments
							@ 1.8': As above, 95% F, 5% S. Soft.
4.0				2.88			
6.0				4.32			@ 4.3': As above: 85% F, 15% S.
				4.7			Core terminated at 4.7'.
8.0							
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 11, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID:	IB-17	Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length:	6.5	Vertical Datum:	MLLW / Other
Weather Conditions:	Sunny, 68°		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37° 44.0082	37° 44.0076	
Longitude:	122° 22.4073	122° 22.4069	
Time:	1155	1210	
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	-3.3	-3.3	
(B) Tide Height (MLLW)	+4.6	+5.4	
(C) Mudline Elevation (MLLW)	~~7.9~~ 1.3	~~8.7~~ 2.1	
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5	6.5	
Total Core Penetration (FT)	6.5	6.5	
Total Core Length Recovered (FT)	~~4.1~~ 4.1	4.4	
Core Recovery %	~~72%~~ 63%	68%	
Description of Core Drive	Steady	Harder in bottom foot.	
Refusal Encountered?	☒ No ☐ Yes	☒ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	—		
Core Collection Comments:	Not logged.		

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Homogeneous	Homogeneous	

Core Characteristic Comments:

Core Collection Recorded By: S. Gehlke

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SEDIMENT CORE LOG

Core Station ID: IB-17

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PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	2.1
DATE:	September 11 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	✓	TOTAL CORE RECOVERED (FT):	4.4
TIME CORE COLLECTED:	1210	CORE RECOVERY (%)	68
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37°44.0076
		LONGITUDE:	122°22.4069
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0						CL	CLAY, 95% F, 5% S, black (2.5/N), wet; very soft; shells and shell fragments; @ 1 ft: increasing shells
2.0				1.36			
4.0				2.72			@ 2.7': As above, moist, soft (increasing stiffness)
6.0				4.08			
				4.4			Core terminated at 4.4 ft.
8.0							
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 12, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID:	IB-18	Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length:	6.5'	Vertical Datum:	MLLW / Other
Weather Conditions:	63°, Sunny, Windy		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37° 44.0470'	37° 44.0465'	
Longitude:	122° 22.3691'	122° 22.3688'	
Time:	1430	1445	
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	5.1	5.1	
(B) Tide Height (MLLW)	+7.0'	+7.0'	
(C) Mudline Elevation (MLLW)	SAG ~~12.1~~ 1.9	SAG ~~12.1~~ 1.9	
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5	6.5	
Total Core Penetration (FT)	6.5	6.5	
Total Core Length Recovered (FT)	4.2	5.3	
Core Recovery %	65%	82%	
Description of Core Drive	Steady	Steady	
Refusal Encountered?	☒ No ☐ Yes	☒ No ☐ Yes	☐ No ☐ Yes
Description of Refusal			
Core Collection Comments:	Not logged		

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous			

Core Characteristic Comments:

Core Collection Recorded By: S. Gehlke

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SEDIMENT CORE LOG

	Core Station ID:	IB-18	
PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~12.1~~ SHC 1.9
DATE:	September 12 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	—	TOTAL CORE RECOVERED (FT):	~~4.2~~ SHC 5.3
TIME CORE COLLECTED:	1445	CORE RECOVERY (%)	82%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:	2nd Attempt	LATITUDE:	37°44.0465'
		LONGITUDE:	122°22.3688'
		NORTHING:	----
		EASTING:	----

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CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0						SP	Poorly Graded SAND, 90% S, 10% F; very dark greenish gray (10Y 3/1); wet; loose.
2.0				1.64			@ 1.3': As above, medium dense, minor pebbles and shell fragments
							@ 1.6': Increasing / larger shell fragments
4.0				3.3			@ 1.8': 2" diameter rock
							~~@ 2.0 ft: Decreasing Sand / increasing fine~~
						CL	@ 2.4 ft: CLAY; 90% F 10% S, very dark gray (3/N); moist, soft; shell fragments, occasional intact shells
6.0				4.9			
				5.3			
							@ 4.2 ft: Increasing shell fragments
8.0							@ 5.0 ft: 2" diameter intact clam shell
							Core terminated at 5.3 ft
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 13, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID:	IB-19	Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length:	6.5	Vertical Datum:	MLLW / Other
Weather Conditions:	64°, Sunny		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37°44.0665'		
Longitude:	122°22.3055'		
Time:	1350		
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	5.7		
(B) Tide Height (MLLW)	5.6		
(C) Mudline Elevation (MLLW)	~~+1.3~~ -0.1		
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5		
Total Core Penetration (FT)	6.5		
Total Core Length Recovered (FT)	4.9		
Core Recovery %	75%		
Description of Core Drive	Steady		
Refusal Encountered?	☐ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	—		
Core Collection Comments:			

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Homogeneous		

Core Characteristic Comments:

Core Collection Recorded By: S. Gehlke

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SEDIMENT CORE LOG

Core Station ID: FB-19

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PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~1.3~~ -0.1
DATE:	September 13 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	—	TOTAL CORE RECOVERED (FT):	4.9
TIME CORE COLLECTED:	1350	CORE RECOVERY (%)	75%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37°44.0665'
		LONGITUDE:	122°22.3055'
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0						CL	CLAY, 95%F, 5%S, greenish black (10Y 2.5/1); wet; very soft.
				1.5			@ 0.5': As above, minor shells, areas of black mottling
2.0							@ 1.5': As above. no mottling.
							@ 2.7': As above, increasing shell fragments
4.0				3.0			@ 3.0': As above; Some intact clam shells
							@ 3.5': Decreasing shells / fragments
6.0				4.5			@ 4.5': No shells / fragments, Slight H_2S odor.
				4.9			Core terminated at 4.9 ft
8.0							
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 14, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID:	IB-20	Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / Leadline
Total Target Core Length:	6.5'	Vertical Datum:	MLLW / Other
Weather Conditions:	56°F, Partly Cloudy		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37° 44.1702'	37° 44.1006	
Longitude:	122° 22.2714'	122° 22.2711	
Time:	1010	1030	
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	-3.1	-3.1	
(B) Tide Height (MLLW)	+1.9	+2.0	
(C) Mudline Elevation (MLLW)	SAC ~~5.0~~ -1.2	SAC ~~5.1~~ -1.1	
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5	6.5	
Total Core Penetration (FT)	6.5	6.5	
Total Core Length Recovered (FT)	4.6	5.0	
Core Recovery %	71%	77%	
Description of Core Drive	Steady	Steady	
Refusal Encountered?	☒ No ☐ Yes	☒ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	—	—	
Core Collection Comments:	Not logged.		

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Homogeneous		

Core Characteristic Comments:

Core Collection Recorded By: S. Gehlke

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SEDIMENT CORE LOG

	Core Station ID:	JB-20	SFC leidos
PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~5.1~~ -1.1
DATE:	September 14 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	—	TOTAL CORE RECOVERED (FT):	5.0
TIME CORE COLLECTED:	1030	CORE RECOVERY (%)	77%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37°44.1006'
		LONGITUDE:	122°22.2711
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0						CL	CLAY; 95% F, 5% S; black (2.5/N), wet, very soft.
2.0				1.54			
4.0				3.08			@ 3.5': As above; soft
							@ 4': Minor shell fragments
6.0				4.62			
				5.0			Core terminated at 5.0 ft.
8.0							
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

CORE COLLECTION LOG

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SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		**Date:**	September 13, 2018
Site Name: IB		**Project Number:**	326230.00.1.100.00.00.00001000
Core Station ID:	IB-21	**Survey Vessel:**	Chinook (TEG)
Core Depth (ft MLLW):		**Northing:**	—
Core Overdepth:		**Easting:**	—
Core Z-layer:		**Water Depth Measured by:**	Sounder / Leadline
Total Target Core Length:	6.5	**Vertical Datum:**	MLLW / Other
Weather Conditions:	Sunny, Breezy, 66°F		

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37°44.0066'	37°44.0064	
Longitude:	122°22.1978'	122°22.1976	
Time:	1500	1520	
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	-8.0	8.0	
(B) Tide Height (MLLW)	6.8	6.8	
(C) Mudline Elevation (MLLW)	JAC ~~14.8~~ -1.2	JAC ~~14.8~~ -1.2	
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	JAC ~~3.8~~ 6.5	6.5	
Total Core Penetration (FT)	6.5	6.5	
Total Core Length Recovered (FT)	3.8	4.9	
Core Recovery %	58%	75%	
Description of Core Drive	Steady	Slowed down bottom 2 ft. Broke barrel.	
Refusal Encountered?	☒ No ☐ Yes	☒ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	—	—	
Core Collection Comments:	Not logged.		

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Layered in bottom 2 ft.		

Core Characteristic Comments:

Core Collection Recorded By: S. Cehlk

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SEDIMENT CORE LOG

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	Core Station ID: IB-21		
PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~14.8~~ -1.2
DATE:	September 13 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	—	TOTAL CORE RECOVERED (FT):	4.9
TIME CORE COLLECTED:	1520	CORE RECOVERY (%)	75%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:	Surface algae caught in sample to approx. 1-foot.	LATITUDE:	37°44.0064
		LONGITUDE:	122°22.1974
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY / OBSERVATIONS
0.0						CL	Silty CLAY, 95% F, 5% S, black (2.5 N), wet, soft
2.0				1.5			@ 1.3 ft: Minor wood fragments, decreasing silt.
							@ 2.8 ft: Wood fragment
4.0				3.0			@ 3.0 ft: Increasing silt, moist
						ML	SILT (@ 3.5'), 90% F, 10% S, very dark greenish gray (10Y 3/1), moist, medium stiff
6.0				4.5			
				4.9			@ 4.1 ft: As above, abundant shell fragments, transitioning into whole shells at bottom of core
8.0							
							Bottom of core at 4.9 ft.
10.0							
12.0							
14.0							

Core Logged by: S. Gehlke

CORE COLLECTION LOG

leidos

SITE INFORMATION

Project Name: SFRPD, India Basin, Sediment Survey and Sampling		Date:	September 14, 2018
Site Name: IB		Project Number:	326230.00.1.100.00.00.00001000
Core Station ID:	IB-22	Survey Vessel:	Chinook (TEG)
Core Depth (ft MLLW):		Northing:	—
Core Overdepth:		Easting:	—
Core Z-layer:		Water Depth Measured by:	Sounder / ~~Leadline~~
Total Target Core Length:		Vertical Datum:	MLLW / Other
Weather Conditions: 57°F, overcast			

CORE COLLECTION

	Attempt 1 (a)	Attempt 2 (b)	Attempt 3 (c)
Latitude:	37° 44.0420'		
Longitude:	122° 22.1620'		
Time:	0934		
Mudline Elevation (C) = (Measured Depth (A) + Tide Height (B)) - [include sign (+/-) of tide height as reported]			
(A) Measured Water Depth	-3.2		
(B) Tide Height (MLLW)	+1.9		
(C) Mudline Elevation (MLLW)	~~5.1~~ -1.3		
Target Core Length = | ((Project Depth (PD) + Overdepth (OD) + Cap Contingency Layer (CCL) [incl. Z]) - (Mudline Elevation) |			
Total Target Core Length (FT)	6.5'		
Total Core Penetration (FT)	6.5'		
Total Core Length Recovered (FT)	5.2		
Core Recovery %	80%		
Description of Core Drive	Stead		
Refusal Encountered?	☒ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes
Description of Refusal	—		
Core Collection Comments:			

CORE CHARACTERISTICS

Sediment Odor	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic	none, slight, mod, strong, H_2S, petroleum, septic
Sediment Color	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:	olive, gray, brown, brown surface, black, other:
Sediment Type	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete	cobble, gravel, sand C M F, silt/clay, organic matter, woody debris, shell debris, concrete
Layering / Homogeneous	Homogeneous		

Core Characteristic Comments:

Core Collection Recorded By: S. Gehlla

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SEDIMENT CORE LOG

Core Station ID: IB-22

PROJECT NAME:	SFRPD, India Basin, Sediment Survey and Sampling	MUDLINE ELEVATION (MLLW):	~~5.1~~ SAC -1.3
DATE:	September 14 2018	TOTAL CORE PENETRATION (FT):	6.5
HARBOR AREA:	—	TOTAL CORE RECOVERED (FT):	5.2
TIME CORE COLLECTED:	0934	CORE RECOVERY (%)	80%
CORE COLLECTED BY:	TEG	CORE METHOD	Vibracore
CORE LOGGED BY:	S. Gehlke	POSITION METHOD	VESSEL GPS
CORE SAMPLED BY:	V. Frank	VESSEL:	Chinook
COMMENTS:		LATITUDE:	37°44.0420'
		LONGITUDE:	122°22.1620'
		NORTHING:	----
		EASTING:	----

CORE DEPTH: Below Sediment Surface / Mudline (FT)	CORE DEPTH: Sediment Elevation (MLLW)	SAMPLING: Core Sample ID	SAMPLING: INTERVAL	Core Length(FT)	SEDIMENT TYPE	SEDIMENT TYPE: USCS SYMBOL	LITHOLOGY	OBSERVATIONS
0.0						CL	CLAY, 95% + 5% S; greenish gray (10Y 2.5/1); wet; very soft. Surface plant material throughout sample.	
2.0				1.6			@ 2.3: No more plant material; soft.	
4.0				3.2				
6.0				4.8				
				5.2			Core terminated at 5.2 ft.	
8.0								
10.0								
12.0								
14.0								

Core Logged by: S. Gehlke

SEDIMENT CORE LOG

Station ID 1B-23

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PROJECT NAME:	SFRPD, INDIA BASIN, SEDIMENT SURVEY & SAMPLING	CORE PENETRATION:	3"
DATE SAMPLED:	9/11/18	CORE RECOVERY:	2"
LOCATION:	INDIA BASIN	% RECOVERY:	66%
TIME:	11:15 - 12:45	SAMPLING METHOD:	HAND AUGER / PISTON CORE
UNCORRECTED DEPTH (-FT)	NA	POSITION METHOD:	TRIMBLE GPS HANDHELD
NOS WATER LEVEL (TIDE):	NA	LATITUDE:	37° 43.971179 N
WATER DEPTH MLLW:	NA	LONGITUDE:	122° 22.511330 W
VESSEL:	NA	NORTHING:	
SAMPLED BY:	R. MUSSELMAN	EASTING:	
	K. CUDDEFORD	WEATHER:	CLEAR
	R. YOUNG		

DEPTH: Feet Below Mud Surface	DEPTH: Feet Below MLLW	SAMPLE DATA: SAMPLE NUMBER	SAMPLE DATA: INTERVAL	SAMPLE DATA: RECOVERY	SEDIMENT TYPE: USCS	SEDIMENT TYPE: SYMBOL	LITHOLOGY / OBSERVATIONS
							12" OF CONCRETE CORED THROUGH
1		1B-23 0.0-2.0 091118	0-2'				FINE TO MEDIUM SUB-ANGULAR GRAVEL, TRACE FINE SAND, LITTLE FINE SILT. SOME LARGER COBBLES REMOVED BY HAND
2				2"/3"			PISTON CORER PUSHES FROM 1.5-1.8' BEFORE REFUSAL
							HAND AUGER REFUSAL AT 2.0 FEET
4							
6							
8							
10							
12							
14							

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SEDIMENT CORE LOG

Station ID 1B-24

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PROJECT NAME:	SFRPD INDIA BASIN SEDIMENT SURVEY SAMPLING	CORE PENETRATION:	18"
DATE SAMPLED:	9/11/18	CORE RECOVERY:	18"
LOCATION:	INDIA BASIN	% RECOVERY:	100
TIME:	10:10 - 12:30	SAMPLING METHOD:	PISTON CORE, HAND AUGER
UNCORRECTED DEPTH (-FT)	NA	POSITION METHOD:	TRIMBLE GPS HANDHELD
NOS WATER LEVEL (TIDE):	NA	LATITUDE:	37 43.966425' N
WATER DEPTH MLLW:	NA	LONGITUDE:	122 22.505473 W
VESSEL:	NA	NORTHING:	
SAMPLED BY:	KEN CUDDEFORD	EASTING:	
	ROGER MUSSELMAN	WEATHER:	CLEAR
	RANDALL YOUNG		

12" OF CONCRETE, CONCRETED ONTO AN ADDITIONAL 6" OF COBBLES.

DEPTH: Feet Below Mud Surface	DEPTH: Feet Below MLLW	SAMPLE DATA: SAMPLE NUMBER	SAMPLE DATA: INTERVAL	SAMPLE DATA: RECOVERY	SEDIMENT TYPE: USCS	SEDIMENT TYPE: SYMBOL	LITHOLOGY / OBSERVATIONS
		1B-24 0.0-2.0 091118		18"/18"			FINE TO MEDIUM, SUB-ANGULAR GRAVEL, TRACE FINE TO COARSE SAND, TRACE SILT, TRACE WOOD DEBRIS
							1.8 GREY-BROWN SOFT CLAY, SOME SEMI-ROUNDED COBBLES, TRACE FINE SAND, TRACE SUB-ANGULAR FINE GRAVEL. TRACE BRICK DEBRIS SLIGHT CREOSOTE ODOR. OCCASIONALLY BLACK. PISTON CORE REFUSAL AT 2.0'
2							2.0
		1B-24 2.0-2.5 091118					GREY FINE ANGULAR GRAVEL, TRACE MEDIUM TO COARSE SAND, TRACE SILT
4							2.5
							HAND AUGER REFUSAL AT 2.5'
6							
8							
10							
12							
14							

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Appendix B
Chemistry Laboratory Reports

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WORK ORDER NUMBER: 18-09-0883

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Leidos

Client Project Name: India Basin

Attention: Charlie Phillips
1000 Broadway
Suite 675
Oakland, CA 94607-4099

Approved for release on 10/17/2018 by:
Carla Hollowell
Project Manager

ResultLink

Email your PM

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Work Order Number: 18-09-0883

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Work Order Narrative

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 09/13/18. They were assigned to Work Order 18-09-0883.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

DoD Projects:

The test results contained in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ADE-1864.

The samples may have been analyzed and/or extracted outside the EPA Method recommended solid sample holding times for selected analyses; However, the samples were frozen after collection (prior to holding time expiration) at -18C, and remained frozen until the laboratory was ready to prepare the samples for analysis. Eurofins Calscience, Inc. follows SWAMP criteria and the Puget Sound Protocol (USEPA/PSWQAT, 1997, Table 2) for holding times in marine samples, which states holding times may be extended up to six months to one year (two years for metals) if stored frozen at -18C after collection. Therefore, the sample results have not been flagged as exceeding the EPA Method recommended holding times.

The LCS/LCSD RPD recovery for the EPA 8270 SIM PCB Congeners analysis was outside of range; however, the associated

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Work Order Narrative

LCS and LCSD recoveries were inside of control range limits and the associated MS/MSD recoveries were also inside the control range limits. No further action is required.

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Sample Summary

Client:	Leidos 1000 Broadway, Suite 675 Oakland, CA 94607-4099	Work Order:	18-09-0883
		Project Name:	India Basin
		PO Number:	
		Date/Time Received:	09/13/18 12:00
		Number of Containers:	54
Attn:	Charlie Phillips		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
IB-12 0.0-2.0 091018	18-09-0883-1	09/10/18 00:00	1	Sediment
IB-12 100 0.0-2.0 091018	18-09-0883-2	09/10/18 00:00	1	Sediment
IB-12 0.0-2.0 091018	18-09-0883-3	09/10/18 00:00	1	Sediment
IB-12 0.0-2.0 091018	18-09-0883-4	09/10/18 00:00	1	Sediment
IB-12 0.0-2.0 091018	18-09-0883-5	09/10/18 00:00	1	Sediment
IB-12 2.0-4.0 091018	18-09-0883-6	09/10/18 00:00	1	Sediment
IB-12 2.0-4.0 091018	18-09-0883-7	09/10/18 00:00	1	Sediment
IB-12 2.0-4.0 091018	18-09-0883-8	09/10/18 00:00	1	Sediment
IB-12 2.0-4.0 091018	18-09-0883-9	09/10/18 00:00	1	Sediment
IB-12 4.0-6.0 091018	18-09-0883-10	09/10/18 00:00	1	Sediment
IB-12 100 4.0-6.0 091018	18-09-0883-11	09/10/18 00:00	1	Sediment
IB-12 4.0-6.0 091018	18-09-0883-12	09/10/18 00:00	1	Sediment
IB-12 4.0-6.0 091018	18-09-0883-13	09/10/18 00:00	1	Sediment
IB-12 4.0-6.0 091018	18-09-0883-14	09/10/18 00:00	1	Sediment
IB-12 6.0-6.5 091018	18-09-0883-15	09/10/18 00:00	1	Sediment
IB-11 0.0-2.0 091018	18-09-0883-16	09/10/18 00:00	1	Sediment
IB-11 0.0-2.0 091018	18-09-0883-17	09/10/18 00:00	1	Sediment
IB-11 0.0-2.0 091018	18-09-0883-18	09/10/18 00:00	1	Sediment
IB-11 0.0-2.0 091018	18-09-0883-19	09/10/18 00:00	1	Sediment
IB-06 0.0-2.0 091018	18-09-0883-20	09/10/18 00:00	1	Sediment
IB-06 0.0-2.0 091018	18-09-0883-21	09/10/18 00:00	1	Sediment
IB-06 0.0-2.0 091018	18-09-0883-22	09/10/18 00:00	1	Sediment
IB-06 0.0-2.0 091018	18-09-0883-23	09/10/18 00:00	1	Sediment
IB-06 2.0-4.0 091018	18-09-0883-24	09/10/18 00:00	1	Sediment
IB-06 2.0-4.0 091018	18-09-0883-25	09/10/18 00:00	1	Sediment
IB-06 2.0-4.0 091018	18-09-0883-26	09/10/18 00:00	1	Sediment
IB-06 2.0-4.0 091018	18-09-0883-27	09/10/18 00:00	1	Sediment
IB-06 4.0-6.0 091018	18-09-0883-28	09/10/18 00:00	1	Sediment
IB-06 4.0-6.0 091018	18-09-0883-29	09/10/18 00:00	1	Sediment
IB-11 2.0-4.0 091018	18-09-0883-30	09/10/18 00:00	1	Sediment
IB-11 2.0-4.0 091018	18-09-0883-31	09/10/18 00:00	1	Sediment
IB-11 2.0-4.0 091018	18-09-0883-32	09/10/18 00:00	1	Sediment
IB-11 2.0-4.0 091018	18-09-0883-33	09/10/18 00:00	1	Sediment
IB-11 4.0-6.0 091018	18-09-0883-34	09/10/18 00:00	1	Sediment
IB-11 4.0-6.0 091018	18-09-0883-35	09/10/18 00:00	1	Sediment
IB-11 4.0-6.0 091018	18-09-0883-36	09/10/18 00:00	1	Sediment
IB-11 4.0-6.0 091018	18-09-0883-37	09/10/18 00:00	1	Sediment
IB-11 6.0-6.5 091018	18-09-0883-38	09/10/18 00:00	1	Sediment
IB-06 4.0-6.0 091018	18-09-0883-39	09/10/18 00:00	1	Sediment
IB-06 4.0-6.0 091018	18-09-0883-40	09/10/18 00:00	1	Sediment
IB-06 6.0-6.5 091018	18-09-0883-41	09/10/18 00:00	1	Sediment
IB-08 0.0-2.0 091018	18-09-0883-42	09/10/18 00:00	1	Sediment

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Sample Summary

Client:	Leidos 1000 Broadway, Suite 675 Oakland, CA 94607-4099	Work Order:	18-09-0883
		Project Name:	India Basin
		PO Number:	
		Date/Time Received:	09/13/18 12:00
		Number of Containers:	54
Attn:	Charlie Phillips		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
IB-08 0.0-2.0 091018	18-09-0883-43	09/10/18 00:00	1	Sediment
IB-08 0.0-2.0 091018	18-09-0883-44	09/10/18 00:00	1	Sediment
IB-08 0.0-2.0 091018	18-09-0883-45	09/10/18 00:00	1	Sediment
IB-08 2.0-4.0 091018	18-09-0883-46	09/10/18 00:00	1	Sediment
IB-08 2.0-4.0 091018	18-09-0883-47	09/10/18 00:00	1	Sediment
IB-08 2.0-4.0 091018	18-09-0883-48	09/10/18 00:00	1	Sediment
IB-08 2.0-4.0 091018	18-09-0883-49	09/10/18 00:00	1	Sediment
IB-08 4.0-6.0 091018	18-09-0883-50	09/10/18 00:00	1	Sediment
IB-08 4.0-6.0 091018	18-09-0883-51	09/10/18 00:00	1	Sediment
IB-08 4.0-6.0 091018	18-09-0883-52	09/10/18 00:00	1	Sediment
IB-08 4.0-6.0 091018	18-09-0883-53	09/10/18 00:00	1	Sediment
IB-08 6.0-6.5 091018	18-09-0883-54	09/10/18 00:00	1	Sediment

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 376.2M
		Units:	mg/kg
Project: India Basin			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 0.0-2.0 091018	**18-09-0883-1-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	61	3.8	3.2	15.0	

IB-12 100 0.0-2.0 091018	**18-09-0883-2-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	70	3.7	3.1	15.0	

IB-12 2.0-4.0 091018	**18-09-0883-6-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	61	3.6	3.0	15.0	

IB-12 4.0-6.0 091018	**18-09-0883-10-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	140	5.5	4.6	25.0	

IB-12 100 4.0-6.0 091018	**18-09-0883-11-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	190	22	18	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 376.2M
		Units:	mg/kg
Project: India Basin			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-11 0.0-2.0 091018	**18-09-0883-16-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	240	22	19	100	

IB-06 0.0-2.0 091018	**18-09-0883-20-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	230	23	19	100	

IB-06 2.0-4.0 091018	**18-09-0883-24-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	190	20	17	100	

IB-06 4.0-6.0 091018	**18-09-0883-28-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	1.1	0.76	0.64	5.00	

IB-11 2.0-4.0 091018	**18-09-0883-30-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	53	4.1	3.4	25.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 376.2M
		Units:	mg/kg
Project: India Basin			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-11 4.0-6.0 091018	**18-09-0883-34-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	0.17	0.17	0.14	1.00	

IB-08 0.0-2.0 091018	**18-09-0883-42-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	110	5.3	4.5	25.0	

IB-08 2.0-4.0 091018	**18-09-0883-46-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	250	19	16	100	

IB-08 4.0-6.0 091018	**18-09-0883-50-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	89	20	17	100	

Method Blank	**099-16-352-166**	**N/A**	**Solid**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	ND	0.10	0.084	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 9060A
		Units:	%
Project: India Basin			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 0.0-2.0 091018	**18-09-0883-1-AA**	**09/10/18 00:00**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.7	0.13	0.044	1.00	

IB-12 100 0.0-2.0 091018	**18-09-0883-2-AA**	**09/10/18 00:00**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.4	0.12	0.043	1.00	

IB-12 2.0-4.0 091018	**18-09-0883-6-AA**	**09/10/18 00:00**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.4	0.12	0.042	1.00	

IB-12 4.0-6.0 091018	**18-09-0883-10-AA**	**09/10/18 00:00**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.5	0.11	0.038	1.00	

IB-12 100 4.0-6.0 091018	**18-09-0883-11-AA**	**09/10/18 00:00**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.4	0.11	0.038	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 9060A
		Units:	%
Project: India Basin			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-11 0.0-2.0 091018	**18-09-0883-16-AA**	**09/10/18 00:00**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.6	0.11	0.039	1.00	

IB-06 0.0-2.0 091018	**18-09-0883-20-AAA**	**09/10/18 00:00**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.6	0.11	0.039	1.00	

IB-06 2.0-4.0 091018	**18-09-0883-24-AA**	**09/10/18 00:00**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	2.1	0.10	0.035	1.00	

IB-06 4.0-6.0 091018	**18-09-0883-28-AA**	**09/10/18 00:00**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	0.92	0.076	0.026	1.00	

IB-11 2.0-4.0 091018	**18-09-0883-30-AA**	**09/10/18 00:00**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.6	0.081	0.028	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 9060A
		Units:	%
Project: India Basin			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-11 4.0-6.0 091018	**18-09-0883-34-AA**	**09/10/18 00:00**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	0.98	0.086	0.030	1.00	

IB-08 0.0-2.0 091018	**18-09-0883-42-AA**	**09/10/18 00:00**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.8	0.11	0.037	1.00	

IB-08 2.0-4.0 091018	**18-09-0883-46-AA**	**09/10/18 00:00**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	2.2	0.097	0.034	1.00	

IB-08 4.0-6.0 091018	**18-09-0883-50-AA**	**09/10/18 00:00**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	2.1	0.099	0.034	1.00	

Method Blank	**099-06-013-1899**	**N/A**	**Solid**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	ND	0.050	0.017	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	SM 2540 B (M)
		Units:	%
Project: India Basin			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 0.0-2.0 091018	**18-09-0883-1-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	39.5	0.100	0.100	1.00	

IB-12 100 0.0-2.0 091018	**18-09-0883-2-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	40.5	0.100	0.100	1.00	

IB-12 2.0-4.0 091018	**18-09-0883-6-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	41.8	0.100	0.100	1.00	

IB-12 4.0-6.0 091018	**18-09-0883-10-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	45.8	0.100	0.100	1.00	

IB-12 100 4.0-6.0 091018	**18-09-0883-11-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	46.3	0.100	0.100	1.00	

IB-11 0.0-2.0 091018	**18-09-0883-16-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	45.1	0.100	0.100	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	SM 2540 B (M)
		Units:	%
Project: India Basin			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-06 0.0-2.0 091018	**18-09-0883-20-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	44.0	0.100	0.100	1.00	

IB-06 2.0-4.0 091018	**18-09-0883-24-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	49.6	0.100	0.100	1.00	

IB-06 4.0-6.0 091018	**18-09-0883-28-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	66.1	0.100	0.100	1.00	

IB-11 2.0-4.0 091018	**18-09-0883-30-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	61.7	0.100	0.100	1.00	

IB-11 4.0-6.0 091018	**18-09-0883-34-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	58.3	0.100	0.100	1.00	

IB-08 0.0-2.0 091018	**18-09-0883-42-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	46.8	0.100	0.100	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	SM 2540 B (M)
		Units:	%
Project: India Basin			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-08 2.0-4.0 091018	**18-09-0883-46-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	51.8	0.100	0.100	1.00	

IB-08 4.0-6.0 091018	**18-09-0883-50-AA**	**09/10/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	50.7	0.100	0.100	1.00	

Method Blank	**099-05-019-4228**	**N/A**	**Solid**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	ND	0.100	0.100	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: India Basin			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 0.0-2.0 091018	**18-09-0883-1-AA**	**09/10/18 00:00**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 16:11**	**180924B09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	15	13	3.2	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	109	61-145	

IB-12 100 0.0-2.0 091018	**18-09-0883-2-AA**	**09/10/18 00:00**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 16:32**	**180924B09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	12	12	3.1	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	116	61-145	

IB-12 2.0-4.0 091018	**18-09-0883-6-AA**	**09/10/18 00:00**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 16:52**	**180924B09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	48	13	3.1	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	113	61-145	

IB-12 4.0-6.0 091018	**18-09-0883-10-AA**	**09/10/18 00:00**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 17:13**	**180924B09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	77	11	2.9	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	112	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: India Basin			Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 100 4.0-6.0 091018	**18-09-0883-11-AA**	**09/10/18 00:00**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 17:34**	**180924B09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	100	10	2.6	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	112	61-145	

IB-11 0.0-2.0 091018	**18-09-0883-16-AA**	**09/10/18 00:00**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 18:15**	**180924B09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	150	11	2.8	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	108	61-145	

IB-06 0.0-2.0 091018	**18-09-0883-20-AA**	**09/10/18 00:00**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 18:35**	**180924B09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	94	12	3.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	110	61-145	

IB-06 2.0-4.0 091018	**18-09-0883-24-AA**	**09/10/18 00:00**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 18:55**	**180924B09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	330	11	2.7	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	119	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: India Basin			Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-06 4.0-6.0 091018	**18-09-0883-28-AA**	**09/10/18 00:00**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 19:16**	**180924B09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	68	7.5	1.9	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	113	61-145	

IB-11 2.0-4.0 091018	**18-09-0883-30-AA**	**09/10/18 00:00**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 19:36**	**180924B09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	160	8.2	2.1	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	113	61-145	

IB-11 4.0-6.0 091018	**18-09-0883-34-AA**	**09/10/18 00:00**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 19:57**	**180924B09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	ND	9.0	2.3	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	122	61-145	

IB-08 0.0-2.0 091018	**18-09-0883-42-AA**	**09/10/18 00:00**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 20:17**	**180924B09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	130	10	2.6	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	110	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: India Basin			Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-08 2.0-4.0 091018	**18-09-0883-46-AA**	**09/10/18 00:00**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 20:37**	**180924B09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	310	9.9	2.5	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	117	61-145	

IB-08 4.0-6.0 091018	**18-09-0883-50-AA**	**09/10/18 00:00**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 20:57**	**180924B09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	110	10	2.5	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	108	61-145	

Method Blank	**099-15-454-3**	**N/A**	**Solid**	**GC 47**	**09/24/18**	**09/25/18 14:28**	**180924B09**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	ND	5.0	1.3	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	105	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 1 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 0.0-2.0 091018	**18-09-0883-1-AA**	**09/10/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 00:39**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	11.6	0.253	0.221	1.00	
Cadmium	0.291	0.253	0.145	1.00	
Chromium	83.8	0.253	0.157	1.00	
Cobalt	14.3	0.253	0.0924	1.00	
Copper	130	0.253	0.106	1.00	
Lead	57.5	0.253	0.167	1.00	
Nickel	90.0	0.253	0.128	1.00	
Selenium	ND	0.253	0.185	1.00	
Silver	0.951	0.253	0.0792	1.00	
Zinc	168	2.53	2.01	1.00	

IB-12 100 0.0-2.0 091018	**18-09-0883-2-AA**	**09/10/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 00:57**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	13.0	0.247	0.216	1.00	
Cadmium	0.313	0.247	0.141	1.00	
Chromium	84.2	0.247	0.153	1.00	
Cobalt	14.7	0.247	0.0901	1.00	
Copper	125	0.247	0.103	1.00	
Lead	54.5	0.247	0.163	1.00	
Nickel	92.5	0.247	0.125	1.00	
Selenium	0.787	0.247	0.180	1.00	
Silver	0.902	0.247	0.0773	1.00	
Zinc	166	2.47	1.96	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 2 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 2.0-4.0 091018	**18-09-0883-6-AA**	**09/10/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 01:00**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	13.5	0.239	0.209	1.00	
Cadmium	0.547	0.239	0.137	1.00	
Chromium	99.4	0.239	0.148	1.00	
Cobalt	15.6	0.239	0.0873	1.00	
Copper	241	0.239	0.100	1.00	
Lead	87.0	0.239	0.158	1.00	
Nickel	98.6	0.239	0.121	1.00	
Selenium	2.63	0.239	0.175	1.00	
Silver	1.43	0.239	0.0749	1.00	
Zinc	232	2.39	1.90	1.00	

IB-12 4.0-6.0 091018	**18-09-0883-10-AA**	**09/10/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 01:04**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	14.6	0.218	0.191	1.00	
Cadmium	0.911	0.218	0.125	1.00	
Chromium	126	0.218	0.136	1.00	
Cobalt	19.0	0.218	0.0797	1.00	
Copper	366	0.218	0.0915	1.00	
Lead	118	0.218	0.144	1.00	
Nickel	129	0.218	0.111	1.00	
Selenium	3.91	0.218	0.160	1.00	
Silver	1.87	0.218	0.0683	1.00	
Zinc	281	2.18	1.74	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 3 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 100 4.0-6.0 091018	**18-09-0883-11-AA**	**09/10/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 01:07**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	15.4	0.216	0.189	1.00	
Cadmium	0.799	0.216	0.124	1.00	
Chromium	114	0.216	0.134	1.00	
Cobalt	17.6	0.216	0.0788	1.00	
Copper	344	0.216	0.0905	1.00	
Lead	115	0.216	0.142	1.00	
Nickel	118	0.216	0.109	1.00	
Selenium	4.00	0.216	0.158	1.00	
Silver	1.81	0.216	0.0676	1.00	
Zinc	274	2.16	1.72	1.00	

IB-11 0.0-2.0 091018	**18-09-0883-16-AA**	**09/10/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 01:11**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	24.1	0.222	0.194	1.00	
Cadmium	1.43	0.222	0.127	1.00	
Chromium	136	0.222	0.138	1.00	
Cobalt	19.6	0.222	0.0809	1.00	
Copper	732	0.222	0.0929	1.00	
Lead	2090	0.222	0.146	1.00	
Nickel	198	0.222	0.112	1.00	
Selenium	10.3	0.222	0.162	1.00	
Silver	1.72	0.222	0.0694	1.00	
Zinc	466	2.22	1.76	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 4 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-06 0.0-2.0 091018	**18-09-0883-20-AA**	**09/10/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 01:14**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	13.6	0.227	0.198	1.00	
Cadmium	0.462	0.227	0.130	1.00	
Chromium	89.4	0.227	0.141	1.00	
Cobalt	14.8	0.227	0.0829	1.00	
Copper	318	0.227	0.0953	1.00	
Lead	118	0.227	0.150	1.00	
Nickel	103	0.227	0.115	1.00	
Selenium	2.96	0.227	0.166	1.00	
Silver	1.08	0.227	0.0711	1.00	
Zinc	292	2.27	1.81	1.00	

IB-06 2.0-4.0 091018	**18-09-0883-24-AA**	**09/10/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 01:18**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	27.5	0.202	0.176	1.00	
Cadmium	1.38	0.202	0.115	1.00	
Chromium	172	0.202	0.125	1.00	
Cobalt	20.8	0.202	0.0736	1.00	
Copper	1070	0.202	0.0845	1.00	
Lead	377	0.202	0.133	1.00	
Nickel	240	0.202	0.102	1.00	
Selenium	20.3	0.202	0.147	1.00	
Silver	2.00	0.202	0.0631	1.00	
Zinc	503	2.02	1.60	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 5 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-06 4.0-6.0 091018	**18-09-0883-28-AA**	**09/10/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 01:22**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	56.2	0.151	0.132	1.00	
Cadmium	0.390	0.151	0.0866	1.00	
Chromium	103	0.151	0.0939	1.00	
Cobalt	15.0	0.151	0.0552	1.00	
Copper	3340	0.151	0.0634	1.00	
Lead	60.6	0.151	0.0997	1.00	
Nickel	188	0.151	0.0766	1.00	
Selenium	101	0.151	0.111	1.00	
Silver	0.596	0.151	0.0474	1.00	
Zinc	107	1.51	1.20	1.00	

IB-11 2.0-4.0 091018	**18-09-0883-30-AA**	**09/10/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 01:25**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	19.8	0.162	0.142	1.00	
Cadmium	1.20	0.162	0.0928	1.00	
Chromium	112	0.162	0.101	1.00	
Cobalt	19.5	0.162	0.0591	1.00	
Copper	194	0.162	0.0679	1.00	
Lead	411	0.162	0.107	1.00	
Nickel	207	0.162	0.0821	1.00	
Selenium	ND	0.162	0.118	1.00	
Silver	1.05	0.162	0.0507	1.00	
Zinc	244	1.62	1.29	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 6 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-11 4.0-6.0 091018	**18-09-0883-34-AA**	**09/10/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 01:29**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	18.1	0.172	0.150	1.00	
Cadmium	0.399	0.172	0.0982	1.00	
Chromium	111	0.172	0.106	1.00	
Cobalt	20.9	0.172	0.0626	1.00	
Copper	32.3	0.172	0.0719	1.00	
Lead	11.9	0.172	0.113	1.00	
Nickel	201	0.172	0.0868	1.00	
Selenium	ND	0.172	0.125	1.00	
Silver	0.715	0.172	0.0537	1.00	
Zinc	79.8	1.72	1.36	1.00	

IB-08 0.0-2.0 091018	**18-09-0883-42-AA**	**09/10/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 02:05**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	17.4	0.214	0.187	1.00	
Cadmium	1.17	0.214	0.122	1.00	
Chromium	134	0.214	0.133	1.00	
Cobalt	18.1	0.214	0.0780	1.00	
Copper	155	0.214	0.0896	1.00	
Lead	150	0.214	0.141	1.00	
Nickel	145	0.214	0.108	1.00	
Selenium	ND	0.214	0.156	1.00	
Silver	2.01	0.214	0.0669	1.00	
Zinc	273	2.14	1.70	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 7 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-08 2.0-4.0 091018	**18-09-0883-46-AA**	**09/10/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 02:08**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	19.4	0.193	0.169	1.00	
Cadmium	2.78	0.193	0.110	1.00	
Chromium	154	0.193	0.120	1.00	
Cobalt	17.8	0.193	0.0704	1.00	
Copper	158	0.193	0.0809	1.00	
Lead	993	0.193	0.127	1.00	
Nickel	153	0.193	0.0977	1.00	
Selenium	ND	0.193	0.141	1.00	
Silver	3.66	0.193	0.0604	1.00	
Zinc	394	1.93	1.53	1.00	

IB-08 4.0-6.0 091018	**18-09-0883-50-AA**	**09/10/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 02:12**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	18.8	0.197	0.172	1.00	
Cadmium	2.35	0.197	0.113	1.00	
Chromium	96.5	0.197	0.122	1.00	
Cobalt	16.8	0.197	0.0720	1.00	
Copper	125	0.197	0.0827	1.00	
Lead	147	0.197	0.130	1.00	
Nickel	122	0.197	0.0999	1.00	
Selenium	ND	0.197	0.144	1.00	
Silver	2.61	0.197	0.0617	1.00	
Zinc	291	1.97	1.57	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 8 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-254-665**	**N/A**	**Solid**	**ICP/MS 05**	**09/21/18**	**09/25/18 00:14**	**180921L04**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	ND	0.100	0.0873	1.00	
Cadmium	ND	0.100	0.0572	1.00	
Chromium	ND	0.100	0.0621	1.00	
Cobalt	ND	0.100	0.0365	1.00	
Copper	ND	0.100	0.0419	1.00	
Lead	ND	0.100	0.0659	1.00	
Nickel	ND	0.100	0.0506	1.00	
Selenium	ND	0.100	0.0731	1.00	
Silver	ND	0.100	0.0313	1.00	
Zinc	ND	1.00	0.795	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	ASTM D4464 (M)
		Units:	%
Project: India Basin			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 0.0-2.0 091018	**18-09-0883-5-A**	**09/10/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/05/18 17:15**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	23.99	
Silt (0.00391 to 0.0625mm)	70.19	
Total Silt and Clay (0 to 0.0625mm)	94.18	
Very Fine Sand (0.0625 to 0.125mm)	4.57	
Fine Sand (0.125 to 0.25mm)	1.25	
Medium Sand (0.25 to 0.5mm)	ND	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

IB-12 2.0-4.0 091018	**18-09-0883-9-A**	**09/10/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/05/18 17:22**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	25.94	
Silt (0.00391 to 0.0625mm)	69.92	
Total Silt and Clay (0 to 0.0625mm)	95.85	
Very Fine Sand (0.0625 to 0.125mm)	3.49	
Fine Sand (0.125 to 0.25mm)	0.65	
Medium Sand (0.25 to 0.5mm)	ND	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

IB-12 4.0-6.0 091018	**18-09-0883-14-A**	**09/10/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/05/18 17:29**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	26.64	
Silt (0.00391 to 0.0625mm)	71.58	
Total Silt and Clay (0 to 0.0625mm)	98.22	
Very Fine Sand (0.0625 to 0.125mm)	1.78	
Fine Sand (0.125 to 0.25mm)	ND	
Medium Sand (0.25 to 0.5mm)	ND	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	ASTM D4464 (M)
		Units:	%
Project: India Basin			Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-11 0.0-2.0 091018	**18-09-0883-17-A**	**09/10/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/05/18 17:39**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	20.54	
Silt (0.00391 to 0.0625mm)	59.06	
Total Silt and Clay (0 to 0.0625mm)	79.60	
Very Fine Sand (0.0625 to 0.125mm)	9.52	
Fine Sand (0.125 to 0.25mm)	10.87	
Medium Sand (0.25 to 0.5mm)	ND	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

IB-06 0.0-2.0 091018	**18-09-0883-21-A**	**09/10/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/05/18 17:45**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	22.56	
Silt (0.00391 to 0.0625mm)	69.66	
Total Silt and Clay (0 to 0.0625mm)	92.22	
Very Fine Sand (0.0625 to 0.125mm)	5.48	
Fine Sand (0.125 to 0.25mm)	2.30	
Medium Sand (0.25 to 0.5mm)	ND	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

IB-06 2.0-4.0 091018	**18-09-0883-25-A**	**09/10/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/05/18 17:55**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	17.13	
Silt (0.00391 to 0.0625mm)	58.80	
Total Silt and Clay (0 to 0.0625mm)	75.93	
Very Fine Sand (0.0625 to 0.125mm)	10.24	
Fine Sand (0.125 to 0.25mm)	13.59	
Medium Sand (0.25 to 0.5mm)	0.24	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	ASTM D4464 (M)
		Units:	%
Project: India Basin			Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-06 4.0-6.0 091018	**18-09-0883-29-A**	**09/10/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/05/18 18:06**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	12.68	
Silt (0.00391 to 0.0625mm)	33.26	
Total Silt and Clay (0 to 0.0625mm)	45.93	
Very Fine Sand (0.0625 to 0.125mm)	5.37	
Fine Sand (0.125 to 0.25mm)	21.35	
Medium Sand (0.25 to 0.5mm)	26.78	
Coarse Sand (0.5 to 1mm)	0.56	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

IB-11 2.0-4.0 091018	**18-09-0883-31-A**	**09/10/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/05/18 18:31**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	23.06	
Silt (0.00391 to 0.0625mm)	60.32	
Total Silt and Clay (0 to 0.0625mm)	83.38	
Very Fine Sand (0.0625 to 0.125mm)	9.48	
Fine Sand (0.125 to 0.25mm)	7.04	
Medium Sand (0.25 to 0.5mm)	0.10	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

IB-11 4.0-6.0 091018	**18-09-0883-35-A**	**09/10/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/05/18 19:13**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	21.71	
Silt (0.00391 to 0.0625mm)	61.75	
Total Silt and Clay (0 to 0.0625mm)	83.46	
Very Fine Sand (0.0625 to 0.125mm)	6.82	
Fine Sand (0.125 to 0.25mm)	9.61	
Medium Sand (0.25 to 0.5mm)	0.11	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	ASTM D4464 (M)
		Units:	%
Project: India Basin			Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-08 0.0-2.0 091018	**18-09-0883-43-A**	**09/10/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/05/18 19:20**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	14.03	
Silt (0.00391 to 0.0625mm)	47.99	
Total Silt and Clay (0 to 0.0625mm)	62.02	
Very Fine Sand (0.0625 to 0.125mm)	10.20	
Fine Sand (0.125 to 0.25mm)	11.66	
Medium Sand (0.25 to 0.5mm)	12.74	
Coarse Sand (0.5 to 1mm)	3.39	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

IB-08 2.0-4.0 091018	**18-09-0883-47-A**	**09/10/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/05/18 19:35**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	20.54	
Silt (0.00391 to 0.0625mm)	60.48	
Total Silt and Clay (0 to 0.0625mm)	81.02	
Very Fine Sand (0.0625 to 0.125mm)	11.23	
Fine Sand (0.125 to 0.25mm)	7.66	
Medium Sand (0.25 to 0.5mm)	0.086	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

IB-08 4.0-6.0 091018	**18-09-0883-51-A**	**09/10/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/05/18 19:41**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	22.04	
Silt (0.00391 to 0.0625mm)	63.69	
Total Silt and Clay (0 to 0.0625mm)	85.73	
Very Fine Sand (0.0625 to 0.125mm)	7.37	
Fine Sand (0.125 to 0.25mm)	6.87	
Medium Sand (0.25 to 0.5mm)	0.029	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 1 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 0.0-2.0 091018	**18-09-0883-1-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/21/18 22:05**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	51	12	2.00	
Acenaphthylene	12	51	9.0	2.00	J
Anthracene	31	51	18	2.00	J
Benzo (a) Anthracene	100	51	11	2.00	
Benzo (a) Pyrene	200	51	9.3	2.00	
Benzo (b) Fluoranthene	240	51	14	2.00	
Benzo (e) Pyrene	130	51	10	2.00	
Benzo (g,h,i) Perylene	140	51	7.8	2.00	
Benzo (k) Fluoranthene	130	51	14	2.00	
Biphenyl	ND	51	9.4	2.00	
Chrysene	100	51	11	2.00	
Dibenz (a,h) Anthracene	30	51	9.9	2.00	J
2,6-Dimethylnaphthalene	12	51	8.7	2.00	J
Fluoranthene	190	51	9.2	2.00	
Fluorene	ND	51	16	2.00	
Indeno (1,2,3-c,d) Pyrene	120	51	8.1	2.00	
2-Methylnaphthalene	ND	51	12	2.00	
1-Methylnaphthalene	ND	51	12	2.00	
1-Methylphenanthrene	ND	51	13	2.00	
Naphthalene	ND	51	18	2.00	
Perylene	73	51	12	2.00	
Phenanthrene	74	51	11	2.00	
Pyrene	280	51	11	2.00	
1,6,7-Trimethylnaphthalene	ND	51	9.8	2.00	
Dibenzothiophene	ND	51	6.8	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	51	14-146	
Nitrobenzene-d5	36	18-162	
p-Terphenyl-d14	84	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 2 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 100 0.0-2.0 091018	**18-09-0883-2-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/21/18 22:25**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	49	11	2.00	
Acenaphthylene	12	49	8.7	2.00	J
Anthracene	24	49	17	2.00	J
Benzo (a) Anthracene	94	49	10	2.00	
Benzo (a) Pyrene	220	49	8.9	2.00	
Benzo (b) Fluoranthene	230	49	13	2.00	
Benzo (e) Pyrene	140	49	9.6	2.00	
Benzo (g,h,i) Perylene	190	49	7.5	2.00	
Benzo (k) Fluoranthene	140	49	14	2.00	
Biphenyl	ND	49	9.1	2.00	
Chrysene	110	49	11	2.00	
Dibenz (a,h) Anthracene	35	49	9.5	2.00	J
2,6-Dimethylnaphthalene	13	49	8.3	2.00	J
Fluoranthene	170	49	8.9	2.00	
Fluorene	ND	49	15	2.00	
Indeno (1,2,3-c,d) Pyrene	140	49	7.7	2.00	
2-Methylnaphthalene	ND	49	11	2.00	
1-Methylnaphthalene	ND	49	11	2.00	
1-Methylphenanthrene	ND	49	12	2.00	
Naphthalene	ND	49	17	2.00	
Perylene	81	49	12	2.00	
Phenanthrene	64	49	11	2.00	
Pyrene	270	49	11	2.00	
1,6,7-Trimethylnaphthalene	ND	49	9.5	2.00	
Dibenzothiophene	ND	49	6.6	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	62	14-146	
Nitrobenzene-d5	45	18-162	
p-Terphenyl-d14	86	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 3 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 2.0-4.0 091018	**18-09-0883-6-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/21/18 22:44**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	47	11	2.00	
Acenaphthylene	18	47	8.5	2.00	J
Anthracene	36	47	16	2.00	J
Benzo (a) Anthracene	110	47	10	2.00	
Benzo (a) Pyrene	250	47	8.7	2.00	
Benzo (b) Fluoranthene	260	47	13	2.00	
Benzo (e) Pyrene	160	47	9.3	2.00	
Benzo (g,h,i) Perylene	110	47	7.3	2.00	
Benzo (k) Fluoranthene	210	47	13	2.00	
Biphenyl	ND	47	8.8	2.00	
Chrysene	120	47	11	2.00	
Dibenz (a,h) Anthracene	23	47	9.2	2.00	J
2,6-Dimethylnaphthalene	18	47	8.1	2.00	J
Fluoranthene	220	47	8.6	2.00	
Fluorene	ND	47	15	2.00	
Indeno (1,2,3-c,d) Pyrene	120	47	7.5	2.00	
2-Methylnaphthalene	18	47	11	2.00	J
1-Methylnaphthalene	ND	47	11	2.00	
1-Methylphenanthrene	ND	47	12	2.00	
Naphthalene	28	47	16	2.00	J
Perylene	36	47	11	2.00	J
Phenanthrene	91	47	11	2.00	
Pyrene	330	47	11	2.00	
1,6,7-Trimethylnaphthalene	ND	47	9.2	2.00	
Dibenzothiophene	ND	47	6.4	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	63	14-146	
Nitrobenzene-d5	52	18-162	
p-Terphenyl-d14	90	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 4 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 4.0-6.0 091018	**18-09-0883-10-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/21/18 23:04**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	11	43	10	2.00	J
Acenaphthylene	18	43	7.7	2.00	J
Anthracene	48	43	15	2.00	
Benzo (a) Anthracene	110	43	9.3	2.00	
Benzo (a) Pyrene	160	43	7.9	2.00	
Benzo (b) Fluoranthene	220	43	12	2.00	
Benzo (e) Pyrene	150	43	8.5	2.00	
Benzo (g,h,i) Perylene	ND	43	6.6	2.00	
Benzo (k) Fluoranthene	160	43	12	2.00	
Biphenyl	9.3	43	8.0	2.00	J
Chrysene	140	43	9.6	2.00	
Dibenz (a,h) Anthracene	ND	43	8.4	2.00	
2,6-Dimethylnaphthalene	26	43	7.4	2.00	J
Fluoranthene	300	43	7.8	2.00	
Fluorene	20	43	13	2.00	J
Indeno (1,2,3-c,d) Pyrene	ND	43	6.8	2.00	
2-Methylnaphthalene	24	43	10	2.00	J
1-Methylnaphthalene	10	43	10	2.00	J
1-Methylphenanthrene	14	43	11	2.00	J
Naphthalene	31	43	15	2.00	J
Perylene	39	43	10	2.00	J
Phenanthrene	130	43	9.6	2.00	
Pyrene	650	43	9.7	2.00	
1,6,7-Trimethylnaphthalene	ND	43	8.4	2.00	
Dibenzothiophene	ND	43	5.8	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	60	14-146	
Nitrobenzene-d5	44	18-162	
p-Terphenyl-d14	86	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 5 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 100 4.0-6.0 091018	**18-09-0883-11-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/21/18 23:23**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	11	42	9.9	2.00	J
Acenaphthylene	20	42	7.5	2.00	J
Anthracene	51	42	15	2.00	
Benzo (a) Anthracene	140	42	9.1	2.00	
Benzo (a) Pyrene	290	42	7.7	2.00	
Benzo (b) Fluoranthene	360	42	12	2.00	
Benzo (e) Pyrene	230	42	8.3	2.00	
Benzo (g,h,i) Perylene	130	42	6.5	2.00	
Benzo (k) Fluoranthene	250	42	12	2.00	
Biphenyl	8.6	42	7.9	2.00	J
Chrysene	180	42	9.4	2.00	
Dibenz (a,h) Anthracene	38	42	8.2	2.00	J
2,6-Dimethylnaphthalene	41	42	7.2	2.00	J
Fluoranthene	360	42	7.7	2.00	
Fluorene	21	42	13	2.00	J
Indeno (1,2,3-c,d) Pyrene	120	42	6.7	2.00	
2-Methylnaphthalene	23	42	9.8	2.00	J
1-Methylnaphthalene	ND	42	9.8	2.00	
1-Methylphenanthrene	22	42	10	2.00	J
Naphthalene	30	42	15	2.00	J
Perylene	97	42	10	2.00	
Phenanthrene	140	42	9.4	2.00	
Pyrene	700	42	9.5	2.00	
1,6,7-Trimethylnaphthalene	ND	42	8.2	2.00	
Dibenzothiophene	ND	42	5.7	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	53	14-146	
Nitrobenzene-d5	41	18-162	
p-Terphenyl-d14	81	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 6 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-11 0.0-2.0 091018	**18-09-0883-16-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/21/18 23:43**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	23	43	10	2.00	J
Acenaphthylene	37	43	7.7	2.00	J
Anthracene	94	43	15	2.00	
Benzo (a) Anthracene	340	43	9.3	2.00	
Benzo (a) Pyrene	790	43	7.9	2.00	
Benzo (b) Fluoranthene	840	43	12	2.00	
Benzo (e) Pyrene	520	43	8.5	2.00	
Benzo (g,h,i) Perylene	400	43	6.7	2.00	
Benzo (k) Fluoranthene	570	43	12	2.00	
Biphenyl	9.1	43	8.1	2.00	J
Chrysene	440	43	9.7	2.00	
Dibenz (a,h) Anthracene	150	43	8.4	2.00	
2,6-Dimethylnaphthalene	22	43	7.4	2.00	J
Fluoranthene	630	43	7.9	2.00	
Fluorene	33	43	14	2.00	J
Indeno (1,2,3-c,d) Pyrene	360	43	6.9	2.00	
2-Methylnaphthalene	17	43	10	2.00	J
1-Methylnaphthalene	11	43	10	2.00	J
1-Methylphenanthrene	29	43	11	2.00	J
Naphthalene	39	43	15	2.00	J
Perylene	160	43	10	2.00	
Phenanthrene	250	43	9.6	2.00	
Pyrene	1000	43	9.7	2.00	
1,6,7-Trimethylnaphthalene	9.9	43	8.4	2.00	J
Dibenzothiophene	ND	43	5.8	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	55	14-146	
Nitrobenzene-d5	40	18-162	
p-Terphenyl-d14	81	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 7 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-06 0.0-2.0 091018	**18-09-0883-20-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 00:02**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	96	45	11	2.00	
Acenaphthylene	62	45	8.0	2.00	
Anthracene	190	45	16	2.00	
Benzo (a) Anthracene	370	45	9.7	2.00	
Benzo (a) Pyrene	670	45	8.2	2.00	
Benzo (b) Fluoranthene	740	45	12	2.00	
Benzo (e) Pyrene	450	45	8.8	2.00	
Benzo (g,h,i) Perylene	320	45	6.9	2.00	
Benzo (k) Fluoranthene	540	45	12	2.00	
Biphenyl	11	45	8.4	2.00	J
Chrysene	700	45	10	2.00	
Dibenz (a,h) Anthracene	120	45	8.7	2.00	
2,6-Dimethylnaphthalene	26	45	7.7	2.00	J
Fluoranthene	690	45	8.2	2.00	
Fluorene	97	45	14	2.00	
Indeno (1,2,3-c,d) Pyrene	300	45	7.1	2.00	
2-Methylnaphthalene	16	45	10	2.00	J
1-Methylnaphthalene	12	45	10	2.00	J
1-Methylphenanthrene	35	45	11	2.00	J
Naphthalene	41	45	16	2.00	J
Perylene	170	45	11	2.00	
Phenanthrene	480	45	10	2.00	
Pyrene	1400	45	10	2.00	
1,6,7-Trimethylnaphthalene	11	45	8.7	2.00	J
Dibenzothiophene	ND	45	6.0	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	67	14-146	
Nitrobenzene-d5	51	18-162	
p-Terphenyl-d14	89	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 8 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-06 2.0-4.0 091018	**18-09-0883-24-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 00:22**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	1900	40	9.4	2.00	
Acenaphthylene	220	40	7.2	2.00	
Anthracene	930	40	14	2.00	
Benzo (e) Pyrene	1700	40	7.9	2.00	
Benzo (g,h,i) Perylene	1000	40	6.2	2.00	
Benzo (k) Fluoranthene	1900	40	11	2.00	
Biphenyl	51	40	7.5	2.00	
Dibenz (a,h) Anthracene	410	40	7.8	2.00	
2,6-Dimethylnaphthalene	130	40	6.9	2.00	
Fluorene	890	40	13	2.00	
Indeno (1,2,3-c,d) Pyrene	980	40	6.4	2.00	
2-Methylnaphthalene	55	40	9.3	2.00	
1-Methylnaphthalene	110	40	9.3	2.00	
1-Methylphenanthrene	190	40	10	2.00	
Naphthalene	470	40	14	2.00	
Perylene	540	40	9.6	2.00	
1,6,7-Trimethylnaphthalene	110	40	7.8	2.00	
Dibenzothiophene	180	40	5.4	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	53	14-146	
Nitrobenzene-d5	32	18-162	
p-Terphenyl-d14	85	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 9 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-06 2.0-4.0 091018	**18-09-0883-24-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/24/18 20:50**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzo (a) Anthracene	1800	400	86	20.0	
Benzo (a) Pyrene	1800	400	74	20.0	
Benzo (b) Fluoranthene	2200	400	110	20.0	
Chrysene	2200	400	90	20.0	
Fluoranthene	5400	400	73	20.0	
Phenanthrene	1600	400	89	20.0	
Pyrene	11000	400	90	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	0	14-146	1,2,6
Nitrobenzene-d5	0	18-162	1,2,6
p-Terphenyl-d14	68	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 10 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-06 4.0-6.0 091018	**18-09-0883-28-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 00:41**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	390	30	7.1	2.00	
Acenaphthylene	31	30	5.4	2.00	
Anthracene	210	30	10	2.00	
Benzo (a) Anthracene	630	30	6.5	2.00	
Benzo (a) Pyrene	720	30	5.5	2.00	
Benzo (b) Fluoranthene	710	30	8.2	2.00	
Benzo (e) Pyrene	450	30	5.9	2.00	
Benzo (g,h,i) Perylene	500	30	4.6	2.00	
Benzo (k) Fluoranthene	440	30	8.4	2.00	
Biphenyl	12	30	5.6	2.00	J
Chrysene	710	30	6.7	2.00	
Dibenz (a,h) Anthracene	110	30	5.9	2.00	
2,6-Dimethylnaphthalene	25	30	5.2	2.00	J
Fluorene	300	30	9.4	2.00	
Indeno (1,2,3-c,d) Pyrene	380	30	4.8	2.00	
2-Methylnaphthalene	19	30	7.0	2.00	J
1-Methylnaphthalene	13	30	7.0	2.00	J
1-Methylphenanthrene	74	30	7.5	2.00	
Naphthalene	92	30	10	2.00	
Perylene	200	30	7.2	2.00	
Phenanthrene	760	30	6.7	2.00	
1,6,7-Trimethylnaphthalene	28	30	5.9	2.00	J
Dibenzothiophene	71	30	4.1	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	65	14-146	
Nitrobenzene-d5	45	18-162	
p-Terphenyl-d14	86	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 11 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-06 4.0-6.0 091018	**18-09-0883-28-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/24/18 21:09**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Fluoranthene	2300	150	27	10.0	
Pyrene	2200	150	34	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	60	14-146	
Nitrobenzene-d5	0	18-162	1,2,6
p-Terphenyl-d14	81	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 12 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-11 2.0-4.0 091018	**18-09-0883-30-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 01:01**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	72	32	7.6	2.00	
Acenaphthylene	94	32	5.8	2.00	
Anthracene	340	32	11	2.00	
Benzo (a) Anthracene	1400	32	7.0	2.00	
Benzo (k) Fluoranthene	1000	32	9.0	2.00	
Biphenyl	22	32	6.0	2.00	J
Dibenz (a,h) Anthracene	390	32	6.3	2.00	
2,6-Dimethylnaphthalene	21	32	5.5	2.00	J
Fluorene	100	32	10	2.00	
2-Methylnaphthalene	26	32	7.5	2.00	J
1-Methylnaphthalene	15	32	7.5	2.00	J
1-Methylphenanthrene	82	32	8.1	2.00	
Naphthalene	190	32	11	2.00	
Perylene	710	32	7.7	2.00	
Phenanthrene	530	32	7.2	2.00	
1,6,7-Trimethylnaphthalene	15	32	6.3	2.00	J
Dibenzothiophene	44	32	4.4	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	62	14-146	
Nitrobenzene-d5	47	18-162	
p-Terphenyl-d14	92	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 13 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-11 2.0-4.0 091018	**18-09-0883-30-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/24/18 21:29**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzo (a) Pyrene	2700	320	59	20.0	
Benzo (b) Fluoranthene	2200	320	89	20.0	
Benzo (e) Pyrene	1800	320	64	20.0	
Benzo (g,h,i) Perylene	2200	320	50	20.0	
Chrysene	2200	320	72	20.0	
Fluoranthene	2900	320	59	20.0	
Indeno (1,2,3-c,d) Pyrene	1500	320	52	20.0	
Pyrene	6700	320	73	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	51	14-146	
Nitrobenzene-d5	0	18-162	1,2,6
p-Terphenyl-d14	92	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 14 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-11 4.0-6.0 091018	**18-09-0883-34-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 01:20**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	47	33	7.9	2.00	
Acenaphthylene	ND	33	6.0	2.00	
Anthracene	ND	33	12	2.00	
Benzo (a) Anthracene	20	33	7.2	2.00	J
Benzo (a) Pyrene	33	33	6.1	2.00	J
Benzo (b) Fluoranthene	32	33	9.1	2.00	J
Benzo (e) Pyrene	24	33	6.6	2.00	J
Benzo (g,h,i) Perylene	30	33	5.2	2.00	J
Benzo (k) Fluoranthene	22	33	9.3	2.00	J
Biphenyl	ND	33	6.2	2.00	
Chrysene	25	33	7.5	2.00	J
Dibenz (a,h) Anthracene	ND	33	6.5	2.00	
2,6-Dimethylnaphthalene	12	33	5.7	2.00	J
Fluoranthene	90	33	6.1	2.00	
Fluorene	45	33	10	2.00	
Indeno (1,2,3-c,d) Pyrene	18	33	5.3	2.00	J
2-Methylnaphthalene	21	33	7.8	2.00	J
1-Methylnaphthalene	12	33	7.8	2.00	J
1-Methylphenanthrene	ND	33	8.3	2.00	
Naphthalene	200	33	12	2.00	
Perylene	55	33	8.0	2.00	
Phenanthrene	54	33	7.5	2.00	
Pyrene	240	33	7.5	2.00	
1,6,7-Trimethylnaphthalene	ND	33	6.5	2.00	
Dibenzothiophene	ND	33	4.5	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	53	14-146	
Nitrobenzene-d5	41	18-162	
p-Terphenyl-d14	85	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 15 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-08 0.0-2.0 091018	**18-09-0883-42-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 01:39**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	17	43	10	2.00	J
Acenaphthylene	48	43	7.6	2.00	
Anthracene	100	43	15	2.00	
Benzo (a) Anthracene	350	43	9.2	2.00	
Benzo (a) Pyrene	790	43	7.8	2.00	
Benzo (b) Fluoranthene	610	43	12	2.00	
Benzo (e) Pyrene	470	43	8.4	2.00	
Benzo (g,h,i) Perylene	670	43	6.5	2.00	
Benzo (k) Fluoranthene	350	43	12	2.00	
Biphenyl	18	43	7.9	2.00	J
Chrysene	410	43	9.5	2.00	
Dibenz (a,h) Anthracene	130	43	8.3	2.00	
2,6-Dimethylnaphthalene	53	43	7.3	2.00	
Fluoranthene	730	43	7.8	2.00	
Fluorene	39	43	13	2.00	J
Indeno (1,2,3-c,d) Pyrene	490	43	6.8	2.00	
2-Methylnaphthalene	48	43	9.9	2.00	
1-Methylnaphthalene	21	43	9.9	2.00	J
1-Methylphenanthrene	34	43	11	2.00	J
Naphthalene	53	43	15	2.00	
Perylene	210	43	10	2.00	
Phenanthrene	310	43	9.5	2.00	
Pyrene	1100	43	9.6	2.00	
1,6,7-Trimethylnaphthalene	17	43	8.3	2.00	J
Dibenzothiophene	24	43	5.7	2.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	59	14-146	
Nitrobenzene-d5	45	18-162	
p-Terphenyl-d14	84	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 16 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-08 2.0-4.0 091018	**18-09-0883-46-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 01:59**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	24	39	9.1	2.00	J
Acenaphthylene	47	39	6.9	2.00	
Anthracene	170	39	13	2.00	
Benzo (a) Anthracene	480	39	8.3	2.00	
Benzo (a) Pyrene	870	39	7.1	2.00	
Benzo (b) Fluoranthene	680	39	11	2.00	
Benzo (e) Pyrene	570	39	7.6	2.00	
Benzo (g,h,i) Perylene	530	39	5.9	2.00	
Benzo (k) Fluoranthene	490	39	11	2.00	
Biphenyl	25	39	7.2	2.00	J
Chrysene	570	39	8.6	2.00	
Dibenz (a,h) Anthracene	110	39	7.5	2.00	
2,6-Dimethylnaphthalene	74	39	6.6	2.00	
Fluoranthene	1100	39	7.0	2.00	
Fluorene	59	39	12	2.00	
Indeno (1,2,3-c,d) Pyrene	440	39	6.1	2.00	
2-Methylnaphthalene	71	39	9.0	2.00	
1-Methylnaphthalene	29	39	9.0	2.00	J
1-Methylphenanthrene	39	39	9.6	2.00	
Naphthalene	73	39	13	2.00	
Perylene	260	39	9.2	2.00	
Phenanthrene	380	39	8.6	2.00	
Pyrene	1800	39	8.7	2.00	
1,6,7-Trimethylnaphthalene	26	39	7.5	2.00	J
Dibenzothiophene	34	39	5.2	2.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	64	14-146	
Nitrobenzene-d5	52	18-162	
p-Terphenyl-d14	80	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 17 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-08 4.0-6.0 091018	**18-09-0883-50-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 02:18**	**180919L09**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	49	39	9.2	2.00	
Acenaphthylene	41	39	7.0	2.00	
Anthracene	180	39	14	2.00	
Benzo (a) Anthracene	490	39	8.5	2.00	
Benzo (a) Pyrene	820	39	7.2	2.00	
Benzo (b) Fluoranthene	690	39	11	2.00	
Benzo (e) Pyrene	530	39	7.7	2.00	
Benzo (g,h,i) Perylene	480	39	6.0	2.00	
Benzo (k) Fluoranthene	400	39	11	2.00	
Biphenyl	18	39	7.3	2.00	J
Chrysene	710	39	8.8	2.00	
Dibenz (a,h) Anthracene	97	39	7.7	2.00	
2,6-Dimethylnaphthalene	41	39	6.7	2.00	
Fluoranthene	1400	39	7.2	2.00	
Fluorene	77	39	12	2.00	
Indeno (1,2,3-c,d) Pyrene	390	39	6.2	2.00	
2-Methylnaphthalene	16	39	9.1	2.00	J
1-Methylnaphthalene	9.1	39	9.1	2.00	J
1-Methylphenanthrene	72	39	9.8	2.00	
Naphthalene	48	39	14	2.00	
Perylene	240	39	9.3	2.00	
Phenanthrene	420	39	8.7	2.00	
Pyrene	1800	39	8.8	2.00	
1,6,7-Trimethylnaphthalene	70	39	7.6	2.00	
Dibenzothiophene	41	39	5.3	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	63	14-146	
Nitrobenzene-d5	43	18-162	
p-Terphenyl-d14	76	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 18 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-437-248**	**N/A**	**Solid**	**GC/MS AAA**	**09/19/18**	**09/21/18 17:35**	**180919L09**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	10	2.4	1.00	
Acenaphthylene	ND	10	1.8	1.00	
Anthracene	ND	10	3.5	1.00	
Benzo (a) Anthracene	ND	10	2.2	1.00	
Benzo (a) Pyrene	ND	10	1.8	1.00	
Benzo (b) Fluoranthene	ND	10	2.7	1.00	
Benzo (e) Pyrene	ND	10	2.0	1.00	
Benzo (g,h,i) Perylene	ND	10	1.5	1.00	
Benzo (k) Fluoranthene	ND	10	2.8	1.00	
Biphenyl	ND	10	1.9	1.00	
Chrysene	ND	10	2.2	1.00	
Dibenz (a,h) Anthracene	ND	10	2.0	1.00	
2,6-Dimethylnaphthalene	ND	10	1.7	1.00	
Fluoranthene	ND	10	1.8	1.00	
Fluorene	ND	10	3.1	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.6	1.00	
2-Methylnaphthalene	ND	10	2.3	1.00	
1-Methylnaphthalene	ND	10	2.3	1.00	
1-Methylphenanthrene	ND	10	2.5	1.00	
Naphthalene	ND	10	3.5	1.00	
Perylene	ND	10	2.4	1.00	
Phenanthrene	ND	10	2.2	1.00	
Pyrene	ND	10	2.2	1.00	
1,6,7-Trimethylnaphthalene	ND	10	1.9	1.00	
Dibenzothiophene	ND	10	1.3	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	75	14-146	
Nitrobenzene-d5	46	18-162	
p-Terphenyl-d14	85	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 1 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 0.0-2.0 091018	**18-09-0883-1-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/21/18 22:04**	**180919L10**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.51	1.0	0.19	1.00	J
PCB018	0.77	0.51	0.16	1.00	
PCB028	1.2	0.51	0.18	1.00	
PCB031	0.99	0.51	0.13	1.00	
PCB033	0.91	0.51	0.097	1.00	
PCB044	1.4	0.51	0.39	1.00	
PCB049	1.6	0.51	0.13	1.00	
PCB052	2.6	0.51	0.48	1.00	
PCB056	0.87	0.51	0.19	1.00	
PCB060	ND	0.51	0.13	1.00	
PCB066	2.4	0.51	0.31	1.00	
PCB070	2.2	0.51	0.18	1.00	
PCB074	0.98	0.51	0.23	1.00	
PCB087	1.1	0.51	0.28	1.00	
PCB095	4.8	0.51	0.27	1.00	
PCB097	1.1	0.51	0.12	1.00	
PCB099	3.3	0.51	0.12	1.00	
PCB101	6.9	0.51	0.11	1.00	
PCB105	2.3	0.51	0.14	1.00	
PCB110	3.9	0.51	0.086	1.00	
PCB118	3.3	0.51	0.088	1.00	
PCB128	0.88	0.51	0.30	1.00	
PCB132/153	22	1.0	0.41	1.00	
PCB138/158	12	1.0	0.89	1.00	
PCB141	2.2	0.51	0.12	1.00	
PCB149	12	0.51	0.30	1.00	
PCB151	4.4	0.51	0.22	1.00	
PCB156	0.69	0.51	0.20	1.00	
PCB170	7.6	0.51	0.28	1.00	
PCB174	5.4	0.51	0.11	1.00	
PCB177	3.7	0.51	0.30	1.00	
PCB180	15	0.51	0.23	1.00	
PCB183	4.4	0.51	0.24	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 2 of 30

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	9.1	0.51	0.26	1.00	
PCB194	4.2	0.51	0.19	1.00	
PCB195	1.9	0.51	0.15	1.00	
PCB201	0.83	0.51	0.086	1.00	
PCB203	4.5	0.51	0.15	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	63	14-146	
p-Terphenyl-d14	94	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 3 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 100 0.0-2.0 091018	**18-09-0883-2-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/21/18 22:28**	**180919L10**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.48	0.97	0.19	1.00	J
PCB018	1.3	0.49	0.16	1.00	
PCB028	1.3	0.49	0.17	1.00	
PCB031	1.1	0.49	0.12	1.00	
PCB033	0.78	0.49	0.093	1.00	
PCB044	1.8	0.49	0.37	1.00	
PCB049	1.8	0.49	0.12	1.00	
PCB052	2.5	0.49	0.46	1.00	
PCB056	0.85	0.49	0.18	1.00	
PCB060	ND	0.49	0.13	1.00	
PCB066	2.3	0.49	0.30	1.00	
PCB070	2.1	0.49	0.17	1.00	
PCB074	1.1	0.49	0.22	1.00	
PCB087	1.2	0.49	0.27	1.00	
PCB095	4.5	0.49	0.26	1.00	
PCB097	1.5	0.49	0.11	1.00	
PCB099	3.6	0.49	0.12	1.00	
PCB101	6.3	0.49	0.11	1.00	
PCB105	1.9	0.49	0.13	1.00	
PCB110	3.7	0.49	0.082	1.00	
PCB118	3.3	0.49	0.084	1.00	
PCB128	1.2	0.49	0.29	1.00	
PCB132/153	20	0.97	0.39	1.00	
PCB138/158	11	0.97	0.86	1.00	
PCB141	1.9	0.49	0.12	1.00	
PCB149	12	0.49	0.29	1.00	
PCB151	4.1	0.49	0.21	1.00	
PCB156	0.52	0.49	0.19	1.00	
PCB170	6.7	0.49	0.27	1.00	
PCB174	5.0	0.49	0.10	1.00	
PCB177	3.5	0.49	0.29	1.00	
PCB180	13	0.49	0.22	1.00	
PCB183	3.8	0.49	0.23	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 4 of 30

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	9.3	0.49	0.25	1.00	
PCB194	4.1	0.49	0.18	1.00	
PCB195	1.8	0.49	0.15	1.00	
PCB201	0.62	0.49	0.083	1.00	
PCB203	3.8	0.49	0.14	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	70	14-146	
p-Terphenyl-d14	92	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 5 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 2.0-4.0 091018	**18-09-0883-6-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/21/18 22:51**	**180919L10**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	1.6	0.95	0.18	1.00	
PCB018	3.8	0.47	0.15	1.00	
PCB028	4.0	0.47	0.16	1.00	
PCB031	3.2	0.47	0.12	1.00	
PCB033	3.5	0.47	0.091	1.00	
PCB044	6.9	0.47	0.36	1.00	
PCB049	5.7	0.47	0.12	1.00	
PCB052	9.2	0.47	0.45	1.00	
PCB056	2.8	0.47	0.18	1.00	
PCB060	ND	0.47	0.12	1.00	
PCB066	7.7	0.47	0.29	1.00	
PCB070	6.7	0.47	0.17	1.00	
PCB074	3.1	0.47	0.21	1.00	
PCB087	2.6	0.47	0.26	1.00	
PCB095	10	0.47	0.25	1.00	
PCB097	3.4	0.47	0.11	1.00	
PCB099	6.2	0.47	0.11	1.00	
PCB101	14	0.47	0.10	1.00	
PCB105	3.8	0.47	0.13	1.00	
PCB110	10	0.47	0.080	1.00	
PCB118	8.1	0.47	0.082	1.00	
PCB128	1.9	0.47	0.28	1.00	
PCB132/153	29	0.95	0.38	1.00	
PCB138/158	17	0.95	0.83	1.00	
PCB141	3.3	0.47	0.12	1.00	
PCB149	19	0.47	0.28	1.00	
PCB151	5.9	0.47	0.21	1.00	
PCB156	1.0	0.47	0.18	1.00	
PCB170	9.7	0.47	0.26	1.00	
PCB174	7.0	0.47	0.099	1.00	
PCB177	4.3	0.47	0.28	1.00	
PCB180	18	0.47	0.22	1.00	
PCB183	4.6	0.47	0.22	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 6 of 30

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	11	0.47	0.24	1.00	
PCB194	5.0	0.47	0.18	1.00	
PCB195	1.9	0.47	0.14	1.00	
PCB201	0.68	0.47	0.081	1.00	
PCB203	4.9	0.47	0.14	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	71	14-146	
p-Terphenyl-d14	93	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 7 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 4.0-6.0 091018	**18-09-0883-10-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/21/18 23:15**	**180919L10**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	1.5	0.86	0.17	1.00	
PCB018	8.5	0.43	0.14	1.00	
PCB028	4.8	0.43	0.15	1.00	
PCB031	5.5	0.43	0.11	1.00	
PCB033	4.5	0.43	0.082	1.00	
PCB044	9.6	0.43	0.33	1.00	
PCB049	6.6	0.43	0.11	1.00	
PCB052	12	0.43	0.41	1.00	
PCB056	2.9	0.43	0.16	1.00	
PCB060	1.5	0.43	0.11	1.00	
PCB066	9.8	0.43	0.27	1.00	
PCB070	11	0.43	0.15	1.00	
PCB074	4.4	0.43	0.19	1.00	
PCB087	3.4	0.43	0.24	1.00	
PCB095	13	0.43	0.23	1.00	
PCB097	3.8	0.43	0.099	1.00	
PCB099	7.7	0.43	0.10	1.00	
PCB101	17	0.43	0.095	1.00	
PCB105	5.5	0.43	0.11	1.00	
PCB110	12	0.43	0.073	1.00	
PCB118	11	0.43	0.074	1.00	
PCB128	3.1	0.43	0.26	1.00	
PCB132/153	37	0.86	0.35	1.00	
PCB138/158	23	0.86	0.76	1.00	
PCB141	4.0	0.43	0.11	1.00	
PCB149	24	0.43	0.25	1.00	
PCB151	7.3	0.43	0.19	1.00	
PCB156	1.8	0.43	0.17	1.00	
PCB170	13	0.43	0.24	1.00	
PCB174	9.1	0.43	0.090	1.00	
PCB177	5.6	0.43	0.25	1.00	
PCB180	24	0.43	0.20	1.00	
PCB183	6.7	0.43	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 8 of 30

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	14	0.43	0.22	1.00	
PCB194	6.3	0.43	0.16	1.00	
PCB195	2.1	0.43	0.13	1.00	
PCB201	0.96	0.43	0.073	1.00	
PCB203	6.9	0.43	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	66	14-146	
p-Terphenyl-d14	85	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 9 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 100 4.0-6.0 091018	**18-09-0883-11-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/21/18 23:39**	**180919L10**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.84	0.16	1.00	
PCB018	ND	0.42	0.14	1.00	
PCB028	ND	0.42	0.15	1.00	
PCB031	ND	0.42	0.11	1.00	
PCB033	ND	0.42	0.081	1.00	
PCB044	12	0.42	0.32	1.00	
PCB049	7.6	0.42	0.10	1.00	
PCB052	12	0.42	0.40	1.00	
PCB056	3.9	0.42	0.16	1.00	
PCB060	1.6	0.42	0.11	1.00	
PCB066	12	0.42	0.26	1.00	
PCB070	11	0.42	0.15	1.00	
PCB074	5.1	0.42	0.19	1.00	
PCB087	4.3	0.42	0.24	1.00	
PCB095	13	0.42	0.23	1.00	
PCB097	5.2	0.42	0.097	1.00	
PCB099	8.0	0.42	0.10	1.00	
PCB101	18	0.42	0.093	1.00	
PCB105	5.7	0.42	0.11	1.00	
PCB110	13	0.42	0.071	1.00	
PCB118	12	0.42	0.073	1.00	
PCB128	2.8	0.42	0.25	1.00	
PCB132/153	39	0.84	0.34	1.00	
PCB138/158	25	0.84	0.74	1.00	
PCB141	5.0	0.42	0.10	1.00	
PCB149	26	0.42	0.25	1.00	
PCB151	7.9	0.42	0.18	1.00	
PCB156	1.8	0.42	0.16	1.00	
PCB170	12	0.42	0.23	1.00	
PCB174	9.9	0.42	0.088	1.00	
PCB177	6.7	0.42	0.25	1.00	
PCB180	27	0.42	0.19	1.00	
PCB183	7.4	0.42	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 10 of 30

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	16	0.42	0.22	1.00	
PCB194	5.9	0.42	0.16	1.00	
PCB195	2.5	0.42	0.13	1.00	
PCB201	1.5	0.42	0.072	1.00	
PCB203	6.9	0.42	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	69	14-146	
p-Terphenyl-d14	100	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 11 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-11 0.0-2.0 091018	**18-09-0883-16-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 00:04**	**180919L10**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	31	0.87	0.17	1.00	
PCB018	170	0.43	0.14	1.00	
PCB028	65	0.43	0.15	1.00	
PCB031	150	0.43	0.11	1.00	
PCB033	51	0.43	0.083	1.00	
PCB044	140	0.43	0.33	1.00	
PCB049	140	0.43	0.11	1.00	
PCB052	210	0.43	0.41	1.00	
PCB056	40	0.43	0.16	1.00	
PCB060	13	0.43	0.11	1.00	
PCB066	120	0.43	0.27	1.00	
PCB070	140	0.43	0.15	1.00	
PCB074	53	0.43	0.19	1.00	
PCB087	15	0.43	0.24	1.00	
PCB095	100	0.43	0.23	1.00	
PCB097	37	0.43	0.10	1.00	
PCB099	88	0.43	0.10	1.00	
PCB101	120	0.43	0.096	1.00	
PCB105	27	0.43	0.12	1.00	
PCB110	110	0.43	0.073	1.00	
PCB118	120	0.43	0.075	1.00	
PCB128	9.3	0.43	0.26	1.00	
PCB132/153	200	0.87	0.35	1.00	
PCB138/158	110	0.87	0.76	1.00	
PCB141	22	0.43	0.11	1.00	
PCB149	110	0.43	0.26	1.00	
PCB151	38	0.43	0.19	1.00	
PCB156	7.9	0.43	0.17	1.00	
PCB170	72	0.43	0.24	1.00	
PCB174	55	0.43	0.091	1.00	
PCB177	32	0.43	0.25	1.00	
PCB180	150	0.43	0.20	1.00	
PCB183	38	0.43	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 12 of 30

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	91	0.43	0.22	1.00	
PCB194	39	0.43	0.16	1.00	
PCB195	17	0.43	0.13	1.00	
PCB201	5.6	0.43	0.074	1.00	
PCB203	44	0.43	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	63	14-146	
p-Terphenyl-d14	90	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 13 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-06 0.0-2.0 091018	**18-09-0883-20-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 00:28**	**180919L10**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.92	0.90	0.17	1.00	
PCB018	3.2	0.45	0.15	1.00	
PCB028	3.4	0.45	0.16	1.00	
PCB031	3.4	0.45	0.11	1.00	
PCB033	1.9	0.45	0.086	1.00	
PCB044	12	0.45	0.34	1.00	
PCB049	5.5	0.45	0.11	1.00	
PCB052	12	0.45	0.43	1.00	
PCB056	2.8	0.45	0.17	1.00	
PCB060	ND	0.45	0.12	1.00	
PCB066	8.0	0.45	0.28	1.00	
PCB070	9.5	0.45	0.16	1.00	
PCB074	3.9	0.45	0.20	1.00	
PCB087	6.0	0.45	0.25	1.00	
PCB095	14	0.45	0.24	1.00	
PCB097	5.2	0.45	0.10	1.00	
PCB099	8.5	0.45	0.11	1.00	
PCB101	19	0.45	0.099	1.00	
PCB105	6.1	0.45	0.12	1.00	
PCB110	16	0.45	0.076	1.00	
PCB118	15	0.45	0.077	1.00	
PCB128	3.0	0.45	0.27	1.00	
PCB132/153	30	0.90	0.36	1.00	
PCB138/158	21	0.90	0.79	1.00	
PCB141	3.4	0.45	0.11	1.00	
PCB149	17	0.45	0.26	1.00	
PCB151	5.4	0.45	0.20	1.00	
PCB156	2.2	0.45	0.17	1.00	
PCB170	8.1	0.45	0.25	1.00	
PCB174	5.4	0.45	0.094	1.00	
PCB177	3.8	0.45	0.26	1.00	
PCB180	15	0.45	0.21	1.00	
PCB183	4.4	0.45	0.21	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 14 of 30

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	10	0.45	0.23	1.00	
PCB194	4.6	0.45	0.17	1.00	
PCB195	1.8	0.45	0.13	1.00	
PCB201	0.81	0.45	0.076	1.00	
PCB203	4.4	0.45	0.13	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	72	14-146	
p-Terphenyl-d14	90	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 15 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-06 2.0-4.0 091018	**18-09-0883-24-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 00:51**	**180919L10**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	12	0.80	0.15	1.00	
PCB018	68	0.40	0.13	1.00	
PCB028	48	0.40	0.14	1.00	
PCB031	62	0.40	0.10	1.00	
PCB033	18	0.40	0.077	1.00	
PCB044	75	0.40	0.31	1.00	
PCB049	80	0.40	0.099	1.00	
PCB052	100	0.40	0.38	1.00	
PCB056	24	0.40	0.15	1.00	
PCB060	ND	0.40	0.11	1.00	
PCB066	64	0.40	0.25	1.00	
PCB070	67	0.40	0.14	1.00	
PCB074	21	0.40	0.18	1.00	
PCB087	16	0.40	0.22	1.00	
PCB095	66	0.40	0.21	1.00	
PCB097	21	0.40	0.093	1.00	
PCB099	44	0.40	0.095	1.00	
PCB101	77	0.40	0.089	1.00	
PCB105	22	0.40	0.11	1.00	
PCB110	80	0.40	0.068	1.00	
PCB118	51	0.40	0.069	1.00	
PCB128	8.5	0.40	0.24	1.00	
PCB132/153	92	0.80	0.33	1.00	
PCB138/158	59	0.80	0.71	1.00	
PCB141	11	0.40	0.098	1.00	
PCB149	61	0.40	0.24	1.00	
PCB151	14	0.40	0.18	1.00	
PCB156	5.5	0.40	0.16	1.00	
PCB170	26	0.40	0.22	1.00	
PCB174	16	0.40	0.084	1.00	
PCB177	9.3	0.40	0.24	1.00	
PCB180	44	0.40	0.18	1.00	
PCB183	11	0.40	0.19	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 16 of 30

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	25	0.40	0.21	1.00	
PCB194	12	0.40	0.15	1.00	
PCB195	4.6	0.40	0.12	1.00	
PCB201	1.7	0.40	0.068	1.00	
PCB203	13	0.40	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	62	14-146	
p-Terphenyl-d14	75	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 17 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-06 4.0-6.0 091018	**18-09-0883-28-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 01:15**	**180919L10**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	2.0	0.60	0.12	1.00	
PCB018	9.5	0.30	0.098	1.00	
PCB028	7.5	0.30	0.10	1.00	
PCB031	8.3	0.30	0.076	1.00	
PCB033	2.2	0.30	0.058	1.00	
PCB044	9.8	0.30	0.23	1.00	
PCB049	9.7	0.30	0.075	1.00	
PCB052	13	0.30	0.29	1.00	
PCB056	3.0	0.30	0.11	1.00	
PCB060	ND	0.30	0.079	1.00	
PCB066	7.2	0.30	0.19	1.00	
PCB070	6.6	0.30	0.11	1.00	
PCB074	2.8	0.30	0.14	1.00	
PCB087	1.4	0.30	0.17	1.00	
PCB095	7.4	0.30	0.16	1.00	
PCB097	2.1	0.30	0.070	1.00	
PCB099	4.7	0.30	0.071	1.00	
PCB101	8.2	0.30	0.067	1.00	
PCB105	2.3	0.30	0.080	1.00	
PCB110	9.2	0.30	0.051	1.00	
PCB118	7.6	0.30	0.052	1.00	
PCB128	1.3	0.30	0.18	1.00	
PCB132/153	9.9	0.60	0.24	1.00	
PCB138/158	6.9	0.60	0.53	1.00	
PCB141	1.3	0.30	0.074	1.00	
PCB149	6.6	0.30	0.18	1.00	
PCB151	1.4	0.30	0.13	1.00	
PCB156	1.1	0.30	0.12	1.00	
PCB170	3.1	0.30	0.17	1.00	
PCB174	1.6	0.30	0.063	1.00	
PCB177	0.97	0.30	0.18	1.00	
PCB180	4.3	0.30	0.14	1.00	
PCB183	1.2	0.30	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 18 of 30

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	2.1	0.30	0.15	1.00	
PCB194	1.2	0.30	0.11	1.00	
PCB195	ND	0.30	0.090	1.00	
PCB201	ND	0.30	0.051	1.00	
PCB203	1.2	0.30	0.087	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	77	14-146	
p-Terphenyl-d14	98	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 19 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-11 2.0-4.0 091018	**18-09-0883-30-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 01:39**	**180919L10**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.65	0.12	1.00	
PCB018	4.8	0.32	0.11	1.00	
PCB028	2.7	0.32	0.11	1.00	
PCB031	3.0	0.32	0.082	1.00	
PCB033	1.8	0.32	0.062	1.00	
PCB044	4.9	0.32	0.25	1.00	
PCB049	1.7	0.32	0.080	1.00	
PCB052	2.5	0.32	0.31	1.00	
PCB056	ND	0.32	0.12	1.00	
PCB060	ND	0.32	0.085	1.00	
PCB066	2.1	0.32	0.20	1.00	
PCB070	2.2	0.32	0.12	1.00	
PCB074	1.4	0.32	0.15	1.00	
PCB087	ND	0.32	0.18	1.00	
PCB095	2.4	0.32	0.17	1.00	
PCB097	ND	0.32	0.075	1.00	
PCB099	2.0	0.32	0.077	1.00	
PCB101	2.6	0.32	0.072	1.00	
PCB105	2.1	0.32	0.087	1.00	
PCB110	2.1	0.32	0.055	1.00	
PCB118	2.9	0.32	0.056	1.00	
PCB128	ND	0.32	0.19	1.00	
PCB132/153	4.2	0.65	0.26	1.00	
PCB138/158	2.8	0.65	0.57	1.00	
PCB141	ND	0.32	0.079	1.00	
PCB149	2.4	0.32	0.19	1.00	
PCB151	0.97	0.32	0.14	1.00	
PCB156	ND	0.32	0.13	1.00	
PCB170	1.2	0.32	0.18	1.00	
PCB174	0.84	0.32	0.068	1.00	
PCB177	ND	0.32	0.19	1.00	
PCB180	2.8	0.32	0.15	1.00	
PCB183	0.73	0.32	0.15	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 20 of 30

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	1.6	0.32	0.17	1.00	
PCB194	0.97	0.32	0.12	1.00	
PCB195	ND	0.32	0.097	1.00	
PCB201	ND	0.32	0.055	1.00	
PCB203	1.4	0.32	0.093	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	69	14-146	
p-Terphenyl-d14	95	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 21 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-11 4.0-6.0 091018	**18-09-0883-34-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 02:04**	**180919L10**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.67	0.13	1.00	
PCB018	0.67	0.33	0.11	1.00	
PCB028	ND	0.33	0.12	1.00	
PCB031	0.37	0.33	0.085	1.00	
PCB033	ND	0.33	0.064	1.00	
PCB044	ND	0.33	0.25	1.00	
PCB049	ND	0.33	0.083	1.00	
PCB052	ND	0.33	0.32	1.00	
PCB056	ND	0.33	0.13	1.00	
PCB060	ND	0.33	0.088	1.00	
PCB066	ND	0.33	0.21	1.00	
PCB070	ND	0.33	0.12	1.00	
PCB074	ND	0.33	0.15	1.00	
PCB087	ND	0.33	0.19	1.00	
PCB095	ND	0.33	0.18	1.00	
PCB097	ND	0.33	0.077	1.00	
PCB099	ND	0.33	0.079	1.00	
PCB101	ND	0.33	0.074	1.00	
PCB105	ND	0.33	0.089	1.00	
PCB110	ND	0.33	0.057	1.00	
PCB118	ND	0.33	0.058	1.00	
PCB128	ND	0.33	0.20	1.00	
PCB132/153	0.83	0.67	0.27	1.00	
PCB138/158	ND	0.67	0.59	1.00	
PCB141	ND	0.33	0.082	1.00	
PCB149	0.57	0.33	0.20	1.00	
PCB151	ND	0.33	0.15	1.00	
PCB156	ND	0.33	0.13	1.00	
PCB170	ND	0.33	0.19	1.00	
PCB174	ND	0.33	0.070	1.00	
PCB177	ND	0.33	0.20	1.00	
PCB180	0.66	0.33	0.15	1.00	
PCB183	ND	0.33	0.16	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 22 of 30

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	ND	0.33	0.17	1.00	
PCB194	ND	0.33	0.12	1.00	
PCB195	ND	0.33	0.10	1.00	
PCB201	ND	0.33	0.057	1.00	
PCB203	ND	0.33	0.097	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	58	14-146	
p-Terphenyl-d14	100	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 23 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-08 0.0-2.0 091018	**18-09-0883-42-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 02:28**	**180919L10**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	1.4	0.85	0.16	1.00	
PCB018	3.6	0.43	0.14	1.00	
PCB028	3.1	0.43	0.15	1.00	
PCB031	3.0	0.43	0.11	1.00	
PCB033	2.2	0.43	0.081	1.00	
PCB044	5.2	0.43	0.32	1.00	
PCB049	4.5	0.43	0.11	1.00	
PCB052	7.9	0.43	0.40	1.00	
PCB056	2.1	0.43	0.16	1.00	
PCB060	1.2	0.43	0.11	1.00	
PCB066	5.0	0.43	0.26	1.00	
PCB070	5.8	0.43	0.15	1.00	
PCB074	2.4	0.43	0.19	1.00	
PCB087	5.3	0.43	0.24	1.00	
PCB095	16	0.43	0.23	1.00	
PCB097	3.8	0.43	0.098	1.00	
PCB099	11	0.43	0.10	1.00	
PCB101	22	0.43	0.094	1.00	
PCB105	8.0	0.43	0.11	1.00	
PCB110	14	0.43	0.072	1.00	
PCB118	12	0.43	0.074	1.00	
PCB128	3.9	0.43	0.26	1.00	
PCB132/153	70	0.85	0.34	1.00	
PCB138/158	40	0.85	0.75	1.00	
PCB141	9.1	0.43	0.10	1.00	
PCB149	43	0.43	0.25	1.00	
PCB151	14	0.43	0.19	1.00	
PCB156	2.8	0.43	0.16	1.00	
PCB170	23	0.43	0.24	1.00	
PCB174	17	0.43	0.089	1.00	
PCB177	10	0.43	0.25	1.00	
PCB180	46	0.43	0.20	1.00	
PCB183	12	0.43	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 24 of 30

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	27	0.43	0.22	1.00	
PCB194	10	0.43	0.16	1.00	
PCB195	4.4	0.43	0.13	1.00	
PCB201	1.6	0.43	0.072	1.00	
PCB203	11	0.43	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	65	14-146	
p-Terphenyl-d14	95	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 25 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-08 2.0-4.0 091018	**18-09-0883-46-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 02:52**	**180919L10**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.77	0.15	1.00	
PCB018	7.9	0.39	0.13	1.00	
PCB028	7.4	0.39	0.13	1.00	
PCB031	7.4	0.39	0.098	1.00	
PCB033	3.3	0.39	0.074	1.00	
PCB044	12	0.39	0.29	1.00	
PCB049	11	0.39	0.096	1.00	
PCB052	23	0.39	0.37	1.00	
PCB056	4.0	0.39	0.15	1.00	
PCB060	ND	0.39	0.10	1.00	
PCB066	9.7	0.39	0.24	1.00	
PCB070	14	0.39	0.14	1.00	
PCB074	5.1	0.39	0.17	1.00	
PCB087	10	0.39	0.22	1.00	
PCB095	25	0.39	0.21	1.00	
PCB097	8.8	0.39	0.089	1.00	
PCB099	15	0.39	0.092	1.00	
PCB101	36	0.39	0.086	1.00	
PCB105	9.7	0.39	0.10	1.00	
PCB110	28	0.39	0.065	1.00	
PCB118	23	0.39	0.067	1.00	
PCB128	5.9	0.39	0.23	1.00	
PCB132/153	70	0.77	0.31	1.00	
PCB138/158	47	0.77	0.68	1.00	
PCB141	11	0.39	0.095	1.00	
PCB149	46	0.39	0.23	1.00	
PCB151	14	0.39	0.17	1.00	
PCB156	3.8	0.39	0.15	1.00	
PCB170	27	0.39	0.21	1.00	
PCB174	16	0.39	0.081	1.00	
PCB177	9.1	0.39	0.23	1.00	
PCB180	43	0.39	0.18	1.00	
PCB183	11	0.39	0.18	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 26 of 30

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	22	0.39	0.20	1.00	
PCB194	11	0.39	0.14	1.00	
PCB195	4.2	0.39	0.12	1.00	
PCB201	1.8	0.39	0.066	1.00	
PCB203	12	0.39	0.11	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	74	14-146	
p-Terphenyl-d14	90	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 27 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-08 4.0-6.0 091018	**18-09-0883-50-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 03:15**	**180919L10**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.79	0.15	1.00	
PCB018	5.7	0.39	0.13	1.00	
PCB028	3.3	0.39	0.14	1.00	
PCB031	4.3	0.39	0.099	1.00	
PCB033	ND	0.39	0.075	1.00	
PCB044	7.5	0.39	0.30	1.00	
PCB049	3.5	0.39	0.097	1.00	
PCB052	8.0	0.39	0.37	1.00	
PCB056	2.0	0.39	0.15	1.00	
PCB060	ND	0.39	0.10	1.00	
PCB066	4.8	0.39	0.24	1.00	
PCB070	6.4	0.39	0.14	1.00	
PCB074	3.1	0.39	0.18	1.00	
PCB087	4.2	0.39	0.22	1.00	
PCB095	9.5	0.39	0.21	1.00	
PCB097	3.4	0.39	0.091	1.00	
PCB099	5.6	0.39	0.093	1.00	
PCB101	13	0.39	0.087	1.00	
PCB105	4.9	0.39	0.10	1.00	
PCB110	10	0.39	0.066	1.00	
PCB118	9.7	0.39	0.068	1.00	
PCB128	3.0	0.39	0.24	1.00	
PCB132/153	21	0.79	0.32	1.00	
PCB138/158	15	0.79	0.69	1.00	
PCB141	4.1	0.39	0.096	1.00	
PCB149	14	0.39	0.23	1.00	
PCB151	4.5	0.39	0.17	1.00	
PCB156	1.5	0.39	0.15	1.00	
PCB170	7.1	0.39	0.22	1.00	
PCB174	4.1	0.39	0.082	1.00	
PCB177	2.5	0.39	0.23	1.00	
PCB180	12	0.39	0.18	1.00	
PCB183	3.6	0.39	0.18	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 28 of 30

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	5.7	0.39	0.20	1.00	
PCB194	3.1	0.39	0.15	1.00	
PCB195	ND	0.39	0.12	1.00	
PCB201	0.62	0.39	0.067	1.00	
PCB203	3.3	0.39	0.11	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	66	14-146	
p-Terphenyl-d14	81	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 29 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-418-333**	**N/A**	**Solid**	**GC/MS HHH**	**09/19/18**	**09/21/18 20:03**	**180919L10**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.40	0.077	1.00	
PCB018	ND	0.20	0.065	1.00	
PCB028	ND	0.20	0.069	1.00	
PCB031	ND	0.20	0.051	1.00	
PCB033	ND	0.20	0.038	1.00	
PCB044	ND	0.20	0.15	1.00	
PCB049	ND	0.20	0.050	1.00	
PCB052	ND	0.20	0.19	1.00	
PCB056	ND	0.20	0.076	1.00	
PCB060	ND	0.20	0.052	1.00	
PCB066	ND	0.20	0.12	1.00	
PCB070	ND	0.20	0.072	1.00	
PCB074	ND	0.20	0.090	1.00	
PCB087	ND	0.20	0.11	1.00	
PCB095	ND	0.20	0.11	1.00	
PCB097	ND	0.20	0.046	1.00	
PCB099	ND	0.20	0.047	1.00	
PCB101	ND	0.20	0.044	1.00	
PCB105	ND	0.20	0.053	1.00	
PCB110	ND	0.20	0.034	1.00	
PCB118	ND	0.20	0.035	1.00	
PCB128	ND	0.20	0.12	1.00	
PCB132/153	ND	0.40	0.16	1.00	
PCB138/158	ND	0.40	0.35	1.00	
PCB141	ND	0.20	0.049	1.00	
PCB149	ND	0.20	0.12	1.00	
PCB151	ND	0.20	0.088	1.00	
PCB156	ND	0.20	0.077	1.00	
PCB170	ND	0.20	0.11	1.00	
PCB174	ND	0.20	0.042	1.00	
PCB177	ND	0.20	0.12	1.00	
PCB180	ND	0.20	0.092	1.00	
PCB183	ND	0.20	0.093	1.00	
PCB187	ND	0.20	0.10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 30 of 30

Parameter	Result	RL	MDL	DF	Qualifiers
PCB194	ND	0.20	0.074	1.00	
PCB195	ND	0.20	0.060	1.00	
PCB201	ND	0.20	0.034	1.00	
PCB203	ND	0.20	0.058	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	57	14-146	
p-Terphenyl-d14	107	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3550B (M)
		Method:	Organotins by Krone et al.
		Units:	ug/kg
Project: India Basin			Page 1 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 0.0-2.0 091018	**18-09-0883-1-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 11:50**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	56	7.4	1.8	1.00	
Monobutyltin	14	7.4	3.4	1.00	
Tetrabutyltin	ND	7.4	1.8	1.00	
Tributyltin	ND	7.4	3.7	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	65	27-135	

IB-12 100 0.0-2.0 091018	**18-09-0883-2-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 14:38**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	55	7.3	1.8	1.00	
Monobutyltin	11	7.3	3.3	1.00	
Tetrabutyltin	ND	7.3	1.8	1.00	
Tributyltin	ND	7.3	3.6	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	64	27-135	

IB-12 2.0-4.0 091018	**18-09-0883-6-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 12:09**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	220	6.9	1.7	1.00	
Monobutyltin	36	6.9	3.2	1.00	
Tetrabutyltin	ND	6.9	1.7	1.00	
Tributyltin	18	6.9	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	61	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3550B (M)
		Method:	Organotins by Krone et al.
		Units:	ug/kg
Project: India Basin			Page 2 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-12 4.0-6.0 091018	**18-09-0883-10-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 12:27**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	400	6.4	1.6	1.00	
Monobutyltin	49	6.4	3.0	1.00	
Tetrabutyltin	ND	6.4	1.6	1.00	
Tributyltin	31	6.4	3.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	67	27-135	

IB-12 100 4.0-6.0 091018	**18-09-0883-11-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 14:57**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	380	6.2	1.5	1.00	
Monobutyltin	67	6.2	2.9	1.00	
Tetrabutyltin	ND	6.2	1.5	1.00	
Tributyltin	29	6.2	3.1	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	62	27-135	

IB-11 0.0-2.0 091018	**18-09-0883-16-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 18:36**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	570	13	3.1	2.00	
Monobutyltin	32	13	5.8	2.00	
Tetrabutyltin	ND	13	3.1	2.00	
Tributyltin	92	13	6.3	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	55	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3550B (M)
		Method:	Organotins by Krone et al.
		Units:	ug/kg
Project: India Basin			Page 3 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-06 0.0-2.0 091018	**18-09-0883-20-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 15:34**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	210	6.6	1.6	1.00	
Monobutyltin	6.0	6.6	3.0	1.00	J
Tetrabutyltin	2.8	6.6	1.6	1.00	J
Tributyltin	32	6.6	3.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	66	27-135	

IB-06 2.0-4.0 091018	**18-09-0883-24-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 18:18**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	880	23	5.7	4.00	
Monobutyltin	13	23	11	4.00	J
Tetrabutyltin	8.3	23	5.8	4.00	J
Tributyltin	450	23	12	4.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	74	27-135	

IB-06 4.0-6.0 091018	**18-09-0883-28-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 13:05**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	19	4.3	1.1	1.00	
Monobutyltin	ND	4.3	2.0	1.00	
Tetrabutyltin	ND	4.3	1.1	1.00	
Tributyltin	7.3	4.3	2.1	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	66	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3550B (M)
		Method:	Organotins by Krone et al.
		Units:	ug/kg
Project: India Basin			Page 4 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-11 2.0-4.0 091018	**18-09-0883-30-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 13:43**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	8.4	4.6	1.1	1.00	
Monobutyltin	ND	4.6	2.1	1.00	
Tetrabutyltin	ND	4.6	1.1	1.00	
Tributyltin	ND	4.6	2.3	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	67	27-135	

IB-11 4.0-6.0 091018	**18-09-0883-34-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 11:32**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	4.2	5.0	1.2	1.00	J
Monobutyltin	ND	5.0	2.3	1.00	
Tetrabutyltin	ND	5.0	1.2	1.00	
Tributyltin	ND	5.0	2.5	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	63	27-135	

IB-08 0.0-2.0 091018	**18-09-0883-42-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/26/18 18:00**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	23	6.4	1.6	1.00	
Monobutyltin	ND	6.4	3.0	1.00	
Tetrabutyltin	ND	6.4	1.6	1.00	
Tributyltin	3.2	6.4	3.2	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	49	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3550B (M)
		Method:	Organotins by Krone et al.
		Units:	ug/kg
Project: India Basin			Page 5 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-08 2.0-4.0 091018	**18-09-0883-46-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/26/18 18:38**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	19	5.5	1.3	1.00	
Monobutyltin	ND	5.5	2.5	1.00	
Tetrabutyltin	ND	5.5	1.4	1.00	
Tributyltin	ND	5.5	2.7	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	47	27-135	

IB-08 4.0-6.0 091018	**18-09-0883-50-AA**	**09/10/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/26/18 18:19**	**180921L04**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	6.0	5.6	1.4	1.00	
Monobutyltin	ND	5.6	2.6	1.00	
Tetrabutyltin	ND	5.6	1.4	1.00	
Tributyltin	ND	5.6	2.8	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	80	27-135	

Method Blank	**099-07-016-1635**	**N/A**	**Solid**	**GC/MS Y**	**09/21/18**	**09/25/18 10:00**	**180921L04**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	3.0	0.73	1.00	
Monobutyltin	ND	3.0	1.4	1.00	
Tetrabutyltin	ND	3.0	0.74	1.00	
Tributyltin	ND	3.0	1.5	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	69	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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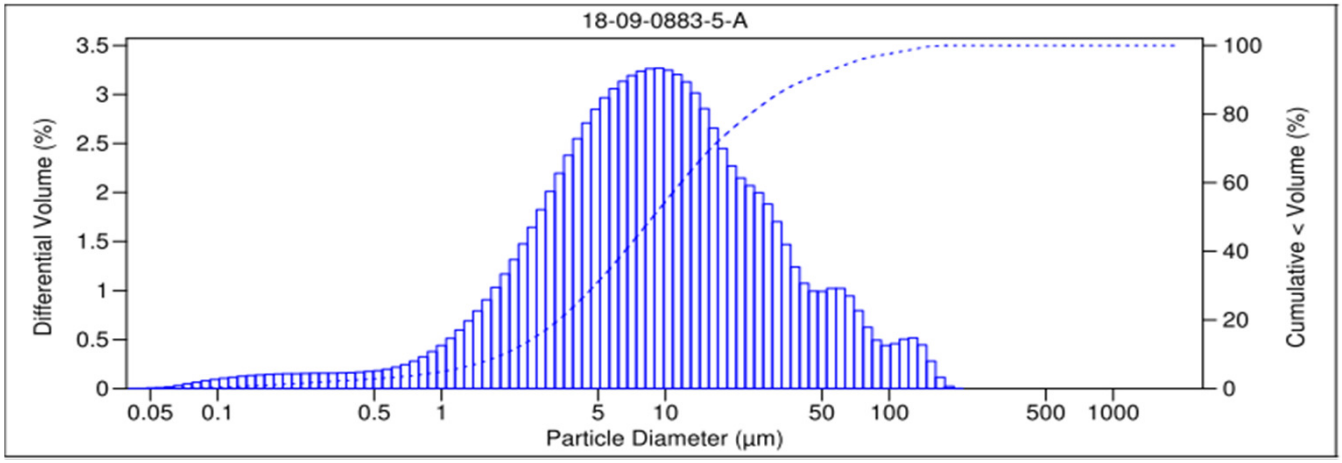
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/10/18
		Date Received:	09/13/18
		Work Order No:	18-09-0883
		Date Analyzed:	10/05/18
		Method:	ASTM D4464M
Project:	India Basin		Page 1 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-12 0.0-2.0 091018		Silt	0.017

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	1.25	4.57	70.19	23.99	94.18



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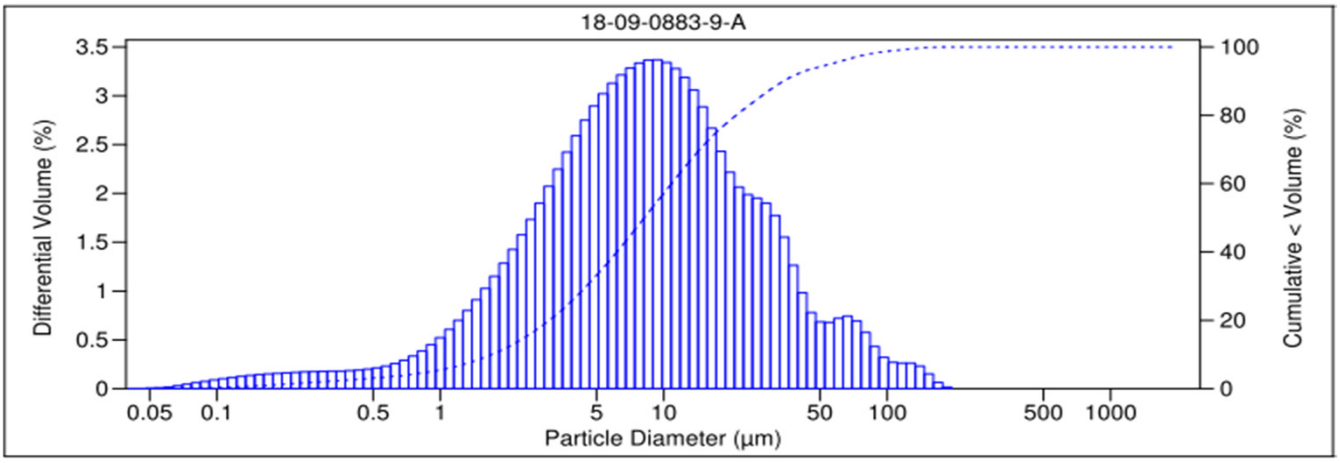
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/10/18
		Date Received:	09/13/18
		Work Order No:	18-09-0883
		Date Analyzed:	10/05/18
		Method:	ASTM D4464M
Project:	India Basin		Page 2 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-12 2.0-4.0 091018		Silt	0.015

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	0.65	3.49	69.92	25.94	95.85



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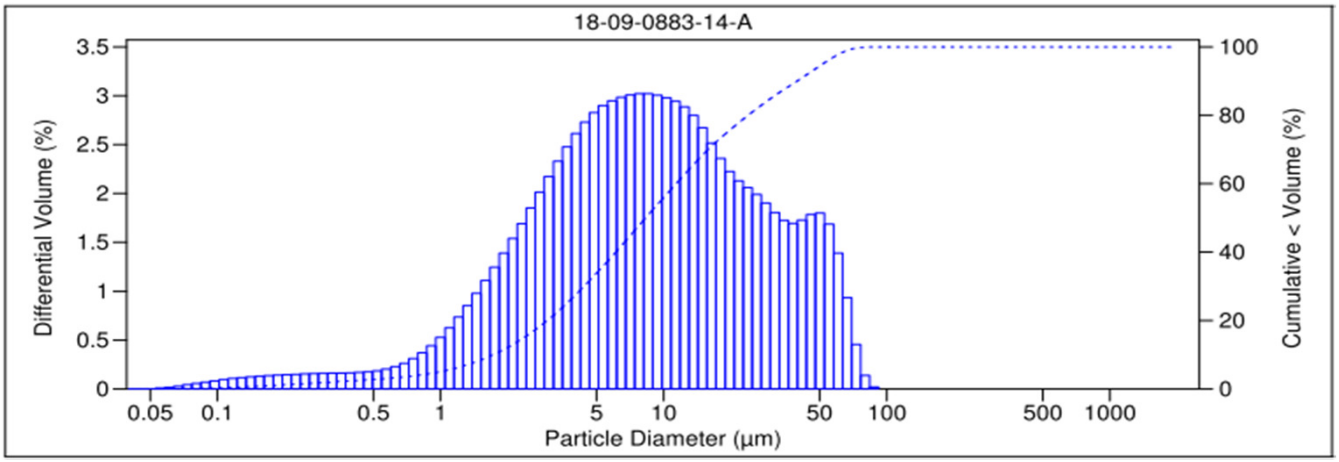
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/10/18
		Date Received:	09/13/18
		Work Order No:	18-09-0883
		Date Analyzed:	10/05/18
		Method:	ASTM D4464M
Project:	India Basin		Page 3 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-12 4.0-6.0 091018		Silt	0.015

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	0.00	1.78	71.58	26.64	98.22



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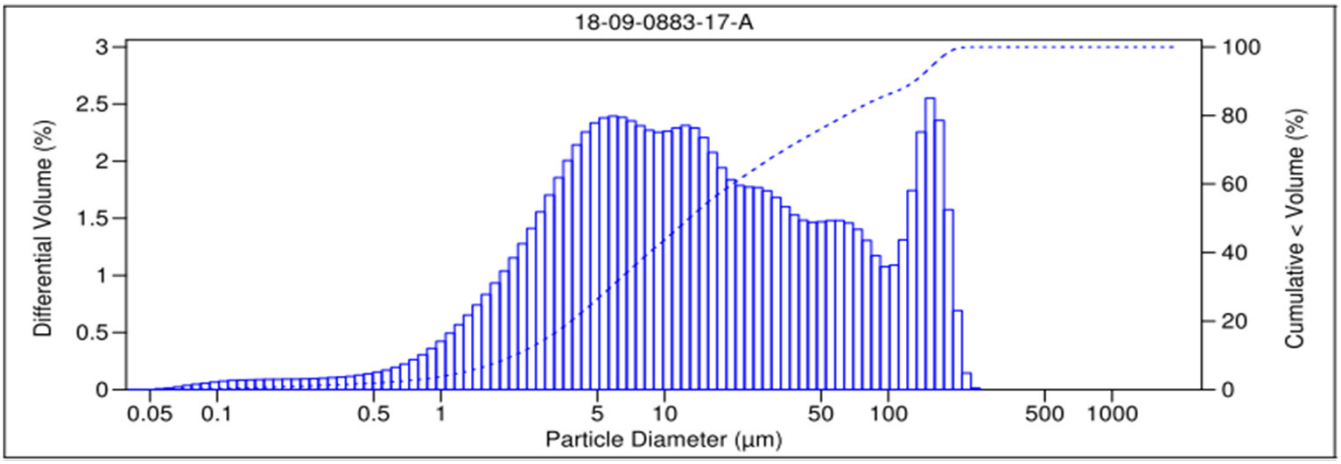
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/10/18
		Date Received:	09/13/18
		Work Order No:	18-09-0883
		Date Analyzed:	10/05/18
		Method:	ASTM D4464M
Project:	India Basin		Page 4 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-11 0.0-2.0 091018		Silt	0.037

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	10.87	9.52	59.06	20.54	79.60



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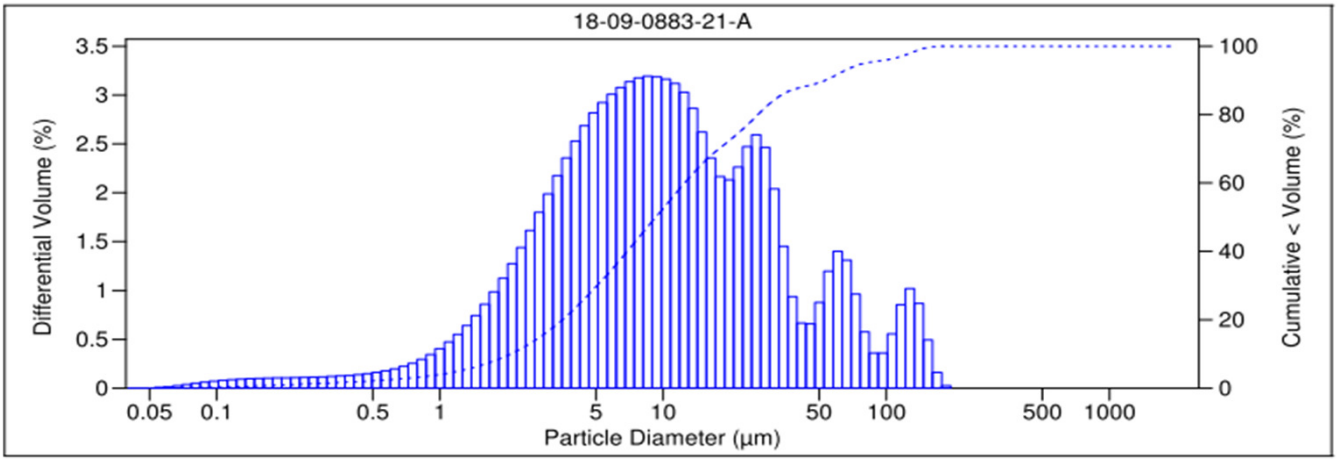
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/10/18
		Date Received:	09/13/18
		Work Order No:	18-09-0883
		Date Analyzed:	10/05/18
		Method:	ASTM D4464M
Project:	India Basin		Page 5 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-06 0.0-2.0 091018		Silt	0.020

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	2.30	5.48	69.66	22.56	92.22



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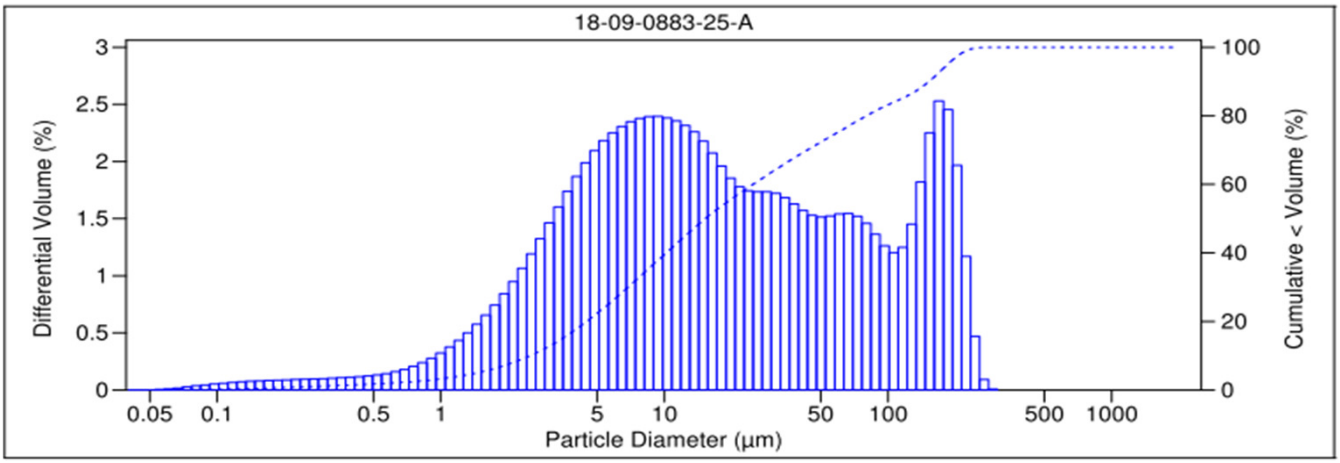
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/10/18
		Date Received:	09/13/18
		Work Order No:	18-09-0883
		Date Analyzed:	10/05/18
		Method:	ASTM D4464M
Project:	India Basin		Page 6 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-06 2.0-4.0 091018		Silt	0.045

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.24	13.59	10.24	58.80	17.13	75.93



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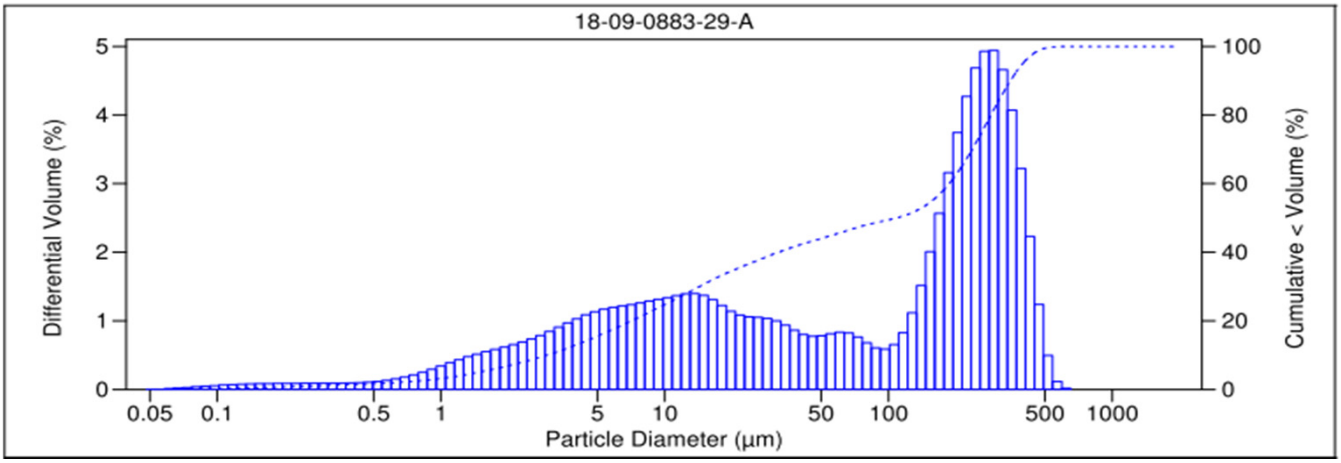
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/10/18
		Date Received:	09/13/18
		Work Order No:	18-09-0883
		Date Analyzed:	10/05/18
		Method:	ASTM D4464M
Project:	India Basin		Page 7 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-06 4.0-6.0 091018		Fine Sand	0.145

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.56	26.78	21.35	5.37	33.26	12.68	45.93



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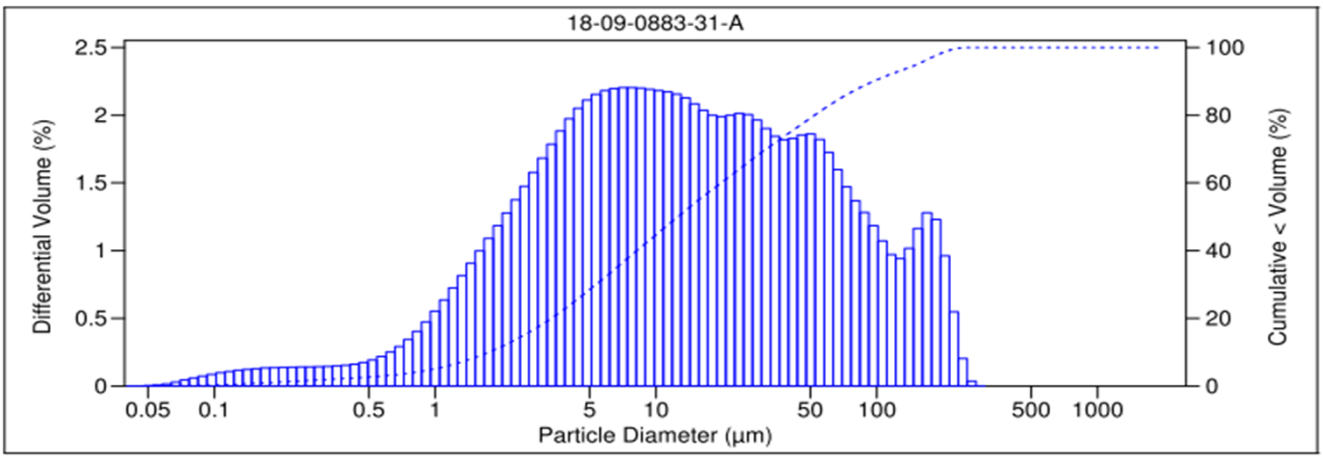
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/10/18
		Date Received:	09/13/18
		Work Order No:	18-09-0883
		Date Analyzed:	10/05/18
		Method:	ASTM D4464M
Project:	India Basin		Page 8 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-11 2.0-4.0 091018		Silt	0.033

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.10	7.04	9.48	60.32	23.06	83.38



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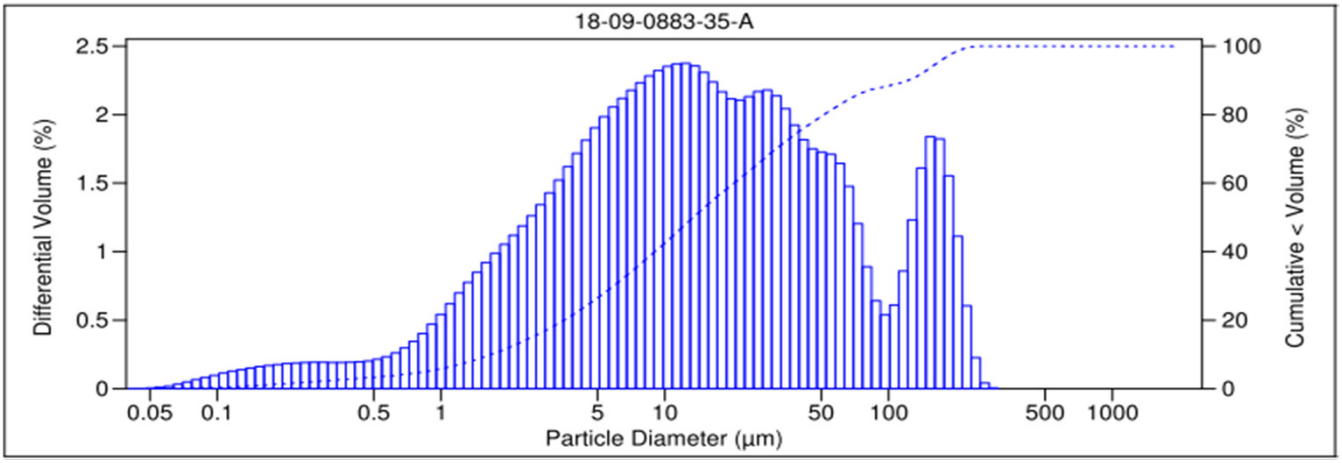
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/10/18
		Date Received:	09/13/18
		Work Order No:	18-09-0883
		Date Analyzed:	10/05/18
		Method:	ASTM D4464M
Project:	India Basin		Page 9 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-11 4.0-6.0 091018		Silt	0.035

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.11	9.61	6.82	61.75	21.71	83.46



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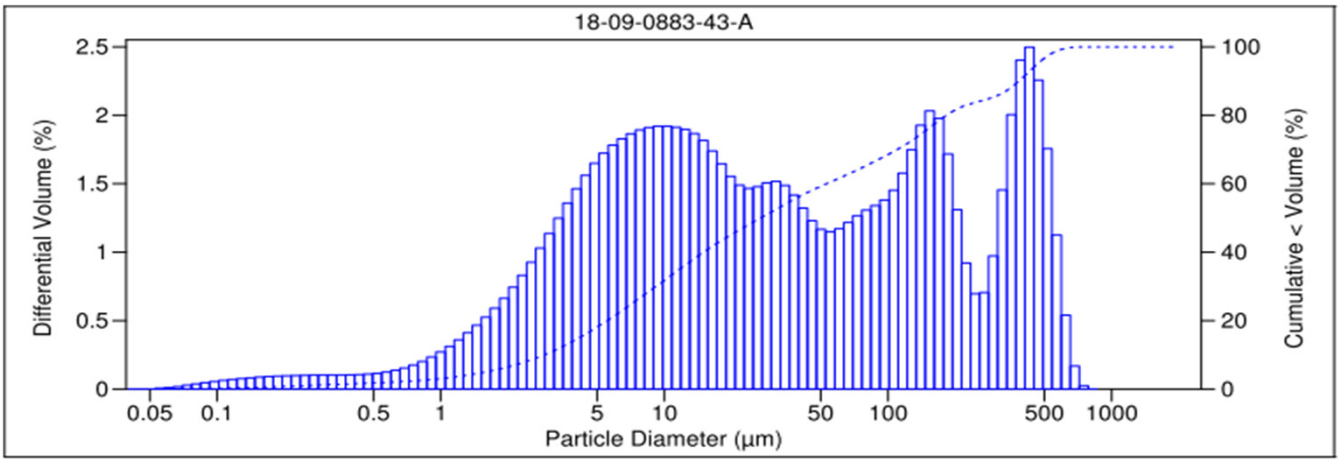
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/10/18
		Date Received:	09/13/18
		Work Order No:	18-09-0883
		Date Analyzed:	10/05/18
		Method:	ASTM D4464M
Project:	India Basin		Page 10 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-08 0.0-2.0 091018		Very Fine Sand	0.107

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	3.39	12.74	11.66	10.20	47.99	14.03	62.02



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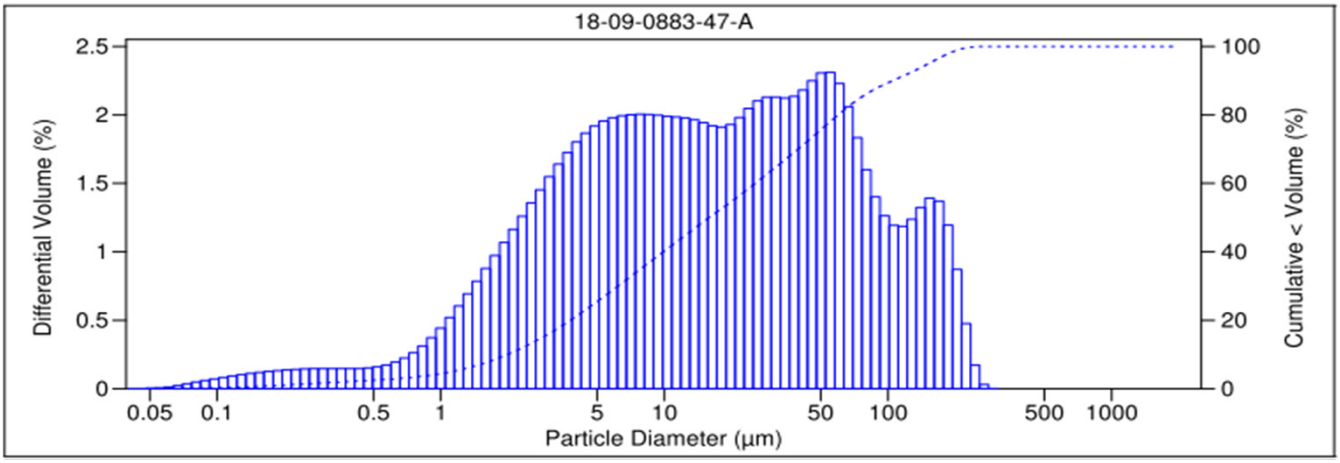
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/10/18
		Date Received:	09/13/18
		Work Order No:	18-09-0883
		Date Analyzed:	10/05/18
		Method:	ASTM D4464M
Project:	India Basin		Page 11 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-08 2.0-4.0 091018		Silt	0.036

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.09	7.66	11.23	60.48	20.54	81.02



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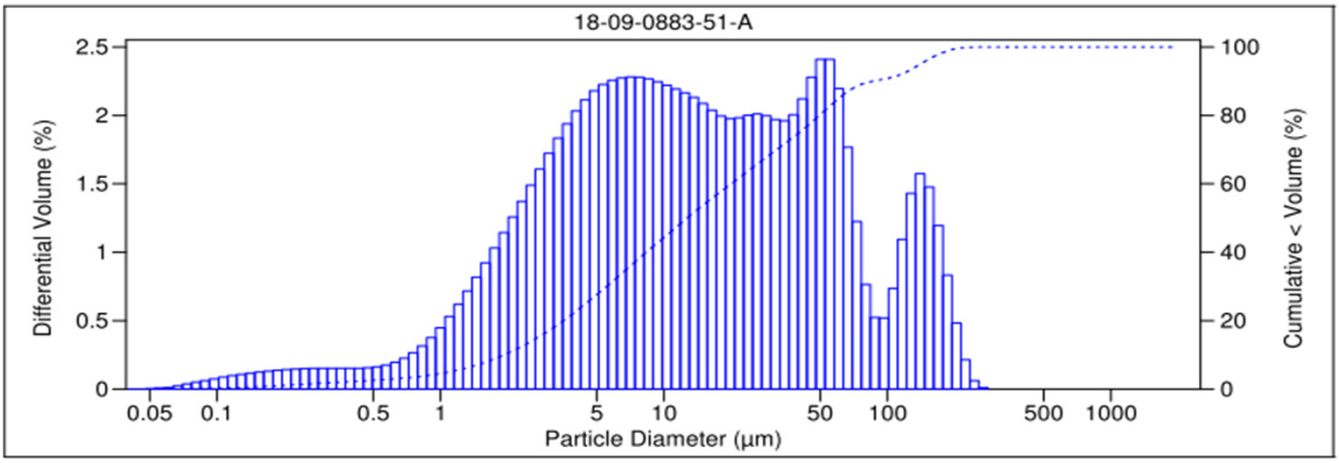
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/10/18
		Date Received:	09/13/18
		Work Order No:	18-09-0883
		Date Analyzed:	10/05/18
		Method:	ASTM D4464M
Project:	India Basin		Page 12 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-08 4.0-6.0 091018		Silt	0.031

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.03	6.87	7.37	63.69	22.04	85.73



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Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 9060A
Project: India Basin			Page 1 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-12 0.0-2.0 091018	**Sample**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCS1**
IB-12 0.0-2.0 091018	**Matrix Spike**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCS1**
IB-12 0.0-2.0 091018	**Matrix Spike Duplicate**	**Sediment**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCS1**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.6780	3.000	3.362	89	3.385	90	75-125	1	0-25	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: India Basin			Page 2 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-06 0.0-2.0 091018	**Sample**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 18:35**	**180924S09**
IB-06 0.0-2.0 091018	**Matrix Spike**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 15:30**	**180924S09**
IB-06 0.0-2.0 091018	**Matrix Spike Duplicate**	**Sediment**	**GC 47**	**09/24/18**	**09/25/18 15:51**	**180924S09**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Diesel Range Organics (C10-C36)	41.23	400.0	477.0	109	455.9	104	61-145	5	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
Project: India Basin			Page 3 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-12 0.0-2.0 091018	**Sample**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 00:39**	**180921S04**
IB-12 0.0-2.0 091018	**Matrix Spike**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 00:24**	**180921S04**
IB-12 0.0-2.0 091018	**Matrix Spike Duplicate**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 00:28**	**180921S04**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	4.594	25.00	34.69	120	35.54	124	80-120	2	0-20	3
Cadmium	0.1151	25.00	31.64	126	32.20	128	80-120	2	0-20	3
Chromium	33.10	25.00	66.25	133	70.24	149	80-120	6	0-20	3
Cobalt	5.634	25.00	36.16	122	36.91	125	80-120	2	0-20	3
Copper	51.22	25.00	81.89	123	85.65	138	80-120	4	0-20	3
Lead	22.71	25.00	60.80	152	63.24	162	80-120	4	0-20	3
Nickel	35.56	25.00	67.64	128	71.81	145	80-120	6	0-20	3
Selenium	ND	25.00	28.91	116	30.04	120	80-120	4	0-20	
Silver	0.3757	12.50	11.50	89	11.91	92	80-120	3	0-20	
Zinc	66.19	25.00	100.6	138	103.7	150	80-120	3	0-20	3

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
Project: India Basin			Page 4 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-06 4.0-6.0 091018	**Sample**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/24/18 21:09**	**180919S09**
IB-06 4.0-6.0 091018	**Matrix Spike**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/21/18 21:26**	**180919S09**
IB-06 4.0-6.0 091018	**Matrix Spike Duplicate**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/21/18 21:46**	**180919S09**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	259.1	100.0	257.1	0	365.3	106	40-160	35	0-20	3,4
Acenaphthylene	20.78	100.0	80.60	60	100.7	80	40-160	22	0-20	4
Anthracene	138.6	100.0	172.3	34	272.5	134	40-160	45	0-20	3,4
Benzo (a) Anthracene	415.6	100.0	400.4	0	724.1	308	40-160	58	0-20	3,4
Benzo (a) Pyrene	475.6	100.0	475.1	0	781.6	306	40-160	49	0-20	3,4
Benzo (b) Fluoranthene	469.2	100.0	421.8	0	633.1	164	40-160	40	0-20	3,4
Benzo (g,h,i) Perylene	332.6	100.0	377.3	45	579.3	247	40-160	42	0-20	3,4
Benzo (k) Fluoranthene	288.3	100.0	296.9	9	513.5	225	40-160	53	0-20	3,4
Chrysene	467.3	100.0	454.7	0	765.8	299	40-160	51	0-20	3,4
Dibenz (a,h) Anthracene	72.44	100.0	119.6	47	178.5	106	40-160	40	0-20	4
Fluoranthene	1505	100.0	1293	0	2365	860	40-160	59	0-20	3,4
Fluorene	196.4	100.0	232.3	36	312.0	116	40-160	29	0-20	3,4
Indeno (1,2,3-c,d) Pyrene	254.3	100.0	286.5	32	447.0	193	40-160	44	0-20	3,4
2-Methylnaphthalene	ND	100.0	60.70	61	83.31	83	40-160	31	0-20	4
1-Methylnaphthalene	ND	100.0	67.30	67	79.65	80	40-160	17	0-20	
Naphthalene	61.09	100.0	110.1	49	138.9	78	40-160	23	0-20	4
Phenanthrene	504.2	100.0	501.1	0	792.9	289	40-160	45	0-20	3,4
Pyrene	1438	100.0	1267	0	2241	802	40-160	55	0-46	3,4

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Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
Project: India Basin			Page 5 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-11 4.0-6.0 091018	**Sample**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 02:04**	**180919S10**
IB-11 4.0-6.0 091018	**Matrix Spike**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/21/18 21:15**	**180919S10**
IB-11 4.0-6.0 091018	**Matrix Spike Duplicate**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/21/18 21:40**	**180919S10**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	0.3900	50.00	28.86	57	30.49	60	50-150	6	0-25	
PCB028	ND	50.00	32.04	64	34.34	69	50-150	7	0-25	
PCB044	ND	50.00	30.07	60	31.62	63	50-150	5	0-25	
PCB052	ND	50.00	29.60	59	31.12	62	50-150	5	0-25	
PCB066	ND	50.00	36.79	74	39.05	78	50-150	6	0-25	
PCB101	ND	50.00	31.55	63	33.59	67	50-150	6	0-25	
PCB105	ND	50.00	35.52	71	35.57	71	50-150	0	0-25	
PCB118	ND	50.00	35.89	72	37.35	75	50-150	4	0-25	
PCB128	ND	50.00	32.17	64	32.30	65	50-150	0	0-25	
PCB170	ND	50.00	33.06	66	34.07	68	50-150	3	0-25	
PCB180	0.3853	50.00	35.83	71	35.14	70	50-150	2	0-25	
PCB187	ND	50.00	33.12	66	32.71	65	50-150	1	0-25	
PCB195	ND	50.00	33.86	68	34.67	69	50-150	2	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3550B (M)
		Method:	Organotins by Krone et al.
Project: India Basin			Page 6 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-11 4.0-6.0 091018	**Sample**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 11:32**	**180921S04**
IB-11 4.0-6.0 091018	**Matrix Spike**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 10:55**	**180921S04**
IB-11 4.0-6.0 091018	**Matrix Spike Duplicate**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 11:14**	**180921S04**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	ND	100.0	78.10	78	73.37	73	33-129	6	0-36	
Tributyltin	ND	100.0	68.39	68	62.34	62	34-142	9	0-50	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - PDS

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
Project: India Basin			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
IB-12 0.0-2.0 091018	**Sample**	**Sediment**	**ICP/MS 05**	**09/21/18 00:00**	**09/25/18 00:39**	**180921S04**
IB-12 0.0-2.0 091018	**PDS**	**Sediment**	**ICP/MS 05**	**09/21/18 00:00**	**09/25/18 00:32**	**180921S04**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Arsenic	4.594	25.00	30.52	104	75-125	
Cadmium	0.1151	25.00	24.93	99	75-125	
Chromium	33.10	25.00	56.47	93	75-125	
Cobalt	5.634	25.00	29.22	94	75-125	
Copper	51.22	25.00	74.35	93	75-125	
Lead	22.71	25.00	47.19	98	75-125	
Nickel	35.56	25.00	58.93	93	75-125	
Selenium	ND	25.00	23.60	94	75-125	
Silver	0.3757	12.50	12.59	98	75-125	
Zinc	66.19	25.00	89.83	95	75-125	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 376.2M
Project: India Basin			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
IB-08 0.0-2.0 091018	**Sample**	**Sediment**	**N/A**	**09/14/18 00:00**	**09/14/18 16:00**	**I0914SD4**
IB-08 0.0-2.0 091018	**Sample Duplicate**	**Sediment**	**N/A**	**09/14/18 00:00**	**09/14/18 16:00**	**I0914SD4**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Sulfide, Total	50.00	48.75	3	0-25	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	SM 2540 B (M)
Project: India Basin			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
IB-12 0.0-2.0 091018	**Sample**	**Sediment**	**N/A**	**09/20/18 00:00**	**09/20/18 14:30**	**I0920TSD1**
IB-12 0.0-2.0 091018	**Sample Duplicate**	**Sediment**	**N/A**	**09/20/18 00:00**	**09/20/18 14:30**	**I0920TSD1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Solids, Total	39.50	39.50	0	0-10	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 376.2M
Project: India Basin			Page 1 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-352-166	**LCS**	**Solid**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**
099-16-352-166	**LCSD**	**Solid**	**N/A**	**09/14/18**	**09/14/18 16:00**	**I0914SL4**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Sulfide, Total	1.000	0.9000	90	0.9500	95	80-120	5	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 9060A
Project: India Basin			Page 2 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-06-013-1899	**LCS**	**Solid**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**
099-06-013-1899	**LCSD**	**Solid**	**TOC 10**	**09/18/18**	**09/24/18 16:17**	**I0918TOCL1**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.6000	0.6038	101	0.5841	97	80-120	3	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: India Basin			Page 3 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-454-3	**LCS**	**Solid**	**GC 47**	**09/24/18**	**09/25/18 14:48**	**180924B09**
099-15-454-3	**LCSD**	**Solid**	**GC 47**	**09/24/18**	**09/25/18 15:09**	**180924B09**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Diesel Range Organics (C10-C36)	400.0	383.8	96	385.6	96	75-123	0	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
Project: India Basin			Page 4 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-254-665	**LCS**	**Solid**	**ICP/MS 05**	**09/21/18**	**09/25/18 00:17**	**180921L04**
099-15-254-665	**LCSD**	**Solid**	**ICP/MS 05**	**09/21/18**	**09/25/18 00:21**	**180921L04**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	24.30	97	23.51	94	80-120	3	0-20	
Cadmium	25.00	25.47	102	25.45	102	80-120	0	0-20	
Chromium	25.00	23.67	95	23.50	94	80-120	1	0-20	
Cobalt	25.00	24.23	97	23.60	94	80-120	3	0-20	
Copper	25.00	25.28	101	25.14	101	80-120	1	0-20	
Lead	25.00	24.90	100	24.82	99	80-120	0	0-20	
Nickel	25.00	25.23	101	25.16	101	80-120	0	0-20	
Selenium	25.00	22.35	89	24.23	97	80-120	8	0-20	
Silver	12.50	12.18	97	12.27	98	80-120	1	0-20	
Zinc	25.00	27.21	109	25.78	103	80-120	5	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
Project: India Basin			Page 5 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-437-248	**LCS**	**Solid**	**GC/MS AAA**	**09/19/18**	**09/21/18 17:54**	**180919L09**
099-14-437-248	**LCSD**	**Solid**	**GC/MS AAA**	**09/19/18**	**09/21/18 18:13**	**180919L09**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acenaphthene	100.0	74.40	74	71.23	71	40-160	20-180	4	0-20	
Acenaphthylene	100.0	74.18	74	71.32	71	40-160	20-180	4	0-20	
Anthracene	100.0	74.62	75	73.24	73	40-160	20-180	2	0-20	
Benzo (a) Anthracene	100.0	77.78	78	77.64	78	40-160	20-180	0	0-20	
Benzo (a) Pyrene	100.0	79.99	80	78.80	79	40-160	20-180	1	0-20	
Benzo (b) Fluoranthene	100.0	79.76	80	78.25	78	40-160	20-180	2	0-20	
Benzo (g,h,i) Perylene	100.0	92.64	93	91.68	92	40-160	20-180	1	0-20	
Benzo (k) Fluoranthene	100.0	78.47	78	79.34	79	40-160	20-180	1	0-20	
Chrysene	100.0	82.13	82	82.15	82	40-160	20-180	0	0-20	
Dibenz (a,h) Anthracene	100.0	92.11	92	91.09	91	40-160	20-180	1	0-20	
Fluoranthene	100.0	81.93	82	81.29	81	40-160	20-180	1	0-20	
Fluorene	100.0	75.18	75	71.76	72	40-160	20-180	5	0-20	
Indeno (1,2,3-c,d) Pyrene	100.0	87.74	88	87.44	87	40-160	20-180	0	0-20	
2-Methylnaphthalene	100.0	75.23	75	73.81	74	40-160	20-180	2	0-20	
1-Methylnaphthalene	100.0	79.99	80	77.83	78	40-160	20-180	3	0-20	
Naphthalene	100.0	71.02	71	68.06	68	40-160	20-180	4	0-20	
Phenanthrene	100.0	76.96	77	74.38	74	40-160	20-180	3	0-20	
Pyrene	100.0	75.33	75	76.03	76	40-160	20-180	1	0-20	

Total number of LCS compounds: 18
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
Project: India Basin			Page 6 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-418-333	**LCS**	**Solid**	**GC/MS HHH**	**09/19/18**	**09/21/18 20:27**	**180919L10**
099-16-418-333	**LCSD**	**Solid**	**GC/MS HHH**	**09/19/18**	**09/21/18 20:52**	**180919L10**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
PCB018	50.00	29.93	60	20.26	41	24-132	6-150	39	0-28	X
PCB028	50.00	32.06	64	24.78	50	31-133	14-150	26	0-26	
PCB044	50.00	31.47	63	26.15	52	36-120	22-134	18	0-28	
PCB052	50.00	29.78	60	24.22	48	31-121	16-136	21	0-27	
PCB066	50.00	38.11	76	33.71	67	43-139	27-155	12	0-25	
PCB101	50.00	33.06	66	29.61	59	37-121	23-135	11	0-27	
PCB105	50.00	37.41	75	33.56	67	48-132	34-146	11	0-26	
PCB118	50.00	38.21	76	33.81	68	46-136	31-151	12	0-25	
PCB128	50.00	35.09	70	30.76	62	40-130	25-145	13	0-26	
PCB170	50.00	32.74	65	30.43	61	40-124	26-138	7	0-29	
PCB180	50.00	37.79	76	33.53	67	41-143	24-160	12	0-26	
PCB187	50.00	34.74	69	30.78	62	39-129	24-144	12	0-26	
PCB195	50.00	33.78	68	32.13	64	44-128	30-142	5	0-28	

Total number of LCS compounds: 13
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0883
Oakland, CA 94607-4099		Preparation:	EPA 3550B (M)
		Method:	Organotins by Krone et al.
Project: India Basin			Page 7 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-016-1635	**LCS**	**Solid**	**GC/MS Y**	**09/21/18**	**09/25/18 10:18**	**180921L04**
099-07-016-1635	**LCSD**	**Solid**	**GC/MS Y**	**09/21/18**	**09/25/18 10:37**	**180921L04**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	100.0	73.24	73	71.23	71	40-142	3	0-20	
Tributyltin	100.0	61.17	61	61.73	62	33-147	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Glossary of Terms and Qualifiers

Work Order: 18-09-0883 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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CHAIN-OF-CUSTODY RECORD

Date 9/10/18

Page 1 of 6

WO NO. / LAB USE ONLY: **18-09-0883**

LABORATORY CLIENT: Leidos

ADDRESS:

CITY: Oakland STATE: CA ZIP:

TEL: 760.728.3378 E-MAIL: charles.r.phillips@leidos.com

CLIENT PROJECT NAME / NO.: India Basin

P.O. NO.:

PROJECT CONTACT: Charlie Phillips / Leidos

LAB CONTACT OR QUOTE NO:

GLOBAL ID:

LOG CODE:

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

EDD

☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:

Metals 6020 includes cobalt

REQUESTED ANALYSES
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ ~~GRO~~ C10-C36 8015B	☐ ~~TPH(d)~~ ☐ ~~DRO~~ Solids SM2540B	TPH ☐ ~~C6-C36~~ ☐ ~~C8-C44~~ TOC EPA 9060A	~~TPH~~ Sulfides EPA 376.2	BTEX / MTBE ☐ 8260 ☐	~~VOCs (8260)~~ Butyltins Crone et al	~~Oxygenates (8260)~~ Metals 6020 Mercury 1631E	Prep (5035) ☐ En Core ☐ Terra Core	~~SVOCs (8270)~~ Selenium 7242	Pesticides (8081)	PCBs (8082) LMP 4/0 Congeners	PAHs ☐ 8270 ☐ 8270 SIM RMP 25	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Dioxin/Furan EPA 1631B	Grain Size ASTM D4464		Archive
1	IB-12 0.0-2.0 091018	9/10		Sed	1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
2	IB-12 100 0.0-2.0 091018	9/10			1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
3	IB-12 0.0-3.0 091018				1 4oz	Amber																				✓
4	IB-12 0.0-3.0 091018				1 4oz																					✓
5	IB-12 0.0-2.0 091018				2 ploc																			✓		
6	IB-12 2.0-4.0 091018				1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
7	IB-12 2.0-4.0 091018				1 4oz	Amber																				✓
8	IB-12 2.0-4.0 091018				1 4oz																					✓
9	IB-12 2.0-4.0 091018				2 ploc																			✓		

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Charles R Phillips 9/11/18	[signature]	9/11/18	18:15
[signature]	Tom O'Malley ECI	9/12/18	1400
Tom O'Malley TO GSO 9/12/18 1730	[signature]	9/13/18	1700

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CHAIN-OF-CUSTODY RECORD

Date 9/10/18

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WO NO. / LAB USE ONLY: 0883

LABORATORY CLIENT: Leidos

ADDRESS:

CITY: Oakland STATE: CA ZIP:

TEL: 760.728.3378 E-MAIL: charles.r.phillips@leidos.com

CLIENT PROJECT NAME / NO.: India Basin

P.O. NO.:

PROJECT CONTACT: Charlie Phillips / Leidos

LAB CONTACT OR QUOTE NO:

GLOBAL ID:

LOG CODE:

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

EDD

☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:

Metals 6020 includes cobalt

REQUESTED ANALYSES
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO C10-C36 8015B	☐ TPH(d) ☐ DRO Solids SM 2540B	TPH ☐ C6-C36 ☐ C6-C44 TOC EPA 9060A	TPH Sulfides EPA 376.2	BTEX / MTBE ☐ 8260 ☐	VOCs (8260) Butyltins Cronectal	Oxygenates (8260) Metals 6020	Prep (5035) ☐ En Core ☐ Terra Core Mercury 1631E	SVOCs (8270) Selenium 7242	Pesticides (8081)	PCBs (8082) RMP 40 Congeners	PAHs ☐ 8270 ☐ 8270 SIM RMP 25	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Dioxin / Furan EPA 1631B	Grain Size ASTM D4464		Archive
10	IB-12 4.0-6.0 091018	9/10		Sed	1 16 oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
11	IB-12 100 4.0-6.0 091018				1 16 oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
12	IB-12 4.0-6.0 091018				1 4 oz	Amber																				✓
13	IB-12 4.0-6.0 091018				1 4 oz																					✓
14	IB-12 4.0-6.0 091018				Ziploc																			✓		
15	IB-12 6.0-6.5 091018				1 16 oz																					✓
16	IB-11 0.0-2.0 091018				1 16 oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
17	IB-11 0.0-2.0 091018				Ziploc																			✓		
18	IB-11 0.0-2.0 091018				1 4 oz	Amber																				✓
19	IB-11 0.0-2.0 091018				1 4 oz																					✓

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Charles R Phillips 9/11/18	[signature]	9/11/18	18:15
[signature]	Tom O'Malley EC1	9/12/18	1400
Tom O'Malley TO GSO 9/12/18 1730	[signature]	9/13/18	1200

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CHAIN-OF-CUSTODY RECORD

Date 9/10/18
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WO NO. / LAB USE ONLY: 0843

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Oakland STATE: CA ZIP:
TEL: 760.728.3378 E-MAIL: charles.r.phillips@leidos.com

CLIENT PROJECT NAME / NO.: Indian Basin
P.O. NO.:
PROJECT CONTACT: Charlie Phillips / Leidos
LAB CONTACT OR QUOTE NO:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

EDD
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
Metals 6020 includes Cobalt

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ 8015B	TPH(d) ☐ 8015B	TPH ☐ C6-C36 ☐ C6-C44	TPH	BTEX / MTBE ☐ 8260 ☐	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6					
										8015B	Solids Sm 2540B	TOC EPA 9060A	Sulfides 376.2		Butylthios Gcms	Metals 6020	Mercury 1631E	Selenium 7742		PAH 4b Longhand	PAH 8270			Dioxin/Furan EPA 1613B	Grain Size ASTM D422		Archive
20	•	JB-06 0.0-2.0 091018	9/10/18		Soil	1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓							
21	•	JB-06 0.0-2.0 091018				2 1pl/oz																			✓		
22	✓	JB-06 0.0-2.0 091018				1 4oz amber																					✓
23	•	JB-06 0.0-2.0 091018				1 4oz																					✓
24	•	JB-06 2.0-4.0 091018				1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
25	•	JB-06 2.0-4.0 091018				2 1pl/oz																			✓		
26	•	JB-06 2.0-4.0 091018				1 4oz amber																					✓
27	•	JB-06 2.0-4.0 091018				1 4oz																					✓
28	•	JB-06 4.0-6.0 091018				1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
29	•	JB-06 4.0-6.0 091018				2 1pl/oz																			✓		

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Charles R Phillips 9/11/18	[signature]	9/11/18	18:15
[signature]	Tom O'Malley EC1	9/12/18	1400
Tom O'Malley TO GSO 9/12/18 1730	[signature]	9/13/18	1200

2016-04-01-Revision

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CHAIN-OF-CUSTODY RECORD

Date 9/10/18
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WO NO. / LAB USE ONLY: 0883

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Oakland STATE: CA ZIP:
TEL: 760.728.3378 E-MAIL: Charles.r.phillips@leidos.com

CLIENT PROJECT NAME / NO.: India Basin
P.O. NO.:
PROJECT CONTACT: Charlie Phillips
LAB CONTACT OR QUOTE NO:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

EDD
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
6020 Metals includes cobalt
16oz glass jars labeled TM etc are for TS, TOC, TPH, metals, PAHs, PCBs, butyltins, sulfides, mercury + selenium

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO C10-C26 8015B	☐ TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH	BTEX / MTBE ☐ 8260 ☐	VOCs (8260) Total Solids SM 2540B	Oxygenates (8260) TOC EPA 9060A	Prep (5035) ☐ En Core ☐ Terra Core Sulfides EPA 376.2	SVOCs (8270) ~~Rad RMP 25 compl~~	Pesticides (8081) Butyltins Crone	PCBs (8082) RMP 43 congeners	PAHs ☐ 8270 ☐ 8270 SIM RMP 25 Compl	5B2 Metals ☐ 6010/747X ☐ 6020/747X Metals 6020	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6 Mercury 1631E	Arsenic Selenium 7242	Dioxin/Furan EPA 1631B	Grain Size ASTM D4464	Archive
30	•	JB-11 2.0-4.0 091018	9/10/18		Sed	1 16oz				✓					✓	✓	✓		✓	✓	✓	✓	✓	✓			
31	•	JB-11 2.0-4.0 091018				2 ziploc																				✓	
32	•	JB-11 2.0-4.0 091018				1 4oz amber																					✓
33	•	JB-11 2.0-4.0 091018				1 4oz																					✓
34	•	JB-11 4.0-6.0 091018				1 16oz				✓					✓	✓	✓		✓	✓	✓	✓	✓	✓			
35	•	JB-11 4.0-6.0 091018				2 ziploc																				✓	
36	•	JB-11 4.0-6.0 091018				1 4oz amber																					✓
37	•	JB-11 4.0-6.0 091018				1 4oz																					✓
38	•	JB-11 6.0-6.5 091018				1 16oz																					✓

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Charlie Phillips 9/11/18	[signature]	9/11/18	18:15
[signature]	Tom O'Malley ECI	9/12/18	1400
Tom O'Malley TO GSO 9/12/18 1730	[signature]	9/13/18	1200

2016-04-01-Revision

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CHAIN-OF-CUSTODY RECORD

Date 9/10/18
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WO NO. / LAB USE ONLY: 0883

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Oakland STATE: ZIP:
TEL: 760.728.3378 E-MAIL: charles.r.phillips@leidos.com

CLIENT PROJECT NAME / NO.: India Basin
P.O. NO.:
PROJECT CONTACT: Charlie Phillips | Leidos
LAB CONTACT OR QUOTE NO:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

EDD
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
Metals 6020 includes Cobalt

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO C10-C36 8015B	☐ TPH(d) ☐ DRO Solids SM 2540B	TPH ☐ C8-C36 ☐ C6-C44 TDC EPA 9060A	TPH Sulfides 376.2	BTEX / MTBE ☐ 8260 ☐	VOCs (8260) Butylfins Crane	Oxygenates (8260) Metals 6020	Prep (5035) ☐ En Core ☐ Terra Core Mercury 1631E	SVOCs (8270) Selenium 7242	Pesticides (8081)	PCBs (8082) RPP 40 Congeners	PAHs ☐ 8270 ☐ 8270 SIM RPP 25	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Tracer/Fuser EPA 1631B	Grain Size ASTM D4464		Archive
39	•	IB-06 4.0-6.0 091018	9/10/18		Sed	1 4oz Amber																					✓
40	•	IB-06 4.0-6.0 091018				1 4oz																					✓
41	•	IB-06 6.0-6.5 091018				1 16oz																					✓
42	•	IB-08 0.0-2.0 091018				1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
43	•	IB 08 0.0-2.0 091018				ziploc																			✓		
44	•	IB 08 0.0-2.0 091018				1 4oz Amber																					✓
45		IB 08 0.0-2.0 091018				1 4oz																					✓
46	•	IB 08 2.0-4.0 091018				1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
47	•	IB-08 2.0-4.0 091018				ziploc																			✓		
48	•	IB 08 2.0-4.0 091018				1 4oz Amber																					✓

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Charlie R Phillips 9/17/18	[signature]	9/11/18	18:15
[signature]	Tom O'Malley EC1	9/12/18	1400
Tom O'Malley TO GSO 9/12/18 1730	[signature]	9/13/18	1200

2016-04-01-Revision

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CHAIN-OF-CUSTODY RECORD

Date 9/10/18
Page 6 of 6

WO NO. / LAB USE ONLY: OPEN

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Oakland STATE: ZIP:
TEL: 760.728.3378 E-MAIL: charles.r.phillips@leidos.com

CLIENT PROJECT NAME / NO.: India Basin
P.O. NO.:
PROJECT CONTACT: Charlie Phillips / Leidos
LAB CONTACT OR QUOTE NO:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

EDD
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
Metals 6020 includes Cobalt

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO C6-C36 8015B	☐ TPH(d) ☐ DRO Solids SM 2540B	TPH ☐ C6-C36 ☐ C6-C44 TOC EPA 9060D	TPH Sulfides 376.2	BTEX / MTBE ☐ 8260 ☐	VOCs (8260) Butylene Crome	Oxygenates (8260) Metals 6020 Mercury 1631E	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270) Selenium 7242	Pesticides (8081)	PCBs (8082) RMP 40 Congeners	PAHs ☐ 8270 ☐ 8270 SIM 25 RMP	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Dioxin/Furan EPA 1631B	Grain Size ASTM D4464		Archive
49	•	JB-08 2.0-4.0 091018	9/13/18		Sed	1 4oz																					✓
50	•	JB-08 4.0-6.0 091018				1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
51	•	JB-08 4.0-6.0 091018				2 ziploc																			✓		
52	•	JB-08 4.0-6.0 091018				1 4oz Amber																					✓
53	•	JB-08 4.0-6.0 091018				1 4oz																					✓
54	•	JB-08 6.0-6.5 091018				1 16oz																					✓

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Charles R Phillips 9/11/18	[signature]	9/11/18	18:15
[signature]	Tom O'Malley ECI	9/12/18	1400
Tom O'Malley TO GSO 9/12/18 1730	[signature]	9/13/18	1200

2016-04-01-Revision

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GSO a GLS company GLS

800-322-5555
www.gso.com

Ship From
CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Tracking #: 542034376

NPS

0883

Ship To
CEL
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD: $0.00
Weight: 0 lb(s)
Reference:
LEIDOS
Delivery Instructions:

Signature Type: STANDARD

ORC C

GARDEN GROVE

S92845A

90510731

Print Date: 9/12/2018 4:58 PM

Package 3 of 4

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.

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9/12/2018

GSO a GLS company GLS

800-322-5555
www.gso.com

Ship From
CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Tracking #: 542034377

NPS

Ship To
CEL
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD: $0.00
Weight: 0 lb(s)
Reference:
LEIDOS
Delivery Instructions:

Signature Type: STANDARD

ORC C

GARDEN GROVE

S92845A

90510732

Print Date: 9/12/2018 4:58 PM

Package 4 of 4

LABEL INSTRUCTIONS:

eurofins | Calscience

WORK ORDER NUMBER: 18-09-0887

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 2

CLIENT: Leidos

DATE: 09/13/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 3.3 °C (w/ CF): 2.8 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: VJ6P

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: VJ6P

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: UD2L

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☐ Sampling date ☑ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna_2 ☐ 100PJ ☐ 100PJna_2 ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PBn (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGBna_2 ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PBna (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (Sediment): ☑ 16ozCGJ ☑ 4ozCGJ ☑ Z

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na_2** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: UD2L

Reviewed by: WFSO

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WORK ORDER NUMBER: 18-09-0883

SAMPLE RECEIPT CHECKLIST

COOLER 2 OF 2

CLIENT: Leidos

DATE: 09/13/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 2.7 °C (w/ CF): 2.2 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: UJ6P

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: UJ6P

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: UD2L

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☐ Sampling date ☑ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna_2 ☐ 100PJ ☐ 100PJna_2 ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna (pH__9) ☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PBn (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB ☐ 1AGB ☐ 1AGBna_2 ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PBna (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (Sediment): ☑ 16ozCGJ ☑ Z ☑ 4ozCGJ

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na_2** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: UD2L

Reviewed by: UFSO

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WORK ORDER NUMBER: 18-09-0883

SAMPLE ANOMALY REPORT

DATE: 09 / 13 / 2018

SAMPLES, CONTAINERS, AND LABELS:

- ☐ Sample(s) NOT RECEIVED but listed on COC
- ☐ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ pH outside acceptable range (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☑ Client sample label(s) do not match COC (comment)
  - ☐ Project information
  - ☐ Client sample ID
  - ☑ Sampling date and/or time
  - ☐ Number of container(s)
  - ☐ Requested analysis
- ☐ Sample container(s) compromised (comment)
  - ☐ Broken
  - ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
  - ☐ Flat
  - ☐ Very low in volume
  - ☐ Leaking (not transferred; duplicate bag submitted)
  - ☐ Leaking (transferred into ECI Tedlar™ bags*)
  - ☐ Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

Comments

(-1) through (-54) no collection time per COC or on Label.

MISCELLANEOUS: (Describe)

Comments

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis

Comments:

Reported by: UDZL

Reviewed by: WSO

** Record the total number of containers (i.e., vials or bottles) for the affected sample.

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Subcontractor Analysis Report

Work Order: 18-09-0883 Page 1 of 1

One or more samples in this work order have tests that were subcontracted. The subcontract report(s) follows.

For subcontracted tests, please reference the laboratory information noted below.

1. Eurofins Frontier Global Sciences - Bothell,WA CA ELAP 2954
   Mercury - EPA 1631
2. ALS - Columbia Analytical Services, Inc. - Kelso,WA NELAP WA100010, CA ELAP 2795
   EPA 7742 Selenium

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eurofins | Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

15 October 2018

Carla Lee Hollowell
Eurofins Calscience, LLC
7440 Lincoln Way
Garden Grove, CA 92841

RE: Total and Methly Mercury

Enclosed are the analytical results for samples received by Eurofins Frontier Global Sciences. All quality control measurements are within established control limits and there were no analytical difficulties encountered with the exception of those listed in the case narrative section of this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Amy Goodall

Amy Goodall
Project Manager

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eurofins | Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
IB-12 0.0-2.0 091018	8I00584-01	Soil/Sediment	10-Sep-18 00:00	19-Sep-18 09:35
IB-12 100 0.0-2.0 0-1018	8I00584-02	Soil/Sediment	10-Sep-18 00:00	19-Sep-18 09:35
IB-12 2.0-4.0 0-1018	8I00584-03	Soil/Sediment	10-Sep-18 00:00	19-Sep-18 09:35
IB-12 4.0-6.0 091018	8I00584-04	Soil/Sediment	10-Sep-18 00:00	19-Sep-18 09:35
IB-12 100 4.0-6.0 091018	8I00584-05	Soil/Sediment	10-Sep-18 00:00	19-Sep-18 09:35
IB-11 0.0-2.0 091018	8I00584-06	Soil/Sediment	10-Sep-18 00:00	19-Sep-18 09:35
IB-06 0.0-2.0 091018	8I00584-07	Soil/Sediment	10-Sep-18 00:00	19-Sep-18 09:35
IB-06 2.0-4.0 091018	8I00584-08	Soil/Sediment	10-Sep-18 00:00	19-Sep-18 09:35
IB-06 4.0-6.0 091018	8I00584-09	Soil/Sediment	10-Sep-18 00:00	19-Sep-18 09:35
IB-11 2.0-4.0 091018	8I00584-10	Soil/Sediment	10-Sep-18 00:00	19-Sep-18 09:35
IB-11 4.0-6.0 091018	8I00584-11	Soil/Sediment	10-Sep-18 00:00	19-Sep-18 09:35
IB-08 0.0-2.0 091018	8I00584-12	Soil/Sediment	10-Sep-18 00:00	19-Sep-18 09:35
IB-08 2.0-4.0 091018	8I00584-13	Soil/Sediment	10-Sep-18 00:00	19-Sep-18 09:35
IB-08 4.0-6.0 091018	8I00584-14	Soil/Sediment	10-Sep-18 00:00	19-Sep-18 09:35

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Eurofins Frontier Global Sciences, LLC

The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amy Goodall

Amy Goodall, Project Manager

eurofins | Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

SAMPLE RECEIPT

Samples were received at Eurofins Frontier Global Sciences (EFGS) on 19-Sep-18 09:35. The samples were received intact, on-ice within a sealed cooler at

Cooler	Temp C°
Default Cooler	3.1

SAMPLE PREPARATION AND ANALYSIS

Total solids analysis was performed in accordance with method SM2540B. Total solids are prepared at the same time as the preparation for the analyte(s) of interest in order to provide the most accurate dry mass correction which may be outside of the method recommended holding time of 7 days from sample collection.

Total mercury preparation and analysis was performed by flow injection atomic fluorescence spectrometry (FI-AFS) in accordance with EPA 1631B.

ANALYTICAL AND QUALITY CONTROL ISSUES

Method blanks were prepared for every preparation to assess possible blank contribution from the sample preparation procedure. The method blanks were carried through the entire analytical procedure. All blanks fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

Liquid spikes, certified reference material (CRM) or a quality control samples (QCS) were prepared for every preparation as a measure of accuracy. All liquid spikes, CRMs and/or QCS samples fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

As an additional measure of the accuracy of the methods used and to check for matrix interference, matrix spikes (MS) and matrix spike duplicates (MSD) were digested and analyzed. All of the matrix spike recoveries fell within the established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

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11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

A reasonable measure of the precision of the analytical methods is the relative percent difference (RPD) between a matrix spike recovery and a matrix spike duplicate recovery and between laboratory control sample recovery and laboratory control sample duplicate recoveries. All of the relative percent differences fell within established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

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eurofins | Frontier Global Sciences

Sample Receipt Checklist

Client: Eurofins Cal Science Date & Time Received: 9/19/18 935 Date Labeled: 9/19/18 Labeled By: CSP

Project: _____ Received By: [illegible] Label Verified By: [illegible]

# of Coolers Received: 1 Samples Arrived By: ✓ Shipping Service ____ Courier ____ Hand ____ Other (Specify: ____)

Coolant: ☐ None/Ambient ☑ Loose Ice ☐ Gel Ice ☐ Dry Ice Coolant Required: Y / N Temp Blank Used: Y/N for Cooler(s): ____

Notify Project Manager if packages/coolers are received without coolant or with thawed coolant and at a temperature in excess of 6°C. PM notified: Y/N

Cooler Information:	Y/N/NA	Comments
The coolers do not appear to be tampered with:	Y	
Custody Seals are present and intact:	Y	
Custody seals signed:	Y	

TID: 9804	CF: +0.5 °C	Date/time: 9/19/18 935	By: [illegible]
Cooler 1: 2.6 °C	w/ CF: 3.1 °C	Cooler 4: °C	w/ CF: °C
Cooler 2: °C	w/ CF: °C	Cooler 5: °C	w/ CF: °C
Cooler 3: °C	w/ CF: °C	Cooler 6: °C	w/ CF: °C

Chain of Custody:	Y/N/NA	Comments
Sample ID/Description:	Y	
Date and time of collection:	Y	
Sampled by:	Y	
Preservation type:	Y	
Requested analyses:	Y	
Required signatures:	Y	
Internal COC required:	NA	

Sample Condition/Integrity:	Y/N/NA	Comments
Sample containers intact/present:	Y	
Sample labels are present and legible:	Y	
Sample ID on container/bag matches COC:	Y	
Correct sample containers used:	Y	
Samples received within holding times:	Y	
Sample volume sufficient for requested analyses:	Y	
Correct preservative used for requested analyses:	Y	

Anomalies/Non-conformances (attach additional pages if needed):

8100584

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eurofins Calscience

EFGS

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 8100584

DATE: 09/18/18

PAGE: 1 OF 2

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

LABORATORY CLIENT: EUROFINS CALSCIENCE

ADDRESS: 7440 LINCOLN WAY

CITY: GARDEN GROVE STATE: CA ZIP:

TEL: E-MAIL: CARLAHOLLOWELL@EUROFINSUS.COM

CLIENT PROJECT NAME / NUMBER: 18-09-0883 / India Basin

P.O. NO.:

PROJECT CONTACT: CARLA LEE HOLLOWELL

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

☐ COELT EDF GLOBAL ID: LOG CODE:

SPECIAL INSTRUCTIONS:

20 day TAT or NTAT (whichever is shorter)
Report in dry weight; Excel EDD required.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	EPA 1631	ECI SAMPLE NUMBER
	IB-12 0.0-2.0 091018	9/10/2018		SED	1	X			X	
	IB-12 100 0.0-2.0 0-1018	9/10/2018		SED	1	X			X	
	IB-12 2.0-4.0 0-1018	9/10/2018		SED	1	X			X	
	IB-12 4.0-6.0 091018	9/10/2018		SED	1	X			X	
	IB-12 100 4.0-6.0 091018	9/10/2018		SED	1	X			X	
	IB-11 0.0-2.0 091018	9/10/2018		SED	1	X			X	
	IB-06 0.0-2.0 091018	9/10/2018		SED	1	X			X	
	IB-06 2.0-4.0 091018	9/10/2018		SED	1	X			X	
	IB-06 4.0-6.0 091018	9/10/2018		SED	1	X			X	
	IB-11 2.0-4.0 091018	9/10/2018		SED	1	X			X	

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Fedex# 773266951959	9/18/18	1623
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation) [signature] / Brian Woldehn	9/19/18	925

CS- FedEx

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06/02/14 Revision

EFGS

CHAIN OF CUSTODY RECORD

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

WO # / LAB USE ONLY: 8100584

DATE: 09/18/18

PAGE: 2 OF 2

LABORATORY CLIENT: EUROFINS CALSCIENCE

ADDRESS: 7440 LINCOLN WAY

CITY: GARDEN GROVE STATE: CA ZIP:

TEL: E-MAIL: CARLAHOLLOWELL@EUROFINSUS.COM

CLIENT PROJECT NAME / NUMBER: 18-09-0883 / India Basin

P.O. NO.:

PROJECT CONTACT: CARLA LEE HOLLOWELL

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

☐ COELT EDF GLOBAL ID: LOG CODE:

SPECIAL INSTRUCTIONS:

20 day TAT or NTAT (whichever is shorter)
Report in dry weight; Excel EDD required.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	EPA 1631																			ECI SAMPLE NUMBER
	IB-11 4.0-6.0 091018	9/10/2018		SED	1	X			X																			
	IB-08 0.0-2.0 091018	9/10/2018		SED	1	X			X																			
	IB-08 2.0-4.0 091018	9/10/2018		SED	1	X			X																			
	IB-08 4.0-6.0 091018	9/10/2018		SED	1	X			X																			

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date: 9/18/18	Time: 1623
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date: 9/19/18	Time:

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425.686.1996 Phone
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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

IB-12 0.0-2.0 091018

8I00584-01

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**489**	1.26	11.5	ng/g dry	100	F809379	21-Sep-18	8J01013	28-Sep-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**39.4**	0.1	0.1	% by Weight	1	F809383	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

IB-12 100 0.0-2.0 0-1018

8I00584-02

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**603**	1.16	10.5	ng/g dry	100	F809379	21-Sep-18	8J01013	28-Sep-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**41.6**	0.1	0.1	% by Weight	1	F809383	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

IB-12 2.0-4.0 0-1018

8I00584-03

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**935**	5.11	46.5	ng/g dry	400	F809379	21-Sep-18	8J01013	28-Sep-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**41.2**	0.1	0.1	% by Weight	1	F809383	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

IB-12 4.0-6.0 091018

8I00584-04

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**1190**	4.76	43.3	ng/g dry	400	F809379	21-Sep-18	8J01013	28-Sep-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**42.3**	0.1	0.1	% by Weight	1	F809383	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

IB-12 100 4.0-6.0 091018

8I00584-05

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**1120**	4.16	37.8	ng/g dry	400	F809379	21-Sep-18	8J01013	28-Sep-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**47.1**	0.1	0.1	% by Weight	1	F809383	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

IB-11 0.0-2.0 091018

8I00584-06

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**7850**	97.1	884	ng/g dry	10000	F809379	21-Sep-18	8J01013	28-Sep-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**47.3**	0.1	0.1	% by Weight	1	F809383	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

IB-06 0.0-2.0 091018

8I00584-07

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**1240**	28.8	263	ng/g dry	2500	F809379	21-Sep-18	8J01013	28-Sep-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**40.0**	0.1	0.1	% by Weight	1	F809383	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

IB-06 2.0-4.0 091018

8I00584-08

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**10500**	26.2	239	ng/g dry	2500	F809379	21-Sep-18	8J01013	28-Sep-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**48.0**	0.1	0.1	% by Weight	1	F809383	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
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IB-06 4.0-6.0 091018

8I00584-09

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**1590**	23.2	211	ng/g dry	2500	F809379	21-Sep-18	8J01013	28-Sep-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**49.2**	0.1	0.1	% by Weight	1	F809383	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

IB-11 2.0-4.0 091018

8I00584-10

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**854**	27.7	253	ng/g dry	2500	F809379	21-Sep-18	8J01013	28-Sep-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**45.0**	0.1	0.1	% by Weight	1	F809383	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
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IB-11 4.0-6.0 091018

8I00584-11

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**70.8**	0.81	7.35	ng/g dry	100	F809379	21-Sep-18	8J01013	28-Sep-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**60.3**	0.1	0.1	% by Weight	1	F809383	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

IB-08 0.0-2.0 091018

8I00584-12

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**851**	26.1	238	ng/g dry	2500	F809379	21-Sep-18	8J01013	28-Sep-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**50.5**	0.1	0.1	% by Weight	1	F809383	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

IB-08 2.0-4.0 091018

8I00584-13

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**1180**	23.0	209	ng/g dry	2500	F809379	21-Sep-18	8J01013	28-Sep-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**51.4**	0.1	0.1	% by Weight	1	F809383	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

IB-08 4.0-6.0 091018

8I00584-14

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**1130**	23.3	212	ng/g dry	2500	F809379	21-Sep-18	8J01013	28-Sep-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**49.3**	0.1	0.1	% by Weight	1	F809383	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F809379 - EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Blank (F809379-BLK1)					Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	ND	0.11	1.00	ng/g wet							U
Blank (F809379-BLK2)					Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	ND	0.11	1.00	ng/g wet							U
Blank (F809379-BLK3)					Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	ND	0.11	1.00	ng/g wet							U
LCS (F809379-BS1)					Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	7.22	0.11	1.00	ng/g wet	8.0320		89.9	75-125			
LCS Dup (F809379-BSD1)					Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	7.42	0.11	1.00	ng/g wet	8.0320		92.3	75-125	2.65	24	
Duplicate (F809379-DUP1)		**Source: 8I00584-01RE1**			Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	519.8	1.31	11.9	ng/g dry		489.3			6.04	24	
Duplicate (F809379-DUP2)		**Source: 8I00584-01RE1**			Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	498.3	1.26	11.5	ng/g dry		489.3			1.83	24	AD
Matrix Spike (F809379-MS1)		**Source: 8I00584-01RE1**			Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	1308	5.21	47.4	ng/g dry	948.81	489.3	86.3	71-125			
Matrix Spike (F809379-MS2)		**Source: 8I00587-02RE1**			Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	1110	4.80	43.7	ng/g dry	873.09	323.8	90.1	71-125			
Matrix Spike (F809379-MS3)		**Source: 8I00584-01RE1**			Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	575.3	1.26	11.5	ng/g dry	91.994	489.3	93.5	71-125			AS

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7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F809379 - EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Matrix Spike Dup (F809379-MSD1)		**Source: 8I00584-01RE1**			Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	1280	4.81	43.8	ng/g dry	875.20	489.3	90.3	71-125	4.62	24	
Matrix Spike Dup (F809379-MSD2)		**Source: 8I00587-02RE1**			Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	1082	4.62	42.1	ng/g dry	841.31	323.8	90.1	71-125	0.0808	24	
Matrix Spike Dup (F809379-MSD3)		**Source: 8I00584-01RE1**			Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	582.8	1.26	11.5	ng/g dry	91.994	489.3	102	71-125	8.29	24	AS

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7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F809383 - EFGS SOP5133 Solids Analysis											
Duplicate (F809383-DUP1)		**Source: 8I00584-01**			Prepared: 21-Sep-18 Analyzed: 26-Sep-18						
% Solids	40.4	0.1	0.1	% by Weight		39.4			2.51	10	O-04, O-09
Duplicate (F809383-DUP2)		**Source: 8I00587-02**			Prepared: 21-Sep-18 Analyzed: 26-Sep-18						
% Solids	41.0	0.1	0.1	% by Weight		41.2			0.487	10	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0883 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:28

Notes and Definitions

U	Analyte was not detected and is reported as less than the LOD or as defined by the client. The LOD has been adjusted for any dilution or concentration of the sample.
O-09	Total Solids are prepared at the same time as the preparation for the analyte(s) of interest in order to provide the most accurate dry mass correction.
O-04	This sample was analyzed outside of the recommended holding time.
AS	This MS and/or MSD is an analytical spike and/or an analytical spike duplicate.
AD	This matrix duplicate is an analytical duplicate.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the method detection limit if reported to the MDL or above the reporting limit if reported to the MRL.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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September 27, 2018 Service Request No:K1809049

Carla Hollowell
Calscience Environmental Laboratories, Incorporated
7440 Lincoln Way
Garden Grove, CA 92841-1427

Laboratory Results for: India Basin

Dear Carla,

Enclosed are the results of the sample(s) submitted to our laboratory September 19, 2018
For your reference, these analyses have been assigned our service request number **K1809049.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3342. You may also contact me via email at Amanda.Juell@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Amanda Juell
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental

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Narrative Documents

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RIGHT SOLUTIONS | RIGHT PARTNER

ALS Environmental

Client: Eurofins Calscience Environmental Laboratory
Project: India Basin
Sample Matrix: Soil

Service Request: K1809049
Date Received: 09/19/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt:

Fourteen soil samples were received for analysis at ALS Environmental on 09/19/2018. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

Metals:

No significant anomalies were noted with this analysis.

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Approved by Amanda Juell Date 09/27/2018

ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: IB-12 0.0-2.0 091018 — **Lab ID: K1809049-001**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.40		0.04	0.22	mg/Kg	7742
Solids, Total	40.6				Percent	160.3 Modified

CLIENT ID: IB-12 100 0.0-2.0 0-091018 — **Lab ID: K1809049-002**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.40		0.05	0.23	mg/Kg	7742
Solids, Total	40.3				Percent	160.3 Modified

CLIENT ID: IB-12 2.0-4.0 0-091018 — **Lab ID: K1809049-003**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.45		0.04	0.21	mg/Kg	7742
Solids, Total	41.4				Percent	160.3 Modified

CLIENT ID: IB-12 4.0-6.0 091018 — **Lab ID: K1809049-004**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.41		0.04	0.20	mg/Kg	7742
Solids, Total	45.5				Percent	160.3 Modified

CLIENT ID: IB-12 100 4.0-6.0 091018 — **Lab ID: K1809049-005**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.41		0.04	0.19	mg/Kg	7742
Solids, Total	46.2				Percent	160.3 Modified

CLIENT ID: IB-11 0.0-2.0 091018 — **Lab ID: K1809049-006**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.36		0.04	0.19	mg/Kg	7742
Solids, Total	45.5				Percent	160.3 Modified

CLIENT ID: IB-06 0.0-2.0 091018 — **Lab ID: K1809049-007**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.29		0.04	0.18	mg/Kg	7742
Solids, Total	44.3				Percent	160.3 Modified

CLIENT ID: IB-06 2.0-4.0 091018 — **Lab ID: K1809049-008**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.36		0.04	0.18	mg/Kg	7742
Solids, Total	52.7				Percent	160.3 Modified

CLIENT ID: IB-06 4.0-6.0 091018 — **Lab ID: K1809049-009**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.22		0.03	0.16	mg/Kg	7742
Solids, Total	54.2				Percent	160.3 Modified

CLIENT ID: IB-11 2.0-4.0 091018 — **Lab ID: K1809049-010**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.48		0.03	0.17	mg/Kg	7742

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ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: IB-11 2.0-4.0 091018			Lab ID: K1809049-010			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Solids, Total	54.2				Percent	160.3 Modified

CLIENT ID: IB-11 4.0-6.0 091018			Lab ID: K1809049-011			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Selenium	0.45		0.03	0.14	mg/Kg	7742
Solids, Total	56.8				Percent	160.3 Modified

CLIENT ID: IB-08 0.0-2.0 091018			Lab ID: K1809049-012			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Selenium	0.43		0.04	0.20	mg/Kg	7742
Solids, Total	47.5				Percent	160.3 Modified

CLIENT ID: IB-08 2.0-4.0 091018			Lab ID: K1809049-013			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Selenium	0.48		0.03	0.17	mg/Kg	7742
Solids, Total	50.0				Percent	160.3 Modified

CLIENT ID: IB-08 4.0-6.0 091018			Lab ID: K1809049-014			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Selenium	0.49		0.04	0.18	mg/Kg	7742
Solids, Total	49.8				Percent	160.3 Modified

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Sample Receipt Information

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ALS Environmental—Kelso Laboratory
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Phone (360) 577-7222 Fax (360) 425-9096
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Client: Eurofins Calscience Environmental Laboratory **Service Request:**K1809049
Project: India Basin/18-09-0883

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
K1809049-001	IB-12 0.0-2.0 091018	9/10/2018	
K1809049-002	IB-12 100 0.0-2.0 0-091018	9/10/2018	
K1809049-003	IB-12 2.0-4.0 0-091018	9/10/2018	
K1809049-004	IB-12 4.0-6.0 091018	9/10/2018	
K1809049-005	IB-12 100 4.0-6.0 091018	9/10/2018	
K1809049-006	IB-11 0.0-2.0 091018	9/10/2018	
K1809049-007	IB-06 0.0-2.0 091018	9/10/2018	
K1809049-008	IB-06 2.0-4.0 091018	9/10/2018	
K1809049-009	IB-06 4.0-6.0 091018	9/10/2018	
K1809049-010	IB-11 2.0-4.0 091018	9/10/2018	
K1809049-011	IB-11 4.0-6.0 091018	9/10/2018	
K1809049-012	IB-08 0.0-2.0 091018	9/10/2018	
K1809049-013	IB-08 2.0-4.0 091018	9/10/2018	
K1809049-014	IB-08 4.0-6.0 091018	9/10/2018	

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ALS

CHAIN OF CUSTODY RECORD

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

WO # / LAB USE ONLY: Ki 309049

DATE: 09/18/18

PAGE: 1 OF 2

LABORATORY CLIENT: EUROFINS CALSCIENCE

ADDRESS: 7440 LINCOLN WAY

CITY: GARDEN GROVE STATE: CA ZIP:

TEL: E-MAIL: CARLAHOLLOWELL@EUROFINSUS.COM

CLIENT PROJECT NAME / NUMBER: 18-09-0883 / India Basin

P.O. NO.:

PROJECT CONTACT: CARLA LEE HOLLOWELL

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

☐ COELT EDF GLOBAL ID: LOG CODE:

SPECIAL INSTRUCTIONS:

20 day TAT or NTAT (whichever is shorter)
Report in dry weight; Excel EDD required.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	EPA 7742 / Se	ECI SAMPLE NUMBER
1	IB-12 0.0-2.0 091018	9/10/2018		SED	1	X			X	
2	IB-12 100 0.0-2.0 0-1018	9/10/2018		SED	1	X			X	
3	IB-12 2.0-4.0 0-1018	9/10/2018		SED	1	X			X	
4	IB-12 4.0-6.0 091018	9/10/2018		SED	1	X			X	
5	IB-12 100 4.0-6.0 091018	9/10/2018		SED	1	X			X	
6	IB-11 0.0-2.0 091018	9/10/2018		SED	1	X			X	
7	IB-06 0.0-2.0 091018	9/10/2018		SED	1	X			X	
8	IB-06 2.0-4.0 091018	9/10/2018		SED	1	X			X	
9	IB-06 4.0-6.0 091018	9/10/2018		SED	1	X			X	
10	IB-11 2.0-4.0 091018	9/10/2018		SED	1	X			X	

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Fedex 773267042717	9/18/18	1645
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	[signature]	9/19/18	0940
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/02/14 Revision

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CHAIN OF CUSTODY RECORD

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WO # / LAB USE ONLY: K1809049

DATE: 09/18/18

PAGE: 2 OF 2

LABORATORY CLIENT: EUROFINS CALSCIENCE

ADDRESS: 7440 LINCOLN WAY

CITY: GARDEN GROVE STATE: CA ZIP:

TEL: E-MAIL: CARLAHOLLOWELL@EUROFINSUS.COM

CLIENT PROJECT NAME / NUMBER: 18-09-0883 / India Basin

P.O. NO.:

PROJECT CONTACT: CARLA LEE HOLLOWELL

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

☐ COELT EDF GLOBAL ID: LOG CODE:

SPECIAL INSTRUCTIONS:

20 day TAT or NTAT (whichever is shorter)
Report in dry weight; Excel EDD required.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	EPA 7742 / Se	ECI SAMPLE NUMBER
11	IB-11 4.0-6.0 091018	9/10/2018		SED	1	X			X	
12	IB-08 0.0-2.0 091018	9/10/2018		SED	1	X			X	
13	IB-08 2.0-4.0 091018	9/10/2018		SED	1	X			X	
14	IB-08 4.0-6.0 091018	9/10/2018		SED	1	X			X	

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
		9/18/18	1645
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
		9/19/18	0940
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/02/14 Revision

ALS

PC [illegible]

Cooler Receipt and Preservation Form

Client Eurofins Service Request *K18* 09049

Received: 9/19/18 Opened: 9/19/18 By: BR Unloaded: 9/19/18 By: BR

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 Front

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected. Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
-0.3	-0.5	0.5	0.6	-0.2	371		773267042717	

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA Y N

   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

7/25/16 ***Page*** ____ ***of*** ____

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Miscellaneous Forms

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Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

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ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

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Client: Eurofins Calscience Environmental Laboratory **Service Request:** K1809049
Project: India Basin/18-09-0883

Sample Name: IB-12 0.0-2.0 091018 **Date Collected:** 09/10/18
Lab Code: K1809049-001 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-12 100 0.0-2.0 0-091018 **Date Collected:** 09/10/18
Lab Code: K1809049-002 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-12 2.0-4.0 0-091018 **Date Collected:** 09/10/18
Lab Code: K1809049-003 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-12 4.0-6.0 091018 **Date Collected:** 09/10/18
Lab Code: K1809049-004 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

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Client: Eurofins Calscience Environmental Laboratory
Service Request: K1809049
Project: India Basin/18-09-0883

Sample Name: IB-12 100 4.0-6.0 091018
Lab Code: K1809049-005
Sample Matrix: Soil
Date Collected: 09/10/18
Date Received: 09/19/18

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-11 0.0-2.0 091018
Lab Code: K1809049-006
Sample Matrix: Soil
Date Collected: 09/10/18
Date Received: 09/19/18

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-06 0.0-2.0 091018
Lab Code: K1809049-007
Sample Matrix: Soil
Date Collected: 09/10/18
Date Received: 09/19/18

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-06 2.0-4.0 091018
Lab Code: K1809049-008
Sample Matrix: Soil
Date Collected: 09/10/18
Date Received: 09/19/18

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Return to Contents

Client: Eurofins Calscience Environmental Laboratory **Service Request:** K1809049
Project: India Basin/18-09-0883

Sample Name: IB-06 4.0-6.0 091018 **Date Collected:** 09/10/18
Lab Code: K1809049-009 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-11 2.0-4.0 091018 **Date Collected:** 09/10/18
Lab Code: K1809049-010 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-11 4.0-6.0 091018 **Date Collected:** 09/10/18
Lab Code: K1809049-011 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-08 0.0-2.0 091018 **Date Collected:** 09/10/18
Lab Code: K1809049-012 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

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Analyst Summary report

Client: Eurofins Calscience Environmental Laboratory
Service Request: K1809049
Project: India Basin/18-09-0883

Sample Name: IB-08 2.0-4.0 091018
Lab Code: K1809049-013
Sample Matrix: Soil
Date Collected: 09/10/18
Date Received: 09/19/18

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-08 4.0-6.0 091018
Lab Code: K1809049-014
Sample Matrix: Soil
Date Collected: 09/10/18
Date Received: 09/19/18

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

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Sample Results

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Metals

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-12 0.0-2.0 091018	**Basis:**	Dry
Lab Code:	K1809049-001		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.40**	mg/Kg	0.22	0.04	2	09/25/18 13:05	09/24/18	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-12 100 0.0-2.0 0-091018	**Basis:**	Dry
Lab Code:	K1809049-002		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.40**	mg/Kg	0.23	0.05	2	09/25/18 13:19	09/24/18	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-12 2.0-4.0 0-091018	**Basis:**	Dry
Lab Code:	K1809049-003		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.45**	mg/Kg	0.21	0.04	2	09/25/18 13:21	09/24/18	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-12 4.0-6.0 091018	**Basis:**	Dry
Lab Code:	K1809049-004		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.41**	mg/Kg	0.20	0.04	2	09/25/18 13:24	09/24/18	

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ALS Group USA, Corp.
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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-12 100 4.0-6.0 091018	**Basis:**	Dry
Lab Code:	K1809049-005		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.41**	mg/Kg	0.19	0.04	2	09/25/18 13:26	09/24/18	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-11 0.0-2.0 091018	**Basis:**	Dry
Lab Code:	K1809049-006		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.36**	mg/Kg	0.19	0.04	2	09/25/18 13:28	09/24/18	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-06 0.0-2.0 091018	**Basis:**	Dry
Lab Code:	K1809049-007		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.29**	mg/Kg	0.18	0.04	2	09/25/18 13:31	09/24/18	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-06 2.0-4.0 091018	**Basis:**	Dry
Lab Code:	K1809049-008		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.36**	mg/Kg	0.18	0.04	2	09/25/18 13:33	09/24/18	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-06 4.0-6.0 091018	**Basis:**	Dry
Lab Code:	K1809049-009		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.22**	mg/Kg	0.16	0.03	2	09/25/18 13:35	09/24/18	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-11 2.0-4.0 091018	**Basis:**	Dry
Lab Code:	K1809049-010		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.48**	mg/Kg	0.17	0.03	2	09/25/18 13:56	09/24/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-11 4.0-6.0 091018	**Basis:**	Dry
Lab Code:	K1809049-011		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.45**	mg/Kg	0.14	0.03	2	09/25/18 13:45	09/24/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-08 0.0-2.0 091018	**Basis:**	Dry
Lab Code:	K1809049-012		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.43**	mg/Kg	0.20	0.04	2	09/25/18 13:47	09/24/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-08 2.0-4.0 091018	**Basis:**	Dry
Lab Code:	K1809049-013		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.48**	mg/Kg	0.17	0.03	2	09/25/18 13:49	09/24/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-08 4.0-6.0 091018	**Basis:**	Dry
Lab Code:	K1809049-014		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.49**	mg/Kg	0.18	0.04	2	09/25/18 13:52	09/24/18	

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General Chemistry

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-12 0.0-2.0 091018	**Basis:**	As Received
Lab Code:	K1809049-001		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**40.6**	Percent	-	-	1	09/21/18 12:22	

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ALS Group USA, Corp.
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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-12 100 0.0-2.0 0-091018	**Basis:**	As Received
Lab Code:	K1809049-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**40.3**	Percent	-	-	1	09/21/18 12:22	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-12 2.0-4.0 0-091018	**Basis:**	As Received
Lab Code:	K1809049-003		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**41.4**	Percent	-	-	1	09/21/18 12:22	

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dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-12 4.0-6.0 091018	**Basis:**	As Received
Lab Code:	K1809049-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**45.5**	Percent	-	-	1	09/21/18 12:22	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-12 100 4.0-6.0 091018	**Basis:**	As Received
Lab Code:	K1809049-005		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**46.2**	Percent	-	-	1	09/21/18 12:22	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-11 0.0-2.0 091018	**Basis:**	As Received
Lab Code:	K1809049-006		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**45.5**	Percent	-	-	1	09/21/18 12:22	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-06 0.0-2.0 091018	**Basis:**	As Received
Lab Code:	K1809049-007		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**44.3**	Percent	-	-	1	09/21/18 12:22	

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dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-06 2.0-4.0 091018	**Basis:**	As Received
Lab Code:	K1809049-008		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**52.7**	Percent	-	-	1	09/21/18 12:22	

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dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-06 4.0-6.0 091018	**Basis:**	As Received
Lab Code:	K1809049-009		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**54.2**	Percent	-	-	1	09/21/18 12:22	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-11 2.0-4.0 091018	**Basis:**	As Received
Lab Code:	K1809049-010		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**54.2**	Percent	-	-	1	09/21/18 12:22	

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dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-11 4.0-6.0 091018	**Basis:**	As Received
Lab Code:	K1809049-011		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**56.8**	Percent	-	-	1	09/21/18 12:22	

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dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-08 0.0-2.0 091018	**Basis:**	As Received
Lab Code:	K1809049-012		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**47.5**	Percent	-	-	1	09/21/18 12:22	

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-08 2.0-4.0 091018	**Basis:**	As Received
Lab Code:	K1809049-013		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**50.0**	Percent	-	-	1	09/21/18 12:22	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-08 4.0-6.0 091018	**Basis:**	As Received
Lab Code:	K1809049-014		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**49.8**	Percent	-	-	1	09/21/18 12:22	

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QC Summary Forms

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Metals

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	Dry
Lab Code:	KQ1813253-03		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	ND U	mg/Kg	0.10	0.02	2	09/25/18 13:01	09/24/18	

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dba ALS Environmental

QA/QC Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project:	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18
		Date Analyzed:	09/25/18
		Date Extracted:	09/24/18

Matrix Spike Summary
Total Metals

Sample Name:	IB-12 0.0-2.0 091018	**Units:**	mg/Kg
Lab Code:	K1809049-001	**Basis:**	Dry
Analysis Method:	7742		
Prep Method:	EPA 3050B		

Matrix Spike
KQ1813253-02

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Selenium	0.4	10.1	9.1	106	75-125

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Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18
		Date Analyzed:	09/25/18

Replicate Sample Summary
Total Metals

Sample Name:	IB-12 0.0-2.0 091018	**Units:**	mg/Kg
Lab Code:	K1809049-001	**Basis:**	Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1813253-01 Result	Average	RPD	RPD Limit
Selenium	7742	0.23	0.05	0.40	0.38	0.39	6	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Eurofins Calscience Environmental Laboratory
Project: India Basin/18-09-0883
Sample Matrix: Soil

Service Request: K1809049
Date Analyzed: 09/25/18

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis: Dry

Lab Control Sample
KQ1813253-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Selenium	7742	208	206	101	64-122

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General Chemistry

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QA/QC Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18
		Date Analyzed:	09/21/18

Replicate Sample Summary
Inorganic Parameters

Sample Name:	IB-12 0.0-2.0 091018	**Units:**	Percent
Lab Code:	K1809049-001	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1809049-001DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	40.6	40.4	40.5	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809049
Project	India Basin/18-09-0883	**Date Collected:**	09/10/18
Sample Matrix:	Soil	**Date Received:**	09/19/18
		Date Analyzed:	09/21/18

Replicate Sample Summary
Inorganic Parameters

Sample Name:	IB-11 4.0-6.0 091018	**Units:**	Percent
Lab Code:	K1809049-011	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1809049-011DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	56.8	56.4	56.6	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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WORK ORDER NUMBER: 18-09-0884

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Leidos

Client Project Name: India Basin

Attention: Charlie Phillips
1000 Broadway
Suite 675
Oakland, CA 94607-4099

Approved for release on 10/18/2018 by:
Carla Hollowell
Project Manager

ResultLink

Email your PM

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Work Order Number: 18-09-0884

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Work Order Narrative

Work Order: 18-09-0884 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 09/13/18. They were assigned to Work Order 18-09-0884.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

DoD Projects:

The test results contained in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ADE-1864.

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Sample Summary

Client:	Leidos 1000 Broadway, Suite 675 Oakland, CA 94607-4099	Work Order:	18-09-0884
		Project Name:	India Basin
		PO Number:	????
		Date/Time Received:	09/13/18 12:00
		Number of Containers:	72
Attn:	Charlie Phillips		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
Equipment Rinse #1	18-09-0884-1	09/11/18 00:00	1	Aqueous
Equipment Rinse #2	18-09-0884-2	09/11/18 00:00	1	Aqueous
Equipment Rinse #3	18-09-0884-3	09/11/18 00:00	1	Aqueous
IB-13 0.0-2.0 091118	18-09-0884-4	09/11/18 00:00	1	Sediment
IB-13 0.0-2.0 091118	18-09-0884-5	09/11/18 00:00	1	Sediment
IB-13 0.0-2.0 091118	18-09-0884-6	09/11/18 00:00	1	Sediment
IB-13 0.0-2.0 091118	18-09-0884-7	09/11/18 00:00	1	Sediment
IB-13 2.0-4.0 091118	18-09-0884-8	09/11/18 00:00	1	Sediment
IB-13 2.0-4.0 091118	18-09-0884-9	09/11/18 00:00	1	Sediment
IB-13 2.0-4.0 091118	18-09-0884-10	09/11/18 00:00	1	Sediment
IB-13 2.0-4.0 091118	18-09-0884-11	09/11/18 00:00	1	Sediment
IB-13 4.0-6.0 091118	18-09-0884-12	09/11/18 00:00	1	Sediment
IB-13 4.0-6.0 091118	18-09-0884-13	09/11/18 00:00	1	Sediment
IB-13 4.0-6.0 091118	18-09-0884-14	09/11/18 00:00	1	Sediment
IB-13 4.0-6.0 091118	18-09-0884-15	09/11/18 00:00	1	Sediment
IB-13 6.0-6.5 091118	18-09-0884-16	09/11/18 00:00	1	Sediment
IB-17 0.0-2.0 091118	18-09-0884-17	09/11/18 00:00	1	Sediment
IB-17 0.0-2.0 091118	18-09-0884-18	09/11/18 00:00	1	Sediment
IB-17 0.0-2.0 091118	18-09-0884-19	09/11/18 00:00	1	Sediment
IB-17 0.0-2.0 091118	18-09-0884-20	09/11/18 00:00	1	Sediment
IB-16 0.0-2.0 091118	18-09-0884-21	09/11/18 00:00	1	Sediment
IB-16 0.0-2.0 091118	18-09-0884-22	09/11/18 00:00	1	Sediment
IB-16 0.0-2.0 091118	18-09-0884-23	09/11/18 00:00	1	Sediment
IB-16 0.0-2.0 091118	18-09-0884-24	09/11/18 00:00	1	Sediment
IB-16 2.0-4.0 091118	18-09-0884-25	09/11/18 00:00	1	Sediment
IB-16 2.0-4.0 091118	18-09-0884-26	09/11/18 00:00	1	Sediment
IB-16 2.0-4.0 091118	18-09-0884-27	09/11/18 00:00	1	Sediment
IB-16 2.0-4.0 091118	18-09-0884-28	09/11/18 00:00	1	Sediment
IB-16 4.0-6.0 091118	18-09-0884-29	09/11/18 00:00	1	Sediment
IB-16 4.0-6.0 091118	18-09-0884-30	09/11/18 00:00	1	Sediment
IB-16 4.0-6.0 091118	18-09-0884-31	09/11/18 00:00	1	Sediment
IB-16 4.0-6.0 091118	18-09-0884-32	09/11/18 00:00	1	Sediment
IB-16 6.0-6.5 091118	18-09-0884-33	09/11/18 00:00	1	Sediment
IB-07 0.0-2.0 091118	18-09-0884-34	09/11/18 00:00	1	Sediment
IB-07 0.0-2.0 091118	18-09-0884-35	09/11/18 00:00	1	Sediment
IB-07 0.0-2.0 091118	18-09-0884-36	09/11/18 00:00	1	Sediment
IB-07 0.0-2.0 091118	18-09-0884-37	09/11/18 00:00	1	Sediment
IB-07 2.0-4.0 091118	18-09-0884-38	09/11/18 00:00	1	Sediment
IB-07 2.0-4.0 091118	18-09-0884-39	09/11/18 00:00	1	Sediment
IB-07 2.0-4.0 091118	18-09-0884-40	09/11/18 00:00	1	Sediment
IB-07 2.0-4.0 091118	18-09-0884-41	09/11/18 00:00	1	Sediment
IB-07 4.0-6.0 091118	18-09-0884-42	09/11/18 00:00	1	Sediment

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Sample Summary

Client:	Leidos 1000 Broadway, Suite 675 Oakland, CA 94607-4099	Work Order:	18-09-0884
		Project Name:	India Basin
		PO Number:	????
		Date/Time Received:	09/13/18 12:00
		Number of Containers:	72
Attn:	Charlie Phillips		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
IB-07 4.0-6.0 091118	18-09-0884-43	09/11/18 00:00	1	Sediment
IB-07 4.0-6.0 091118	18-09-0884-44	09/11/18 00:00	1	Sediment
IB-07 4.0-6.0 091118	18-09-0884-45	09/11/18 00:00	1	Sediment
IB-07 6.0-6.5 091118	18-09-0884-46	09/11/18 00:00	1	Sediment
IB-07 100 2.0-4.0 091118	18-09-0884-47	09/11/18 00:00	1	Sediment
IB-17 2.0-4.0 091118	18-09-0884-48	09/11/18 00:00	1	Sediment
IB-17 2.0-4.0 091118	18-09-0884-49	09/11/18 00:00	1	Sediment
IB-17 2.0-4.0 091118	18-09-0884-50	09/11/18 00:00	1	Sediment
IB-17 2.0-4.0 091118	18-09-0884-51	09/11/18 00:00	1	Sediment
IB-17 4.0-6.0 091118	18-09-0884-52	09/11/18 00:00	1	Sediment
IB-17 4.0-6.0 091118	18-09-0884-53	09/11/18 00:00	1	Sediment
IB-17 4.0-6.0 091118	18-09-0884-54	09/11/18 00:00	1	Sediment
IB-17 4.0-6.0 091118	18-09-0884-55	09/11/18 00:00	1	Sediment
IB-17 6.0-6.5 091118	18-09-0884-56	09/11/18 00:00	1	Sediment
IB-23 0.0-2.0 091118	18-09-0884-57	09/11/18 12:20	1	Sediment
IB-24 0.0-2.0 091118	18-09-0884-58	09/11/18 10:55	1	Sediment
IB-24 2.0-4.0 091118	18-09-0884-59	09/11/18 11:05	1	Sediment
IB-23 0.0-2.0 091118	18-09-0884-60	09/11/18 12:20	2	Sediment
IB-24 0.0-2.0 091118	18-09-0884-61	09/11/18 10:55	2	Sediment
IB-24 2.0-4.0 091118	18-09-0884-62	09/11/18 11:05	2	Sediment
IB-INNER 0.0-2.0 091118	18-09-0884-63	09/11/18 00:00	1	Sediment
IB-INNER 2.0-4.0 091118	18-09-0884-64	09/11/18 00:00	1	Sediment
IB-INNER 4.0-6.0 091118	18-09-0884-65	09/11/18 00:00	1	Sediment
IB-MIDDLE 0.0-2.0 091118	18-09-0884-66	09/11/18 00:00	1	Sediment
IB-MIDDLE 2.0-4.0 091118	18-09-0884-67	09/11/18 00:00	1	Sediment
IB-MIDDLE 4.0-6.0 091118	18-09-0884-68	09/11/18 00:00	1	Sediment
IB-INNER 100 2.0-4.0 091118	18-09-0884-69	09/11/18 00:00	1	Sediment

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 376.2M
		Units:	mg/kg
Project: India Basin			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-13 0.0-2.0 091118	**18-09-0884-4-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	54	6.0	5.0	25.0	

IB-13 2.0-4.0 091118	**18-09-0884-8-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	1.9	0.93	0.78	5.00	

IB-13 4.0-6.0 091118	**18-09-0884-12-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	0.44	0.18	0.15	1.00	

IB-17 0.0-2.0 091118	**18-09-0884-17-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	17	0.86	0.72	5.00	

IB-16 0.0-2.0 091118	**18-09-0884-21-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	9.8	0.89	0.75	5.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 376.2M
		Units:	mg/kg
Project: India Basin			Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-16 2.0-4.0 091118	**18-09-0884-25-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	3.0	0.87	0.73	5.00	

IB-16 4.0-6.0 091118	**18-09-0884-29-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	2.0	0.81	0.68	5.00	

IB-07 0.0-2.0 091118	**18-09-0884-34-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	5.2	0.86	0.73	5.00	

IB-07 2.0-4.0 091118	**18-09-0884-38-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	15	0.83	0.70	5.00	

IB-07 4.0-6.0 091118	**18-09-0884-42-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	7.6	0.80	0.67	5.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 376.2M
		Units:	mg/kg
Project: India Basin			Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 100 2.0-4.0 091118	**18-09-0884-47-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	21	0.83	0.69	5.00	

IB-17 2.0-4.0 091118	**18-09-0884-48-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	8.0	0.84	0.71	5.00	

IB-17 4.0-6.0 091118	**18-09-0884-52-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	4.4	0.88	0.74	5.00	

IB-23 0.0-2.0 091118	**18-09-0884-57-AA**	**09/11/18 12:20**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	ND	0.13	0.11	1.00	

IB-24 0.0-2.0 091118	**18-09-0884-58-AA**	**09/11/18 10:55**	**Sediment**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	7.0	0.67	0.56	5.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 376.2M
		Units:	mg/kg
Project: India Basin			Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-352-167**	**N/A**	**Solid**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Sulfide, Total	ND	0.10	0.084	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 9060A
		Units:	%
Project: India Basin			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-13 0.0-2.0 091118	**18-09-0884-4-AA**	**09/11/18 00:00**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.6	0.12	0.041	1.00	

IB-13 2.0-4.0 091118	**18-09-0884-8-AA**	**09/11/18 00:00**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.2	0.093	0.032	1.00	

IB-13 4.0-6.0 091118	**18-09-0884-12-AA**	**09/11/18 00:00**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.5	0.089	0.031	1.00	

IB-17 0.0-2.0 091118	**18-09-0884-17-AA**	**09/11/18 00:00**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	0.93	0.086	0.030	1.00	

IB-16 0.0-2.0 091118	**18-09-0884-21-AA**	**09/11/18 00:00**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	0.76	0.089	0.031	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 9060A
		Units:	%
Project: India Basin			Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-16 2.0-4.0 091118	**18-09-0884-25-AA**	**09/11/18 00:00**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.0	0.087	0.030	1.00	

IB-16 4.0-6.0 091118	**18-09-0884-29-AA**	**09/11/18 00:00**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.1	0.081	0.028	1.00	

IB-07 0.0-2.0 091118	**18-09-0884-34-AA**	**09/11/18 00:00**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.0	0.086	0.030	1.00	

IB-07 2.0-4.0 091118	**18-09-0884-38-AA**	**09/11/18 00:00**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.3	0.083	0.029	1.00	

IB-07 4.0-6.0 091118	**18-09-0884-42-AA**	**09/11/18 00:00**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.7	0.080	0.028	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 9060A
		Units:	%
Project: India Basin			Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 100 2.0-4.0 091118	**18-09-0884-47-AA**	**09/11/18 00:00**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.4	0.083	0.029	1.00	

IB-17 2.0-4.0 091118	**18-09-0884-48-AA**	**09/11/18 00:00**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.3	0.084	0.029	1.00	

IB-17 4.0-6.0 091118	**18-09-0884-52-AA**	**09/11/18 00:00**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.2	0.088	0.031	1.00	

IB-23 0.0-2.0 091118	**18-09-0884-57-AA**	**09/11/18 12:20**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	1.7	0.063	0.022	1.00	

IB-24 0.0-2.0 091118	**18-09-0884-58-AA**	**09/11/18 10:55**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	2.2	0.067	0.023	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 9060A
		Units:	%
Project: India Basin			Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-24 2.0-4.0 091118	**18-09-0884-59-AA**	**09/11/18 11:05**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	0.46	0.063	0.022	1.00	

Method Blank	**099-06-013-1900**	**N/A**	**Solid**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Carbon, Total Organic	ND	0.050	0.017	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	SM 2540 B (M)
		Units:	%
Project: India Basin			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-13 0.0-2.0 091118	**18-09-0884-4-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	42.0	0.100	0.100	1.00	

IB-13 2.0-4.0 091118	**18-09-0884-8-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	53.6	0.100	0.100	1.00	

IB-13 4.0-6.0 091118	**18-09-0884-12-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	56.4	0.100	0.100	1.00	

IB-17 0.0-2.0 091118	**18-09-0884-17-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	58.2	0.100	0.100	1.00	

IB-16 0.0-2.0 091118	**18-09-0884-21-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	56.2	0.100	0.100	1.00	

IB-16 2.0-4.0 091118	**18-09-0884-25-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	57.7	0.100	0.100	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	SM 2540 B (M)
		Units:	%
Project: India Basin			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-16 4.0-6.0 091118	**18-09-0884-29-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	61.7	0.100	0.100	1.00	

IB-07 0.0-2.0 091118	**18-09-0884-34-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	57.9	0.100	0.100	1.00	

IB-07 2.0-4.0 091118	**18-09-0884-38-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	60.0	0.100	0.100	1.00	

IB-07 4.0-6.0 091118	**18-09-0884-42-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	62.3	0.100	0.100	1.00	

IB-07 100 2.0-4.0 091118	**18-09-0884-47-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	60.6	0.100	0.100	1.00	

IB-17 2.0-4.0 091118	**18-09-0884-48-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	59.5	0.100	0.100	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	SM 2540 B (M)
		Units:	%
Project: India Basin			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-17 4.0-6.0 091118	**18-09-0884-52-AA**	**09/11/18 00:00**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	56.7	0.100	0.100	1.00	

IB-23 0.0-2.0 091118	**18-09-0884-57-AA**	**09/11/18 12:20**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	79.2	0.100	0.100	1.00	

IB-24 0.0-2.0 091118	**18-09-0884-58-AA**	**09/11/18 10:55**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	75.0	0.100	0.100	1.00	

IB-24 2.0-4.0 091118	**18-09-0884-59-AA**	**09/11/18 11:05**	**Sediment**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	79.5	0.100	0.100	1.00	

Method Blank	**099-05-019-4229**	**N/A**	**Solid**	**N/A**	**09/20/18**	**09/20/18 14:30**	**I0920TSB2**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	ND	0.100	0.100	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: India Basin			Page 1 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-13 0.0-2.0 091118	**18-09-0884-4-AA**	**09/11/18 00:00**	**Sediment**	**GC 47**	**09/25/18**	**09/25/18 23:19**	**180925B01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	ND	12	2.9	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	97	61-145	

IB-13 2.0-4.0 091118	**18-09-0884-8-AA**	**09/11/18 00:00**	**Sediment**	**GC 47**	**09/25/18**	**09/25/18 23:39**	**180925B01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	ND	9.0	2.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	112	61-145	

IB-13 4.0-6.0 091118	**18-09-0884-12-AA**	**09/11/18 00:00**	**Sediment**	**GC 47**	**09/25/18**	**09/26/18 00:00**	**180925B01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	ND	8.4	2.1	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	108	61-145	

IB-17 0.0-2.0 091118	**18-09-0884-17-AA**	**09/11/18 00:00**	**Sediment**	**GC 47**	**09/25/18**	**09/26/18 00:20**	**180925B01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	ND	8.2	2.1	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	104	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: India Basin			Page 2 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-16 0.0-2.0 091118	**18-09-0884-21-AA**	**09/11/18 00:00**	**Sediment**	**GC 47**	**09/25/18**	**09/26/18 00:40**	**180925B01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	12	8.6	2.1	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	107	61-145	

IB-16 2.0-4.0 091118	**18-09-0884-25-AA**	**09/11/18 00:00**	**Sediment**	**GC 47**	**09/25/18**	**09/26/18 01:21**	**180925B01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	ND	8.5	2.1	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	107	61-145	

IB-16 4.0-6.0 091118	**18-09-0884-29-AA**	**09/11/18 00:00**	**Sediment**	**GC 47**	**09/25/18**	**09/26/18 01:41**	**180925B01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	5.4	7.8	2.0	1.00	HD,J

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	103	61-145	

IB-07 0.0-2.0 091118	**18-09-0884-34-AA**	**09/11/18 00:00**	**Sediment**	**GC 47**	**09/25/18**	**09/26/18 02:01**	**180925B01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	ND	8.4	2.1	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	107	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: India Basin			Page 3 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 2.0-4.0 091118	**18-09-0884-38-AA**	**09/11/18 00:00**	**Sediment**	**GC 47**	**09/25/18**	**09/26/18 02:21**	**180925B01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	14	8.0	2.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	101	61-145	

IB-07 4.0-6.0 091118	**18-09-0884-42-AA**	**09/11/18 00:00**	**Sediment**	**GC 47**	**09/25/18**	**09/26/18 02:41**	**180925B01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	22	8.0	2.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	106	61-145	

IB-07 100 2.0-4.0 091118	**18-09-0884-47-AA**	**09/11/18 00:00**	**Sediment**	**GC 47**	**09/25/18**	**09/26/18 03:01**	**180925B01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	22	7.9	2.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	99	61-145	

IB-17 2.0-4.0 091118	**18-09-0884-48-AA**	**09/11/18 00:00**	**Sediment**	**GC 47**	**09/25/18**	**09/26/18 03:22**	**180925B01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	6.2	8.0	2.0	1.00	HD,J

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	113	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: India Basin			Page 4 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-17 4.0-6.0 091118	**18-09-0884-52-AA**	**09/11/18 00:00**	**Sediment**	**GC 47**	**09/25/18**	**09/26/18 03:42**	**180925B01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	ND	8.7	2.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	98	61-145	

IB-23 0.0-2.0 091118	**18-09-0884-57-A**	**09/11/18 12:20**	**Sediment**	**GC 47**	**09/25/18**	**09/26/18 04:02**	**180925B01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	5600	130	31	20.0	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	119	61-145	

IB-24 0.0-2.0 091118	**18-09-0884-58-AA**	**09/11/18 10:55**	**Sediment**	**GC 47**	**09/25/18**	**09/26/18 04:22**	**180925B01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	300	6.6	1.7	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	101	61-145	

IB-24 2.0-4.0 091118	**18-09-0884-59-A**	**09/11/18 11:05**	**Sediment**	**GC 47**	**09/25/18**	**09/26/18 05:02**	**180925B01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	61	6.2	1.6	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	106	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: India Basin			Page 5 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-454-4**	**N/A**	**Solid**	**GC 47**	**09/25/18**	**09/25/18 21:38**	**180925B01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Diesel Range Organics (C10-C36)	ND	5.0	1.3	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	104	61-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3020A Total
		Method:	EPA 6020
		Units:	ug/L
Project: India Basin			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Equipment Rinse #2	**18-09-0884-2-A**	**09/11/18 00:00**	**Aqueous**	**ICP/MS 05**	**09/28/18**	**10/02/18 03:24**	**180928LA4A**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	ND	1.00	0.386	1.00	
Cadmium	ND	1.00	0.128	1.00	
Chromium	ND	1.00	0.402	1.00	
Cobalt	ND	1.00	0.0919	1.00	
Copper	0.474	1.00	0.140	1.00	J
Lead	ND	1.00	0.0898	1.00	
Nickel	ND	1.00	0.132	1.00	
Selenium	ND	1.00	0.168	1.00	
Silver	ND	1.00	0.111	1.00	
Zinc	ND	5.00	0.479	1.00	

Method Blank	**096-06-003-6032**	**N/A**	**Aqueous**	**ICP/MS 05**	**09/28/18**	**10/03/18 01:41**	**180928LA4A**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	ND	1.00	0.386	1.00	
Cadmium	ND	1.00	0.128	1.00	
Chromium	ND	1.00	0.402	1.00	
Cobalt	ND	1.00	0.0919	1.00	
Copper	ND	1.00	0.140	1.00	
Lead	ND	1.00	0.0898	1.00	
Nickel	ND	1.00	0.132	1.00	
Selenium	ND	1.00	0.168	1.00	
Silver	ND	1.00	0.111	1.00	
Zinc	ND	5.00	0.479	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 1 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-13 0.0-2.0 091118	**18-09-0884-4-AA**	**09/11/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 22:30**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	12.0	0.238	0.208	1.00	
Cadmium	0.317	0.238	0.136	1.00	
Chromium	77.8	0.238	0.148	1.00	
Cobalt	15.0	0.238	0.0869	1.00	
Copper	82.2	0.238	0.0998	1.00	
Lead	48.7	0.238	0.157	1.00	
Nickel	96.4	0.238	0.121	1.00	
Selenium	ND	0.238	0.174	1.00	
Silver	0.778	0.238	0.0745	1.00	
Zinc	148	2.38	1.89	1.00	

IB-13 2.0-4.0 091118	**18-09-0884-8-AA**	**09/11/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 22:37**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	15.5	0.187	0.163	1.00	
Cadmium	0.422	0.187	0.107	1.00	
Chromium	85.2	0.187	0.116	1.00	
Cobalt	15.6	0.187	0.0681	1.00	
Copper	82.2	0.187	0.0782	1.00	
Lead	35.1	0.187	0.123	1.00	
Nickel	118	0.187	0.0945	1.00	
Selenium	ND	0.187	0.136	1.00	
Silver	0.771	0.187	0.0584	1.00	
Zinc	115	1.87	1.48	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 2 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-13 4.0-6.0 091118	**18-09-0884-12-AA**	**09/11/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 22:41**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	14.3	0.177	0.155	1.00	
Cadmium	0.343	0.177	0.101	1.00	
Chromium	68.3	0.177	0.110	1.00	
Cobalt	15.5	0.177	0.0647	1.00	
Copper	35.3	0.177	0.0743	1.00	
Lead	11.3	0.177	0.117	1.00	
Nickel	81.2	0.177	0.0898	1.00	
Selenium	ND	0.177	0.130	1.00	
Silver	0.586	0.177	0.0555	1.00	
Zinc	86.4	1.77	1.41	1.00	

IB-17 0.0-2.0 091118	**18-09-0884-17-AA**	**09/11/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 22:44**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	10.7	0.172	0.150	1.00	
Cadmium	0.274	0.172	0.0983	1.00	
Chromium	63.9	0.172	0.107	1.00	
Cobalt	12.1	0.172	0.0627	1.00	
Copper	71.2	0.172	0.0720	1.00	
Lead	28.3	0.172	0.113	1.00	
Nickel	75.5	0.172	0.0870	1.00	
Selenium	0.884	0.172	0.126	1.00	
Silver	0.645	0.172	0.0538	1.00	
Zinc	98.2	1.72	1.37	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 3 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-16 0.0-2.0 091118	**18-09-0884-21-AA**	**09/11/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 22:48**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	12.5	0.178	0.155	1.00	
Cadmium	0.379	0.178	0.102	1.00	
Chromium	90.1	0.178	0.110	1.00	
Cobalt	13.8	0.178	0.0649	1.00	
Copper	130	0.178	0.0746	1.00	
Lead	71.3	0.178	0.117	1.00	
Nickel	136	0.178	0.0901	1.00	
Selenium	1.19	0.178	0.130	1.00	
Silver	0.754	0.178	0.0557	1.00	
Zinc	133	1.78	1.41	1.00	

IB-16 2.0-4.0 091118	**18-09-0884-25-AA**	**09/11/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 23:02**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	12.1	0.173	0.151	1.00	
Cadmium	0.309	0.173	0.0992	1.00	
Chromium	67.1	0.173	0.108	1.00	
Cobalt	13.8	0.173	0.0632	1.00	
Copper	41.2	0.173	0.0726	1.00	
Lead	18.2	0.173	0.114	1.00	
Nickel	91.8	0.173	0.0877	1.00	
Selenium	ND	0.173	0.127	1.00	
Silver	0.617	0.173	0.0542	1.00	
Zinc	84.0	1.73	1.38	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 4 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-16 4.0-6.0 091118	**18-09-0884-29-AA**	**09/11/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 23:06**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	12.8	0.162	0.142	1.00	
Cadmium	0.334	0.162	0.0928	1.00	
Chromium	82.9	0.162	0.101	1.00	
Cobalt	14.4	0.162	0.0591	1.00	
Copper	36.5	0.162	0.0679	1.00	
Lead	18.1	0.162	0.107	1.00	
Nickel	111	0.162	0.0821	1.00	
Selenium	ND	0.162	0.118	1.00	
Silver	0.544	0.162	0.0507	1.00	
Zinc	72.2	1.62	1.29	1.00	

IB-07 0.0-2.0 091118	**18-09-0884-34-AA**	**09/11/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 23:09**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	12.6	0.173	0.151	1.00	
Cadmium	0.295	0.173	0.0988	1.00	
Chromium	77.9	0.173	0.107	1.00	
Cobalt	15.1	0.173	0.0630	1.00	
Copper	34.9	0.173	0.0724	1.00	
Lead	14.5	0.173	0.114	1.00	
Nickel	102	0.173	0.0874	1.00	
Selenium	ND	0.173	0.126	1.00	
Silver	0.633	0.173	0.0541	1.00	
Zinc	82.0	1.73	1.37	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 5 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 2.0-4.0 091118	**18-09-0884-38-AA**	**09/11/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 23:13**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	14.6	0.167	0.146	1.00	
Cadmium	0.640	0.167	0.0954	1.00	
Chromium	94.2	0.167	0.103	1.00	
Cobalt	16.4	0.167	0.0608	1.00	
Copper	60.7	0.167	0.0699	1.00	
Lead	47.7	0.167	0.110	1.00	
Nickel	148	0.167	0.0844	1.00	
Selenium	ND	0.167	0.122	1.00	
Silver	0.707	0.167	0.0522	1.00	
Zinc	115	1.67	1.32	1.00	

IB-07 4.0-6.0 091118	**18-09-0884-42-AA**	**09/11/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 23:17**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	20.5	0.161	0.140	1.00	
Cadmium	0.843	0.161	0.0919	1.00	
Chromium	122	0.161	0.0996	1.00	
Cobalt	21.2	0.161	0.0586	1.00	
Copper	103	0.161	0.0673	1.00	
Lead	89.4	0.161	0.106	1.00	
Nickel	225	0.161	0.0813	1.00	
Selenium	ND	0.161	0.117	1.00	
Silver	0.833	0.161	0.0502	1.00	
Zinc	152	1.61	1.28	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 6 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 100 2.0-4.0 091118	**18-09-0884-47-AA**	**09/11/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 23:20**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	18.3	0.165	0.144	1.00	
Cadmium	1.01	0.165	0.0944	1.00	
Chromium	111	0.165	0.102	1.00	
Cobalt	19.1	0.165	0.0602	1.00	
Copper	92.1	0.165	0.0692	1.00	
Lead	91.9	0.165	0.109	1.00	
Nickel	175	0.165	0.0835	1.00	
Selenium	ND	0.165	0.121	1.00	
Silver	0.884	0.165	0.0516	1.00	
Zinc	276	1.65	1.31	1.00	

IB-17 2.0-4.0 091118	**18-09-0884-48-AA**	**09/11/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 12:44**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	20.3	0.168	0.147	1.00	
Cadmium	1.05	0.168	0.0962	1.00	
Chromium	94.7	0.168	0.104	1.00	
Cobalt	17.2	0.168	0.0613	1.00	
Copper	80.4	0.168	0.0704	1.00	
Lead	57.8	0.168	0.111	1.00	
Nickel	116	0.168	0.0851	1.00	
Selenium	ND	0.168	0.123	1.00	
Silver	1.08	0.168	0.0526	1.00	
Zinc	148	1.68	1.34	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 7 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-17 4.0-6.0 091118	**18-09-0884-52-AA**	**09/11/18 00:00**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 23:27**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	13.2	0.176	0.154	1.00	
Cadmium	0.337	0.176	0.101	1.00	
Chromium	79.2	0.176	0.109	1.00	
Cobalt	16.3	0.176	0.0643	1.00	
Copper	35.7	0.176	0.0739	1.00	
Lead	10.8	0.176	0.116	1.00	
Nickel	90.5	0.176	0.0893	1.00	
Selenium	0.197	0.176	0.129	1.00	
Silver	0.683	0.176	0.0552	1.00	
Zinc	87.7	1.76	1.40	1.00	

IB-23 0.0-2.0 091118	**18-09-0884-57-A**	**09/11/18 12:20**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 23:31**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	12.7	0.126	0.110	1.00	
Cadmium	0.520	0.126	0.0723	1.00	
Chromium	38.0	0.126	0.0784	1.00	
Cobalt	39.3	0.126	0.0461	1.00	
Copper	764	0.126	0.0529	1.00	
Lead	2700	0.126	0.0832	1.00	
Nickel	85.1	0.126	0.0639	1.00	
Selenium	ND	0.126	0.0923	1.00	
Silver	0.431	0.126	0.0395	1.00	
Zinc	1070	1.26	1.00	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 8 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-24 0.0-2.0 091118	**18-09-0884-58-AA**	**09/11/18 10:55**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 23:34**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	11.8	0.133	0.116	1.00	
Cadmium	1.22	0.133	0.0763	1.00	
Chromium	153	0.133	0.0828	1.00	
Cobalt	34.6	0.133	0.0486	1.00	
Copper	935	0.133	0.0559	1.00	
Lead	766	0.133	0.0879	1.00	
Nickel	418	0.133	0.0675	1.00	
Selenium	5.12	0.133	0.0974	1.00	
Silver	0.725	0.133	0.0417	1.00	
Zinc	833	1.33	1.06	1.00	

IB-24 2.0-4.0 091118	**18-09-0884-59-A**	**09/11/18 11:05**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/25/18 00:10**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	2.69	0.126	0.110	1.00	
Cadmium	0.171	0.126	0.0720	1.00	
Chromium	488	0.126	0.0781	1.00	
Cobalt	48.4	0.126	0.0459	1.00	
Copper	375	0.126	0.0527	1.00	
Lead	158	0.126	0.0829	1.00	
Nickel	1020	0.126	0.0637	1.00	
Selenium	2.40	0.126	0.0919	1.00	
Silver	0.149	0.126	0.0394	1.00	
Zinc	364	1.26	1.00	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin			Page 9 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-254-666**	**N/A**	**Solid**	**ICP/MS 05**	**09/21/18**	**09/25/18 16:03**	**180921L03**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	ND	0.100	0.0873	1.00	
Cadmium	ND	0.100	0.0572	1.00	
Chromium	ND	0.100	0.0621	1.00	
Cobalt	ND	0.100	0.0365	1.00	
Copper	ND	0.100	0.0419	1.00	
Lead	ND	0.100	0.0659	1.00	
Nickel	ND	0.100	0.0506	1.00	
Selenium	ND	0.100	0.0731	1.00	
Silver	ND	0.100	0.0313	1.00	
Zinc	ND	1.00	0.795	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	ASTM D4464 (M)
		Units:	%
Project: India Basin			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-13 0.0-2.0 091118	**18-09-0884-5-A**	**09/11/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/09/18 15:19**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	20.18	
Silt (0.00391 to 0.0625mm)	64.65	
Total Silt and Clay (0 to 0.0625mm)	84.83	
Very Fine Sand (0.0625 to 0.125mm)	9.36	
Fine Sand (0.125 to 0.25mm)	5.65	
Medium Sand (0.25 to 0.5mm)	0.17	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

IB-13 2.0-4.0 091118	**18-09-0884-9-A**	**09/11/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/09/18 15:25**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	21.48	
Silt (0.00391 to 0.0625mm)	68.06	
Total Silt and Clay (0 to 0.0625mm)	89.54	
Very Fine Sand (0.0625 to 0.125mm)	5.44	
Fine Sand (0.125 to 0.25mm)	3.54	
Medium Sand (0.25 to 0.5mm)	1.48	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

IB-13 4.0-6.0 091118	**18-09-0884-13-A**	**09/11/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/09/18 15:37**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	22.16	
Silt (0.00391 to 0.0625mm)	64.75	
Total Silt and Clay (0 to 0.0625mm)	86.91	
Very Fine Sand (0.0625 to 0.125mm)	6.57	
Fine Sand (0.125 to 0.25mm)	5.80	
Medium Sand (0.25 to 0.5mm)	0.72	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	ASTM D4464 (M)
		Units:	%
Project: India Basin			Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-17 0.0-2.0 091118	**18-09-0884-18-A**	**09/11/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/09/18 15:50**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	16.60	
Silt (0.00391 to 0.0625mm)	48.23	
Total Silt and Clay (0 to 0.0625mm)	64.82	
Very Fine Sand (0.0625 to 0.125mm)	10.91	
Fine Sand (0.125 to 0.25mm)	12.79	
Medium Sand (0.25 to 0.5mm)	11.33	
Coarse Sand (0.5 to 1mm)	0.16	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

IB-16 0.0-2.0 091118	**18-09-0884-22-A**	**09/11/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/09/18 15:59**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	11.17	
Silt (0.00391 to 0.0625mm)	34.39	
Total Silt and Clay (0 to 0.0625mm)	45.56	
Very Fine Sand (0.0625 to 0.125mm)	13.00	
Fine Sand (0.125 to 0.25mm)	14.47	
Medium Sand (0.25 to 0.5mm)	21.41	
Coarse Sand (0.5 to 1mm)	5.55	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

IB-16 2.0-4.0 091118	**18-09-0884-26-A**	**09/11/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/09/18 16:14**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	14.74	
Silt (0.00391 to 0.0625mm)	43.36	
Total Silt and Clay (0 to 0.0625mm)	58.10	
Very Fine Sand (0.0625 to 0.125mm)	13.09	
Fine Sand (0.125 to 0.25mm)	12.22	
Medium Sand (0.25 to 0.5mm)	15.25	
Coarse Sand (0.5 to 1mm)	1.34	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	ASTM D4464 (M)
		Units:	%
Project: India Basin			Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-16 4.0-6.0 091118	**18-09-0884-30-A**	**09/11/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/09/18 16:23**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	21.50	
Silt (0.00391 to 0.0625mm)	61.49	
Total Silt and Clay (0 to 0.0625mm)	82.99	
Very Fine Sand (0.0625 to 0.125mm)	8.01	
Fine Sand (0.125 to 0.25mm)	8.73	
Medium Sand (0.25 to 0.5mm)	0.27	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

IB-07 0.0-2.0 091118	**18-09-0884-35-A**	**09/11/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/09/18 16:32**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	19.88	
Silt (0.00391 to 0.0625mm)	53.94	
Total Silt and Clay (0 to 0.0625mm)	73.82	
Very Fine Sand (0.0625 to 0.125mm)	12.29	
Fine Sand (0.125 to 0.25mm)	13.64	
Medium Sand (0.25 to 0.5mm)	0.25	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

IB-07 2.0-4.0 091118	**18-09-0884-39-A**	**09/11/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/09/18 18:56**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	17.54	
Silt (0.00391 to 0.0625mm)	52.05	
Total Silt and Clay (0 to 0.0625mm)	69.59	
Very Fine Sand (0.0625 to 0.125mm)	11.30	
Fine Sand (0.125 to 0.25mm)	10.46	
Medium Sand (0.25 to 0.5mm)	5.79	
Coarse Sand (0.5 to 1mm)	2.86	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	ASTM D4464 (M)
		Units:	%
Project: India Basin			Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 4.0-6.0 091118	**18-09-0884-43-A**	**09/11/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/09/18 19:06**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	18.25	
Silt (0.00391 to 0.0625mm)	58.46	
Total Silt and Clay (0 to 0.0625mm)	76.71	
Very Fine Sand (0.0625 to 0.125mm)	12.38	
Fine Sand (0.125 to 0.25mm)	10.55	
Medium Sand (0.25 to 0.5mm)	0.36	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

IB-17 2.0-4.0 091118	**18-09-0884-49-A**	**09/11/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/09/18 19:26**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	20.14	
Silt (0.00391 to 0.0625mm)	60.51	
Total Silt and Clay (0 to 0.0625mm)	80.65	
Very Fine Sand (0.0625 to 0.125mm)	10.61	
Fine Sand (0.125 to 0.25mm)	6.24	
Medium Sand (0.25 to 0.5mm)	2.49	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

IB-17 4.0-6.0 091118	**18-09-0884-53-A**	**09/11/18 00:00**	**Sediment**	**LPSA 1**	**N/A**	**10/09/18 19:32**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	21.86	
Silt (0.00391 to 0.0625mm)	65.22	
Total Silt and Clay (0 to 0.0625mm)	87.08	
Very Fine Sand (0.0625 to 0.125mm)	8.11	
Fine Sand (0.125 to 0.25mm)	4.58	
Medium Sand (0.25 to 0.5mm)	0.23	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3510C
		Method:	EPA 8270C SIM PAHs
		Units:	ug/L
Project: India Basin			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Equipment Rinse #1	**18-09-0884-1-A**	**09/11/18 00:00**	**Aqueous**	**GC/MS AAA**	**09/20/18**	**09/21/18 15:56**	**180920L04**

Comment(s): - Sample extracted outside recommended holding time.

Parameter	Result	RL	DF	Qualifiers
Dibenzothiophene	ND	0.19	1.00	ET
Naphthalene	ND	0.19	1.00	ET
2-Methylnaphthalene	ND	0.19	1.00	ET
1-Methylnaphthalene	ND	0.19	1.00	ET
Acenaphthylene	ND	0.19	1.00	ET
Acenaphthene	ND	0.19	1.00	ET
Fluorene	ND	0.19	1.00	ET
Phenanthrene	ND	0.19	1.00	ET
Anthracene	ND	0.19	1.00	ET
Fluoranthene	ND	0.19	1.00	ET
Pyrene	ND	0.19	1.00	ET
Benzo (a) Anthracene	ND	0.19	1.00	ET
Chrysene	ND	0.19	1.00	ET
Benzo (k) Fluoranthene	ND	0.19	1.00	ET
Benzo (b) Fluoranthene	ND	0.19	1.00	ET
Benzo (a) Pyrene	ND	0.19	1.00	ET
Indeno (1,2,3-c,d) Pyrene	ND	0.19	1.00	ET
Dibenz (a,h) Anthracene	ND	0.19	1.00	ET
Benzo (g,h,i) Perylene	ND	0.19	1.00	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	53	28-139	
2-Fluorobiphenyl	75	33-144	
p-Terphenyl-d14	74	23-160	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3510C
		Method:	EPA 8270C SIM PAHs
		Units:	ug/L
Project: India Basin			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-06-008-1075**	**N/A**	**Aqueous**	**GC/MS AAA**	**09/20/18**	**09/21/18 15:36**	**180920L04**

Parameter	Result	RL	DF	Qualifiers
Dibenzothiophene	ND	0.20	1.00	
Naphthalene	ND	0.20	1.00	
2-Methylnaphthalene	ND	0.20	1.00	
1-Methylnaphthalene	ND	0.20	1.00	
Acenaphthylene	ND	0.20	1.00	
Acenaphthene	ND	0.20	1.00	
Fluorene	ND	0.20	1.00	
Phenanthrene	ND	0.20	1.00	
Anthracene	ND	0.20	1.00	
Fluoranthene	ND	0.20	1.00	
Pyrene	ND	0.20	1.00	
Benzo (a) Anthracene	ND	0.20	1.00	
Chrysene	ND	0.20	1.00	
Benzo (k) Fluoranthene	ND	0.20	1.00	
Benzo (b) Fluoranthene	ND	0.20	1.00	
Benzo (a) Pyrene	ND	0.20	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.20	1.00	
Dibenz (a,h) Anthracene	ND	0.20	1.00	
Benzo (g,h,i) Perylene	ND	0.20	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	58	28-139	
2-Fluorobiphenyl	79	33-144	
p-Terphenyl-d14	82	23-160	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 1 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-13 0.0-2.0 091118	**18-09-0884-4-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 03:17**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	47	11	2.00	
Acenaphthylene	12	47	8.3	2.00	J
Anthracene	31	47	16	2.00	J
Benzo (a) Anthracene	110	47	10	2.00	
Benzo (a) Pyrene	220	47	8.6	2.00	
Benzo (b) Fluoranthene	200	47	13	2.00	
Benzo (e) Pyrene	140	47	9.2	2.00	
Benzo (g,h,i) Perylene	180	47	7.2	2.00	
Benzo (k) Fluoranthene	130	47	13	2.00	
Biphenyl	ND	47	8.7	2.00	
Chrysene	120	47	10	2.00	
Dibenz (a,h) Anthracene	32	47	9.1	2.00	J
2,6-Dimethylnaphthalene	13	47	8.0	2.00	J
Fluoranthene	230	47	8.5	2.00	
Fluorene	ND	47	15	2.00	
Indeno (1,2,3-c,d) Pyrene	140	47	7.4	2.00	
2-Methylnaphthalene	ND	47	11	2.00	
1-Methylnaphthalene	ND	47	11	2.00	
1-Methylphenanthrene	12	47	12	2.00	J
Naphthalene	ND	47	16	2.00	
Perylene	75	47	11	2.00	
Phenanthrene	83	47	10	2.00	
Pyrene	320	47	11	2.00	
1,6,7-Trimethylnaphthalene	ND	47	9.1	2.00	
Dibenzothiophene	ND	47	6.3	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	56	14-146	
Nitrobenzene-d5	39	18-162	
p-Terphenyl-d14	79	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 2 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-13 2.0-4.0 091118	**18-09-0884-8-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 03:36**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	12	36	8.6	2.00	J
Acenaphthylene	16	36	6.5	2.00	J
Anthracene	50	36	13	2.00	
Benzo (a) Anthracene	150	36	7.8	2.00	
Benzo (a) Pyrene	350	36	6.7	2.00	
Benzo (b) Fluoranthene	310	36	9.9	2.00	
Benzo (e) Pyrene	200	36	7.2	2.00	
Benzo (g,h,i) Perylene	310	36	5.6	2.00	
Benzo (k) Fluoranthene	180	36	10	2.00	
Biphenyl	ND	36	6.8	2.00	
Chrysene	190	36	8.1	2.00	
Dibenz (a,h) Anthracene	49	36	7.1	2.00	
2,6-Dimethylnaphthalene	12	36	6.2	2.00	J
Fluoranthene	350	36	6.6	2.00	
Fluorene	15	36	11	2.00	J
Indeno (1,2,3-c,d) Pyrene	210	36	5.8	2.00	
2-Methylnaphthalene	11	36	8.5	2.00	J
1-Methylnaphthalene	ND	36	8.5	2.00	
1-Methylphenanthrene	16	36	9.0	2.00	J
Naphthalene	36	36	13	2.00	J
Perylene	98	36	8.7	2.00	
Phenanthrene	120	36	8.1	2.00	
Pyrene	750	36	8.2	2.00	
1,6,7-Trimethylnaphthalene	ND	36	7.1	2.00	
Dibenzothiophene	ND	36	4.9	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	58	14-146	
Nitrobenzene-d5	41	18-162	
p-Terphenyl-d14	78	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 3 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-13 4.0-6.0 091118	**18-09-0884-12-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 03:56**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	35	8.1	2.00	
Acenaphthylene	ND	35	6.2	2.00	
Anthracene	ND	35	12	2.00	
Benzo (a) Anthracene	32	35	7.5	2.00	J
Benzo (a) Pyrene	53	35	6.3	2.00	
Benzo (b) Fluoranthene	35	35	9.5	2.00	
Benzo (e) Pyrene	30	35	6.8	2.00	J
Benzo (g,h,i) Perylene	43	35	5.3	2.00	
Benzo (k) Fluoranthene	33	35	9.6	2.00	J
Biphenyl	ND	35	6.5	2.00	
Chrysene	34	35	7.7	2.00	J
Dibenz (a,h) Anthracene	8.2	35	6.7	2.00	J
2,6-Dimethylnaphthalene	7.3	35	5.9	2.00	J
Fluoranthene	59	35	6.3	2.00	
Fluorene	ND	35	11	2.00	
Indeno (1,2,3-c,d) Pyrene	29	35	5.5	2.00	J
2-Methylnaphthalene	ND	35	8.1	2.00	
1-Methylnaphthalene	ND	35	8.1	2.00	
1-Methylphenanthrene	ND	35	8.6	2.00	
Naphthalene	ND	35	12	2.00	
Perylene	57	35	8.2	2.00	
Phenanthrene	25	35	7.7	2.00	J
Pyrene	100	35	7.8	2.00	
1,6,7-Trimethylnaphthalene	ND	35	6.7	2.00	
Dibenzothiophene	ND	35	4.7	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	56	14-146	
Nitrobenzene-d5	47	18-162	
p-Terphenyl-d14	81	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 4 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-17 0.0-2.0 091118	**18-09-0884-17-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 04:15**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	34	7.9	2.00	
Acenaphthylene	11	34	6.0	2.00	J
Anthracene	51	34	12	2.00	
Benzo (a) Anthracene	140	34	7.3	2.00	
Benzo (a) Pyrene	210	34	6.2	2.00	
Benzo (b) Fluoranthene	200	34	9.2	2.00	
Benzo (e) Pyrene	130	34	6.6	2.00	
Benzo (g,h,i) Perylene	160	34	5.2	2.00	
Benzo (k) Fluoranthene	140	34	9.4	2.00	
Biphenyl	ND	34	6.3	2.00	
Chrysene	160	34	7.5	2.00	
Dibenz (a,h) Anthracene	35	34	6.6	2.00	
2,6-Dimethylnaphthalene	10	34	5.8	2.00	J
Fluoranthene	260	34	6.1	2.00	
Fluorene	ND	34	11	2.00	
Indeno (1,2,3-c,d) Pyrene	120	34	5.4	2.00	
2-Methylnaphthalene	ND	34	7.8	2.00	
1-Methylnaphthalene	ND	34	7.8	2.00	
1-Methylphenanthrene	17	34	8.4	2.00	J
Naphthalene	ND	34	12	2.00	
Perylene	70	34	8.0	2.00	
Phenanthrene	120	34	7.5	2.00	
Pyrene	350	34	7.6	2.00	
1,6,7-Trimethylnaphthalene	ND	34	6.6	2.00	
Dibenzothiophene	ND	34	4.5	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	65	14-146	
Nitrobenzene-d5	40	18-162	
p-Terphenyl-d14	98	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 5 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-16 0.0-2.0 091118	**18-09-0884-21-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 04:34**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	13	35	8.2	2.00	J
Acenaphthylene	23	35	6.3	2.00	J
Anthracene	86	35	12	2.00	
Benzo (a) Anthracene	240	35	7.6	2.00	
Benzo (a) Pyrene	420	35	6.4	2.00	
Benzo (b) Fluoranthene	410	35	9.6	2.00	
Benzo (e) Pyrene	230	35	6.9	2.00	
Benzo (g,h,i) Perylene	300	35	5.4	2.00	
Benzo (k) Fluoranthene	240	35	9.8	2.00	
Biphenyl	ND	35	6.5	2.00	
Chrysene	290	35	7.8	2.00	
Dibenz (a,h) Anthracene	76	35	6.8	2.00	
2,6-Dimethylnaphthalene	9.6	35	6.0	2.00	J
Fluoranthene	480	35	6.4	2.00	
Fluorene	22	35	11	2.00	J
Indeno (1,2,3-c,d) Pyrene	240	35	5.6	2.00	
2-Methylnaphthalene	ND	35	8.2	2.00	
1-Methylnaphthalene	ND	35	8.2	2.00	
1-Methylphenanthrene	32	35	8.7	2.00	J
Naphthalene	17	35	12	2.00	J
Perylene	92	35	8.3	2.00	
Phenanthrene	260	35	7.8	2.00	
Pyrene	600	35	7.9	2.00	
1,6,7-Trimethylnaphthalene	ND	35	6.8	2.00	
Dibenzothiophene	ND	35	4.7	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	52	14-146	
Nitrobenzene-d5	43	18-162	
p-Terphenyl-d14	78	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 6 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-16 2.0-4.0 091118	**18-09-0884-25-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 04:54**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	17	34	8.0	2.00	J
Acenaphthylene	8.3	34	6.1	2.00	J
Anthracene	26	34	12	2.00	J
Benzo (a) Anthracene	84	34	7.3	2.00	
Benzo (a) Pyrene	140	34	6.2	2.00	
Benzo (b) Fluoranthene	150	34	9.3	2.00	
Benzo (e) Pyrene	93	34	6.7	2.00	
Benzo (g,h,i) Perylene	130	34	5.2	2.00	
Benzo (k) Fluoranthene	86	34	9.5	2.00	
Biphenyl	ND	34	6.3	2.00	
Chrysene	110	34	7.6	2.00	
Dibenz (a,h) Anthracene	25	34	6.6	2.00	J
2,6-Dimethylnaphthalene	8.2	34	5.8	2.00	J
Fluoranthene	200	34	6.2	2.00	
Fluorene	16	34	11	2.00	J
Indeno (1,2,3-c,d) Pyrene	89	34	5.4	2.00	
2-Methylnaphthalene	ND	34	7.9	2.00	
1-Methylnaphthalene	ND	34	7.9	2.00	
1-Methylphenanthrene	ND	34	8.4	2.00	
Naphthalene	12	34	12	2.00	J
Perylene	100	34	8.1	2.00	
Phenanthrene	68	34	7.6	2.00	
Pyrene	270	34	7.6	2.00	
1,6,7-Trimethylnaphthalene	ND	34	6.6	2.00	
Dibenzothiophene	ND	34	4.6	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	62	14-146	
Nitrobenzene-d5	46	18-162	
p-Terphenyl-d14	87	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 7 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-16 4.0-6.0 091118	**18-09-0884-29-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 05:14**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	33	32	7.6	2.00	
Acenaphthylene	51	32	5.7	2.00	
Anthracene	240	32	11	2.00	
Benzo (a) Anthracene	1300	32	6.9	2.00	
Benzo (a) Pyrene	900	32	5.9	2.00	
Benzo (b) Fluoranthene	990	32	8.8	2.00	
Benzo (e) Pyrene	530	32	6.3	2.00	
Benzo (g,h,i) Perylene	600	32	4.9	2.00	
Benzo (k) Fluoranthene	610	32	8.9	2.00	
Biphenyl	ND	32	6.0	2.00	
Dibenz (a,h) Anthracene	130	32	6.3	2.00	
2,6-Dimethylnaphthalene	10	32	5.5	2.00	J
Fluorene	45	32	10	2.00	
Indeno (1,2,3-c,d) Pyrene	450	32	5.1	2.00	
2-Methylnaphthalene	ND	32	7.5	2.00	
1-Methylnaphthalene	ND	32	7.5	2.00	
1-Methylphenanthrene	38	32	8.0	2.00	
Naphthalene	35	32	11	2.00	
Perylene	240	32	7.6	2.00	
Phenanthrene	250	32	7.1	2.00	
1,6,7-Trimethylnaphthalene	6.7	32	6.2	2.00	J
Dibenzothiophene	20	32	4.3	2.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	57	14-146	
Nitrobenzene-d5	39	18-162	
p-Terphenyl-d14	96	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 8 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-16 4.0-6.0 091118	**18-09-0884-29-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/24/18 21:48**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Chrysene	1500	80	18	5.00	
Fluoranthene	1700	80	15	5.00	
Pyrene	2100	80	18	5.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	49	14-146	
Nitrobenzene-d5	39	18-162	
p-Terphenyl-d14	86	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 9 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 0.0-2.0 091118	**18-09-0884-34-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 05:33**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	35	8.1	2.00	
Acenaphthylene	ND	35	6.2	2.00	
Anthracene	ND	35	12	2.00	
Benzo (a) Anthracene	35	35	7.4	2.00	
Benzo (a) Pyrene	46	35	6.3	2.00	
Benzo (b) Fluoranthene	36	35	9.4	2.00	
Benzo (e) Pyrene	31	35	6.8	2.00	J
Benzo (g,h,i) Perylene	48	35	5.3	2.00	
Benzo (k) Fluoranthene	27	35	9.6	2.00	J
Biphenyl	ND	35	6.4	2.00	
Chrysene	27	35	7.7	2.00	J
Dibenz (a,h) Anthracene	7.4	35	6.7	2.00	J
2,6-Dimethylnaphthalene	ND	35	5.9	2.00	
Fluoranthene	55	35	6.3	2.00	
Fluorene	ND	35	11	2.00	
Indeno (1,2,3-c,d) Pyrene	32	35	5.5	2.00	J
2-Methylnaphthalene	ND	35	8.0	2.00	
1-Methylnaphthalene	ND	35	8.0	2.00	
1-Methylphenanthrene	ND	35	8.6	2.00	
Naphthalene	ND	35	12	2.00	
Perylene	83	35	8.2	2.00	
Phenanthrene	27	35	7.7	2.00	J
Pyrene	99	35	7.8	2.00	
1,6,7-Trimethylnaphthalene	ND	35	6.7	2.00	
Dibenzothiophene	ND	35	4.7	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	54	14-146	
Nitrobenzene-d5	41	18-162	
p-Terphenyl-d14	87	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 10 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 2.0-4.0 091118	**18-09-0884-38-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 05:52**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	64	33	7.8	2.00	
Acenaphthylene	120	33	6.0	2.00	
Anthracene	450	33	12	2.00	
Benzo (k) Fluoranthene	1600	33	9.3	2.00	
Biphenyl	26	33	6.2	2.00	J
Dibenz (a,h) Anthracene	530	33	6.5	2.00	
2,6-Dimethylnaphthalene	16	33	5.7	2.00	J
Fluorene	92	33	10	2.00	
2-Methylnaphthalene	14	33	7.8	2.00	J
1-Methylnaphthalene	10	33	7.8	2.00	J
1-Methylphenanthrene	100	33	8.3	2.00	
Naphthalene	130	33	12	2.00	
Perylene	1200	33	7.9	2.00	
Phenanthrene	1000	33	7.4	2.00	
1,6,7-Trimethylnaphthalene	21	33	6.5	2.00	J
Dibenzothiophene	79	33	4.5	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	58	14-146	
Nitrobenzene-d5	43	18-162	
p-Terphenyl-d14	83	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 11 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 2.0-4.0 091118	**18-09-0884-38-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/27/18 17:11**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzo (a) Anthracene	2000	330	72	20.0	
Benzo (a) Pyrene	4500	330	61	20.0	
Benzo (b) Fluoranthene	3600	330	91	20.0	
Benzo (e) Pyrene	2700	330	66	20.0	
Benzo (g,h,i) Perylene	4300	330	51	20.0	
Chrysene	2500	330	74	20.0	
Fluoranthene	6000	330	61	20.0	
Indeno (1,2,3-c,d) Pyrene	2900	330	53	20.0	
Pyrene	8800	330	75	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	51	14-146	
Nitrobenzene-d5	0	18-162	1,2,6
p-Terphenyl-d14	78	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 12 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 4.0-6.0 091118	**18-09-0884-42-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 06:12**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	45	31	7.4	2.00	
Acenaphthylene	130	31	5.6	2.00	
Anthracene	460	31	11	2.00	
Biphenyl	26	31	5.9	2.00	J
Dibenz (a,h) Anthracene	410	31	6.1	2.00	
2,6-Dimethylnaphthalene	19	31	5.4	2.00	J
Fluorene	120	31	9.8	2.00	
2-Methylnaphthalene	19	31	7.3	2.00	J
1-Methylnaphthalene	17	31	7.3	2.00	J
1-Methylphenanthrene	140	31	7.8	2.00	
Naphthalene	120	31	11	2.00	
Perylene	1000	31	7.5	2.00	
Phenanthrene	1400	31	7.0	2.00	
1,6,7-Trimethylnaphthalene	23	31	6.1	2.00	J
Dibenzothiophene	81	31	4.2	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	61	14-146	
Nitrobenzene-d5	40	18-162	
p-Terphenyl-d14	90	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 13 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 4.0-6.0 091118	**18-09-0884-42-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/24/18 22:08**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzo (a) Anthracene	1300	310	68	20.0	
Benzo (a) Pyrene	3300	310	58	20.0	
Benzo (b) Fluoranthene	2300	310	86	20.0	
Benzo (e) Pyrene	2000	310	62	20.0	
Benzo (g,h,i) Perylene	2700	310	48	20.0	
Benzo (k) Fluoranthene	1900	310	88	20.0	
Chrysene	1600	310	70	20.0	
Fluoranthene	3100	310	57	20.0	
Indeno (1,2,3-c,d) Pyrene	1900	310	50	20.0	
Pyrene	6200	310	71	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	49	14-146	
Nitrobenzene-d5	0	18-162	1,2,6
p-Terphenyl-d14	77	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 14 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 100 2.0-4.0 091118	**18-09-0884-47-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 06:31**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	67	33	7.7	2.00	
Acenaphthylene	150	33	5.8	2.00	
Anthracene	550	33	11	2.00	
Biphenyl	27	33	6.1	2.00	J
Dibenz (a,h) Anthracene	600	33	6.4	2.00	
2,6-Dimethylnaphthalene	23	33	5.6	2.00	J
Fluorene	130	33	10	2.00	
2-Methylnaphthalene	16	33	7.6	2.00	J
1-Methylnaphthalene	14	33	7.6	2.00	J
1-Methylphenanthrene	140	33	8.1	2.00	
Naphthalene	130	33	11	2.00	
Perylene	1200	33	7.8	2.00	
Phenanthrene	1300	33	7.3	2.00	
1,6,7-Trimethylnaphthalene	43	33	6.4	2.00	
Dibenzothiophene	95	33	4.4	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	57	14-146	
Nitrobenzene-d5	35	18-162	
p-Terphenyl-d14	85	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 15 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 100 2.0-4.0 091118	**18-09-0884-47-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/24/18 22:28**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzo (a) Anthracene	2300	330	70	20.0	
Benzo (a) Pyrene	5100	330	60	20.0	
Benzo (b) Fluoranthene	3400	330	89	20.0	
Benzo (e) Pyrene	3000	330	64	20.0	
Benzo (g,h,i) Perylene	4200	330	50	20.0	
Benzo (k) Fluoranthene	2600	330	91	20.0	
Chrysene	2900	330	73	20.0	
Fluoranthene	6700	330	60	20.0	
Indeno (1,2,3-c,d) Pyrene	2900	330	52	20.0	
Pyrene	9700	330	74	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	53	14-146	
Nitrobenzene-d5	42	18-162	
p-Terphenyl-d14	84	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 16 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-17 2.0-4.0 091118	**18-09-0884-48-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/24/18 22:47**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	9.3	33	7.7	2.00	J
Acenaphthylene	33	33	5.9	2.00	
Anthracene	110	33	11	2.00	
Benzo (a) Anthracene	290	33	7.1	2.00	
Benzo (a) Pyrene	590	33	6.0	2.00	
Benzo (b) Fluoranthene	440	33	9.0	2.00	
Benzo (e) Pyrene	350	33	6.4	2.00	
Benzo (g,h,i) Perylene	450	33	5.1	2.00	
Benzo (k) Fluoranthene	290	33	9.1	2.00	
Biphenyl	ND	33	6.1	2.00	
Chrysene	320	33	7.3	2.00	
Dibenz (a,h) Anthracene	76	33	6.4	2.00	
2,6-Dimethylnaphthalene	12	33	5.6	2.00	J
Fluoranthene	570	33	6.0	2.00	
Fluorene	24	33	10	2.00	J
Indeno (1,2,3-c,d) Pyrene	320	33	5.2	2.00	
2-Methylnaphthalene	ND	33	7.6	2.00	
1-Methylnaphthalene	ND	33	7.6	2.00	
1-Methylphenanthrene	34	33	8.1	2.00	
Naphthalene	26	33	11	2.00	J
Perylene	140	33	7.8	2.00	
Phenanthrene	270	33	7.3	2.00	
Pyrene	1000	33	7.4	2.00	
1,6,7-Trimethylnaphthalene	ND	33	6.4	2.00	
Dibenzothiophene	ND	33	4.4	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	48	14-146	
Nitrobenzene-d5	35	18-162	
p-Terphenyl-d14	75	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 17 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-17 4.0-6.0 091118	**18-09-0884-52-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/24/18 23:06**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	17	4.0	1.00	
Acenaphthylene	ND	17	3.1	1.00	
Anthracene	ND	17	6.0	1.00	
Benzo (a) Anthracene	13	17	3.7	1.00	J
Benzo (a) Pyrene	15	17	3.2	1.00	J
Benzo (b) Fluoranthene	15	17	4.7	1.00	J
Benzo (e) Pyrene	11	17	3.4	1.00	J
Benzo (g,h,i) Perylene	13	17	2.7	1.00	J
Benzo (k) Fluoranthene	10	17	4.8	1.00	J
Biphenyl	ND	17	3.2	1.00	
Chrysene	13	17	3.8	1.00	J
Dibenz (a,h) Anthracene	ND	17	3.4	1.00	
2,6-Dimethylnaphthalene	7.8	17	2.9	1.00	J
Fluoranthene	19	17	3.1	1.00	
Fluorene	6.3	17	5.4	1.00	J
Indeno (1,2,3-c,d) Pyrene	9.1	17	2.7	1.00	J
2-Methylnaphthalene	ND	17	4.0	1.00	
1-Methylnaphthalene	ND	17	4.0	1.00	
1-Methylphenanthrene	ND	17	4.3	1.00	
Naphthalene	ND	17	6.0	1.00	
Perylene	46	17	4.1	1.00	
Phenanthrene	18	17	3.8	1.00	
Pyrene	30	17	3.9	1.00	
1,6,7-Trimethylnaphthalene	ND	17	3.3	1.00	
Dibenzothiophene	ND	17	2.3	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	63	14-146	
Nitrobenzene-d5	51	18-162	
p-Terphenyl-d14	91	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 18 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-23 0.0-2.0 091118	**18-09-0884-57-AA**	**09/11/18 12:20**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/24/18 23:26**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	27	25	5.9	2.00	
Acenaphthylene	17	25	4.5	2.00	J
Anthracene	58	25	8.8	2.00	
Benzo (a) Anthracene	180	25	5.4	2.00	
Benzo (a) Pyrene	200	25	4.6	2.00	
Benzo (b) Fluoranthene	200	25	6.9	2.00	
Benzo (e) Pyrene	140	25	5.0	2.00	
Benzo (g,h,i) Perylene	150	25	3.9	2.00	
Benzo (k) Fluoranthene	130	25	7.0	2.00	
Biphenyl	ND	25	4.7	2.00	
Chrysene	220	25	5.6	2.00	
Dibenz (a,h) Anthracene	52	25	4.9	2.00	
2,6-Dimethylnaphthalene	6.2	25	4.3	2.00	J
Fluoranthene	370	25	4.6	2.00	
Fluorene	29	25	7.9	2.00	
Indeno (1,2,3-c,d) Pyrene	100	25	4.0	2.00	
2-Methylnaphthalene	7.4	25	5.9	2.00	J
1-Methylnaphthalene	6.2	25	5.9	2.00	J
1-Methylphenanthrene	24	25	6.3	2.00	J
Naphthalene	ND	25	8.8	2.00	
Perylene	75	25	6.0	2.00	
Phenanthrene	250	25	5.6	2.00	
Pyrene	330	25	5.7	2.00	
1,6,7-Trimethylnaphthalene	7.9	25	4.9	2.00	J
Dibenzothiophene	11	25	3.4	2.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	68	14-146	
Nitrobenzene-d5	41	18-162	
p-Terphenyl-d14	74	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 19 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-24 0.0-2.0 091118	**18-09-0884-58-AA**	**09/11/18 10:55**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/24/18 23:46**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	86	130	31	10.0	J
Acenaphthylene	83	130	23	10.0	J
Anthracene	ND	130	45	10.0	
Benzo (a) Anthracene	150	130	28	10.0	
Benzo (a) Pyrene	170	130	24	10.0	
Benzo (b) Fluoranthene	210	130	36	10.0	
Benzo (e) Pyrene	160	130	26	10.0	
Benzo (g,h,i) Perylene	150	130	20	10.0	
Benzo (k) Fluoranthene	140	130	36	10.0	
Biphenyl	160	130	24	10.0	
Chrysene	140	130	29	10.0	
Dibenz (a,h) Anthracene	55	130	25	10.0	J
2,6-Dimethylnaphthalene	1900	130	22	10.0	
Fluoranthene	180	130	24	10.0	
Fluorene	420	130	41	10.0	
Indeno (1,2,3-c,d) Pyrene	120	130	21	10.0	J
2-Methylnaphthalene	1000	130	30	10.0	
1-Methylnaphthalene	710	130	30	10.0	
1-Methylphenanthrene	320	130	32	10.0	
Naphthalene	300	130	45	10.0	
Perylene	57	130	31	10.0	J
Phenanthrene	760	130	29	10.0	
Pyrene	310	130	29	10.0	
1,6,7-Trimethylnaphthalene	1700	130	25	10.0	
Dibenzothiophene	120	130	18	10.0	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	54	14-146	
Nitrobenzene-d5	38	18-162	
p-Terphenyl-d14	79	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 20 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-24 2.0-4.0 091118	**18-09-0884-59-AA**	**09/11/18 11:05**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/25/18 00:06**	**180919L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	5.0	12	2.9	1.00	J
Acenaphthylene	3.0	12	2.2	1.00	J
Anthracene	ND	12	4.3	1.00	
Benzo (a) Anthracene	19	12	2.7	1.00	
Benzo (a) Pyrene	19	12	2.3	1.00	
Benzo (b) Fluoranthene	23	12	3.4	1.00	
Benzo (e) Pyrene	16	12	2.4	1.00	
Benzo (g,h,i) Perylene	8.4	12	1.9	1.00	J
Benzo (k) Fluoranthene	18	12	3.5	1.00	
Biphenyl	5.3	12	2.3	1.00	J
Chrysene	22	12	2.8	1.00	
Dibenz (a,h) Anthracene	4.1	12	2.4	1.00	J
2,6-Dimethylnaphthalene	58	12	2.1	1.00	
Fluoranthene	65	12	2.3	1.00	
Fluorene	23	12	3.9	1.00	
Indeno (1,2,3-c,d) Pyrene	8.7	12	2.0	1.00	J
2-Methylnaphthalene	36	12	2.9	1.00	
1-Methylnaphthalene	25	12	2.9	1.00	
1-Methylphenanthrene	11	12	3.1	1.00	J
Naphthalene	15	12	4.3	1.00	
Perylene	5.4	12	3.0	1.00	J
Phenanthrene	59	12	2.8	1.00	
Pyrene	61	12	2.8	1.00	
1,6,7-Trimethylnaphthalene	50	12	2.4	1.00	
Dibenzothiophene	6.2	12	1.7	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	63	14-146	
Nitrobenzene-d5	47	18-162	
p-Terphenyl-d14	92	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: India Basin			Page 21 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-437-247**	**N/A**	**Solid**	**GC/MS AAA**	**09/19/18**	**09/21/18 16:15**	**180919L15**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acenaphthene	ND	10	2.4	1.00	
Acenaphthylene	ND	10	1.8	1.00	
Anthracene	ND	10	3.5	1.00	
Benzo (a) Anthracene	ND	10	2.2	1.00	
Benzo (a) Pyrene	ND	10	1.8	1.00	
Benzo (b) Fluoranthene	ND	10	2.7	1.00	
Benzo (e) Pyrene	ND	10	2.0	1.00	
Benzo (g,h,i) Perylene	ND	10	1.5	1.00	
Benzo (k) Fluoranthene	ND	10	2.8	1.00	
Biphenyl	ND	10	1.9	1.00	
Chrysene	ND	10	2.2	1.00	
Dibenz (a,h) Anthracene	ND	10	2.0	1.00	
2,6-Dimethylnaphthalene	ND	10	1.7	1.00	
Fluoranthene	ND	10	1.8	1.00	
Fluorene	ND	10	3.1	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.6	1.00	
2-Methylnaphthalene	ND	10	2.3	1.00	
1-Methylnaphthalene	ND	10	2.3	1.00	
1-Methylphenanthrene	ND	10	2.5	1.00	
Naphthalene	ND	10	3.5	1.00	
Perylene	ND	10	2.4	1.00	
Phenanthrene	ND	10	2.2	1.00	
Pyrene	ND	10	2.2	1.00	
1,6,7-Trimethylnaphthalene	ND	10	1.9	1.00	
Dibenzothiophene	ND	10	1.3	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	71	14-146	
Nitrobenzene-d5	45	18-162	
p-Terphenyl-d14	83	34-148	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3510C
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/L
Project: India Basin			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Equipment Rinse #3	**18-09-0884-3-A**	**09/11/18 00:00**	**Aqueous**	**GC/MS HHH**	**09/20/18**	**09/21/18 18:03**	**180920L03**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
- Sample extracted outside recommended holding time.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.0038	0.00049	1.00	ET
PCB018	ND	0.0019	0.00044	1.00	ET
PCB028	ND	0.0019	0.00051	1.00	ET
PCB031	ND	0.0019	0.00026	1.00	ET
PCB033	ND	0.0019	0.00039	1.00	ET
PCB044	ND	0.0019	0.00068	1.00	ET
PCB049	ND	0.0019	0.00051	1.00	ET
PCB052	ND	0.0019	0.00053	1.00	ET
PCB056	ND	0.0019	0.00055	1.00	ET
PCB060	ND	0.0019	0.0012	1.00	ET
PCB066	ND	0.0019	0.00039	1.00	ET
PCB070	ND	0.0019	0.00040	1.00	ET
PCB074	ND	0.0019	0.00047	1.00	ET
PCB087	ND	0.0019	0.00068	1.00	ET
PCB095	ND	0.0019	0.00075	1.00	ET
PCB097	ND	0.0019	0.00048	1.00	ET
PCB099	ND	0.0019	0.00059	1.00	ET
PCB101	ND	0.0019	0.00048	1.00	ET
PCB105	ND	0.0019	0.00045	1.00	ET
PCB110	ND	0.0019	0.00032	1.00	ET
PCB118	ND	0.0019	0.00048	1.00	ET
PCB128	ND	0.0019	0.00042	1.00	ET
PCB132/153	ND	0.0038	0.00067	1.00	ET
PCB138/158	ND	0.0038	0.00057	1.00	ET
PCB141	ND	0.0019	0.00058	1.00	ET
PCB149	ND	0.0019	0.00022	1.00	ET
PCB151	ND	0.0019	0.00039	1.00	ET
PCB156	ND	0.0019	0.00039	1.00	ET
PCB170	ND	0.0019	0.00041	1.00	ET
PCB174	ND	0.0019	0.00039	1.00	ET
PCB177	ND	0.0019	0.00027	1.00	ET
PCB180	ND	0.0019	0.00058	1.00	ET
PCB183	ND	0.0019	0.00050	1.00	ET

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3510C
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/L
Project: India Basin			Page 2 of 4

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	ND	0.0019	0.00041	1.00	ET
PCB194	ND	0.0019	0.00024	1.00	ET
PCB195	ND	0.0019	0.00072	1.00	ET
PCB201	ND	0.0019	0.00045	1.00	ET
PCB203	ND	0.0019	0.0014	1.00	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	87	50-150	
p-Terphenyl-d14	107	50-150	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3510C
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/L
Project: India Basin			Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-414-143**	**N/A**	**Aqueous**	**GC/MS HHH**	**09/20/18**	**09/21/18 16:50**	**180920L03**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.0040	0.00051	1.00	
PCB018	ND	0.0020	0.00046	1.00	
PCB028	ND	0.0020	0.00053	1.00	
PCB031	ND	0.0020	0.00027	1.00	
PCB033	ND	0.0020	0.00040	1.00	
PCB044	ND	0.0020	0.00071	1.00	
PCB049	ND	0.0020	0.00053	1.00	
PCB052	ND	0.0020	0.00056	1.00	
PCB056	ND	0.0020	0.00057	1.00	
PCB060	ND	0.0020	0.0012	1.00	
PCB066	ND	0.0020	0.00040	1.00	
PCB070	ND	0.0020	0.00041	1.00	
PCB074	ND	0.0020	0.00049	1.00	
PCB087	ND	0.0020	0.00071	1.00	
PCB095	ND	0.0020	0.00078	1.00	
PCB097	ND	0.0020	0.00050	1.00	
PCB099	ND	0.0020	0.00061	1.00	
PCB101	ND	0.0020	0.00050	1.00	
PCB105	ND	0.0020	0.00047	1.00	
PCB110	ND	0.0020	0.00034	1.00	
PCB118	ND	0.0020	0.00050	1.00	
PCB128	ND	0.0020	0.00043	1.00	
PCB132/153	ND	0.0040	0.00069	1.00	
PCB138/158	ND	0.0040	0.00060	1.00	
PCB141	ND	0.0020	0.00060	1.00	
PCB149	ND	0.0020	0.00023	1.00	
PCB151	ND	0.0020	0.00040	1.00	
PCB156	ND	0.0020	0.00040	1.00	
PCB170	ND	0.0020	0.00042	1.00	
PCB174	ND	0.0020	0.00040	1.00	
PCB177	ND	0.0020	0.00028	1.00	
PCB180	ND	0.0020	0.00060	1.00	
PCB183	ND	0.0020	0.00052	1.00	
PCB187	ND	0.0020	0.00043	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3510C
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/L
Project: India Basin			Page 4 of 4

Parameter	Result	RL	MDL	DF	Qualifiers
PCB194	ND	0.0020	0.00025	1.00	
PCB195	ND	0.0020	0.00075	1.00	
PCB201	ND	0.0020	0.00047	1.00	
PCB203	ND	0.0020	0.0014	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	64	50-150	
p-Terphenyl-d14	82	50-150	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 1 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-13 0.0-2.0 091118	**18-09-0884-4-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/25/18 19:21**	**180919L16**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.93	0.18	1.00	
PCB018	0.58	0.47	0.15	1.00	
PCB028	0.73	0.47	0.16	1.00	
PCB031	0.76	0.47	0.12	1.00	
PCB033	ND	0.47	0.089	1.00	
PCB044	ND	0.47	0.36	1.00	
PCB049	0.56	0.47	0.12	1.00	
PCB052	1.2	0.47	0.44	1.00	
PCB056	0.40	0.47	0.18	1.00	J
PCB060	ND	0.47	0.12	1.00	
PCB066	1.2	0.47	0.29	1.00	
PCB070	0.99	0.47	0.17	1.00	
PCB074	0.59	0.47	0.21	1.00	
PCB087	0.49	0.47	0.26	1.00	
PCB095	2.0	0.47	0.25	1.00	
PCB097	0.52	0.47	0.11	1.00	
PCB099	1.7	0.47	0.11	1.00	
PCB101	3.0	0.47	0.10	1.00	
PCB105	ND	0.47	0.12	1.00	
PCB110	2.2	0.47	0.079	1.00	
PCB118	2.1	0.47	0.081	1.00	
PCB128	0.72	0.47	0.28	1.00	
PCB132/153	9.4	0.93	0.38	1.00	
PCB138/158	11	0.93	0.82	1.00	
PCB141	ND	0.47	0.11	1.00	
PCB149	5.3	0.47	0.28	1.00	
PCB151	1.8	0.47	0.20	1.00	
PCB156	0.54	0.47	0.18	1.00	
PCB170	2.8	0.47	0.26	1.00	
PCB174	2.1	0.47	0.098	1.00	
PCB177	1.7	0.47	0.27	1.00	
PCB180	6.1	0.47	0.21	1.00	
PCB183	1.4	0.47	0.22	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 2 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	3.2	0.47	0.24	1.00	
PCB194	1.5	0.47	0.17	1.00	
PCB195	0.61	0.47	0.14	1.00	
PCB201	0.30	0.47	0.079	1.00	J
PCB203	1.5	0.47	0.13	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	71	14-146	
p-Terphenyl-d14	106	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 3 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-13 2.0-4.0 091118	**18-09-0884-8-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 06:18**	**180919L16**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.73	0.14	1.00	
PCB018	0.44	0.36	0.12	1.00	
PCB028	0.43	0.36	0.13	1.00	
PCB031	0.39	0.36	0.092	1.00	
PCB033	ND	0.36	0.070	1.00	
PCB044	0.57	0.36	0.28	1.00	
PCB049	0.44	0.36	0.090	1.00	
PCB052	0.84	0.36	0.35	1.00	
PCB056	ND	0.36	0.14	1.00	
PCB060	ND	0.36	0.095	1.00	
PCB066	0.70	0.36	0.22	1.00	
PCB070	0.81	0.36	0.13	1.00	
PCB074	0.43	0.36	0.16	1.00	
PCB087	0.43	0.36	0.20	1.00	
PCB095	1.3	0.36	0.19	1.00	
PCB097	0.40	0.36	0.084	1.00	
PCB099	1.1	0.36	0.086	1.00	
PCB101	2.1	0.36	0.081	1.00	
PCB105	0.77	0.36	0.097	1.00	
PCB110	1.4	0.36	0.062	1.00	
PCB118	1.3	0.36	0.063	1.00	
PCB128	ND	0.36	0.22	1.00	
PCB132/153	5.7	0.73	0.30	1.00	
PCB138/158	3.7	0.73	0.64	1.00	
PCB141	0.70	0.36	0.089	1.00	
PCB149	3.5	0.36	0.22	1.00	
PCB151	1.3	0.36	0.16	1.00	
PCB156	0.44	0.36	0.14	1.00	
PCB170	1.9	0.36	0.20	1.00	
PCB174	1.3	0.36	0.076	1.00	
PCB177	1.1	0.36	0.21	1.00	
PCB180	4.0	0.36	0.17	1.00	
PCB183	1.1	0.36	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 4 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	2.4	0.36	0.19	1.00	
PCB194	1.1	0.36	0.13	1.00	
PCB195	0.38	0.36	0.11	1.00	
PCB201	0.25	0.36	0.062	1.00	J
PCB203	0.93	0.36	0.10	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	71	14-146	
p-Terphenyl-d14	103	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 5 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-13 4.0-6.0 091118	**18-09-0884-12-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 06:42**	**180919L16**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.69	0.13	1.00	
PCB018	ND	0.35	0.11	1.00	
PCB028	ND	0.35	0.12	1.00	
PCB031	ND	0.35	0.088	1.00	
PCB033	ND	0.35	0.066	1.00	
PCB044	ND	0.35	0.26	1.00	
PCB049	ND	0.35	0.086	1.00	
PCB052	ND	0.35	0.33	1.00	
PCB056	ND	0.35	0.13	1.00	
PCB060	ND	0.35	0.091	1.00	
PCB066	ND	0.35	0.21	1.00	
PCB070	ND	0.35	0.12	1.00	
PCB074	ND	0.35	0.16	1.00	
PCB087	ND	0.35	0.19	1.00	
PCB095	ND	0.35	0.19	1.00	
PCB097	ND	0.35	0.080	1.00	
PCB099	ND	0.35	0.082	1.00	
PCB101	ND	0.35	0.077	1.00	
PCB105	ND	0.35	0.092	1.00	
PCB110	ND	0.35	0.059	1.00	
PCB118	ND	0.35	0.060	1.00	
PCB128	ND	0.35	0.21	1.00	
PCB132/153	0.44	0.69	0.28	1.00	J
PCB138/158	ND	0.69	0.61	1.00	
PCB141	ND	0.35	0.085	1.00	
PCB149	ND	0.35	0.20	1.00	
PCB151	ND	0.35	0.15	1.00	
PCB156	ND	0.35	0.13	1.00	
PCB170	ND	0.35	0.19	1.00	
PCB174	ND	0.35	0.073	1.00	
PCB177	ND	0.35	0.20	1.00	
PCB180	ND	0.35	0.16	1.00	
PCB183	ND	0.35	0.16	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 6 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	ND	0.35	0.18	1.00	
PCB194	ND	0.35	0.13	1.00	
PCB195	ND	0.35	0.10	1.00	
PCB201	ND	0.35	0.059	1.00	
PCB203	ND	0.35	0.10	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	69	14-146	
p-Terphenyl-d14	111	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 7 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-17 0.0-2.0 091118	**18-09-0884-17-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 07:06**	**180919L16**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.67	0.13	1.00	
PCB018	0.71	0.34	0.11	1.00	
PCB028	0.75	0.34	0.12	1.00	
PCB031	0.53	0.34	0.085	1.00	
PCB033	ND	0.34	0.064	1.00	
PCB044	1.3	0.34	0.26	1.00	
PCB049	0.83	0.34	0.084	1.00	
PCB052	1.6	0.34	0.32	1.00	
PCB056	0.43	0.34	0.13	1.00	
PCB060	0.33	0.34	0.088	1.00	J
PCB066	1.5	0.34	0.21	1.00	
PCB070	1.6	0.34	0.12	1.00	
PCB074	0.78	0.34	0.15	1.00	
PCB087	1.0	0.34	0.19	1.00	
PCB095	2.0	0.34	0.18	1.00	
PCB097	1.0	0.34	0.078	1.00	
PCB099	1.3	0.34	0.080	1.00	
PCB101	3.0	0.34	0.075	1.00	
PCB105	1.4	0.34	0.090	1.00	
PCB110	2.4	0.34	0.057	1.00	
PCB118	2.2	0.34	0.058	1.00	
PCB128	0.85	0.34	0.20	1.00	
PCB132/153	6.6	0.67	0.27	1.00	
PCB138/158	4.7	0.67	0.59	1.00	
PCB141	0.76	0.34	0.083	1.00	
PCB149	3.8	0.34	0.20	1.00	
PCB151	1.2	0.34	0.15	1.00	
PCB156	0.42	0.34	0.13	1.00	
PCB170	1.9	0.34	0.19	1.00	
PCB174	1.3	0.34	0.071	1.00	
PCB177	0.98	0.34	0.20	1.00	
PCB180	3.7	0.34	0.15	1.00	
PCB183	1.1	0.34	0.16	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 8 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	2.5	0.34	0.17	1.00	
PCB194	1.3	0.34	0.12	1.00	
PCB195	0.26	0.34	0.10	1.00	J
PCB201	ND	0.34	0.057	1.00	
PCB203	0.99	0.34	0.097	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	71	14-146	
p-Terphenyl-d14	113	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 9 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-16 0.0-2.0 091118	**18-09-0884-21-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 07:31**	**180919L16**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.47	0.70	0.13	1.00	J
PCB018	2.2	0.35	0.11	1.00	
PCB028	1.4	0.35	0.12	1.00	
PCB031	1.2	0.35	0.089	1.00	
PCB033	1.3	0.35	0.067	1.00	
PCB044	2.5	0.35	0.27	1.00	
PCB049	1.8	0.35	0.087	1.00	
PCB052	2.9	0.35	0.33	1.00	
PCB056	1.1	0.35	0.13	1.00	
PCB060	ND	0.35	0.092	1.00	
PCB066	3.7	0.35	0.22	1.00	
PCB070	3.3	0.35	0.13	1.00	
PCB074	1.4	0.35	0.16	1.00	
PCB087	1.3	0.35	0.20	1.00	
PCB095	3.9	0.35	0.19	1.00	
PCB097	1.8	0.35	0.081	1.00	
PCB099	2.9	0.35	0.083	1.00	
PCB101	5.9	0.35	0.078	1.00	
PCB105	2.2	0.35	0.094	1.00	
PCB110	4.7	0.35	0.059	1.00	
PCB118	4.8	0.35	0.061	1.00	
PCB128	1.1	0.35	0.21	1.00	
PCB132/153	13	0.70	0.28	1.00	
PCB138/158	8.6	0.70	0.62	1.00	
PCB141	1.3	0.35	0.086	1.00	
PCB149	7.4	0.35	0.21	1.00	
PCB151	2.5	0.35	0.15	1.00	
PCB156	0.69	0.35	0.14	1.00	
PCB170	4.0	0.35	0.19	1.00	
PCB174	2.9	0.35	0.074	1.00	
PCB177	2.0	0.35	0.21	1.00	
PCB180	8.4	0.35	0.16	1.00	
PCB183	2.2	0.35	0.16	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 10 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	5.3	0.35	0.18	1.00	
PCB194	2.5	0.35	0.13	1.00	
PCB195	1.1	0.35	0.11	1.00	
PCB201	0.46	0.35	0.060	1.00	
PCB203	2.4	0.35	0.10	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	73	14-146	
p-Terphenyl-d14	104	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 11 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-16 2.0-4.0 091118	**18-09-0884-25-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 07:55**	**180919L16**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.68	0.13	1.00	
PCB018	0.53	0.34	0.11	1.00	
PCB028	0.52	0.34	0.12	1.00	
PCB031	ND	0.34	0.086	1.00	
PCB033	ND	0.34	0.065	1.00	
PCB044	1.6	0.34	0.26	1.00	
PCB049	0.69	0.34	0.084	1.00	
PCB052	0.88	0.34	0.32	1.00	
PCB056	ND	0.34	0.13	1.00	
PCB060	ND	0.34	0.089	1.00	
PCB066	1.3	0.34	0.21	1.00	
PCB070	1.1	0.34	0.12	1.00	
PCB074	0.89	0.34	0.15	1.00	
PCB087	0.74	0.34	0.19	1.00	
PCB095	1.2	0.34	0.18	1.00	
PCB097	0.61	0.34	0.079	1.00	
PCB099	1.0	0.34	0.081	1.00	
PCB101	1.7	0.34	0.075	1.00	
PCB105	0.66	0.34	0.091	1.00	
PCB110	1.8	0.34	0.058	1.00	
PCB118	1.6	0.34	0.059	1.00	
PCB128	ND	0.34	0.20	1.00	
PCB132/153	3.2	0.68	0.28	1.00	
PCB138/158	2.1	0.68	0.60	1.00	
PCB141	0.37	0.34	0.083	1.00	
PCB149	1.8	0.34	0.20	1.00	
PCB151	0.80	0.34	0.15	1.00	
PCB156	ND	0.34	0.13	1.00	
PCB170	0.80	0.34	0.19	1.00	
PCB174	0.72	0.34	0.071	1.00	
PCB177	0.43	0.34	0.20	1.00	
PCB180	1.7	0.34	0.16	1.00	
PCB183	0.58	0.34	0.16	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 12 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	1.3	0.34	0.17	1.00	
PCB194	0.84	0.34	0.13	1.00	
PCB195	ND	0.34	0.10	1.00	
PCB201	ND	0.34	0.058	1.00	
PCB203	0.62	0.34	0.098	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	72	14-146	
p-Terphenyl-d14	111	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 13 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-16 4.0-6.0 091118	**18-09-0884-29-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 08:20**	**180919L16**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.64	0.12	1.00	
PCB018	ND	0.32	0.10	1.00	
PCB028	ND	0.32	0.11	1.00	
PCB031	ND	0.32	0.081	1.00	
PCB033	ND	0.32	0.061	1.00	
PCB044	ND	0.32	0.24	1.00	
PCB049	ND	0.32	0.080	1.00	
PCB052	ND	0.32	0.31	1.00	
PCB056	ND	0.32	0.12	1.00	
PCB060	ND	0.32	0.084	1.00	
PCB066	ND	0.32	0.20	1.00	
PCB070	ND	0.32	0.11	1.00	
PCB074	ND	0.32	0.14	1.00	
PCB087	ND	0.32	0.18	1.00	
PCB095	ND	0.32	0.17	1.00	
PCB097	ND	0.32	0.074	1.00	
PCB099	ND	0.32	0.076	1.00	
PCB101	ND	0.32	0.071	1.00	
PCB105	ND	0.32	0.086	1.00	
PCB110	ND	0.32	0.054	1.00	
PCB118	ND	0.32	0.056	1.00	
PCB128	ND	0.32	0.19	1.00	
PCB132/153	ND	0.64	0.26	1.00	
PCB138/158	ND	0.64	0.57	1.00	
PCB141	ND	0.32	0.079	1.00	
PCB149	ND	0.32	0.19	1.00	
PCB151	ND	0.32	0.14	1.00	
PCB156	ND	0.32	0.12	1.00	
PCB170	ND	0.32	0.18	1.00	
PCB174	ND	0.32	0.067	1.00	
PCB177	ND	0.32	0.19	1.00	
PCB180	ND	0.32	0.15	1.00	
PCB183	ND	0.32	0.15	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 14 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	ND	0.32	0.16	1.00	
PCB194	ND	0.32	0.12	1.00	
PCB195	ND	0.32	0.096	1.00	
PCB201	ND	0.32	0.055	1.00	
PCB203	ND	0.32	0.093	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	61	14-146	
p-Terphenyl-d14	99	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 15 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 0.0-2.0 091118	**18-09-0884-34-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 08:44**	**180919L16**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.69	0.13	1.00	
PCB018	ND	0.35	0.11	1.00	
PCB028	ND	0.35	0.12	1.00	
PCB031	ND	0.35	0.087	1.00	
PCB033	ND	0.35	0.066	1.00	
PCB044	ND	0.35	0.26	1.00	
PCB049	ND	0.35	0.086	1.00	
PCB052	ND	0.35	0.33	1.00	
PCB056	ND	0.35	0.13	1.00	
PCB060	ND	0.35	0.091	1.00	
PCB066	ND	0.35	0.21	1.00	
PCB070	ND	0.35	0.12	1.00	
PCB074	ND	0.35	0.16	1.00	
PCB087	ND	0.35	0.19	1.00	
PCB095	ND	0.35	0.18	1.00	
PCB097	ND	0.35	0.080	1.00	
PCB099	ND	0.35	0.082	1.00	
PCB101	ND	0.35	0.076	1.00	
PCB105	ND	0.35	0.092	1.00	
PCB110	ND	0.35	0.058	1.00	
PCB118	ND	0.35	0.060	1.00	
PCB128	ND	0.35	0.21	1.00	
PCB132/153	0.74	0.69	0.28	1.00	
PCB138/158	ND	0.69	0.61	1.00	
PCB141	ND	0.35	0.085	1.00	
PCB149	ND	0.35	0.20	1.00	
PCB151	ND	0.35	0.15	1.00	
PCB156	ND	0.35	0.13	1.00	
PCB170	ND	0.35	0.19	1.00	
PCB174	ND	0.35	0.072	1.00	
PCB177	ND	0.35	0.20	1.00	
PCB180	0.34	0.35	0.16	1.00	J
PCB183	ND	0.35	0.16	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 16 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	0.31	0.35	0.18	1.00	J
PCB194	ND	0.35	0.13	1.00	
PCB195	ND	0.35	0.10	1.00	
PCB201	ND	0.35	0.059	1.00	
PCB203	ND	0.35	0.10	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	56	14-146	
p-Terphenyl-d14	102	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 17 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 2.0-4.0 091118	**18-09-0884-38-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 09:08**	**180919L16**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.67	0.13	1.00	
PCB018	ND	0.33	0.11	1.00	
PCB028	ND	0.33	0.12	1.00	
PCB031	ND	0.33	0.084	1.00	
PCB033	ND	0.33	0.064	1.00	
PCB044	ND	0.33	0.25	1.00	
PCB049	ND	0.33	0.083	1.00	
PCB052	ND	0.33	0.32	1.00	
PCB056	ND	0.33	0.13	1.00	
PCB060	ND	0.33	0.087	1.00	
PCB066	ND	0.33	0.21	1.00	
PCB070	ND	0.33	0.12	1.00	
PCB074	ND	0.33	0.15	1.00	
PCB087	ND	0.33	0.19	1.00	
PCB095	ND	0.33	0.18	1.00	
PCB097	ND	0.33	0.077	1.00	
PCB099	ND	0.33	0.079	1.00	
PCB101	ND	0.33	0.074	1.00	
PCB105	ND	0.33	0.089	1.00	
PCB110	ND	0.33	0.056	1.00	
PCB118	ND	0.33	0.058	1.00	
PCB128	ND	0.33	0.20	1.00	
PCB132/153	ND	0.67	0.27	1.00	
PCB138/158	ND	0.67	0.59	1.00	
PCB141	ND	0.33	0.082	1.00	
PCB149	ND	0.33	0.20	1.00	
PCB151	ND	0.33	0.15	1.00	
PCB156	ND	0.33	0.13	1.00	
PCB170	ND	0.33	0.19	1.00	
PCB174	ND	0.33	0.070	1.00	
PCB177	ND	0.33	0.20	1.00	
PCB180	ND	0.33	0.15	1.00	
PCB183	ND	0.33	0.16	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 18 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	ND	0.33	0.17	1.00	
PCB194	ND	0.33	0.12	1.00	
PCB195	ND	0.33	0.10	1.00	
PCB201	ND	0.33	0.057	1.00	
PCB203	ND	0.33	0.096	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	74	14-146	
p-Terphenyl-d14	108	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 19 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 4.0-6.0 091118	**18-09-0884-42-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 09:32**	**180919L16**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.63	0.12	1.00	
PCB018	ND	0.31	0.10	1.00	
PCB028	ND	0.31	0.11	1.00	
PCB031	ND	0.31	0.080	1.00	
PCB033	ND	0.31	0.060	1.00	
PCB044	ND	0.31	0.24	1.00	
PCB049	ND	0.31	0.078	1.00	
PCB052	ND	0.31	0.30	1.00	
PCB056	ND	0.31	0.12	1.00	
PCB060	ND	0.31	0.083	1.00	
PCB066	ND	0.31	0.19	1.00	
PCB070	ND	0.31	0.11	1.00	
PCB074	ND	0.31	0.14	1.00	
PCB087	ND	0.31	0.18	1.00	
PCB095	ND	0.31	0.17	1.00	
PCB097	ND	0.31	0.073	1.00	
PCB099	ND	0.31	0.075	1.00	
PCB101	ND	0.31	0.070	1.00	
PCB105	ND	0.31	0.084	1.00	
PCB110	ND	0.31	0.053	1.00	
PCB118	ND	0.31	0.054	1.00	
PCB128	ND	0.31	0.19	1.00	
PCB132/153	ND	0.63	0.26	1.00	
PCB138/158	ND	0.63	0.55	1.00	
PCB141	ND	0.31	0.077	1.00	
PCB149	ND	0.31	0.19	1.00	
PCB151	ND	0.31	0.14	1.00	
PCB156	ND	0.31	0.12	1.00	
PCB170	ND	0.31	0.17	1.00	
PCB174	ND	0.31	0.066	1.00	
PCB177	ND	0.31	0.18	1.00	
PCB180	ND	0.31	0.14	1.00	
PCB183	ND	0.31	0.15	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 20 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	ND	0.31	0.16	1.00	
PCB194	ND	0.31	0.12	1.00	
PCB195	ND	0.31	0.095	1.00	
PCB201	ND	0.31	0.054	1.00	
PCB203	ND	0.31	0.091	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	73	14-146	
p-Terphenyl-d14	111	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 21 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 100 2.0-4.0 091118	**18-09-0884-47-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 09:55**	**180919L16**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.65	0.13	1.00	
PCB018	ND	0.33	0.11	1.00	
PCB028	ND	0.33	0.11	1.00	
PCB031	ND	0.33	0.083	1.00	
PCB033	ND	0.33	0.062	1.00	
PCB044	ND	0.33	0.25	1.00	
PCB049	ND	0.33	0.081	1.00	
PCB052	ND	0.33	0.31	1.00	
PCB056	ND	0.33	0.12	1.00	
PCB060	ND	0.33	0.086	1.00	
PCB066	ND	0.33	0.20	1.00	
PCB070	ND	0.33	0.12	1.00	
PCB074	ND	0.33	0.15	1.00	
PCB087	ND	0.33	0.18	1.00	
PCB095	ND	0.33	0.17	1.00	
PCB097	ND	0.33	0.076	1.00	
PCB099	ND	0.33	0.077	1.00	
PCB101	ND	0.33	0.072	1.00	
PCB105	ND	0.33	0.087	1.00	
PCB110	ND	0.33	0.055	1.00	
PCB118	ND	0.33	0.057	1.00	
PCB128	ND	0.33	0.20	1.00	
PCB132/153	ND	0.65	0.26	1.00	
PCB138/158	ND	0.65	0.58	1.00	
PCB141	ND	0.33	0.080	1.00	
PCB149	ND	0.33	0.19	1.00	
PCB151	ND	0.33	0.14	1.00	
PCB156	ND	0.33	0.13	1.00	
PCB170	ND	0.33	0.18	1.00	
PCB174	ND	0.33	0.069	1.00	
PCB177	ND	0.33	0.19	1.00	
PCB180	ND	0.33	0.15	1.00	
PCB183	ND	0.33	0.15	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 22 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	ND	0.33	0.17	1.00	
PCB194	ND	0.33	0.12	1.00	
PCB195	ND	0.33	0.098	1.00	
PCB201	ND	0.33	0.056	1.00	
PCB203	ND	0.33	0.094	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	69	14-146	
p-Terphenyl-d14	108	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 23 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-17 2.0-4.0 091118	**18-09-0884-48-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 10:19**	**180919L16**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.66	0.13	1.00	
PCB018	1.2	0.33	0.11	1.00	
PCB028	0.74	0.33	0.11	1.00	
PCB031	0.77	0.33	0.083	1.00	
PCB033	ND	0.33	0.063	1.00	
PCB044	ND	0.33	0.25	1.00	
PCB049	1.8	0.33	0.081	1.00	
PCB052	1.7	0.33	0.31	1.00	
PCB056	ND	0.33	0.12	1.00	
PCB060	ND	0.33	0.086	1.00	
PCB066	1.1	0.33	0.20	1.00	
PCB070	1.3	0.33	0.12	1.00	
PCB074	ND	0.33	0.15	1.00	
PCB087	ND	0.33	0.18	1.00	
PCB095	2.3	0.33	0.18	1.00	
PCB097	1.5	0.33	0.076	1.00	
PCB099	1.0	0.33	0.078	1.00	
PCB101	3.1	0.33	0.073	1.00	
PCB105	ND	0.33	0.088	1.00	
PCB110	3.4	0.33	0.056	1.00	
PCB118	2.4	0.33	0.057	1.00	
PCB128	0.60	0.33	0.20	1.00	
PCB132/153	5.4	0.66	0.27	1.00	
PCB138/158	4.1	0.66	0.58	1.00	
PCB141	0.82	0.33	0.080	1.00	
PCB149	3.4	0.33	0.19	1.00	
PCB151	1.2	0.33	0.14	1.00	
PCB156	ND	0.33	0.13	1.00	
PCB170	1.6	0.33	0.18	1.00	
PCB174	1.1	0.33	0.069	1.00	
PCB177	0.69	0.33	0.19	1.00	
PCB180	3.2	0.33	0.15	1.00	
PCB183	0.90	0.33	0.15	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 24 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	1.8	0.33	0.17	1.00	
PCB194	1.2	0.33	0.12	1.00	
PCB195	ND	0.33	0.099	1.00	
PCB201	ND	0.33	0.056	1.00	
PCB203	1.1	0.33	0.095	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	61	14-146	
p-Terphenyl-d14	101	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 25 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-17 4.0-6.0 091118	**18-09-0884-52-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 10:43**	**180919L16**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.69	0.13	1.00	
PCB018	ND	0.34	0.11	1.00	
PCB028	ND	0.34	0.12	1.00	
PCB031	ND	0.34	0.087	1.00	
PCB033	ND	0.34	0.066	1.00	
PCB044	ND	0.34	0.26	1.00	
PCB049	ND	0.34	0.085	1.00	
PCB052	ND	0.34	0.33	1.00	
PCB056	ND	0.34	0.13	1.00	
PCB060	ND	0.34	0.090	1.00	
PCB066	ND	0.34	0.21	1.00	
PCB070	ND	0.34	0.12	1.00	
PCB074	ND	0.34	0.16	1.00	
PCB087	ND	0.34	0.19	1.00	
PCB095	ND	0.34	0.18	1.00	
PCB097	ND	0.34	0.080	1.00	
PCB099	ND	0.34	0.082	1.00	
PCB101	ND	0.34	0.076	1.00	
PCB105	ND	0.34	0.092	1.00	
PCB110	ND	0.34	0.058	1.00	
PCB118	ND	0.34	0.060	1.00	
PCB128	ND	0.34	0.21	1.00	
PCB132/153	ND	0.69	0.28	1.00	
PCB138/158	ND	0.69	0.61	1.00	
PCB141	ND	0.34	0.084	1.00	
PCB149	ND	0.34	0.20	1.00	
PCB151	ND	0.34	0.15	1.00	
PCB156	ND	0.34	0.13	1.00	
PCB170	ND	0.34	0.19	1.00	
PCB174	ND	0.34	0.072	1.00	
PCB177	ND	0.34	0.20	1.00	
PCB180	ND	0.34	0.16	1.00	
PCB183	ND	0.34	0.16	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 26 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	ND	0.34	0.18	1.00	
PCB194	ND	0.34	0.13	1.00	
PCB195	ND	0.34	0.10	1.00	
PCB201	ND	0.34	0.059	1.00	
PCB203	ND	0.34	0.099	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	62	14-146	
p-Terphenyl-d14	112	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 27 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-23 0.0-2.0 091118	**18-09-0884-57-AA**	**09/11/18 12:20**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 11:07**	**180919L16**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.51	0.097	1.00	
PCB018	6.0	0.25	0.082	1.00	
PCB028	2.6	0.25	0.088	1.00	
PCB031	ND	0.25	0.064	1.00	
PCB033	ND	0.25	0.048	1.00	
PCB044	21	0.25	0.19	1.00	
PCB049	13	0.25	0.063	1.00	
PCB052	20	0.25	0.24	1.00	
PCB056	10	0.25	0.095	1.00	
PCB060	3.1	0.25	0.066	1.00	
PCB066	29	0.25	0.16	1.00	
PCB070	26	0.25	0.090	1.00	
PCB074	7.5	0.25	0.11	1.00	
PCB087	16	0.25	0.14	1.00	
PCB095	31	0.25	0.14	1.00	
PCB097	13	0.25	0.058	1.00	
PCB099	16	0.25	0.060	1.00	
PCB101	33	0.25	0.056	1.00	
PCB105	18	0.25	0.067	1.00	
PCB110	44	0.25	0.043	1.00	
PCB118	30	0.25	0.044	1.00	
PCB128	5.8	0.25	0.15	1.00	
PCB132/153	24	0.51	0.20	1.00	
PCB138/158	25	0.51	0.44	1.00	
PCB141	3.5	0.25	0.062	1.00	
PCB149	17	0.25	0.15	1.00	
PCB151	5.4	0.25	0.11	1.00	
PCB156	3.3	0.25	0.098	1.00	
PCB170	5.0	0.25	0.14	1.00	
PCB174	3.0	0.25	0.053	1.00	
PCB177	1.6	0.25	0.15	1.00	
PCB180	8.3	0.25	0.12	1.00	
PCB183	1.9	0.25	0.12	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 28 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	4.3	0.25	0.13	1.00	
PCB194	2.2	0.25	0.093	1.00	
PCB195	0.42	0.25	0.076	1.00	
PCB201	0.34	0.25	0.043	1.00	
PCB203	2.0	0.25	0.073	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	82	14-146	
p-Terphenyl-d14	108	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 29 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-24 0.0-2.0 091118	**18-09-0884-58-AA**	**09/11/18 10:55**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/25/18 15:06**	**180919L16**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	5.2	1.0	10.0	
PCB018	ND	2.6	0.84	10.0	
PCB028	ND	2.6	0.90	10.0	
PCB031	ND	2.6	0.66	10.0	
PCB033	ND	2.6	0.50	10.0	
PCB044	17	2.6	2.0	10.0	
PCB049	9.7	2.6	0.64	10.0	
PCB052	16	2.6	2.5	10.0	
PCB056	7.7	2.6	0.98	10.0	
PCB060	2.9	2.6	0.68	10.0	
PCB066	19	2.6	1.6	10.0	
PCB070	18	2.6	0.93	10.0	
PCB074	7.1	2.6	1.2	10.0	
PCB087	17	2.6	1.5	10.0	
PCB095	20	2.6	1.4	10.0	
PCB097	10	2.6	0.60	10.0	
PCB099	15	2.6	0.62	10.0	
PCB101	26	2.6	0.58	10.0	
PCB105	12	2.6	0.70	10.0	
PCB110	28	2.6	0.44	10.0	
PCB118	21	2.6	0.45	10.0	
PCB128	5.4	2.6	1.6	10.0	
PCB132/153	28	5.2	2.1	10.0	
PCB138/158	21	5.2	4.6	10.0	
PCB141	5.3	2.6	0.64	10.0	
PCB149	19	2.6	1.5	10.0	
PCB151	8.7	2.6	1.1	10.0	
PCB156	ND	2.6	1.0	10.0	
PCB170	8.1	2.6	1.4	10.0	
PCB174	11	2.6	0.55	10.0	
PCB177	5.9	2.6	1.5	10.0	
PCB180	29	2.6	1.2	10.0	
PCB183	8.1	2.6	1.2	10.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 30 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	19	2.6	1.3	10.0	
PCB194	8.5	2.6	0.96	10.0	
PCB195	3.6	2.6	0.78	10.0	
PCB201	1.7	2.6	0.44	10.0	J
PCB203	11	2.6	0.75	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	59	14-146	
p-Terphenyl-d14	112	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 31 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-24 2.0-4.0 091118	**18-09-0884-59-AA**	**09/11/18 11:05**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 11:56**	**180919L16**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.50	0.096	1.00	
PCB018	ND	0.25	0.081	1.00	
PCB028	ND	0.25	0.086	1.00	
PCB031	ND	0.25	0.063	1.00	
PCB033	ND	0.25	0.048	1.00	
PCB044	1.0	0.25	0.19	1.00	
PCB049	ND	0.25	0.062	1.00	
PCB052	0.72	0.25	0.24	1.00	
PCB056	ND	0.25	0.094	1.00	
PCB060	ND	0.25	0.065	1.00	
PCB066	0.82	0.25	0.15	1.00	
PCB070	0.80	0.25	0.089	1.00	
PCB074	0.54	0.25	0.11	1.00	
PCB087	ND	0.25	0.14	1.00	
PCB095	0.88	0.25	0.13	1.00	
PCB097	ND	0.25	0.058	1.00	
PCB099	0.60	0.25	0.059	1.00	
PCB101	1.4	0.25	0.055	1.00	
PCB105	0.60	0.25	0.067	1.00	
PCB110	1.2	0.25	0.042	1.00	
PCB118	1.3	0.25	0.043	1.00	
PCB128	ND	0.25	0.15	1.00	
PCB132/153	1.6	0.50	0.20	1.00	
PCB138/158	1.2	0.50	0.44	1.00	
PCB141	ND	0.25	0.061	1.00	
PCB149	1.2	0.25	0.15	1.00	
PCB151	0.67	0.25	0.11	1.00	
PCB156	ND	0.25	0.096	1.00	
PCB170	0.91	0.25	0.14	1.00	
PCB174	ND	0.25	0.052	1.00	
PCB177	ND	0.25	0.15	1.00	
PCB180	1.8	0.25	0.11	1.00	
PCB183	0.67	0.25	0.12	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 32 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	1.2	0.25	0.13	1.00	
PCB194	0.63	0.25	0.092	1.00	
PCB195	ND	0.25	0.075	1.00	
PCB201	ND	0.25	0.042	1.00	
PCB203	0.56	0.25	0.072	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	59	14-146	
p-Terphenyl-d14	122	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 33 of 34

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-418-334**	**N/A**	**Solid**	**GC/MS HHH**	**09/19/18**	**09/21/18 18:51**	**180919L16**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.40	0.077	1.00	
PCB018	ND	0.20	0.065	1.00	
PCB028	ND	0.20	0.069	1.00	
PCB031	ND	0.20	0.051	1.00	
PCB033	ND	0.20	0.038	1.00	
PCB044	ND	0.20	0.15	1.00	
PCB049	ND	0.20	0.050	1.00	
PCB052	ND	0.20	0.19	1.00	
PCB056	ND	0.20	0.076	1.00	
PCB060	ND	0.20	0.052	1.00	
PCB066	ND	0.20	0.12	1.00	
PCB070	ND	0.20	0.072	1.00	
PCB074	ND	0.20	0.090	1.00	
PCB087	ND	0.20	0.11	1.00	
PCB095	ND	0.20	0.11	1.00	
PCB097	ND	0.20	0.046	1.00	
PCB099	ND	0.20	0.047	1.00	
PCB101	ND	0.20	0.044	1.00	
PCB105	ND	0.20	0.053	1.00	
PCB110	ND	0.20	0.034	1.00	
PCB118	ND	0.20	0.035	1.00	
PCB128	ND	0.20	0.12	1.00	
PCB132/153	ND	0.40	0.16	1.00	
PCB138/158	ND	0.40	0.35	1.00	
PCB141	ND	0.20	0.049	1.00	
PCB149	ND	0.20	0.12	1.00	
PCB151	ND	0.20	0.088	1.00	
PCB156	ND	0.20	0.077	1.00	
PCB170	ND	0.20	0.11	1.00	
PCB174	ND	0.20	0.042	1.00	
PCB177	ND	0.20	0.12	1.00	
PCB180	ND	0.20	0.092	1.00	
PCB183	ND	0.20	0.093	1.00	
PCB187	ND	0.20	0.10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin			Page 34 of 34

Parameter	Result	RL	MDL	DF	Qualifiers
PCB194	ND	0.20	0.074	1.00	
PCB195	ND	0.20	0.060	1.00	
PCB201	ND	0.20	0.034	1.00	
PCB203	ND	0.20	0.058	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	77	14-146	
p-Terphenyl-d14	104	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3550B (M)
		Method:	Organotins by Krone et al.
		Units:	ug/kg
Project: India Basin			Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-13 0.0-2.0 091118	**18-09-0884-4-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 20:26**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	17	7.1	1.7	1.00	
Monobutyltin	ND	7.1	3.3	1.00	
Tetrabutyltin	ND	7.1	1.8	1.00	
Tributyltin	ND	7.1	3.5	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	65	27-135	

IB-13 2.0-4.0 091118	**18-09-0884-8-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/26/18 18:55**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	10	5.4	1.3	1.00	
Monobutyltin	ND	5.4	2.5	1.00	
Tetrabutyltin	ND	5.4	1.3	1.00	
Tributyltin	ND	5.4	2.7	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	74	27-135	

IB-13 4.0-6.0 091118	**18-09-0884-12-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 21:04**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	5.3	1.3	1.00	
Monobutyltin	ND	5.3	2.5	1.00	
Tetrabutyltin	ND	5.3	1.3	1.00	
Tributyltin	ND	5.3	2.6	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	53	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3550B (M)
		Method:	Organotins by Krone et al.
		Units:	ug/kg
Project: India Basin			Page 2 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-17 0.0-2.0 091118	**18-09-0884-17-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 21:21**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	19	5.1	1.2	1.00	
Monobutyltin	ND	5.1	2.3	1.00	
Tetrabutyltin	ND	5.1	1.3	1.00	
Tributyltin	4.9	5.1	2.5	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	61	27-135	

IB-16 0.0-2.0 091118	**18-09-0884-21-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 21:40**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	76	5.3	1.3	1.00	
Monobutyltin	6.1	5.3	2.5	1.00	
Tetrabutyltin	ND	5.3	1.3	1.00	
Tributyltin	12	5.3	2.6	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	65	27-135	

IB-16 2.0-4.0 091118	**18-09-0884-25-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 21:59**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	7.4	5.2	1.3	1.00	
Monobutyltin	ND	5.2	2.4	1.00	
Tetrabutyltin	ND	5.2	1.3	1.00	
Tributyltin	ND	5.2	2.6	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	61	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3550B (M)
		Method:	Organotins by Krone et al.
		Units:	ug/kg
Project: India Basin			Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-16 4.0-6.0 091118	**18-09-0884-29-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 22:17**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	4.6	1.1	1.00	
Monobutyltin	ND	4.6	2.1	1.00	
Tetrabutyltin	ND	4.6	1.1	1.00	
Tributyltin	ND	4.6	2.3	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	63	27-135	

IB-07 0.0-2.0 091118	**18-09-0884-34-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 22:35**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	5.1	1.2	1.00	
Monobutyltin	ND	5.1	2.3	1.00	
Tetrabutyltin	ND	5.1	1.3	1.00	
Tributyltin	ND	5.1	2.5	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	63	27-135	

IB-07 2.0-4.0 091118	**18-09-0884-38-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 22:53**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	5.0	1.2	1.00	
Monobutyltin	ND	5.0	2.3	1.00	
Tetrabutyltin	ND	5.0	1.2	1.00	
Tributyltin	ND	5.0	2.5	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	56	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3550B (M)
		Method:	Organotins by Krone et al.
		Units:	ug/kg
Project: India Basin			Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-07 4.0-6.0 091118	**18-09-0884-42-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 23:11**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	4.6	1.1	1.00	
Monobutyltin	ND	4.6	2.1	1.00	
Tetrabutyltin	ND	4.6	1.1	1.00	
Tributyltin	ND	4.6	2.3	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	60	27-135	

IB-07 100 2.0-4.0 091118	**18-09-0884-47-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 23:29**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	4.7	1.1	1.00	
Monobutyltin	ND	4.7	2.2	1.00	
Tetrabutyltin	ND	4.7	1.2	1.00	
Tributyltin	ND	4.7	2.3	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	58	27-135	

IB-17 2.0-4.0 091118	**18-09-0884-48-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/26/18 19:14**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	5.0	1.2	1.00	
Monobutyltin	ND	5.0	2.3	1.00	
Tetrabutyltin	ND	5.0	1.2	1.00	
Tributyltin	ND	5.0	2.5	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	70	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3550B (M)
		Method:	Organotins by Krone et al.
		Units:	ug/kg
Project: India Basin			Page 5 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-17 4.0-6.0 091118	**18-09-0884-52-AA**	**09/11/18 00:00**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/26/18 00:05**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	5.2	1.3	1.00	
Monobutyltin	ND	5.2	2.4	1.00	
Tetrabutyltin	ND	5.2	1.3	1.00	
Tributyltin	ND	5.2	2.6	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	61	27-135	

IB-23 0.0-2.0 091118	**18-09-0884-57-AA**	**09/11/18 12:20**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/26/18 00:23**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	35	3.6	0.89	1.00	
Monobutyltin	12	3.6	1.7	1.00	
Tetrabutyltin	ND	3.6	0.90	1.00	
Tributyltin	ND	3.6	1.8	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	105	27-135	

IB-24 0.0-2.0 091118	**18-09-0884-58-AA**	**09/11/18 10:55**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/26/18 00:42**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	9.2	4.0	0.97	1.00	
Monobutyltin	ND	4.0	1.8	1.00	
Tetrabutyltin	ND	4.0	0.99	1.00	
Tributyltin	ND	4.0	2.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	63	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3550B (M)
		Method:	Organotins by Krone et al.
		Units:	ug/kg
Project: India Basin			Page 6 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-24 2.0-4.0 091118	**18-09-0884-59-A**	**09/11/18 11:05**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/26/18 01:00**	**180921L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	29	3.7	0.91	1.00	
Monobutyltin	ND	3.7	1.7	1.00	
Tetrabutyltin	ND	3.7	0.93	1.00	
Tributyltin	ND	3.7	1.9	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	60	27-135	

Method Blank	**099-07-016-1636**	**N/A**	**Solid**	**GC/MS Y**	**09/21/18**	**09/25/18 18:55**	**180921L03**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	3.0	0.73	1.00	
Monobutyltin	ND	3.0	1.4	1.00	
Tetrabutyltin	ND	3.0	0.74	1.00	
Tributyltin	ND	3.0	1.5	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	59	27-135	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

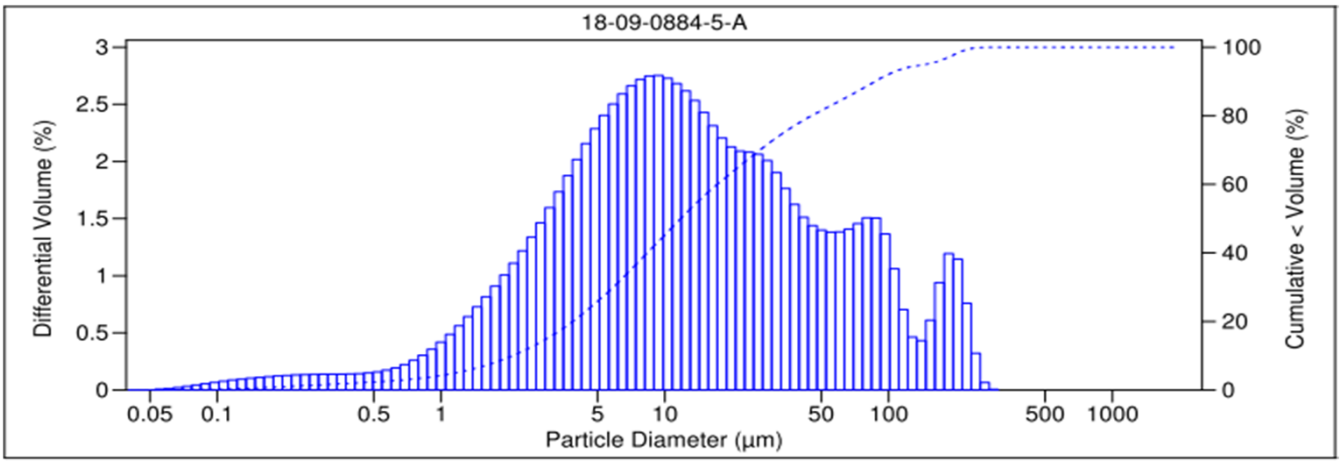
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/11/18
		Date Received:	09/13/18
		Work Order No:	18-09-0884
		Date Analyzed:	10/09/18
		Method:	ASTM D4464M
Project:	India Basin		Page 1 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-13 0.0-2.0 091118		Silt	0.031

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.17	5.65	9.36	64.65	20.18	84.83



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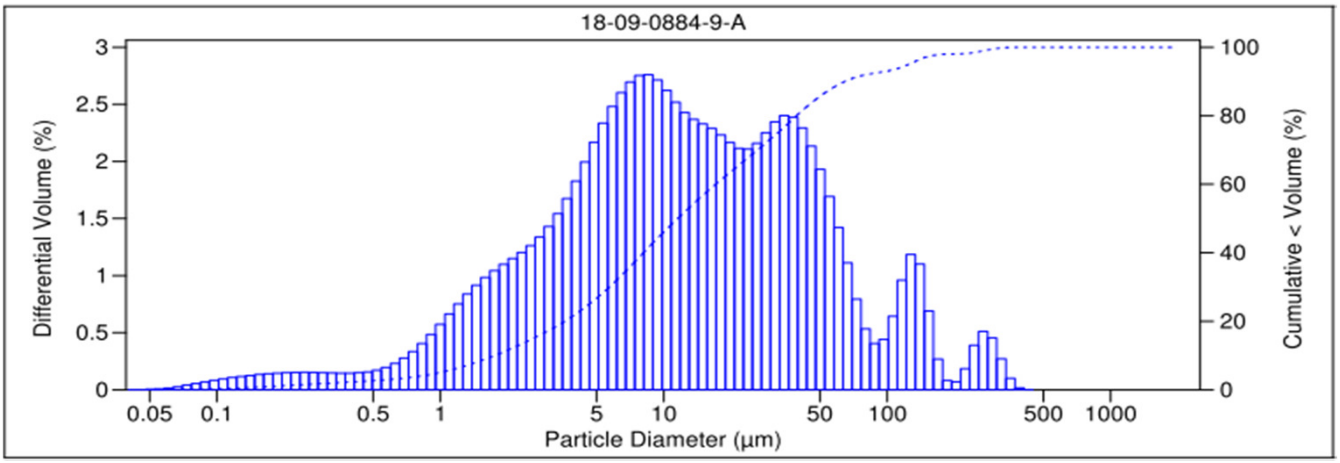
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/11/18
		Date Received:	09/13/18
		Work Order No:	18-09-0884
		Date Analyzed:	10/09/18
		Method:	ASTM D4464M
Project:	India Basin		Page 2 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-13 2.0-4.0 091118		Silt	0.029

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	1.48	3.54	5.44	68.06	21.48	89.54



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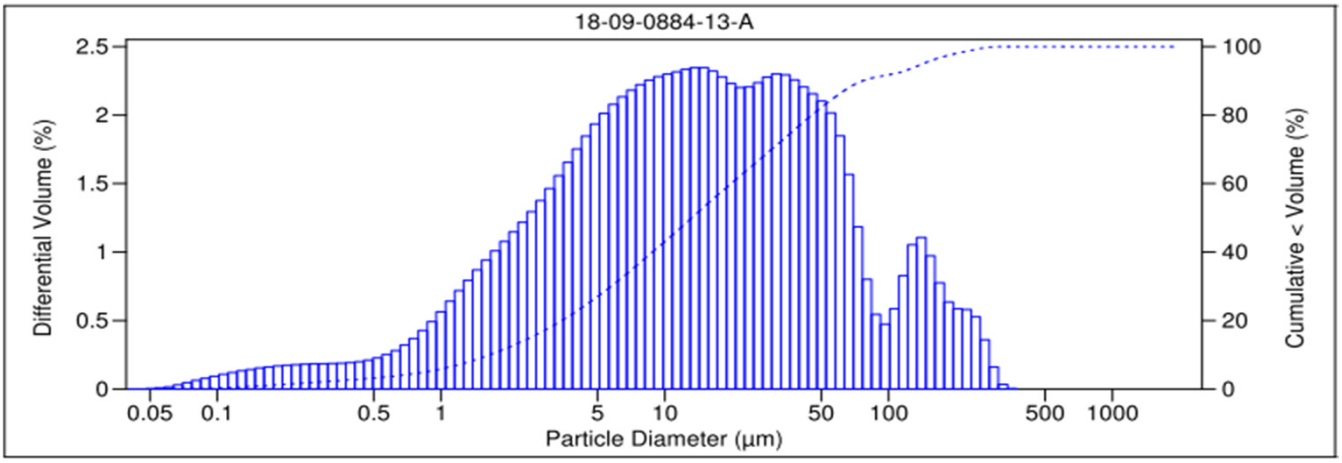
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/11/18
		Date Received:	09/13/18
		Work Order No:	18-09-0884
		Date Analyzed:	10/09/18
		Method:	ASTM D4464M
Project:	India Basin		Page 3 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-13 4.0-6.0 091118		Silt	0.032

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.72	5.80	6.57	64.75	22.16	86.91



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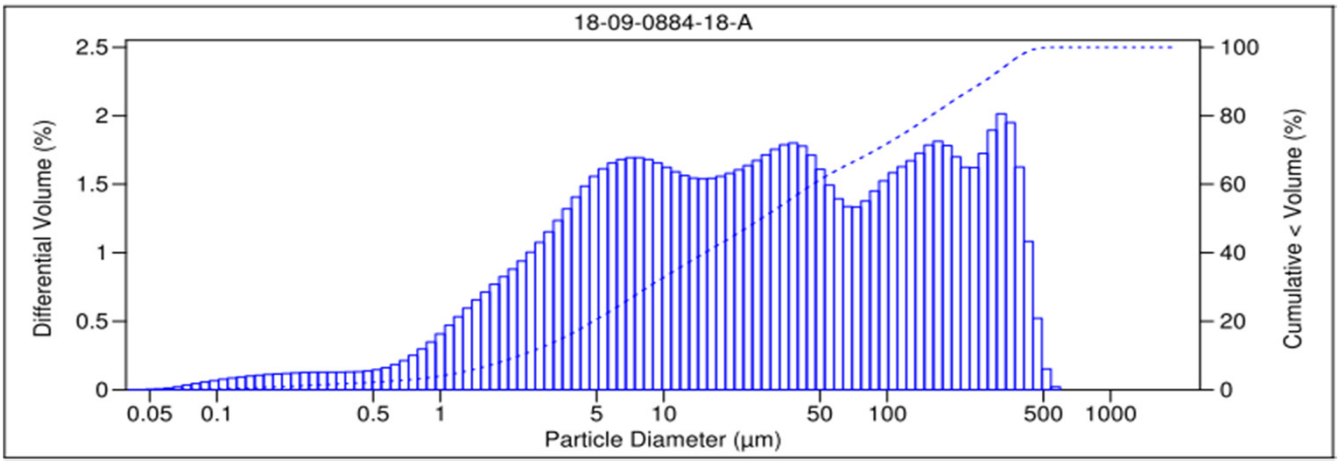
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/11/18
		Date Received:	09/13/18
		Work Order No:	18-09-0884
		Date Analyzed:	10/09/18
		Method:	ASTM D4464M
Project:	India Basin		Page 4 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-17 0.0-2.0 091118		Very Fine Sand	0.083

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.16	11.33	12.79	10.91	48.23	16.60	64.82



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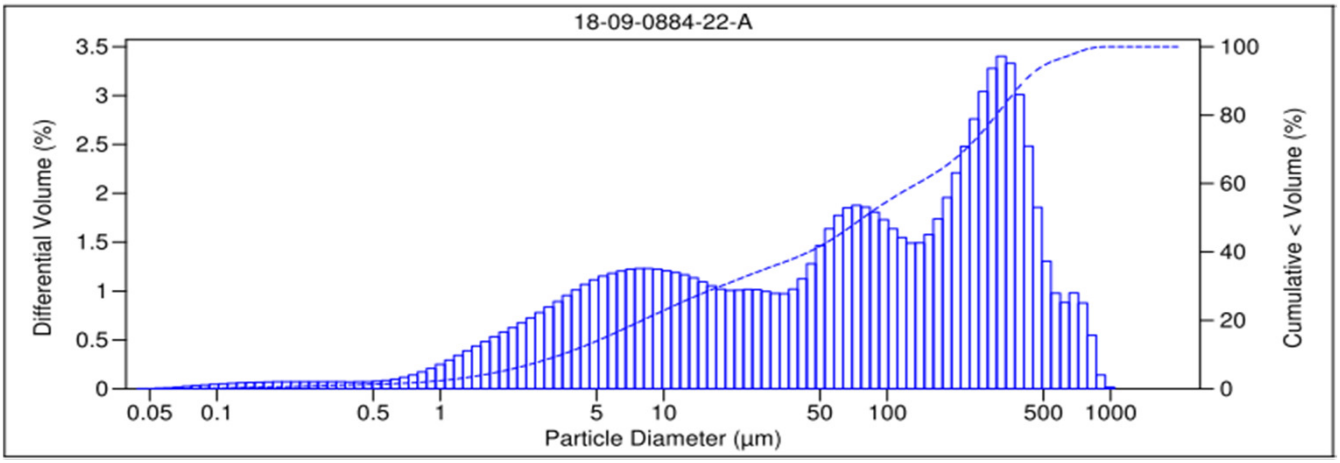
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/11/18
		Date Received:	09/13/18
		Work Order No:	18-09-0884
		Date Analyzed:	10/09/18
		Method:	ASTM D4464M
Project:	India Basin		Page 5 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-16 0.0-2.0 091118		Fine Sand	0.158

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.01	5.55	21.41	14.47	13.00	34.39	11.17	45.56



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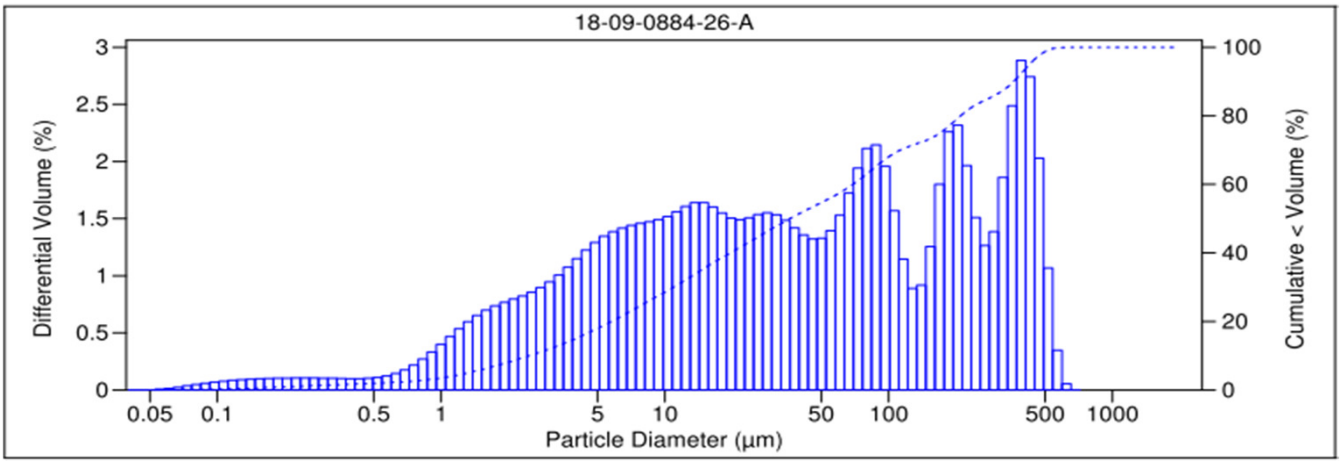
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/11/18
		Date Received:	09/13/18
		Work Order No:	18-09-0884
		Date Analyzed:	10/09/18
		Method:	ASTM D4464M
Project:	India Basin		Page 6 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-16 2.0-4.0 091118		Very Fine Sand	0.108

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	1.34	15.25	12.22	13.09	43.36	14.74	58.10



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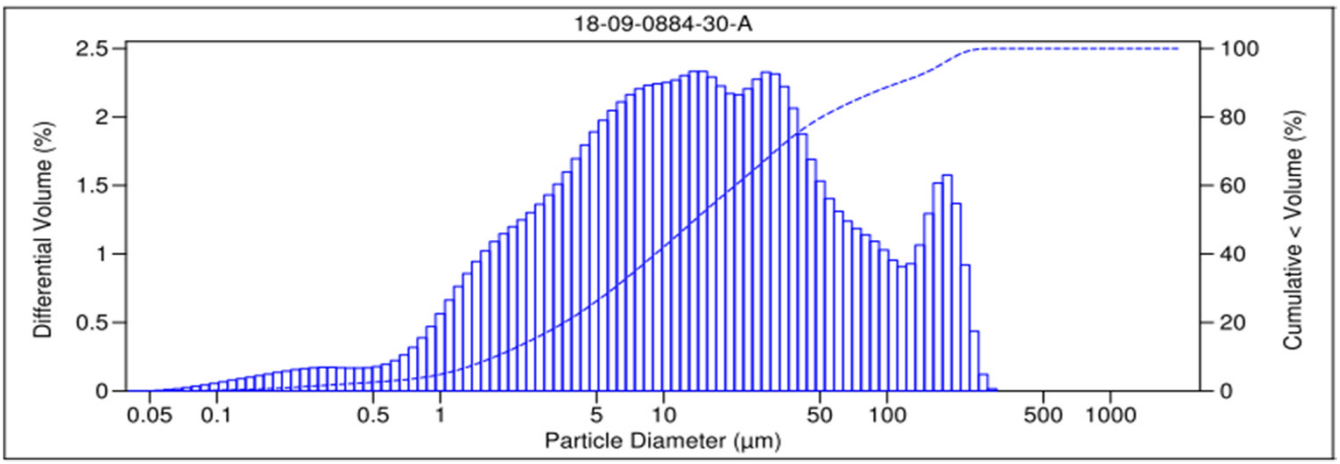
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/11/18
		Date Received:	09/13/18
		Work Order No:	18-09-0884
		Date Analyzed:	10/09/18
		Method:	ASTM D4464M
Project:	India Basin		Page 7 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-16 4.0-6.0 091118		Silt	0.036

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.27	8.73	8.01	61.49	21.50	82.99



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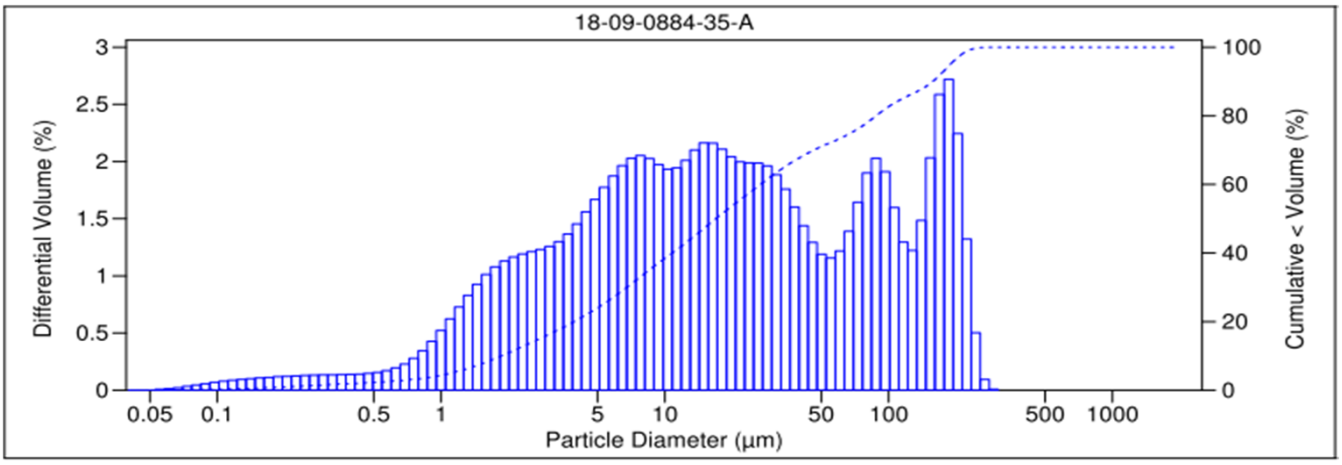
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/11/18
		Date Received:	09/13/18
		Work Order No:	18-09-0884
		Date Analyzed:	10/09/18
		Method:	ASTM D4464M
Project:	India Basin		Page 8 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-07 0.0-2.0 091118		Silt	0.047

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.25	13.64	12.29	53.94	19.88	73.82



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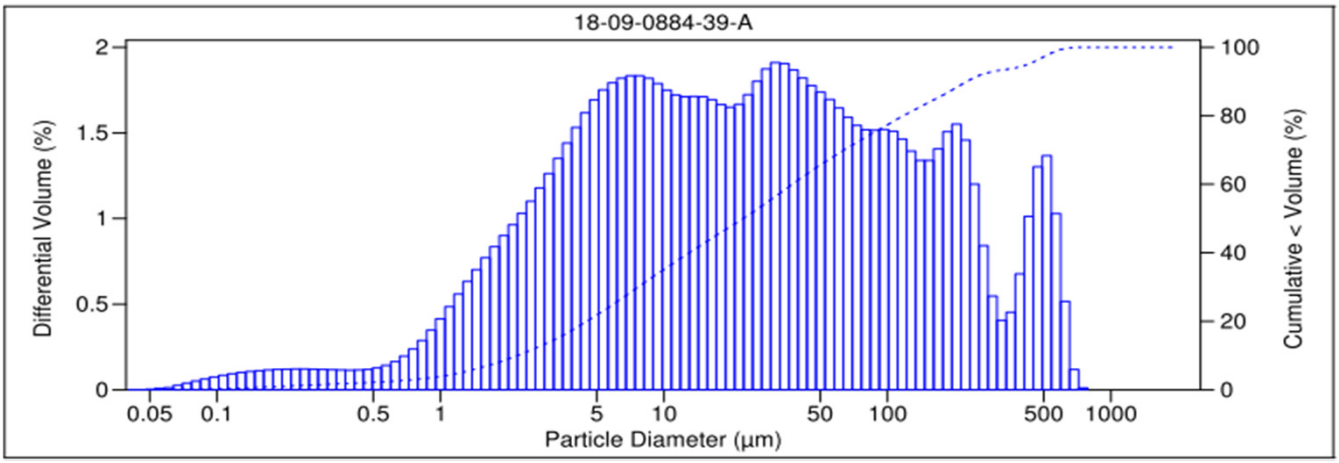
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/11/18
		Date Received:	09/13/18
		Work Order No:	18-09-0884
		Date Analyzed:	10/09/18
		Method:	ASTM D4464M
Project:	India Basin		Page 9 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-07 2.0-4.0 091118		Very Fine Sand	0.078

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	2.86	5.79	10.46	11.30	52.05	17.54	69.59



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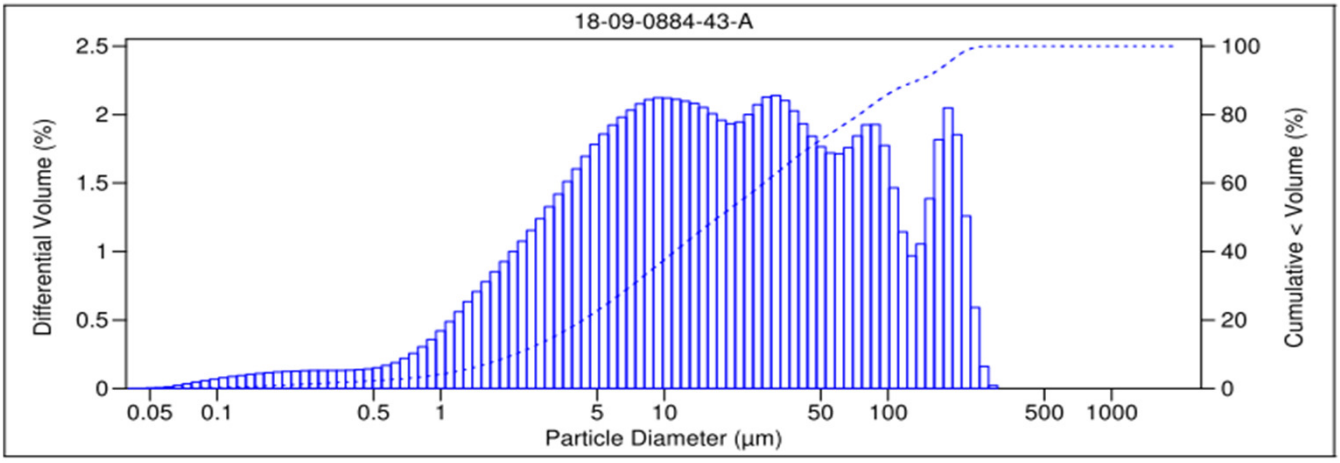
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/11/18
		Date Received:	09/13/18
		Work Order No:	18-09-0884
		Date Analyzed:	10/09/18
		Method:	ASTM D4464M
Project:	India Basin		Page 10 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-07 4.0-6.0 091118		Silt	0.043

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.36	10.55	12.38	58.46	18.25	76.71



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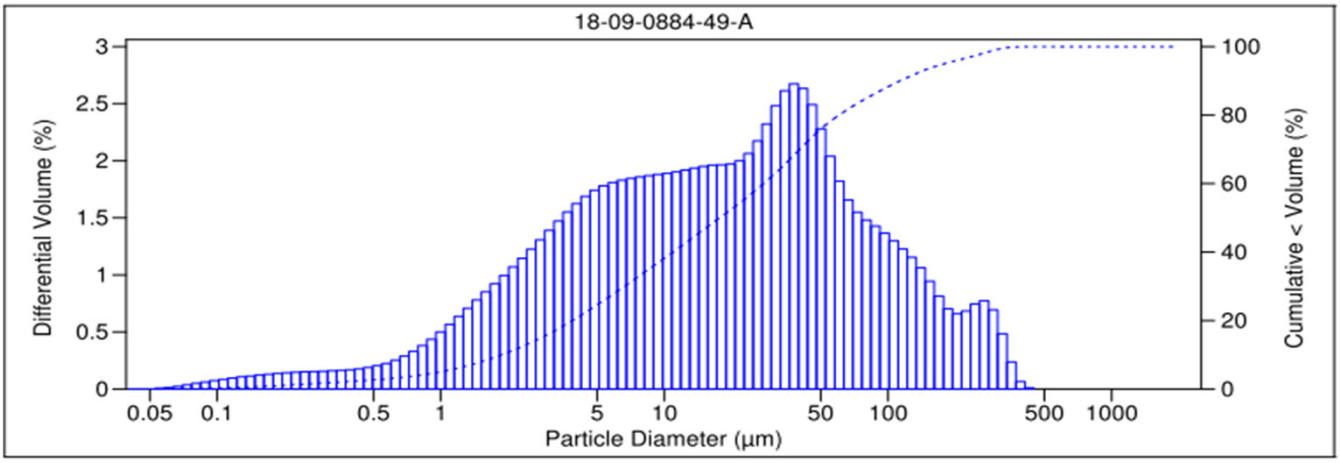
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/11/18
		Date Received:	09/13/18
		Work Order No:	18-09-0884
		Date Analyzed:	10/09/18
		Method:	ASTM D4464M
Project:	India Basin		Page 11 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-17 2.0-4.0 091118		Silt	0.042

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	2.49	6.24	10.61	60.51	20.14	80.65



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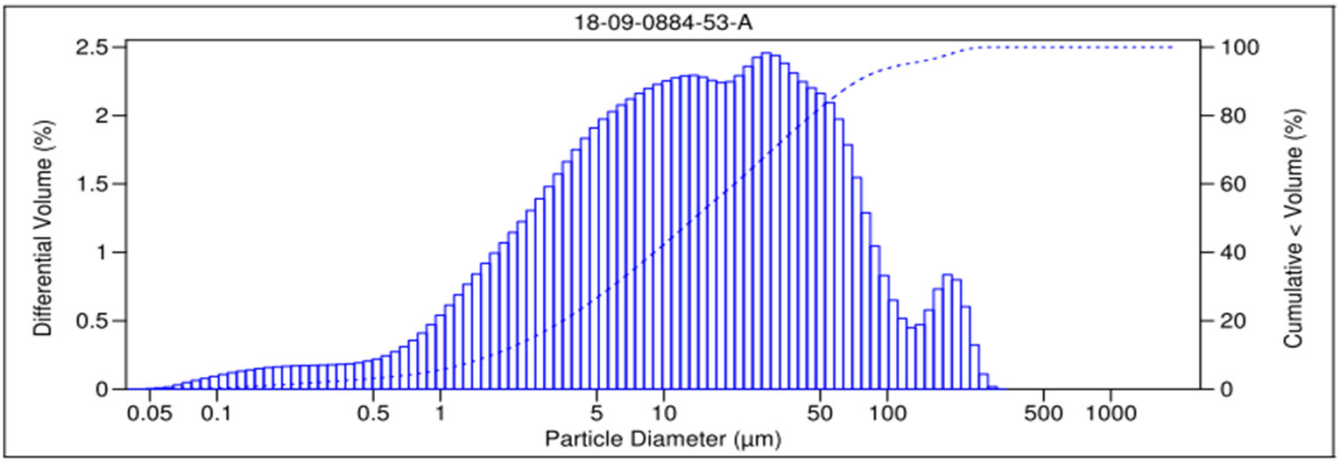
PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Leidos		Date Sampled:	09/11/18
		Date Received:	09/13/18
		Work Order No:	18-09-0884
		Date Analyzed:	10/09/18
		Method:	ASTM D4464M
Project:	India Basin		Page 12 of 12

Sample ID	Depth ft	Description	Mean Grain Size mm
IB-17 4.0-6.0 091118		Silt	0.030

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.23	4.58	8.11	65.22	21.86	87.08



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Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 9060A
Project: India Basin			Page 1 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-13 0.0-2.0 091118	**Sample**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCS1**
IB-13 0.0-2.0 091118	**Matrix Spike**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCS1**
IB-13 0.0-2.0 091118	**Matrix Spike Duplicate**	**Sediment**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCS1**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.6620	3.000	3.393	91	3.364	90	75-125	1	0-25	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: India Basin			Page 2 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-17 2.0-4.0 091118	**Sample**	**Sediment**	**GC 47**	**09/25/18**	**09/26/18 03:22**	**180925S01**
IB-17 2.0-4.0 091118	**Matrix Spike**	**Sediment**	**GC 47**	**09/25/18**	**09/25/18 22:39**	**180925S01**
IB-17 2.0-4.0 091118	**Matrix Spike Duplicate**	**Sediment**	**GC 47**	**09/25/18**	**09/25/18 22:59**	**180925S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Diesel Range Organics (C10-C36)	ND	400.0	381.3	95	410.5	103	61-145	7	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3005A Filt.
		Method:	EPA 6020
Project: India Basin			Page 3 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-09-1853-15	**Sample**	**Aqueous**	**ICP/MS 05**	**09/28/18**	**10/02/18 02:27**	**180928SA4A**
18-09-1853-15	**Matrix Spike**	**Aqueous**	**ICP/MS 05**	**09/28/18**	**10/02/18 02:13**	**180928SA4A**
18-09-1853-15	**Matrix Spike Duplicate**	**Aqueous**	**ICP/MS 05**	**09/28/18**	**10/02/18 02:16**	**180928SA4A**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	379.6	100.0	407.4	28	416.7	37	73-127	2	0-11	3
Cadmium	ND	100.0	103.3	103	104.8	105	84-114	1	0-8	
Chromium	3357	100.0	3394	4X	3412	4X	73-133	4X	0-11	Q
Cobalt	ND	100.0	110.7	111	112.4	112	79-121	1	0-10	
Copper	ND	100.0	7.712	8	8.180	8	72-108	6	0-10	3
Lead	ND	100.0	96.30	96	97.99	98	79-121	2	0-10	
Nickel	70.02	100.0	173.6	104	173.4	103	68-122	0	0-10	
Selenium	ND	100.0	11.14	11	11.63	12	59-125	4	0-12	3
Silver	ND	50.00	0	0	0	0	68-128	0	0-14	3
Zinc	82.85	100.0	166.0	83	131.2	48	43-145	23	0-39	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
Project: India Basin			Page 4 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-13 0.0-2.0 091118	**Sample**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 22:30**	**180921S03**
IB-13 0.0-2.0 091118	**Matrix Spike**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 22:16**	**180921S03**
IB-13 0.0-2.0 091118	**Matrix Spike Duplicate**	**Sediment**	**ICP/MS 05**	**09/21/18**	**09/24/18 22:19**	**180921S03**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	5.043	25.00	31.02	104	32.51	110	80-120	5	0-20	
Cadmium	0.1331	25.00	28.43	113	29.43	117	80-120	3	0-20	
Chromium	32.69	25.00	65.07	130	66.77	136	80-120	3	0-20	3
Cobalt	6.299	25.00	33.57	109	34.73	114	80-120	3	0-20	
Copper	34.52	25.00	61.64	108	61.59	108	80-120	0	0-20	
Lead	20.45	25.00	47.70	109	45.89	102	80-120	4	0-20	
Nickel	40.48	25.00	67.01	106	68.23	111	80-120	2	0-20	
Selenium	ND	25.00	26.14	105	27.05	108	80-120	3	0-20	
Silver	0.3268	12.50	14.24	111	14.32	112	80-120	1	0-20	
Zinc	62.19	25.00	90.79	114	86.11	96	80-120	5	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
Project: India Basin			Page 5 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-13 0.0-2.0 091118	**Sample**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 03:17**	**180919S15**
IB-13 0.0-2.0 091118	**Matrix Spike**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 02:38**	**180919S15**
IB-13 0.0-2.0 091118	**Matrix Spike Duplicate**	**Sediment**	**GC/MS AAA**	**09/19/18**	**09/22/18 02:57**	**180919S15**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	100.0	60.62	61	70.72	71	40-160	15	0-20	
Acenaphthylene	ND	100.0	65.39	65	76.32	76	40-160	15	0-20	
Anthracene	ND	100.0	100.7	101	103.9	104	40-160	3	0-20	
Benzo (a) Anthracene	44.14	100.0	139.3	95	152.8	109	40-160	9	0-20	
Benzo (a) Pyrene	91.43	100.0	194.0	103	225.3	134	40-160	15	0-20	
Benzo (b) Fluoranthene	83.71	100.0	172.4	89	218.5	135	40-160	24	0-20	4
Benzo (g,h,i) Perylene	75.04	100.0	144.3	69	176.2	101	40-160	20	0-20	
Benzo (k) Fluoranthene	52.57	100.0	139.9	87	158.6	106	40-160	13	0-20	
Chrysene	49.45	100.0	146.6	97	174.9	125	40-160	18	0-20	
Dibenz (a,h) Anthracene	ND	100.0	81.93	82	102.2	102	40-160	22	0-20	4
Fluoranthene	95.25	100.0	220.5	125	212.0	117	40-160	4	0-20	
Fluorene	ND	100.0	67.98	68	79.03	79	40-160	15	0-20	
Indeno (1,2,3-c,d) Pyrene	56.92	100.0	128.8	72	155.1	98	40-160	19	0-20	
2-Methylnaphthalene	ND	100.0	56.72	57	61.81	62	40-160	9	0-20	
1-Methylnaphthalene	ND	100.0	57.56	58	68.26	68	40-160	17	0-20	
Naphthalene	ND	100.0	56.66	57	59.94	60	40-160	6	0-20	
Phenanthrene	35.06	100.0	130.4	95	129.4	94	40-160	1	0-20	
Pyrene	132.5	100.0	260.5	128	255.2	123	40-160	2	0-46	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
Project: India Basin			Page 6 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-13 4.0-6.0 091118	**Sample**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 06:42**	**180919S16**
IB-13 4.0-6.0 091118	**Matrix Spike**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 05:07**	**180919S16**
IB-13 4.0-6.0 091118	**Matrix Spike Duplicate**	**Sediment**	**GC/MS HHH**	**09/19/18**	**09/22/18 05:31**	**180919S16**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	ND	50.00	28.34	57	28.49	57	50-150	1	0-25	
PCB028	ND	50.00	31.83	64	32.14	64	50-150	1	0-25	
PCB044	ND	50.00	30.38	61	30.70	61	50-150	1	0-25	
PCB052	ND	50.00	28.91	58	28.88	58	50-150	0	0-25	
PCB066	ND	50.00	37.21	74	38.84	78	50-150	4	0-25	
PCB101	ND	50.00	31.83	64	33.61	67	50-150	5	0-25	
PCB105	ND	50.00	36.85	74	39.62	79	50-150	7	0-25	
PCB118	ND	50.00	37.61	75	40.47	81	50-150	7	0-25	
PCB128	ND	50.00	33.92	68	37.20	74	50-150	9	0-25	
PCB170	ND	50.00	33.14	66	33.88	68	50-150	2	0-25	
PCB180	ND	50.00	37.32	75	41.91	84	50-150	12	0-25	
PCB187	ND	50.00	34.13	68	37.20	74	50-150	9	0-25	
PCB195	ND	50.00	32.32	65	33.48	67	50-150	4	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3550B (M)
		Method:	Organotins by Krone et al.
Project: India Basin			Page 7 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-16 2.0-4.0 091118	**Sample**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 21:59**	**180921S03**
IB-16 2.0-4.0 091118	**Matrix Spike**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/25/18 19:50**	**180921S03**
IB-16 2.0-4.0 091118	**Matrix Spike Duplicate**	**Sediment**	**GC/MS Y**	**09/21/18**	**09/26/18 19:31**	**180921S03**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	ND	100.0	69.98	70	48.73	49	33-129	36	0-36	
Tributyltin	ND	100.0	60.07	60	42.61	43	34-142	34	0-50	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - PDS

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3005A Filt.
		Method:	EPA 6020
Project: India Basin			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
18-09-1853-15	**Sample**	**Aqueous**	**ICP/MS 05**	**09/28/18 00:00**	**10/02/18 02:27**	**180928SA4A**
18-09-1853-15	**PDS**	**Aqueous**	**ICP/MS 05**	**09/28/18 00:00**	**10/02/18 02:20**	**180928SA4A**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Arsenic	379.6	1000	1419	104	75-125	
Cadmium	ND	1000	1039	104	75-125	
Chromium	3357	1000	4365	101	75-125	
Cobalt	ND	1000	1053	105	75-125	
Copper	ND	1000	1072	107	75-125	
Lead	ND	1000	1031	103	75-125	
Nickel	70.02	1000	1073	100	75-125	
Selenium	ND	1000	1000	100	75-125	
Silver	ND	500.0	376.5	75	75-125	
Zinc	82.85	1000	1137	105	75-125	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - PDS

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
Project: India Basin			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
IB-13 0.0-2.0 091118	**Sample**	**Sediment**	**ICP/MS 05**	**09/21/18 00:00**	**09/24/18 22:30**	**180921S03**
IB-13 0.0-2.0 091118	**PDS**	**Sediment**	**ICP/MS 05**	**09/21/18 00:00**	**09/24/18 22:23**	**180921S03**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Arsenic	5.043	25.00	29.56	98	75-125	
Cadmium	0.1331	25.00	25.34	101	75-125	
Chromium	32.69	25.00	57.10	98	75-125	
Cobalt	6.299	25.00	29.47	93	75-125	
Copper	34.52	25.00	59.71	101	75-125	
Lead	20.45	25.00	45.15	99	75-125	
Nickel	40.48	25.00	62.59	88	75-125	
Selenium	ND	25.00	25.44	102	75-125	
Silver	0.3268	12.50	12.79	100	75-125	
Zinc	62.19	25.00	86.78	98	75-125	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 376.2M
Project: India Basin			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
IB-24 2.0-4.0 091118	**Sample**	**Sediment**	**N/A**	**09/14/18 00:00**	**09/14/18 18:00**	**I0914SD5**
IB-24 2.0-4.0 091118	**Sample Duplicate**	**Sediment**	**N/A**	**09/14/18 00:00**	**09/14/18 18:00**	**I0914SD5**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Sulfide, Total	2.500	2.500	0	0-25	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	SM 2540 B (M)
Project: India Basin			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
IB-13 0.0-2.0 091118	**Sample**	**Sediment**	**N/A**	**09/20/18 00:00**	**09/20/18 14:30**	**I0920TSD2**
IB-13 0.0-2.0 091118	**Sample Duplicate**	**Sediment**	**N/A**	**09/20/18 00:00**	**09/20/18 14:30**	**I0920TSD2**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Solids, Total	42.00	41.90	0	0-10	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 376.2M
Project: India Basin			Page 1 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-352-167	**LCS**	**Solid**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**
099-16-352-167	**LCSD**	**Solid**	**N/A**	**09/14/18**	**09/14/18 18:00**	**I0914SL5**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Sulfide, Total	1.000	0.9500	95	0.9000	90	80-120	5	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	EPA 9060A
Project: India Basin			Page 2 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-06-013-1900	**LCS**	**Solid**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**
099-06-013-1900	**LCSD**	**Solid**	**TOC 10**	**09/23/18**	**09/26/18 12:50**	**I0923TOCL1**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.6000	0.6162	103	0.6193	103	80-120	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: India Basin			Page 3 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-454-4	**LCS**	**Solid**	**GC 47**	**09/25/18**	**09/25/18 21:58**	**180925B01**
099-15-454-4	**LCSD**	**Solid**	**GC 47**	**09/25/18**	**09/25/18 22:19**	**180925B01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Diesel Range Organics (C10-C36)	400.0	385.2	96	379.7	95	75-123	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3020A Total
		Method:	EPA 6020
Project: India Basin			Page 4 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
096-06-003-6032	**LCS**	**Aqueous**	**ICP/MS 05**	**09/28/18**	**10/03/18 01:44**	**180928LA4A**
096-06-003-6032	**LCSD**	**Aqueous**	**ICP/MS 05**	**09/28/18**	**10/02/18 13:16**	**180928LA4A**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	100.0	103.3	103	103.6	104	80-120	0	0-20	
Cadmium	100.0	110.0	110	103.4	103	80-120	6	0-20	
Chromium	100.0	112.0	112	113.6	114	80-120	1	0-20	
Cobalt	100.0	107.1	107	105.2	105	80-120	2	0-20	
Copper	100.0	106.9	107	101.1	101	80-120	6	0-20	
Lead	100.0	105.7	106	103.3	103	80-120	2	0-20	
Nickel	100.0	104.9	105	100.9	101	80-120	4	0-20	
Selenium	100.0	106.0	106	101.2	101	80-120	5	0-20	
Silver	50.00	51.90	104	49.69	99	80-120	4	0-20	
Zinc	100.0	106.3	106	104.7	105	80-120	2	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
Project: India Basin			Page 5 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-254-666	**LCS**	**Solid**	**ICP/MS 05**	**09/21/18**	**09/24/18 21:37**	**180921L03**
099-15-254-666	**LCSD**	**Solid**	**ICP/MS 05**	**09/21/18**	**09/24/18 21:40**	**180921L03**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	23.33	93	25.07	100	80-120	7	0-20	
Cadmium	25.00	25.18	101	25.28	101	80-120	0	0-20	
Chromium	25.00	22.39	90	22.37	89	80-120	0	0-20	
Cobalt	25.00	22.62	90	23.37	93	80-120	3	0-20	
Copper	25.00	24.62	98	24.65	99	80-120	0	0-20	
Lead	25.00	24.38	98	25.01	100	80-120	3	0-20	
Nickel	25.00	22.67	91	23.26	93	80-120	3	0-20	
Selenium	25.00	22.18	89	23.92	96	80-120	8	0-20	
Silver	12.50	12.21	98	12.23	98	80-120	0	0-20	
Zinc	25.00	27.32	109	26.62	106	80-120	3	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3510C
		Method:	EPA 8270C SIM PAHs
Project: India Basin			Page 6 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-06-008-1075	**LCS**	**Aqueous**	**GC/MS AAA**	**09/20/18**	**09/21/18 14:57**	**180920L04**
099-06-008-1075	**LCSD**	**Aqueous**	**GC/MS AAA**	**09/20/18**	**09/21/18 15:17**	**180920L04**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Naphthalene	2.000	1.480	74	1.497	75	21-133	2-152	1	0-25	
2-Methylnaphthalene	2.000	1.447	72	1.482	74	21-140	1-160	2	0-25	
1-Methylnaphthalene	2.000	1.587	79	1.612	81	20-140	0-160	2	0-25	
Acenaphthylene	2.000	1.404	70	1.468	73	33-145	14-164	4	0-25	
Acenaphthene	2.000	1.445	72	1.471	74	55-121	44-132	2	0-25	
Fluorene	2.000	1.450	73	1.484	74	59-121	49-131	2	0-25	
Phenanthrene	2.000	1.448	72	1.468	73	54-120	43-131	1	0-25	
Anthracene	2.000	1.352	68	1.421	71	27-133	9-151	5	0-25	
Fluoranthene	2.000	1.535	77	1.587	79	26-137	8-156	3	0-25	
Pyrene	2.000	1.446	72	1.447	72	45-129	31-143	0	0-25	
Benzo (a) Anthracene	2.000	1.427	71	1.464	73	33-143	15-161	3	0-25	
Chrysene	2.000	1.487	74	1.505	75	17-168	0-193	1	0-25	
Benzo (k) Fluoranthene	2.000	1.412	71	1.523	76	24-159	2-182	8	0-25	
Benzo (b) Fluoranthene	2.000	1.522	76	1.471	74	24-159	2-182	3	0-25	
Benzo (a) Pyrene	2.000	1.473	74	1.526	76	17-163	0-187	4	0-25	
Indeno (1,2,3-c,d) Pyrene	2.000	1.632	82	1.620	81	25-175	0-200	1	0-25	
Dibenz (a,h) Anthracene	2.000	1.741	87	1.728	86	25-175	0-200	1	0-25	
Benzo (g,h,i) Perylene	2.000	1.728	86	1.706	85	25-157	3-179	1	0-25	

Total number of LCS compounds: 18
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PAHs
Project: India Basin			Page 7 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-437-247	**LCS**	**Solid**	**GC/MS AAA**	**09/19/18**	**09/21/18 16:35**	**180919L15**
099-14-437-247	**LCSD**	**Solid**	**GC/MS AAA**	**09/19/18**	**09/21/18 17:15**	**180919L15**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acenaphthene	100.0	70.15	70	71.69	72	40-160	20-180	2	0-20	
Acenaphthylene	100.0	70.56	71	72.40	72	40-160	20-180	3	0-20	
Anthracene	100.0	72.16	72	73.98	74	40-160	20-180	2	0-20	
Benzo (a) Anthracene	100.0	78.22	78	79.39	79	40-160	20-180	1	0-20	
Benzo (a) Pyrene	100.0	79.75	80	80.31	80	40-160	20-180	1	0-20	
Benzo (b) Fluoranthene	100.0	84.81	85	84.74	85	40-160	20-180	0	0-20	
Benzo (g,h,i) Perylene	100.0	94.14	94	94.11	94	40-160	20-180	0	0-20	
Benzo (k) Fluoranthene	100.0	80.17	80	82.48	82	40-160	20-180	3	0-20	
Chrysene	100.0	82.32	82	82.13	82	40-160	20-180	0	0-20	
Dibenz (a,h) Anthracene	100.0	92.30	92	91.88	92	40-160	20-180	0	0-20	
Fluoranthene	100.0	81.14	81	83.27	83	40-160	20-180	3	0-20	
Fluorene	100.0	69.99	70	72.97	73	40-160	20-180	4	0-20	
Indeno (1,2,3-c,d) Pyrene	100.0	89.32	89	88.14	88	40-160	20-180	1	0-20	
2-Methylnaphthalene	100.0	72.53	73	74.56	75	40-160	20-180	3	0-20	
1-Methylnaphthalene	100.0	68.70	69	80.18	80	40-160	20-180	15	0-20	
Naphthalene	100.0	72.74	73	72.97	73	40-160	20-180	0	0-20	
Phenanthrene	100.0	75.80	76	75.14	75	40-160	20-180	1	0-20	
Pyrene	100.0	76.45	76	77.46	77	40-160	20-180	1	0-20	

Total number of LCS compounds: 18
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3510C
		Method:	EPA 8270C SIM PCB Congeners
Project: India Basin			Page 8 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-414-143	**LCS**	**Aqueous**	**GC/MS HHH**	**09/20/18**	**09/25/18 17:30**	**180920L03**
099-16-414-143	**LCSD**	**Aqueous**	**GC/MS HHH**	**09/20/18**	**09/25/18 18:19**	**180920L03**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
PCB018	0.5000	0.3132	63	0.2984	60	50-150	33-167	5	0-25	
PCB028	0.5000	0.3666	73	0.3455	69	50-150	33-167	6	0-25	
PCB044	0.5000	0.3349	67	0.3222	64	50-150	33-167	4	0-25	
PCB052	0.5000	0.2835	57	0.2698	54	50-150	33-167	5	0-25	
PCB066	0.5000	0.3687	74	0.3604	72	50-150	33-167	2	0-25	
PCB101	0.5000	0.3469	69	0.3300	66	50-150	33-167	5	0-25	
PCB105	0.5000	0.4052	81	0.3855	77	50-150	33-167	5	0-25	
PCB118	0.5000	0.4031	81	0.3812	76	50-150	33-167	6	0-25	
PCB128	0.5000	0.3709	74	0.3560	71	50-150	33-167	4	0-25	
PCB170	0.5000	0.3619	72	0.3338	67	50-150	33-167	8	0-25	
PCB180	0.5000	0.3910	78	0.3592	72	50-150	33-167	8	0-25	
PCB187	0.5000	0.3625	72	0.3402	68	50-150	33-167	6	0-25	
PCB195	0.5000	0.3530	71	0.3268	65	50-150	33-167	8	0-25	

Total number of LCS compounds: 13
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
Project: India Basin			Page 9 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-418-334	**LCS**	**Solid**	**GC/MS HHH**	**09/19/18**	**09/21/18 19:15**	**180919L16**
099-16-418-334	**LCSD**	**Solid**	**GC/MS HHH**	**09/19/18**	**09/21/18 19:39**	**180919L16**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
PCB018	50.00	27.96	56	25.51	51	24-132	6-150	9	0-28	
PCB028	50.00	28.83	58	26.35	53	31-133	14-150	9	0-26	
PCB044	50.00	27.93	56	25.28	51	36-120	22-134	10	0-28	
PCB052	50.00	26.39	53	24.17	48	31-121	16-136	9	0-27	
PCB066	50.00	34.02	68	31.09	62	43-139	27-155	9	0-25	
PCB101	50.00	29.10	58	27.04	54	37-121	23-135	7	0-27	
PCB105	50.00	31.75	63	29.53	59	48-132	34-146	7	0-26	
PCB118	50.00	32.49	65	29.72	59	46-136	31-151	9	0-25	
PCB128	50.00	29.11	58	26.56	53	40-130	25-145	9	0-26	
PCB170	50.00	26.59	53	24.87	50	40-124	26-138	7	0-29	
PCB180	50.00	31.25	62	28.55	57	41-143	24-160	9	0-26	
PCB187	50.00	29.12	58	26.65	53	39-129	24-144	9	0-26	
PCB195	50.00	28.51	57	26.33	53	44-128	30-142	8	0-28	

Total number of LCS compounds: 13
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/13/18
1000 Broadway, Suite 675		Work Order:	18-09-0884
Oakland, CA 94607-4099		Preparation:	EPA 3550B (M)
		Method:	Organotins by Krone et al.
Project: India Basin			Page 10 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-016-1636	**LCS**	**Solid**	**GC/MS Y**	**09/21/18**	**09/25/18 19:13**	**180921L03**
099-07-016-1636	**LCSD**	**Solid**	**GC/MS Y**	**09/21/18**	**09/25/18 19:31**	**180921L03**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	100.0	64.41	64	70.40	70	40-142	9	0-20	
Tributyltin	100.0	54.94	55	60.45	60	33-147	10	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Glossary of Terms and Qualifiers

Work Order: 18-09-0884 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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CHAIN-OF-CUSTODY RECORD

Date 9/11/18

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WO NO. / LAB USE ONLY: **18-09-0884**

LABORATORY CLIENT: Leidos

ADDRESS:

CITY: Oakland STATE: CA ZIP:

TEL: 760.728.3378 E-MAIL: charles.r.phillips@leidos.com

CLIENT PROJECT NAME / NO.: INDIA BASIN

P.O. NO.:

PROJECT CONTACT: Charlie Phillips/Leidos

LAB CONTACT OR QUOTE NO:

GLOBAL ID:

LOG CODE:

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

EDD

☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:

Metals 6020 includes cobalt

REQUESTED ANALYSES

Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO C_{10}-C_{36} 8015B	☐ TPH(d) ☐ DRO Solids SM 2540B	TPH ☐ C6-C36 ☐ C6-C44 TOC EPA 9060A	TPH Sulfides EPA 376.2	BTEX / MTBE ☐ 8260 ☐	VOCs (8260) Butyltins Crone	Oxygenates (8260) Metals 6020	Prep (5035) ☐ En Core ☐ Terra Core Mercury 1631E	SVOCs (8270) Selenium 7242	Pesticides (8081)	PCBs (8082) RMP 40 Congeners	PAHs ☐ 8270 ☐ 8270 SIM RMP 25	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Dioxin/Furan EPA 1631B	Grain Size ASTM D4464		Archive
1	•	Equipment Rinse #1	9/11/18		water	1 amber				✓		✓	✓								✓						
2	•	Equipment Rinse #2			↓	1 amber									✓	✓	✓	✓									
3	•	Equipment Rinse #3			↓	1 amber																		✓			
4	•	JB-13 0.0-2.0 091118			Sed	1 16 oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
5	•	JB-13 0.0-2.0 091118				ziploc																			✓		
6	•	JB-13 0.0-2.0 091118				1 4oz Amber																					✓
7	•	JB-13 0.0-2.0 091118				1 4oz																					✓
8	•	JB-13 2.0-4.0 091118				1 16 oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
9	•	JB-13 2.0-4.0 091118				ziploc																			✓		
10	•	JB-13 2.0-4.0 091118				1 4oz Amber																					✓

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Charlie R Phillips 9/11/18	[signature]	9/11/18	18:15
[signature]	Tom O'Malley ECI	9/12/18	1400
Tom O'Malley TO GSO 9/12/18 1730	[signature]	9/13/18	1200

2016-04-01-Revision

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CHAIN-OF-CUSTODY RECORD

Date 9/11/18
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WO NO. / LAB USE ONLY: 0884

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Oakland STATE: CA ZIP:
TEL: 760.728.3378 E-MAIL: charles.r.phillips@leidos.com

CLIENT PROJECT NAME / NO.: India Basin
P.O. NO.:
PROJECT CONTACT: Charlie Phillips / Leidos
LAB CONTACT OR QUOTE NO:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

EDD
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
Metals 1620 includes cobalt

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO C_6-C_{12} 8015B	TPH(d) ☐ DRO Solids SM 2540B	TPH ☐ C6-C36 ☐ C6-C44 TPC EPA 9060A	TPH Sulfides EPA 376.2	BTEX / MTBE ☐ 8260 ☐	VOCs (8260) Butyltins Crm	Oxygenates (8260) Metals 6020	Prep (5035) ☐ En Core ☐ Terra Core Mercury 7471B	SVOCs (8270) Selenium 7742	Pesticides (8081)	PCBs (8082) PAH 40 compounds	PAHs ☐ 8270 ☐ 8270 SIM LAB 25	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Dioxin/Furan EPA 1613B	Grain Size ASTM D422		Archive
11	•	IB-13 2.0-4.0 091118	9/11/18		Sed																						✓
12	•	IB-13 4.0-6.0 091118				1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
13	•	IB-13 4.0-6.0 091118				2 1ploc																			✓		
14	•	IB-13 4.0-6.0 091118				1 4oz Alpha																					✓
15	•	IB-13 4.0-6.0 091118				1 4oz																					✓
16	•	IB-13 6.0-6.5 091118				1 16oz																					✓
17	•	IB-17 0.0-2.0 091118			Sed	1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
18	•	IB-17 0.0-2.0 091118				2 1ploc																			✓		
19	•	IB-17 0.0-2.0 091118				1 4oz Alpha																					✓
20	•	IB-17 0.0-2.0 091118				1 4oz																					✓

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Charles R Phillips 9/11/18		9/11/18	18:15
	Tom O'Malley ECI	9/12/18	1400
Tom O'Malley TO GSO 9/12/18 1730		9/13/18	1200

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CHAIN-OF-CUSTODY RECORD

Date 9/11/18
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WO NO. / LAB USE ONLY: 0884

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Oakland STATE: CA ZIP:
TEL: E-MAIL:

CLIENT PROJECT NAME / NO.: India Basin
P.O. NO.:
PROJECT CONTACT: Charlie Phillips / Leidos
LAB CONTACT OR QUOTE NO:
GLOBAL ID: LOG CODE: SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

EDD
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
Metals 1620 includes cobalt

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO C_{10}-C_{36} 8015B	☐ TPH(d) ☐ DRO Solids SM 2540B	TPH ☐ C6-C36 ☐ C6-C44 TDC EPA 9060A	TPH Sulfides EPA 376.2	BTEX / MTBE ☐ 8260 ☐	VOCs (8260) Butylfins Crane	Oxygenates (8260) Metal 6020	Prep (5035) ☐ En Core ☐ Terra Core Mercury 1631E	SVOCs (8270) Selenium 7242	Pesticides (8081)	PCBs (8082) RMP 40 congeners	PAHs ☐ 8270 ☐ 8270 SIM RMP 25	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Dioxin/Furan EPA 1631B	Grain Size ASTM D4464		Archive
21	•	JB-16 0.0-2.0 091118	9/11		Sed	1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
22	•	JB-16 0.0-2.0 091118				2 ziploc																			✓		
23	•	JB-16 0.0-2.0 091118				1 4oz rubber																					✓
24	•	JB-16 0.0-2.0 091118				1 4oz																					✓
25	•	JB-16 2.0-4.0 091118				1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
26	•	JB-16 2.0-4.0 091118				2 ziploc																			✓		
27	•	JB-16 2.0-4.0 091118				1 4oz rubber																					✓
28	•	JB-16 2.0-4.0 091118				1 4oz																					✓
29	•	JB 16 4.0-6.0 091118				1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
30	•	JB 16 4.0-6.0 091118				2 ziploc																			✓		

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature] 9/11/18	[signature]	9/11/18	18:15
[signature]	Tom O'Malley ECI	9/12/18	1400
Tom O'Malley TO GSO 9/12/18 1730	[signature]	9/13/18	1200

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CHAIN-OF-CUSTODY RECORD

Date 9/11/18
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WO NO. / LAB USE ONLY: 08CH

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Oakland STATE: CA ZIP:
TEL: 760-728-3378 EMAIL: charles.v.phillips@leidos

CLIENT PROJECT NAME / NO.: India Basin
P.O. NO.:
PROJECT CONTACT: Charlie Phillips | Leidos
LAB CONTACT OR QUOTE NO:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

EDD
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
Metals 1620 includes cobalt

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO	☐ TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH	BTEX / MTBE ☐ 8260 ☐	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6				Archive
31	•	IB-16 4.0-6.0 091118	9/11		Soil	1 4oz Amber																					✓
32	•	IB-16 4.0-6.0 091118				1 4oz																					✓
33	•	IB-16 6.0-6.5 091118				1 16oz																					✓
34	•	IB-07 0.0-2.0 091118				1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
35	•	IB-07 0.0-2.0 091118				1 ziploc																			✓		
36	•	IB-07 0.0-2.0 091118				1 4oz Amber																					✓
37	•	IB-07 0.0-2.0 091118				1 4oz																					✓
38	•	IB-07 2.0-4.0 091118				1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
39	•	IB-07 2.0-4.0 091118				1 ziploc																			✓		
40	•	IB-07 2.0-4.0 091118				1 4oz Amber																					✓

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Charles R Phillips 9/11/18	[signature]	9/11/18	18:15
[signature]	Tom O'Malley ECI	9/12/18	1400
Tom O'Malley TO GSO 9/12/18 1730	[signature]	9/13/18	1200

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CHAIN-OF-CUSTODY RECORD

Date 9/11/18
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WO NO. / LAB USE ONLY: 0884

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Oakland STATE: CA ZIP:
TEL: 760.728-3378 E-MAIL: charles.r.phillips@leidos.com

CLIENT PROJECT NAME / NO.: India Basin
PROJECT CONTACT: Charlie Phillips / Leidos
P.O. NO.:
LAB CONTACT OR QUOTE NO:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

EDD
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
Metals 6020 includes cobalt

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ DRO C6-C36	TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	BTEX / MTBE ☐ 8260 ☐	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ Ed Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 218.6				
										C6-C36 8015B	Solid Sm 2540B	TDC EPA 9060B	Sulfide EPA 376.2	Butylthiocarb	Metals 6020	Mercury 1631E	Silica 7242		LMW 4/0 Longform	LMW 8270			Flow / Grain Size 1631B	Grain Size D4464		Archive
41	•	JB-07 2.0-4.0 09/11/18	9/11		Soil	1 4oz																				✓
42	•	JB-07 4.0-6.0 09/11/18				1 16oz				✓	✓	✓	✓	✓	✓	✓	✓		✓	✓						
43	•	JB-07 4.0-6.0 09/11/18				2 4oz																		✓		
44	•	JB-07 4.0-6.0 09/11/18				1 4oz glass																				✓
45	•	JB-07 4.0-6.0 09/11/18				1 4oz glass																				✓
46	•	JB-07 6.0-6.5 09/11/18				1 16oz																				✓
47	•	JB-07 180 2.0-4.0 09/11/18				1 16oz				✓	✓	✓	✓		✓	✓	✓	✓	✓	✓						

Relinquished by: (Signature)	Date	Received by: (Signature/Affiliation)	Date	Time
Charlie R Phillips	9/11/18	[signature]	9/11/18	18:15
[signature]		To O'Malley ECI	9/12/18	1400
To O'Malley TO 650	9/12/18 1230	[signature]	9/13/18	1200

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CHAIN-OF-CUSTODY RECORD

Date 9/11/18
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WO NO. / LAB USE ONLY: OCCH

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Oakland STATE: CA ZIP:
TEL: E-MAIL:

CLIENT PROJECT NAME / NO.: India Basin
P.O. NO.:
PROJECT CONTACT: Charlie Phillips / Leidos
LAB CONTACT OR QUOTE NO:
GLOBAL ID: LOG CODE: SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

EDD
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
Metals 1620 includes cobalt

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO C6-C12 8015B	TPH(d) ☐ DRO Solids SM2540B	TPH ☐ C6-C36 ☐ C6-C44 TOC EPA 9060A	TPH Sulfide EPA 376.2	BTEX / MTBE ☐ 8260 ☐	VOCs (8260) Butyltin Crane	Oxygenates (8260) Metals 6020	Prep (5035) ☐ En Core ☐ Terra Core Mercury	SVOCs (8270) Selenium 7742	Pesticides (8081)	PCBs (8082) CAP 40 Congeners	PAHs ☐ 8270 ☐ 8270 SIM RAP 25	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Dioxin/Furan EPA 1613B	Grain Size ASTM D422		Archive
48	•	IB-17 2.0-4.0 091118	9/11/18		Sed	1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
49	•	IB-17 2.0-4.0 091118				ziploc																			✓		
50	•	IB-17 2.0-4.0 091118				1 4oz Archive																					✓
51	•	IB-17 2.0-4.0 091118				1 4oz																					✓
52	•	IB-17 4.0-6.0 091118				1 16oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
53	•	IB-17 4.0-6.0 091118				ziploc																			✓		
54	•	IB-17 4.0-6.0 091118				1 4oz Archive																					✓
55	•	IB-17 4.0-6.0 091118				1 4oz																					✓
56	•	IB-17 6.0-6.5 091118				1 16oz																					✓

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Charlie Phillips 9/11/18	[illegible]	9/11/18	18:15
[illegible]	Tom O'Malley EKI	9/12/18	1400
Tom O'Malley TO GSO 9/12/18 1730	[illegible]	9/13/18	1200

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CHAIN-OF-CUSTODY RECORD

Date 9/11/18
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WO NO. / LAB USE ONLY: 0884

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Oakland STATE: CA ZIP:
TEL: 760-728-3378 E-MAIL: charles.r.phillips@leidos.com

CLIENT PROJECT NAME / NO.: India Basin
P.O. NO.:
PROJECT CONTACT: Charlie Phillips / Leidos
LAB CONTACT OR QUOTE NO:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

EDD
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
Metals 6020 includes cobalt

REQUESTED ANALYSES
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO C10-C36 8015B	☐ TPH(d) ☐ DRO Solids SM 2540B	TPH ☐ C6-C36 ☐ C6-C44 TOC EPA 9060A	TPH Sulfide EPA 376.2	BTEX / MTBE ☐ 8260 ☐	VOCs (8260) Butyltin Crane	Oxygenates (8260) Metals 6020	Prep (5035) ☐ En Core ☐ Terra Core Mercury 1631E	SVOCs (8270) Selenium 7242	Pesticides (8081)	PCBs (8082) RMP 40 Congeners	PAHs ☐ 8270 ☐ 8270 SIM RMP 25	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Dioxin/Furan EPA 1631B	Grain Size ASTM D4464		Archive
57	IB 23 0.0-2.0 091118	9/11		Soil	16 oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓			•			
58	IB-24 0.0-2.0 091118				16 oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
59	IB-24 2.0-4.0 091118				16 oz				✓	✓	✓	✓		✓	✓	✓	✓		✓	✓						
60	IB-23 0.0-2.0 091118				4 oz																					✓
61	IB-24 0.0-2.0 091118				4 oz																					✓
62	IB-24 2.0-4.0 091118				4 oz																					✓

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Charlie R Phillips 9/11/18	[signature]	9/11/18	18:15
[signature]	Tom O'Malley ECI	9/12/18	1400
Tom O'Malley TO GSO 9/12/18 1730	[signature]	9/12/18	1200

2016-04-01-Revision

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eurofins | Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

CHAIN-OF-CUSTODY RECORD

Date 9/11/18

Page 8 of 8

WO NO. / LAB USE ONLY: OPPA

LABORATORY CLIENT: Leidos

ADDRESS:

CITY: Oakland STATE: CA ZIP:

TEL: 760.728.3378 E-MAIL: charles.r.phillips@leidos.com

CLIENT PROJECT NAME / NO.: India Basin

PROJECT CONTACT: Charles Phillips/Leidos

P.O. NO.:

LAB CONTACT OR QUOTE NO:

GLOBAL ID:

LOG CODE:

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

EDD

☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO	☐ TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ___	BTEX / MTBE ☐ 8260 ☐ ___	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Dioxins/Furans EPA 1613B			
63	IB-INNER 0.0-2.0 09118	9/11		Sed																			✓			
64	IB-INNER 2.0-4.0 09118																						✓			
65	IB-INNER 4.0-6.0 09118																						✓			
66	IB-MIDDLE 0.0-2.0 09118																						✓			
67	IB MIDDLE 2.0-4.0 09118																						✓			
68	IB MIDDLE 4.0-6.0 09118																						✓			
69	IB INNER 108 2.0-4.0 09118																						✓			

Relinquished by: (Signature)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Charles R Phillips	9/11/18		[signature]	9/11/18	18:15
[signature]			Tom O'Malley ECI	9/12/18	1400
Tom O'Malley to GSO	9/12/18	1730	[signature]	9/12/18	1200

2016-04-01-Revision

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GSO a GLS company GLS

800-322-5555
www.gso.com

Ship From
CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Ship To
CEL
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD: $0.00
Weight: 0 lb(s)
Reference:
LEIDOS
Delivery Instructions:

Signature Type: STANDARD

Tracking #: 542034375

NPS

OPH

ORC C

GARDEN GROVE

S92845A

90510730

Print Date: 9/12/2018 4:58 PM

Package 2 of 4

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.

9/12/2018

GSO a GLS company GLS

800-322-5555
www.gso.com

Ship From
CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Ship To
CEL
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD: $0.00
Weight: 0 lb(s)
Reference:
LEIDOS
Delivery Instructions:

Signature Type: STANDARD

Tracking #: 542034374

NPS

ORC C

GARDEN GROVE

S92845A

90510729

Print Date: 9/12/2018 4:58 PM

Package 1 of 4

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.

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WORK ORDER NUMBER: 18-0911

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 2

CLIENT: Leidos

DATE: 09/13/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 3.1 °C (w/ CF): 2.6 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: VJ6P

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: VJ6P

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: TTLS

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☑ Sampling date ☑ Sampling time ☑ Matrix ☑ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and in good condition	☐	☑	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☐	☑	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☑	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna_2 ☐ 100PJ ☐ 100PJna_2 ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PBn (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB

☑ 1AGB ☐ 1AGBna_2 ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PBna (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (Sediment): ☑ 4ozCGJ ☑ Z ☑ 4ozCGJ ☑ 4ozAGJ

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na_2** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: TTLS

Reviewed by: UDZL

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WORK ORDER NUMBER: 18-09-0864

SAMPLE RECEIPT CHECKLIST

COOLER 2 OF 2

CLIENT: Leidos

DATE: 09/13/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 2.9 °C (w/ CF): 2.4 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: UJGP

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: UJGP

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: TTLS

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na₂** ☐ 100PJ ☐ 100PJ**na₂** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB ☐ 125PB**znna** (pH__9) ☐ 250AGB ☐ 250CGB ☐ 250CGB**s** (pH__2) ☐ 250PB ☐ 250PB**n** (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s** (pH__2) ☐ 500PB ☐ 1AGB ☐ 1AGB**na₂** ☐ 1AGB**s** (pH__2) ☐ 1AGB**s** (O&G) ☐ 1PB ☐ 1PB**na** (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (Sediment): ☑ 16oz CGJ ☑ Z ☑ 4oz CGJ ☑ 4oz AGJ

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na₂** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: TTLS

Reviewed by: UDZL

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WORK ORDER NUMBER: 18-09-0884

SAMPLE ANOMALY REPORT

DATE: 09 / 13 / 2018

SAMPLES, CONTAINERS, AND LABELS:

- ☐ Sample(s) NOT RECEIVED but listed on COC
- ☐ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☑ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ pH outside acceptable range (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☑ Client sample label(s) do not match COC (comment)
  - ☐ Project information
  - ☑ Client sample ID
  - ☑ Sampling date and/or time
  - ☐ Number of container(s)
  - ☐ Requested analysis
- ☑ Sample container(s) compromised (comment)
  - ☑ Broken
  - ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
  - ☐ Flat
  - ☐ Very low in volume
  - ☐ Leaking (not transferred; duplicate bag submitted)
  - ☐ Leaking (transferred into ECI Tedlar™ bags*)
  - ☐ Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

Comments

(-1) (-2) Received 1-1 Liter Amber glass bottle for all analyses

(-62) Labeled as: IB24 2.0-2.5 091118

(-62) 1 of 2 jars received broken (clear glass jar)

(-60, -61) Received 2 containers 1- 4oz clear glass jar 1- 4oz Amber glass jar

(-11) (-63 thru -69) Received 1 container

*(-5 thru -10) Matrix is Sediment (-2 thru -10) Collection date per label is 9/11/18 (-59) Labeled as: IB24 2.0-2.5 091118

MISCELLANEOUS: (Describe)

* matrix

Comments

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis

Comments: _____

Reported by: TTLS

Reviewed by: UDZ

** Record the total number of containers (i.e., vials or bottles) for the affected sample.

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Subcontractor Analysis Report

Work Order: 18-09-0884 Page 1 of 1

One or more samples in this work order have tests that were subcontracted. The subcontract report(s) follows.

For subcontracted tests, please reference the laboratory information noted below.

1. Eurofins Frontier Global Sciences - Bothell,WA CA ELAP 2954
   Mercury - EPA 1631
2. ALS - Columbia Analytical Services, Inc. - Kelso,WA NELAP WA100010, CA ELAP 2795
   EPA 7742 Selenium
3. Eurofins Lancaster Laboratories - Lancaster,PA NELAP 10276CA
   EPA 1613 - Dioxins/Furans

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eurofins | Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

15 October 2018

Carla Lee Hollowell
Eurofins Calscience, LLC
7440 Lincoln Way
Garden Grove, CA 92841

RE: Total and Methly Mercury

Enclosed are the analytical results for samples received by Eurofins Frontier Global Sciences. All quality control measurements are within established control limits and there were no analytical difficulties encountered with the exception of those listed in the case narrative section of this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Amy Goodall

Amy Goodall
Project Manager

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11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Equipment Rinse #2	8I00587-01	Water	11-Sep-18 00:00	19-Sep-18 09:35
IB-13 0.0-2.0 091118	8I00587-02	Soil/Sediment	11-Sep-18 00:00	19-Sep-18 09:35
IB-13 2.0-4.0 091118	8I00587-03	Soil/Sediment	11-Sep-18 00:00	19-Sep-18 09:35
IB-13 4.0-6.0 091118	8I00587-04	Soil/Sediment	11-Sep-18 00:00	19-Sep-18 09:35
IB-17 0.0-2.0 091118	8I00587-05	Soil/Sediment	11-Sep-18 00:00	19-Sep-18 09:35
IB-16 0.0-2.0 091118	8I00587-06	Soil/Sediment	11-Sep-18 00:00	19-Sep-18 09:35
IB-16 2.0-4.0 091118	8I00587-07	Soil/Sediment	11-Sep-18 00:00	19-Sep-18 09:35
IB-16 4.0-6.0 091118	8I00587-08	Soil/Sediment	11-Sep-18 00:00	19-Sep-18 09:35
IB-07 0.0-2.0 091118	8I00587-09	Soil/Sediment	11-Sep-18 00:00	19-Sep-18 09:35
IB-07 2.0-4.0 091118	8I00587-10	Soil/Sediment	11-Sep-18 00:00	19-Sep-18 09:35
IB-07 4.0-6.0 091118	8I00587-11	Soil/Sediment	11-Sep-18 00:00	19-Sep-18 09:35
IB-07 100 2.0-4.0 091118	8I00587-12	Soil/Sediment	11-Sep-18 00:00	19-Sep-18 09:35
IB-17 2.0-4.0 091118	8I00587-13	Soil/Sediment	11-Sep-18 00:00	19-Sep-18 09:35
IB-17 4.0-6.0 091118	8I00587-14	Soil/Sediment	11-Sep-18 00:00	19-Sep-18 09:35
IB-23 0.0-2.0 091118	8I00587-15	Soil/Sediment	11-Sep-18 00:00	19-Sep-18 09:35
IB-24 0.0-2.0 091118	8I00587-16	Soil/Sediment	11-Sep-18 00:00	19-Sep-18 09:35
IB-24 2.0-4.0 091118	8I00587-17	Soil/Sediment	11-Sep-18 00:00	19-Sep-18 09:35

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Eurofins Frontier Global Sciences, LLC

The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amy Goodall

Amy Goodall, Project Manager

eurofins | Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

SAMPLE RECEIPT

Samples were received at Eurofins Frontier Global Sciences (EFGS) on 19-Sep-18 09:35. The samples were received intact, on-ice within a sealed cooler at

Cooler	Temp C°
Default Cooler	3.1

SAMPLE PREPARATION AND ANALYSIS

The equipment rinse was prepared and analyzed for total mercury by flow injection atomic fluorescence spectrometry (FI-AFS) in accordance with EPA 1631E.

Total solids analysis was performed in accordance with method SM2540B. Total solids are prepared at the same time as the preparation for the analyte(s) of interest in order to provide the most accurate dry mass correction which may be outside of the method recommended holding time of 7 days from sample collection.

Total mercury preparation and analysis was performed by flow injection atomic fluorescence spectrometry (FI-AFS) in accordance with EPA 1631B. Some of the soil samples in this work order contained some soil, but were mostly medium-sized rocks/pebbles. Per client request, EFGS proceeded to remove any rocks and pebbles and only use the sample mass that is actually sediment for the prep and analysis.

ANALYTICAL AND QUALITY CONTROL ISSUES

Method blanks were prepared for every preparation to assess possible blank contribution from the sample preparation procedure. The method blanks were carried through the entire analytical procedure. All blanks fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

Liquid spikes, certified reference material (CRM) or a quality control samples (QCS) were prepared for every preparation as a measure of accuracy. All liquid spikes, CRMs and/or QCS samples fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

As an additional measure of the accuracy of the methods used and to check for matrix interference, matrix spikes (MS) and matrix spike

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11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

duplicates (MSD) were digested and analyzed. All of the matrix spike recoveries fell within the established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

A reasonable measure of the precision of the analytical methods is the relative percent difference (RPD) between a matrix spike recovery and a matrix spike duplicate recovery and between laboratory control sample recovery and laboratory control sample duplicate recoveries. All of the relative percent differences fell within established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

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eurofins | Frontier Global Sciences

Sample Receipt Checklist

Client: Eurofins Cal Science Date & Time Received: 9/19/18 935 Date Labeled: 9/19/18 Labeled By: CSP

Project: _____ Received By: [illegible] Label Verified By: [illegible]

# of Coolers Received: 1 Samples Arrived By: ✓ Shipping Service ____ Courier ____ Hand ____ Other (Specify: ____)

Coolant: ☐ None/Ambient ☑ Loose Ice ☐ Gel Ice ☐ Dry Ice Coolant Required: Y / N Temp Blank Used: Y/N for Cooler(s): ____

Notify Project Manager if packages/coolers are received without coolant or with thawed coolant and at a temperature in excess of 6°C. PM notified: Y/N

Cooler Information:	Y/N/NA	Comments
The coolers do not appear to be tampered with:	Y	
Custody Seals are present and intact:	Y	
Custody seals signed:	Y	

TID: 9804	CF: +0.5°C	Date/time: 9/19/18 935	By: [illegible]
Cooler 1: 2.6 °C	w/ CF: 3.1 °C	Cooler 4: °C	w/ CF: °C
Cooler 2: °C	w/ CF: °C	Cooler 5: °C	w/ CF: °C
Cooler 3: °C	w/ CF: °C	Cooler 6: °C	w/ CF: °C

Chain of Custody:	Y/N/NA	Comments
Sample ID/Description:	Y	
Date and time of collection:	Y	
Sampled by:	Y	
Preservation type:	Y	
Requested analyses:	Y	
Required signatures:	Y	
Internal COC required:	NA	

Sample Condition/Integrity:	Y/N/NA	Comments
Sample containers intact/present:	Y	
Sample labels are present and legible:	Y	
Sample ID on container/bag matches COC:	Y	
Correct sample containers used:	Y	
Samples received within holding times:	Y	
Sample volume sufficient for requested analyses:	Y	
Correct preservative used for requested analyses:	Y	

Anomalies/Non-conformances (attach additional pages if needed):

8I00587

eurofins Calscience

EFGS

CHAIN OF CUSTODY RECORD

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
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WO # / LAB USE ONLY: 8100587

DATE: 09/13/18

PAGE: 1 OF 2

LABORATORY CLIENT: EUROFINS CALSCIENCE

ADDRESS: 7440 LINCOLN WAY

CITY: GARDEN GROVE STATE: CA ZIP:

TEL: E-MAIL: CARLAHOLLOWELL@EUROFINSUS.COM

CLIENT PROJECT NAME / NUMBER: 18-09-0884 / India Basin

P.O. NO.:

PROJECT CONTACT: CARLA LEE HOLLOWELL

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

☐ COELT EDF GLOBAL ID: LOG CODE:

SPECIAL INSTRUCTIONS:

20 day TAT or NTAT (whichever is shorter)
Report in dry weight; Excel EDD required.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	EPA 1631	ECI SAMPLE NUMBER
	Equipment Rinse #2	9/11/2018	H2O	SED	1	X			X	2
	IB-13 0.0-2.0 091118	9/11/2018		SED	1	X			X	4
	IB-13 2.0-4.0 091118	9/11/2018		SED	1	X			X	8
	IB-13 4.0-6.0 091118	9/11/2018		SED	1	X			X	12
	IB-17 0.0-2.0 091118	9/11/2018		SED	1	X			X	17
	IB-16 0.0-2.0 091118	9/11/2018		SED	1	X			X	21
	IB-16 2.0-4.0 091118	9/11/2018		SED	1	X			X	25
	IB-16 4.0-6.0 091118	9/11/2018		SED	1	X			X	29
	IB-07 0.0-2.0 091118	9/11/2018		SED	1	X			X	34
	IB-07 2.0-4.0 091118	9/11/2018		SED	1	X			X	38

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
	Fedex # 773266951959	9/18/18	1623
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation) / Binian Wordlaw CS-Yes FedEx 7732 6695 1959	9/19/18	935

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DATE: 09/13/18

PAGE: 2 OF 2

LABORATORY CLIENT: EUROFINS CALSCIENCE

ADDRESS: 7440 LINCOLN WAY

CITY: GARDEN GROVE STATE: CA ZIP:

TEL:

E-MAIL: CARLAHOLLOWELL@EUROFINSUS.COM

CLIENT PROJECT NAME / NUMBER: 18-09-0884 / India Basin

P.O. NO.:

PROJECT CONTACT: CARLA LEE HOLLOWELL

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

☐ COELT EDF

GLOBAL ID:

LOG CODE:

SPECIAL INSTRUCTIONS:

20 day TAT or NTAT (whichever is shorter)
Report in dry weight; Excel EDD required.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	EPA 1631	ECI SAMPLE NUMBER
	IB-07 4.0-6.0 091118	9/11/2018		SED	1	X			X	42
	IB-07 100 2.0-4.0 0911	9/11/2018		SED	1	X			X	47
	IB-17 2.0-4.0 091118	9/11/2018		SED	1	X			X	48
	IB-17 4.0-6.0 091118	9/11/2018		SED	1	X			X	52
	IB-23 0.0-2.0 091118	9/11/2018		SED	1	X			X	57
	IB-24 0.0-2.0 091118	9/11/2018		SED	1	X			X	58
	IB-24 2.0-4.0 091118	9/11/2018		SED	1	X			X	59

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date: 9/18/18	Time: 1623
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

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06/02/14 Revision

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7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

Equipment Rinse #2

8I00587-01

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2796 EPA 1631 Oxidation											
Mercury	**0.25**	0.08	0.50	ng/L	1	F810214	25-Sep-18	8J04008	03-Oct-18	EPA 1631E	J

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

IB-13 0.0-2.0 091118

8I00587-02

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**324**	5.11	46.5	ng/g dry	400	F809379	21-Sep-18	8J01013	28-Sep-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**41.2**	0.1	0.1	% by Weight	1	F809383	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

IB-13 2.0-4.0 091118

8I00587-03

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**273**	4.32	39.3	ng/g dry	400	F809379	21-Sep-18	8J01013	28-Sep-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**48.3**	0.1	0.1	% by Weight	1	F809383	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

IB-13 4.0-6.0 091118

8I00587-04

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**66.3**	3.34	30.4	ng/g dry	400	F809381	21-Sep-18	8J05005	04-Oct-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**59.8**	0.1	0.1	% by Weight	1	F809384	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

IB-17 0.0-2.0 091118

8I00587-05

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**171**	3.77	34.4	ng/g dry	400	F809381	21-Sep-18	8J05005	04-Oct-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**53.2**	0.1	0.1	% by Weight	1	F809384	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

IB-16 0.0-2.0 091118

8I00587-06

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**905**	3.33	30.3	ng/g dry	400	F809381	21-Sep-18	8J05005	04-Oct-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**60.6**	0.1	0.1	% by Weight	1	F809384	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

IB-16 2.0-4.0 091118

8I00587-07

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**181**	3.25	29.6	ng/g dry	400	F809381	21-Sep-18	8J05005	04-Oct-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**58.4**	0.1	0.1	% by Weight	1	F809384	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

IB-16 4.0-6.0 091118

8I00587-08

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**111**	3.66	33.3	ng/g dry	400	F809381	21-Sep-18	8J05005	04-Oct-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**51.2**	0.1	0.1	% by Weight	1	F809384	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

IB-07 0.0-2.0 091118

8I00587-09

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**65.0**	3.19	29.0	ng/g dry	400	F809381	21-Sep-18	8J05005	04-Oct-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**62.2**	0.1	0.1	% by Weight	1	F809384	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

IB-07 2.0-4.0 091118

8I00587-10

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**925**	3.26	29.6	ng/g dry	400	F809381	21-Sep-18	8J05005	04-Oct-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**56.5**	0.1	0.1	% by Weight	1	F809384	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

IB-07 4.0-6.0 091118

8I00587-11

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**580**	3.01	27.4	ng/g dry	400	F809381	21-Sep-18	8J05005	04-Oct-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**61.3**	0.1	0.1	% by Weight	1	F809384	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

IB-07 100 2.0-4.0 091118

8I00587-12

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**698**	2.91	26.5	ng/g dry	400	F809381	21-Sep-18	8J05005	04-Oct-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**64.6**	0.1	0.1	% by Weight	1	F809384	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

IB-17 2.0-4.0 091118

8I00587-13

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**580**	3.35	30.5	ng/g dry	400	F809381	21-Sep-18	8J05005	04-Oct-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**51.0**	0.1	0.1	% by Weight	1	F809384	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

IB-17 4.0-6.0 091118

8I00587-14

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**71.6**	3.02	27.5	ng/g dry	400	F809381	21-Sep-18	8J05005	04-Oct-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**57.8**	0.1	0.1	% by Weight	1	F809384	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

IB-23 0.0-2.0 091118

8I00587-15

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**3930**	16.3	148	ng/g dry	2500	F810198	02-Oct-18	8J05005	04-Oct-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**78.3**	0.1	0.1	% by Weight	1	F810201	02-Oct-18		04-Oct-18	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

IB-24 0.0-2.0 091118

8I00587-16

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**1380**	5.59	50.9	ng/g dry	1000	F809381	21-Sep-18	8J05005	04-Oct-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**75.9**	0.1	0.1	% by Weight	1	F809384	21-Sep-18		26-Sep-18	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

IB-24 2.0-4.0 091118

8I00587-17

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**178**	2.82	25.7	ng/g dry	400	F810198	02-Oct-18	8J05005	04-Oct-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**74.4**	0.1	0.1	% by Weight	1	F810201	02-Oct-18		04-Oct-18	SM 2540B	O-04, O-09

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Amy Goodall

Amy Goodall, Project Manager

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F809379 - EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Blank (F809379-BLK1)					Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	ND	0.11	1.00	ng/g wet							U
Blank (F809379-BLK2)					Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	ND	0.11	1.00	ng/g wet							U
Blank (F809379-BLK3)					Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	ND	0.11	1.00	ng/g wet							U
LCS (F809379-BS1)					Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	7.22	0.11	1.00	ng/g wet	8.0320		89.9	75-125			
LCS Dup (F809379-BSD1)					Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	7.42	0.11	1.00	ng/g wet	8.0320		92.3	75-125	2.65	24	
Duplicate (F809379-DUP1)		**Source: 8I00584-01RE1**			Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	519.8	1.31	11.9	ng/g dry		489.3			6.04	24	
Duplicate (F809379-DUP2)		**Source: 8I00584-01RE1**			Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	498.3	1.26	11.5	ng/g dry		489.3			1.83	24	AD
Matrix Spike (F809379-MS1)		**Source: 8I00584-01RE1**			Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	1308	5.21	47.4	ng/g dry	948.81	489.3	86.3	71-125			
Matrix Spike (F809379-MS2)		**Source: 8I00587-02RE1**			Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	1110	4.80	43.7	ng/g dry	873.09	323.8	90.1	71-125			
Matrix Spike (F809379-MS3)		**Source: 8I00584-01RE1**			Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	575.3	1.26	11.5	ng/g dry	91.994	489.3	93.5	71-125			AS

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F809379 - EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Matrix Spike Dup (F809379-MSD1)		**Source: 8I00584-01RE1**			Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	1280	4.81	43.8	ng/g dry	875.20	489.3	90.3	71-125	4.62	24	
Matrix Spike Dup (F809379-MSD2)		**Source: 8I00587-02RE1**			Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	1082	4.62	42.1	ng/g dry	841.31	323.8	90.1	71-125	0.0808	24	
Matrix Spike Dup (F809379-MSD3)		**Source: 8I00584-01RE1**			Prepared: 21-Sep-18 Analyzed: 28-Sep-18						
Mercury	582.8	1.26	11.5	ng/g dry	91.994	489.3	102	71-125	8.29	24	AS
Batch F809381 - EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Blank (F809381-BLK1)					Prepared: 21-Sep-18 Analyzed: 04-Oct-18						
Mercury	ND	0.11	1.00	ng/g wet							U
Blank (F809381-BLK2)					Prepared: 21-Sep-18 Analyzed: 04-Oct-18						
Mercury	ND	0.11	1.00	ng/g wet							U
Blank (F809381-BLK3)					Prepared: 21-Sep-18 Analyzed: 04-Oct-18						
Mercury	ND	0.11	1.00	ng/g wet							U
LCS (F809381-BS1)					Prepared: 21-Sep-18 Analyzed: 04-Oct-18						
Mercury	8.02	0.11	1.00	ng/g wet	8.0320		99.9	75-125			
LCS Dup (F809381-BSD1)					Prepared: 21-Sep-18 Analyzed: 04-Oct-18						
Mercury	7.55	0.11	1.00	ng/g wet	8.0320		94.0	75-125	6.12	24	
Duplicate (F809381-DUP1)		**Source: 8I00587-04RE2**			Prepared: 21-Sep-18 Analyzed: 04-Oct-18						
Mercury	64.40	3.40	30.9	ng/g dry		66.28			2.87	24	

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F809381 - EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Matrix Spike (F809381-MS1)		**Source: 8I00587-04RE2**			Prepared: 21-Sep-18 Analyzed: 04-Oct-18						
Mercury	644.0	3.48	31.7	ng/g dry	633.42	66.28	91.2	71-125			
Matrix Spike (F809381-MS2)		**Source: 8I00587-11**			Prepared: 21-Sep-18 Analyzed: 04-Oct-18						
Mercury	893.5	3.06	27.9	ng/g dry	557.72	579.7	56.3	71-125			QM-02
Matrix Spike (F809381-MS3)		**Source: 8I00587-11**			Prepared: 21-Sep-18 Analyzed: 04-Oct-18						
Mercury	2578	7.53	68.5	ng/g dry	2202.1	579.7	90.7	71-125			AS
Matrix Spike Dup (F809381-MSD1)		**Source: 8I00587-04RE2**			Prepared: 21-Sep-18 Analyzed: 04-Oct-18						
Mercury	644.4	3.26	29.6	ng/g dry	592.99	66.28	97.5	71-125	6.67	24	
Matrix Spike Dup (F809381-MSD2)		**Source: 8I00587-11**			Prepared: 21-Sep-18 Analyzed: 04-Oct-18						
Mercury	855.9	2.99	27.2	ng/g dry	544.68	579.7	50.7	71-125	10.4	24	QM-02
Matrix Spike Dup (F809381-MSD3)		**Source: 8I00587-11**			Prepared: 21-Sep-18 Analyzed: 04-Oct-18						
Mercury	2515	7.53	68.5	ng/g dry	2202.1	579.7	87.9	71-125	3.18	24	AS
Batch F810198 - EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Blank (F810198-BLK1)					Prepared: 02-Oct-18 Analyzed: 04-Oct-18						
Mercury	ND	0.11	1.00	ng/g wet							U
Blank (F810198-BLK2)					Prepared: 02-Oct-18 Analyzed: 04-Oct-18						
Mercury	ND	0.11	1.00	ng/g wet							U
Blank (F810198-BLK3)					Prepared: 02-Oct-18 Analyzed: 04-Oct-18						
Mercury	ND	0.11	1.00	ng/g wet							U

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F810198 - EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
LCS (F810198-BS1)					Prepared: 02-Oct-18 Analyzed: 04-Oct-18						
Mercury	7.47	0.11	1.00	ng/g wet	8.0320		93.1	75-125			
LCS Dup (F810198-BSD1)					Prepared: 02-Oct-18 Analyzed: 04-Oct-18						
Mercury	7.27	0.11	1.00	ng/g wet	8.0320		90.5	75-125	2.84	24	
Duplicate (F810198-DUP1)		**Source: 8I00587-17**			Prepared: 02-Oct-18 Analyzed: 04-Oct-18						
Mercury	198.0	2.74	25.0	ng/g dry		184.0			7.36	24	
Matrix Spike (F810198-MS1)		**Source: 8I00670-01**			Prepared: 02-Oct-18 Analyzed: 04-Oct-18						
Mercury	352.8	2.09	19.1	ng/g dry	381.39	2.49	91.9	71-125			
Matrix Spike (F810198-MS2)		**Source: 8I00805-01**			Prepared: 02-Oct-18 Analyzed: 04-Oct-18						
Mercury	370.5	2.17	19.7	ng/g dry	394.55	ND	93.9	71-125			
Matrix Spike Dup (F810198-MSD1)		**Source: 8I00670-01**			Prepared: 02-Oct-18 Analyzed: 04-Oct-18						
Mercury	360.6	2.13	19.4	ng/g dry	387.71	2.49	92.4	71-125	0.544	24	
Matrix Spike Dup (F810198-MSD2)		**Source: 8I00805-01**			Prepared: 02-Oct-18 Analyzed: 04-Oct-18						
Mercury	357.6	2.19	20.0	ng/g dry	399.39	ND	89.5	71-125	4.75	24	
Batch F810214 - EFGS SOP2796 EPA 1631 Oxidation											
Blank (F810214-BLK1)					Prepared & Analyzed: 03-Oct-18						
Mercury	ND	0.08	0.50	ng/L							U
Blank (F810214-BLK2)					Prepared & Analyzed: 03-Oct-18						
Mercury	ND	0.08	0.50	ng/L							U

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Eurofins Calscience, LLC	Project: Total and Methly Mercury	
7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F810214 - EFGS SOP2796 EPA 1631 Oxidation											
Blank (F810214-BLK3)					Prepared & Analyzed: 03-Oct-18						
Mercury	0.08	0.08	0.50	ng/L							J
Blank (F810214-BLK4)					Prepared & Analyzed: 03-Oct-18						
Mercury	ND	0.08	0.50	ng/L							U
Blank (F810214-BLK5)					Prepared & Analyzed: 03-Oct-18						
Mercury	ND	0.08	0.50	ng/L							U
Blank (F810214-BLK6)					Prepared & Analyzed: 03-Oct-18						
Mercury	0.08	0.08	0.50	ng/L							J
Blank (F810214-BLK7)					Prepared & Analyzed: 03-Oct-18						
Mercury	ND	0.09	0.52	ng/L							QB-06, U
Blank (F810214-BLK8)					Prepared & Analyzed: 03-Oct-18						
Mercury	ND	1.65	9.90	ng/L							QB-08, U
LCS (F810214-BS1)					Prepared & Analyzed: 03-Oct-18						
Mercury	14.51	0.08	0.50	ng/L	14.688		98.8	80-120			
LCS Dup (F810214-BSD1)					Prepared & Analyzed: 03-Oct-18						
Mercury	14.47	0.08	0.50	ng/L	14.688		98.5	80-120	0.311	24	
Duplicate (F810214-DUP1)		**Source: 8I00450-01**			Prepared & Analyzed: 03-Oct-18						
Mercury	0.85	0.08	0.50	ng/L		0.89			4.06	24	AD
Matrix Spike (F810214-MS1)		**Source: 8I00401-01**			Prepared & Analyzed: 03-Oct-18						
Mercury	3.12	0.08	0.50	ng/L	2.5351	0.72	94.4	71-125			AS

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Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F810214 - EFGS SOP2796 EPA 1631 Oxidation											
Matrix Spike (F810214-MS2)		**Source: 8I00402-01**			Prepared & Analyzed: 03-Oct-18						
Mercury	2.95	0.08	0.50	ng/L	2.5351	0.56	94.3	71-125			AS
Matrix Spike Dup (F810214-MSD1)		**Source: 8I00401-01**			Prepared & Analyzed: 03-Oct-18						
Mercury	3.07	0.08	0.50	ng/L	2.5351	0.72	92.4	71-125	1.67	24	AS
Matrix Spike Dup (F810214-MSD2)		**Source: 8I00402-01**			Prepared & Analyzed: 03-Oct-18						
Mercury	3.02	0.08	0.50	ng/L	2.5351	0.56	97.1	71-125	2.39	24	AS

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7440 Lincoln Way	Project Number: 18-09-0884 / India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F809383 - EFGS SOP5133 Solids Analysis											
Duplicate (F809383-DUP1)		**Source: 8I00584-01**			Prepared: 21-Sep-18 Analyzed: 26-Sep-18						
% Solids	40.4	0.1	0.1	% by Weight		39.4			2.51	10	O-04, O-09
Duplicate (F809383-DUP2)		**Source: 8I00587-02**			Prepared: 21-Sep-18 Analyzed: 26-Sep-18						
% Solids	41.0	0.1	0.1	% by Weight		41.2			0.487	10	O-04, O-09
Batch F809384 - EFGS SOP5133 Solids Analysis											
Duplicate (F809384-DUP1)		**Source: 8I00587-04**			Prepared: 21-Sep-18 Analyzed: 26-Sep-18						
% Solids	59.1	0.1	0.1	% by Weight		59.8			1.18	10	O-04, O-09
Duplicate (F809384-DUP2)		**Source: 8I00587-11**			Prepared: 21-Sep-18 Analyzed: 26-Sep-18						
% Solids	61.8	0.1	0.1	% by Weight		61.3			0.812	10	O-04, O-09
Batch F810201 - EFGS SOP5133 Solids Analysis											
Duplicate (F810201-DUP1)		**Source: 8I00587-17**			Prepared: 02-Oct-18 Analyzed: 04-Oct-18						
% Solids	73.8	0.1	0.1	% by Weight		74.4			0.810	10	O-04, O-09

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Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	15-Oct-18 16:35

Notes and Definitions

U	Analyte was not detected and is reported as less than the LOD or as defined by the client. The LOD has been adjusted for any dilution or concentration of the sample.
QM-02	The MS and/or MSD recoveries outside acceptance limits, due to spike concentration less than 1 times the sample concentration. The batch was accepted based on LCS and LCSD recoveries within control limits and, when analysis permits, acceptable AS/ASD.
QB-08	The blank was preserved to 50% BrCl rather than 1%. The control limit for blanks preserved to greater than 1% BrCl is the preservation percentage multiplied by the MRL.
QB-06	The blank was preserved to 5% BrCl rather than 1%. The control limit for blanks preserved to greater than 1% BrCl is the preservation percentage multiplied by the MRL.
O-09	Total Solids are prepared at the same time as the preparation for the analyte(s) of interest in order to provide the most accurate dry mass correction.
O-04	This sample was analyzed outside of the recommended holding time.
J	The result is an estimated concentration.
AS	This MS and/or MSD is an analytical spike and/or an analytical spike duplicate.
AD	This matrix duplicate is an analytical duplicate.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the method detection limit if reported to the MDL or above the reporting limit if reported to the MRL.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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October 03, 2018 Service Request No:K1809047

Carla Hollowell
Calscience Environmental Laboratories, Incorporated
7440 Lincoln Way
Garden Grove, CA 92841-1427

Laboratory Results for: India Basin

Dear Carla,

Enclosed are the results of the sample(s) submitted to our laboratory September 19, 2018
For your reference, these analyses have been assigned our service request number **K1809047.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3342. You may also contact me via email at Amanda.Juell@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Amanda Juell
Project Manager

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Narrative Documents

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ALS Environmental

Client: Eurofins Calscience Environmental Laboratory
Project: India Basin
Sample Matrix: Soil, Water

Service Request: K1809047
Date Received: 09/19/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt:

Seventeen soil, water samples were received for analysis at ALS Environmental on 09/19/2018. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

Metals:

No significant anomalies were noted with this analysis.

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Approved by _____ Date 10/03/2018

ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: IB-13 0.0-2.0 091118 — **Lab ID: K1809047-002**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.41		0.03	0.15	mg/Kg	7742
Solids, Total	52.3				Percent	160.3 Modified

CLIENT ID: IB-13 2.0-4.0 091118 — **Lab ID: K1809047-003**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.40		0.03	0.16	mg/Kg	7742
Solids, Total	54.9				Percent	160.3 Modified

CLIENT ID: IB-13 4.0-6.0 091118 — **Lab ID: K1809047-004**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.45		0.03	0.17	mg/Kg	7742
Solids, Total	56.4				Percent	160.3 Modified

CLIENT ID: IB-17 0.0-2.0 091118 — **Lab ID: K1809047-005**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.31		0.03	0.14	mg/Kg	7742
Solids, Total	57.8				Percent	160.3 Modified

CLIENT ID: IB-16 0.0-2.0 091118 — **Lab ID: K1809047-006**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.27		0.03	0.15	mg/Kg	7742
Solids, Total	61.4				Percent	160.3 Modified

CLIENT ID: IB-16 2.0-4.0 091118 — **Lab ID: K1809047-007**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.42		0.03	0.16	mg/Kg	7742
Solids, Total	56.3				Percent	160.3 Modified

CLIENT ID: IB-16 4.0-6.0 091118 — **Lab ID: K1809047-008**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.39		0.03	0.15	mg/Kg	7742
Solids, Total	61.8				Percent	160.3 Modified

CLIENT ID: IB-07 0.0-2.0 091118 — **Lab ID: K1809047-009**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.38		0.03	0.16	mg/Kg	7742
Solids, Total	53.6				Percent	160.3 Modified

CLIENT ID: IB-07 2.0-4.0 091118 — **Lab ID: K1809047-010**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.38		0.03	0.16	mg/Kg	7742
Solids, Total	61.1				Percent	160.3 Modified

CLIENT ID: IB-07 4.0-6.0 091118 — **Lab ID: K1809047-011**

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium	0.42		0.03	0.15	mg/Kg	7742

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SAMPLE DETECTION SUMMARY

CLIENT ID: IB-07 4.0-6.0 091118			Lab ID: K1809047-011			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Solids, Total	59.0				Percent	160.3 Modified

CLIENT ID: IB-07 100 2.0-4.0 091118			Lab ID: K1809047-012			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Selenium	0.40		0.03	0.16	mg/Kg	7742
Solids, Total	59.2				Percent	160.3 Modified

CLIENT ID: IB-17 2.0-4.0 091118			Lab ID: K1809047-013			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Selenium	0.45		0.03	0.14	mg/Kg	7742
Solids, Total	60.5				Percent	160.3 Modified

CLIENT ID: IB-17 4.0-6.0 091118			Lab ID: K1809047-014			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Selenium	0.44		0.03	0.17	mg/Kg	7742
Solids, Total	56.2				Percent	160.3 Modified

CLIENT ID: IB-23 0.0-2.0 091118			Lab ID: K1809047-015			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Selenium	0.08	J	0.02	0.10	mg/Kg	7742
Solids, Total	79.0				Percent	160.3 Modified

CLIENT ID: IB-24 0.0-2.0 091118			Lab ID: K1809047-016			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Selenium	0.09	J	0.03	0.13	mg/Kg	7742
Solids, Total	75.4				Percent	160.3 Modified

CLIENT ID: IB-24 2.0-4.0 091118			Lab ID: K1809047-017			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Solids, Total	49.2				Percent	160.3 Modified

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Sample Receipt Information

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Client: Eurofins Calscience Environmental Laboratory **Service Request:**K1809047
Project: India Basin/18-09-0884

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
K1809047-001	Equipment Rinse #2	9/11/2018	
K1809047-002	IB-13 0.0-2.0 091118	9/11/2018	
K1809047-003	IB-13 2.0-4.0 091118	9/11/2018	
K1809047-004	IB-13 4.0-6.0 091118	9/11/2018	
K1809047-005	IB-17 0.0-2.0 091118	9/11/2018	
K1809047-006	IB-16 0.0-2.0 091118	9/11/2018	
K1809047-007	IB-16 2.0-4.0 091118	9/11/2018	
K1809047-008	IB-16 4.0-6.0 091118	9/11/2018	
K1809047-009	IB-07 0.0-2.0 091118	9/11/2018	
K1809047-010	IB-07 2.0-4.0 091118	9/11/2018	
K1809047-011	IB-07 4.0-6.0 091118	9/11/2018	
K1809047-012	IB-07 100 2.0-4.0 091118	9/11/2018	
K1809047-013	IB-17 2.0-4.0 091118	9/11/2018	
K1809047-014	IB-17 4.0-6.0 091118	9/11/2018	
K1809047-015	IB-23 0.0-2.0 091118	9/11/2018	
K1809047-016	IB-24 0.0-2.0 091118	9/11/2018	
K1809047-017	IB-24 2.0-4.0 091118	9/11/2018	

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K1809049

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY

DATE: 09/13/18

PAGE: 1 OF 2

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

LABORATORY CLIENT: EUROFINS CALSCIENCE

ADDRESS: 7440 LINCOLN WAY

CITY: GARDEN GROVE STATE: CA ZIP:

TEL: E-MAIL: CARLAHOLLOWELL@EUROFINSUS.COM

CLIENT PROJECT NAME / NUMBER: 18-09-0884 / India Basin

P.O. NO.:

PROJECT CONTACT: CARLA LEE HOLLOWELL

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

☐ COELT EDF GLOBAL ID: LOG CODE:

SPECIAL INSTRUCTIONS:

20 day TAT or NTAT (whichever is shorter)
Report in dry weight; Excel EDD required.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	EPA 7742 / Se	ECI SAMPLE NUMBER
	Equipment Rinse #2	9/11/2018	1 H2O	SED	1	X			X	2
	IB-13 0.0-2.0 091118	9/11/2018	2	SED	1	X			X	4
	IB-13 2.0-4.0 091118	9/11/2018	3	SED	1	X			X	8
	IB-13 4.0-6.0 091118	9/11/2018	4	SED	1	X			X	12
	IB-17 0.0-2.0 091118	9/11/2018	5	SED	1	X			X	17
	IB-16 0.0-2.0 091118	9/11/2018	6	SED	1	X			X	21
	IB-16 2.0-4.0 091118	9/11/2018	7	SED	1	X			X	25
	IB-16 4.0-6.0 091118	9/11/2018	8	SED	1	X			X	29
	IB-07 0.0-2.0 091118	9/11/2018	9	SED	1	X			X	34
	IB-07 2.0-4.0 091118	9/11/2018	10	SED	1	X			X	38

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Fedex # 773267042717	9/18/18	1645
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
	[signature]	9/19/18	0940
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/02/14 Revision

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R1809047

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY:

DATE: 09/13/18

PAGE: 2 OF 2

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LABORATORY CLIENT: EUROFINS CALSCIENCE

ADDRESS: 7440 LINCOLN WAY

CITY: GARDEN GROVE STATE: CA ZIP:

TEL:

E-MAIL: CARLAHOLLOWELL@EUROFINSUS.COM

CLIENT PROJECT NAME / NUMBER: 18-09-0884 / India Basin

P.O. NO.:

PROJECT CONTACT: CARLA LEE HOLLOWELL

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

☐ COELT EDF

GLOBAL ID:

LOG CODE:

SPECIAL INSTRUCTIONS:

20 day TAT or NTAT (whichever is shorter)
Report in dry weight; Excel EDD required.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	EPA 7742 / Se	ECI SAMPLE NUMBER
	IB-07 4.0-6.0 091118	9/11/2018	11	SED	1	X			X	42
	IB-07 100 2.0-4.0 0911	9/11/2018	12	SED	1	X			X	47
	IB-17 2.0-4.0 091118	9/11/2018	13	SED	1	X			X	48
	IB-17 4.0-6.0 091118	9/11/2018	14	SED	1	X			X	52
	IB-23 0.0-2.0 091118	9/11/2018	15	SED	1	X			X	57
	IB-24 0.0-2.0 091118	9/11/2018	16	SED	1	X			X	58
	IB-24 2.0-4.0 091118	9/11/2018	17	SED	1	X			X	59

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
		9/18/18	1645
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
		9/19/18	0940
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/02/14 Revision

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ALS

PC

Cooler Receipt and Preservation Form

Client Sundance Service Request K18 0947

Received: 9/19/18 Opened: 9/19/18 By: BR Unloaded: 9/19/18 By: BR

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? Front
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected. Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
-0.3	-0.5	0.8	0.6	-0.2	371		773207042717	

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA Y N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

7/25/16 *Page* ____ *of* ____

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Miscellaneous Forms

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Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

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ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

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Client: Eurofins Calscience Environmental Laboratory **Service Request:** K1809047
Project: India Basin/18-09-0884

Sample Name: Equipment Rinse #2 **Date Collected:** 09/11/18
Lab Code: K1809047-001 **Date Received:** 09/19/18
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
7742	JHINSON	JCHAN

Sample Name: IB-13 0.0-2.0 091118 **Date Collected:** 09/11/18
Lab Code: K1809047-002 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-13 2.0-4.0 091118 **Date Collected:** 09/11/18
Lab Code: K1809047-003 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-13 4.0-6.0 091118 **Date Collected:** 09/11/18
Lab Code: K1809047-004 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

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Client: Eurofins Calscience Environmental Laboratory **Service Request:** K1809047
Project: India Basin/18-09-0884

Sample Name: IB-17 0.0-2.0 091118 **Date Collected:** 09/11/18
Lab Code: K1809047-005 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-16 0.0-2.0 091118 **Date Collected:** 09/11/18
Lab Code: K1809047-006 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-16 2.0-4.0 091118 **Date Collected:** 09/11/18
Lab Code: K1809047-007 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-16 4.0-6.0 091118 **Date Collected:** 09/11/18
Lab Code: K1809047-008 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

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Client: Eurofins Calscience Environmental Laboratory **Service Request:** K1809047
Project: India Basin/18-09-0884

Sample Name: IB-07 0.0-2.0 091118 **Date Collected:** 09/11/18
Lab Code: K1809047-009 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-07 2.0-4.0 091118 **Date Collected:** 09/11/18
Lab Code: K1809047-010 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-07 4.0-6.0 091118 **Date Collected:** 09/11/18
Lab Code: K1809047-011 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-07 100 2.0-4.0 091118 **Date Collected:** 09/11/18
Lab Code: K1809047-012 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

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Client: Eurofins Calscience Environmental Laboratory **Service Request:** K1809047
Project: India Basin/18-09-0884

Sample Name: IB-17 2.0-4.0 091118 **Date Collected:** 09/11/18
Lab Code: K1809047-013 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-17 4.0-6.0 091118 **Date Collected:** 09/11/18
Lab Code: K1809047-014 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-23 0.0-2.0 091118 **Date Collected:** 09/11/18
Lab Code: K1809047-015 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

Sample Name: IB-24 0.0-2.0 091118 **Date Collected:** 09/11/18
Lab Code: K1809047-016 **Date Received:** 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

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Analyst Summary report

Client: Eurofins Calscience Environmental Laboratory
Service Request: K1809047
Project: India Basin/18-09-0884

Sample Name: IB-24 2.0-4.0 091118
Date Collected: 09/11/18
Lab Code: K1809047-017
Date Received: 09/19/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		APOSEY
7742	ISTENERSEN	JCHAN

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Sample Results

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Metals

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www.alsglobal.com

Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Water	**Date Received:**	09/19/18 09:40
Sample Name:	Equipment Rinse #2	**Basis:**	NA
Lab Code:	K1809047-001		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	ND U	ug/L	1.0	0.2	2	09/28/18 10:17	09/27/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-13 0.0-2.0 091118	**Basis:**	Dry
Lab Code:	K1809047-002		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.41**	mg/Kg	0.15	0.03	2	09/25/18 12:21	09/21/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-13 2.0-4.0 091118	**Basis:**	Dry
Lab Code:	K1809047-003		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.40**	mg/Kg	0.16	0.03	2	09/25/18 12:07	09/21/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-13 4.0-6.0 091118	**Basis:**	Dry
Lab Code:	K1809047-004		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.45**	mg/Kg	0.17	0.03	2	09/25/18 12:24	09/21/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-17 0.0-2.0 091118	**Basis:**	Dry
Lab Code:	K1809047-005		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.31**	mg/Kg	0.14	0.03	2	09/25/18 12:26	09/21/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-16 0.0-2.0 091118	**Basis:**	Dry
Lab Code:	K1809047-006		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.27**	mg/Kg	0.15	0.03	2	09/25/18 12:28	09/21/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-16 2.0-4.0 091118	**Basis:**	Dry
Lab Code:	K1809047-007		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.42**	mg/Kg	0.16	0.03	2	09/25/18 12:31	09/21/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-16 4.0-6.0 091118	**Basis:**	Dry
Lab Code:	K1809047-008		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.39**	mg/Kg	0.15	0.03	2	09/25/18 12:33	09/21/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-07 0.0-2.0 091118	**Basis:**	Dry
Lab Code:	K1809047-009		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.38**	mg/Kg	0.16	0.03	2	09/25/18 12:35	09/21/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-07 2.0-4.0 091118	**Basis:**	Dry
Lab Code:	K1809047-010		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.38**	mg/Kg	0.16	0.03	2	09/25/18 12:37	09/21/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-07 4.0-6.0 091118	**Basis:**	Dry
Lab Code:	K1809047-011		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.42**	mg/Kg	0.15	0.03	2	09/25/18 12:40	09/21/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-07 100 2.0-4.0 091118	**Basis:**	Dry
Lab Code:	K1809047-012		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.40**	mg/Kg	0.16	0.03	2	09/25/18 12:42	09/21/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-17 2.0-4.0 091118	**Basis:**	Dry
Lab Code:	K1809047-013		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.45**	mg/Kg	0.14	0.03	2	09/25/18 12:49	09/21/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-17 4.0-6.0 091118	**Basis:**	Dry
Lab Code:	K1809047-014		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.44**	mg/Kg	0.17	0.03	2	09/25/18 12:51	09/21/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-23 0.0-2.0 091118	**Basis:**	Dry
Lab Code:	K1809047-015		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.08**	mg/Kg	0.10	0.02	2	09/25/18 12:54	09/21/18	**J**

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-24 0.0-2.0 091118	**Basis:**	Dry
Lab Code:	K1809047-016		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	**0.09**	mg/Kg	0.13	0.03	2	09/25/18 12:56	09/21/18	**J**

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-24 2.0-4.0 091118	**Basis:**	Dry
Lab Code:	K1809047-017		

Total Metals

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	ND	U	mg/Kg	0.17	0.03	2	09/25/18 12:58	09/21/18	

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General Chemistry

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-13 0.0-2.0 091118	**Basis:**	As Received
Lab Code:	K1809047-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**52.3**	Percent	-	-	1	09/20/18 17:24	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-13 2.0-4.0 091118	**Basis:**	As Received
Lab Code:	K1809047-003		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**54.9**	Percent	-	-	1	09/20/18 17:24	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-13 4.0-6.0 091118	**Basis:**	As Received
Lab Code:	K1809047-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**56.4**	Percent	-	-	1	09/20/18 17:24	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-17 0.0-2.0 091118	**Basis:**	As Received
Lab Code:	K1809047-005		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**57.8**	Percent	-	-	1	09/20/18 17:24	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-16 0.0-2.0 091118	**Basis:**	As Received
Lab Code:	K1809047-006		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**61.4**	Percent	-	-	1	09/20/18 17:24	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-16 2.0-4.0 091118	**Basis:**	As Received
Lab Code:	K1809047-007		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**56.3**	Percent	-	-	1	09/20/18 17:24	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-16 4.0-6.0 091118	**Basis:**	As Received
Lab Code:	K1809047-008		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**61.8**	Percent	-	-	1	09/20/18 17:24	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-07 0.0-2.0 091118	**Basis:**	As Received
Lab Code:	K1809047-009		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**53.6**	Percent	-	-	1	09/20/18 17:24	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-07 2.0-4.0 091118	**Basis:**	As Received
Lab Code:	K1809047-010		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**61.1**	Percent	-	-	1	09/20/18 17:24	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-07 4.0-6.0 091118	**Basis:**	As Received
Lab Code:	K1809047-011		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**59.0**	Percent	-	-	1	09/20/18 17:24	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-07 100 2.0-4.0 091118	**Basis:**	As Received
Lab Code:	K1809047-012		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**59.2**	Percent	-	-	1	09/20/18 17:24	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-17 2.0-4.0 091118	**Basis:**	As Received
Lab Code:	K1809047-013		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**60.5**	Percent	-	-	1	09/20/18 17:24	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-17 4.0-6.0 091118	**Basis:**	As Received
Lab Code:	K1809047-014		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**56.2**	Percent	-	-	1	09/20/18 17:24	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-23 0.0-2.0 091118	**Basis:**	As Received
Lab Code:	K1809047-015		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**79.0**	Percent	-	-	1	09/20/18 17:24	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-24 0.0-2.0 091118	**Basis:**	As Received
Lab Code:	K1809047-016		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**75.4**	Percent	-	-	1	09/20/18 17:24	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18 09:40
Sample Name:	IB-24 2.0-4.0 091118	**Basis:**	As Received
Lab Code:	K1809047-017		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**49.2**	Percent	-	-	1	09/20/18 17:24	

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QC Summary Forms

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Metals

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	Dry
Lab Code:	KQ1813225-03		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	ND U	mg/Kg	0.10	0.02	2	09/25/18 12:02	09/21/18	

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Analytical Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1813384-01		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Selenium	7742	ND U	ug/L	1.0	0.2	2	09/28/18 10:10	09/27/18	

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QA/QC Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project:	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18
		Date Analyzed:	09/25/18
		Date Extracted:	09/21/18

Matrix Spike Summary
Total Metals

Sample Name:	IB-13 2.0-4.0 091118	**Units:**	mg/Kg
Lab Code:	K1809047-003	**Basis:**	Dry
Analysis Method:	7742		
Prep Method:	EPA 3050B		

Matrix Spike
KQ1813225-02

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Selenium	0.40	6.80	6.48	99	75-125

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Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18
		Date Analyzed:	09/25/18

Replicate Sample Summary
Total Metals

Sample Name:	IB-13 2.0-4.0 091118	**Units:**	mg/Kg
Lab Code:	K1809047-003	**Basis:**	Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1813225-01 Result	Average	RPD	RPD Limit
Selenium	7742	0.16	0.03	0.40	0.41	0.41	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Eurofins Calscience Environmental Laboratory
Project: India Basin/18-09-0884
Sample Matrix: Soil

Service Request: K1809047
Date Analyzed: 09/25/18

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis: Dry

Lab Control Sample
KQ1813225-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Selenium	7742	201	206	97	64-122

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QA/QC Report

Client: Eurofins Calscience Environmental Laboratory
Project: India Basin/18-09-0884
Sample Matrix: Water

Service Request: K1809047
Date Analyzed: 09/28/18

Duplicate Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

		Lab Control Sample			**Duplicate Lab Control Sample**					
		KQ1813384-02			KQ1813384-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Selenium	7742	9.8	10	98	9.1	10	91	80-120	7	20

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General Chemistry

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18
		Date Analyzed:	09/20/18

Replicate Sample Summary
Inorganic Parameters

Sample Name:	IB-13 2.0-4.0 091118	**Units:**	Percent
Lab Code:	K1809047-003	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample K1809047-003DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	-	54.9	52.4	53.7	5	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Eurofins Calscience Environmental Laboratory	**Service Request:**	K1809047
Project	India Basin/18-09-0884	**Date Collected:**	09/11/18
Sample Matrix:	Soil	**Date Received:**	09/19/18
		Date Analyzed:	09/20/18

Replicate Sample Summary
Inorganic Parameters

Sample Name:	IB-17 4.0-6.0 091118	**Units:**	Percent
Lab Code:	K1809047-014	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample K1809047-014DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	-	56.2	57.6	56.9	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Eurofins Calscience, Inc.
7440 Lincoln Way
Garden Grove CA 92841-1427

Report Date: October 02, 2018 10:23

Project: 18-09-0884 / India Basin

Account #: 19744
Group Number: 1988322
SDG: EUS92
PO Number: 18-09-0884
State of Sample Origin: CA

Electronic Copy To Eurofins Calscience, Inc. Attn: Carla Hollowell

Respectfully Submitted,

Lynn M. Frederiksen
Principal Specialist Group Leader

(717) 556-7255

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
IB-INNER 0.0-2.0 091118 Sediment	09/11/2018	9807610
IB-INNER 2.0-4.0 091118 Sediment	09/11/2018	9807611
IB-INNER 4.0-6.0 091118 Sediment	09/11/2018	9807612
IB-MIDDLE 0.0-2.0 091118 Sediment	09/11/2018	9807613
IB-MIDDLE 2.0-4.0 091118 Sediment	09/11/2018	9807614
IB-MIDDLE 4.0-6.0 091118 Sediment	09/11/2018	9807615
IB-INNER 100 2.0-4.0 091118 Sediment	09/11/2018	9807616

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Case Narrative

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Project Name: 18-09-0884 / India Basin
ELLE Group #: 1988322

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

No additional comments are necessary.

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Analysis Report

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Sample Description: **IB-INNER 0.0-2.0 091118 Sediment**
18-09-0884 / India Basin

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-01

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807610
ELLE Group #: 1988322
Matrix: Sediment

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	38.6	0.50	1

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Analysis Report

Sample Description: **IB-INNER 0.0-2.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-01

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807610
ELLE Group #: 1988322
Matrix: Sediment

CAT No.	Analysis Name	CAS Number	Dry Result		Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B October 1994**		**ng/kg**		**ng/kg**	
11031	2378-TCDD	1746-01-6	< 1.56		1.56	1
11031	12378-PeCDD	40321-76-4	< 7.81		7.81	1
11031	123478-HxCDD	39227-28-6	< 7.81		7.81	1
11031	123678-HxCDD	57653-85-7	32.4		7.81	1
11031	123789-HxCDD	19408-74-3	13.3		7.81	1
11031	1234678-HpCDD	35822-46-9	929		7.81	1
11031	OCDD	3268-87-9	8,800	E	15.6	1
11031	2378-TCDF	51207-31-9	5.71	C	1.56	1
11031	12378-PeCDF	57117-41-6	< 7.81		7.81	1
11031	23478-PeCDF	57117-31-4	15.2		7.81	1
11031	123478-HxCDF	70648-26-9	10.4		7.81	1
11031	123678-HxCDF	57117-44-9	10.5		7.81	1
11031	123789-HxCDF	72918-21-9	< 7.81		7.81	1
11031	234678-HxCDF	60851-34-5	16.5		7.81	1
11031	1234678-HpCDF	67562-39-4	274		7.81	1
11031	1234789-HpCDF	55673-89-7	13.9		7.81	1
11031	OCDF	39001-02-0	1,230		15.6	1

Labeled Compounds	**%Rec**	**Windows**
13C12-2378-TCDD	65	25 - 164
13C12-12378-PeCDD	52	25 - 181
13C12-123478-HxCDD	56	32 - 141
13C12-123678-HxCDD	54	28 - 130
13C12-123789-HxCDD	57	28 - 130
13C12-1234678-HpCDD	52	23 - 140
13C12-OCDD	44	17 - 157
13C12-2378-TCDF	56	24 - 169
13C12-12378-PeCDF	56	24 - 185
13C12-23478-PeCDF	58	21 - 178
13C12-123478-HxCDF	64	26 - 152
13C12-123678-HxCDF	61	26 - 123
13C12-234678-HxCDF	63	28 - 136
13C12-123789-HxCDF	62	29 - 147
13C12-1234678-HpCDF	60	28 - 143
13C12-1234789-HpCDF	57	26 - 138
13C12-OCDF	46	17 - 157

Dioxins/Furans Data Qualifiers:

B	*Detected in Method Blank*
U	*Undetected*
J	*Estimated concentration between Estimated Detection Limit and Minimum Reporting Level*
E	*Exceeds calibration range*
C	*Confirmed quantitation on secondary GC column*
Q	*EMPC - Estimated Maximum Possible Concentration*
F	*Interference is present*
S	*Saturation of detection signal*

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Sample Description: **IB-INNER 0.0-2.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-01

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807610
ELLE Group #: 1988322
Matrix: Sediment

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	17 Dioxins & Furans - Soil	EPA 1613B October 1994	1	18263003	09/22/2018 06:30	Michael A Ziegler	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B October 1994	1	18263003	09/20/2018 08:24	Alex L Barton	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18262820002B	09/19/2018 11:46	Larry E Bevins	1

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Analysis Report

Sample Description: **IB-INNER 2.0-4.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-02

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807611
ELLE Group #: 1988322
Matrix: Sediment

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	44.9	0.50	1

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Analysis Report

Sample Description: **IB-INNER 2.0-4.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-02

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807611
ELLE Group #: 1988322
Matrix: Sediment

CAT No.	Analysis Name	CAS Number	Dry Result	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B October 1994**		**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	< 1.80	1.80	1
11031	12378-PeCDD	40321-76-4	< 8.99	8.99	1
11031	123478-HxCDD	39227-28-6	< 8.99	8.99	1
11031	123678-HxCDD	57653-85-7	26.1	8.99	1
11031	123789-HxCDD	19408-74-3	10.2	8.99	1
11031	1234678-HpCDD	35822-46-9	751	8.99	1
11031	OCDD	3268-87-9	6,840	18.0	1
11031	2378-TCDF	51207-31-9	2.84 C	1.80	1
11031	12378-PeCDF	57117-41-6	< 8.99	8.99	1
11031	23478-PeCDF	57117-31-4	9.83	8.99	1
11031	123478-HxCDF	70648-26-9	< 8.99	8.99	1
11031	123678-HxCDF	57117-44-9	< 8.99	8.99	1
11031	123789-HxCDF	72918-21-9	< 8.99	8.99	1
11031	234678-HxCDF	60851-34-5	9.99	8.99	1
11031	1234678-HpCDF	67562-39-4	192	8.99	1
11031	1234789-HpCDF	55673-89-7	13.7	8.99	1
11031	OCDF	39001-02-0	1,120	18.0	1

Labeled Compounds	**%Rec**	**Windows**
13C12-2378-TCDD	75	25 - 164
13C12-12378-PeCDD	65	25 - 181
13C12-123478-HxCDD	65	32 - 141
13C12-123678-HxCDD	63	28 - 130
13C12-123789-HxCDD	68	28 - 130
13C12-1234678-HpCDD	61	23 - 140
13C12-OCDD	59	17 - 157
13C12-2378-TCDF	70	24 - 169
13C12-12378-PeCDF	69	24 - 185
13C12-23478-PeCDF	74	21 - 178
13C12-123478-HxCDF	80	26 - 152
13C12-123678-HxCDF	76	26 - 123
13C12-234678-HxCDF	76	28 - 136
13C12-123789-HxCDF	74	29 - 147
13C12-1234678-HpCDF	74	28 - 143
13C12-1234789-HpCDF	68	26 - 138
13C12-OCDF	61	17 - 157

Dioxins/Furans Data Qualifiers:

B	*Detected in Method Blank*
U	*Undetected*
J	*Estimated concentration between Estimated Detection Limit and Minimum Reporting Level*
E	*Exceeds calibration range*
C	*Confirmed quantitation on secondary GC column*
Q	*EMPC - Estimated Maximum Possible Concentration*
F	*Interference is present*
S	*Saturation of detection signal*

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Analysis Report

Sample Description: **IB-INNER 2.0-4.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-02

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807611
ELLE Group #: 1988322
Matrix: Sediment

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	17 Dioxins & Furans - Soil	EPA 1613B October 1994	1	18263003	09/22/2018 07:27	Michael A Ziegler	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B October 1994	1	18263003	09/20/2018 08:24	Alex L Barton	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18262820002B	09/19/2018 11:46	Larry E Bevins	1

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Analysis Report

Sample Description: **IB-INNER 4.0-6.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-03

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807612
ELLE Group #: 1988322
Matrix: Sediment

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	40.8	0.50	1

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Analysis Report

Sample Description: **IB-INNER 4.0-6.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-03

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807612
ELLE Group #: 1988322
Matrix: Sediment

CAT No.	Analysis Name	CAS Number	Dry Result	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B October 1994**		**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	< 1.63	1.63	1
11031	12378-PeCDD	40321-76-4	< 8.14	8.14	1
11031	123478-HxCDD	39227-28-6	< 8.14	8.14	1
11031	123678-HxCDD	57653-85-7	< 8.14	8.14	1
11031	123789-HxCDD	19408-74-3	< 8.14	8.14	1
11031	1234678-HpCDD	35822-46-9	163	8.14	1
11031	OCDD	3268-87-9	1,220	16.3	1
11031	2378-TCDF	51207-31-9	< 1.63	1.63	1
11031	12378-PeCDF	57117-41-6	< 8.14	8.14	1
11031	23478-PeCDF	57117-31-4	< 8.14	8.14	1
11031	123478-HxCDF	70648-26-9	< 8.14	8.14	1
11031	123678-HxCDF	57117-44-9	< 8.14	8.14	1
11031	123789-HxCDF	72918-21-9	< 8.14	8.14	1
11031	234678-HxCDF	60851-34-5	< 8.14	8.14	1
11031	1234678-HpCDF	67562-39-4	30.8	8.14	1
11031	1234789-HpCDF	55673-89-7	< 8.14	8.14	1
11031	OCDF	39001-02-0	138	16.3	1

Labeled Compounds	**%Rec**	**Windows**
13C12-2378-TCDD	80	25 - 164
13C12-12378-PeCDD	67	25 - 181
13C12-123478-HxCDD	67	32 - 141
13C12-123678-HxCDD	66	28 - 130
13C12-123789-HxCDD	69	28 - 130
13C12-1234678-HpCDD	64	23 - 140
13C12-OCDD	59	17 - 157
13C12-2378-TCDF	72	24 - 169
13C12-12378-PeCDF	68	24 - 185
13C12-23478-PeCDF	75	21 - 178
13C12-123478-HxCDF	79	26 - 152
13C12-123678-HxCDF	78	26 - 123
13C12-234678-HxCDF	80	28 - 136
13C12-123789-HxCDF	65	29 - 147
13C12-1234678-HpCDF	72	28 - 143
13C12-1234789-HpCDF	70	26 - 138
13C12-OCDF	64	17 - 157

Dioxins/Furans Data Qualifiers:

B *Detected in Method Blank*
U *Undetected*
J *Estimated concentration between Estimated Detection Limit and Minimum Reporting Level*
E *Exceeds calibration range*
C *Confirmed quantitation on secondary GC column*
Q *EMPC - Estimated Maximum Possible Concentration*
F *Interference is present*
S *Saturation of detection signal*

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Analysis Report

Sample Description: **IB-INNER 4.0-6.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-03

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807612
ELLE Group #: 1988322
Matrix: Sediment

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	17 Dioxins & Furans - Soil	EPA 1613B October 1994	1	18263003	09/22/2018 12:56	Michael A Ziegler	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B October 1994	1	18263003	09/20/2018 08:24	Alex L Barton	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18262820002B	09/19/2018 11:46	Larry E Bevins	1

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Analysis Report

Sample Description: **IB-MIDDLE 0.0-2.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-04

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807613
ELLE Group #: 1988322
Matrix: Sediment

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	49.9	0.50	1

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Analysis Report

Sample Description: **IB-MIDDLE 0.0-2.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-04

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807613
ELLE Group #: 1988322
Matrix: Sediment

CAT No.	Analysis Name	CAS Number	Dry Result	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B October 1994**		**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	< 1.97	1.97	1
11031	12378-PeCDD	40321-76-4	< 9.85	9.85	1
11031	123478-HxCDD	39227-28-6	< 9.85	9.85	1
11031	123678-HxCDD	57653-85-7	10.5	9.85	1
11031	123789-HxCDD	19408-74-3	< 9.85	9.85	1
11031	1234678-HpCDD	35822-46-9	164	9.85	1
11031	OCDD	3268-87-9	1,370	19.7	1
11031	2378-TCDF	51207-31-9	3.11 C	1.97	1
11031	12378-PeCDF	57117-41-6	< 9.85	9.85	1
11031	23478-PeCDF	57117-31-4	< 9.85	9.85	1
11031	123478-HxCDF	70648-26-9	< 9.85	9.85	1
11031	123678-HxCDF	57117-44-9	< 9.85	9.85	1
11031	123789-HxCDF	72918-21-9	< 9.85	9.85	1
11031	234678-HxCDF	60851-34-5	< 9.85	9.85	1
11031	1234678-HpCDF	67562-39-4	35.7	9.85	1
11031	1234789-HpCDF	55673-89-7	< 9.85	9.85	1
11031	OCDF	39001-02-0	131	19.7	1

Labeled Compounds	**%Rec**	**Windows**
13C12-2378-TCDD	71	25 - 164
13C12-12378-PeCDD	65	25 - 181
13C12-123478-HxCDD	62	32 - 141
13C12-123678-HxCDD	62	28 - 130
13C12-123789-HxCDD	66	28 - 130
13C12-1234678-HpCDD	60	23 - 140
13C12-OCDD	58	17 - 157
13C12-2378-TCDF	64	24 - 169
13C12-12378-PeCDF	68	24 - 185
13C12-23478-PeCDF	71	21 - 178
13C12-123478-HxCDF	71	26 - 152
13C12-123678-HxCDF	69	26 - 123
13C12-234678-HxCDF	68	28 - 136
13C12-123789-HxCDF	68	29 - 147
13C12-1234678-HpCDF	71	28 - 143
13C12-1234789-HpCDF	66	26 - 138
13C12-OCDF	60	17 - 157

Dioxins/Furans Data Qualifiers:

B	*Detected in Method Blank*
U	*Undetected*
J	*Estimated concentration between Estimated Detection Limit and Minimum Reporting Level*
E	*Exceeds calibration range*
C	*Confirmed quantitation on secondary GC column*
Q	*EMPC - Estimated Maximum Possible Concentration*
F	*Interference is present*
S	*Saturation of detection signal*

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Analysis Report

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Sample Description: **IB-MIDDLE 0.0-2.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-04

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807613
ELLE Group #: 1988322
Matrix: Sediment

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	17 Dioxins & Furans - Soil	EPA 1613B October 1994	1	18263003	09/22/2018 13:53	Michael A Ziegler	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B October 1994	1	18263003	09/20/2018 08:24	Alex L Barton	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18262820002B	09/19/2018 11:46	Larry E Bevins	1

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Analysis Report

Sample Description: **IB-MIDDLE 2.0-4.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-05

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807614
ELLE Group #: 1988322
Matrix: Sediment

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	45.6	0.50	1

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Sample Description: **IB-MIDDLE 2.0-4.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-05

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807614
ELLE Group #: 1988322
Matrix: Sediment

CAT No.	Analysis Name	CAS Number	Dry Result	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B October 1994**		**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	< 1.75	1.75	1
11031	12378-PeCDD	40321-76-4	< 8.75	8.75	1
11031	123478-HxCDD	39227-28-6	< 8.75	8.75	1
11031	123678-HxCDD	57653-85-7	12.2	8.75	1
11031	123789-HxCDD	19408-74-3	< 8.75	8.75	1
11031	1234678-HpCDD	35822-46-9	198	8.75	1
11031	OCDD	3268-87-9	1,380	17.5	1
11031	2378-TCDF	51207-31-9	4.83 C	1.75	1
11031	12378-PeCDF	57117-41-6	< 8.75	8.75	1
11031	23478-PeCDF	57117-31-4	9.24	8.75	1
11031	123478-HxCDF	70648-26-9	< 8.75	8.75	1
11031	123678-HxCDF	57117-44-9	< 8.75	8.75	1
11031	123789-HxCDF	72918-21-9	< 8.75	8.75	1
11031	234678-HxCDF	60851-34-5	< 8.75	8.75	1
11031	1234678-HpCDF	67562-39-4	45.5	8.75	1
11031	1234789-HpCDF	55673-89-7	< 8.75	8.75	1
11031	OCDF	39001-02-0	123	17.5	1

Labeled Compounds	**%Rec**	**Windows**
13C12-2378-TCDD	51	25 - 164
13C12-12378-PeCDD	41	25 - 181
13C12-123478-HxCDD	46	32 - 141
13C12-123678-HxCDD	44	28 - 130
13C12-123789-HxCDD	46	28 - 130
13C12-1234678-HpCDD	42	23 - 140
13C12-OCDD	41	17 - 157
13C12-2378-TCDF	45	24 - 169
13C12-12378-PeCDF	44	24 - 185
13C12-23478-PeCDF	47	21 - 178
13C12-123478-HxCDF	53	26 - 152
13C12-123678-HxCDF	51	26 - 123
13C12-234678-HxCDF	51	28 - 136
13C12-123789-HxCDF	48	29 - 147
13C12-1234678-HpCDF	52	28 - 143
13C12-1234789-HpCDF	47	26 - 138
13C12-OCDF	41	17 - 157

Dioxins/Furans Data Qualifiers:

B	*Detected in Method Blank*
U	*Undetected*
J	*Estimated concentration between Estimated Detection Limit and Minimum Reporting Level*
E	*Exceeds calibration range*
C	*Confirmed quantitation on secondary GC column*
Q	*EMPC - Estimated Maximum Possible Concentration*
F	*Interference is present*
S	*Saturation of detection signal*

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Analysis Report

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Sample Description: **IB-MIDDLE 2.0-4.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-05

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807614
ELLE Group #: 1988322
Matrix: Sediment

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	17 Dioxins & Furans - Soil	EPA 1613B October 1994	1	18263003	09/22/2018 14:49	Michael A Ziegler	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B October 1994	1	18263003	09/20/2018 08:24	Alex L Barton	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18262820002B	09/19/2018 11:46	Larry E Bevins	1

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Analysis Report

Sample Description: **IB-MIDDLE 4.0-6.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-06

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807615
ELLE Group #: 1988322
Matrix: Sediment

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	45.3	0.50	1

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Sample Description: **IB-MIDDLE 4.0-6.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-06

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807615
ELLE Group #: 1988322
Matrix: Sediment

CAT No.	Analysis Name	CAS Number	Dry Result	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B October 1994**		**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	< 1.79	1.79	1
11031	12378-PeCDD	40321-76-4	< 8.94	8.94	1
11031	123478-HxCDD	39227-28-6	< 8.94	8.94	1
11031	123678-HxCDD	57653-85-7	< 8.94	8.94	1
11031	123789-HxCDD	19408-74-3	< 8.94	8.94	1
11031	1234678-HpCDD	35822-46-9	68.2	8.94	1
11031	OCDD	3268-87-9	402	17.9	1
11031	2378-TCDF	51207-31-9	2.14 CQ	1.79	1
11031	12378-PeCDF	57117-41-6	< 8.94	8.94	1
11031	23478-PeCDF	57117-31-4	< 8.94	8.94	1
11031	123478-HxCDF	70648-26-9	< 8.94	8.94	1
11031	123678-HxCDF	57117-44-9	< 8.94	8.94	1
11031	123789-HxCDF	72918-21-9	< 8.94	8.94	1
11031	234678-HxCDF	60851-34-5	< 8.94	8.94	1
11031	1234678-HpCDF	67562-39-4	16.5	8.94	1
11031	1234789-HpCDF	55673-89-7	< 8.94	8.94	1
11031	OCDF	39001-02-0	47.4	17.9	1

Labeled Compounds	**%Rec**	**Windows**
13C12-2378-TCDD	58	25 - 164
13C12-12378-PeCDD	52	25 - 181
13C12-123478-HxCDD	52	32 - 141
13C12-123678-HxCDD	51	28 - 130
13C12-123789-HxCDD	52	28 - 130
13C12-1234678-HpCDD	48	23 - 140
13C12-OCDD	44	17 - 157
13C12-2378-TCDF	54	24 - 169
13C12-12378-PeCDF	56	24 - 185
13C12-23478-PeCDF	57	21 - 178
13C12-123478-HxCDF	60	26 - 152
13C12-123678-HxCDF	58	26 - 123
13C12-234678-HxCDF	57	28 - 136
13C12-123789-HxCDF	55	29 - 147
13C12-1234678-HpCDF	57	28 - 143
13C12-1234789-HpCDF	50	26 - 138
13C12-OCDF	45	17 - 157

Dioxins/Furans Data Qualifiers:

B	*Detected in Method Blank*
U	*Undetected*
J	*Estimated concentration between Estimated Detection Limit and Minimum Reporting Level*
E	*Exceeds calibration range*
C	*Confirmed quantitation on secondary GC column*
Q	*EMPC - Estimated Maximum Possible Concentration*
F	*Interference is present*
S	*Saturation of detection signal*

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Sample Description: **IB-MIDDLE 4.0-6.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-06

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807615
ELLE Group #: 1988322
Matrix: Sediment

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	17 Dioxins & Furans - Soil	EPA 1613B October 1994	1	18263003	09/22/2018 15:46	Michael A Ziegler	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B October 1994	1	18263003	09/20/2018 08:24	Alex L Barton	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18262820002B	09/19/2018 11:46	Larry E Bevins	1

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Analysis Report

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Sample Description: **IB-INNER 100 2.0-4.0 091118 Sediment**
18-09-0884 / India Basin

Project Name: **18-09-0884 / India Basin**

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807616
ELLE Group #: 1988322
Matrix: Sediment

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	45.0	0.50	1

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Analysis Report

Sample Description: **IB-INNER 100 2.0-4.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-07

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807616
ELLE Group #: 1988322
Matrix: Sediment

CAT No.	Analysis Name	CAS Number	Dry Result	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B October 1994**		**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	< 1.75	1.75	1
11031	12378-PeCDD	40321-76-4	< 8.75	8.75	1
11031	123478-HxCDD	39227-28-6	< 8.75	8.75	1
11031	123678-HxCDD	57653-85-7	21.6	8.75	1
11031	123789-HxCDD	19408-74-3	9.78	8.75	1
11031	1234678-HpCDD	35822-46-9	612	8.75	1
11031	OCDD	3268-87-9	5,150	17.5	1
11031	2378-TCDF	51207-31-9	2.71 C	1.75	1
11031	12378-PeCDF	57117-41-6	< 8.75	8.75	1
11031	23478-PeCDF	57117-31-4	9.12	8.75	1
11031	123478-HxCDF	70648-26-9	< 8.75	8.75	1
11031	123678-HxCDF	57117-44-9	< 8.75	8.75	1
11031	123789-HxCDF	72918-21-9	< 8.75	8.75	1
11031	234678-HxCDF	60851-34-5	< 8.75	8.75	1
11031	1234678-HpCDF	67562-39-4	131	8.75	1
11031	1234789-HpCDF	55673-89-7	8.84	8.75	1
11031	OCDF	39001-02-0	708	17.5	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	80	25 - 164
13C12-12378-PeCDD	67	25 - 181
13C12-123478-HxCDD	66	32 - 141
13C12-123678-HxCDD	66	28 - 130
13C12-123789-HxCDD	68	28 - 130
13C12-1234678-HpCDD	63	23 - 140
13C12-OCDD	58	17 - 157
13C12-2378-TCDF	73	24 - 169
13C12-12378-PeCDF	72	24 - 185
13C12-23478-PeCDF	74	21 - 178
13C12-123478-HxCDF	79	26 - 152
13C12-123678-HxCDF	77	26 - 123
13C12-234678-HxCDF	76	28 - 136
13C12-123789-HxCDF	75	29 - 147
13C12-1234678-HpCDF	75	28 - 143
13C12-1234789-HpCDF	70	26 - 138
13C12-OCDF	61	17 - 157

Dioxins/Furans Data Qualifiers:

B	*Detected in Method Blank*
U	*Undetected*
J	*Estimated concentration between Estimated Detection Limit and Minimum Reporting Level*
E	*Exceeds calibration range*
C	*Confirmed quantitation on secondary GC column*
Q	*EMPC - Estimated Maximum Possible Concentration*
F	*Interference is present*
S	*Saturation of detection signal*

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Sample Description: **IB-INNER 100 2.0-4.0 091118 Sediment 18-09-0884 / India Basin**

Project Name: **18-09-0884 / India Basin**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/11/2018
SDG#: EUS92-07

Eurofins Calscience, Inc.
ELLE Sample #: SW 9807616
ELLE Group #: 1988322
Matrix: Sediment

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	17 Dioxins & Furans - Soil	EPA 1613B October 1994	1	18263003	09/22/2018 16:43	Michael A Ziegler	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B October 1994	1	18263003	09/20/2018 08:24	Alex L Barton	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18262820002B	09/19/2018 11:46	Larry E Bevins	1

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Analysis Report

Quality Control Summary

Client Name: Eurofins Calscience, Inc.
Reported: 10/02/2018 10:23

Group Number: 1988322

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ng/kg	MRL ng/kg
Batch number: 18263003	Sample number(s): 9807610-9807616	
2378-TCDD	< 1.00	1.00
12378-PeCDD	< 5.00	5.00
123478-HxCDD	< 5.00	5.00
123678-HxCDD	< 5.00	5.00
123789-HxCDD	< 5.00	5.00
1234678-HpCDD	< 5.00	5.00
OCDD	< 10.0	10.0
2378-TCDF	< 1.00	1.00
12378-PeCDF	< 5.00	5.00
23478-PeCDF	< 5.00	5.00
123478-HxCDF	< 5.00	5.00
123678-HxCDF	< 5.00	5.00
123789-HxCDF	< 5.00	5.00
234678-HxCDF	< 5.00	5.00
1234678-HpCDF	< 5.00	5.00
1234789-HpCDF	< 5.00	5.00
OCDF	< 10.0	10.0

LCS/LCSD

Analysis Name	LCS Spike Added %	LCS Conc %	LCSD Spike Added %	LCSD Conc %	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18262820002B	Sample number(s): 9807610-9807616								
Moisture	89.5	89.46			100		99-101		

Analysis Name	OPR Spike Added ng/kg	OPR Conc ng/kg	OPRD Spike Added ng/kg	OPRD Conc ng/kg	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 18263003	Sample number(s): 9807610-9807616								
2378-TCDD	20	18.11			91		67-158		
12378-PeCDD	100	110.13			110		70-142		
123478-HxCDD	100	108.07			108		70-164		
123678-HxCDD	100	111.36			111		76-134		
123789-HxCDD	100	102.41			102		64-162		
1234678-HpCDD	100	109.76			110		70-140		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

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Analysis Report

Quality Control Summary

Client Name: Eurofins Calscience, Inc.
Reported: 10/02/2018 10:23

Group Number: 1988322

OPR/OPRD (continued)

Analysis Name	OPR Spike Added ng/kg	OPR Conc ng/kg	OPRD Spike Added ng/kg	OPRD Conc ng/kg	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
OCDD	200	211.63			106		78-144		
2378-TCDF	20	22.96			115		75-158		
12378-PeCDF	100	110.99			111		80-134		
23478-PeCDF	100	112.78			113		68-160		
123478-HxCDF	100	105.71			106		72-134		
123678-HxCDF	100	111.04			111		84-130		
123789-HxCDF	100	102.88			103		78-130		
234678-HxCDF	100	106.39			106		70-156		
1234678-HpCDF	100	104.57			105		82-122		
1234789-HpCDF	100	107.91			108		78-138		
OCDF	200	198.26			99		63-170		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc %	DUP Conc %	DUP RPD	DUP RPD Max
Batch number: 18262820002B	Sample number(s): 9807610-9807616 BKG: 9807612			
Moisture	40.82	40.81	0	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 17 Dioxins & Furans - Soil
Batch number: 18263003

	13C12-2378-TCDD	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD	13C12-123789-HxCDD	13C12-1234678-HpCDD
9807610	65	52	56	54	57	52
9807611	75	65	65	63	68	61
9807612	80	67	67	66	69	64
9807613	71	65	62	62	66	60
9807614	51	41	46	44	46	42
9807615	58	52	52	51	52	48
9807616	80	67	66	66	68	63
Blank	77	63	69	67	71	69

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

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Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Quality Control Summary

Client Name: Eurofins Calscience, Inc.
Reported: 10/02/2018 10:23

Group Number: 1988322

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 17 Dioxins & Furans - Soil
Batch number: 18263003

Limits:	25-164	25-181	32-141	28-130	28-130	23-140
	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF
9807610	44	56	56	58	64	61
9807611	59	70	69	74	80	76
9807612	59	72	68	75	79	78
9807613	58	64	68	71	71	69
9807614	41	45	44	47	53	51
9807615	44	54	56	57	60	58
9807616	58	73	72	74	79	77
Blank	69	67	67	70	72	76

Limits:	17-157	24-169	24-185	21-178	26-152	26-123
	13C12-234678-HxCDF	13C12-123789-HxCDF	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	
9807610	63	62	60	57	46	
9807611	76	74	74	68	61	
9807612	80	65	72	70	64	
9807613	68	68	71	66	60	
9807614	51	48	52	47	41	
9807615	57	55	57	50	45	
9807616	76	75	75	70	61	
Blank	73	67	82	66	63	

Limits:	28-136	29-147	28-143	26-138	17-157	
	13C12-2378-TCDD	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD	13C12-123789-HxCDD	13C12-1234678-HpCDD
OPR	61	53	53	52	56	52

Limits:	20-175	21-227	21-193	25-163	25-163	26-166
	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF
OPR	50	55	57	58	55	55

Limits:	13-199	22-152	21-192	13-328	19-202	21-159
	13C12-234678-HxCDF	13C12-123789-HxCDF	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	
OPR	56	49	62	46	47	

Limits:	22-176	17-205	21-158	20-186	13-199

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

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Environmental Analysis Request/Chain of Custody

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Acct. # 19744 Group # 1988322 Sample # 9807610-16

Client: EUROFINS CALSCIENCE	
Project Name/#: 18-09-0884 / India Basin	Site ID #: Fruitland
Project Manager: CARLA HOLLOWELL	P.O. #:
Sampler:	PWSID #:
Phone #: 714-895-5494	Quote #:
State where sample(s) were collected: CA	

For Lab Use Only
SF #: _____
SCR #: _____

Preservation Codes: H = HCl, T = Thiosulfate, N = HNO_3, B = NaOH, S = H_2SO_4, P = H_3PO_4, O = Other

Level IV Data Package needed ~~within 5 business days of final data report~~ LF 9/19/18

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil	Matrix: Water (Potable / Ground / NPDES / Surface)	Other: SEDIMENT	Total # of Containers	Analyses Requested: Dioxins / Furans 1631B	ECI SXE NUMBER	Remarks
~~Equipment Rinse #3~~	~~9/11/18~~	~~WATER~~				~~(W)~~	~~X~~	~~1~~	~~X~~	~~3~~	
IB-INNER 0.0-2.0 091118	9/11/18	SED					X	1	X	63	NTAT or 20 days (whichever is soonest); Excel EDD required.
IB-INNER 2.0-4.0 091118	9/11/18						X	1	X	64	
IB-INNER 4.0-6.0 091118	9/11/18						X	1	X	65	
IB-MIDDLE 0.0-2.0 091118	9/11/18						X	1	X	66	
IB-MIDDLE 2.0-4.0 091118	9/11/18						X	1	X	67	
IB-MIDDLE 4.0-6.0 091118	9/11/18						X	1	X	68	
IB-INNER 100 2.0-4.0 091118	9/11/18						X	1	X	69	

Turnaround Time Requested (TAT) (please check): Standard ☒ ~~Rush~~ ☑ per C. Hollowell LF 9/19/18
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed: ~~Five days from receipt of samples~~

Rush results requested by (please check): E-Mail ☑ Phone ☐

E-mail Address: CarlaHollowell@EurofinsUS.com

Phone:

Data Package Options (please check if required)

Type I (Validation/non-CLP)	☐	MA MCP	☐
Type III (Reduced non-CLP)	☐	CT RCP	☐
Type IV (CLP SOW)	☐	TX TRRP-13	☐
Type VI (Raw Data Only)	☐		

EDD Required? Yes ☑ No ☐ If yes, format: _____

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	9/17/18	1522	FedEx # 782812394761		
			[signature]	9/18/18	1000

Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____

Temperature upon receipt 5.6 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 227319

Group Number(s): 1980322

Client: Eurofins Calscience

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/18/2018 10:00
Number of Packages:	1	Number of Projects:	2
State/Province of Origin:	CA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Wanita Curry (14057) at 14:56 on 09/18/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-02	5.6	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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Supplemental Report 1

Additional requested analyses have been added to the original report.

WORK ORDER NUMBER: 18-09-1272

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Leidos

Client Project Name: Archive Samples: India Basin

Attention: Charlie Phillips
1000 Broadway
Suite 675
Oakland, CA 94607-4099

Kathleen M. Burney FOR

Approved for release on 12/05/2018 by:
Carla Hollowell
Project Manager

ResultLink

Email your PM

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Work Order Number: 18-09-1272

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Work Order Narrative

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 09/18/18. They were assigned to Work Order 18-09-1272.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

DoD Projects:

The test results contained in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ADE-1864.

The samples were analyzed or extracted outside the EPA Method recommended solid sample holding times for Total Solids and PCBs. However, the samples were frozen after collection (prior to holding time expiration) at -18°C, and remained frozen until the laboratory was ready to prepare the samples for analysis. Eurofins Calscience, Inc. follows SWAMP criteria and the Puget Sound Protocol (USEPA/PSWQAT, 1997, Table 2) for holding times in sediment samples, which states holding times may be extended up to six months to one year (two years for metals) if stored frozen at -18°C after collection. Therefore, the sample results have not been flagged as exceeding the EPA Method recommended holding time.

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Sample Summary

Client:	Leidos 1000 Broadway, Suite 675 Oakland, CA 94607-4099	Work Order:	18-09-1272
		Project Name:	Archive Samples: India Basin
		PO Number:	
		Date/Time Received:	09/18/18 11:00
		Number of Containers:	200
Attn:	Charlie Phillips		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
IB-10 0.0-2.0	18-09-1272-1	09/12/18 00:00	4	Sediment
IB-10 2.0-4.0	18-09-1272-2	09/12/18 00:00	4	Sediment
IB-10 4.0-6.0	18-09-1272-3	09/12/18 00:00	4	Sediment
IB-10 6.0-6.5	18-09-1272-4	09/12/18 00:00	1	Sediment
IB-15 0.0-2.0	18-09-1272-5	09/12/18 00:00	0	Sediment
IB-15 2.0-4.0	18-09-1272-6	09/12/18 00:00	0	Sediment
IB-15 4.0-6.0	18-09-1272-7	09/12/18 00:00	0	Sediment
IB-15 6.0-6.5	18-09-1272-8	09/12/18 00:00	0	Sediment
IB-05 0.0-2.0	18-09-1272-9	09/12/18 00:00	4	Sediment
IB-05 2.0-4.0	18-09-1272-10	09/12/18 00:00	4	Sediment
IB-05 4.0-6.0	18-09-1272-11	09/12/18 00:00	4	Sediment
IB-05 6.0-6.5	18-09-1272-12	09/12/18 00:00	1	Sediment
IB-02 0.0-2.0	18-09-1272-13	09/12/18 00:00	4	Sediment
IB-02 2.0-4.0	18-09-1272-14	09/12/18 00:00	4	Sediment
IB-02 4.0-6.0	18-09-1272-15	09/12/18 00:00	4	Sediment
IB-02 6.0-6.5	18-09-1272-16	09/12/18 00:00	1	Sediment
IB-01 0.0-2.0	18-09-1272-17	09/12/18 00:00	4	Sediment
IB-01 2.0-4.0	18-09-1272-18	09/12/18 00:00	4	Sediment
IB-01 4.0-6.0	18-09-1272-19	09/12/18 00:00	4	Sediment
IB-01 6.0-6.5	18-09-1272-20	09/12/18 00:00	1	Sediment
IB-01 2.0-4.0-100	18-09-1272-21	09/12/18 00:00	2	Sediment
IB-03 0.0-2.0	18-09-1272-22	09/12/18 00:00	3	Sediment
IB-03 2.0-4.0	18-09-1272-23	09/12/18 00:00	4	Sediment
IB-03 4.0-6.0	18-09-1272-24	09/12/18 00:00	4	Sediment
IB-03 6.0-6.5	18-09-1272-25	09/12/18 00:00	1	Sediment
IB-03 2.0-4.0-100	18-09-1272-26	09/12/18 00:00	0	Sediment
IB-18 0.0-2.0	18-09-1272-27	09/12/18 00:00	2	Sediment
IB-18 2.0-4.0	18-09-1272-28	09/12/18 00:00	4	Sediment
IB-18 4.0-6.0	18-09-1272-29	09/12/18 00:00	4	Sediment
IB-18 6.0-6.5	18-09-1272-30	09/12/18 00:00	1	Sediment
IB-15 0.0-2.0	18-09-1272-31	09/13/18 00:00	4	Sediment
IB-15 2.0-4.0	18-09-1272-32	09/13/18 00:00	4	Sediment
IB-15 4.0-6.0	18-09-1272-33	09/13/18 00:00	4	Sediment
IB-15 6.0-6.5	18-09-1272-34	09/13/18 00:00	1	Sediment
IB-09 0.0-2.0	18-09-1272-35	09/13/18 00:00	3	Sediment
IB-09 2.0-4.0	18-09-1272-36	09/13/18 00:00	3	Sediment
IB-09 4.0-6.0	18-09-1272-37	09/13/18 00:00	4	Sediment
IB-09 6.0-6.5	18-09-1272-38	09/13/18 00:00	1	Sediment
IB-09 0.0-2.0-100	18-09-1272-39	09/13/18 00:00	1	Sediment
IB-09 2.0-4.0-100	18-09-1272-40	09/13/18 00:00	1	Sediment
IB-04 0.0-2.0	18-09-1272-41	09/13/18 00:00	4	Sediment
IB-04 2.0-4.0	18-09-1272-42	09/13/18 00:00	4	Sediment

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Sample Summary

Client:	Leidos 1000 Broadway, Suite 675 Oakland, CA 94607-4099	Work Order:	18-09-1272
		Project Name:	Archive Samples: India Basin
		PO Number:	
		Date/Time Received:	09/18/18 11:00
		Number of Containers:	200
Attn:	Charlie Phillips		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
IB-04 4.0-6.0	18-09-1272-43	09/13/18 00:00	4	Sediment
IB-04 6.0-6.5	18-09-1272-44	09/13/18 00:00	1	Sediment
IB-04 0.0-2.0-100	18-09-1272-45	09/13/18 00:00	1	Sediment
IB-04 4.0-6.0-100	18-09-1272-46	09/13/18 00:00	1	Sediment
IB-14 0.0-2.0	18-09-1272-47	09/13/18 00:00	3	Sediment
IB-14 2.0-4.0	18-09-1272-48	09/13/18 00:00	4	Sediment
IB-14 4.0-6.0	18-09-1272-49	09/13/18 00:00	4	Sediment
IB-14 6.0-6.5	18-09-1272-50	09/13/18 00:00	1	Sediment
IB-14 0.0-2.0-100	18-09-1272-51	09/13/18 00:00	1	Sediment
IB-14 2.0-4.0-100	18-09-1272-52	09/13/18 00:00	1	Sediment
IB-19 0.0-2.0	18-09-1272-53	09/13/18 00:00	4	Sediment
IB-19 2.0-4.0	18-09-1272-54	09/13/18 00:00	4	Sediment
IB-19 4.0-6.0	18-09-1272-55	09/13/18 00:00	4	Sediment
IB-19 6.0-6.5	18-09-1272-56	09/13/18 00:00	1	Sediment
IB-21 0.0-2.0	18-09-1272-57	09/13/18 00:00	4	Sediment
IB-21 2.0-4.0	18-09-1272-58	09/13/18 00:00	4	Sediment
IB-21 4.0-6.0	18-09-1272-59	09/13/18 00:00	4	Sediment
IB-21 6.0-6.5	18-09-1272-60	09/13/18 00:00	1	Sediment
IB-22 0.0-2.0	18-09-1272-61	09/14/18 00:00	5	Sediment
IB-22 2.0-4.0	18-09-1272-62	09/14/18 00:00	5	Sediment
IB-22 4.0-6.0	18-09-1272-63	09/14/18 00:00	5	Sediment
IB-22 6.0-6.5	18-09-1272-64	09/14/18 00:00	2	Sediment
IB-20 0.0-2.0	18-09-1272-65	09/14/18 00:00	4	Sediment
IB-20 2.0-4.0	18-09-1272-66	09/14/18 00:00	4	Sediment
IB-20 4.0-6.0	18-09-1272-67	09/14/18 00:00	4	Sediment
IB-20 6.0-6.5	18-09-1272-68	09/14/18 00:00	1	Sediment
IB-OUT1 0.0-2.0	18-09-1272-69	09/13/18 00:00	1	Sediment
IB-OUT1 0.0-2.0-100	18-09-1272-70	09/13/18 00:00	1	Sediment
IB-OUT1 2.0-4.0	18-09-1272-71	09/13/18 00:00	1	Sediment
IB-OUT1 2.0-4.0-100	18-09-1272-72	09/13/18 00:00	1	Sediment
IB-OUT1 4.0-6.0	18-09-1272-73	09/13/18 00:00	1	Sediment
IB-OUT1 4.0-6.0-100	18-09-1272-74	09/13/18 00:00	1	Sediment
IB-OUT2 0.0-2.0	18-09-1272-75	09/13/18 00:00	1	Sediment
IB-OUT2 0.0-2.0-100	18-09-1272-76	09/13/18 00:00	1	Sediment
IB-OUT2 2.0-4.0	18-09-1272-77	09/13/18 00:00	1	Sediment
IB-OUT2 2.0-4.0-100	18-09-1272-78	09/13/18 00:00	1	Sediment
IB-OUT2 4.0-6.0	18-09-1272-79	09/13/18 00:00	1	Sediment
IB-OUT2 4.0-6.0-100	18-09-1272-80	09/13/18 00:00	1	Sediment

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	SM 2540 B (M)
		Units:	%
Project: Archive Samples: India Basin			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-03 0.0-2.0	**18-09-1272-22-AA**	**09/12/18 00:00**	**Sediment**	**N/A**	**11/08/18**	**11/08/18 15:30**	**I1108TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	48.1	0.100	0.100	1.00	

IB-03 2.0-4.0	**18-09-1272-23-AA**	**09/12/18 00:00**	**Sediment**	**N/A**	**11/08/18**	**11/08/18 15:30**	**I1108TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	53.7	0.100	0.100	1.00	

IB-03 4.0-6.0	**18-09-1272-24-AA**	**09/12/18 00:00**	**Sediment**	**N/A**	**11/08/18**	**11/08/18 15:30**	**I1108TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	54.4	0.100	0.100	1.00	

IB-09 0.0-2.0	**18-09-1272-35-AA**	**09/13/18 00:00**	**Sediment**	**N/A**	**11/08/18**	**11/08/18 15:30**	**I1108TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	44.2	0.100	0.100	1.00	

IB-09 2.0-4.0	**18-09-1272-36-AA**	**09/13/18 00:00**	**Sediment**	**N/A**	**11/08/18**	**11/08/18 15:30**	**I1108TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	47.0	0.100	0.100	1.00	

IB-09 4.0-6.0	**18-09-1272-37-AA**	**09/13/18 00:00**	**Sediment**	**N/A**	**11/08/18**	**11/08/18 15:30**	**I1108TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	49.8	0.100	0.100	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	SM 2540 B (M)
		Units:	%
Project: Archive Samples: India Basin			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-04 0.0-2.0	**18-09-1272-41-AA**	**09/13/18 00:00**	**Sediment**	**N/A**	**11/08/18**	**11/08/18 15:30**	**I1108TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	48.7	0.100	0.100	1.00	

IB-04 2.0-4.0	**18-09-1272-42-AA**	**09/13/18 00:00**	**Sediment**	**N/A**	**11/08/18**	**11/08/18 15:30**	**I1108TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	48.1	0.100	0.100	1.00	

IB-04 4.0-6.0	**18-09-1272-43-AA**	**09/13/18 00:00**	**Sediment**	**N/A**	**11/08/18**	**11/08/18 15:30**	**I1108TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	54.2	0.100	0.100	1.00	

Method Blank	**099-05-019-4306**	**N/A**	**Solid**	**N/A**	**11/08/18**	**11/08/18 15:30**	**I1108TSB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	ND	0.100	0.100	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: Archive Samples: India Basin			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-03 0.0-2.0	**18-09-1272-22-AA**	**09/12/18 00:00**	**Sediment**	**ICP/MS 05**	**11/13/18**	**11/14/18 02:41**	**181113L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	47.3	0.208	0.137	1.00	

IB-03 2.0-4.0	**18-09-1272-23-AA**	**09/12/18 00:00**	**Sediment**	**ICP/MS 05**	**11/13/18**	**11/14/18 02:45**	**181113L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	159	0.186	0.123	1.00	

IB-03 4.0-6.0	**18-09-1272-24-AA**	**09/12/18 00:00**	**Sediment**	**ICP/MS 05**	**11/13/18**	**11/14/18 02:48**	**181113L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	12.7	0.184	0.121	1.00	

IB-09 0.0-2.0	**18-09-1272-35-AA**	**09/13/18 00:00**	**Sediment**	**ICP/MS 05**	**11/13/18**	**11/14/18 02:52**	**181113L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	39.7	0.226	0.149	1.00	

IB-09 2.0-4.0	**18-09-1272-36-AA**	**09/13/18 00:00**	**Sediment**	**ICP/MS 05**	**11/13/18**	**11/14/18 02:55**	**181113L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	106	0.213	0.140	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: Archive Samples: India Basin			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-09 4.0-6.0	**18-09-1272-37-AA**	**09/13/18 00:00**	**Sediment**	**ICP/MS 05**	**11/13/18**	**11/14/18 02:59**	**181113L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	154	0.201	0.132	1.00	

IB-04 0.0-2.0	**18-09-1272-41-AA**	**09/13/18 00:00**	**Sediment**	**ICP/MS 05**	**11/13/18**	**11/14/18 03:02**	**181113L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	56.7	0.205	0.135	1.00	

IB-04 2.0-4.0	**18-09-1272-42-AA**	**09/13/18 00:00**	**Sediment**	**ICP/MS 05**	**11/13/18**	**11/14/18 03:06**	**181113L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	28.6	0.208	0.137	1.00	

IB-04 4.0-6.0	**18-09-1272-43-AA**	**09/13/18 00:00**	**Sediment**	**ICP/MS 05**	**11/13/18**	**11/14/18 03:09**	**181113L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	10.7	0.185	0.122	1.00	

Method Blank	**099-15-254-690**	**N/A**	**Solid**	**ICP/MS 05**	**11/13/18**	**11/14/18 02:06**	**181113L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	ND	0.100	0.0659	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 1 of 20

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-03 0.0-2.0	**18-09-1272-22-AA**	**09/12/18 00:00**	**Sediment**	**GC/MS HHH**	**11/07/18**	**11/09/18 22:20**	**181107L13**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.55	0.83	0.16	1.00	J
PCB018	1.2	0.42	0.14	1.00	
PCB028	1.2	0.42	0.14	1.00	
PCB031	0.79	0.42	0.11	1.00	
PCB033	1.5	0.42	0.079	1.00	
PCB044	2.2	0.42	0.32	1.00	
PCB049	1.4	0.42	0.10	1.00	
PCB052	2.0	0.42	0.40	1.00	
PCB056	0.45	0.42	0.16	1.00	
PCB060	0.43	0.42	0.11	1.00	
PCB066	1.7	0.42	0.26	1.00	
PCB070	1.5	0.42	0.15	1.00	
PCB074	0.87	0.42	0.19	1.00	
PCB087	1.6	0.42	0.23	1.00	
PCB095	4.0	0.42	0.22	1.00	
PCB097	1.2	0.42	0.096	1.00	
PCB099	2.7	0.42	0.099	1.00	
PCB101	6.1	0.42	0.092	1.00	
PCB105	1.7	0.42	0.11	1.00	
PCB110	4.2	0.42	0.070	1.00	
PCB118	3.5	0.42	0.072	1.00	
PCB128	1.3	0.42	0.25	1.00	
PCB132/153	19	0.83	0.34	1.00	
PCB138/158	12	0.83	0.73	1.00	
PCB141	2.2	0.42	0.10	1.00	
PCB149	12	0.42	0.25	1.00	
PCB151	4.2	0.42	0.18	1.00	
PCB156	1.2	0.42	0.16	1.00	
PCB170	7.0	0.42	0.23	1.00	
PCB174	5.0	0.42	0.087	1.00	
PCB177	3.4	0.42	0.24	1.00	
PCB180	13	0.42	0.19	1.00	
PCB183	3.7	0.42	0.19	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 2 of 20

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	7.1	0.42	0.21	1.00	
PCB194	3.8	0.42	0.15	1.00	
PCB195	1.5	0.42	0.12	1.00	
PCB201	0.93	0.42	0.071	1.00	
PCB203	3.6	0.42	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	91	14-146	
p-Terphenyl-d14	106	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 3 of 20

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-03 2.0-4.0	**18-09-1272-23-AA**	**09/12/18 00:00**	**Sediment**	**GC/MS HHH**	**11/07/18**	**11/09/18 22:44**	**181107L13**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.74	0.14	1.00	
PCB018	ND	0.37	0.12	1.00	
PCB028	ND	0.37	0.13	1.00	
PCB031	ND	0.37	0.094	1.00	
PCB033	ND	0.37	0.071	1.00	
PCB044	ND	0.37	0.28	1.00	
PCB049	ND	0.37	0.092	1.00	
PCB052	ND	0.37	0.35	1.00	
PCB056	ND	0.37	0.14	1.00	
PCB060	ND	0.37	0.098	1.00	
PCB066	ND	0.37	0.23	1.00	
PCB070	ND	0.37	0.13	1.00	
PCB074	ND	0.37	0.17	1.00	
PCB087	ND	0.37	0.21	1.00	
PCB095	ND	0.37	0.20	1.00	
PCB097	ND	0.37	0.086	1.00	
PCB099	1.3	0.37	0.088	1.00	
PCB101	0.73	0.37	0.082	1.00	
PCB105	ND	0.37	0.10	1.00	
PCB110	ND	0.37	0.063	1.00	
PCB118	ND	0.37	0.064	1.00	
PCB128	ND	0.37	0.22	1.00	
PCB132/153	2.1	0.74	0.30	1.00	
PCB138/158	ND	0.74	0.66	1.00	
PCB141	ND	0.37	0.091	1.00	
PCB149	1.5	0.37	0.22	1.00	
PCB151	1.0	0.37	0.16	1.00	
PCB156	ND	0.37	0.14	1.00	
PCB170	ND	0.37	0.21	1.00	
PCB174	ND	0.37	0.078	1.00	
PCB177	ND	0.37	0.22	1.00	
PCB180	1.6	0.37	0.17	1.00	
PCB183	0.50	0.37	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 4 of 20

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	1.0	0.37	0.19	1.00	
PCB194	ND	0.37	0.14	1.00	
PCB195	ND	0.37	0.11	1.00	
PCB201	ND	0.37	0.063	1.00	
PCB203	ND	0.37	0.11	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	98	14-146	
p-Terphenyl-d14	107	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 5 of 20

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-03 4.0-6.0	**18-09-1272-24-AA**	**09/12/18 00:00**	**Sediment**	**GC/MS HHH**	**11/07/18**	**11/09/18 23:07**	**181107L13**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.73	0.14	1.00	
PCB018	ND	0.36	0.12	1.00	
PCB028	ND	0.36	0.13	1.00	
PCB031	ND	0.36	0.092	1.00	
PCB033	ND	0.36	0.070	1.00	
PCB044	ND	0.36	0.28	1.00	
PCB049	ND	0.36	0.090	1.00	
PCB052	ND	0.36	0.35	1.00	
PCB056	ND	0.36	0.14	1.00	
PCB060	ND	0.36	0.095	1.00	
PCB066	ND	0.36	0.22	1.00	
PCB070	ND	0.36	0.13	1.00	
PCB074	ND	0.36	0.16	1.00	
PCB087	ND	0.36	0.20	1.00	
PCB095	ND	0.36	0.19	1.00	
PCB097	ND	0.36	0.084	1.00	
PCB099	ND	0.36	0.086	1.00	
PCB101	ND	0.36	0.081	1.00	
PCB105	ND	0.36	0.097	1.00	
PCB110	ND	0.36	0.062	1.00	
PCB118	ND	0.36	0.063	1.00	
PCB128	ND	0.36	0.22	1.00	
PCB132/153	1.2	0.73	0.30	1.00	
PCB138/158	0.67	0.73	0.64	1.00	J
PCB141	ND	0.36	0.089	1.00	
PCB149	0.76	0.36	0.22	1.00	
PCB151	ND	0.36	0.16	1.00	
PCB156	ND	0.36	0.14	1.00	
PCB170	ND	0.36	0.20	1.00	
PCB174	ND	0.36	0.076	1.00	
PCB177	ND	0.36	0.21	1.00	
PCB180	ND	0.36	0.17	1.00	
PCB183	ND	0.36	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 6 of 20

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	ND	0.36	0.19	1.00	
PCB194	ND	0.36	0.13	1.00	
PCB195	ND	0.36	0.11	1.00	
PCB201	ND	0.36	0.062	1.00	
PCB203	ND	0.36	0.10	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	94	14-146	
p-Terphenyl-d14	106	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 7 of 20

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-09 0.0-2.0	**18-09-1272-35-AA**	**09/13/18 00:00**	**Sediment**	**GC/MS HHH**	**11/07/18**	**11/09/18 23:31**	**181107L13**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.66	0.90	0.17	1.00	J
PCB018	1.2	0.45	0.15	1.00	
PCB028	1.3	0.45	0.16	1.00	
PCB031	0.97	0.45	0.11	1.00	
PCB033	0.97	0.45	0.086	1.00	
PCB044	1.8	0.45	0.34	1.00	
PCB049	1.3	0.45	0.11	1.00	
PCB052	2.5	0.45	0.43	1.00	
PCB056	ND	0.45	0.17	1.00	
PCB060	ND	0.45	0.12	1.00	
PCB066	1.7	0.45	0.28	1.00	
PCB070	2.0	0.45	0.16	1.00	
PCB074	1.9	0.45	0.20	1.00	
PCB087	ND	0.45	0.25	1.00	
PCB095	5.6	0.45	0.24	1.00	
PCB097	1.8	0.45	0.10	1.00	
PCB099	2.3	0.45	0.11	1.00	
PCB101	7.2	0.45	0.10	1.00	
PCB105	2.3	0.45	0.12	1.00	
PCB110	4.6	0.45	0.077	1.00	
PCB118	3.7	0.45	0.078	1.00	
PCB128	1.2	0.45	0.27	1.00	
PCB132/153	21	0.90	0.37	1.00	
PCB138/158	14	0.90	0.80	1.00	
PCB141	3.2	0.45	0.11	1.00	
PCB149	14	0.45	0.27	1.00	
PCB151	4.7	0.45	0.20	1.00	
PCB156	0.93	0.45	0.17	1.00	
PCB170	7.5	0.45	0.25	1.00	
PCB174	5.6	0.45	0.095	1.00	
PCB177	4.0	0.45	0.27	1.00	
PCB180	16	0.45	0.21	1.00	
PCB183	3.8	0.45	0.21	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 8 of 20

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	7.9	0.45	0.23	1.00	
PCB194	3.4	0.45	0.17	1.00	
PCB195	1.8	0.45	0.14	1.00	
PCB201	ND	0.45	0.077	1.00	
PCB203	3.5	0.45	0.13	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	91	14-146	
p-Terphenyl-d14	109	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 9 of 20

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-09 2.0-4.0	**18-09-1272-36-AA**	**09/13/18 00:00**	**Sediment**	**GC/MS HHH**	**11/07/18**	**11/09/18 23:54**	**181107L13**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	2.2	0.85	0.16	1.00	
PCB018	8.3	0.43	0.14	1.00	
PCB028	6.5	0.43	0.15	1.00	
PCB031	6.7	0.43	0.11	1.00	
PCB033	4.8	0.43	0.081	1.00	
PCB044	8.6	0.43	0.32	1.00	
PCB049	5.8	0.43	0.11	1.00	
PCB052	14	0.43	0.40	1.00	
PCB056	2.9	0.43	0.16	1.00	
PCB060	ND	0.43	0.11	1.00	
PCB066	8.5	0.43	0.26	1.00	
PCB070	11	0.43	0.15	1.00	
PCB074	4.7	0.43	0.19	1.00	
PCB087	9.2	0.43	0.24	1.00	
PCB095	33	0.43	0.23	1.00	
PCB097	6.9	0.43	0.098	1.00	
PCB099	10	0.43	0.10	1.00	
PCB101	44	0.43	0.094	1.00	
PCB105	12	0.43	0.11	1.00	
PCB110	27	0.43	0.072	1.00	
PCB118	21	0.43	0.074	1.00	
PCB128	7.1	0.43	0.26	1.00	
PCB132/153	130	0.85	0.35	1.00	
PCB138/158	91	0.85	0.75	1.00	
PCB141	22	0.43	0.10	1.00	
PCB149	90	0.43	0.25	1.00	
PCB151	33	0.43	0.19	1.00	
PCB156	6.1	0.43	0.16	1.00	
PCB170	51	0.43	0.24	1.00	
PCB174	41	0.43	0.089	1.00	
PCB177	24	0.43	0.25	1.00	
PCB180	100	0.43	0.20	1.00	
PCB183	25	0.43	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 10 of 20

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	48	0.43	0.22	1.00	
PCB194	21	0.43	0.16	1.00	
PCB195	9.4	0.43	0.13	1.00	
PCB201	3.4	0.43	0.072	1.00	
PCB203	25	0.43	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	83	14-146	
p-Terphenyl-d14	104	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 11 of 20

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-09 4.0-6.0	**18-09-1272-37-AA**	**09/13/18 00:00**	**Sediment**	**GC/MS HHH**	**11/07/18**	**11/10/18 00:17**	**181107L13**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	2.3	0.79	0.15	1.00	
PCB018	7.1	0.40	0.13	1.00	
PCB028	7.6	0.40	0.14	1.00	
PCB031	10	0.40	0.10	1.00	
PCB033	5.1	0.40	0.076	1.00	
PCB044	12	0.40	0.30	1.00	
PCB049	8.0	0.40	0.098	1.00	
PCB052	20	0.40	0.38	1.00	
PCB056	4.7	0.40	0.15	1.00	
PCB060	ND	0.40	0.10	1.00	
PCB066	12	0.40	0.24	1.00	
PCB070	16	0.40	0.14	1.00	
PCB074	8.1	0.40	0.18	1.00	
PCB087	8.7	0.40	0.22	1.00	
PCB095	24	0.40	0.21	1.00	
PCB097	7.9	0.40	0.091	1.00	
PCB099	12	0.40	0.094	1.00	
PCB101	33	0.40	0.088	1.00	
PCB105	18	0.40	0.11	1.00	
PCB110	26	0.40	0.067	1.00	
PCB118	23	0.40	0.068	1.00	
PCB128	7.4	0.40	0.24	1.00	
PCB132/153	61	0.79	0.32	1.00	
PCB138/158	44	0.79	0.70	1.00	
PCB141	7.9	0.40	0.097	1.00	
PCB149	39	0.40	0.23	1.00	
PCB151	12	0.40	0.17	1.00	
PCB156	3.3	0.40	0.15	1.00	
PCB170	20	0.40	0.22	1.00	
PCB174	14	0.40	0.083	1.00	
PCB177	8.6	0.40	0.23	1.00	
PCB180	34	0.40	0.18	1.00	
PCB183	9.3	0.40	0.18	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 12 of 20

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	17	0.40	0.20	1.00	
PCB194	7.7	0.40	0.15	1.00	
PCB195	4.2	0.40	0.12	1.00	
PCB201	1.3	0.40	0.067	1.00	
PCB203	9.6	0.40	0.11	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	87	14-146	
p-Terphenyl-d14	105	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 13 of 20

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-04 0.0-2.0	**18-09-1272-41-AA**	**09/13/18 00:00**	**Sediment**	**GC/MS HHH**	**11/07/18**	**11/10/18 00:41**	**181107L13**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.53	0.82	0.16	1.00	J
PCB018	0.80	0.41	0.13	1.00	
PCB028	0.94	0.41	0.14	1.00	
PCB031	0.94	0.41	0.10	1.00	
PCB033	ND	0.41	0.078	1.00	
PCB044	ND	0.41	0.31	1.00	
PCB049	ND	0.41	0.10	1.00	
PCB052	2.7	0.41	0.39	1.00	
PCB056	ND	0.41	0.15	1.00	
PCB060	ND	0.41	0.11	1.00	
PCB066	1.6	0.41	0.25	1.00	
PCB070	1.6	0.41	0.15	1.00	
PCB074	ND	0.41	0.18	1.00	
PCB087	ND	0.41	0.23	1.00	
PCB095	2.9	0.41	0.22	1.00	
PCB097	1.2	0.41	0.094	1.00	
PCB099	1.8	0.41	0.097	1.00	
PCB101	4.4	0.41	0.090	1.00	
PCB105	ND	0.41	0.11	1.00	
PCB110	2.9	0.41	0.069	1.00	
PCB118	2.4	0.41	0.071	1.00	
PCB128	1.0	0.41	0.25	1.00	
PCB132/153	12	0.82	0.33	1.00	
PCB138/158	8.1	0.82	0.72	1.00	
PCB141	1.5	0.41	0.10	1.00	
PCB149	8.0	0.41	0.24	1.00	
PCB151	2.6	0.41	0.18	1.00	
PCB156	ND	0.41	0.16	1.00	
PCB170	4.7	0.41	0.23	1.00	
PCB174	3.1	0.41	0.086	1.00	
PCB177	2.3	0.41	0.24	1.00	
PCB180	9.5	0.41	0.19	1.00	
PCB183	2.4	0.41	0.19	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 14 of 20

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	4.9	0.41	0.21	1.00	
PCB194	2.1	0.41	0.15	1.00	
PCB195	ND	0.41	0.12	1.00	
PCB201	ND	0.41	0.070	1.00	
PCB203	2.4	0.41	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	90	14-146	
p-Terphenyl-d14	103	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 15 of 20

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-04 2.0-4.0	**18-09-1272-42-AA**	**09/13/18 00:00**	**Sediment**	**GC/MS HHH**	**11/07/18**	**11/10/18 01:04**	**181107L13**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.83	0.16	1.00	
PCB018	ND	0.41	0.13	1.00	
PCB028	ND	0.41	0.14	1.00	
PCB031	ND	0.41	0.10	1.00	
PCB033	ND	0.41	0.079	1.00	
PCB044	ND	0.41	0.31	1.00	
PCB049	ND	0.41	0.10	1.00	
PCB052	ND	0.41	0.39	1.00	
PCB056	ND	0.41	0.16	1.00	
PCB060	ND	0.41	0.11	1.00	
PCB066	ND	0.41	0.26	1.00	
PCB070	ND	0.41	0.15	1.00	
PCB074	ND	0.41	0.19	1.00	
PCB087	ND	0.41	0.23	1.00	
PCB095	ND	0.41	0.22	1.00	
PCB097	ND	0.41	0.096	1.00	
PCB099	ND	0.41	0.098	1.00	
PCB101	ND	0.41	0.092	1.00	
PCB105	ND	0.41	0.11	1.00	
PCB110	ND	0.41	0.070	1.00	
PCB118	ND	0.41	0.072	1.00	
PCB128	ND	0.41	0.25	1.00	
PCB132/153	0.66	0.83	0.34	1.00	J
PCB138/158	ND	0.83	0.73	1.00	
PCB141	ND	0.41	0.10	1.00	
PCB149	ND	0.41	0.24	1.00	
PCB151	ND	0.41	0.18	1.00	
PCB156	ND	0.41	0.16	1.00	
PCB170	ND	0.41	0.23	1.00	
PCB174	ND	0.41	0.087	1.00	
PCB177	ND	0.41	0.24	1.00	
PCB180	ND	0.41	0.19	1.00	
PCB183	ND	0.41	0.19	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 16 of 20

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	ND	0.41	0.21	1.00	
PCB194	ND	0.41	0.15	1.00	
PCB195	ND	0.41	0.12	1.00	
PCB201	ND	0.41	0.070	1.00	
PCB203	ND	0.41	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	78	14-146	
p-Terphenyl-d14	107	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 17 of 20

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-04 4.0-6.0	**18-09-1272-43-AA**	**09/13/18 00:00**	**Sediment**	**GC/MS HHH**	**11/07/18**	**11/10/18 01:27**	**181107L13**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.74	0.14	1.00	
PCB018	ND	0.37	0.12	1.00	
PCB028	ND	0.37	0.13	1.00	
PCB031	ND	0.37	0.093	1.00	
PCB033	ND	0.37	0.070	1.00	
PCB044	ND	0.37	0.28	1.00	
PCB049	ND	0.37	0.091	1.00	
PCB052	ND	0.37	0.35	1.00	
PCB056	ND	0.37	0.14	1.00	
PCB060	ND	0.37	0.097	1.00	
PCB066	ND	0.37	0.23	1.00	
PCB070	ND	0.37	0.13	1.00	
PCB074	ND	0.37	0.17	1.00	
PCB087	ND	0.37	0.21	1.00	
PCB095	ND	0.37	0.20	1.00	
PCB097	ND	0.37	0.085	1.00	
PCB099	ND	0.37	0.088	1.00	
PCB101	ND	0.37	0.082	1.00	
PCB105	ND	0.37	0.099	1.00	
PCB110	ND	0.37	0.062	1.00	
PCB118	ND	0.37	0.064	1.00	
PCB128	ND	0.37	0.22	1.00	
PCB132/153	0.33	0.74	0.30	1.00	J
PCB138/158	ND	0.74	0.65	1.00	
PCB141	ND	0.37	0.090	1.00	
PCB149	ND	0.37	0.22	1.00	
PCB151	ND	0.37	0.16	1.00	
PCB156	ND	0.37	0.14	1.00	
PCB170	ND	0.37	0.20	1.00	
PCB174	ND	0.37	0.077	1.00	
PCB177	ND	0.37	0.22	1.00	
PCB180	ND	0.37	0.17	1.00	
PCB183	ND	0.37	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 18 of 20

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	ND	0.37	0.19	1.00	
PCB194	ND	0.37	0.14	1.00	
PCB195	ND	0.37	0.11	1.00	
PCB201	ND	0.37	0.063	1.00	
PCB203	ND	0.37	0.11	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	70	14-146	
p-Terphenyl-d14	105	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 19 of 20

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-418-343**	**N/A**	**Solid**	**GC/MS HHH**	**11/07/18**	**11/09/18 18:46**	**181107L13**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.40	0.077	1.00	
PCB018	ND	0.20	0.065	1.00	
PCB028	ND	0.20	0.069	1.00	
PCB031	ND	0.20	0.051	1.00	
PCB033	ND	0.20	0.038	1.00	
PCB044	ND	0.20	0.15	1.00	
PCB049	ND	0.20	0.050	1.00	
PCB052	ND	0.20	0.19	1.00	
PCB056	ND	0.20	0.076	1.00	
PCB060	ND	0.20	0.052	1.00	
PCB066	ND	0.20	0.12	1.00	
PCB070	ND	0.20	0.072	1.00	
PCB074	ND	0.20	0.090	1.00	
PCB087	ND	0.20	0.11	1.00	
PCB095	ND	0.20	0.11	1.00	
PCB097	ND	0.20	0.046	1.00	
PCB099	ND	0.20	0.047	1.00	
PCB101	ND	0.20	0.044	1.00	
PCB105	ND	0.20	0.053	1.00	
PCB110	ND	0.20	0.034	1.00	
PCB118	ND	0.20	0.035	1.00	
PCB128	ND	0.20	0.12	1.00	
PCB132/153	ND	0.40	0.16	1.00	
PCB138/158	ND	0.40	0.35	1.00	
PCB141	ND	0.20	0.049	1.00	
PCB149	ND	0.20	0.12	1.00	
PCB151	ND	0.20	0.088	1.00	
PCB156	ND	0.20	0.077	1.00	
PCB170	ND	0.20	0.11	1.00	
PCB174	ND	0.20	0.042	1.00	
PCB177	ND	0.20	0.12	1.00	
PCB180	ND	0.20	0.092	1.00	
PCB183	ND	0.20	0.093	1.00	
PCB187	ND	0.20	0.10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 20 of 20

Parameter	Result	RL	MDL	DF	Qualifiers
PCB194	ND	0.20	0.074	1.00	
PCB195	ND	0.20	0.060	1.00	
PCB201	ND	0.20	0.034	1.00	
PCB203	ND	0.20	0.058	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	66	14-146	
p-Terphenyl-d14	84	34-148	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
Project: Archive Samples: India Basin			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-03 0.0-2.0	**Sample**	**Sediment**	**ICP/MS 05**	**11/13/18**	**11/14/18 02:41**	**181113S02**
IB-03 0.0-2.0	**Matrix Spike**	**Sediment**	**ICP/MS 05**	**11/13/18**	**11/14/18 02:16**	**181113S02**
IB-03 0.0-2.0	**Matrix Spike Duplicate**	**Sediment**	**ICP/MS 05**	**11/13/18**	**11/14/18 02:20**	**181113S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Lead	22.75	25.00	48.53	103	48.45	103	80-120	0	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
Project: Archive Samples: India Basin			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-10-2389-1	**Sample**	**Sediment**	**GC/MS HHH**	**11/07/18**	**11/09/18 20:45**	**181107S13**
18-10-2389-1	**Matrix Spike**	**Sediment**	**GC/MS HHH**	**11/07/18**	**11/09/18 19:58**	**181107S13**
18-10-2389-1	**Matrix Spike Duplicate**	**Sediment**	**GC/MS HHH**	**11/07/18**	**11/09/18 20:21**	**181107S13**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	1.668	50.00	48.28	93	47.03	91	50-150	3	0-25	
PCB028	2.279	50.00	53.85	103	55.06	106	50-150	2	0-25	
PCB044	3.301	50.00	48.72	91	48.38	90	50-150	1	0-25	
PCB052	3.325	50.00	49.52	92	47.84	89	50-150	3	0-25	
PCB066	2.824	50.00	51.53	97	50.64	96	50-150	2	0-25	
PCB101	3.329	50.00	48.58	91	50.40	94	50-150	4	0-25	
PCB105	4.594	50.00	45.99	83	48.87	89	50-150	6	0-25	
PCB118	3.055	50.00	46.87	88	45.85	86	50-150	2	0-25	
PCB128	0.9360	50.00	44.26	87	42.52	83	50-150	4	0-25	
PCB170	1.470	50.00	50.43	98	50.95	99	50-150	1	0-25	
PCB180	2.042	50.00	48.37	93	47.64	91	50-150	2	0-25	
PCB187	1.040	50.00	44.53	87	43.16	84	50-150	3	0-25	
PCB195	ND	50.00	49.36	99	50.74	101	50-150	3	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - PDS

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
Project: Archive Samples: India Basin			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
IB-03 0.0-2.0	**Sample**	**Sediment**	**ICP/MS 05**	**11/13/18 00:00**	**11/14/18 02:41**	**181113S02**
IB-03 0.0-2.0	**PDS**	**Sediment**	**ICP/MS 05**	**11/13/18 00:00**	**11/14/18 02:23**	**181113S02**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Lead	22.75	25.00	47.62	99	75-125	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	SM 2540 B (M)
Project: Archive Samples: India Basin			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
IB-03 0.0-2.0	**Sample**	**Sediment**	**N/A**	**11/08/18 00:00**	**11/08/18 15:30**	**I1108TSD1**
IB-03 0.0-2.0	**Sample Duplicate**	**Sediment**	**N/A**	**11/08/18 00:00**	**11/08/18 15:30**	**I1108TSD1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Solids, Total	48.10	47.60	1	0-10	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
Project: Archive Samples: India Basin			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-254-690	**LCS**	**Solid**	**ICP/MS 05**	**11/13/18**	**11/14/18 02:09**	**181113L02**
099-15-254-690	**LCSD**	**Solid**	**ICP/MS 05**	**11/13/18**	**11/14/18 02:13**	**181113L02**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Lead	25.00	25.97	104	25.38	102	80-120	2	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
Project: Archive Samples: India Basin			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-418-343	**LCS**	**Solid**	**GC/MS HHH**	**11/07/18**	**11/09/18 19:10**	**181107L13**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
PCB018	50.00	42.15	84	24-132	6-150	
PCB028	50.00	46.37	93	31-133	14-150	
PCB044	50.00	45.21	90	36-120	22-134	
PCB052	50.00	44.04	88	31-121	16-136	
PCB066	50.00	52.94	106	43-139	27-155	
PCB101	50.00	48.83	98	37-121	23-135	
PCB105	50.00	49.81	100	48-132	34-146	
PCB118	50.00	48.48	97	46-136	31-151	
PCB128	50.00	48.39	97	40-130	25-145	
PCB170	50.00	47.42	95	40-124	26-138	
PCB180	50.00	50.82	102	41-143	24-160	
PCB187	50.00	46.73	93	39-129	24-144	
PCB195	50.00	49.52	99	44-128	30-142	

Total number of LCS compounds: 13
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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Glossary of Terms and Qualifiers

Work Order: 18-09-1272 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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CHAIN-OF-CUSTODY RECORD

DATE: 9/14/18
PAGE: 1 OF 10

WO NO. / LAB USE ONLY: 18-09-1272

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Charlie Phillips/PM STATE: ZIP:
TEL: 1-760-535-6182 E-MAIL:

CLIENT PROJECT NAME / NO.:
P.O. NO.:
PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All samples are for archive only.

REQUESTED ANALYSES
Please check box or fill in blank as needed.

archive

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO	☐ TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Chemistry - see SAP pamp	GS	D/F
1	IB-10 0.0-2.0	9/12/18		Sed.	1																		X	X	X
2	2.0-4.0	↓		↓	↓																		X	X	X
3	4.0-6.0																						↓	↓	↓
4	6.0-6.5																							[redacted]	
5	IB-15 0.0-2.0																						X	X	X
6	2.0-4.0																						↓	↓	↓
7	4.0-6.0																								
8	6.0-6.5																							—	—

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Tom O'Malley EC1	9/14/18	1515
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Tom O'Malley TO 650 9/12/18 1730			
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
	[signature]	9/18/18	1100

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CHAIN-OF-CUSTODY RECORD

DATE: 9/14/18
PAGE: 2 OF 10

WO NO. / LAB USE ONLY: 1272

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Charlie Phillips / PM STATE: ZIP:
TEL: 1-760-535-6187 E-MAIL:

CLIENT PROJECT NAME / NO.:
P.O. NO.:
PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All samples - archive only.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO	☐ TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	archive: Chemistry see SAP/QAPP	GS	D/F
9	IB-05 0.0-2.0	9/12/18		Sed.	1																		X	X	X
10	2.0-4.0																								
11	4.0-6.0																								
12	6.0-6.5																							—	—
13	IB-02 0.0-2.0																						X	X	X
14	2.0-4.0																								
15	4.0-6.0																								
16	6.0-6.5																							—	—

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
V. Full	Tom O'Malley ECI	9/14/18	1515
Tom O'Malley TO GSO 9/17/18 1230			
	[signature]	9/18/18	1180

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CHAIN-OF-CUSTODY RECORD

DATE: 9/14/18
PAGE: 3 OF 10

WO NO. / LAB USE ONLY: 1272

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Charlie Phillips / PM STATE: ZIP:
TEL: 1-760-535-6187 E-MAIL:

CLIENT PROJECT NAME / NO.:
P.O. NO.:
PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All samples archive only
IB-01 2.0-4.0-100 is a dup

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO	TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	archive Chem. see SAP/QAPP	GS	O/F
13	17	IB-02 0.0-2.0	9/12/18		Sed	1																		X	X	X
14	18	2.0-4.0	↓		↓	↓																		↓	↓	↓
15	19	4.0-6.0																							↓	↓
16	20	6.0-6.5																							—	—
17	21	IB-01 0.0-2.0																							↓	↓
18	22	2.0-4.0																								
19	23	4.0-6.0																							↓	↓
20	24	6.0-6.5																							—	—
21	~~25~~	~~IB-01 2.0-4.0-100~~	↓		↓	↓																		↓	—	—
	~~26~~	~~[illegible]~~																								

VF VF

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Tom O'Malley (EC)	9/14/18	1515
Relinquished by: (Signature) Tom O'Malley TO GSO 9/17/18 1730	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation) [signature]	Date: 9/18/18	Time: 1100

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CHAIN-OF-CUSTODY RECORD

DATE: 9/14/18
PAGE: 4 OF 10

WO NO. / LAB USE ONLY: 1272

LABORATORY/CLIENT: Leidos
ADDRESS:
CITY: Charlie Phillips / PM STATE: ZIP:
TEL: 1-760-535-6187 E-MAIL:

CLIENT PROJECT NAME / NO.:
P.O. NO.:
PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All samples archive only.
-100 ⇒ dup. chem only.

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO	TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Chem. see SAP/QAPP archive			
22	25	IB-03 1.0-2.0	9/12/18		Sed	1																		X	X	X	
23	26	2.0-4.0	↓		↓	↓																		↓	↓	↓	
24	27	4.0-6.0																							↓	↓	
25	28	6.0-6.5	↓		↓	↓																		↓	—	—	
26	29	IB-03 2.0-4.0 -100	↓		↓	↓																		↓	—	—	
27	30	IB-18 0.0-2.0																									
28	31	2.0-4.0																							↓	↓	
29	32	4.0-6.0																									
30	33	6.0-6.5	↓		↓	↓																		↓	—	—	
		9/18/18																									

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
V. Fall	Tom O'Malley ECI	9/14/18	1515
Tom O'Malley to GSO 9/17/18 1730			
		9/18/18	1100

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2015-05-13 Revision

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CHAIN-OF-CUSTODY RECORD

DATE: 9/14/18
PAGE: 5 OF 10

WO NO. / LAB USE ONLY: 1272

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Charlie Phillips / PM STATE: ZIP:
TEL: 1-760-535-6187 E-MAIL:

CLIENT PROJECT NAME / NO.:
P.O. NO.:
PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All are archive only.
-100 => dups chem. only

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO	TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	archive: Chem. - See SAP/QAPP	GS	D/F
31	34	IB-15 0.0-2.0	9/13/18		Sed	1																				
32	35	2.0-4.0																								
33	36	4.0-6.0																								
34	37	6.0-6.5																							—	—
35	38	IB-09 0.0-2.0																								
36	39	2.0-4.0																								
37	40	4.0-6.0																								
38	41	6.0-6.5																							—	—
39	42	IB-09 0.0-2.0 -100																							—	—
40	43	2.0-4.0 -100																							—	—

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
J. Frank	Tom O'Malley ECI	9/14/18	1515
Tom O'Malley TO650 9/17/18 1230			
		9/18/18	1100

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CHAIN-OF-CUSTODY RECORD

DATE: 9/14/18
PAGE: 6 OF 10

WO NO. / LAB USE ONLY: 1272

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Charlie Phillips STATE: ZIP:
TEL: 1-760-535-6187 E-MAIL:

CLIENT PROJECT NAME / NO.:
P.O. NO.:
PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All samples archive only.
-100 ⇒ dup (chem)

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO	TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	archive		
																								see SAP/QAPP		
41	44	IB-04 0.0-2.0	9/13/18		Sed	1																		X	X	X
42	45	2.0-4.0																								
43	46	4.0-6.0																								
44	47	6.0-6.5																							—	—
45	48	IB-04 0.0-2.0-100																							—	—
46	49	4.0-6.0-100																							—	—
47	50	IB-14 0.0-2.0																								
48	51	2.0-4.0																								
49	52	4.0-6.0																								
50	53	6.0-6.5																							—	—

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
V. Phill	Tom O'Malley ECI	9/14/18	1515
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Tom O'Malley TO GSO 9/12/18 1730			
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
		9/18/18	1100

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CHAIN-OF-CUSTODY RECORD

DATE: 9/14/18
PAGE: 7 OF 10

WO NO. / LAB USE ONLY: 1272

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: STATE: ZIP:
TEL: E-MAIL:

CLIENT PROJECT NAME / NO.:
P.O. NO.:
PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID: LOG CODE: SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All archive.
-100 dup chem only.

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO	TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ___	BTEX / MTBE ☐ 8260 ☐ ___	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	archive: Chem - SAP	GS	D/F
51	E4	IB-14 0.0-2.0-100	9/13/18		Soil	1																		—	—	—
52	E5	2.0-4.0-100																						—	—	—
53	E6	IB-19 0.0-2.0																								
54	E7	2.0-4.0																								
55	E8	4.0-6.0																								
56	E9	6.0-6.5																						—	—	—
57	60	IB-21 0.0-2.0																								
58	61	2.0-4.0																								
59	62	4.0-6.0																								
60	63	6.0-6.5																						—	—	—

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
V. Frank	Tom O'Malley ECI	9/14/18	1515
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Tom O'Malley TO GSO 9/17/18 1730			
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
		9/18/18	1100

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WO NO. / LAB USE ONLY: 1272

CHAIN-OF-CUSTODY RECORD

DATE: 9/14/18
PAGE: 8 OF 10

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: STATE: ZIP:
TEL: E-MAIL:

CLIENT PROJECT NAME / NO.:
P.O. NO.:
PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID: LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All archives.
IB-22 has (2) containers for chemistry.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO	☐ TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	chemistry - see SAP/DAQP archive	GS	P/F
61	64	IB-22 0.0-2.0	9/14/18		Sed	1																		X	X	X
62	65	2.0-4.0	↓		↓	↓																		↓	↓	↓
63	66	4.0-6.0	↓		↓	↓																		↓	↓	↓
64	67	6.0-6.5	↓		↓	↓																		↓	—	—
65	68	IB-20 0.0-2.0	↓		↓	↓																		↓	↓	↓
66	69	2.0-4.0	↓		↓	↓																		↓	↓	↓
67	70	4.0-6.0	↓		↓	↓																		↓	↓	↓
68	71	6.0-6.5	↓		↓	↓																		↓	—	—
	C 9/18/18																									

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
V. Fraile	Tom O'Malley EC1	9/14/18	1515
Tom O'Malley TO GSO 9/17/18 1730			
	[signature]	9/18/18	1100

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CHAIN-OF-CUSTODY RECORD

DATE: 9/14/18
PAGE: 9 OF 10

WO NO. / LAB USE ONLY: 1272

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: STATE: ZIP:
TEL: E-MAIL:

CLIENT PROJECT NAME / NO.:
P.O. NO.:
PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID: LOG CODE: SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All archive
-100 ⇒ dup.

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO	TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ___	BTEX / MTBE ☐ 8260 ☐ ___	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	D/H ARCHIVE			
69	F2	JB-OUT1 0.0-2.0	9/13/18		Soil	1																		X			
70	F3	" -100																									
71	F4	2.0-4.0																									
72	F5	" -100																									
73	F6	4.0-6.0																									
74	F7	" -100																									
	8																										
	9																										
	9/18/18																										

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
V. Frull	Ton O'Malley ECI	9/14/18	1515
Ton O'Malley TO GSO 9/17/18 1730			
		9/18/18	1100

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CHAIN-OF-CUSTODY RECORD

DATE: 9/14/18
PAGE: 10 OF 10

WO NO. / LAB USE ONLY: 1272

LABORATORY CLIENT: LeidOS
ADDRESS:
CITY: STATE: ZIP:
TEL: E-MAIL:

CLIENT PROJECT NAME / NO.:
P.O. NO.:
PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID: LOG CODE: SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All archives.
-100 ⇒ dup.

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO	☐ TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	D/F archive			
75	78	IB-OUT2 0.0-2.0	9/13/18		Sed	1																					
76	79	" -100																									
77	80	2.0-4.0																									
78	81	-100																									
79	82	4.0-6.0																									
80	83	" -100																									
		(VF) =																									

C 9/14/18

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
J. Frank	Tom O'Malley EQ	9/14/18	1515
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Tom O'Malley to GSO 9/17/18 1730			
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
		9/18/18	1100

2015-05-13 Revision

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9/17/2018

GSO a GLS company GLS

800-322-5555
www.gso.com

1272

Ship From
CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Tracking #: 542081671

NPS

9/17/2018

GSO a GLS company GLS

800-322-5555
www.gso.com

Ship From
CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERGIAL CIRCLE
#H
CONCORD, CA 94520

Tracking #: 542081672

NPS

9/17/2018

GSO a GLS company GLS

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www.gso.com

Ship From
CAL SCIENCE- CONCORD
ALAN KEMP

Tracking #: 542081673

NPS

9/17/2018

GSO a GLS company GLS

800-322-5555
www.gso.com

Ship From
CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Tracking #: 542081674

NPS

9/17/2018

GSO a GLS company GLS

800-322-5555
www.gso.com

Ship From
CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Tracking #: 542081675

NPS

Ship To
CEL
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

ORC
GARDEN GROVE

C

COD: $0.00

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WORK ORDER NUMBER: 18-09-1272

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 5

CLIENT: Leidos

DATE: 09/18/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 4.1 °C (w/ CF): 3.6 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: VJGP

CUSTODY SEAL:

Cooler	☑ Present and Intact	☐ Present but Not Intact	☐ Not Present	☐ N/A	Checked by: VJGP
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: UNLC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☐ Sampling date ☑ Sampling time ☐ Matrix ☑ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna$_2$ ☐ 100PJ ☐ 100PJna$_2$ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PBn (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGBna$_2$ ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PBna (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☑ 4ozCGJ (2) ☐ 8ozCGJ ☑ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☑ Z ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: UNLC

Reviewed by: UFS

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WORK ORDER NUMBER: 18-09-1272

SAMPLE RECEIPT CHECKLIST

COOLER 2 OF 5

CLIENT: Leidos

DATE: 09/18/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 3.7 °C (w/ CF): 3.2 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: VJGP

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: VJGP

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: UNLC

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☐ Sampling date ☑ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOA**na₂** ☐ 100PJ ☐ 100PJ**na₂** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB ☐ 125PB**znna** (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGB**s** (pH__2) ☐ 250PB ☐ 250PB**n** (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s** (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGB**na₂** ☐ 1AGB**s** (pH__2) ☐ 1AGB**s** (O&G) ☐ 1PB ☐ 1PB**na** (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☑ 4ozCGJ (2) ☐ 8ozCGJ ☑ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☑ 2 ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na₂** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: UNLC

Reviewed by: YFO

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WORK ORDER NUMBER: 18-09-1272

SAMPLE RECEIPT CHECKLIST

COOLER 3 OF 5

CLIENT: Leidos

DATE: 09/18/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 4.1 °C (w/ CF): 3.6 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: UJGP

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: UJGP

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: UNLC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☐ Sampling date ☑ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna$_2$ ☐ 100PJ ☐ 100PJna$_2$ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PBn (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGBna$_2$ ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PBna (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☑ 4ozCGJ ☐ 8ozCGJ ☑ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☑ Z ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: UNLC

Reviewed by: UFSO

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WORK ORDER NUMBER: 18-09-1272

SAMPLE RECEIPT CHECKLIST

COOLER 4 OF 5

CLIENT: Leidos

DATE: 09/18/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 4.3 °C (w/ CF): 3.8 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: UJGP

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: UJGP

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: UNLC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☐ Sampling date ☑ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOA**na₂** ☐ 100PJ ☐ 100PJ**na₂** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB ☐ 125PB**znna** (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGB**s** (pH__2) ☐ 250PB ☐ 250PB**n** (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s** (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGB**na₂** ☐ 1AGB**s** (pH__2) ☐ 1AGB**s** (O&G) ☐ 1PB ☐ 1PB**na** (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☑ 4ozCGJ (2) ☑ 8ozCGJ (2) ☐ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☑ Z ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na₂** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: UNLC

Reviewed by: UFSO

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WORK ORDER NUMBER: 18-09-1272

SAMPLE RECEIPT CHECKLIST

COOLER 5 OF 5

CLIENT: Leidos

DATE: 09/18/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 3.4 °C (w/ CF): 2.9 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: VJGP

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: VJGP

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: VNLC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☐ Sampling date ☑ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na₂** ☐ 100PJ ☐ 100PJ**na₂** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB ☐ 125PB**znna** (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGB**s** (pH__2) ☐ 250PB ☐ 250PB**n** (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s** (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGB**na₂** ☐ 1AGB**s** (pH__2) ☐ 1AGB**s** (O&G) ☐ 1PB ☐ 1PB**na** (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☑ 4ozCGJ ☐ 8ozCGJ ☑ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☑ 2 ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na₂** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: VNLC

Reviewed by: YPD

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WORK ORDER NUMBER: 18-09-1272

SAMPLE ANOMALY REPORT

DATE: 09 / 18 / 2018

SAMPLES, CONTAINERS, AND LABELS:

- ☑ Sample(s) NOT RECEIVED but listed on COC
- ☐ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ pH outside acceptable range (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☑ Client sample label(s) do not match COC (comment)
  - ☐ Project information
  - ☐ Client sample ID
  - ☑ Sampling date and/or time
  - ☑ Number of container(s)
  - ☐ Requested analysis
- ☐ Sample container(s) compromised (comment)
  - ☐ Broken
  - ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
  - ☐ Flat
  - ☐ Very low in volume
  - ☐ Leaking (not transferred; duplicate bag submitted)
  - ☐ Leaking (transferred into ECI Tedlar™ bags*)
  - ☐ Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

Comments

(-5), (-6), (-7), (-8), (-26) Not received.

No collection time for all samples per COC and labels.

④ 16oz Jar, 2x4oz Jar, Z: 1,2,3,9,10,11,13,14,15, 17,18,19,23,24,28,29,31,32,33,37,41,42,43,48 49,53,54,55,57,58,59,65,66,67

① 16oz Jar: 4,12,16,20,25,30,34,38,39,40,44 45,46,50,51,52,56,60,68

② 16oz Jar, Z: 21,27

③ 16oz Jar, 4oz Jar, Z: 22,35,36,47

⑤ 2x8oz Jar, 2x4oz Jar, Z: 61,62,63

② 2x8oz Jar: 64

① 4oz Jar: 69,70,71,72,73,74,75,76,77,78,79,80

MISCELLANEOUS: (Describe)

Comments

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis

Comments:

Reported by: UNLC

Reviewed by: LFSO

** Record the total number of containers (i.e., vials or bottles) for the affected sample.

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Carla Hollowell

From: Phillips, Charles R. <CHARLES.R.PHILLIPS@leidos.com>
Sent: Monday, November 05, 2018 1:48 PM
To: Carla Hollowell
Cc: Frank, Vicky
Subject: Request for Analyses of Archived India Basin Sediment Samples
Attachments: Leidos_COC for Analysis of India Basin Archive Samples_PCBs, Hg, Pb and TS_11_5_18.xlsx

EXTERNAL EMAIL*

Carla;

We are requesting analyses of 9 sediment samples from India Basin that were submitted in September and archived at Eurofins; analyses are for PCBs, mercury, lead, and solids, as indicated on the attached COC.

Station ID	Depth Interval (feet)	Analysis
IB-03	0-2	Total solids, mercury, lead, and PCBs
	2-4	Total solids, mercury, lead, and PCBs
	4-6	Total solids, mercury, lead, and PCBs
IB-04	0-2	Total solids, mercury, lead, and PCBs
	2-4	Total solids, mercury, lead, and PCBs
	4-6	Total solids, mercury, lead, and PCBs
IB-09	0-2	Total solids, mercury, lead, and PCBs
	2-4	Total solids, mercury, lead, and PCBs
	4-6	Total solids, mercury, lead, and PCBs

Please let me know if you have any questions about this request.

Thanks, Charlie

Charles Phillips | Leidos
phone: 760.728.3378; mobile: 760.535.6182
charles.r.phillips@leidos.com

www.leidos.com

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CHAIN OF CUSTODY RECORD

DATE: 11/05/18

PAGE: 1 OF 1

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

LABORATORY CLIENT: Leidos, Inc.

ADDRESS:

CITY: STATE: ZIP:

TEL: E-MAIL: charles.r.phillips@leidos.com

CLIENT PROJECT NAME / NUMBER: CCSF RPD India Basin

P.O. NO.:

PROJECT CONTACT: Charlie Phillips office 760.728.3378; cell 760-535-6182

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

☐ COELT EDF GLOBAL ID: LOG CODE:

SPECIAL INSTRUCTIONS:

9 archived (at Eurofins) sediment samples; please analyze for PCBs (RMP 40 congeners), mercury, lead, and solids.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO	☐ TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs, RMP 40 congeners (EPA 8270C	PAHs 8270 C SIM (RMP 25)	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Solids SM2540 B	Mercury (EPA 1631E)	Lead (EPA 6020)	
	IB-03 0.0-2.0 091218	9/12/2018		Sediment	1														1				1	1	1	
	IB-03 2.0-4.0 091218	9/12/2018		Sediment	1														1				1	1	1	
	IB-03 4.0-6.0 091218	9/12/2018		Sediment	1														1				1	1	1	
	IB-04 0.0-2.0 091318	9/13/2018		Sediment	1														1				1	1	1	
	IB-04 2.0-4.0 091318	9/13/2018		Sediment	1														1				1	1	1	
	IB-04 4.0-6.0 091318	9/13/2018		Sediment	1														1				1	1	1	
	IB-09 0.0-2.0 091318	9/13/2018		Sediment	1														1				1	1	1	
	IB-09 2.0-4.0 091318	9/13/2018		Sediment	1														1				1	1	1	
	IB-09 4.0-6.0 091318	9/13/2018		Sediment	1														1				1	1	1	

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

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Subcontractor Analysis Report

Work Order: 18-09-1272 Page 1 of 1

One or more samples in this work order have tests that were subcontracted. The subcontract report(s) follows.

For subcontracted tests, please reference the laboratory information noted below.

1. Eurofins Frontier Global Sciences - Bothell,WA CA ELAP 2954
   Mercury - EPA 1631

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11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

03 December 2018

Carla Lee Hollowell
Eurofins Calscience, LLC
7440 Lincoln Way
Garden Grove, CA 92841

RE: Low Level Hg - 2018

Enclosed are the analytical results for samples received by Eurofins Frontier Global Sciences. All quality control measurements are within established control limits and there were no analytical difficulties encountered with the exception of those listed in the case narrative section of this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Amy Goodall

Amy Goodall
Project Manager

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eurofins | Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Eurofins Calscience, LLC	Project: Low Level Hg - 2018	
7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	03-Dec-18 14:39

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
IB-03 0.0-2.0 091218	8K00318-01	Soil/Sediment	12-Sep-18 00:00	08-Nov-18 10:40
IB-03 2.0-4.0 091218	8K00318-02	Soil/Sediment	12-Sep-18 00:00	08-Nov-18 10:40
IB-03 4.0-6.0 091218	8K00318-03	Soil/Sediment	12-Sep-18 00:00	08-Nov-18 10:40
IB-04 0.0-2.0 091318	8K00318-04	Soil/Sediment	13-Sep-18 00:00	08-Nov-18 10:40
IB-04 2.0-4.0 091318	8K00318-05	Soil/Sediment	13-Sep-18 00:00	08-Nov-18 10:40
IB-04 4.0-6.0 091318	8K00318-06	Soil/Sediment	13-Sep-18 00:00	08-Nov-18 10:40
IB-09 0.0-2.0 091318	8K00318-07	Soil/Sediment	13-Sep-18 00:00	08-Nov-18 10:40
IB-09 2.0-4.0 091318	8K00318-08	Soil/Sediment	13-Sep-18 00:00	08-Nov-18 10:40
IB-09 4.0-6.0 091318	8K00318-09	Soil/Sediment	13-Sep-18 00:00	08-Nov-18 10:40

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The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amy Goodall, Project Manager

eurofins | Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Eurofins Calscience, LLC	Project: Low Level Hg - 2018	
7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	03-Dec-18 14:39

SAMPLE RECEIPT

Samples were received at Eurofins Frontier Global Sciences (EFGS) on 08-Nov-18 10:40. The samples were received intact, on-ice within a sealed cooler at

Cooler	Temp C°
Default Cooler	0.4

SAMPLE PREPARATION AND ANALYSIS

Total solids analysis was performed in accordance with method SM2540B. Total solids are prepared at the same time as the preparation for the analyte(s) of interest in order to provide the most accurate dry mass correction which may be outside of the method recommended holding time of 7 days from sample collection.

Total mercury preparation and analysis was performed by flow injection atomic fluorescence spectrometry (FI-AFS) in accordance with EPA 1631B.

ANALYTICAL AND QUALITY CONTROL ISSUES

Method blanks were prepared for every preparation to assess possible blank contribution from the sample preparation procedure. The method blanks were carried through the entire analytical procedure. All blanks fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

Liquid spikes, certified reference material (CRM) or a quality control samples (QCS) were prepared for every preparation as a measure of accuracy. All liquid spikes, CRMs and/or QCS samples fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

As an additional measure of the accuracy of the methods used and to check for matrix interference, matrix spikes (MS) and matrix spike duplicates (MSD) were digested and analyzed. All of the matrix spike recoveries fell within the established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

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7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	03-Dec-18 14:39

A reasonable measure of the precision of the analytical methods is the relative percent difference (RPD) between a matrix spike recovery and a matrix spike duplicate recovery and between laboratory control sample recovery and laboratory control sample duplicate recoveries. All of the relative percent differences fell within established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

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Sample Receipt Checklist

Client: Cal Science

Date & Time Received: 11-8-18 1040

Date Labeled: 11-8-18 Labeled By: LEL

Project:

Received By: LEL

Label Verified By: Ben

# of Coolers Received: 1

Samples Arrived By: ✓ Shipping Service ____ Courier ____ Hand ____ Other (Specify: ____)

Coolant: ☐ None/Ambient ☒ Loose Ice ☐ Gel Ice ☐ Dry Ice

Coolant Required: Y / N

Temp Blank Used: Y/N for Cooler(s): 1

Notify Project Manager if packages/coolers are received without coolant or with thawed coolant and at a temperature in excess of 6°C. PM notified: Y/N

Cooler Information:	Y/N/NA	Comments
The coolers do not appear to be tampered with:	Y	
Custody Seals are present and intact:	Y	
Custody seals signed:	Y	

TID: 191139780 CF: +0.1 °C		Date/time:		By:	
Cooler 1: 0.3 °C	w/ CF: 0.4 °C	Cooler 4:	°C	w/ CF:	°C
Cooler 2: °C	w/ CF: °C	Cooler 5:	°C	w/ CF:	°C
Cooler 3: °C	w/ CF: °C	Cooler 6:	°C	w/ CF:	°C

Chain of Custody:	Y/N/NA	Comments
Sample ID/Description:	Y	
Date and time of collection:	N	NO Time
Sampled by:	N	
Preservation type:	N	
Requested analyses:	Y	
Required signatures:	Y	
Internal COC required:	NA	

Sample Condition/Integrity:	Y/N/NA	Comments
Sample containers intact/present:	Y	
Sample labels are present and legible:	Y	
Sample ID on container/bag matches COC:	Y	
Correct sample containers used:	Y	
Samples received within holding times:	Y	
Sample volume sufficient for requested analyses:	Y	
Correct preservative used for requested analyses:	NA	

Anomalies/Non-conformances (attach additional pages if needed):

8K00318

EFGS Sample Receipt Checklist Revision 7; 9/15/2017

eurofins | Calscience

EFGS

8K00318

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY

DATE: 11/06/18

PAGE: 1 OF 1

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

LABORATORY CLIENT: EUROFINS CALSCIENCE

ADDRESS: 7440 LINCOLN WAY

CITY: GARDEN GROVE STATE: CA ZIP:

TEL: E-MAIL: CARLAHOLLOWELL@EUROFINSUS.COM

CLIENT PROJECT NAME / NUMBER: 18-09-1272 / India Basin

P.O. NO.:

PROJECT CONTACT: CARLA LEE HOLLOWELL

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

☐ COELT EDF GLOBAL ID: LOG CODE:

SPECIAL INSTRUCTIONS:

NTAT
Report in dry weight; Anchor Equis EDD required.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	EPA 1631	ECI SAMPLE NUMBER
	IB-03 0.0-2.0 091218	9/12/2018		SED	1	X			X	22
	IB-03 2.0-4.0 091218	9/12/2018		SED	1	X			X	23
	IB-03 4.0-6.0 091218	9/12/2018		SED	1	X			X	24
	IB-04 0.0-2.0 091318	9/13/2018		SED	1	X			X	41
	IB-04 2.0-4.0 091318	9/13/2018		SED	1	X			X	42
	IB-04 4.0-6.0 091318	9/13/2018		SED	1	X			X	43
	IB-09 0.0-2.0 091318	9/13/2018		SED	1	X			X	35
	IB-09 2.0-4.0 091318	9/13/2018		SED	1	X			X	36
	IB-09 4.0-6.0 091318	9/13/2018		SED	1	X			X	37

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
	Fedex # 773670355090	11/7/18	1043
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/02/14 Revision

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7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	03-Dec-18 14:39

IB-03 0.0-2.0 091218

8K00318-01

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**428**	-	43.5	ng/g dry	400	F811341	21-Nov-18	8K30006	29-Nov-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**45.7**	-	0.1	% by Weight	1	F811364	19-Nov-18		20-Nov-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	03-Dec-18 14:39

IB-03 2.0-4.0 091218

8K00318-02

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**854**	-	35.5	ng/g dry	400	F811341	21-Nov-18	8K30006	29-Nov-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**56.1**	-	0.1	% by Weight	1	F811364	19-Nov-18		20-Nov-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	03-Dec-18 14:39

IB-03 4.0-6.0 091218

8K00318-03

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**81.7**	-	30.9	ng/g dry	400	F811341	21-Nov-18	8K30006	29-Nov-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**63.5**	-	0.1	% by Weight	1	F811364	19-Nov-18		20-Nov-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	03-Dec-18 14:39

IB-04 0.0-2.0 091318

8K00318-04

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**598**	-	39.9	ng/g dry	400	F811341	21-Nov-18	8K30006	29-Nov-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**49.9**	-	0.1	% by Weight	1	F811364	19-Nov-18		20-Nov-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	03-Dec-18 14:39

IB-04 2.0-4.0 091318

8K00318-05

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**210**	-	38.1	ng/g dry	400	F811341	21-Nov-18	8K30006	29-Nov-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**51.4**	-	0.1	% by Weight	1	F811364	19-Nov-18		20-Nov-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	03-Dec-18 14:39

IB-04 4.0-6.0 091318

8K00318-06

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**66.2**	-	36.0	ng/g dry	400	F811341	21-Nov-18	8K30006	29-Nov-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**55.3**	-	0.1	% by Weight	1	F811364	19-Nov-18		20-Nov-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	03-Dec-18 14:39

IB-09 0.0-2.0 091318

8K00318-07

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**356**	-	43.9	ng/g dry	400	F811341	21-Nov-18	8K30006	29-Nov-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**44.1**	-	0.1	% by Weight	1	F811364	19-Nov-18		20-Nov-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	03-Dec-18 14:39

IB-09 2.0-4.0 091318

8K00318-08

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**1390**	-	42.2	ng/g dry	400	F811341	21-Nov-18	8K30006	29-Nov-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**46.8**	-	0.1	% by Weight	1	F811364	19-Nov-18		20-Nov-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	03-Dec-18 14:39

IB-09 4.0-6.0 091318

8K00318-09

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**1190**	-	42.8	ng/g dry	400	F811341	21-Nov-18	8K30006	29-Nov-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**46.7**	-	0.1	% by Weight	1	F811364	19-Nov-18		20-Nov-18	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	03-Dec-18 14:39

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F811341 - EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Blank (F811341-BLK1)					Prepared: 21-Nov-18 Analyzed: 29-Nov-18						
Mercury	ND	-	1.00	ng/g wet							U
Blank (F811341-BLK2)					Prepared: 21-Nov-18 Analyzed: 29-Nov-18						
Mercury	ND	-	1.00	ng/g wet							U
Blank (F811341-BLK3)					Prepared: 21-Nov-18 Analyzed: 29-Nov-18						
Mercury	ND	-	1.00	ng/g wet							U
Blank (F811341-BLK4)					Prepared: 21-Nov-18 Analyzed: 30-Nov-18						
Mercury	ND	-	1.00	ng/g wet							U
Blank (F811341-BLK5)					Prepared: 21-Nov-18 Analyzed: 30-Nov-18						
Mercury	ND	-	1.00	ng/g wet							U
Blank (F811341-BLK6)					Prepared: 21-Nov-18 Analyzed: 30-Nov-18						
Mercury	ND	-	1.00	ng/g wet							U
LCS (F811341-BS1)					Prepared: 21-Nov-18 Analyzed: 29-Nov-18						
Mercury	7.31	-	1.00	ng/g wet	8.0320		91.0	75-125			
LCS Dup (F811341-BSD1)					Prepared: 21-Nov-18 Analyzed: 29-Nov-18						
Mercury	7.53	-	1.00	ng/g wet	8.0320		93.8	75-125	3.02	24	
Duplicate (F811341-DUP1)		**Source: 8K00318-04**			Prepared: 21-Nov-18 Analyzed: 29-Nov-18						
Mercury	626.4	-	38.9	ng/g dry		597.7			4.70	24	
Matrix Spike (F811341-MS1)		**Source: 8K00318-04**			Prepared: 21-Nov-18 Analyzed: 29-Nov-18						
Mercury	1296	-	39.4	ng/g dry	788.51	597.7	88.6	71-125			

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7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	03-Dec-18 14:39

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F811341 - EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Matrix Spike (F811341-MS3)		**Source: 8K00430-01RE1**			Prepared: 21-Nov-18 Analyzed: 29-Nov-18						
Mercury	14910	-	494	ng/g wet	395.34	5189	2460	71-125			QM-02
Matrix Spike Dup (F811341-MSD1)		**Source: 8K00318-04**			Prepared: 21-Nov-18 Analyzed: 29-Nov-18						
Mercury	1466	-	39.9	ng/g dry	797.62	597.7	109	71-125	20.5	24	
Matrix Spike Dup (F811341-MSD3)		**Source: 8K00430-01RE1**			Prepared: 21-Nov-18 Analyzed: 29-Nov-18						
Mercury	12130	-	485	ng/g wet	387.90	5189	1790	71-125	31.5	24	QM-02, QR-08

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Eurofins Calscience, LLC	Project: Low Level Hg - 2018	
7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	03-Dec-18 14:39

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F811364 - EFGS SOP5133 Solids Analysis											
Duplicate (F811364-DUP1)		**Source: 8K00318-01**			Prepared: 19-Nov-18 Analyzed: 20-Nov-18						
% Solids	47.1	-	0.1	% by Weight		45.7			3.02	10	O-04, O-09
Duplicate (F811364-DUP2)		**Source: 8K00318-02**			Prepared: 19-Nov-18 Analyzed: 20-Nov-18						
% Solids	54.5	-	0.1	% by Weight		56.1			2.89	10	O-04, O-09

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7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	03-Dec-18 14:39

Notes and Definitions

U	Analyte was not detected and is reported as less than the LOD or as defined by the client. The LOD has been adjusted for any dilution or concentration of the sample.
QR-08	The RPD value for the MS/MSD was outside of acceptance limits. Batch QC acceptable based on matrix duplicate and/or LCS/LCSD RPD values within control limits.
QM-02	The MS and/or MSD recoveries outside acceptance limits, due to spike concentration less than 1 times the sample concentration. The batch was accepted based on LCS and LCSD recoveries within control limits and, when analysis permits, acceptable AS/ASD.
O-09	Total Solids are prepared at the same time as the preparation for the analyte(s) of interest in order to provide the most accurate dry mass correction.
O-04	This sample was analyzed outside of the recommended holding time.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the method detection limit if reported to the MDL or above the reporting limit if reported to the MRL.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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Supplemental Report

Additional analyses are reported as a stand-alone report.

WORK ORDER NUMBER: 18-09-1272

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Leidos

Client Project Name: Archive Samples: India Basin

Attention: Charlie Phillips
1000 Broadway
Suite 675
Oakland, CA 94607-4099

Approved for release on 12/20/2018 by:
Carla Hollowell
Project Manager

ResultLink

Email your PM

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Work Order Number: 18-09-1272

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Work Order Narrative

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 09/18/18. They were assigned to Work Order 18-09-1272.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

DoD Projects:

The test results contained in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ADE-1864.

The samples were analyzed or extracted outside the EPA Method recommended solid sample holding times for Total Solids and PCBs. However, the samples were frozen after collection (prior to holding time expiration) at -18°C, and remained frozen until the laboratory was ready to prepare the samples for analysis. Eurofins Calscience, Inc. follows SWAMP criteria and the Puget Sound Protocol (USEPA/PSWQAT, 1997, Table 2) for holding times in sediment samples, which states holding times may be extended up to six months to one year (two years for metals) if stored frozen at -18°C after collection. Therefore, the sample results have not been flagged as exceeding the EPA Method recommended holding time.

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Sample Summary

Client:	Leidos 1000 Broadway, Suite 675 Oakland, CA 94607-4099	Work Order:	18-09-1272
		Project Name:	Archive Samples: India Basin
		PO Number:	
		Date/Time Received:	09/18/18 11:00
		Number of Containers:	200
Attn:	Charlie Phillips		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
IB-10 0.0-2.0	18-09-1272-1	09/12/18 00:00	4	Sediment
IB-15 0.0-2.0	18-09-1272-31	09/13/18 00:00	4	Sediment
IB-14 0.0-2.0	18-09-1272-47	09/13/18 00:00	3	Sediment

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	SM 2540 B (M)
		Units:	%
Project: Archive Samples: India Basin			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-10 0.0-2.0	**18-09-1272-1-AA**	**09/12/18 00:00**	**Sediment**	**N/A**	**12/13/18**	**12/13/18 17:00**	**I1213TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	45.3	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-15 0.0-2.0	**18-09-1272-31-AA**	**09/13/18 00:00**	**Sediment**	**N/A**	**12/13/18**	**12/13/18 17:00**	**I1213TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	45.9	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-14 0.0-2.0	**18-09-1272-47-AA**	**09/13/18 00:00**	**Sediment**	**N/A**	**12/13/18**	**12/13/18 17:00**	**I1213TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	48.8	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-05-019-4360**	**N/A**	**Solid**	**N/A**	**12/13/18**	**12/13/18 17:00**	**I1213TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	ND	0.100	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: Archive Samples: India Basin			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-10 0.0-2.0	**18-09-1272-1-AA**	**09/12/18 00:00**	**Sediment**	**ICP/MS 05**	**12/06/18**	**12/07/18 11:50**	**181206L01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	40.4	1.10	0.727	5.00	

IB-15 0.0-2.0	**18-09-1272-31-AA**	**09/13/18 00:00**	**Sediment**	**ICP/MS 05**	**12/06/18**	**12/07/18 11:53**	**181206L01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	31.0	1.09	0.718	5.00	

IB-14 0.0-2.0	**18-09-1272-47-AA**	**09/13/18 00:00**	**Sediment**	**ICP/MS 05**	**12/06/18**	**12/07/18 12:07**	**181206L01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	55.5	1.02	0.675	5.00	

Method Blank	**099-15-254-696**	**N/A**	**Solid**	**ICP/MS 05**	**12/06/18**	**12/07/18 06:55**	**181206L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	ND	0.100	0.0659	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 1 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-10 0.0-2.0	**18-09-1272-1-AA**	**09/12/18 00:00**	**Sediment**	**GC/MS HHH**	**12/10/18**	**12/12/18 16:39**	**181210L07**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.41	0.88	0.17	1.00	J
PCB018	ND	0.44	0.14	1.00	
PCB028	0.69	0.44	0.15	1.00	
PCB031	0.55	0.44	0.11	1.00	
PCB033	ND	0.44	0.084	1.00	
PCB044	1.0	0.44	0.34	1.00	
PCB049	0.86	0.44	0.11	1.00	
PCB052	1.4	0.44	0.42	1.00	
PCB056	ND	0.44	0.17	1.00	
PCB060	ND	0.44	0.12	1.00	
PCB066	1.1	0.44	0.27	1.00	
PCB070	1.1	0.44	0.16	1.00	
PCB074	0.64	0.44	0.20	1.00	
PCB087	1.0	0.44	0.25	1.00	
PCB095	2.9	0.44	0.24	1.00	
PCB097	1.3	0.44	0.10	1.00	
PCB099	1.8	0.44	0.10	1.00	
PCB101	4.2	0.44	0.098	1.00	
PCB105	1.8	0.44	0.12	1.00	
PCB110	2.6	0.44	0.075	1.00	
PCB118	2.7	0.44	0.076	1.00	
PCB128	0.90	0.44	0.26	1.00	
PCB132/153	12	0.88	0.36	1.00	
PCB138/158	8.3	0.88	0.78	1.00	
PCB141	1.9	0.44	0.11	1.00	
PCB149	7.3	0.44	0.26	1.00	
PCB151	2.6	0.44	0.19	1.00	
PCB156	0.75	0.44	0.17	1.00	
PCB170	4.2	0.44	0.25	1.00	
PCB174	3.3	0.44	0.093	1.00	
PCB177	2.1	0.44	0.26	1.00	
PCB180	9.1	0.44	0.20	1.00	
PCB183	2.4	0.44	0.21	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 2 of 8

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	5.1	0.44	0.23	1.00	
PCB194	2.0	0.44	0.16	1.00	
PCB195	1.0	0.44	0.13	1.00	
PCB201	ND	0.44	0.075	1.00	
PCB203	2.2	0.44	0.13	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	87	14-146	
p-Terphenyl-d14	119	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 3 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-15 0.0-2.0	**18-09-1272-31-AA**	**09/13/18 00:00**	**Sediment**	**GC/MS HHH**	**12/10/18**	**12/12/18 17:02**	**181210L07**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.87	0.17	1.00	
PCB018	ND	0.43	0.14	1.00	
PCB028	0.41	0.43	0.15	1.00	J
PCB031	ND	0.43	0.11	1.00	
PCB033	ND	0.43	0.083	1.00	
PCB044	ND	0.43	0.33	1.00	
PCB049	0.73	0.43	0.11	1.00	
PCB052	0.92	0.43	0.41	1.00	
PCB056	ND	0.43	0.16	1.00	
PCB060	ND	0.43	0.11	1.00	
PCB066	0.78	0.43	0.27	1.00	
PCB070	0.83	0.43	0.16	1.00	
PCB074	0.50	0.43	0.20	1.00	
PCB087	ND	0.43	0.24	1.00	
PCB095	1.6	0.43	0.23	1.00	
PCB097	ND	0.43	0.10	1.00	
PCB099	1.4	0.43	0.10	1.00	
PCB101	2.1	0.43	0.096	1.00	
PCB105	0.97	0.43	0.12	1.00	
PCB110	1.7	0.43	0.073	1.00	
PCB118	1.9	0.43	0.075	1.00	
PCB128	ND	0.43	0.26	1.00	
PCB132/153	6.1	0.87	0.35	1.00	
PCB138/158	4.4	0.87	0.76	1.00	
PCB141	0.69	0.43	0.11	1.00	
PCB149	3.4	0.43	0.26	1.00	
PCB151	1.3	0.43	0.19	1.00	
PCB156	ND	0.43	0.17	1.00	
PCB170	1.9	0.43	0.24	1.00	
PCB174	1.4	0.43	0.091	1.00	
PCB177	1.2	0.43	0.25	1.00	
PCB180	4.3	0.43	0.20	1.00	
PCB183	1.0	0.43	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 4 of 8

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	2.6	0.43	0.22	1.00	
PCB194	1.1	0.43	0.16	1.00	
PCB195	ND	0.43	0.13	1.00	
PCB201	ND	0.43	0.074	1.00	
PCB203	1.1	0.43	0.13	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	89	14-146	
p-Terphenyl-d14	118	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 5 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-14 0.0-2.0	**18-09-1272-47-AA**	**09/13/18 00:00**	**Sediment**	**GC/MS HHH**	**12/10/18**	**12/12/18 17:26**	**181210L07**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.59	0.80	0.15	1.00	J
PCB018	0.83	0.40	0.13	1.00	
PCB028	1.2	0.40	0.14	1.00	
PCB031	ND	0.40	0.10	1.00	
PCB033	1.2	0.40	0.076	1.00	
PCB044	1.8	0.40	0.30	1.00	
PCB049	1.5	0.40	0.099	1.00	
PCB052	2.0	0.40	0.38	1.00	
PCB056	0.72	0.40	0.15	1.00	
PCB060	ND	0.40	0.10	1.00	
PCB066	2.4	0.40	0.25	1.00	
PCB070	2.1	0.40	0.14	1.00	
PCB074	1.1	0.40	0.18	1.00	
PCB087	1.9	0.40	0.22	1.00	
PCB095	5.0	0.40	0.21	1.00	
PCB097	2.1	0.40	0.092	1.00	
PCB099	3.6	0.40	0.095	1.00	
PCB101	7.4	0.40	0.089	1.00	
PCB105	2.7	0.40	0.11	1.00	
PCB110	5.5	0.40	0.068	1.00	
PCB118	5.2	0.40	0.069	1.00	
PCB128	1.4	0.40	0.24	1.00	
PCB132/153	20	0.80	0.32	1.00	
PCB138/158	15	0.80	0.70	1.00	
PCB141	2.7	0.40	0.098	1.00	
PCB149	13	0.40	0.24	1.00	
PCB151	4.1	0.40	0.17	1.00	
PCB156	1.3	0.40	0.15	1.00	
PCB170	6.7	0.40	0.22	1.00	
PCB174	5.8	0.40	0.084	1.00	
PCB177	4.2	0.40	0.23	1.00	
PCB180	16	0.40	0.18	1.00	
PCB183	4.0	0.40	0.19	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 6 of 8

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	8.5	0.40	0.20	1.00	
PCB194	3.3	0.40	0.15	1.00	
PCB195	1.6	0.40	0.12	1.00	
PCB201	0.70	0.40	0.068	1.00	
PCB203	3.8	0.40	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	83	14-146	
p-Terphenyl-d14	125	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 7 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-418-346**	**N/A**	**Solid**	**GC/MS HHH**	**12/10/18**	**12/12/18 13:31**	**181210L07**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.40	0.077	1.00	
PCB018	ND	0.20	0.065	1.00	
PCB028	ND	0.20	0.069	1.00	
PCB031	ND	0.20	0.051	1.00	
PCB033	ND	0.20	0.038	1.00	
PCB044	ND	0.20	0.15	1.00	
PCB049	ND	0.20	0.050	1.00	
PCB052	ND	0.20	0.19	1.00	
PCB056	ND	0.20	0.076	1.00	
PCB060	ND	0.20	0.052	1.00	
PCB066	ND	0.20	0.12	1.00	
PCB070	ND	0.20	0.072	1.00	
PCB074	ND	0.20	0.090	1.00	
PCB087	ND	0.20	0.11	1.00	
PCB095	ND	0.20	0.11	1.00	
PCB097	ND	0.20	0.046	1.00	
PCB099	ND	0.20	0.047	1.00	
PCB101	ND	0.20	0.044	1.00	
PCB105	ND	0.20	0.053	1.00	
PCB110	ND	0.20	0.034	1.00	
PCB118	ND	0.20	0.035	1.00	
PCB128	ND	0.20	0.12	1.00	
PCB132/153	ND	0.40	0.16	1.00	
PCB138/158	ND	0.40	0.35	1.00	
PCB141	ND	0.20	0.049	1.00	
PCB149	ND	0.20	0.12	1.00	
PCB151	ND	0.20	0.088	1.00	
PCB156	ND	0.20	0.077	1.00	
PCB170	ND	0.20	0.11	1.00	
PCB174	ND	0.20	0.042	1.00	
PCB177	ND	0.20	0.12	1.00	
PCB180	ND	0.20	0.092	1.00	
PCB183	ND	0.20	0.093	1.00	
PCB187	ND	0.20	0.10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: Archive Samples: India Basin			Page 8 of 8

Parameter	Result	RL	MDL	DF	Qualifiers
PCB194	ND	0.20	0.074	1.00	
PCB195	ND	0.20	0.060	1.00	
PCB201	ND	0.20	0.034	1.00	
PCB203	ND	0.20	0.058	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	89	14-146	
p-Terphenyl-d14	115	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
Project: Archive Samples: India Basin			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-10 0.0-2.0	**Sample**	**Sediment**	**ICP/MS 05**	**12/06/18**	**12/07/18 11:50**	**181206S01**
IB-10 0.0-2.0	**Matrix Spike**	**Sediment**	**ICP/MS 05**	**12/06/18**	**12/07/18 11:36**	**181206S01**
IB-10 0.0-2.0	**Matrix Spike Duplicate**	**Sediment**	**ICP/MS 05**	**12/06/18**	**12/07/18 11:39**	**181206S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Lead	18.31	25.00	49.24	124	47.63	117	80-120	3	0-20	3

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
Project: Archive Samples: India Basin			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-14 0.0-2.0	**Sample**	**Sediment**	**GC/MS HHH**	**12/10/18**	**12/12/18 17:26**	**181210S07**
IB-14 0.0-2.0	**Matrix Spike**	**Sediment**	**GC/MS HHH**	**12/10/18**	**12/12/18 15:53**	**181210S07**
IB-14 0.0-2.0	**Matrix Spike Duplicate**	**Sediment**	**GC/MS HHH**	**12/10/18**	**12/12/18 16:16**	**181210S07**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	0.4058	50.00	52.45	104	48.04	95	50-150	9	0-25	
PCB028	0.5881	50.00	64.08	127	57.85	115	50-150	10	0-25	
PCB044	0.8957	50.00	59.83	118	54.09	106	50-150	10	0-25	
PCB052	0.9812	50.00	60.12	118	55.11	108	50-150	9	0-25	
PCB066	1.193	50.00	73.86	145	65.99	130	50-150	11	0-25	
PCB101	3.629	50.00	70.00	133	61.53	116	50-150	13	0-25	
PCB105	1.313	50.00	72.09	142	63.52	124	50-150	13	0-25	
PCB118	2.527	50.00	72.92	141	65.23	125	50-150	11	0-25	
PCB128	0.7010	50.00	76.97	153	65.86	130	50-150	16	0-25	3
PCB170	3.294	50.00	69.85	133	64.33	122	50-150	8	0-25	
PCB180	7.598	50.00	87.65	160	78.61	142	50-150	11	0-25	3
PCB187	4.130	50.00	80.65	153	71.82	135	50-150	12	0-25	3
PCB195	0.7930	50.00	72.35	143	66.02	130	50-150	9	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

Quality Control - PDS

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
Project: Archive Samples: India Basin			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
IB-10 0.0-2.0	**Sample**	**Sediment**	**ICP/MS 05**	**12/06/18 00:00**	**12/07/18 11:50**	**181206S01**
IB-10 0.0-2.0	**PDS**	**Sediment**	**ICP/MS 05**	**12/06/18 00:00**	**12/07/18 11:43**	**181206S01**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Lead	18.31	25.00	47.06	115	75-125	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	N/A
		Method:	SM 2540 B (M)
Project: Archive Samples: India Basin			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
IB-10 0.0-2.0	**Sample**	**Sediment**	**N/A**	**12/13/18 00:00**	**12/13/18 17:00**	**I1213TSD1**
IB-10 0.0-2.0	**Sample Duplicate**	**Sediment**	**N/A**	**12/13/18 00:00**	**12/13/18 17:00**	**I1213TSD1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Solids, Total	45.30	45.30	0	0-10	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3050B
		Method:	EPA 6020
Project: Archive Samples: India Basin			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-254-696	**LCS**	**Solid**	**ICP/MS 05**	**12/06/18**	**12/07/18 06:58**	**181206L01**
099-15-254-696	**LCSD**	**Solid**	**ICP/MS 05**	**12/06/18**	**12/07/18 07:02**	**181206L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Lead	25.00	25.65	103	25.85	103	80-120	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Leidos		Date Received:	09/18/18
1000 Broadway, Suite 675		Work Order:	18-09-1272
Oakland, CA 94607-4099		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
Project: Archive Samples: India Basin			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-418-346	**LCS**	**Solid**	**GC/MS HHH**	**12/10/18**	**12/14/18 10:55**	**181210L07**
099-16-418-346	**LCSD**	**Solid**	**GC/MS HHH**	**12/10/18**	**12/14/18 11:19**	**181210L07**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
PCB018	50.00	42.69	85	42.28	85	24-132	6-150	1	0-28	
PCB028	50.00	48.19	96	47.13	94	31-133	14-150	2	0-26	
PCB044	50.00	46.91	94	46.87	94	36-120	22-134	0	0-28	
PCB052	50.00	44.17	88	44.03	88	31-121	16-136	0	0-27	
PCB066	50.00	58.91	118	57.88	116	43-139	27-155	2	0-25	
PCB101	50.00	51.60	103	50.59	101	37-121	23-135	2	0-27	
PCB105	50.00	55.76	112	54.04	108	48-132	34-146	3	0-26	
PCB118	50.00	54.44	109	52.73	105	46-136	31-151	3	0-25	
PCB128	50.00	55.49	111	54.13	108	40-130	25-145	2	0-26	
PCB170	50.00	50.26	101	49.77	100	40-124	26-138	1	0-29	
PCB180	50.00	59.43	119	58.79	118	41-143	24-160	1	0-26	
PCB187	50.00	56.99	114	55.44	111	39-129	24-144	3	0-26	
PCB195	50.00	54.75	110	53.69	107	44-128	30-142	2	0-28	

Total number of LCS compounds: 13
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

Glossary of Terms and Qualifiers

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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CHAIN-OF-CUSTODY RECORD

DATE: 9/14/18
PAGE: 1 OF 10

WO NO. / LAB USE ONLY: 18-09-1272

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Charlie Phillips/PM STATE: ZIP:
TEL: 1-760-535-6182 E-MAIL:

CLIENT PROJECT NAME / NO.:
P.O. NO.:
PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All samples are for archive only.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

archive

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO	☐ TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Chemistry - see SAP Comp	GS	D/F
1	IB-10 0.0-2.0	9/12/18		Sed.	1																		X	X	X
2	2.0-4.0	↓		↓	↓																		X	X	X
3	4.0-6.0																						↓	↓	↓
4	6.0-6.5																							[redacted]	
5	IB-15 0.0-2.0																						X	X	X
6	2.0-4.0																						↓	↓	↓
7	4.0-6.0																								
8	6.0-6.5																							—	—

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Tom O'Malley EC	9/14/18	1515
Relinquished by: (Signature) Tom O'Malley TO 650 9/12/18 1730	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation) [signature]	Date: 9/18/18	Time: 1100

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DATE: 9/14/18
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WO NO. / LAB USE ONLY: 1272

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CITY: Charlie Phillips / PM STATE: ZIP:
TEL: 1-760-535-6187 E-MAIL:

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PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All samples - archive only.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO	☐ TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	archive: Chemistry see SAP/QAPP	GS	D/F
9	IB-05 0.0-2.0	9/12/18		Sed.	1																		X	X	X
10	2.0-4.0																								
11	4.0-6.0																								
12	6.0-6.5																							—	—
13	IB-02 0.0-2.0																						X	X	X
14	2.0-4.0																								
15	4.0-6.0																								
16	6.0-6.5																							—	—

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
V. Full	Tom O'Malley ECI	9/14/18	1515
Tom O'Malley TO GSO 9/17/18 1230			
	[signature]	9/18/18	1180

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TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All samples archive only
IB-01 2.0-4.0-100 is a dup

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO	TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	archive Chem. see SAP/QAPP	GS	O/F
13	17	IB-02 0.0-2.0	9/12/18		Sed	1																		X	X	X
14	18	2.0-4.0	↓		↓	↓																		↓	↓	↓
15	19	4.0-6.0																							↓	↓
16	20	6.0-6.5																							—	—
17	21	IB-01 0.0-2.0																								
18	22	2.0-4.0																								
19	23	4.0-6.0																							↓	↓
20	24	6.0-6.5																							—	—
21	~~25~~	~~IB-01 2.0-4.0-100~~																							—	—
	~~26~~	~~[illegible]~~ VF				VF																				

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[signature]	Tom O'Malley (EC)	9/14/18	1515
Relinquished by: (Signature) Tom O'Malley TO GSO 9/17/18 1730	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation) [signature]	Date: 9/18/18	Time: 1100

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TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All samples archive only.
-100 ⇒ dup. chem only.

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO	TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Chem. see SAP/QAPP archive			
22	25	IB-03 1.0-2.0	9/12/18		Sed	1																		X	X	X	
23	26	2.0-4.0	↓		↓	↓																		↓	↓	↓	
24	27	4.0-6.0																							↓	↓	
25	28	6.0-6.5	↓		↓	↓																		↓	—	—	
26	29	IB-03 2.0-4.0 -100	↓		↓	↓																		↓	—	—	
27	30	IB-18 0.0-2.0																									
28	31	2.0-4.0																							↓	↓	
29	32	4.0-6.0																									
30	33	6.0-6.5	↓		↓	↓																		↓	—	—	
		9/18/18																									

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V. Finll	Tom O'Malley ECI	9/14/18	1515
Tom O'Malley to GSO 9/17/18 1730			
		9/18/18	1100

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LAB CONTACT OR QUOTE NO.:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All are archive only.
-100 => dups chem. only

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO	TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	archive: Chem. - See SAP/QAPP	GS	D/F
31	34	IB-15 0.0-2.0	9/13/18		Sed	1																				
32	35	2.0-4.0																								
33	36	4.0-6.0																								
34	37	6.0-6.5																							—	—
35	38	IB-09 0.0-2.0																								
36	39	2.0-4.0																								
37	40	4.0-6.0																								
38	41	6.0-6.5																							—	—
39	42	IB-09 0.0-2.0 -100																							—	—
40	43	2.0-4.0 -100																							—	—

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
J. Frank	Tom O'Malley ECI	9/14/18	1515
Tom O'Malley TO650 9/17/18 1230			
		9/18/18	1100

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CHAIN-OF-CUSTODY RECORD

DATE: 9/14/18
PAGE: 6 OF 10

WO NO. / LAB USE ONLY: 1272

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: Charlie Phillips STATE: ZIP:
TEL: 1-760-535-6187 E-MAIL:

CLIENT PROJECT NAME / NO.:
P.O. NO.:
PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID:
LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All samples archive only.
-100 ⇒ dup (chem)

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO	TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ___	BTEX / MTBE ☐ 8260 ☐ ___	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	archive		
																								see SAP/QAPP		
41	44	IB-04 0.0-2.0	9/13/18		Sed	1																		X	X	X
42	45	2.0-4.0																								
43	46	4.0-6.0																								
44	47	6.0-6.5																							—	—
45	48	IB-04 0.0-2.0-100																							—	—
46	49	4.0-6.0-100																							—	—
47	50	IB-14 0.0-2.0																								
48	51	2.0-4.0																								
49	52	4.0-6.0																								
50	53	6.0-6.5																							—	—

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
V. Phill	Tom O'Malley ECI	9/14/18	1515
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Tom O'Malley TO GSO 9/12/18 1730			
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
		9/18/18	1100

2015-05-13 Revision

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CHAIN-OF-CUSTODY RECORD

DATE: 9/14/18
PAGE: 7 OF 10

WO NO. / LAB USE ONLY: 1272

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: STATE: ZIP:
TEL: E-MAIL:

CLIENT PROJECT NAME / NO.:
P.O. NO.:
PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID: LOG CODE: SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All archive.
-100 dup chem only.

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO	TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ___	BTEX / MTBE ☐ 8260 ☐ ___	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	archive: Chem-SAP	GS	D/F
51	E4	IB-14 0.0-2.0-100	9/13/18		Sed	1																		—	—	—
52	E5	2.0-4.0-100	↓		↓	↓																		↓	—	—
53	E6	IB-19 0.0-2.0																							↓	↓
54	E7	2.0-4.0																								
55	E8	4.0-6.0																							↓	↓
56	E9	6.0-6.5	↓		↓	↓																		↓	—	—
57	E0	IB-21 0.0-2.0																							↓	↓
58	E1	2.0-4.0																								
59	E2	4.0-6.0																							↓	↓
60	E3	6.0-6.5	↓		↓	↓																		↓	—	—

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
V. Frank	Tom Malley ECI	9/14/18	1515
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Tom O'Malley TO GSO 9/17/18 1730			
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
		9/18/18	1100

2015-05-13 Revision

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WO NO. / LAB USE ONLY: 1272

CHAIN-OF-CUSTODY RECORD

DATE: 9/14/18
PAGE: 8 OF 10

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: STATE: ZIP:
TEL: E-MAIL:

CLIENT PROJECT NAME / NO.:
P.O. NO.:
PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID: LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All archives.
IB-22 has (2) containers for chemistry.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO	☐ TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	chemistry - see SAP/DAQP archive	GS	P/F
61	64	IB-22 0.0-2.0	9/14/18		Sed	1																		X	X	X
62	65	2.0-4.0	↓		↓	↓																		↓	↓	↓
63	66	4.0-6.0	↓		↓	↓																		↓	↓	↓
64	67	6.0-6.5	↓		↓	↓																		↓	—	—
65	68	IB-20 0.0-2.0	↓		↓	↓																		↓	↓	↓
66	69	2.0-4.0	↓		↓	↓																		↓	↓	↓
67	70	4.0-6.0	↓		↓	↓																		↓	↓	↓
68	71	6.0-6.5	↓		↓	↓																		↓	—	—
	C 9/18/18																									

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
V. Fraile	Tom O'Malley EC1	9/14/18	1515
Tom O'Malley TO GSO 9/17/18 1730			
	[signature]	9/18/18	1100

2015-05-13 Revision

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CHAIN-OF-CUSTODY RECORD

DATE: 9/14/18
PAGE: 9 OF 10

WO NO. / LAB USE ONLY: 1272

LABORATORY CLIENT: Leidos
ADDRESS:
CITY: STATE: ZIP:
TEL: E-MAIL:

CLIENT PROJECT NAME / NO.:
P.O. NO.:
PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID: LOG CODE: SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All archive
-100 ⇒ dup.

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO	TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ___	BTEX / MTBE ☐ 8260 ☐ ___	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	D/H ARCHIVE			
69	F2	JB-OUT1 0.0-2.0	9/13/18		Soil	1																		X			
70	F3	" -100																									
71	F4	2.0-4.0																									
72	F5	" -100																									
73	F6	4.0-6.0																									
74	F7	" -100																									
	72																										
	0																										
	9/18/18																										

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
V. Frull	Ton O'Malley ECI	9/14/18	1515
Ton O'Malley to GSO 9/17/18 1730			
		9/18/18	1100

2015-05-13 Revision

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CHAIN-OF-CUSTODY RECORD

DATE: 9/14/18
PAGE: 10 OF 10

WO NO. / LAB USE ONLY: 1272

LABORATORY CLIENT: LeidOS
ADDRESS:
CITY: STATE: ZIP:
TEL: E-MAIL:

CLIENT PROJECT NAME / NO.:
P.O. NO.:
PROJECT CONTACT:
LAB CONTACT OR QUOTE NO.:
GLOBAL ID: LOG CODE:
SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
All archives.
-100 ⇒ dup.

REQUESTED ANALYSES
Please check box or fill in blank as needed.

	LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO	☐ TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	D/F archive			
75	78	IB-OUT2 0.0-2.0	9/13/18		Sed	1																					
76	79	" -100																									
77	80	2.0-4.0																									
78	81	-100																									
79	82	4.0-6.0																									
80	83	" -100																									
		(VF) =																									

C 9/14/18

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
J. Frank	Tom O'Malley EQ	9/14/18	1515
Tom O'Malley to GSO 9/17/18 1730			
		9/18/18	1100

2015-05-13 Revision

9/17/2018

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www.gso.com

1272

Ship From
CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Tracking #: 542081671

NPS

9/17/2018

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CONCORD, CA 94520

Tracking #: 542081672

NPS

9/17/2018

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Tracking #: 542081673

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9/17/2018

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ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Tracking #: 542081674

NPS

9/17/2018

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CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Tracking #: 542081675

NPS

Ship To
CEL
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

ORC

GARDEN GROVE

C

COD: $0.00

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WORK ORDER NUMBER: 18-09-1272

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 5

CLIENT: Leidos

DATE: 09/18/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 4.1 °C (w/ CF): 3.6 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: VJGP

CUSTODY SEAL:

Cooler	☑ Present and Intact	☐ Present but Not Intact	☐ Not Present	☐ N/A	Checked by: VJGP
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: UNLC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☐ Sampling date ☑ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna$_2$ ☐ 100PJ ☐ 100PJna$_2$ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PBn (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGBna$_2$ ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PBna (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☑ 4ozCGJ (2) ☐ 8ozCGJ ☑ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☑ Z ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: UNLC

Reviewed by: UFS

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WORK ORDER NUMBER: 18-09-1272

SAMPLE RECEIPT CHECKLIST

COOLER 2 OF 5

CLIENT: Leidos

DATE: 09/18/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 3.7 °C (w/ CF): 3.2 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: VJGP

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: VJGP

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: UNLC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☐ Sampling date ☑ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOA**na₂** ☐ 100PJ ☐ 100PJ**na₂** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB ☐ 125PB**znna** (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGB**s** (pH__2) ☐ 250PB ☐ 250PB**n** (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s** (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGB**na₂** ☐ 1AGB**s** (pH__2) ☐ 1AGB**s** (O&G) ☐ 1PB ☐ 1PB**na** (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☑ 4ozCGJ (2) ☐ 8ozCGJ ☑ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☑ 2 ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na₂** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: UNLC

Reviewed by: YFO

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WORK ORDER NUMBER: 18-09- 1272

SAMPLE RECEIPT CHECKLIST

COOLER 3 OF 5

CLIENT: Leidos

DATE: 09 / 18 / 2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 4.1 °C (w/ CF): 3.6 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: UJGP

CUSTODY SEAL:

Cooler	☑ Present and Intact	☐ Present but Not Intact	☐ Not Present	☐ N/A	Checked by: UJGP
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: UNLC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☐ Sampling date ☑ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna$_2$ ☐ 100PJ ☐ 100PJna$_2$ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PBn (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGBna$_2$ ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PBna (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☑ 4ozCGJ ☐ 8ozCGJ ☑ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☑ Z ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: UNLC

Reviewed by: UFSO

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WORK ORDER NUMBER: 18-09-1272

SAMPLE RECEIPT CHECKLIST

COOLER 4 OF 5

CLIENT: Leidos

DATE: 09/18/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 4.3 °C (w/ CF): 3.8 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: UJGP

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: UJGP

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: UNLC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☐ Sampling date ☑ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna_2 ☐ 100PJ ☐ 100PJna_2 ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PBn (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGBna_2 ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PBna (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☑ 4ozCGJ (2) ☑ 8ozCGJ (2) ☐ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☑ Z ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na₂** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: UNLC

Reviewed by: UFSO

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WORK ORDER NUMBER: 18-09- 1272

SAMPLE RECEIPT CHECKLIST

COOLER 5 OF 5

CLIENT: Leidos

DATE: 09/18/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 3.4 °C (w/ CF): 2.9 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: VJGP

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: VJGP

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: VNLC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☐ Sampling date ☑ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☐	☑	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na₂** ☐ 100PJ ☐ 100PJ**na₂** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB ☐ 125PB**znna** (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGB**s** (pH__2) ☐ 250PB ☐ 250PB**n** (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s** (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGB**na₂** ☐ 1AGB**s** (pH__2) ☐ 1AGB**s** (O&G) ☐ 1PB ☐ 1PB**na** (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☑ 4ozCGJ ☐ 8ozCGJ ☑ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☑ 2 ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na₂** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: VNLC

Reviewed by: YFD

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WORK ORDER NUMBER: 18-09-1272

SAMPLE ANOMALY REPORT

DATE: 09 / 18 / 2018

SAMPLES, CONTAINERS, AND LABELS:

Comments

- ☑ Sample(s) NOT RECEIVED but listed on COC — (-5), (-6), (-7), (-8), (-26) Not received.
- ☐ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ pH outside acceptable range (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☑ Client sample label(s) do not match COC (comment)
  - ☐ Project information
  - ☐ Client sample ID
  - ☑ Sampling date and/or time — No collection time for all samples per COC and labels.
  - ☑ Number of container(s)
  - ☐ Requested analysis — ④ 16oz Jar, 2x4oz Jar, Z: 1,2,3,9,10,11,13,14,15, 17,18,19,23,24,28,29,31,32,33,37,41,42,43,48 49,53,54,55,57,58,59,65,66,67
- ☐ Sample container(s) compromised (comment)
  - ☐ Broken — ① 16oz Jar: 4,12,16,20,25,30,34,38,39,40,44 45,46,50,51,52,56,60,68
  - ☐ Water present in sample container — ② 16oz Jar, Z: 21,27
- ☐ Air sample container(s) compromised (comment)
  - ☐ Flat — ③ 16oz Jar, 4oz Jar, Z: 22,35,36,47
  - ☐ Very low in volume — ⑤ 2x8oz Jar, 2x4oz Jar, Z: 61,62,63
  - ☐ Leaking (not transferred; duplicate bag submitted) — ② 2x8oz Jar: 64
  - ☐ Leaking (transferred into ECI Tedlar™ bags*) — ① 4oz Jar: 69,70,71,72,73,74,75,76,77,78,79,80
  - ☐ Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

MISCELLANEOUS: (Describe)

Comments

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis

Comments:

Reported by: UNLC

Reviewed by: LFSO

** Record the total number of containers (i.e., vials or bottles) for the affected sample.

2017-08-29 Revision

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Carla Hollowell

From: Phillips, Charles R. <CHARLES.R.PHILLIPS@leidos.com>
Sent: Monday, November 05, 2018 1:48 PM
To: Carla Hollowell
Cc: Frank, Vicky
Subject: Request for Analyses of Archived India Basin Sediment Samples
Attachments: Leidos_COC for Analysis of India Basin Archive Samples_PCBs, Hg, Pb and TS_11_5_18.xlsx

EXTERNAL EMAIL*

Carla;

We are requesting analyses of 9 sediment samples from India Basin that were submitted in September and archived at Eurofins; analyses are for PCBs, mercury, lead, and solids, as indicated on the attached COC.

Station ID	Depth Interval (feet)	Analysis
IB-03	0-2	Total solids, mercury, lead, and PCBs
	2-4	Total solids, mercury, lead, and PCBs
	4-6	Total solids, mercury, lead, and PCBs
IB-04	0-2	Total solids, mercury, lead, and PCBs
	2-4	Total solids, mercury, lead, and PCBs
	4-6	Total solids, mercury, lead, and PCBs
IB-09	0-2	Total solids, mercury, lead, and PCBs
	2-4	Total solids, mercury, lead, and PCBs
	4-6	Total solids, mercury, lead, and PCBs

Please let me know if you have any questions about this request.

Thanks, Charlie

Charles Phillips | Leidos
phone: 760.728.3378; mobile: 760.535.6182
charles.r.phillips@leidos.com

www.leidos.com

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CHAIN OF CUSTODY RECORD

DATE: 11/05/18

PAGE: 1 OF 1

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

LABORATORY CLIENT: Leidos, Inc.

ADDRESS:

CITY: STATE: ZIP:

TEL: E-MAIL: charles.r.phillips@leidos.com

CLIENT PROJECT NAME / NUMBER: CCSF RPD India Basin

P.O. NO.:

PROJECT CONTACT: Charlie Phillips office 760.728.3378; cell 760-535-6182

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

☐ COELT EDF

GLOBAL ID:

LOG CODE:

SPECIAL INSTRUCTIONS:

9 archived (at Eurofins) sediment samples; please analyze for PCBs (RMP 40 congeners), mercury, lead, and solids.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO	☐ TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH ____	BTEX / MTBE ☐ 8260 ☐ ____	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs, RMP 40 congeners (EPA 8270C	PAHs 8270 C SIM (RMP 25)	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Solids SM2540 B	Mercury (EPA 1631E)	Lead (EPA 6020)	
	IB-03 0.0-2.0 091218	9/12/2018		Sediment	1														1				1	1	1	
	IB-03 2.0-4.0 091218	9/12/2018		Sediment	1														1				1	1	1	
	IB-03 4.0-6.0 091218	9/12/2018		Sediment	1														1				1	1	1	
	IB-04 0.0-2.0 091318	9/13/2018		Sediment	1														1				1	1	1	
	IB-04 2.0-4.0 091318	9/13/2018		Sediment	1														1				1	1	1	
	IB-04 4.0-6.0 091318	9/13/2018		Sediment	1														1				1	1	1	
	IB-09 0.0-2.0 091318	9/13/2018		Sediment	1														1				1	1	1	
	IB-09 2.0-4.0 091318	9/13/2018		Sediment	1														1				1	1	1	
	IB-09 4.0-6.0 091318	9/13/2018		Sediment	1														1				1	1	1	

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

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Subcontractor Analysis Report

One or more samples in this work order have tests that were subcontracted. The subcontract report(s) follows.

For subcontracted tests, please reference the laboratory information noted below.

1. Eurofins Frontier Global Sciences - Bothell,WA CA ELAP 2954
   Mercury - EPA 1631

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eurofins | Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

20 December 2018

Carla Lee Hollowell
Eurofins Calscience, LLC
7440 Lincoln Way
Garden Grove, CA 92841

RE: Low Level Hg - 2018

Enclosed are the analytical results for samples received by Eurofins Frontier Global Sciences. All quality control measurements are within established control limits and there were no analytical difficulties encountered with the exception of those listed in the case narrative section of this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Amy Goodall

Amy Goodall
Project Manager

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eurofins | Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Eurofins Calscience, LLC	Project: Low Level Hg - 2018	
7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	20-Dec-18 14:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
IB-10 0.0-2.0	8L00232-01	Soil/Sediment	12-Sep-18 00:00	07-Dec-18 09:35
IB-15 0.0-2.0	8L00232-02	Soil/Sediment	13-Sep-18 00:00	07-Dec-18 09:35
IB-14 0.0-2.0	8L00232-03	Soil/Sediment	13-Sep-18 00:00	07-Dec-18 09:35

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Eurofins Frontier Global Sciences, LLC

The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amy Goodall

Amy Goodall, Project Manager

eurofins | Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Eurofins Calscience, LLC	Project: Low Level Hg - 2018	
7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	20-Dec-18 14:21

SAMPLE RECEIPT

Samples were received at Eurofins Frontier Global Sciences (EFGS) on 07-Dec-18 09:35. The samples were received intact, on-ice within a sealed cooler at

Cooler	Temp C°
Default Cooler	1.3

SAMPLE PREPARATION AND ANALYSIS

Total solids analysis was performed in accordance with method SM2540B. Total solids are prepared at the same time as the preparation for the analyte(s) of interest in order to provide the most accurate dry mass correction which may be outside of the method recommended holding time of 7 days from sample collection.

Total mercury preparation and analysis was performed by flow injection atomic fluorescence spectrometry (FI-AFS) in accordance with EPA 1631B.

ANALYTICAL AND QUALITY CONTROL ISSUES

Method blanks were prepared for every preparation to assess possible blank contribution from the sample preparation procedure. The method blanks were carried through the entire analytical procedure. All blanks fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

Liquid spikes, certified reference material (CRM) or a quality control samples (QCS) were prepared for every preparation as a measure of accuracy. All liquid spikes, CRMs and/or QCS samples fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

As an additional measure of the accuracy of the methods used and to check for matrix interference, matrix spikes (MS) and matrix spike duplicates (MSD) were digested and analyzed. All of the matrix spike recoveries fell within the established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

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11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Eurofins Calscience, LLC	Project: Low Level Hg - 2018	
7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	20-Dec-18 14:21

A reasonable measure of the precision of the analytical methods is the relative percent difference (RPD) between a matrix spike recovery and a matrix spike duplicate recovery and between laboratory control sample recovery and laboratory control sample duplicate recoveries. All of the relative percent differences fell within established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

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Sample Receipt Checklist

Client: CalScience

Date & Time Received: 12/7/18 9:35

Date Labeled: 12/7/18 Labeled By: [illegible]

Project:

Received By: [illegible]

Label Verified By: BW

# of Coolers Received: ✓

Samples Arrived By: ✓ Shipping Service ____ Courier ____ Hand ____ Other (Specify: ____)

Coolant: ☐ None/Ambient ☑ Loose Ice ☐ Gel Ice ☐ Dry Ice

Coolant Required: Y / N

Temp Blank Used: Y/N for Cooler(s): 1

Notify Project Manager if packages/coolers are received without coolant or with thawed coolant and at a temperature in excess of 6°C. PM notified: Y/N

Cooler Information:	Y/N/NA	Comments
The coolers do not appear to be tampered with:	Y	
Custody Seals are present and intact:	Y	
Custody seals signed:	Y	

TID: 18139750	CF: 0.3 °C		Date/time: 12/7/18 [illegible]	By: 9:35	
Cooler 1: 1.0 °C	w/ CF: 1.3 °C		Cooler 4: °C	w/ CF: °C	
Cooler 2: °C	w/ CF: °C		Cooler 5: °C	w/ CF: °C	
Cooler 3: °C	w/ CF: °C		Cooler 6: °C	w/ CF: °C	

Chain of Custody:	Y/N/NA	Comments
Sample ID/Description:	Y	
Date and time of collection:	Y	
Sampled by: BW	~~NA~~ N	
Preservation type: 12/7/18	NA	
Requested analyses:	Y	
Required signatures:	Y	
Internal COC required:	NA	

Sample Condition/Integrity:	Y/N/NA	Comments
Sample containers intact/present:	Y	
Sample labels are present and legible:	Y	
Sample ID on container/bag matches COC:	Y	
Correct sample containers used:	Y	
Samples received within holding times:	Y	
Sample volume sufficient for requested analyses:	Y	
Correct preservative used for requested analyses:	Y	

Anomalies/Non-conformances (attach additional pages if needed):

8L00232

eurofins | Calscience

EFGS

8L00232

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY

DATE: 12/06/18

PAGE: 1 OF 1

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

LABORATORY CLIENT: EUROFINS CALSCIENCE

ADDRESS: 7440 LINCOLN WAY

CITY: GARDEN GROVE STATE: CA ZIP:

TEL: E-MAIL: CARLAHOLLOWELL@EUROFINSUS.COM

CLIENT PROJECT NAME / NUMBER: 18-09-1272 / India Basin

P.O. NO.:

PROJECT CONTACT: CARLA LEE HOLLOWELL

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

☐ COELT EDF GLOBAL ID: LOG CODE:

SPECIAL INSTRUCTIONS:

RUSH TAT (per emails with Michele Castro)
Fastest TAT possible. Please advise w/ expected Report date.
Report in dry weight; Anchor Equis EDD required.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	EPA 1631	ECI SAMPLE NUMBER
	IB-10 0.0-2.0	9/12/2018		SED	1	X			X	1
	IB-15 0.0-2.0	9/13/2018		SED	1	X			X	31
	IB-14 0.0-2.0	9/13/2018		SED	1	X			X	47

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
EC	FedEx AB # 7739 6685 0563	12/06/18	1630
Relinquished by: (Signature) FedEx	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation) Shannon EFGS	Date: 12/7/18	Time: 9:58

06/02/14 Revision

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Eurofins Calscience, LLC	Project: Low Level Hg - 2018	
7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	20-Dec-18 14:21

IB-10 0.0-2.0

8L00232-01

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**359**	17.2	157	ng/g dry	2500	F812387	18-Dec-18	8L20003	19-Dec-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**45.0**	0.1	0.1	% by Weight	1	F812388	18-Dec-18		19-Dec-18	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Low Level Hg - 2018	
7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	20-Dec-18 14:21

IB-15 0.0-2.0

8L00232-02

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**254**	3.96	36.0	ng/g dry	400	F812387	18-Dec-18	8L20003	19-Dec-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**45.9**	0.1	0.1	% by Weight	1	F812388	18-Dec-18		19-Dec-18	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Low Level Hg - 2018	
7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	20-Dec-18 14:21

IB-14 0.0-2.0

8L00232-03

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**433**	28.2	257	ng/g dry	2500	F812387	18-Dec-18	8L20003	19-Dec-18	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**43.5**	0.1	0.1	% by Weight	1	F812388	18-Dec-18		19-Dec-18	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Low Level Hg - 2018	
7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	20-Dec-18 14:21

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F812387 - EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Blank (F812387-BLK1)					Prepared: 18-Dec-18 Analyzed: 19-Dec-18						
Mercury	ND	0.11	1.00	ng/g wet							U
Blank (F812387-BLK2)					Prepared: 18-Dec-18 Analyzed: 19-Dec-18						
Mercury	ND	0.11	1.00	ng/g wet							U
Blank (F812387-BLK3)					Prepared: 18-Dec-18 Analyzed: 19-Dec-18						
Mercury	ND	0.11	1.00	ng/g wet							U
LCS (F812387-BS1)					Prepared: 18-Dec-18 Analyzed: 19-Dec-18						
Mercury	7.95	0.11	1.00	ng/g wet	8.0320		98.9	75-125			
LCS Dup (F812387-BSD1)					Prepared: 18-Dec-18 Analyzed: 19-Dec-18						
Mercury	7.92	0.11	1.00	ng/g wet	8.0320		98.6	75-125	0.387	24	
Duplicate (F812387-DUP1)		**Source: 8L00059-20**			Prepared: 18-Dec-18 Analyzed: 19-Dec-18						
Mercury	506.0	2.07	18.9	ng/g dry		534.8			5.55	24	
Matrix Spike (F812387-MS1)		**Source: 8L00059-20**			Prepared: 18-Dec-18 Analyzed: 19-Dec-18						
Mercury	980.7	5.77	52.6	ng/g dry	420.61	534.8	106	71-125			
Matrix Spike (F812387-MS2)		**Source: 8L00232-03**			Prepared: 18-Dec-18 Analyzed: 19-Dec-18						
Mercury	1197	9.89	90.1	ng/g dry	720.64	432.7	106	71-125			
Matrix Spike Dup (F812387-MSD1)		**Source: 8L00059-20**			Prepared: 18-Dec-18 Analyzed: 19-Dec-18						
Mercury	886.4	5.52	50.3	ng/g dry	402.25	534.8	87.4	71-125	19.3	24	
Matrix Spike Dup (F812387-MSD2)		**Source: 8L00232-03**			Prepared: 18-Dec-18 Analyzed: 19-Dec-18						
Mercury	1319	11.2	102	ng/g dry	816.64	432.7	109	71-125	2.32	24	

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Eurofins Calscience, LLC	Project: Low Level Hg - 2018	
7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	20-Dec-18 14:21

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F812388 - EFGS SOP5133 Solids Analysis											
Duplicate (F812388-DUP1)		**Source: 8L00232-01**		Prepared: 18-Dec-18 Analyzed: 19-Dec-18							
% Solids	49.2	0.1	0.1	% by Weight		45.0			8.92	10	O-04, O-09

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Amy Goodall, Project Manager

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Eurofins Calscience, LLC	Project: Low Level Hg - 2018	
7440 Lincoln Way	Project Number: 18-09-1272/India Basin	**Reported:**
Garden Grove CA, 92841	Project Manager: Carla Lee Hollowell	20-Dec-18 14:21

Notes and Definitions

U	Analyte was not detected and is reported as less than the LOD or as defined by the client. The LOD has been adjusted for any dilution or concentration of the sample.
O-09	Total Solids are prepared at the same time as the preparation for the analyte(s) of interest in order to provide the most accurate dry mass correction.
O-04	This sample was analyzed outside of the recommended holding time.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the method detection limit if reported to the MDL or above the reporting limit if reported to the MRL.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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Amy Goodall

Amy Goodall, Project Manager

Appendix C
Data Validation Reports

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Seattle, Washington 98101
206.287.9130

ANCHOR QEA

Data Validation Report – EPA Stage 2A

November 5, 2018

Project: India Basin, 900 Innes Avenue

Project Number: 160153-17.05

This report summarizes the review of analytical results for 33 sediment samples, four field duplicate samples, and three equipment rinse blank samples collected on September 10 and 11, 2018. The samples were collected by Leidos and submitted to Eurofins Calscience, Inc. (ECI). Select sample aliquots were subcontracted to Eurofins Lancaster Laboratories Environmental (ELLE) in Lancaster, Pennsylvania, Eurofins Frontier Global Sciences (EFGS) in Bothell, Washington, and ALS Environmental (ALS) in Kelso, Washington. The following analytical parameter results were reviewed in this report:

- Total solids by Standard Method (SM) 2540B and G
- Total organic carbon (TOC) by U.S. Environmental Protection Agency (USEPA) method 9060A
- Sulfides (S2) by USEPA method 376.2
- Grain size by ASTM International (ASTM) method D4464, modified
- Metals by USEPA method 6020
- Mercury (Hg) by USEPA method 1631E
- Selenium (Se) by USEPA method 7742
- Polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyl congeners (PCBs) by USEPA method 8270D-SIM
- Organotins by method Krone et. al. 1989
- Diesel-range organics (DRO) by USEPA method 8015B
- Polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (PCD/F) by USEPA method 1613B

Sample IDs, sample delivery groups (SDGs), matrices, and analyses are presented in Table 1.

Table 1
Sample IDs, Matrices, Analyses, and Sample Delivery Groups

Sample ID	Lab SDG	Lab Sample ID	Matrix	Analyses
EQUIPMENT RINSE #1_091118	18090884	18-09-0884-1	Water	PAHs
EQUIPMENT RINSE #2_091118	18090884	18-09-0884-2	Water	Metals
	8I00587	8I00587-01	Water	Hg
	K1809047	K1809047-001	Water	Se
EQUIPMENT RINSE #3_091118	18090884	18-09-0884-3	Water	PCBs
IB-06 0.0-2.0 091018	18090883	18-09-0883-20	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0883-21	Sediment	Grain size

Sample ID	Lab SDG	Lab Sample ID	Matrix	Analyses
	8I00584	8I00584-07	Sediment	PCD/F
	K1809049	K1809049-007	Sediment	Se
IB-06 2.0-4.0 091018	18090883	18-09-0883-24	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0883-25	Sediment	Grain size
	8I00584	8I00584-08	Sediment	Hg
	K1809049	K1809049-008	Sediment	Se
IB-06 4.0-6.0 091018	18090883	18-09-0883-28	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0883-29	Sediment	Grain size
	8I00584	8I00584-09	Sediment	Hg
	K1809049	K1809049-009	Sediment	Se
IB-07 0.0-2.0 091118	18090884	18-09-0884-34	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0884-35	Sediment	Grain size
	8I00587	8I00587-09	Sediment	Hg
	K1809047	K1809047-009	Sediment	Se
IB-07 100 2.0-4.0 091118	18090884	18-09-0884-47	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
	8I00587	8I00587-12	Sediment	Hg
	K1809047	K1809047-012	Sediment	Se
IB-07 2.0-4.0 091118	18090884	18-09-0884-38	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0884-39	Sediment	Grain size
	8I00587	8I00587-10	Sediment	Hg
	K1809047	K1809047-010	Sediment	Se
IB-07 4.0-6.0 091118	18090884	18-09-0884-42	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0884-43	Sediment	Grain size
	8I00587	8I00587-11	Sediment	Hg
	K1809047	K1809047-011	Sediment	Se
IB-08 0.0-2.0 091018	18090883	18-09-0883-42	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0883-43	Sediment	Grain size
	8I00584	8I00584-12	Sediment	Hg
	K1809049	K1809049-012	Sediment	Se
IB-08 2.0-4.0 091018	18090883	18-09-0883-46	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0883-47	Sediment	Grain size
	8I00584	8I00584-13	Sediment	Hg

Sample ID	Lab SDG	Lab Sample ID	Matrix	Analyses
	K1809049	K1809049-013	Sediment	Se
IB-08 4.0-6.0 091018	18090883	18-09-0883-50	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0883-51	Sediment	Grain size
	8I00584	8I00584-14	Sediment	Hg
	K1809049	K1809049-014	Sediment	Se
IB-11 0.0-2.0 091018	18090883	18-09-0883-16	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0883-17	Sediment	Grain size
	8I00584	8I00584-06	Sediment	PCD/F
	K1809049	K1809049-006	Sediment	Se
IB-11 2.0-4.0 091018	18090883	18-09-0883-30	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0883-31	Sediment	Grain size
	8I00584	8I00584-10	Sediment	Hg
	K1809049	K1809049-010	Sediment	Se
IB-11 4.0-6.0 091018	18090883	18-09-0883-34	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0883-35	Sediment	Grain size
	8I00584	8I00584-11	Sediment	Hg
	K1809049	K1809049-011	Sediment	Se
IB-12 0.0-2.0 091018	18090883	18-09-0883-1	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0883-5	Sediment	Grain size
	8I00584	8I00584-01	Sediment	PCD/F
	K1809049	K1809049-001	Sediment	Se
IB-12 100 0.0-2.0 091018	18090883	18-09-0883-2	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
	8I00584	8I00584-02	Sediment	PCD/F
	K1809049	K1809049-002	Sediment	Se
IB-12 100 4.0-6.0 091018	18090883	18-09-0883-11	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
	8I00584	8I00584-05	Sediment	PCD/F
	K1809049	K1809049-005	Sediment	Se
IB-12 2.0-4.0 091018	18090883	18-09-0883-6	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0883-9	Sediment	Grain size
	8I00584	8I00584-03	Sediment	PCD/F
	K1809049	K1809049-003	Sediment	Se

Sample ID	Lab SDG	Lab Sample ID	Matrix	Analyses
IB-12 4.0-6.0 091018	18090883	18-09-0883-10	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0883-14	Sediment	Grain size
	8I00584	8I00584-04	Sediment	PCD/F
	K1809049	K1809049-004	Sediment	Se
IB-13 0.0-2.0 091118	18090884	18-09-0884-4	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0884-5	Sediment	Grain size
	8I00587	8I00587-02	Sediment	Hg
	K1809047	K1809047-002	Sediment	Se
IB-13 2.0-4.0 091118	18090884	18-09-0884-8	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0884-9	Sediment	Grain size
	8I00587	8I00587-03	Sediment	Hg
	K1809047	K1809047-003	Sediment	Se
IB-13 4.0-6.0 091118	18090884	18-09-0884-12	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0884-13	Sediment	Grain size
	8I00587	8I00587-04	Sediment	Hg
	K1809047	K1809047-004	Sediment	Se
IB-16 0.0-2.0 091118	18090884	18-09-0884-21	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0884-22	Sediment	Grain size
	8I00587	8I00587-06	Sediment	Hg
	K1809047	K1809047-006	Sediment	Se
IB-16 2.0-4.0 091118	18090884	18-09-0884-25	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0884-26	Sediment	Grain size
	8I00587	8I00587-07	Sediment	Hg
	K1809047	K1809047-007	Sediment	Se
IB-16 4.0-6.0 091118	18090884	18-09-0884-29	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0884-30	Sediment	Grain size
	8I00587	8I00587-08	Sediment	Hg
	K1809047	K1809047-008	Sediment	Se
IB-17 0.0-2.0 091118	18090884	18-09-0884-17	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0884-18	Sediment	Grain size
	8I00587	8I00587-05	Sediment	Hg
	K1809047	K1809047-005	Sediment	Se

Sample ID	Lab SDG	Lab Sample ID	Matrix	Analyses
IB-17 2.0-4.0 091118	18090884	18-09-0884-48	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0884-49	Sediment	Grain size
	8I00587	8I00587-13	Sediment	Hg
	K1809047	K1809047-013	Sediment	Se
IB-17 4.0-6.0 091118	18090884	18-09-0884-52	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
		18-09-0884-53	Sediment	Grain size
	8I00587	8I00587-14	Sediment	Hg
	K1809047	K1809047-014	Sediment	Se
IB-23 0.0-2.0 091118	18090884	18-09-0884-57	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
	8I00587	8I00587-15	Sediment	Hg
	K1809047	K1809047-015	Sediment	Se
IB-24 0.0-2.0 091118	18090884	18-09-0884-58	Sediment	TS, TOC, S2, metals, DRO, PAHs, PCBs, organotins
	8I00587	8I00587-16	Sediment	Hg
	K1809047	K1809047-016	Sediment	Se
IB-24 2.0-4.0 091118	18090884	18-09-0884-59	Sediment	TS, TOC, metals, DRO, PAHs, PCBs, organotins
	8I00587	8I00587-17	Sediment	PCD/F
	K1809047	K1809047-017	Sediment	Se
IB-INNER 0.0-2.0 091118	1988322	9807610	Sediment	PCD/F
IB-INNER 100 2.0-4.0 091118	1988322	9807616	Sediment	PCD/F
IB-INNER 2.0-4.0 091118	1988322	9807611	Sediment	PCD/F
IB-INNER 4.0-6.0 091118	1988322	9807612	Sediment	PCD/F
IB-MIDDLE 0.0-2.0 091118	1988322	9807613	Sediment	PCD/F
IB-MIDDLE 2.0-4.0 091118	1988322	9807614	Sediment	PCD/F
IB-MIDDLE 4.0-6.0 091118	1988322	9807615	Sediment	PCD/F

Notes:
DRO: diesel-range organics
Hg: mercury
PAHs: polycyclic aromatic hydrocarbons
PCBs: polychlorinated biphenyls
PCD/F: polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans
S2: sulfides
SDG: sample delivery group
Se: selenium
TS: total solids
TOC: total organic carbon

Data Validation and Qualifications

The following comments refer to the laboratory's performance in meeting the quality assurance/quality control (QA/QC) guidelines outlined in the analytical procedures. Laboratory results were reviewed using the laboratory control limits and the following guidelines:

- *Quality Assurance Project Plan, India Basin, 900 Innes Avenue* (QAPP; Anchor QEA 2018)
- USEPA *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*, Third Edition (SW-846; USEPA 1986)
- USEPA *National Functional Guidelines for Chlorinated Dioxin/Furan Data Review* (USEPA 2016)
- USEPA *National Functional Guidelines for Inorganic Superfund Data Review* (USEPA 2017a)
- USEPA *National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA 2017b)

Unless otherwise noted in this report, laboratory results for the samples listed above were within QC criteria.

Field Documentation

Field documentation was checked for completeness and accuracy. The chain-of-custody forms were signed by ECI, ELLE, EFGS, and ALS at the time of sample receipt. All samples were received in good condition and within the recommended temperature range.

Holding Times and Sample Preservation

Samples were appropriately preserved and analyzed within holding times.

Laboratory Method Blanks

Laboratory method blanks were analyzed at the required frequencies. All method blanks were free of target analytes with the exception of two of the six water method blanks analyzed for Hg in SDG 8I00587, which had results detected between the method detection limit (MDL) and the reporting limit (RL). The associated sample result was not significantly greater than (greater than five times) the method blank detections; therefore, the result was qualified as non-detect. Qualified results are summarized in Table 4.

Field Quality Control

Equipment Blanks

Three equipment blank samples were collected in association with these sample sets. Detected results are summarized in Table 2.

Table 2
Equipment Blank Results

Analyte	EQUIPMENT RINSE #2_091118
Copper	0.474J µg/L

Note:
µg/L: microgram per liter

All associated sample results were significantly greater than (greater than five times) the concentration detected in the equipment blank; therefore, no data were qualified.

Field Duplicates

Four field duplicate samples were collected in association with these sample sets. Detected results are summarized in Table 3.

Result values less than five times the reporting limit (RL) may have exaggerated relative percent difference (RPD) values; therefore, if the sample or field duplicate result was less than five times the parent RL, the sample result is evaluated by the difference between them using ± two times the parent RL as the control limit.

All RPD and/or difference values were within control limits, with the following exceptions:

- Five field duplicate RPD or difference values for samples IB-07 2.0-4.0 091118 and IB-07 100 2.0-4.0 091118 were above the project-required control limits.
- Nine field duplicate RPD or difference values for samples IB-12 4.0-6.0 091018 and IB-12 100 4.0-6.0 091018 were above the project-required control limits.
- Two field duplicate RPD values for samples IB-INNER 2.0-4.0 091118 and IB-INNER 100 2.0-4.0 091118 were above the project-required control limit.

These sample results were qualified "J" or "UJ" to indicate they are estimated. Qualified results are summarized in Table 4.

Surrogate Recoveries

Surrogate recoveries were within the laboratory control limits, with the exception of some PAH surrogates, which did not recover in five samples. Results for these samples were reported from sample dilutions; therefore, no data were qualified.

Table 3
Field Duplicate Results

Analyte	IB-07 2.0-4.0 091118	IB-07 100 2.0-4.0 091118	RPD	Difference	Control Limit
Mercury	925 ng/g	698 ng/g	28.0%	--	--
Sulfide	15 mg/kg	21 mg/kg	33.3%	--	--
Total Solids	60 %	60.6 %	1.0%	--	--
Arsenic	14.6 mg/kg	18.3 mg/kg	22.5%	--	--
Cadmium	0.64 mg/kg	1.01 mg/kg	--	0.37 mg/kg	0.334 mg/kg
Chromium	94.2 mg/kg	111 mg/kg	16.4%	--	--
Cobalt	16.4 mg/kg	19.1 mg/kg	15.2%	--	--
Copper	60.7 mg/kg	92.1 mg/kg	41.1%	--	--
Lead	47.7 mg/kg	91.9 mg/kg	63.3%	--	--
Nickel	148 mg/kg	175 mg/kg	16.7%	--	--
Silver	0.707 mg/kg	0.884 mg/kg	--	0.177 mg/kg	0.334 mg/kg
Zinc	115 mg/kg	276 mg/kg	82.4%	--	--
Selenium	0.38 mg/kg	0.4 mg/kg	--	0.02 mg/kg	0.32 mg/kg
Diesel range organics (C10 - C36)	14 mg/kg	22 mg/kg	--	8 mg/kg	16 mg/kg
1-Methylnaphthalene	10J µg/kg	14J µg/kg	--	4 µg/kg	66 µg/kg
1-Methylphenanthrene	100 µg/kg	140 µg/kg	--	40 µg/kg	66 µg/kg
2,3,5-Trimethylnaphthalene (1,6,7-Trimethylnaphthalene)	21J µg/kg	43 µg/kg	--	22 µg/kg	66 µg/kg
2,6-Dimethylnaphthalene	16J µg/kg	23J µg/kg	--	7 µg/kg	66 µg/kg
2-Methylnaphthalene	14J µg/kg	16J µg/kg	--	2 µg/kg	66 µg/kg
Acenaphthene	64 µg/kg	67 µg/kg	--	3 µg/kg	66 µg/kg
Acenaphthylene	120 µg/kg	150 µg/kg	--	30 µg/kg	66 µg/kg
Anthracene	450 µg/kg	550 µg/kg	20.0%	--	--
Benzo(a)anthracene	2000 µg/kg	2300 µg/kg	14.0%	--	--
Benzo(a)pyrene	4500 µg/kg	5100 µg/kg	12.5%	--	--

Analyte	IB-07 2.0-4.0 091118	IB-07 100 2.0-4.0 091118	RPD	Difference	Control Limit
Benzo(b)fluoranthene	3600 µg/kg	3400 µg/kg	5.7%	--	--
Benzo(e)pyrene	2700 µg/kg	3000 µg/kg	10.5%	--	--
Benzo(g,h,i)perylene	4300 µg/kg	4200 µg/kg	2.4%	--	--
Benzo(k)fluoranthene	1600 µg/kg	2600 µg/kg	47.6%	--	--
Biphenyl (1,1'-Biphenyl)	26J µg/kg	27J µg/kg	--	1 µg/kg	66 µg/kg
Chrysene	2500 µg/kg	2900 µg/kg	14.8%	--	--
Dibenzo(a,h)anthracene	530 µg/kg	600 µg/kg	12.4%	--	--
Dibenzothiophene	79 µg/kg	95 µg/kg	--	16 µg/kg	66 µg/kg
Fluoranthene	6000 µg/kg	6700 µg/kg	11.0%	--	--
Fluorene	92 µg/kg	130 µg/kg	--	38 µg/kg	66 µg/kg
Indeno(1,2,3-c,d)pyrene	2900 µg/kg	2900 µg/kg	0.0%	--	--
Naphthalene	130 µg/kg	130 µg/kg	--	0 µg/kg	66 µg/kg
Perylene	1200 µg/kg	1200 µg/kg	0.0%	--	--
Phenanthrene	1000 µg/kg	1300 µg/kg	26.1%	--	--
Pyrene	8800 µg/kg	9700 µg/kg	9.7%	--	--
Total organic carbon	1.3 %	1.4 %	7.4%	--	--

Analyte	IB-12 0.0-2.0 091018	IB-12 100 0.0-2.0 091018	RPD	Difference	Control Limit
Mercury	489 ng/g	603 ng/g	20.9%	--	--
Sulfide	61 mg/kg	70 mg/kg	13.7%	--	--
Butyltin (n-Butyltin)	14 µg/kg	11 µg/kg	--	3 µg/kg	14.8 µg/kg
Dibutyltin	56 µg/kg	55 µg/kg	1.8%	--	--
Total Solids	39.5 %	40.5 %	2.5%	--	--
Arsenic	11.6 mg/kg	13 mg/kg	11.4%	--	--
Cadmium	0.291 mg/kg	0.313 mg/kg	--	0.022 mg/kg	0.506 mg/kg
Chromium	83.8 mg/kg	84.2 mg/kg	0.5%	--	--
Cobalt	14.3 mg/kg	14.7 mg/kg	2.8%	--	--

Analyte	IB-12 0.0-2.0 091018	IB-12 100 0.0-2.0 091018	RPD	Difference	Control Limit
Copper	130 mg/kg	125 mg/kg	3.9%	--	--
Lead	57.5 mg/kg	54.5 mg/kg	5.4%	--	--
Nickel	90 mg/kg	92.5 mg/kg	2.7%	--	--
Silver	0.951 mg/kg	0.902 mg/kg	--	0.049 mg/kg	0.506 mg/kg
Zinc	168 mg/kg	166 mg/kg	1.2%	--	--
Selenium	0.4 mg/kg	0.4 mg/kg	--	0 mg/kg	0.44 mg/kg
Diesel range organics (C10 - C36)	15 mg/kg	12 mg/kg	--	3 mg/kg	26 mg/kg
2,6-Dimethylnaphthalene	12J µg/kg	13J µg/kg	--	1 µg/kg	102 µg/kg
Acenaphthylene	12J µg/kg	12J µg/kg	--	0 µg/kg	102 µg/kg
Anthracene	31J µg/kg	24J µg/kg	--	7 µg/kg	102 µg/kg
Benzo(a)anthracene	100 µg/kg	94 µg/kg	--	6 µg/kg	102 µg/kg
Benzo(a)pyrene	200 µg/kg	220 µg/kg	--	20 µg/kg	102 µg/kg
Benzo(b)fluoranthene	240 µg/kg	230 µg/kg	--	10 µg/kg	102 µg/kg
Benzo(e)pyrene	130 µg/kg	140 µg/kg	--	10 µg/kg	102 µg/kg
Benzo(g,h,i)perylene	140 µg/kg	190 µg/kg	--	50 µg/kg	102 µg/kg
Benzo(k)fluoranthene	130 µg/kg	140 µg/kg	--	10 µg/kg	102 µg/kg
Chrysene	100 µg/kg	110 µg/kg	--	10 µg/kg	102 µg/kg
Dibenzo(a,h)anthracene	30J µg/kg	35J µg/kg	--	5 µg/kg	102 µg/kg
Fluoranthene	190 µg/kg	170 µg/kg	--	20 µg/kg	102 µg/kg
Indeno(1,2,3-c,d)pyrene	120 µg/kg	140 µg/kg	--	20 µg/kg	102 µg/kg
Perylene	73 µg/kg	81 µg/kg	--	8 µg/kg	102 µg/kg
Phenanthrene	74 µg/kg	64 µg/kg	--	10 µg/kg	102 µg/kg
Pyrene	280 µg/kg	270 µg/kg	3.6%	--	--
PCB-005/008	0.51J µg/kg	0.48J µg/kg	--	0.03 µg/kg	2 µg/kg
PCB-018	0.77 µg/kg	1.3 µg/kg	--	0.53 µg/kg	1.02 µg/kg
PCB-028	1.2 µg/kg	1.3 µg/kg	--	0.1 µg/kg	1.02 µg/kg
PCB-031	0.99 µg/kg	1.1 µg/kg	--	0.11 µg/kg	1.02 µg/kg

Analyte	IB-12 0.0-2.0 091018	IB-12 100 0.0-2.0 091018	RPD	Difference	Control Limit
PCB-033	0.91 µg/kg	0.78 µg/kg	--	0.13 µg/kg	1.02 µg/kg
PCB-044	1.4 µg/kg	1.8 µg/kg	--	0.4 µg/kg	1.02 µg/kg
PCB-049	1.6 µg/kg	1.8 µg/kg	--	0.2 µg/kg	1.02 µg/kg
PCB-052	2.6 µg/kg	2.5 µg/kg	--	0.1 µg/kg	1.02 µg/kg
PCB-056	0.87 µg/kg	0.85 µg/kg	--	0.02 µg/kg	1.02 µg/kg
PCB-066	2.4 µg/kg	2.3 µg/kg	--	0.1 µg/kg	1.02 µg/kg
PCB-070	2.2 µg/kg	2.1 µg/kg	--	0.1 µg/kg	1.02 µg/kg
PCB-074	0.98 µg/kg	1.1 µg/kg	--	0.12 µg/kg	1.02 µg/kg
PCB-087	1.1 µg/kg	1.2 µg/kg	--	0.1 µg/kg	1.02 µg/kg
PCB-095	4.8 µg/kg	4.5 µg/kg	6.5%	--	--
PCB-097	1.1 µg/kg	1.5 µg/kg	--	0.4 µg/kg	1.02 µg/kg
PCB-099	3.3 µg/kg	3.6 µg/kg	8.7%	--	--
PCB-101	6.9 µg/kg	6.3 µg/kg	9.1%	--	--
PCB-105	2.3 µg/kg	1.9 µg/kg	--	0.4 µg/kg	1.02 µg/kg
PCB-110	3.9 µg/kg	3.7 µg/kg	5.3%	--	--
PCB-118	3.3 µg/kg	3.3 µg/kg	0.0%	--	--
PCB-128	0.88 µg/kg	1.2 µg/kg	--	0.32 µg/kg	1.02 µg/kg
PCB-132/153	22 µg/kg	20 µg/kg	9.5%	--	--
PCB-138/158	12 µg/kg	11 µg/kg	8.7%	--	--
PCB-141	2.2 µg/kg	1.9 µg/kg	--	0.3 µg/kg	1.02 µg/kg
PCB-149	12 µg/kg	12 µg/kg	0.0%	--	--
PCB-151	4.4 µg/kg	4.1 µg/kg	7.1%	--	--
PCB-156	0.69 µg/kg	0.52 µg/kg	--	0.17 µg/kg	1.02 µg/kg
PCB-170	7.6 µg/kg	6.7 µg/kg	12.6%	--	--
PCB-174	5.4 µg/kg	5 µg/kg	7.7%	--	--
PCB-177	3.7 µg/kg	3.5 µg/kg	5.6%	--	--
PCB-180	15 µg/kg	13 µg/kg	14.3%	--	--

Analyte	IB-12 0.0-2.0 091018	IB-12 100 0.0-2.0 091018	RPD	Difference	Control Limit
PCB-183	4.4 µg/kg	3.8 µg/kg	14.6%	--	--
PCB-187	9.1 µg/kg	9.3 µg/kg	2.2%	--	--
PCB-194	4.2 µg/kg	4.1 µg/kg	2.4%	--	--
PCB-195	1.9 µg/kg	1.8 µg/kg	--	0.1 µg/kg	1.02 µg/kg
PCB-201	0.83 µg/kg	0.62 µg/kg	--	0.21 µg/kg	1.02 µg/kg
PCB-203	4.5 µg/kg	3.8 µg/kg	16.9%	--	--
Total organic carbon	1.7 %	1.4 %	19.4%	--	--

Analyte	IB-12 4.0-6.0 091018	IB-12 100 4.0-6.0 091018	RPD	Difference	Control Limit
Mercury	1190 ng/g	1120 ng/g	6.1%	--	--
Sulfide	140 mg/kg	190 mg/kg	30.3%	--	--
Butyltin (n-Butyltin)	49 µg/kg	67 µg/kg	31.0%	--	--
Dibutyltin	400 µg/kg	380 µg/kg	5.1%	--	--
Tributyltin	31 µg/kg	29 µg/kg	--	2 µg/kg	12.8 µg/kg
Tripentyltin chloride	67 %	62 %	7.8%	--	--
Total Solids	45.8 %	46.3 %	1.1%	--	--
Arsenic	14.6 mg/kg	15.4 mg/kg	5.3%	--	--
Cadmium	0.911 mg/kg	0.799 mg/kg	--	0.112 mg/kg	0.436 mg/kg
Chromium	126 mg/kg	114 mg/kg	10.0%	--	--
Cobalt	19 mg/kg	17.6 mg/kg	7.7%	--	--
Copper	366 mg/kg	344 mg/kg	6.2%	--	--
Lead	118 mg/kg	115 mg/kg	2.6%	--	--
Nickel	129 mg/kg	118 mg/kg	8.9%	--	--
Silver	1.87 mg/kg	1.81 mg/kg	3.3%	--	--
Zinc	281 mg/kg	274 mg/kg	2.5%	--	--
Selenium	0.41 mg/kg	0.41 mg/kg	--	0 mg/kg	0.4 mg/kg
Diesel range organics (C10 - C36)	77 mg/kg	100 mg/kg	26.0%	--	--

Analyte	IB-12 4.0-6.0 091018	IB-12 100 4.0-6.0 091018	RPD	Difference	Control Limit
1-Methylnaphthalene	10J µg/kg	9.8U µg/kg	--	0.2 µg/kg	86 µg/kg
1-Methylphenanthrene	14J µg/kg	22J µg/kg	--	8 µg/kg	86 µg/kg
2,6-Dimethylnaphthalene	26J µg/kg	41J µg/kg	--	15 µg/kg	86 µg/kg
2-Fluorobiphenyl	60 %	53 %	12.4%	--	--
2-Fluorobiphenyl	66 %	69 %	4.4%	--	--
2-Methylnaphthalene	24J µg/kg	23J µg/kg	--	1 µg/kg	86 µg/kg
Acenaphthene	11J µg/kg	11J µg/kg	--	0 µg/kg	86 µg/kg
Acenaphthylene	18J µg/kg	20J µg/kg	--	2 µg/kg	86 µg/kg
Anthracene	48 µg/kg	51 µg/kg	--	3 µg/kg	86 µg/kg
Benzo(a)anthracene	110 µg/kg	140 µg/kg	--	30 µg/kg	86 µg/kg
Benzo(a)pyrene	160 µg/kg	290 µg/kg	--	130 µg/kg	86 µg/kg
Benzo(b)fluoranthene	220 µg/kg	360 µg/kg	48.3%	--	--
Benzo(e)pyrene	150 µg/kg	230 µg/kg	--	80 µg/kg	86 µg/kg
Benzo(g,h,i)perylene	6.6U µg/kg	130 µg/kg	--	123.4 µg/kg	86 µg/kg
Benzo(k)fluoranthene	160 µg/kg	250 µg/kg	--	90 µg/kg	86 µg/kg
Biphenyl (1,1'-Biphenyl)	9.3J µg/kg	8.6J µg/kg	--	0.7 µg/kg	86 µg/kg
Chrysene	140 µg/kg	180 µg/kg	--	40 µg/kg	86 µg/kg
Dibenzo(a,h)anthracene	8.4U µg/kg	38J µg/kg	--	29.6 µg/kg	86 µg/kg
Fluoranthene	300 µg/kg	360 µg/kg	18.2%	--	--
Fluorene	20J µg/kg	21J µg/kg	--	1 µg/kg	86 µg/kg
Indeno(1,2,3-c,d)pyrene	6.8U µg/kg	120 µg/kg	--	113.2 µg/kg	86 µg/kg
Naphthalene	31J µg/kg	30J µg/kg	--	1 µg/kg	86 µg/kg
Perylene	39J µg/kg	97 µg/kg	--	58 µg/kg	86 µg/kg
Phenanthrene	130 µg/kg	140 µg/kg	--	10 µg/kg	86 µg/kg
Pyrene	650 µg/kg	700 µg/kg	7.4%	--	--
PCB-005/008	1.5 µg/kg	0.16U µg/kg	--	1.34 µg/kg	1.72 µg/kg
PCB-018	8.5 µg/kg	0.14U µg/kg	--	8.36 µg/kg	0.86 µg/kg

Analyte	IB-12 4.0-6.0 091018	IB-12 100 4.0-6.0 091018	RPD	Difference	Control Limit
PCB-028	4.8 µg/kg	0.15U µg/kg	--	4.65 µg/kg	0.86 µg/kg
PCB-031	5.5 µg/kg	0.11U µg/kg	--	5.39 µg/kg	0.86 µg/kg
PCB-033	4.5 µg/kg	0.081U µg/kg	--	4.419 µg/kg	0.86 µg/kg
PCB-044	9.6 µg/kg	12 µg/kg	22.2%	--	--
PCB-049	6.6 µg/kg	7.6 µg/kg	14.1%	--	--
PCB-052	12 µg/kg	12 µg/kg	0.0%	--	--
PCB-056	2.9 µg/kg	3.9 µg/kg	29.4%	--	--
PCB-060	1.5 µg/kg	1.6 µg/kg	--	0.1 µg/kg	0.86 µg/kg
PCB-066	9.8 µg/kg	12 µg/kg	20.2%	--	--
PCB-070	11 µg/kg	11 µg/kg	0.0%	--	--
PCB-074	4.4 µg/kg	5.1 µg/kg	14.7%	--	--
PCB-087	3.4 µg/kg	4.3 µg/kg	23.4%	--	--
PCB-095	13 µg/kg	13 µg/kg	0.0%	--	--
PCB-097	3.8 µg/kg	5.2 µg/kg	31.1%	--	--
PCB-099	7.7 µg/kg	8 µg/kg	3.8%	--	--
PCB-101	17 µg/kg	18 µg/kg	5.7%	--	--
PCB-105	5.5 µg/kg	5.7 µg/kg	3.6%	--	--
PCB-110	12 µg/kg	13 µg/kg	8.0%	--	--
PCB-118	11 µg/kg	12 µg/kg	8.7%	--	--
PCB-128	3.1 µg/kg	2.8 µg/kg	10.2%	--	--
PCB-132/153	37 µg/kg	39 µg/kg	5.3%	--	--
PCB-138/158	23 µg/kg	25 µg/kg	8.3%	--	--
PCB-141	4 µg/kg	5 µg/kg	22.2%	--	--
PCB-149	24 µg/kg	26 µg/kg	8.0%	--	--
PCB-151	7.3 µg/kg	7.9 µg/kg	7.9%	--	--
PCB-156	1.8 µg/kg	1.8 µg/kg	--	0 µg/kg	0.86 µg/kg
PCB-170	13 µg/kg	12 µg/kg	8.0%	--	--

Analyte	IB-12 4.0-6.0 091018	IB-12 100 4.0-6.0 091018	RPD	Difference	Control Limit
PCB-174	9.1 µg/kg	9.9 µg/kg	8.4%	--	--
PCB-177	5.6 µg/kg	6.7 µg/kg	17.9%	--	--
PCB-180	24 µg/kg	27 µg/kg	11.8%	--	--
PCB-183	6.7 µg/kg	7.4 µg/kg	9.9%	--	--
PCB-187	14 µg/kg	16 µg/kg	13.3%	--	--
PCB-194	6.3 µg/kg	5.9 µg/kg	6.6%	--	--
PCB-195	2.1 µg/kg	2.5 µg/kg	17.4%	0.4 µg/kg	0.86 µg/kg
PCB-201	0.96 µg/kg	1.5 µg/kg	--	0.54 µg/kg	0.86 µg/kg
PCB-203	6.9 µg/kg	6.9 µg/kg	0.0%	--	--
Total organic carbon	1.5 %	1.4 %	6.9%	--	--

Analyte	IB-INNER 2.0-4.0 091118	IB-INNER 100 2.0-4.0 091118	RPD	Difference	Control Limit
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	1120 ng/kg	708 ng/kg	45.1%	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	6840 ng/kg	5150 ng/kg	28.2%	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	192 ng/kg	131 ng/kg	37.8%	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	751 ng/kg	612 ng/kg	20.4%	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	13.7 ng/kg	8.84 ng/kg	--	4.86 ng/kg	17.5 ng/kg
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	26.1 ng/kg	21.6 ng/kg	--	4.5 ng/kg	17.5 ng/kg
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	10.2 ng/kg	9.78 ng/kg	--	0.42 ng/kg	17.5 ng/kg
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	9.83 ng/kg	9.12 ng/kg	--	0.71 ng/kg	17.5 ng/kg
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	2.84 ng/kg	2.71 ng/kg	--	0.13 ng/kg	3.5 ng/kg
Moisture, percent	44.9 %	45 %	0.2%	--	--

Notes:
µg/kg: micrograms per kilogram
ng/g: nanograms per gram
mg/kg: milligrams per kilogram
PCB: polychlorinated biphenyl
RPD: relative percent difference

Laboratory Control Samples and Laboratory Control Sample Duplicates

Laboratory control samples (LCS) and laboratory control sample duplicates (LCSDs) and were analyzed at the required frequency. Some pesticides, PCBs, and PAHs, and one organotin, were not spiked in the LCS samples; therefore, accuracy could not be evaluated for these analytes. All LCS and LCSD recovery values were within project-required control limits with the exception of the PCB18 and PCB52 LCSDs in SDG 18-09-0883, and the PCB52 LCSD in SDG 18-09-0884. Additionally, the LCS/LCSD RPD was above the control limit in the in SDG 18-08-0883. These analytes recovered below the control limit; therefore, all associated results were qualified "J" or "UJ" to indicate they are estimated. Qualified results are summarized in Table 4.

Matrix Spike and Matrix Spike Duplicate Samples

Matrix spike (MS) and matrix spike duplicate (MSD) samples were analyzed at the required frequencies. Some PCBs and PAHs, and one organotin, were not spiked in the MS/MSD samples, therefore matrix-specific accuracy could not be evaluated for these analytes. No results were qualified for MS/MSD recoveries outside of control limits when the sample concentration was greater than four times the spike concentration. All MS and MSD recoveries were within project-required control limits with the following exceptions:

- Metals

  SDG 18090883 – The MS and MSDs for cadmium, chromium, lead, nickel, and zinc recovered above the control limit in sample IB12 0.0-2.0 091018. The MSD for copper also recovered above the control limit in the same sample. Associated sample results were qualified "J" to indicate they are estimated.

  SDG 18090884 – The MS and MSD for chromium recovered above the control limit in sample IB-13 0.0-2.0 091118. Associated sample results were qualified "J" to indicate they are estimated.
- Mercury

  SDG 8I00587- The MS and MSD mercury recovery values analyzed on sample IB-07 4.0-6.0 091118 were below the control limit. The post digestion spike recovery value and the first set of batch MS/MSD recovery values all were within control limits; therefore, only the parent sample result was qualified "J" to indicate it was estimated.
- PAHs
  - SDG 1809883 –
  - Seven analytes in the MS analyzed on sample IB-06 4.0-6.0 091018 recovered below the control limit, and eight analytes in the MS did not recover. Ten analytes in the MSD recovered above the project required control limit, and twelve associated MS/MSD RPDs were above the control limit. Associated sample results were qualified "J" to indicate they are estimated.

- Organotins
  - SDG 1809884 – The MSDs for tetrabutyltin and tributyltin were below the control limits in sample IB-16 2.0-4.0 091118. The MS/MSD RPD for tetrabutyltin was above the control limit in the same sample. The associated sample results were qualified "UJ" to indicate they are estimated.

All qualified results are summarized in Table 4.

Laboratory Duplicates

Laboratory duplicates were analyzed at the required frequency or in place of MSD samples for all analyses, with the exception of the grain size analysis. Parent and/or duplicate results that were greater than five times RL were evaluated by the difference between the results using the control limit of ± two times the RL. Duplicate results from non-project samples were not evaluated. All duplicate RPD and/or difference values were within control limits.

Sample Analyses

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) was above the calibration range in the PCD/F analysis of sample IB-INNER 0.0-2.0 091118. This result was qualified "J" to indicate it is estimated.

Estimated Maximum Possible Concentration

Some PCD/F results were flagged as estimated maximum possible concentration due to results that do not meet all method qualitative criteria for positive identification. Results that were not previously qualified as non-detects due to method blank contamination have been qualified to indicate they are estimated. Qualified results are summarized in Table 4.

Method Reporting Limits and Analyte List

MDLs and RLs were acceptable as reported. All values were reported using the laboratory limits. Values were reported as undiluted or when diluted, the reporting limit reflects the dilution factor.

Overall Assessment

As was determined by this evaluation, the laboratory followed the specified analytical methods and all requested sample analyses were completed. Accuracy was acceptable as demonstrated by the surrogate, LCS/LCSD, and MS/MSD recovery values, with the exceptions noted above. Precision was acceptable as demonstrated by the LCS/LCSD, MS/MSD, laboratory and field duplicate RPD values or difference values, with the exceptions noted above. All data are acceptable as reported or as qualified. Table 4 summarizes the qualifiers applied to the sample results reviewed in this report.

Data Qualifier Definitions

U Indicates the compound or analyte was analyzed for but not detected at or above the specified limit.

J Indicates an estimated value.

UJ Indicates the compound or analyte was analyzed for but not detected and the specified limit reported is estimated

Table 4
Data Qualification Summary

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
EQUIPMENT RINSE #2_091118	Metals	Mercury	0.25J ng/L	0.5U ng/L	Method blank contamination
IB-06 0.0-2.0 091018	Metals	Cadmium	0.462 mg/kg	0.462J mg/kg	MS and/or MSD %R above control limit
		Chromium	89.4 mg/kg	89.4J mg/kg	
		Copper	318 mg/kg	318J mg/kg	
		Lead	118 mg/kg	118J mg/kg	
		Nickel	103 mg/kg	103J mg/kg	
		Zinc	292 mg/kg	292J mg/kg	
	PCBs	PCB-018	3.2 µg/kg	3.2J µg/kg	LCSD %R below control limit / LCS/LCSD RPD above control limit
		PCB-052	12 µg/kg	12J µg/kg	LCSD %R below control limit
IB-06 2.0-4.0 091018	Metals	Cadmium	1.38 mg/kg	1.38J mg/kg	MS and/or MSD %R above control limit
		Chromium	172 mg/kg	172J mg/kg	
		Copper	1070 mg/kg	1070J mg/kg	
		Lead	377 mg/kg	377J mg/kg	
		Nickel	240 mg/kg	240J mg/kg	
		Zinc	503 mg/kg	503J mg/kg	

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
	PCBs	PCB-018	68 µg/kg	68J µg/kg	LCSD %R below control limit / LCS/LCSD RPD above control limit
		PCB-052	100 µg/kg	100J µg/kg	LCSD %R below control limit
IB-06 4.0-6.0 091018	Metals	Cadmium	0.39 mg/kg	0.39J mg/kg	MS and/or MSD %R above control limit
		Chromium	103 mg/kg	103J mg/kg	
		Copper	3340 mg/kg	3340J mg/kg	
		Lead	60.6 mg/kg	60.6J mg/kg	
		Nickel	188 mg/kg	188J mg/kg	
		Zinc	107 mg/kg	107J mg/kg	
	PAHs	Acenaphthene	390 µg/kg	390J µg/kg	MS %R was below control limit or did not recover
		Benzo(a)anthracene	630 µg/kg	630J µg/kg	
		Benzo(a)pyrene	720 µg/kg	720J µg/kg	
		Benzo(b)fluoranthene	710 µg/kg	710J µg/kg	
		Benzo(k)fluoranthene	440 µg/kg	440J µg/kg	
		Chrysene	710 µg/kg	710J µg/kg	
		Phenanthrene	760 µg/kg	760J µg/kg	
		Pyrene	2200 µg/kg	2200J µg/kg	
		Anthracene	210 µg/kg	210J µg/kg	MS %R below control limit and MS/MSD RPD above control limit
		Dibenzo(a,h)anthracene	110 µg/kg	110J µg/kg	
		Fluoranthene	2300 µg/kg	2300J µg/kg	MS %R was below control limit or did not recover
		Fluorene	300 µg/kg	300J µg/kg	
		Benzo(g,h,i)perylene	500 µg/kg	500J µg/kg	MS %R below control limit and MSD %R above control limit / MS/MSD RPD above control limit
		Indeno(1,2,3-c,d)pyrene	380 µg/kg	380J µg/kg	
		Naphthalene	92 µg/kg	92J µg/kg	MS %R below control limit

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
	PCBs	PCB-018	9.5 µg/kg	9.5J µg/kg	LCSD %R below control limit / LCS/LCSD RPD above control limit
		PCB-052	13 µg/kg	13J µg/kg	LCSD %R below control limit
IB-07 0.0-2.0 091118	Metals	Chromium	77.9 mg/kg	77.9J mg/kg	MS/MSD %R above control limit
	PCBs	PCB-052	0.33U µg/kg	0.33UJ µg/kg	LCSD %R below control limit
IB-07 100 2.0-4.0 091118	Metals	Cadmium	1.01 mg/kg	1.01J mg/kg	Field duplicate RPD or difference value above control limit
		Chromium	111 mg/kg	111J mg/kg	MS/MSD %R above control limit
		Copper	92.1 mg/kg	92.1J mg/kg	Field duplicate RPD or difference value above control limit
		Lead	91.9 mg/kg	91.9J mg/kg	
		Zinc	276 mg/kg	276J mg/kg	
	PAHs	Benzo(k)fluoranthene	2600 µg/kg	2600J µg/kg	
	PCBs	PCB-052	0.31U µg/kg	0.31UJ µg/kg	LCSD %R below control limit
IB-07 2.0-4.0 091118	Metals	Cadmium	0.64 mg/kg	0.64J mg/kg	Field duplicate RPD or difference value above control limit
		Chromium	94.2 mg/kg	94.2J mg/kg	MS/MSD %R above control limit
		Copper	60.7 mg/kg	60.7J mg/kg	Field duplicate RPD or difference value above control limit
		Lead	47.7 mg/kg	47.7J mg/kg	
		Zinc	115 mg/kg	115J mg/kg	
	PAHs	Benzo(k)fluoranthene	1600 µg/kg	1600J µg/kg	
	PCBs	PCB-052	0.32U µg/kg	0.32UJ µg/kg	LCSD %R below control limit
IB-07 4.0-6.0 091118	Metals	Mercury	580 ng/g	580J ng/g	MS/MSD %R below control limit
		Chromium	122 mg/kg	122J mg/kg	
	PCBs	PCB-052	0.3U µg/kg	0.3UJ µg/kg	LCSD %R below control limit
IB-08 0.0-2.0 091018	Metals	Cadmium	1.17 mg/kg	1.17J mg/kg	MS and/or MSD %R above control limit
		Chromium	134 mg/kg	134J mg/kg	

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
		Copper	155 mg/kg	155J mg/kg	
		Lead	150 mg/kg	150J mg/kg	
		Nickel	145 mg/kg	145J mg/kg	
		Zinc	273 mg/kg	273J mg/kg	
	PCBs	PCB-018	3.6 µg/kg	3.6J µg/kg	LCSD %R below control limit / LCS/LCSD RPD above control limit
		PCB-052	7.9 µg/kg	7.9J µg/kg	LCSD %R below control limit
IB-08 2.0-4.0 091018	Metals	Cadmium	2.78 mg/kg	2.78J mg/kg	MS and/or MSD %R above control limit
		Chromium	154 mg/kg	154J mg/kg	
		Copper	158 mg/kg	158J mg/kg	
		Lead	993 mg/kg	993J mg/kg	
		Nickel	153 mg/kg	153J mg/kg	
		Zinc	394 mg/kg	394J mg/kg	
	PCBs	PCB-018	7.9 µg/kg	7.9J µg/kg	LCSD %R below control limit / LCS/LCSD RPD above control limit
		PCB-052	23 µg/kg	23J µg/kg	LCSD %R below control limit
IB-08 4.0-6.0 091018	Metals	Cadmium	2.35 mg/kg	2.35J mg/kg	MS and/or MSD %R above control limit
		Chromium	96.5 mg/kg	96.5J mg/kg	
		Copper	125 mg/kg	125J mg/kg	
		Lead	147 mg/kg	147J mg/kg	
		Nickel	122 mg/kg	122J mg/kg	
		Zinc	291 mg/kg	291J mg/kg	
	PCBs	PCB-018	5.7 µg/kg	5.7J µg/kg	LCSD %R below control limit / LCS/LCSD RPD above control limit
		PCB-052	8 µg/kg	8J µg/kg	LCSD %R below control limit
IB-11 0.0-2.0 091018	Metals	Cadmium	1.43 mg/kg	1.43J mg/kg	

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
		Chromium	136 mg/kg	136J mg/kg	MS and/or MSD %R above control limit
		Copper	732 mg/kg	732J mg/kg	
		Lead	2090 mg/kg	2090J mg/kg	
		Nickel	198 mg/kg	198J mg/kg	
		Zinc	466 mg/kg	466J mg/kg	
	PCBs	PCB-018	170 µg/kg	170J µg/kg	LCSD %R below control limit / LCS/LCSD RPD above control limit
		PCB-052	210 µg/kg	210J µg/kg	LCSD %R below control limit
IB-11 2.0-4.0 091018	Metals	Cadmium	1.2 mg/kg	1.2J mg/kg	MS and/or MSD %R above control limit
		Chromium	112 mg/kg	112J mg/kg	
		Copper	194 mg/kg	194J mg/kg	
		Lead	411 mg/kg	411J mg/kg	
		Nickel	207 mg/kg	207J mg/kg	
		Zinc	244 mg/kg	244J mg/kg	
	PCBs	PCB-018	4.8 µg/kg	4.8J µg/kg	LCSD %R below control limit / LCS/LCSD RPD above control limit
		PCB-052	2.5 µg/kg	2.5J µg/kg	LCSD %R below control limit
IB-11 4.0-6.0 091018	Metals	Cadmium	0.399 mg/kg	0.399J mg/kg	MS and/or MSD %R above control limit
		Chromium	111 mg/kg	111J mg/kg	
		Copper	32.3 mg/kg	32.3J mg/kg	
		Lead	11.9 mg/kg	11.9J mg/kg	
		Nickel	201 mg/kg	201J mg/kg	
		Zinc	79.8 mg/kg	79.8J mg/kg	
	PCBs	PCB-018	0.67 µg/kg	0.67J µg/kg	LCSD %R below control limit / LCS/LCSD RPD above control limit
		PCB-052	0.32U µg/kg	0.32UJ µg/kg	LCSD %R below control limit

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
IB-12 0.0-2.0 091018	Metals	Cadmium	0.291 mg/kg	0.291J mg/kg	MS and/or MSD %R above control limit
		Chromium	83.8 mg/kg	83.8J mg/kg	
		Copper	130 mg/kg	130J mg/kg	
		Lead	57.5 mg/kg	57.5J mg/kg	
		Nickel	90 mg/kg	90J mg/kg	
		Zinc	168 mg/kg	168J mg/kg	
	PCBs	PCB-018	0.77 µg/kg	0.77J µg/kg	LCSD %R below control limit / LCS/LCSD RPD above control limit
		PCB-052	2.6 µg/kg	2.6J µg/kg	LCSD %R below control limit
IB-12 100 0.0-2.0 091018	Metals	Cadmium	0.313 mg/kg	0.313J mg/kg	MS and/or MSD %R above control limit
		Chromium	84.2 mg/kg	84.2J mg/kg	
		Copper	125 mg/kg	125J mg/kg	
		Lead	54.5 mg/kg	54.5J mg/kg	
		Nickel	92.5 mg/kg	92.5J mg/kg	
		Zinc	166 mg/kg	166J mg/kg	
	PCBs	PCB-018	1.3 µg/kg	1.3J µg/kg	LCSD %R below control limit / LCS/LCSD RPD above control limit
		PCB-052	2.5 µg/kg	2.5J µg/kg	LCSD %R below control limit
IB-12 100 4.0-6.0 091018	Metals	Cadmium	0.799 mg/kg	0.799J mg/kg	MS and/or MSD %R above control limit
		Chromium	114 mg/kg	114J mg/kg	
		Copper	344 mg/kg	344J mg/kg	
		Lead	115 mg/kg	115J mg/kg	
		Nickel	118 mg/kg	118J mg/kg	
		Zinc	274 mg/kg	274J mg/kg	
	PAHs	Benzo(a)pyrene	290 µg/kg	290J µg/kg	
		Benzo(b)fluoranthene	360 µg/kg	360J µg/kg	

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
		Benzo(g,h,i)perylene	130 µg/kg	130J µg/kg	Field duplicate RPD or difference value above control limit
		Benzo(k)fluoranthene	250 µg/kg	250J µg/kg	
		Indeno(1,2,3-c,d)pyrene	120 µg/kg	120J µg/kg	
	PCBs	PCB-018	0.14U µg/kg	0.14UJ µg/kg	LCSD %R below control limit / LCS/LCSD RPD above control limit / Field duplicate RPD or difference value above control limit
		PCB-028	0.15U µg/kg	0.15UJ µg/kg	Field duplicate RPD or difference value above control limit
		PCB-031	0.11U µg/kg	0.11UJ µg/kg	
		PCB-033	0.081U µg/kg	0.081UJ µg/kg	
		PCB-052	12 µg/kg	12J µg/kg	LCSD %R below control limit
IB-12 2.0-4.0 091018	Metals	Cadmium	0.547 mg/kg	0.547J mg/kg	MS and/or MSD %R above control limit
		Chromium	99.4 mg/kg	99.4J mg/kg	
		Copper	241 mg/kg	241J mg/kg	
		Lead	87 mg/kg	87J mg/kg	
		Nickel	98.6 mg/kg	98.6J mg/kg	
		Zinc	232 mg/kg	232J mg/kg	
	PCBs	PCB-018	3.8 µg/kg	3.8J µg/kg	LCSD %R below control limit / LCS/LCSD RPD above control limit
		PCB-052	9.2 µg/kg	9.2J µg/kg	LCSD %R below control limit
IB-12 4.0-6.0 091018	Metals	Cadmium	0.911 mg/kg	0.911J mg/kg	MS and/or MSD %R above control limit
		Chromium	126 mg/kg	126J mg/kg	
		Copper	366 mg/kg	366J mg/kg	
		Lead	118 mg/kg	118J mg/kg	
		Nickel	129 mg/kg	129J mg/kg	
		Zinc	281 mg/kg	281J mg/kg	
	PAHs	Benzo(a)pyrene	160 µg/kg	160J µg/kg	

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
		Benzo(b)fluoranthene	220 µg/kg	220J µg/kg	Field duplicate RPD or difference value above control limit
		Benzo(g,h,i)perylene	6.6U µg/kg	6.6UJ µg/kg	
		Benzo(k)fluoranthene	160 µg/kg	160J µg/kg	
		Indeno(1,2,3-c,d)pyrene	6.8U µg/kg	6.8UJ µg/kg	
	PCBs	PCB-018	8.5 µg/kg	8.5J µg/kg	LCSD %R below control limit / LCS/LCSD RPD above control limit / Field duplicate RPD or difference value above control limit
		PCB-028	4.8 µg/kg	4.8J µg/kg	Field duplicate RPD or difference value above control limit
		PCB-031	5.5 µg/kg	5.5J µg/kg	
		PCB-033	4.5 µg/kg	4.5J µg/kg	
		PCB-052	12 µg/kg	12J µg/kg	LCSD %R below control limit
IB-13 0.0-2.0 091118	Metals	Chromium	77.8 mg/kg	77.8J mg/kg	MS/MSD %R above control limit
	PCBs	PCB-052	1.2 µg/kg	1.2J µg/kg	LCSD %R below control limit
IB-13 2.0-4.0 091118	Metals	Chromium	85.2 mg/kg	85.2J mg/kg	MS/MSD %R above control limit
	PCBs	PCB-052	0.84 µg/kg	0.84J µg/kg	LCSD %R below control limit
IB-13 4.0-6.0 091118	Metals	Chromium	68.3 mg/kg	68.3J mg/kg	MS/MSD %R above control limit
	PCBs	PCB-052	0.33U µg/kg	0.33UJ µg/kg	LCSD %R below control limit
IB-16 0.0-2.0 091118	Metals	Chromium	90.1 mg/kg	90.1J mg/kg	MS/MSD %R above control limit
	PCBs	PCB-052	2.9 µg/kg	2.9J µg/kg	LCSD %R below control limit
IB-16 2.0-4.0 091118	Organotins	Tetrabutyltin	1.3U µg/kg	1.3UJ µg/kg	MSD %R below control limit
		Tributyltin	2.6U µg/kg	2.6UJ µg/kg	
	Metals	Chromium	67.1 mg/kg	67.1J mg/kg	MS/MSD %R above control limit
	PCBs	PCB-052	0.88 µg/kg	0.88J µg/kg	LCSD %R below control limit
IB-16 4.0-6.0 091118	Metals	Chromium	82.9 mg/kg	82.9J mg/kg	MS/MSD %R above control limit
	PCBs	PCB-052	0.31U µg/kg	0.31UJ µg/kg	LCSD %R below control limit
IB-17 0.0-2.0 091118	Metals	Chromium	63.9 mg/kg	63.9J mg/kg	MS/MSD %R above control limit
	PCBs	PCB-052	1.6 µg/kg	1.6J µg/kg	LCSD %R below control limit

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
IB-17 2.0-4.0 091118	Metals	Chromium	94.7 mg/kg	94.7J mg/kg	MS/MSD %R above control limit
	PCBs	PCB-052	1.7 µg/kg	1.7J µg/kg	LCSD %R below control limit
IB-17 4.0-6.0 091118	Metals	Chromium	79.2 mg/kg	79.2J mg/kg	MS/MSD %R above control limit
	PCBs	PCB-052	0.33U µg/kg	0.33UJ µg/kg	LCSD %R below control limit
IB-23 0.0-2.0 091118	Metals	Chromium	38 mg/kg	38J mg/kg	MS/MSD %R above control limit
	PCBs	PCB-052	20 µg/kg	20J µg/kg	LCSD %R below control limit
IB-24 0.0-2.0 091118	Metals	Chromium	153 mg/kg	153J mg/kg	MS/MSD %R above control limit
	PCBs	PCB-052	16 µg/kg	16J µg/kg	LCSD %R below control limit
IB-24 2.0-4.0 091118	Metals	Chromium	488 mg/kg	488J mg/kg	MS/MSD %R above control limit
	PCBs	PCB-052	0.72 µg/kg	0.72J µg/kg	LCSD %R below control limit
IB-INNER 0.0-2.0 091118	PCD/F	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	8800E ng/kg	8800J ng/kg	Linear range exceeded
IB-INNER 100 2.0-4.0 091118	PCD/F	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	708 ng/kg	708J ng/kg	Field duplicate RPD or difference value above control limit
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	131 ng/kg	131J ng/kg	
IB-INNER 2.0-4.0 091118	PCD/F	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	1120 ng/kg	1120J ng/kg	Field duplicate RPD or difference value above control limit
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	192 ng/kg	192J ng/kg	
IB-MIDDLE 4.0-6.0 091118	PCD/F	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	2.14 ng/kg	2.14J ng/kg	EMPC

Notes:
%R: percent recovery
µg/kg: microgram per kilogram
EMPC: estimated maximum possible concentration
LCSD: laboratory control sample duplicate
mg/kg: milligram per kilogram
MS: matrix spike
MSD: matrix spike duplicate
ng/kg: nanogram per kilogram
ng/L: nanogram per liter
RPD: relative percent difference

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USEPA, 2017a. *National Functional Guidelines for Inorganic Superfund Data Review*. Office of Superfund Remediation and Technology Innovation. EPA-540-R-2017-001. January 2017.

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ANCHOR QEA

Data Validation Report – EPA Stage 2A

January 7, 2019

Project: India Basin, 900 Innes Avenue

Project Number: 160153-17.05

This report summarizes the review of analytical results for 12 sediment samples collected on September 12 and 13, 2018. The samples were collected by Leidos and submitted to Eurofins Calscience, Inc. (ECI). Select sample aliquots were subcontracted to Eurofins Frontier Global Sciences (EFGS) in Bothell, Washington. The following analytical parameter results were reviewed in this report:

- Total solids by Standard Method (SM) 2540B
- Metals by U.S. Environmental Protection Agency (USEPA) method 6020
- Polychlorinated biphenyl congeners (PCBs) by USEPA method 8270D-SIM
- Mercury (Hg) by USEPA 1631E

Sample IDs, sample delivery groups (SDGs), matrices, and analyses are presented in Table 1.

Table 1
Sample IDs, Matrices, Analyses, and Sample Delivery Groups

Sample ID	Lab SDG	Lab Sample ID	Matrix	Analyses
IB-03 0.0-2.0 091218	18-09-1272_s1	18-09-1272-22	Sediment	TS, metals, PCBs
	8K00318	8K00318-01		Hg
IB-03 2.0-4.0 091218	18-09-1272_s1	18-09-1272-23	Sediment	TS, metals, PCBs
	8K00318	8K00318-02		Hg
IB-03 4.0-6.0 091218	18-09-1272_s1	18-09-1272-24	Sediment	TS, metals, PCBs
	8K00318	8K00318-03		Hg
IB-04 0.0-2.0 091318	18-09-1272_s1	18-09-1272-41	Sediment	TS, metals, PCBs
	8K00318	8K00318-04		Hg
IB-04 2.0-4.0 091318	18-09-1272_s1	18-09-1272-42	Sediment	TS, metals, PCBs
	8K00318	8K00318-05		Hg
IB-04 4.0-6.0 091318	18-09-1272_s1	18-09-1272-43	Sediment	TS, metals, PCBs
	8K00318	8K00318-06		Hg
IB-09 0.0-2.0 091318	18-09-1272_s1	18-09-1272-35	Sediment	TS, metals, PCBs
	8K00318	8K00318-07		Hg
IB-09 2.0-4.0 091318	18-09-1272_s1	18-09-1272-36	Sediment	TS, metals, PCBs
	8K00318	8K00318-08		Hg
IB-09 4.0-6.0 091318	18-09-1272_s1	18-09-1272-37	Sediment	TS, metals, PCBs
	8K00318	8K00318-09		Hg

Sample ID	Lab SDG	Lab Sample ID	Matrix	Analyses
IB-10 0.0-2.0	18-09-1272_s3	18-09-1272-1	Sediment	TS, metals, PCBs
	8L00232	8L00232-01		Hg
IB-15 0.0-2.0	18-09-1272_s3	18-09-1272-31	Sediment	TS, metals, PCBs
	8L00232	8L00232-02		Hg
IB-14 0.0-2.0	18-09-1272_s3	18-09-1272-47	Sediment	TS, metals, PCBs
	8L00232	8L00232-03		Hg

Notes:
Hg: mercury
PCBs: polychlorinated biphenyls
SDG: sample delivery group
TS: total solids

Data Validation and Qualifications

The following comments refer to the laboratory's performance in meeting the quality assurance/quality control (QA/QC) guidelines outlined in the analytical procedures. Laboratory results were reviewed using the laboratory control limits and the following guidelines:

- *Quality Assurance Project Plan, India Basin, 900 Innes Avenue* (QAPP; Anchor QEA 2018)
- USEPA *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*, Third Edition (SW-846; USEPA 1986)
- USEPA *National Functional Guidelines for Inorganic Superfund Data Review* (USEPA 2017a)
- USEPA *National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA 2017b)

Unless otherwise noted in this report, laboratory results for the samples listed above were within QC criteria.

Field Documentation

Field documentation was checked for completeness and accuracy. The chain-of-custody forms were signed by ECI and EFGS at the time of sample receipt. All samples were received in good condition and within the recommended temperature range. Sediment samples were frozen upon receipt.

Holding Times and Sample Preservation

Samples were appropriately preserved and analyzed within holding times.

Laboratory Method Blanks

Laboratory method blanks were analyzed at the required frequencies. All method blanks were free of target analytes.

Field Quality Control

No equipment blanks or field duplicates were required to be collected with this sample set.

Surrogate Recoveries

Surrogate standards were added to all samples analyzed for PCBs. Recoveries were within the laboratory control limits.

Laboratory Control Samples and Laboratory Control Sample Duplicates

Laboratory control samples (LCS) and laboratory control sample duplicates (LCSDs) were analyzed at the required frequency. Some PCBs were not spiked in the LCS/LCSD samples; therefore, accuracy could not be evaluated for these analytes. All LCS and LCSD recovery values were within project-required control limits.

Matrix Spike and Matrix Spike Duplicate Samples

Matrix spike (MS) and matrix spike duplicate (MSD) samples were analyzed at the required frequencies. Some PCBs were not spiked in the MS/MSD samples; therefore, matrix-specific accuracy could not be evaluated for these analytes. MS/MSD samples analyzed on non-project samples were not evaluated. All MS and MSD recoveries were within project-required control limits, with the exception of the MS analyzed on sample IB-14 0.0-2.0 for PCB128, PCB180, and PCB187, which recovered above the project-required control limit. Associated sample results were qualified "J" to indicate they are estimated.

Laboratory Duplicates

Laboratory duplicates were analyzed at the required frequency or in place of MSD samples for all analyses. Duplicate results from non-project samples were not evaluated. All duplicate relative percent difference (RPD) and/or difference values were within control limits.

Method Reporting Limits and Analyte List

Method detection limits and reporting limits were acceptable as reported. All values were reported using the laboratory limits. Values were reported as undiluted or when diluted, the reporting limit reflects the dilution factor.

Overall Assessment

As was determined by this evaluation, the laboratory followed the specified analytical methods and all requested sample analyses were completed. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS/MSD recovery values. Precision was acceptable, as demonstrated by

the LCS/LCSD, MS/MSD, laboratory and field duplicate RPD values. All data are acceptable as reported or qualified. All qualified data is summarized in Table 3.

Data Qualifier Definitions

J Indicates an estimated value.

Table 2
Data Qualification Summary

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
IB-14 0.0-2.0	PCBs	PCB128	1.4 µg/kg	1.4J µg/kg	MS %R above control limit
		PCB180	16 µg/kg	16J µg/kg	
		PCB187	8.5 µg/kg	8.5J µg/kg	

Notes:
µg/kg: microgram per kilogram
%R: percent recovery
MS: matrix spike
PCBs: polychlorinated biphenyls

References

Anchor QEA (Anchor QEA, LLC), 2018. *Quality Assurance Project Plan, India Basin, 900 Innes Avenue*. April 2018.

USEPA (U.S. Environmental Protection Agency), 1986. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*. Third Edition. Office of Solid Waste and Emergency Response. EPA-530/SW-846.

USEPA, 2017a. *National Functional Guidelines for Inorganic Superfund Data Review*. Office of Superfund Remediation and Technology Innovation. EPA-540-R-2017-001. January 2017.

USEPA, 2017b. *National Functional Guidelines for Superfund Organic Methods Data Review*. Office of Superfund Remediation and Technology Innovation. EPA-540-R-2017-002. January 2017.

Appendix D
Results of Pre-Design Sediment Sampling in 2019

130 Battery Street, Suite 400
San Francisco, California 94111
415.230.0862

ANCHOR QEA

Memorandum

July 29, 2019

To: Charlene Angsuco, San Francisco Recreation and Parks Department

From: Chris Osuch, Anchor QEA, LLC

cc: Jaclyn Gnusti, PE, and Steve Cappellino, Anchor QEA, LLC

Re: Additional Surface Sediment Sampling and Analysis Results for India Basin, 900 Innes Avenue

Introduction

The San Francisco Recreation and Parks Department (SFRPD) is implementing a voluntary cleanup for the 900 Innes Avenue (900 Innes) and India Basin Shoreline Park (IBSP) properties along the shoreline of San Francisco Bay. The 900 Innes property is a former maritime industrial site. The property was used as a ship repair facility for over 120 years. SFRPD acquired the property in 2014. The planned redevelopment for the 900 Innes property includes remediation of historic contaminants and redevelopment of both the landside and waterside portions of the site to create publicly accessible passive shoreline and restore habitat.

The 900 Innes property was previously characterized in 2013, 2015, 2017, and 2018 (Weston 2013a, 2013b; URS 2015; Northgate 2017; Anchor QEA 2019a). Elevated concentrations of contaminants, including metals, total petroleum hydrocarbons, polycyclic aromatic hydrocarbons, and polychlorinated biphenyls (PCBs), were measured in sediment and soil. In sediment, the three primary contaminants of potential concern (COPCs) include lead, mercury, and PCBs. Highest sediment concentrations of each COPC were measured at stations near the shoreline within the 900 Innes property. Offshore of the 900 Innes property, elevated concentrations are primarily buried at depth under a cleaner surface layer, with only one isolated hot spot (station IB-08; Figure 1).

In March 2019, a draft Remedial Action Plan/Remedial Design Report (RAP/RDR) was developed to summarize the nature and extent of contamination at the 900 Innes site, define areas requiring management action, and detail a concept design for implementing a remediation program at the site (Anchor QEA 2019b). Several data needs and pre-design studies were identified during the development of the draft RAP/RDR, including additional surface sediment sampling to fully delineate the spatial extent of contamination and refine remedial boundaries.

Additional sampling and testing were performed near the shoreline of 900 Innes and IBSP to determine the outer boundary for sediment removal and at the localized offshore area (station IB-08) to better define the spatial extent of surface contamination and determine the most appropriate

management alternative (i.e., natural recovery, removal and backfilling, or capping in place). This memorandum summarizes the sediment sampling event and provides data results.

Field Collection Program

Sediment Collection

Surface sediment grab samples were collected on June 3, 2019. Grab samples were collected from 12 stations using a petite ponar. Five stations (IB-SG-01 through IB-SG-05) were located around the localized offshore area (station IB-08), three stations (IB-SG-06 through IB-SG-08) were located near the shoreline of 900 Innes and IBSP, and four stations (IB-SG-09 through IB-SG-12) were located near the outer boundary of the proposed nearshore excavation area. Sampling locations are shown in Figure 1.

Surface sediment sampling was performed from a 22-foot jet vessel equipped with an articulating A-frame. The jet vessel was used to access the shallow sampling locations, which are exposed at low tide. A differential GPS was used to guide the vessel to the pre-determined grab sampling locations with an accuracy of plus or minus 10 feet. Station coordinates, mudline elevation, and grab sample recovery for each station are presented in Table 1.

Table 1
Station Identification, Coordinates, Mudline Elevation, and Grab Sample Recovery for Each Sampling Location

Station ID	Mudline Elevation (feet MLLW)	Latitude (decimal degrees)[1]	Longitude (decimal degrees)[1]	Grab Sample Recovery (cm)
IB-SG-01	+1.0	37.73401	-122.37488	9.0
IB-SG-02	+0.2	37.73399	-122.3746	9.0
IB-SG-03	+0.2	37.73379	-122.37453	9.0
IB-SG-04	+1.0	37.73382	-122.37487	9.0
IB-SG-05	+0.6	37.73367	-122.37469	9.0
IB-SG-06	+1.0	37.73351	-122.37493	9.0
IB-SG-07	+1.0	37.73338	-122.37503	8.5
IB-SG-08	+1.0	37.73321	-122.37521	9.0
IB-SG-09	+0.6	37.73309	-122.37477	7.0
IB-SG-10	+0.8	37.73302	-122.37466	9.0
IB-SG-11	+0.9	37.73291	-122.37452	8.5
IB-SG-12	+1.4	37.73283	-122.37439	9.0

Notes:
1. Based on North American Datum 1983

cm: centimeters
MLLW: mean lower low water

Sample Processing

Surface sediment grab samples were processed on the sampling vessel. Physical characteristics of each grab sample were noted on the individual surface sediment sampling log and each grab sample was photographed. Field logs and photographs are provided in Attachments A and B, respectively.

Surface sediment samples were collected for sediment chemistry and archival. Surface sediment from the entire depth of the grab was placed into jars appropriate for chemical analysis, and firmly sealed with Teflon-lined lids. All samples were temporarily stored in coolers with ice. Samples were picked up by courier and shipped overnight to Eurofins Calscience, Inc., in Garden Grove, California, for analysis. Proper chain-of-custody procedures were followed.

Chemical Analyses Results

Chemical analysis of sediment samples was performed to fully delineate the spatial extent of contamination in nearshore and offshore sediments at 900 Innes Avenue and IBSP. Surface sediment samples from each station were submitted for analysis of total solids, lead, mercury, and PCB congeners. All analytical methods used followed U.S. Environmental Protection Agency and Standard Method protocols.

Sediment chemistry results were compared to area-weighted average (AWA) and not-to-exceed (NTE) remedial goals for lead, mercury, and PCBs (Anchor QEA 2019b). These goals are consistent with established cleanup levels for nearby sites (e.g., Yosemite Slough and Hunters Point Naval Shipyard Parcel F), National Oceanic and Atmospheric Administration effects range median values (Long et al. 1995), and ambient concentrations in nearshore sediments. Sediment chemistry results are presented in Table 2. Method detection limits, reporting limits, and raw data for the analyses are presented in the laboratory report in Attachment C. All concentrations of contaminants were less than NTE remedial goals. Concentrations of PCBs at three stations (IB-SG-02, IB-SG-10, and IB-SG-11) exceeded the AWA remedial goal.

Table 2
Surface Sediment Chemistry Results

		Location Name	IB-SG-01	IB-SG-02	IB-SG-03	IB-SG-04	IB-SG-05	IB-SG-06	IB-SG-07	IB-SG-08
		Sample Name	IB-SG-01-190603	IB-SG-02-190603	IB-SG-03-190603	IB-SG-04-190603	IB-SG-05-190603	IB-SG-06-190603	IB-SG-07-190603	IB-SG-08-190603
		Sample Date	6/3/2019	6/3/2019	6/3/2019	6/3/2019	6/3/2019	6/3/2019	6/3/2019	6/3/2019
		Depth Interval	0 - 9 cm	0 - 9 cm	0 - 9 cm	0 - 9 cm	0 - 9 cm	0 - 9 cm	0 - 8.5 cm	0 - 9 cm
	Proposed Sitewide AWA Remedial Goal	Proposed NTE Remedial Goal for Any Given Location								
Conventional Parameters (pct)										
Total Solids	--	--	**50.5**	**39.8**	**35.6**	**41.7**	**37.5**	**38.4**	**36.8**	**37**
Metals (mg/kg)										
Lead	218	436	**38.3**	**56.1**	**45**	**50.7**	**52.4**	**59.2**	**47.9**	**47.6**
Mercury	0.71	1.87	**0.263**	**0.497**	**0.39**	**0.419**	**0.47**	**0.517**	**0.478**	**0.485**
PCB Congeners (µg/kg)										
PCB-005/008	--	--	**0.33 J**	**0.62 J**	**0.37 J**	**0.67 J**	**0.53 J**	**0.56 J**	**0.66 J**	**0.49 J**
PCB-018	--	--	0.13 U	0.16 U	0.18 U	0.16 U	0.17 U	**0.88**	**0.78**	0.18 U
PCB-028	--	--	0.14 U	**0.96**	0.19 U	**0.81**	**0.62**	**0.93**	**0.82**	**1.3**
PCB-031	--	--	**0.41**	**1.1**	**0.84**	**0.76**	**0.84**	**0.93**	**0.87**	**1.1**
PCB-033	--	--	**0.32 J**	**1.2**	**1.2**	**0.77**	**0.8**	**0.76**	**0.61**	**0.71**
PCB-044	--	--	0.3 U	**3.5**	0.43 U	0.36 U	**2.6**	**2.8**	0.41 U	**4.2**
PCB-049	--	--	**0.53**	**1.5**	**1.5**	**2.4**	**1.1**	**2.4**	**2**	**2.6**
PCB-052	--	--	**1.3**	**3.1**	**3.8**	**3.2**	**2.4**	**3.8**	**2.4**	**3.3**
PCB-056	--	--	0.15 U	0.19 U	0.21 U	0.18 U	0.2 U	0.19 U	0.2 U	0.2 U
PCB-060	--	--	0.1 U	0.13 U	0.15 U	0.13 U	0.14 U	0.13 U	0.14 U	0.14 U
PCB-066	--	--	**0.71**	**1.7**	**1.4**	**1.8**	**1.7**	**2**	**2.6**	**2.6**
PCB-070	--	--	**0.78**	**2.4**	**1.7**	**2.1**	**1.4**	**2.5**	**2.1**	**2.8**
PCB-074	--	--	**0.97**	**0.91**	**0.92**	**0.68**	**0.97**	**1.2**	**1.1**	**1.3**
PCB-087	--	--	**0.5**	**2.4**	**0.92**	**1.7**	**1.1**	**1.1**	0.3 U	0.3 U
PCB-095	--	--	**1.6**	**5.5**	**3.4**	**4.4**	**3.5**	**1.6**	0.29 U	**5.2**
PCB-097	--	--	0.091 U	**2.3**	**0.79**	**1.1**	**1.6**	**1.4**	**1.8**	**1.8**
PCB-099	--	--	**1.1**	**3.4**	**2.1**	**3.1**	**2.9**	**4.2**	**4.2**	**4.3**
PCB-101	--	--	**2.2**	**8.4**	**4.1**	**6.3**	**4.9**	**5.7**	**5.7**	**6.1**
PCB-105	--	--	**0.96**	**3.3**	**1.2**	**2.1**	**1.7**	**1.7**	**1.9**	0.14 U
PCB-110	--	--	**1.7**	**4.9**	**3.9**	**4.9**	**4.5**	**3.3**	**3.2**	**3.5**
PCB-118	--	--	**1.5**	**5**	**3.2**	**4.1**	**3.4**	**3.3**	**3.7**	**3.3**
PCB-128	--	--	0.24 U	**2.5**	0.34 U	0.29 U	**1.5**	0.31 U	0.32 U	0.32 U
PCB-132/153	--	--	**7.2**	**31**	**14**	**21**	**16**	**20**	**21**	**17**
PCB-138/158	--	--	**4.4**	**19**	**7.8**	**11**	**9.2**	**9.5**	**8.5**	**7.8**
PCB-141	--	--	0.097 U	**4.7**	0.14 U	0.12 U	**1.5**	0.13 U	**1.5**	**1.9**
PCB-149	--	--	**3.8**	**16**	**7.5**	**10**	**9.5**	**9.3**	**9.9**	**9.1**

Table 2
Surface Sediment Chemistry Results

		Location Name	IB-SG-09	IB-SG-10	IB-SG-11	IB-SG-12
		Sample Name	IB-SG-09-190603	IB-SG-10-190603	IB-SG-11-190603	IB-SG-12-190603
		Sample Date	6/3/2019	6/3/2019	6/3/2019	6/3/2019
		Depth Interval	0 - 7 cm	0 - 9 cm	0 - 8.5 cm	0 - 9 cm
	Proposed Sitewide AWA Remedial Goal	Proposed NTE Remedial Goal for Any Given Location				
Conventional Parameters (pct)						
Total Solids	--	--	**28.8**	**30.3**	**33.5**	**31.7**
Metals (mg/kg)						
Lead	218	436	**46.9**	**56.9**	**51.8**	**51.1**
Mercury	0.71	1.87	**0.387**	**0.583**	**0.563**	**0.552**
PCB Congeners (µg/kg)						
PCB-005/008	--	--	**0.51 J**	**0.38 J**	**0.48 J**	**0.75 J**
PCB-018	--	--	0.22 U	**1.2**	**1.3**	**1.6**
PCB-028	--	--	**1.4**	**1.4**	**1.5**	**1.4**
PCB-031	--	--	**1.1**	**1.4**	**1.1**	**1.1**
PCB-033	--	--	0.13 U	**0.73**	**0.83**	**0.64**
PCB-044	--	--	**3**	**2.3**	**3**	**4.1**
PCB-049	--	--	0.17 U	**5.6**	**2.9**	**2.3**
PCB-052	--	--	**2.9**	**4.4**	**3.7**	**3.1**
PCB-056	--	--	0.26 U	**1.2**	**0.98**	0.24 U
PCB-060	--	--	0.18 U	**0.37 J**	0.16 U	0.17 U
PCB-066	--	--	**2.5**	**2.7**	**2.9**	**2**
PCB-070	--	--	**2**	**2.6**	**2.8**	**2.1**
PCB-074	--	--	**1.1**	**1.3**	**1.2**	**0.84**
PCB-087	--	--	**1.3**	**1.6**	**1.2**	**0.81**
PCB-095	--	--	**4**	**11**	**5.9**	**3.5**
PCB-097	--	--	**1.1**	**1.8**	**2.1**	**1.3**
PCB-099	--	--	**2.8**	**8.9**	**4.5**	**2.6**
PCB-101	--	--	**4.9**	**11**	**7.1**	**4.2**
PCB-105	--	--	**2.3**	**2.2**	**2.9**	**1.3**
PCB-110	--	--	**4.5**	**3.7**	**4.3**	**3.1**
PCB-118	--	--	**3.2**	**3.4**	**4.2**	**3.3**
PCB-128	--	--	0.41 U	0.39 U	**1.9**	0.38 U
PCB-132/153	--	--	**13**	**43**	**26**	**14**
PCB-138/158	--	--	**6.4**	**16**	**16**	**7.7**
PCB-141	--	--	**13**	0.16 U	0.15 U	0.15 U
PCB-149	--	--	**7.5**	**20**	**13**	**7.2**

Table 2
Surface Sediment Chemistry Results

		Location Name	IB-SG-01	IB-SG-02	IB-SG-03	IB-SG-04	IB-SG-05	IB-SG-06	IB-SG-07	IB-SG-08
		Sample Name	IB-SG-01-190603	IB-SG-02-190603	IB-SG-03-190603	IB-SG-04-190603	IB-SG-05-190603	IB-SG-06-190603	IB-SG-07-190603	IB-SG-08-190603
		Sample Date	6/3/2019	6/3/2019	6/3/2019	6/3/2019	6/3/2019	6/3/2019	6/3/2019	6/3/2019
		Depth Interval	0 - 9 cm	0 - 9 cm	0 - 9 cm	0 - 9 cm	0 - 9 cm	0 - 9 cm	0 - 8.5 cm	0 - 9 cm
	Proposed Sitewide AWA Remedial Goal	Proposed NTE Remedial Goal for Any Given Location								
PCB-151	--	--	**1.4**	**5.6**	**2.6**	**3.7**	**3.1**	**3.3**	**3.1**	**3.8**
PCB-156	--	--	0.15 U	**1.2**	0.22 U	**0.85**	**0.58**	0.2 U	0.21 U	**0.7**
PCB-170	--	--	**2.1**	**8.5**	**4.6**	**5.4**	**4.2**	**5.9**	**4.9**	**5.1**
PCB-174	--	--	**1.5**	**8.5**	**2.9**	**4.3**	**3.2**	**3.1**	**2.7**	**2.7**
PCB-177	--	--	**0.96**	**4.8**	**2.3**	**2.8**	**2.1**	**2.4**	**2**	**1.9**
PCB-180	--	--	**4.1**	**22**	**7.9**	**11**	**8.9**	**9.5**	**7.5**	**8.3**
PCB-183	--	--	**0.95**	**5.7**	**2.2**	**3**	**2.7**	**2.5**	**2.3**	**2.1**
PCB-187	--	--	**3.8**	**13**	**5.2**	**8.4**	**6.5**	**7.8**	**6**	**6.4**
PCB-194	--	--	**1.6**	**4.4**	**2.2**	**2.7**	**2.8**	**3.6**	**2.5**	**3.2**
PCB-195	--	--	**0.65**	**2.3**	**0.86**	**1.4**	**0.97**	**1.3**	**1.3**	0.16 U
PCB-201	--	--	0.067 U	**1.1**	**0.55 J**	**0.82**	**0.67**	**0.63**	**0.57**	**0.89**
PCB-203	--	--	**1.6**	**4.7**	**1.8**	**2.8**	**3.3**	**3.7**	**2.5**	**2.2**
Total PCB Congeners (SFEI 40) (U = 0)	148	1,240	**48.97 J**	**207.19 J**	**93.75 J**	**130.06 J**	**113.28 J**	**123.59 J**	**110.71 J**	**117.69 J**

Table 2
Surface Sediment Chemistry Results

		Location Name	IB-SG-09	IB-SG-10	IB-SG-11	IB-SG-12
		Sample Name	IB-SG-09-190603	IB-SG-10-190603	IB-SG-11-190603	IB-SG-12-190603
		Sample Date	6/3/2019	6/3/2019	6/3/2019	6/3/2019
		Depth Interval	0 - 7 cm	0 - 9 cm	0 - 8.5 cm	0 - 9 cm
	Proposed Sitewide AWA Remedial Goal	**Proposed NTE Remedial Goal for Any Given Location**				
PCB-151	--	--	**3.7**	**8.4**	**5.2**	**2.6**
PCB-156	--	--	**0.65 J**	**0.97**	**1.1**	0.24 U
PCB-170	--	--	**3.6**	**20**	**6.8**	**4.9**
PCB-174	--	--	**2.5**	**11**	**7.4**	**3.2**
PCB-177	--	--	**1.9**	**6.3**	**5.3**	**2.1**
PCB-180	--	--	**7.1**	**32**	**21**	**8.3**
PCB-183	--	--	**1.5**	**7.8**	**5.1**	**2.3**
PCB-187	--	--	**4.5**	**21**	**14**	**6**
PCB-194	--	--	**2.7**	**15**	**4.2**	**4.6**
PCB-195	--	--	0.21 U	**6.3**	**1.4**	**1.3**
PCB-201	--	--	**0.59 J**	**1.5**	**1.1**	**0.49 J**
PCB-203	--	--	**1.1**	**16**	**4.2**	**3.3**
Total PCB Congeners (SFEI 40) (U = 0)	148	1,240	**108.35 J**	**294.45 J**	**188.59 J**	**108.03 J**

Notes:
Detected concentration is greater than Proposed Sitewide AWA Remedial Goal.
Italicized : Non-detected concentration is above one or more identified screening levels.
Bold: Detected result
Totals are calculated as the sum of all detected results (U=0). If all results are not detected, the highest method detection limit value is reported as the sum.
Total PCB congeners is the sum of the following PCB congeners: 008, 018, 028, 031, 033, 044, 049, 052, 056, 060, 066, 070, 074, 087, 095, 097, 099, 101, 105, 110, 118, 128, 132, 138, 141, 149, 151, 153, 156, 158, 170, 174, 177, 180, 183, 187, 194, 195, 201, and 203.
USEPA Stage 2A data validation was completed by Anchor QEA.
--: not applicable
µg/kg: micrograms per kilogram
cm: centimeters
J: Estimated value
mg/kg: milligrams per kilogram
PCB: polychlorinated biphenyls
pct: percent
U: Compound analyzed, but not detected above detection limit

FINAL VALIDATED TABLE

Quality Assurance and Quality Control

A review of analytical results was conducted to evaluate the laboratory's performance in meeting quality assurance/quality control guidelines outline in the 2018 *Sampling and Analysis Plan, 900 Innes Avenue* (Anchor QEA 2018a) and *Quality Assurance Project Plan, 900 Innes Avenue* (Anchor QEA 2018b). The data validation report prepared by Anchor QEA, LLC, is presented in Attachment D. All samples were received in good condition and within the recommended temperature range. Samples were appropriately preserved and analyzed within holding times. Laboratory quality control samples included matrix replicates, matrix spikes, surrogate spikes (for organic analyses), laboratory control samples, and method blanks. Results of this assessment concluded that all data were acceptable as reported.

References

Anchor QEA (Anchor QEA, LLC), 2018a. *Sampling and Analysis Plan, 900 Innes Avenue*. April 2018.

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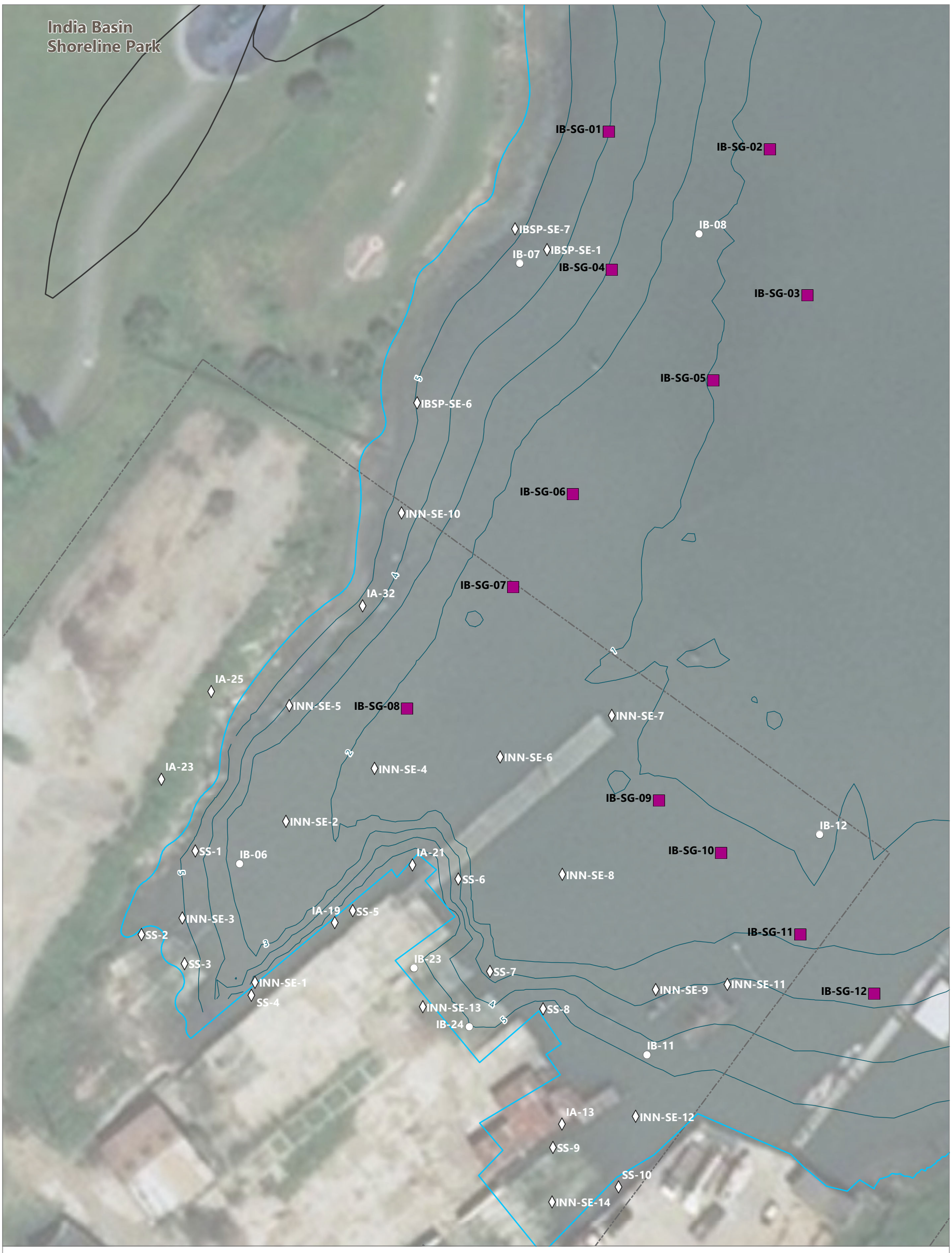
Figure



LEGEND:

- Sediment Sample (Anchor QEA 2018)
- Historical Data (Weston 2013, URS 2015, Northgate 2017)

Surface Sediment Sample

- Analyzed for PCBs, Lead, and Mercury
- Property Boundary
- Mean High Water Line (5.98 Feet MLLW)
- Shipwreck Vessels
- 1-Foot Contours, MLLW

0 50
Feet

Publish Date: 2019/06/27, 3:59 PM | User: kballou
Filepath: Q:\Jobs\CityAndCounty_SanFrancisco_0153\InnesIndiaBasin\Maps\RAP\India_Basin_Sampling_Locations.mxd

ANCHOR QEA

Figure 1
Sampling Locations
India Basin – 900 Innes Avenue
San Francisco Recreation and Parks Department

Attachment A
Field Logs

Surface Sediment Sampling Log

ANCHOR QEA

Project: India Basin
Project No: ~~190153~~ 192051-01.01
Subontractor: Leviathan
Vessel: Jet boat
Sample Method: Ponar
Field Staff: CD/RM

Date: 6/3/19 **Time:** 1245
Station ID: IB-SG-01
Navigation: DGPS WAAS-GPS GPS
Weather: Clear Overcast Partly Cloudy Drizzle/Rain
Sea State: Calm Choppy Rough
Wind: Speed kts Direction S
Swell: Period s Height ft Direction

Station comments:

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (ft)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (~~cm~~)	Analysis			
1	IBSG-01-190603	1245	37.73401	-122.37488	3.9	3	Y	~~4~~ 9.0 cm	Chem/Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:	silt w/fine sand		none	gray	none	None	Jar	2	X			
1	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
2									Chem/Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
									Chem/Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Directions: N, NE, E, SE, S, SW, W, NW, or XX for calm
Sediment Composition: coarse sand, medium sand, fine sand, silt, clay, silt/clay, gravel, cobble, mixed
Odor: none, petroleum, hydrogen sulfide (H2S), humic, other
Color: [light or dark] brown, olive, grey, black, red, brown surface
Shell Hash: trace, moderate, substantial
Debris: trace, moderate, substantial

Surface Sediment Sampling Log

ANCHOR QEA

Project: India Basin
Project No: ~~14453-01.02~~ 192051-01.01
Subontractor: Leviathan
Vessel: Jet boat
Sample Method: Ponar
Field Staff: CO/RM

Station comments: tide

Date: 6/3/19 **Time:** 1005
Station ID: IB-SG-02
Navigation: DGPS WAAS-GPS GPS
Weather: Clear Overcast Partly Cloudy Drizzle/Rain
Sea State: Calm Choppy Rough
Wind: Speed kts Direction
Swell: Period s Height ft Direction

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (ft)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (~~cm~~ FT)	Analysis			
1	IB-SG-02	1005	37.73399	-122.37460	1.4	3	Y	9.0 cm	Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:	Silt		none	gray	none	none	jar	2	X			
1	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
2									Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
									Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Directions: N, NE, E, SE, S, SW, W, NW, or XX for calm
Sediment Composition: coarse sand, medium sand, fine sand, silt, clay, silt/clay, gravel, cobble, mixed
Odor: none, petroleum, hydrogen sulfide (H2S), humic, other
Color: [light or dark] brown, olive, grey, black, red, brown surface
Shell Hash: trace, moderate, substantial
Debris: trace, moderate, substantial

Surface Sediment Sampling Log

ANCHOR QEA

Project: India Basin
Project No: ~~190153-01.01~~ 192051-01.01
Subontractor: Leviathan
Vessel: Jet boat
Sample Method: Ponar
Field Staff: C. Dolphin, R. Musselman

Date: 6/3/19 **Time:** 955
Station ID: IB-SG-03
Navigation: DGPS | WAAS-GPS | GPS
Weather: Clear | Overcast | Partly Cloudy | Drizzle/Rain
Sea State: Calm | Choppy | Rough
Wind: Speed kts Direction
Swell: Period s Height ft Direction

Station comments:

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (ft)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis: Chem/Physical	Treatability	Comp	
1	IB-SG-03-192051	955	37.73379	-122.37453	1.2	5	Y	9.0				
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:	Silt		none	gray	none	none	jar	2	X			
↑	Notes/Comments: Tide 1.28											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis: Chem/Physical	Treatability	Comp	
2												
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis: Chem/Physical	Treatability	Comp	
3												
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Directions: N, NE, E, SE, S, SW, W, NW, or XX for calm
Sediment Composition: coarse sand, medium sand, fine sand, silt, clay, silt/clay, gravel, cobble, mixed
Odor: none, petroleum, hydrogen sulfide (H2S), humic, other
Color: [light or dark] brown, olive, grey, black, red, brown surface
Shell Hash: trace, moderate, substantial
Debris: trace, moderate, substantial

Surface Sediment Sampling Log

ANCHOR QEA

Project: India Basin
Project No: ~~190153-01.01~~ 192051-01.01
Subontractor: Leviathan
Vessel: Jet boat
Sample Method: Ponar
Field Staff: CD/RM

Date: 6/3/19 **Time:** 1230
Station ID: IB-SG-04
Navigation: DGPS WAAS-GPS GPS
Weather: Clear Overcast Partly Cloudy Drizzle/Rain
Sea State: Calm Choppy Rough
Wind: ~~Speed~~ kts ~~Direction~~ S
Swell: ~~Period~~ s ~~Height~~ ft Direction

Station comments:

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (ft)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration ~~(cm)~~	Analysis			
1	IB-SG-04-190603	1230	37.73382	122.37487	3.7	4	Y	9.0 ~~4~~ cm	Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:	Silt		none	brown surface dark gray	trace	none	jar	2	X			
1	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
2									Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
									Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Directions: N, NE, E, SE, S, SW, W, NW, or XX for calm
Sediment Composition: coarse sand, medium sand, fine sand, silt, clay, silt/clay, gravel, cobble, mixed
Odor: none, petroleum, hydrogen sulfide (H2S), humic, other
Color: [light or dark] brown, olive, grey, black, red, brown surface
Shell Hash: trace, moderate, substantial
Debris: trace, moderate, substantial

Surface Sediment Sampling Log

ANCHOR QEA

Project: India Basin
Project No: ~~140153-01.01~~ 192051-01.01
Subontractor: Leviathan
Vessel: Jet boat
Sample Method: Ponar
Field Staff: CD/RM

Station comments: MS/MSD taken (1 x 802.)

Date: 6/3/19 Time: 1025
Station ID: IB-SG-05
Navigation: DGPS WAAS-GPS GPS
Weather: Clear Overcast Partly Cloudy Drizzle/Rain
Sea State: Calm Choppy Rough
Wind: Speed kts Direction
Swell: Period s Height ft Direction

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (ft)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (~~cm~~)	Analysis			
1	IB-SG-05-180603	1025	37.73367	-122.37469	1.5	-	Y	9 cm	Chem/Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:	silt		none	light gray	trace	none	~~2~~ jar	~~2~~ 3	X			
1	Notes/Comments: 3 pilings → debris											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
2									Chem/Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
									Chem/Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Directions: N, NE, E, SE, S, SW, W, NW, or XX for calm
Sediment Composition: coarse sand, medium sand, fine sand, silt, clay, silt/clay, gravel, cobble, mixed
Odor: none, petroleum, hydrogen sulfide (H2S), humic, other
Color: [light or dark] brown, olive, grey, black, red, brown surface
Shell Hash: trace, moderate, substantial
Debris: trace, moderate, substantial

Surface Sediment Sampling Log

ANCHOR QEA

Project: India Basin
Project No: ~~190153-01.01~~ 192051-01.01
Subontractor: Leviathan
Vessel: Jet boat
Sample Method: Ponar
Field Staff: CO / RM

Date: 6/3/19 **Time:** 1045
Station ID: IB-SG-06
Navigation: DGPS WAAS-GPS GPS
Weather: Clear Overcast Partly Cloudy Drizzle/Rain
Sea State: Calm Choppy Rough
Wind: Speed kts Direction
Swell: Period s Height ft Direction

Station comments:

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (ft)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (~~cm~~)	Analysis			
1	IB-SG-06-190603	1045	37.73351	-122.37493	1.6	5	Y	~~in~~ cm	Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:	Silt		none	gray w/ lt. brown surface	none	none	jar	2	X			
1	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
2									Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
									Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Directions: N, NE, E, SE, S, SW, W, NW, or XX for calm
Sediment Composition: coarse sand, medium sand, fine sand, silt, clay, silt/clay, gravel, cobble, mixed
Odor: none, petroleum, hydrogen sulfide (H2S), humic, other
Color: [light or dark] brown, olive, grey, black, red, brown surface
Shell Hash: trace, moderate, substantial
Debris: trace, moderate, substantial

Surface Sediment Sampling Log

ANCHOR QEA

Project: India Basin
Project No: ~~140153-01.0~~ V92051-01.01
Subontractor: Leviathan
Vessel: Jet boat
Sample Method: Ponar
Field Staff: CO/RM

Date: 6/3/19 **Time:** 1100
Station ID: IB-SG-07
Navigation: DGPS WAAS-GPS GPS
Weather: Clear Overcast Partly Cloudy Drizzle/Rain
Sea State: Calm Choppy Rough
Wind: ~~Speed~~ kts Direction
Swell: Period s Height ft Direction

Station comments:

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (ft)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
1	IB-SG-07-190603	1100	37.73338	122.37503	1.9	5	Y	~~7.5~~ 8.5	Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:	silt		none	gray	trace	none	jar	2				
1	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
									Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
									Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Directions: N, NE, E, SE, S, SW, W, NW, or XX for calm
Sediment Composition: coarse sand, medium sand, fine sand, silt, clay, silt/clay, gravel, cobble, mixed
Odor: none, petroleum, hydrogen sulfide (H2S), humic, other
Color: [light or dark] brown, olive, grey, black, red, brown surface
Shell Hash: trace, moderate, substantial
Debris: trace, moderate, substantial

Surface Sediment Sampling Log

ANCHOR QEA

Project: India Basin
Project No: ~~190153-01.01~~ 192051-01.01
Subontractor: Leviathan
Vessel: Jet boat
Sample Method: Ponar
Field Staff: CO/RM

Date: 6/3/19 **Time:** 1110
Station ID: IB-SG-08
Navigation: DGPS WAAS-GPS (GPS)
Weather: Clear Overcast (Partly Cloudy) Drizzle/Rain
Sea State: (Calm) Choppy Rough
Wind: ~~Speed~~ kts ~~Direction~~
Swell: ~~Period~~ s Height ft ~~Direction~~

Station comments:

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (ft)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration ~~(cm)~~	Analysis			
1	IB-SG-08-190603	1110	37.73321	-122.37521	2.1	5	Y	~~4 in.~~ 9cm	Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:	Silt w/trace f sand		none	gray	None	none	jar	2	X			
1	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
									Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
									Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Directions: N, NE, E, SE, S, SW, W, NW, or XX for calm
Sediment Composition: coarse sand, medium sand, fine sand, silt, clay, silt/clay, gravel, cobble, mixed
Odor: none, petroleum, hydrogen sulfide (H2S), humic, other
Color: [light or dark] brown, olive, grey, black, red, brown surface
Shell Hash: trace, moderate, substantial
Debris: trace, moderate, substantial

Surface Sediment Sampling Log

ANCHOR QEA

Project: India Basin
Project No: ~~192153-01.01~~ 192051-01.01
Subontractor: Leviathan
Vessel: Jet boat
Sample Method: Ponar
Field Staff: CD, RM

Date: 6/3/19 **Time:** 1125
Station ID: IB-SG-09
Navigation: DGPS WAAS-GPS GPS
Weather: Clear Overcast Partly Cloudy Drizzle/Rain
Sea State: Calm Choppy Rough
Wind: Speed kts Direction
Swell: Period s Height ft Direction

Station comments:

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (ft)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration ~~(cm)~~	Analysis			
1	IB-SG-09 190603	1130	37.73309	122.37477	29	6 ft	Y	~~2.75 in~~ 7 cm	Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:	silt		none	light gray w/ light brown surface	none	none	jar	2	X			
1	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
2									Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
									Chem/ Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Directions: N, NE, E, SE, S, SW, W, NW, or XX for calm
Sediment Composition: coarse sand, medium sand, fine sand, silt, clay, silt/clay, gravel, cobble, mixed
Odor: none, petroleum, hydrogen sulfide (H2S), humic, other
Color: [light or dark] brown, olive, grey, black, red, brown surface
Shell Hash: trace, moderate, substantial
Debris: trace, moderate, substantial

Surface Sediment Sampling Log

ANCHOR QEA

Project: India Basin
Project No: ~~190153-01.01~~ 192051-0201
Subontractor: Leviathan
Vessel: Jet boat
Sample Method: Ponar
Field Staff: CO / RM

Date: 6/3/19 **Time:** 1145
Station ID: IB-SG-10
Navigation: DGPS WAAS-GPS GPS
Weather: Clear Overcast Partly Cloudy Drizzle/Rain
Sea State: Calm Choppy Rough
Wind: ~~Speed~~ kts ~~Direction~~
Swell: ~~Period~~ s ~~Height~~ ft ~~Direction~~

Station comments:

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (ft)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration ~~(cm)~~	Analysis			
1	IB-SG-10-190603	1145	37.73302	122.37466	3.1	5	Y	9 cm	Chem/Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:	silt		none	dark gray, brown surface	none	none	jar	2	X			
1	Notes/Comments: trace organics											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
									Chem/Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
									Chem/Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Directions: N, NE, E, SE, S, SW, W, NW, or XX for calm
Sediment Composition: coarse sand, medium sand, fine sand, silt, clay, silt/clay, gravel, cobble, mixed
Odor: none, petroleum, hydrogen sulfide (H2S), humic, other
Color: [light or dark] brown, olive, grey, black, red, brown surface
Shell Hash: trace, moderate, substantial
Debris: trace, moderate, substantial

Surface Sediment Sampling Log

ANCHOR QEA

Project: India Basin
Project No: ~~140153-01-01~~ 192051-01.01
Subontractor: Leviathan
Vessel: Jet boat
Sample Method: Ponar
Field Staff: CO / RM

Date: 6/3/19 **Time:** ~~1450~~ 1155
Station ID: IB-SG-11
Navigation: DGPS WAAS-GPS GPS
Weather: Clear Overcast Partly Cloudy Drizzle/Rain
Sea State: ~~Calm~~ Choppy Rough
Wind: ~~Speed~~ kts ~~Direction~~
Swell: ~~Period~~ s ~~Height~~ ft ~~Direction~~

Station comments:

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (ft)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration ~~(cm)~~	Analysis			
1	IB-SG-11-190603	1155	37.73291	-122.37452	3.3	6	Y	8.5 cm	Chem/Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:	Silt		none	Brown surface dark gray	none	None	jar	2	X			
1	Notes/Comments: trace organics											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
2									Chem/Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
									Chem/Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Directions: N, NE, E, SE, S, SW, W, NW, or XX for calm
Sediment Composition: coarse sand, medium sand, fine sand, silt, clay, silt/clay, gravel, cobble, mixed
Odor: none, petroleum, hydrogen sulfide (H2S), humic, other
Color: [light or dark] brown, olive, grey, black, red, brown surface
Shell Hash: trace, moderate, substantial
Debris: trace, moderate, substantial

Surface Sediment Sampling Log

ANCHOR QEA

Project: India Basin
Project No: ~~192053-01.01~~ 192051-01.01
Subontractor: Leviathan
Vessel: Jet boat
Sample Method: Ponar
Field Staff: CD/RM

Date: 6/3/19 **Time:** 1215
Station ID: IB-SG-12
Navigation: DGPS WAAS-GPS GPS
Weather: Clear Overcast Partly Cloudy Drizzle/Rain
Sea State: Calm Choppy Rough
Wind: Speed 5 kts Direction S
Swell: Period s Height ft Direction

Station comments:

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (ft)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration ~~(cm)~~	Analysis			
1	IB-SG12-19a003	1215	37.73283	-122.37439	3.1	5	Y	9.0 cm	Chem/Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:	Silt		none	brown surface gray	none	none	jar	2	Y			
1	Notes/Comments:											

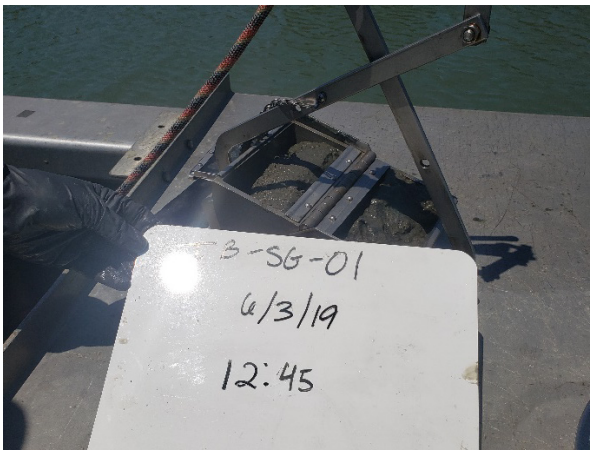
Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
2									Chem/Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

Attempt/Grab No.:	Sample ID	Time	Latitude (DD MM.mmmm)	Longitude (DD MM.mmmm)	Depth (m)	Distance to Target (ft)	Grab accepted (Y/N)?	Penetration (cm)	Analysis			
									Chem/Physical	Treatability	Comp	
	Sediment Composition		Odor	Color	Shell Hash	Debris	Container Type	No. of Containers				
Photos:												
	Notes/Comments:											

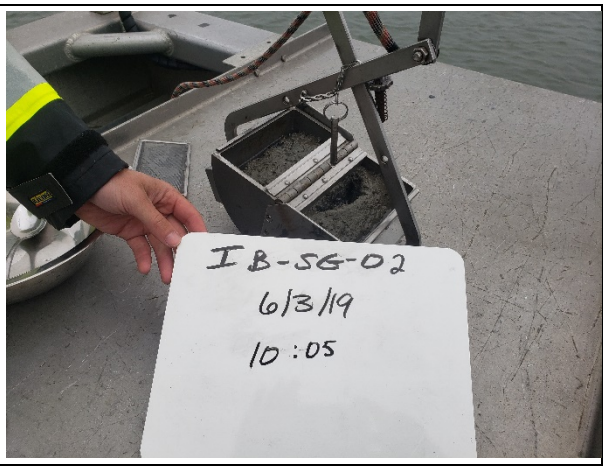
Directions: N, NE, E, SE, S, SW, W, NW, or XX for calm
Sediment Composition: coarse sand, medium sand, fine sand, silt, clay, silt/clay, gravel, cobble, mixed
Odor: none, petroleum, hydrogen sulfide (H2S), humic, other
Color: [light or dark] brown, olive, grey, black, red, brown surface
Shell Hash: trace, moderate, substantial
Debris: trace, moderate, substantial

Attachment B
Grab Sample Photographs

Attachment B
Grab Sample Photographs



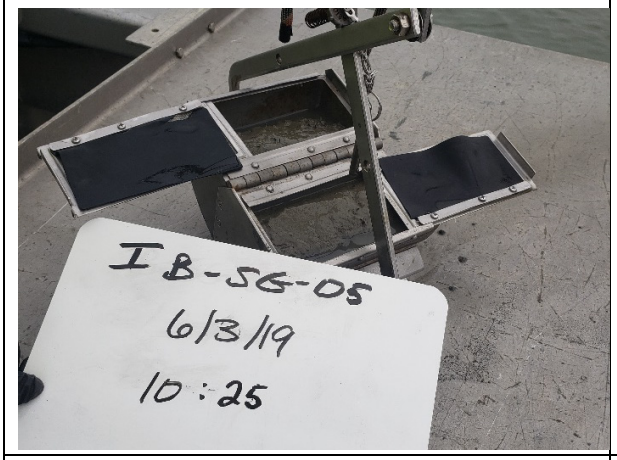
IB-SG-01



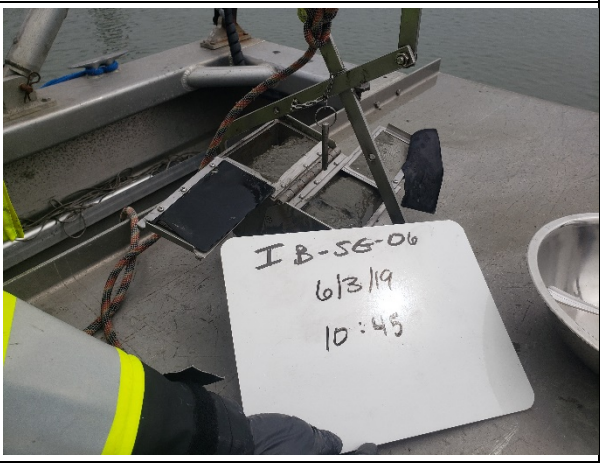
IB-SG-02

IB-SG-03

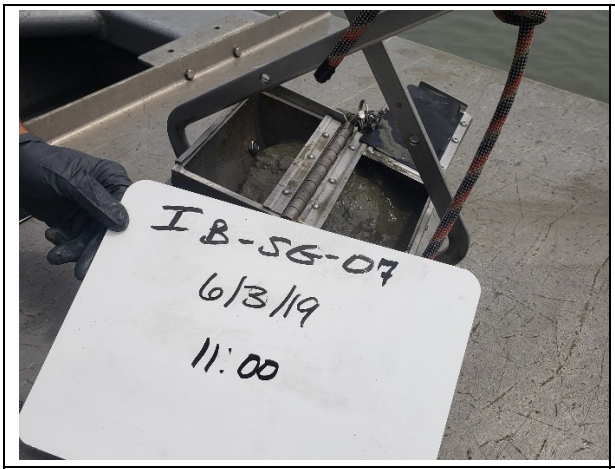
IB-SG-04



IB-SG-05

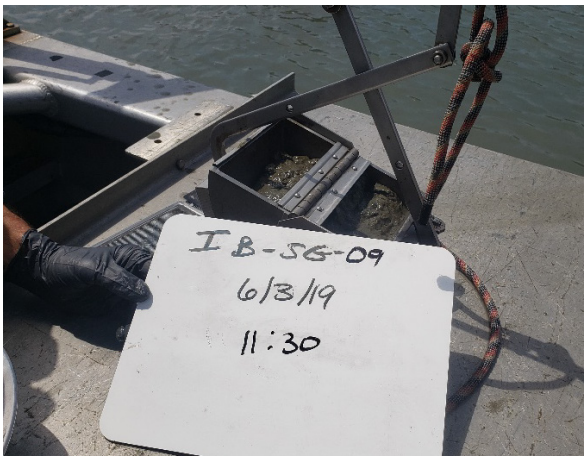


IB-SG-06

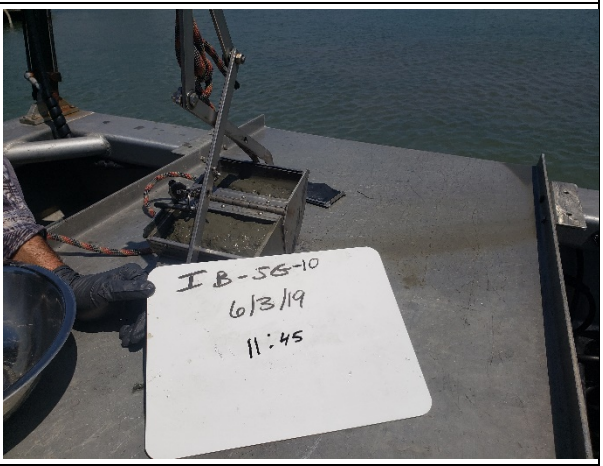


IB-SG-07

IB-SG-08



IB-SG-09



IB-SG-10

IB-SG-11

IB-SG-12

Attachment C
Chemistry Laboratory Report

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WORK ORDER NUMBER: 19-06-0181

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ANCHOR QEA, LLC

Client Project Name: India Basin Surface Grabs

Attention: Chris Osuch
9700 RESEARCH DR
IRVINE, CA 92618-4327

Approved for release on 06/19/2019 by:
Richard Villafania
Project Manager

ResultLink

Email your PM

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Work Order Number: 19-06-0181

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Work Order Narrative

Work Order: 19-06-0181 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 06/05/19. They were assigned to Work Order 19-06-0181.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-13A): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

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Sample Summary

Client:	ANCHOR QEA, LLC 9700 RESEARCH DR IRVINE, CA 92618-4327	Work Order:	19-06-0181
		Project Name:	India Basin Surface Grabs
		PO Number:	
		Date/Time Received:	06/05/19 09:15
		Number of Containers:	25
Attn:	Chris Osuch		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
IB-SG-01-190603	19-06-0181-1	06/03/19 12:45	2	Solid
IB-SG-02-190603	19-06-0181-2	06/03/19 10:05	2	Solid
IB-SG-03-190603	19-06-0181-3	06/03/19 09:55	2	Solid
IB-SG-04-190603	19-06-0181-4	06/03/19 12:30	2	Solid
IB-SG-05-190603	19-06-0181-5	06/03/19 10:25	3	Solid
IB-SG-06-190603	19-06-0181-6	06/03/19 10:45	2	Solid
IB-SG-07-190603	19-06-0181-7	06/03/19 11:00	2	Solid
IB-SG-08-190603	19-06-0181-8	06/03/19 11:10	2	Solid
IB-SG-09-190603	19-06-0181-9	06/03/19 11:30	2	Solid
IB-SG-10-190603	19-06-0181-10	06/03/19 11:45	2	Solid
IB-SG-11-190603	19-06-0181-11	06/03/19 11:55	2	Solid
IB-SG-12-190603	19-06-0181-12	06/03/19 12:15	2	Solid

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin Surface Grabs			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-01-190603	**19-06-0181-1-BB**	**06/03/19 12:45**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 19:36**	**190613L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	38.3	0.198	0.130	1.00	

IB-SG-02-190603	**19-06-0181-2-BB**	**06/03/19 10:05**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 19:46**	**190613L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	56.1	0.251	0.166	1.00	

IB-SG-03-190603	**19-06-0181-3-BB**	**06/03/19 09:55**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 19:49**	**190613L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	45.0	0.281	0.185	1.00	

IB-SG-04-190603	**19-06-0181-4-BB**	**06/03/19 12:30**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 19:51**	**190613L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	50.7	0.240	0.158	1.00	

IB-SG-05-190603	**19-06-0181-5-BB**	**06/03/19 10:25**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 19:54**	**190613L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	52.4	0.267	0.176	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin Surface Grabs			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-06-190603	**19-06-0181-6-BB**	**06/03/19 10:45**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 19:56**	**190613L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	59.2	0.260	0.172	1.00	

IB-SG-07-190603	**19-06-0181-7-BB**	**06/03/19 11:00**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 19:58**	**190613L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	47.9	0.272	0.179	1.00	

IB-SG-08-190603	**19-06-0181-8-BB**	**06/03/19 11:10**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 20:01**	**190613L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	47.6	0.270	0.178	1.00	

IB-SG-09-190603	**19-06-0181-9-BB**	**06/03/19 11:30**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 20:03**	**190613L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	46.9	0.347	0.229	1.00	

IB-SG-10-190603	**19-06-0181-10-BB**	**06/03/19 11:45**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 20:06**	**190613L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	56.9	0.330	0.217	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: India Basin Surface Grabs			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-11-190603	**19-06-0181-11-BB**	**06/03/19 11:55**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 20:08**	**190613L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	51.8	0.299	0.197	1.00	

IB-SG-12-190603	**19-06-0181-12-BB**	**06/03/19 12:15**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 20:18**	**190613L02**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	51.1	0.315	0.208	1.00	

Method Blank	**099-15-254-758**	**N/A**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 19:19**	**190613L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	ND	0.100	0.0659	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 1 of 26

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-01-190603	**19-06-0181-1-BB**	**06/03/19 12:45**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 20:56**	**190608L01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.33	0.79	0.15	1.00	J
PCB018	ND	0.39	0.13	1.00	
PCB028	ND	0.39	0.14	1.00	
PCB031	0.41	0.39	0.10	1.00	
PCB033	0.32	0.39	0.075	1.00	J
PCB044	ND	0.39	0.30	1.00	
PCB049	0.53	0.39	0.098	1.00	
PCB052	1.3	0.39	0.37	1.00	
PCB056	ND	0.39	0.15	1.00	
PCB060	ND	0.39	0.10	1.00	
PCB066	0.71	0.39	0.24	1.00	
PCB070	0.78	0.39	0.14	1.00	
PCB074	0.97	0.39	0.18	1.00	
PCB087	0.50	0.39	0.22	1.00	
PCB095	1.6	0.39	0.21	1.00	
PCB097	ND	0.39	0.091	1.00	
PCB099	1.1	0.39	0.093	1.00	
PCB101	2.2	0.39	0.087	1.00	
PCB105	0.96	0.39	0.11	1.00	
PCB110	1.7	0.39	0.067	1.00	
PCB118	1.5	0.39	0.068	1.00	
PCB128	ND	0.39	0.24	1.00	
PCB132/153	7.2	0.79	0.32	1.00	
PCB138/158	4.4	0.79	0.69	1.00	
PCB141	ND	0.39	0.097	1.00	
PCB149	3.8	0.39	0.23	1.00	
PCB151	1.4	0.39	0.17	1.00	
PCB156	ND	0.39	0.15	1.00	
PCB170	2.1	0.39	0.22	1.00	
PCB174	1.5	0.39	0.083	1.00	
PCB177	0.96	0.39	0.23	1.00	
PCB180	4.1	0.39	0.18	1.00	
PCB183	0.95	0.39	0.18	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 2 of 26

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	3.8	0.39	0.20	1.00	
PCB194	1.6	0.39	0.15	1.00	
PCB195	0.65	0.39	0.12	1.00	
PCB201	ND	0.39	0.067	1.00	
PCB203	1.6	0.39	0.11	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	53	14-146	
p-Terphenyl-d14	82	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 3 of 26

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-02-190603	**19-06-0181-2-BB**	**06/03/19 10:05**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 21:19**	**190608L01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.62	1.0	0.19	1.00	J
PCB018	ND	0.50	0.16	1.00	
PCB028	0.96	0.50	0.17	1.00	
PCB031	1.1	0.50	0.13	1.00	
PCB033	1.2	0.50	0.096	1.00	
PCB044	3.5	0.50	0.38	1.00	
PCB049	1.5	0.50	0.12	1.00	
PCB052	3.1	0.50	0.48	1.00	
PCB056	ND	0.50	0.19	1.00	
PCB060	ND	0.50	0.13	1.00	
PCB066	1.7	0.50	0.31	1.00	
PCB070	2.4	0.50	0.18	1.00	
PCB074	0.91	0.50	0.23	1.00	
PCB087	2.4	0.50	0.28	1.00	
PCB095	5.5	0.50	0.27	1.00	
PCB097	2.3	0.50	0.12	1.00	
PCB099	3.4	0.50	0.12	1.00	
PCB101	8.4	0.50	0.11	1.00	
PCB105	3.3	0.50	0.13	1.00	
PCB110	4.9	0.50	0.085	1.00	
PCB118	5.0	0.50	0.087	1.00	
PCB128	2.5	0.50	0.30	1.00	
PCB132/153	31	1.0	0.41	1.00	
PCB138/158	19	1.0	0.88	1.00	
PCB141	4.7	0.50	0.12	1.00	
PCB149	16	0.50	0.30	1.00	
PCB151	5.6	0.50	0.22	1.00	
PCB156	1.2	0.50	0.19	1.00	
PCB170	8.5	0.50	0.28	1.00	
PCB174	8.5	0.50	0.11	1.00	
PCB177	4.8	0.50	0.29	1.00	
PCB180	22	0.50	0.23	1.00	
PCB183	5.7	0.50	0.23	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 4 of 26

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	13	0.50	0.26	1.00	
PCB194	4.4	0.50	0.19	1.00	
PCB195	2.3	0.50	0.15	1.00	
PCB201	1.1	0.50	0.086	1.00	
PCB203	4.7	0.50	0.14	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	63	14-146	
p-Terphenyl-d14	92	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 5 of 26

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-03-190603	**19-06-0181-3-BB**	**06/03/19 09:55**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 21:42**	**190608L01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.37	1.1	0.22	1.00	J
PCB018	ND	0.56	0.18	1.00	
PCB028	ND	0.56	0.19	1.00	
PCB031	0.84	0.56	0.14	1.00	
PCB033	1.2	0.56	0.11	1.00	
PCB044	ND	0.56	0.43	1.00	
PCB049	1.5	0.56	0.14	1.00	
PCB052	3.8	0.56	0.53	1.00	
PCB056	ND	0.56	0.21	1.00	
PCB060	ND	0.56	0.15	1.00	
PCB066	1.4	0.56	0.35	1.00	
PCB070	1.7	0.56	0.20	1.00	
PCB074	0.92	0.56	0.25	1.00	
PCB087	0.92	0.56	0.31	1.00	
PCB095	3.4	0.56	0.30	1.00	
PCB097	0.79	0.56	0.13	1.00	
PCB099	2.1	0.56	0.13	1.00	
PCB101	4.1	0.56	0.12	1.00	
PCB105	1.2	0.56	0.15	1.00	
PCB110	3.9	0.56	0.095	1.00	
PCB118	3.2	0.56	0.097	1.00	
PCB128	ND	0.56	0.34	1.00	
PCB132/153	14	1.1	0.46	1.00	
PCB138/158	7.8	1.1	0.99	1.00	
PCB141	ND	0.56	0.14	1.00	
PCB149	7.5	0.56	0.33	1.00	
PCB151	2.6	0.56	0.25	1.00	
PCB156	ND	0.56	0.22	1.00	
PCB170	4.6	0.56	0.31	1.00	
PCB174	2.9	0.56	0.12	1.00	
PCB177	2.3	0.56	0.33	1.00	
PCB180	7.9	0.56	0.26	1.00	
PCB183	2.2	0.56	0.26	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 6 of 26

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	5.2	0.56	0.29	1.00	
PCB194	2.2	0.56	0.21	1.00	
PCB195	0.86	0.56	0.17	1.00	
PCB201	0.55	0.56	0.096	1.00	J
PCB203	1.8	0.56	0.16	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	65	14-146	
p-Terphenyl-d14	88	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 7 of 26

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-04-190603	**19-06-0181-4-BB**	**06/03/19 12:30**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 22:05**	**190608L01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.67	0.96	0.18	1.00	J
PCB018	ND	0.48	0.16	1.00	
PCB028	0.81	0.48	0.17	1.00	
PCB031	0.76	0.48	0.12	1.00	
PCB033	0.77	0.48	0.092	1.00	
PCB044	ND	0.48	0.36	1.00	
PCB049	2.4	0.48	0.12	1.00	
PCB052	3.2	0.48	0.46	1.00	
PCB056	ND	0.48	0.18	1.00	
PCB060	ND	0.48	0.13	1.00	
PCB066	1.8	0.48	0.30	1.00	
PCB070	2.1	0.48	0.17	1.00	
PCB074	0.68	0.48	0.22	1.00	
PCB087	1.7	0.48	0.27	1.00	
PCB095	4.4	0.48	0.26	1.00	
PCB097	1.1	0.48	0.11	1.00	
PCB099	3.1	0.48	0.11	1.00	
PCB101	6.3	0.48	0.11	1.00	
PCB105	2.1	0.48	0.13	1.00	
PCB110	4.9	0.48	0.081	1.00	
PCB118	4.1	0.48	0.083	1.00	
PCB128	ND	0.48	0.29	1.00	
PCB132/153	21	0.96	0.39	1.00	
PCB138/158	11	0.96	0.84	1.00	
PCB141	ND	0.48	0.12	1.00	
PCB149	10	0.48	0.28	1.00	
PCB151	3.7	0.48	0.21	1.00	
PCB156	0.85	0.48	0.19	1.00	
PCB170	5.4	0.48	0.27	1.00	
PCB174	4.3	0.48	0.10	1.00	
PCB177	2.8	0.48	0.28	1.00	
PCB180	11	0.48	0.22	1.00	
PCB183	3.0	0.48	0.22	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 8 of 26

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	8.4	0.48	0.25	1.00	
PCB194	2.7	0.48	0.18	1.00	
PCB195	1.4	0.48	0.14	1.00	
PCB201	0.82	0.48	0.082	1.00	
PCB203	2.8	0.48	0.14	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	52	14-146	
p-Terphenyl-d14	86	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 9 of 26

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-05-190603	**19-06-0181-5-BB**	**06/03/19 10:25**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 22:28**	**190608L01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.53	1.1	0.20	1.00	J
PCB018	ND	0.53	0.17	1.00	
PCB028	0.62	0.53	0.19	1.00	
PCB031	0.84	0.53	0.14	1.00	
PCB033	0.80	0.53	0.10	1.00	
PCB044	2.6	0.53	0.41	1.00	
PCB049	1.1	0.53	0.13	1.00	
PCB052	2.4	0.53	0.51	1.00	
PCB056	ND	0.53	0.20	1.00	
PCB060	ND	0.53	0.14	1.00	
PCB066	1.7	0.53	0.33	1.00	
PCB070	1.4	0.53	0.19	1.00	
PCB074	0.97	0.53	0.24	1.00	
PCB087	1.1	0.53	0.30	1.00	
PCB095	3.5	0.53	0.29	1.00	
PCB097	1.6	0.53	0.12	1.00	
PCB099	2.9	0.53	0.13	1.00	
PCB101	4.9	0.53	0.12	1.00	
PCB105	1.7	0.53	0.14	1.00	
PCB110	4.5	0.53	0.090	1.00	
PCB118	3.4	0.53	0.092	1.00	
PCB128	1.5	0.53	0.32	1.00	
PCB132/153	16	1.1	0.43	1.00	
PCB138/158	9.2	1.1	0.94	1.00	
PCB141	1.5	0.53	0.13	1.00	
PCB149	9.5	0.53	0.32	1.00	
PCB151	3.1	0.53	0.23	1.00	
PCB156	0.58	0.53	0.21	1.00	
PCB170	4.2	0.53	0.30	1.00	
PCB174	3.2	0.53	0.11	1.00	
PCB177	2.1	0.53	0.31	1.00	
PCB180	8.9	0.53	0.24	1.00	
PCB183	2.7	0.53	0.25	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 10 of 26

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	6.5	0.53	0.27	1.00	
PCB194	2.8	0.53	0.20	1.00	
PCB195	0.97	0.53	0.16	1.00	
PCB201	0.67	0.53	0.091	1.00	
PCB203	3.3	0.53	0.15	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	48	14-146	
p-Terphenyl-d14	90	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 11 of 26

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-06-190603	**19-06-0181-6-BB**	**06/03/19 10:45**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 22:51**	**190608L01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.56	1.0	0.20	1.00	J
PCB018	0.88	0.51	0.17	1.00	
PCB028	0.93	0.51	0.18	1.00	
PCB031	0.93	0.51	0.13	1.00	
PCB033	0.76	0.51	0.098	1.00	
PCB044	2.8	0.51	0.39	1.00	
PCB049	2.4	0.51	0.13	1.00	
PCB052	3.8	0.51	0.49	1.00	
PCB056	ND	0.51	0.19	1.00	
PCB060	ND	0.51	0.13	1.00	
PCB066	2.0	0.51	0.32	1.00	
PCB070	2.5	0.51	0.18	1.00	
PCB074	1.2	0.51	0.23	1.00	
PCB087	1.1	0.51	0.28	1.00	
PCB095	1.6	0.51	0.27	1.00	
PCB097	1.4	0.51	0.12	1.00	
PCB099	4.2	0.51	0.12	1.00	
PCB101	5.7	0.51	0.11	1.00	
PCB105	1.7	0.51	0.14	1.00	
PCB110	3.3	0.51	0.086	1.00	
PCB118	3.3	0.51	0.088	1.00	
PCB128	ND	0.51	0.31	1.00	
PCB132/153	20	1.0	0.41	1.00	
PCB138/158	9.5	1.0	0.90	1.00	
PCB141	ND	0.51	0.13	1.00	
PCB149	9.3	0.51	0.30	1.00	
PCB151	3.3	0.51	0.22	1.00	
PCB156	ND	0.51	0.20	1.00	
PCB170	5.9	0.51	0.28	1.00	
PCB174	3.1	0.51	0.11	1.00	
PCB177	2.4	0.51	0.30	1.00	
PCB180	9.5	0.51	0.23	1.00	
PCB183	2.5	0.51	0.24	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 12 of 26

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	7.8	0.51	0.26	1.00	
PCB194	3.6	0.51	0.19	1.00	
PCB195	1.3	0.51	0.15	1.00	
PCB201	0.63	0.51	0.087	1.00	
PCB203	3.7	0.51	0.15	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	48	14-146	
p-Terphenyl-d14	72	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 13 of 26

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-07-190603	**19-06-0181-7-BB**	**06/03/19 11:00**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 23:15**	**190608L01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.66	1.1	0.21	1.00	J
PCB018	0.78	0.54	0.17	1.00	
PCB028	0.82	0.54	0.19	1.00	
PCB031	0.87	0.54	0.14	1.00	
PCB033	0.61	0.54	0.10	1.00	
PCB044	ND	0.54	0.41	1.00	
PCB049	2.0	0.54	0.13	1.00	
PCB052	2.4	0.54	0.51	1.00	
PCB056	ND	0.54	0.20	1.00	
PCB060	ND	0.54	0.14	1.00	
PCB066	2.6	0.54	0.33	1.00	
PCB070	2.1	0.54	0.19	1.00	
PCB074	1.1	0.54	0.24	1.00	
PCB087	ND	0.54	0.30	1.00	
PCB095	ND	0.54	0.29	1.00	
PCB097	1.8	0.54	0.12	1.00	
PCB099	4.2	0.54	0.13	1.00	
PCB101	5.7	0.54	0.12	1.00	
PCB105	1.9	0.54	0.14	1.00	
PCB110	3.2	0.54	0.091	1.00	
PCB118	3.7	0.54	0.093	1.00	
PCB128	ND	0.54	0.32	1.00	
PCB132/153	21	1.1	0.44	1.00	
PCB138/158	8.5	1.1	0.95	1.00	
PCB141	1.5	0.54	0.13	1.00	
PCB149	9.9	0.54	0.32	1.00	
PCB151	3.1	0.54	0.24	1.00	
PCB156	ND	0.54	0.21	1.00	
PCB170	4.9	0.54	0.30	1.00	
PCB174	2.7	0.54	0.11	1.00	
PCB177	2.0	0.54	0.32	1.00	
PCB180	7.5	0.54	0.25	1.00	
PCB183	2.3	0.54	0.25	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 14 of 26

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	6.0	0.54	0.28	1.00	
PCB194	2.5	0.54	0.20	1.00	
PCB195	1.3	0.54	0.16	1.00	
PCB201	0.57	0.54	0.092	1.00	
PCB203	2.5	0.54	0.16	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	50	14-146	
p-Terphenyl-d14	94	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 15 of 26

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-08-190603	**19-06-0181-8-BB**	**06/03/19 11:10**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 23:38**	**190608L01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.49	1.1	0.21	1.00	J
PCB018	ND	0.54	0.18	1.00	
PCB028	1.3	0.54	0.19	1.00	
PCB031	1.1	0.54	0.14	1.00	
PCB033	0.71	0.54	0.10	1.00	
PCB044	4.2	0.54	0.41	1.00	
PCB049	2.6	0.54	0.13	1.00	
PCB052	3.3	0.54	0.51	1.00	
PCB056	ND	0.54	0.20	1.00	
PCB060	ND	0.54	0.14	1.00	
PCB066	2.6	0.54	0.33	1.00	
PCB070	2.8	0.54	0.19	1.00	
PCB074	1.3	0.54	0.24	1.00	
PCB087	ND	0.54	0.30	1.00	
PCB095	5.2	0.54	0.29	1.00	
PCB097	1.8	0.54	0.12	1.00	
PCB099	4.3	0.54	0.13	1.00	
PCB101	6.1	0.54	0.12	1.00	
PCB105	ND	0.54	0.14	1.00	
PCB110	3.5	0.54	0.091	1.00	
PCB118	3.3	0.54	0.093	1.00	
PCB128	ND	0.54	0.32	1.00	
PCB132/153	17	1.1	0.44	1.00	
PCB138/158	7.8	1.1	0.95	1.00	
PCB141	1.9	0.54	0.13	1.00	
PCB149	9.1	0.54	0.32	1.00	
PCB151	3.8	0.54	0.24	1.00	
PCB156	0.70	0.54	0.21	1.00	
PCB170	5.1	0.54	0.30	1.00	
PCB174	2.7	0.54	0.11	1.00	
PCB177	1.9	0.54	0.32	1.00	
PCB180	8.3	0.54	0.25	1.00	
PCB183	2.1	0.54	0.25	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 16 of 26

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	6.4	0.54	0.28	1.00	
PCB194	3.2	0.54	0.20	1.00	
PCB195	ND	0.54	0.16	1.00	
PCB201	0.89	0.54	0.092	1.00	
PCB203	2.2	0.54	0.16	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	52	14-146	
p-Terphenyl-d14	95	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 17 of 26

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-09-190603	**19-06-0181-9-BB**	**06/03/19 11:30**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/19/19 00:01**	**190608L01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.51	1.4	0.26	1.00	J
PCB018	ND	0.69	0.22	1.00	
PCB028	1.4	0.69	0.24	1.00	
PCB031	1.1	0.69	0.17	1.00	
PCB033	ND	0.69	0.13	1.00	
PCB044	3.0	0.69	0.52	1.00	
PCB049	ND	0.69	0.17	1.00	
PCB052	2.9	0.69	0.65	1.00	
PCB056	ND	0.69	0.26	1.00	
PCB060	ND	0.69	0.18	1.00	
PCB066	2.5	0.69	0.42	1.00	
PCB070	2.0	0.69	0.25	1.00	
PCB074	1.1	0.69	0.31	1.00	
PCB087	1.3	0.69	0.38	1.00	
PCB095	4.0	0.69	0.37	1.00	
PCB097	1.1	0.69	0.16	1.00	
PCB099	2.8	0.69	0.16	1.00	
PCB101	4.9	0.69	0.15	1.00	
PCB105	2.3	0.69	0.18	1.00	
PCB110	4.5	0.69	0.12	1.00	
PCB118	3.2	0.69	0.12	1.00	
PCB128	ND	0.69	0.41	1.00	
PCB132/153	13	1.4	0.56	1.00	
PCB138/158	6.4	1.4	1.2	1.00	
PCB141	13	0.69	0.17	1.00	
PCB149	7.5	0.69	0.41	1.00	
PCB151	3.7	0.69	0.30	1.00	
PCB156	0.65	0.69	0.27	1.00	J
PCB170	3.6	0.69	0.38	1.00	
PCB174	2.5	0.69	0.14	1.00	
PCB177	1.9	0.69	0.40	1.00	
PCB180	7.1	0.69	0.32	1.00	
PCB183	1.5	0.69	0.32	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 18 of 26

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	4.5	0.69	0.35	1.00	
PCB194	2.7	0.69	0.25	1.00	
PCB195	ND	0.69	0.21	1.00	
PCB201	0.59	0.69	0.12	1.00	J
PCB203	1.1	0.69	0.20	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	52	14-146	
p-Terphenyl-d14	94	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 19 of 26

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-10-190603	**19-06-0181-10-BB**	**06/03/19 11:45**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/19/19 00:24**	**190608L01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.38	1.3	0.25	1.00	J
PCB018	1.2	0.66	0.21	1.00	
PCB028	1.4	0.66	0.23	1.00	
PCB031	1.4	0.66	0.17	1.00	
PCB033	0.73	0.66	0.13	1.00	
PCB044	2.3	0.66	0.50	1.00	
PCB049	5.6	0.66	0.16	1.00	
PCB052	4.4	0.66	0.62	1.00	
PCB056	1.2	0.66	0.25	1.00	
PCB060	0.37	0.66	0.17	1.00	J
PCB066	2.7	0.66	0.41	1.00	
PCB070	2.6	0.66	0.24	1.00	
PCB074	1.3	0.66	0.30	1.00	
PCB087	1.6	0.66	0.37	1.00	
PCB095	11	0.66	0.35	1.00	
PCB097	1.8	0.66	0.15	1.00	
PCB099	8.9	0.66	0.16	1.00	
PCB101	11	0.66	0.15	1.00	
PCB105	2.2	0.66	0.18	1.00	
PCB110	3.7	0.66	0.11	1.00	
PCB118	3.4	0.66	0.11	1.00	
PCB128	ND	0.66	0.39	1.00	
PCB132/153	43	1.3	0.53	1.00	
PCB138/158	16	1.3	1.2	1.00	
PCB141	ND	0.66	0.16	1.00	
PCB149	20	0.66	0.39	1.00	
PCB151	8.4	0.66	0.29	1.00	
PCB156	0.97	0.66	0.25	1.00	
PCB170	20	0.66	0.36	1.00	
PCB174	11	0.66	0.14	1.00	
PCB177	6.3	0.66	0.39	1.00	
PCB180	32	0.66	0.30	1.00	
PCB183	7.8	0.66	0.31	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 20 of 26

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	21	0.66	0.34	1.00	
PCB194	15	0.66	0.24	1.00	
PCB195	6.3	0.66	0.20	1.00	
PCB201	1.5	0.66	0.11	1.00	
PCB203	16	0.66	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	51	14-146	
p-Terphenyl-d14	77	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 21 of 26

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-11-190603	**19-06-0181-11-BB**	**06/03/19 11:55**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/19/19 00:47**	**190608L01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.48	1.2	0.23	1.00	J
PCB018	1.3	0.59	0.19	1.00	
PCB028	1.5	0.59	0.21	1.00	
PCB031	1.1	0.59	0.15	1.00	
PCB033	0.83	0.59	0.11	1.00	
PCB044	3.0	0.59	0.45	1.00	
PCB049	2.9	0.59	0.15	1.00	
PCB052	3.7	0.59	0.57	1.00	
PCB056	0.98	0.59	0.22	1.00	
PCB060	ND	0.59	0.16	1.00	
PCB066	2.9	0.59	0.37	1.00	
PCB070	2.8	0.59	0.21	1.00	
PCB074	1.2	0.59	0.27	1.00	
PCB087	1.2	0.59	0.33	1.00	
PCB095	5.9	0.59	0.32	1.00	
PCB097	2.1	0.59	0.14	1.00	
PCB099	4.5	0.59	0.14	1.00	
PCB101	7.1	0.59	0.13	1.00	
PCB105	2.9	0.59	0.16	1.00	
PCB110	4.3	0.59	0.10	1.00	
PCB118	4.2	0.59	0.10	1.00	
PCB128	1.9	0.59	0.36	1.00	
PCB132/153	26	1.2	0.48	1.00	
PCB138/158	16	1.2	1.0	1.00	
PCB141	ND	0.59	0.15	1.00	
PCB149	13	0.59	0.35	1.00	
PCB151	5.2	0.59	0.26	1.00	
PCB156	1.1	0.59	0.23	1.00	
PCB170	6.8	0.59	0.33	1.00	
PCB174	7.4	0.59	0.12	1.00	
PCB177	5.3	0.59	0.35	1.00	
PCB180	21	0.59	0.27	1.00	
PCB183	5.1	0.59	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 22 of 26

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	14	0.59	0.30	1.00	
PCB194	4.2	0.59	0.22	1.00	
PCB195	1.4	0.59	0.18	1.00	
PCB201	1.1	0.59	0.10	1.00	
PCB203	4.2	0.59	0.17	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	82	14-146	
p-Terphenyl-d14	85	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 23 of 26

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-12-190603	**19-06-0181-12-BB**	**06/03/19 12:15**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/19/19 01:11**	**190608L01**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	0.75	1.3	0.24	1.00	J
PCB018	1.6	0.63	0.20	1.00	
PCB028	1.4	0.63	0.22	1.00	
PCB031	1.1	0.63	0.16	1.00	
PCB033	0.64	0.63	0.12	1.00	
PCB044	4.1	0.63	0.48	1.00	
PCB049	2.3	0.63	0.16	1.00	
PCB052	3.1	0.63	0.60	1.00	
PCB056	ND	0.63	0.24	1.00	
PCB060	ND	0.63	0.17	1.00	
PCB066	2.0	0.63	0.39	1.00	
PCB070	2.1	0.63	0.23	1.00	
PCB074	0.84	0.63	0.28	1.00	
PCB087	0.81	0.63	0.35	1.00	
PCB095	3.5	0.63	0.34	1.00	
PCB097	1.3	0.63	0.15	1.00	
PCB099	2.6	0.63	0.15	1.00	
PCB101	4.2	0.63	0.14	1.00	
PCB105	1.3	0.63	0.17	1.00	
PCB110	3.1	0.63	0.11	1.00	
PCB118	3.3	0.63	0.11	1.00	
PCB128	ND	0.63	0.38	1.00	
PCB132/153	14	1.3	0.51	1.00	
PCB138/158	7.7	1.3	1.1	1.00	
PCB141	ND	0.63	0.15	1.00	
PCB149	7.2	0.63	0.37	1.00	
PCB151	2.6	0.63	0.28	1.00	
PCB156	ND	0.63	0.24	1.00	
PCB170	4.9	0.63	0.35	1.00	
PCB174	3.2	0.63	0.13	1.00	
PCB177	2.1	0.63	0.37	1.00	
PCB180	8.3	0.63	0.29	1.00	
PCB183	2.3	0.63	0.29	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 24 of 26

Parameter	Result	RL	MDL	DF	Qualifiers
PCB187	6.0	0.63	0.32	1.00	
PCB194	4.6	0.63	0.23	1.00	
PCB195	1.3	0.63	0.19	1.00	
PCB201	0.49	0.63	0.11	1.00	J
PCB203	3.3	0.63	0.18	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	55	14-146	
p-Terphenyl-d14	66	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 25 of 26

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-418-379**	**N/A**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 18:59**	**190608L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB005/008	ND	0.40	0.077	1.00	
PCB018	ND	0.20	0.065	1.00	
PCB028	ND	0.20	0.069	1.00	
PCB031	ND	0.20	0.051	1.00	
PCB033	ND	0.20	0.038	1.00	
PCB044	ND	0.20	0.15	1.00	
PCB049	ND	0.20	0.050	1.00	
PCB052	ND	0.20	0.19	1.00	
PCB056	ND	0.20	0.076	1.00	
PCB060	ND	0.20	0.052	1.00	
PCB066	ND	0.20	0.12	1.00	
PCB070	ND	0.20	0.072	1.00	
PCB074	ND	0.20	0.090	1.00	
PCB087	ND	0.20	0.11	1.00	
PCB095	ND	0.20	0.11	1.00	
PCB097	ND	0.20	0.046	1.00	
PCB099	ND	0.20	0.047	1.00	
PCB101	ND	0.20	0.044	1.00	
PCB105	ND	0.20	0.053	1.00	
PCB110	ND	0.20	0.034	1.00	
PCB118	ND	0.20	0.035	1.00	
PCB128	ND	0.20	0.12	1.00	
PCB132/153	ND	0.40	0.16	1.00	
PCB138/158	ND	0.40	0.35	1.00	
PCB141	ND	0.20	0.049	1.00	
PCB149	ND	0.20	0.12	1.00	
PCB151	ND	0.20	0.088	1.00	
PCB156	ND	0.20	0.077	1.00	
PCB170	ND	0.20	0.11	1.00	
PCB174	ND	0.20	0.042	1.00	
PCB177	ND	0.20	0.12	1.00	
PCB180	ND	0.20	0.092	1.00	
PCB183	ND	0.20	0.093	1.00	
PCB187	ND	0.20	0.10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
		Units:	ug/kg
Project: India Basin Surface Grabs			Page 26 of 26

Parameter	Result	RL	MDL	DF	Qualifiers
PCB194	ND	0.20	0.074	1.00	
PCB195	ND	0.20	0.060	1.00	
PCB201	ND	0.20	0.034	1.00	
PCB203	ND	0.20	0.058	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	55	14-146	
p-Terphenyl-d14	76	34-148	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	N/A
		Method:	SM 2540 B (M)
		Units:	%
Project: India Basin Surface Grabs			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-01-190603	**19-06-0181-1-BB**	**06/03/19 12:45**	**Solid**	**N/A**	**06/07/19**	**06/07/19 16:00**	**J0607TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	50.5	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-02-190603	**19-06-0181-2-BB**	**06/03/19 10:05**	**Solid**	**N/A**	**06/07/19**	**06/07/19 16:00**	**J0607TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	39.8	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-03-190603	**19-06-0181-3-BB**	**06/03/19 09:55**	**Solid**	**N/A**	**06/07/19**	**06/07/19 16:00**	**J0607TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	35.6	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-04-190603	**19-06-0181-4-BB**	**06/03/19 12:30**	**Solid**	**N/A**	**06/07/19**	**06/07/19 16:00**	**J0607TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	41.7	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-05-190603	**19-06-0181-5-BB**	**06/03/19 10:25**	**Solid**	**N/A**	**06/07/19**	**06/07/19 16:00**	**J0607TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	37.5	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-06-190603	**19-06-0181-6-BB**	**06/03/19 10:45**	**Solid**	**N/A**	**06/07/19**	**06/07/19 16:00**	**J0607TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	38.4	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-07-190603	**19-06-0181-7-BB**	**06/03/19 11:00**	**Solid**	**N/A**	**06/07/19**	**06/07/19 16:00**	**J0607TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	36.8	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-08-190603	**19-06-0181-8-BB**	**06/03/19 11:10**	**Solid**	**N/A**	**06/07/19**	**06/07/19 16:00**	**J0607TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	37.0	0.100	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	N/A
		Method:	SM 2540 B (M)
		Units:	%
Project: India Basin Surface Grabs			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-09-190603	**19-06-0181-9-BB**	**06/03/19 11:30**	**Solid**	**N/A**	**06/07/19**	**06/07/19 16:00**	**J0607TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	28.8	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-10-190603	**19-06-0181-10-BB**	**06/03/19 11:45**	**Solid**	**N/A**	**06/07/19**	**06/07/19 16:00**	**J0607TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	30.3	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-11-190603	**19-06-0181-11-BB**	**06/03/19 11:55**	**Solid**	**N/A**	**06/07/19**	**06/07/19 16:00**	**J0607TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	33.5	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-SG-12-190603	**19-06-0181-12-BB**	**06/03/19 12:15**	**Solid**	**N/A**	**06/07/19**	**06/07/19 16:00**	**J0607TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	31.7	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-05-019-4497**	**N/A**	**Solid**	**N/A**	**06/07/19**	**06/07/19 16:00**	**J0607TSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total	ND	0.100	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3050B
		Method:	EPA 6020
Project: India Basin Surface Grabs			Page 1 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-SG-05-190603	**Sample**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 19:54**	**190613S02**
IB-SG-05-190603	**Matrix Spike**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 19:27**	**190613S02**
IB-SG-05-190603	**Matrix Spike Duplicate**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 19:29**	**190613S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Lead	19.65	25.00	43.06	94	45.37	103	80-120	5	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
Project: India Basin Surface Grabs			Page 2 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-SG-05-190603	**Sample**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 22:28**	**190608S01**
IB-SG-05-190603	**Matrix Spike**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 20:09**	**190608S01**
IB-SG-05-190603	**Matrix Spike Duplicate**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 20:32**	**190608S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	ND	50.00	34.28	69	32.66	65	50-150	5	0-25	
PCB028	0.2321	50.00	41.29	82	44.75	89	50-150	8	0-25	
PCB044	0.9678	50.00	38.64	75	40.54	79	50-150	5	0-25	
PCB052	0.9050	50.00	40.14	78	43.04	84	50-150	7	0-25	
PCB066	0.6340	50.00	44.30	87	47.80	94	50-150	8	0-25	
PCB077	ND	50.00	39.47	79	42.17	84	50-150	7	0-25	
PCB101	1.842	50.00	40.18	77	44.31	85	50-150	10	0-25	
PCB105	0.6397	50.00	38.80	76	42.05	83	50-150	8	0-25	
PCB118	1.277	50.00	40.61	79	44.73	87	50-150	10	0-25	
PCB126	ND	50.00	42.35	85	44.58	89	50-150	5	0-25	
PCB128	0.5803	50.00	42.22	83	47.00	93	50-150	11	0-25	
PCB170	1.556	50.00	36.67	70	40.00	77	50-150	9	0-25	
PCB180	3.338	50.00	45.80	85	50.97	95	50-150	11	0-25	
PCB187	2.452	50.00	42.76	81	46.36	88	50-150	8	0-25	
PCB195	0.3646	50.00	37.95	75	41.04	81	50-150	8	0-25	
PCB206	ND	50.00	35.98	72	40.23	80	50-150	11	0-25	
PCB209	ND	50.00	37.03	74	40.55	81	50-150	9	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Spike/Spike Duplicate - Surrogate

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
Project: India Basin Surface Grabs			Page 3 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-SG-05-190603	**Sample**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 22:28**	**190608S01**
IB-SG-05-190603	**Matrix Spike**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 20:09**	**190608S01**
IB-SG-05-190603	**Matrix Spike Duplicate**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 20:32**	**190608S01**

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
2-Fluorobiphenyl	10.00	47.32	47	55.13	55	14-146	
p-Terphenyl-d14	10.00	88.12	88	94.23	94	34-148	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - PDS

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3050B
		Method:	EPA 6020
Project: India Basin Surface Grabs			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
IB-SG-05-190603	**Sample**	**Solid**	**ICP/MS 06**	**06/13/19 00:00**	**06/14/19 19:54**	**190613S02**
IB-SG-05-190603	**PDS**	**Solid**	**ICP/MS 06**	**06/13/19 00:00**	**06/14/19 19:34**	**190613S02**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Lead	19.65	25.00	43.78	97	75-125	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	N/A
		Method:	SM 2540 B (M)
Project: India Basin Surface Grabs			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
IB-SG-05-190603	**Sample**	**Solid**	**N/A**	**06/07/19 00:00**	**06/07/19 16:00**	**J0607TSD1**
IB-SG-05-190603	**Sample Duplicate**	**Solid**	**N/A**	**06/07/19 00:00**	**06/07/19 16:00**	**J0607TSD1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Solids, Total	37.50	37.40	0	0-10	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3050B
		Method:	EPA 6020
Project: India Basin Surface Grabs			Page 1 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-254-758	**LCS**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 19:22**	**190613L02**
099-15-254-758	**LCSD**	**Solid**	**ICP/MS 06**	**06/13/19**	**06/14/19 19:24**	**190613L02**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Lead	25.00	26.13	105	25.33	101	80-120	3	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
Project: India Basin Surface Grabs			Page 2 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-418-379	**LCS**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 19:22**	**190608L01**
099-16-418-379	**LCSD**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 19:45**	**190608L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
PCB018	50.00	30.28	61	29.96	60	24-132	6-150	1	0-28	
PCB028	50.00	34.93	70	33.50	67	31-133	14-150	4	0-26	
PCB044	50.00	35.26	71	31.79	64	36-120	22-134	10	0-28	
PCB052	50.00	33.21	66	32.57	65	31-121	16-136	2	0-27	
PCB066	50.00	38.77	78	36.13	72	43-139	27-155	7	0-25	
PCB077	50.00	36.24	72	33.70	67	41-131	26-146	7	0-25	
PCB101	50.00	37.96	76	32.84	66	37-121	23-135	14	0-27	
PCB105	50.00	36.57	73	32.71	65	48-132	34-146	11	0-26	
PCB118	50.00	37.96	76	33.05	66	46-136	31-151	14	0-25	
PCB126	50.00	38.67	77	35.46	71	38-134	22-150	9	0-25	
PCB128	50.00	40.17	80	35.80	72	40-130	25-145	12	0-26	
PCB170	50.00	32.97	66	32.54	65	40-124	26-138	1	0-29	
PCB180	50.00	40.34	81	37.08	74	41-143	24-160	8	0-26	
PCB187	50.00	36.84	74	34.55	69	39-129	24-144	6	0-26	
PCB195	50.00	35.67	71	35.19	70	44-128	30-142	1	0-28	
PCB206	50.00	33.87	68	33.30	67	33-135	16-152	2	0-24	
PCB209	50.00	34.93	70	34.62	69	29-137	11-155	1	0-29	

Total number of LCS compounds: 17
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

ANCHOR QEA, LLC		Date Received:	06/05/19
9700 RESEARCH DR		Work Order:	19-06-0181
IRVINE, CA 92618-4327		Preparation:	EPA 3541
		Method:	EPA 8270C SIM PCB Congeners
Project: India Basin Surface Grabs			Page 3 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-418-379	**LCS**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 19:22**	**190608L01**
099-16-418-379	**LCSD**	**Solid**	**GC/MS HHH**	**06/08/19**	**06/18/19 19:45**	**190608L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
2-Fluorobiphenyl	10.00	54.61	55	60.38	60	14-146	
p-Terphenyl-d14	10.00	77.43	77	67.30	67	34-148	

RPD: Relative Percent Difference. CL: Control Limits

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Sample Analysis Summary Report

Work Order: 19-06-0181

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 6020	EPA 3050B	110	ICP/MS 06	1
EPA 8270C SIM PCB Congeners	EPA 3541	1027	GC/MS HHH	1
SM 2540 B (M)	N/A	1136	N/A	1

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Glossary of Terms and Qualifiers

Work Order: 19-06-0181 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: **19-06-0181**

DATE: 6/3/19

PAGE: 1 OF 1

LABORATORY CLIENT: Anchor QEA

ADDRESS: 27201 Puerta Real, Suite 350

CITY: Mission Viejo STATE: CA ZIP: 92691

TEL: 949.347.2780 E-MAIL: cosuch@anchorqea.com

CLIENT PROJECT NAME / NUMBER: India Basin Surface Grabs

P.O. NO.: 190153-01.01

PROJECT CONTACT: Chris Osuch

QUOTE #:

SAMPLER(S): (PRINT) C. Dolphin

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

☐ COELT EDF GLOBAL ID: LOG CODE:

SPECIAL INSTRUCTIONS:
Report down to the MDL
TAT 2 weeks for all analytes (including subcontracted)
Email results to labdata@anchorqea.com, cosuch@anchorqea.com, cfields@anchorqea.com

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	PCBs (USEPA 8270C SIM)	Lead (USEPA 6020)	Mercury (USEPA 1631A)	Total solids (SM2540 B)	MS/MSD
1	IB-SG-01-1906-03	6/3/19	1245	SED	2				X	X	X	X	
2	IB-SG-02-1906-03		1005	SED	2				X	X	X	X	
3	IB-SG-03-1906-03		0955	SED	2				X	X	X	X	
4	IB-SG-04-1906-03		1230	SED	2				X	X	X	X	
5	IB-SG-05-1906-03		1025	SED	3				X	X	X	X	X
6	IB-SG-06-1906-03		1045	SED	2				X	X	X	X	
7	IB-SG-07-1906-03		1100	SED	2				X	X	X	X	
8	IB-SG-08-1906-03		1110	SED	2				X	X	X	X	
9	IB-SG-09-1906-03		1130	SED	2				X	X	X	X	
10	IB-SG-10-1906-03		1145	SED	2				X	X	X	X	
11	IB-SG-11-1906-03		1155	SED	2				X	X	X	X	
12	IB-SG-12-1906-03		1215	SED	2				X	X	X	X	

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
	ECI	6/04/2019	11:40
Relinquished by: (Signature) To GSD 6/4/19 1630	Received by: (Signature/Affiliation) EL	Date: 6/5/19	Time: 0915
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

(GSD)

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800-322-5555
www.gso.com

Ship From
CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Ship To
CEL
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD: $0.00
Weight: 0 lb(s)
Reference:
ANCHOR,STANTEC
Delivery Instructions:

Signature Type: STANDARD

Tracking #: 545040120

NPS

GARDEN GROVE

S92841A

3722437

ORC CA927-C 0

Print Date: 6/4/2019 3:48 PM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the GSO service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gso.com.

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WORK ORDER NUMBER: 19-06-0181

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Anchor QEA

DATE: 06/05/2019

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.2°C); Temperature (w/o CF): 1.8 °C (w/ CF): 1.6 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: SJG

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: SJG

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: CR

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna_2 ☐ 100PJ ☐ 100PJna_2 ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PBn (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGBna_2 ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PBna (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (Sediment): ☑ 4 ozCGJ ☑ 8 ozCGJ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na_2** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: CR

Reviewed by: SJG

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eurofins | Calscience

Subcontractor Analysis Report

Work Order: 19-06-0181 Page 1 of 1

One or more samples in this work order have tests that were subcontracted. The subcontract report(s) follows.

For subcontracted tests, please reference the laboratory information noted below.

1. Eurofins Frontier Global Sciences - Bothell,WA CA ELAP 2954
   Mercury - EPA 1631

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eurofins | Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

19 June 2019

Richard Villafania
Eurofins Calscience, LLC
7440 Lincoln Way
Garden Grove, CA 92841

RE: Anchor QEA Sediments

Enclosed are the analytical results for samples received by Eurofins Frontier Global Sciences. All quality control measurements are within established control limits and there were no analytical difficulties encountered with the exception of those listed in the case narrative section of this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Amy Goodall

Amy Goodall
Project Manager

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eurofins | Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400
Bothell, WA 98011
425.686.1996 Phone
425.686.3096 Fax

Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
IB-SG-01-190603	9F00021-01	Soil/Sediment	03-Jun-19 12:45	07-Jun-19 09:35
IB-SG-02-190603	9F00021-02	Soil/Sediment	03-Jun-19 10:05	07-Jun-19 09:35
IB-SG-03-190603	9F00021-03	Soil/Sediment	03-Jun-19 09:55	07-Jun-19 09:35
IB-SG-04-190603	9F00021-04	Soil/Sediment	03-Jun-19 12:30	07-Jun-19 09:35
IB-SG-05-190603	9F00021-05	Soil/Sediment	03-Jun-19 10:25	07-Jun-19 09:35
IB-SG-06-190603	9F00021-06	Soil/Sediment	03-Jun-19 10:45	07-Jun-19 09:35
IB-SG-07-190603	9F00021-07	Soil/Sediment	03-Jun-19 11:00	07-Jun-19 09:35
IB-SG-08-190603	9F00021-08	Soil/Sediment	03-Jun-19 11:10	07-Jun-19 09:35
IB-SG-09-190603	9F00021-09	Soil/Sediment	03-Jun-19 11:30	07-Jun-19 09:35
IB-SG-10-190603	9F00021-10	Soil/Sediment	03-Jun-19 11:45	07-Jun-19 09:35
IB-SG-11-190603	9F00021-11	Soil/Sediment	03-Jun-19 11:55	07-Jun-19 09:35
IB-SG-12-190603	9F00021-12	Soil/Sediment	03-Jun-19 12:15	07-Jun-19 09:35

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The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amy Goodall

Amy Goodall, Project Manager

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Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

SAMPLE RECEIPT

Samples were received at Eurofins Frontier Global Sciences (EFGS) on 07-Jun-19 09:35. The samples were received intact, on-ice within a sealed cooler at

Cooler	Temp C°
Default Cooler	0.2

SAMPLE PREPARATION AND ANALYSIS

Total solids analysis was performed in accordance with method SM2540B. Total solids are prepared at the same time as the preparation for the analyte(s) of interest in order to provide the most accurate dry mass correction which may be outside of the method recommended holding time of 7 days from sample collection.

Total mercury preparation and analysis was performed by flow injection atomic fluorescence spectrometry (FI-AFS) in accordance with EPA 1631B. Per client request, sample 9F00021-05, 'IB-SG-05-190603' was used as the QC source for the Matrix Spike (MS) and the Matrix Spike Duplicate (MSD).

ANALYTICAL AND QUALITY CONTROL ISSUES

Method blanks were prepared for every preparation to assess possible blank contribution from the sample preparation procedure. The method blanks were carried through the entire analytical procedure. All blanks fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

Liquid spikes, certified reference material (CRM) or a quality control samples (QCS) were prepared for every preparation as a measure of accuracy. All liquid spikes, CRMs and/or QCS samples fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

As an additional measure of the accuracy of the methods used and to check for matrix interference, matrix spikes (MS) and matrix spike duplicates (MSD) were digested and analyzed. All of the matrix spike recoveries fell within the established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

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Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

A reasonable measure of the precision of the analytical methods is the relative percent difference (RPD) between a matrix spike recovery and a matrix spike duplicate recovery and between laboratory control sample recovery and laboratory control sample duplicate recoveries. All of the relative percent differences fell within established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

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Sample Receipt Checklist

Client: Calscience Date & Time Received: 6/7/19 935 Date Labeled: 6/11/19 Labeled By: BC

Project: _____ Received By: BGW Label Verified By: VFL

# of Coolers Received: 1 Samples Arrived By: ✓ ____ Shipping Service ____ Courier ____ Hand ____ Other (Specify: _____)

Coolant: ☐ None/Ambient ☒ Loose Ice ☐ Gel Ice ☐ Dry Ice Coolant Required: (Y)/N Temp Blank Used: Y/(N) for Cooler(s): _____

Notify Project Manager if packages/coolers are received without coolant or with thawed coolant and at a temperature in excess of 6°C. PM notified: Y/N

Cooler Information:	Y/N/NA	Comments
The coolers do not appear to be tampered with:	Y	
Custody Seals are present and intact:	Y	
Custody seals signed:	Y	

TID: 5225	CF: +0.2°C	Date/time: 6/7/19 935	By: BC
Cooler 1: 0.0°C	w/ CF: 0.2°C	Cooler 4: °C	w/ CF: °C
Cooler 2: °C	w/ CF: °C	Cooler 5: °C	w/ CF: °C
Cooler 3: °C	w/ CF: °C	Cooler 6: °C	w/ CF: °C

Chain of Custody:	Y/N/NA	Comments
Sample ID/Description:	Y	
Date and time of collection:	Y	
Sampled by:	N	
Preservation type:	N/A	
Requested analyses:	Y	
Required signatures:	Y	
Internal COC required:	NA	

Sample Condition/Integrity:	Y/N/NA	Comments
Sample containers intact/present:		
Sample labels are present and legible:		
Sample ID on container/bag matches COC:		
Correct sample containers used:		
Samples received within holding times:		
Sample volume sufficient for requested analyses:		
Correct preservative used for requested analyses:		

Anomalies/Non-conformances (attach additional pages if needed):

9F00021

EFGS Sample Receipt Checklist Revision 7; 9/15/2017

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9F60021

eurofins | Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_calsc@eurofinsus.com or call us

TO: EFGS
11720 North Creek Parkway N.,
Suite 400
Bothell, WA 98011

CHAIN OF CUSTODY RECORD

DATE: 06/06/19

PAGE: 1 OF 2

LABORATORY CLIENT: EUROFINS CALSCIENCE, INC.

ADDRESS: 7440 LINCOLN WAY

CITY: GARDEN GROVE STATE: CA ZIP: 92841-1432

TEL: (714) 895-5494 E-MAIL: RichardVillafania@eurofinsUS.com

CLIENT PROJECT NAME / NUMBER: 19-06-0181

P.O. NO.:

PROJECT CONTACT: Richard Villafania

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

X 10 DAYS o 24 HR o 48 HR o 72 HR o 5 DAYS

☐ COELT EDF

GLOBAL ID:

LOG CODE:

SPECIAL INSTRUCTIONS:

Excel EDD and Anchor Equis EDD are required.

Report down to the MDL; dry weight corrected.
MS/MSD onIB-SG-05-190603
Report due 06/21/19

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Filtered at ECI	EPA 1631E Mercury		MS/MSD											
	IB-SG-01-190603	06/03/19	1245	sediment	1	X			X													
	IB-SG-02-190603	06/03/19	1005	sediment	1	X			X													
	IB-SG-03-190603	06/03/19	0955	sediment	1	X			X													
	IB-SG-04-190603	06/03/19	1230	sediment	1	X			X													
	IB-SG-05-190603	06/03/19	1025	sediment	1	X			X		X											MS/MSD
	IB-SG-06-190603	06/03/19	1045	sediment	1	X			X													
	IB-SG-07-190603	06/03/19	1100	sediment	1	X			X													
	IB-SG-08-190603	06/03/19	1110	sediment	1	X			X													
	IB-SG-09-190603	06/03/19	1130	sediment	1	X			X													
	IB-SG-10-190603	06/03/19	1145	sediment	1	X			X													

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
	Fedex 775412334010	6/6/19	1622
Relinquished by: (Signature)	Received by: (Signature/Affiliation) / EFGS	6/7/19	935
Relinquished by: (Signature)	Received by: (Signature/Affiliation)		

CS-Yes FedEx

06/02/14 Revision

9F06021

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For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

TO: EFGS
11720 North Creek Parkway N.,
Suite 400
Bothell, WA 98011

CHAIN OF CUSTODY RECORD

DATE: 06/06/19

PAGE: 2 OF 2

LABORATORY CLIENT: EUROFINS CALSCIENCE, INC.

ADDRESS: 7440 LINCOLN WAY

CITY: GARDEN GROVE STATE: CA ZIP: 92841-1432

TEL: (714) 895-5494 E-MAIL: RichardVillafania@eurofinsUS.com

CLIENT PROJECT NAME / NUMBER: 19-06-0181

P.O. NO.:

PROJECT CONTACT: Richard Villafania

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

X 10 DAYS o 24 HR o 48 HR o 72 HR o 5 DAYS

☐ COELT EDF

GLOBAL ID:

LOG CODE:

SPECIAL INSTRUCTIONS:

Excel EDD and Anchor Equis EDD are required.

Report down to the MDL, dry weight corrected.

Report due 06/21/19

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Filtered at ECI	EPA 1631E Total Mercury
	IB-SG-11-190603	06/03/19	1155	sediment	1	X			X
	IB-SG-12-190603	06/03/19	1215	sediment	1	X			X

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]		6/6/19	1622
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/02/14 Revision

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Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

IB-SG-01-190603

9F00021-01

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**263**	1.01	9.23	ng/g dry	100	F906200	12-Jun-19	9F18011	17-Jun-19	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**51.9**	0.1	0.1	% by Weight	1	F906201	12-Jun-19		13-Jun-19	SM 2540B	O-04, O-09

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Eurofins Frontier Global Sciences, LLC

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Amy Goodall

Amy Goodall, Project Manager

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Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

IB-SG-02-190603

9F00021-02

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**497**	1.32	12.0	ng/g dry	100	F906200	12-Jun-19	9F18011	17-Jun-19	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**38.5**	0.1	0.1	% by Weight	1	F906201	12-Jun-19		13-Jun-19	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

IB-SG-03-190603

9F00021-03

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**390**	1.49	13.6	ng/g dry	100	F906200	12-Jun-19	9F18011	17-Jun-19	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**36.0**	0.1	0.1	% by Weight	1	F906201	12-Jun-19		13-Jun-19	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

IB-SG-04-190603

9F00021-04

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**419**	1.18	10.7	ng/g dry	100	F906200	12-Jun-19	9F18011	17-Jun-19	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**41.2**	0.1	0.1	% by Weight	1	F906201	12-Jun-19		13-Jun-19	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

IB-SG-05-190603

9F00021-05

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**470**	1.26	11.5	ng/g dry	100	F906200	12-Jun-19	9F18011	17-Jun-19	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**37.0**	0.1	0.1	% by Weight	1	F906201	12-Jun-19		13-Jun-19	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

IB-SG-06-190603

9F00021-06

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**517**	1.38	12.6	ng/g dry	100	F906200	12-Jun-19	9F18011	17-Jun-19	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**37.6**	0.1	0.1	% by Weight	1	F906201	12-Jun-19		13-Jun-19	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

IB-SG-07-190603

9F00021-07

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**478**	1.36	12.4	ng/g dry	100	F906200	12-Jun-19	9F18011	17-Jun-19	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**38.4**	0.1	0.1	% by Weight	1	F906201	12-Jun-19		13-Jun-19	SM 2540B	O-04, O-09

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Eurofins Frontier Global Sciences, LLC

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Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

IB-SG-08-190603

9F00021-08

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**485**	1.43	13.0	ng/g dry	100	F906200	12-Jun-19	9F18011	17-Jun-19	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**35.6**	0.1	0.1	% by Weight	1	F906201	12-Jun-19		13-Jun-19	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

IB-SG-09-190603

9F00021-09

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**387**	1.59	14.5	ng/g dry	100	F906200	12-Jun-19	9F18011	17-Jun-19	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**32.3**	0.1	0.1	% by Weight	1	F906201	12-Jun-19		13-Jun-19	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

IB-SG-10-190603

9F00021-10

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**583**	1.55	14.2	ng/g dry	100	F906200	12-Jun-19	9F18011	17-Jun-19	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**32.0**	0.1	0.1	% by Weight	1	F906201	12-Jun-19		13-Jun-19	SM 2540B	O-04, O-09

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Eurofins Frontier Global Sciences, LLC

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Amy Goodall

Amy Goodall, Project Manager

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Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

IB-SG-11-190603

9F00021-11

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**563**	1.34	12.2	ng/g dry	100	F906200	12-Jun-19	9F18011	17-Jun-19	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**34.8**	0.1	0.1	% by Weight	1	F906201	12-Jun-19		13-Jun-19	SM 2540B	O-04, O-09

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7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

IB-SG-12-190603

9F00021-12

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
Sample Preparation: EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Mercury	**552**	1.44	13.1	ng/g dry	100	F906200	12-Jun-19	9F18011	17-Jun-19	EPA 1631B	
Sample Preparation: EFGS SOP5133 Solids Analysis											
% Solids	**32.6**	0.1	0.1	% by Weight	1	F906201	12-Jun-19		13-Jun-19	SM 2540B	O-04, O-09

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Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F906200 - EFGS SOP2807 Cold Aqua Regia Digestion for Hg											
Blank (F906200-BLK1)					Prepared: 12-Jun-19 Analyzed: 17-Jun-19						
Mercury	0.53	0.11	1.00	ng/g wet							J
Blank (F906200-BLK2)					Prepared: 12-Jun-19 Analyzed: 17-Jun-19						
Mercury	ND	0.11	1.00	ng/g wet							U
Blank (F906200-BLK3)					Prepared: 12-Jun-19 Analyzed: 17-Jun-19						
Mercury	ND	0.11	1.00	ng/g wet							U
LCS (F906200-BS1)					Prepared: 12-Jun-19 Analyzed: 17-Jun-19						
Mercury	7.41	0.11	1.00	ng/g wet	8.0000		92.6	75-125			
LCS Dup (F906200-BSD1)					Prepared: 12-Jun-19 Analyzed: 17-Jun-19						
Mercury	7.61	0.11	1.00	ng/g wet	8.0000		95.1	75-125	2.68	24	
Duplicate (F906200-DUP1)		**Source: 9F00021-01**			Prepared: 12-Jun-19 Analyzed: 17-Jun-19						
Mercury	288.2	1.01	9.23	ng/g dry		263.2			9.07	24	AD
Matrix Spike (F906200-MS1)		**Source: 9F00021-05**			Prepared: 12-Jun-19 Analyzed: 17-Jun-19						
Mercury	1451	5.51	50.1	ng/g dry	1008.9	469.6	97.3	71-125			
Matrix Spike (F906200-MS2)		**Source: 9F00021-11**			Prepared: 12-Jun-19 Analyzed: 17-Jun-19						
Mercury	1731	6.05	55.0	ng/g dry	1107.6	562.9	105	71-125			
Matrix Spike Dup (F906200-MSD1)		**Source: 9F00021-05**			Prepared: 12-Jun-19 Analyzed: 17-Jun-19						
Mercury	1505	5.13	46.7	ng/g dry	939.18	469.6	110	71-125	12.6	24	
Matrix Spike Dup (F906200-MSD2)		**Source: 9F00021-11**			Prepared: 12-Jun-19 Analyzed: 17-Jun-19						
Mercury	1529	5.72	52.1	ng/g dry	1047.4	562.9	92.2	71-125	13.4	24	

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Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch F906201 - EFGS SOP5133 Solids Analysis											
Duplicate (F906201-DUP1)		**Source: 9F00021-05**			Prepared: 12-Jun-19 Analyzed: 13-Jun-19						
% Solids	36.8	0.1	0.1	% by Weight		37.0			0.542	10	O-04, O-09
Duplicate (F906201-DUP2)		**Source: 9F00021-11**			Prepared: 12-Jun-19 Analyzed: 13-Jun-19						
% Solids	35.1	0.1	0.1	% by Weight		34.8			0.858	10	O-04, O-09

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Eurofins Calscience, LLC	Project: Anchor QEA Sediments	
7440 Lincoln Way	Project Number: 19-06-0181	**Reported:**
Garden Grove CA, 92841	Project Manager: Richard Villafania	19-Jun-19 14:02

Notes and Definitions

U	Analyte was not detected and is reported as less than the LOD or as defined by the client. The LOD has been adjusted for any dilution or concentration of the sample.
O-09	Total Solids are prepared at the same time as the preparation for the analyte(s) of interest in order to provide the most accurate dry mass correction.
O-04	This sample was analyzed outside of the recommended holding time.
J	The result is an estimated concentration.
AD	This matrix duplicate is an analytical duplicate.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the method detection limit if reported to the MDL or above the reporting limit if reported to the MRL.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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Attachment D
Data Validation Report

1201 3rd Avenue, Suite 2600
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ANCHOR QEA

Data Validation Report – EPA Stage 2A

June 25, 2019

Project: India Basin, 900 Innes Avenue

Project Number: 192051-01.01

This report summarizes the review of analytical results for 12 sediment samples collected on June 3, 2019. The samples were collected by Anchor QEA, LLC, and submitted to Eurofins Calscience, Inc., (ECI) in Garden Grove, California. Select sample aliquots were subcontracted to Eurofins Frontier Global Sciences (EFGS) in Bothell, Washington for total mercury analysis. The following analytical parameter results were reviewed in this report:

- Lead by U.S. Environmental Protection Agency (USEPA) method 6020
- Polychlorinated biphenyl congeners (PCBs) by USEPA method 8270D-SIM
- Total solids (TS) by Standard Method (SM) 2540B and 2540B (modified)
- Mercury by USEPA 1631E, Appendix B

Sample IDs, sample delivery groups (SDGs), matrices, and analyses are presented in Table 1.

Table 1
Sample IDs, Matrices, Analyses, and Sample Delivery Groups

Sample ID	Laboratory	Lab SDG	Lab Sample ID	Matrix	Analyses
IB-SG-01-190603	EFGS	9F00021	9F00021-01	Sediment	Mercury, TS
	ECI	19060181	19-06-0181-1	Sediment	Lead, PCBs, TS
IB-SG-02-190603	EFGS	9F00021	9F00021-02	Sediment	Mercury, TS
	ECI	19060181	19-06-0181-2	Sediment	Lead, PCBs, TS
IB-SG-03-190603	EFGS	9F00021	9F00021-03	Sediment	Mercury, TS
	ECI	19060181	19-06-0181-3	Sediment	Lead, PCBs, TS
IB-SG-04-190603	EFGS	9F00021	9F00021-04	Sediment	Mercury, TS
	ECI	19060181	19-06-0181-4	Sediment	Lead, PCBs, TS
IB-SG-05-190603	EFGS	9F00021	9F00021-05	Sediment	Mercury, TS
	ECI	19060181	19-06-0181-5	Sediment	Lead, PCBs, TS
IB-SG-06-190603	EFGS	9F00021	9F00021-06	Sediment	Mercury, TS
	ECI	19060181	19-06-0181-6	Sediment	Lead, PCBs, TS
IB-SG-07-190603	EFGS	9F00021	9F00021-07	Sediment	Mercury, TS
	ECI	19060181	19-06-0181-7	Sediment	Lead, PCBs, TS
IB-SG-08-190603	EFGS	9F00021	9F00021-08	Sediment	Mercury, TS
	ECI	19060181	19-06-0181-8	Sediment	Lead, PCBs, TS

Sample ID	Laboratory	Lab SDG	Lab Sample ID	Matrix	Analyses
IB-SG-09-190603	EFGS	9F00021	9F00021-09	Sediment	Mercury, TS
	ECI	19060181	19-06-0181-9	Sediment	Lead, PCBs, TS
IB-SG-10-190603	EFGS	9F00021	9F00021-10	Sediment	Mercury, TS
	ECI	19060181	19-06-0181-10	Sediment	Lead, PCBs, TS
IB-SG-11-190603	EFGS	9F00021	9F00021-11	Sediment	Mercury, TS
	ECI	19060181	19-06-0181-11	Sediment	Lead, PCBs, TS
IB-SG-12-190603	EFGS	9F00021	9F00021-12	Sediment	Mercury, TS
	ECI	19060181	19-06-0181-12	Sediment	Lead, PCBs, TS

Data Validation and Qualifications

The following comments refer to the laboratory's performance in meeting the quality assurance/quality control (QA/QC) guidelines outlined in the analytical procedures. Laboratory results were reviewed using the laboratory control limits and the following guidelines:

- *Quality Assurance Project Plan India Basin, 900 Innes Avenue* (QAPP; Anchor QEA 2018)
- *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods* (SW-846, Third Edition; USEPA 1986)
- USEPA *National Functional Guidelines for Inorganic Superfund Data Review* (USEPA 2017a)
- USEPA *National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA 2017b)

Unless noted in this report, laboratory results for the samples listed above were within QC criteria.

Field Documentation

Field documentation was checked for completeness and accuracy. The chain-of-custody forms were signed by ECI and EFGS at the time of sample receipt. All samples were received in good condition and within the recommended temperature range.

Holding Times and Sample Preservation

Samples were appropriately preserved and analyzed within holding times.

Laboratory Method Blanks

Laboratory method blanks were analyzed at the required frequencies. All method blanks were free of target analytes except for mercury in one of the three method blanks, which had a detected result between the method detection limit (MDL) and the reporting limit (RL). The associated sample result was significantly greater than (greater than five times) the method blank detection, so no results were qualified.

Field Quality Control

No field quality control samples were collected with this sample set.

Surrogate Recoveries

Surrogate recoveries were within the laboratory control limits.

Laboratory Control Samples and Laboratory Control Sample Duplicates

Laboratory control samples (LCS) and laboratory control sample duplicates (LCSDs) were analyzed at the required frequency and were within the project control limits for accuracy and precision.

Matrix Spike and Matrix Spike Duplicate Samples

Matrix spike (MS) and matrix spike duplicate (MSD) samples were analyzed at the required frequency and were within the project control limits for accuracy and precision.

Laboratory Duplicates

Laboratory duplicates were analyzed at the required frequency and all duplicate RPD values were within control limits.

Method Reporting Limits and Analyte List

MDLs and RLs were acceptable as reported. All values were reported using the laboratory limits. Values were reported as undiluted or when diluted, the reporting limit reflects the dilution factor.

Overall Assessment

As was determined by this evaluation, the laboratory followed the specified analytical methods and all requested sample analyses were completed. Accuracy was acceptable as demonstrated by the surrogate, LCS/LCSD, and MS/MSD recovery values. Precision was acceptable as demonstrated by the LCS/LCSD, MS/MSD, and laboratory duplicate RPD values. All data are acceptable as reported.

References

Anchor QEA (Anchor QEA, LLC), 2018. *Quality Assurance Project Plan India Basin, 900 Innes Avenue*. April 2018.

USEPA (U.S. Environmental Protection Agency), 1986. *Test methods for Evaluating Solid Waste: Physical/Chemical Methods*. Office of Solid Waste and Emergency Response. EPA-530/SW-846.

USEPA, 2017a. *National Functional Guidelines for Inorganic Superfund Data Review*. Office of Superfund Remediation and Technology Innovation. EPA-540-R-2017-001. January 2017.

USEPA, 2017b. *National Functional Guidelines for Superfund Organic Methods Data Review*. Office of Superfund Remediation and Technology Innovation. EPA-540-R-2017-002. January 2017.