

Gammon Construction Limited

Central Kowloon Route
Works Contract HY/2014/07 –
Central Kowloon Route – Kai Tak West
Water Quality Baseline Monitoring Report

[October 2018]

	Name	Signature
Prepared & Checked:	Ray Cheng	
Reviewed, Approved & Certified:	Y T Tang	

Version: 1

Date: 2 November 2018

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AECOM Asia Co. Ltd.

15/F, Grand Central Plaza, Tower 1, 138 Shatin Rural Committee Road, Shatin, NT, Hong Kong
Tel: (852) 3922 9000 Fax: (852) 2317 7609 www.aecom.com

Environmental Permit No. FEP-01/457/2013/C

Central Kowloon Route

Independent Environmental Checker Verification

Works Contract: Kai Tak West (HY/2014/07)

Reference Document/Plan

Document/~~Plan~~ to be ~~Certified~~/ Verified: Water Quality Baseline Monitoring Report
Date of Report: 2 November 2018 (Rev. 1)
Date received by IEC: 2 November 2018

Reference EP Condition

Environmental Permit Condition: 3.3

Environmental Monitoring and Audit (EM&A) Requirements

3.3 Four hard copies and one electronic copy of the Baseline Monitoring Report shall be submitted to the Director at least 2 weeks before the commencement of construction of the Project. The submissions shall be certified by the ET Leader and verified by the IEC as complied with the requirements as set out in the EM&A Manual before submission to the Director. Additional copies of the submission shall be provided upon request by the Director.

IEC Verification

I hereby verify that the above referenced document/~~plan~~ complies with the above referenced condition of FEP-01/457/2013/C.



Ms Mandy To

Date: 2 November 2018

Independent Environmental Checker

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EXECUTIVE SUMMARY

The Environmental Impact Assessment (EIA) Report for Central Kowloon Route (CKR) (Register No.: AEIAR-171/2013) was approved on 11 July 2013 under the Environmental Impact Assessment Ordinance (EIAO). An Environmental Permit (EP) for CKR was granted on 9 August 2013 (EP No.: EP-457/2013) and the latest Further Environmental Permit (FEP) (EP No.: FEP-01/457/2013/C) for CKR - Kai Tak West was issued on 28 February 2018.

The baseline water quality monitoring was carried out 3 days per week for 4 weeks between 16 August 2018 and 11 September 2018 for all designated water quality monitoring locations (CS3, IS1, IS2, CS2, IS3, CS1) described in the Updated EM&A Manual. The water monitoring stations for baseline water quality monitoring is presented in **Table 2.2** and shown in **Figure 2.1**. The water quality parameters such as dissolved oxygen, temperature, turbidity, pH value, salinity, suspended solids, copper and total PAHs were monitored either using the calibrated equipment or by laboratory analysis.

The monitoring results were presented in this report and no major pollution source and extreme weather, which might affect the results, were observed during the baseline monitoring period. The Action and Limit levels of dissolved oxygen, suspended solids, turbidity, Copper and total PAHs were derived based on the baseline monitoring results and the water quality assessment criteria.

1 INTRODUCTION

1.1 Project Description

- 1.1.1 Central Kowloon Route (CKR) is a proposed dual 3-lane trunk road across central Kowloon linking the West Kowloon in the west and the proposed Kai Tak Development (KTD) in the east. The CKR will be about 4.7 km long with an underground tunnel section of about 3.9 km long, in particular, there will be an underwater tunnel of about 370 m long in Kowloon Bay to the north of the To Kwa Wan Typhoon Shelter. It will connect the West Kowloon Highway at Yau Ma Tei Interchange with the road network at Kowloon Bay and the future Trunk Road T2 at KTD which will connect to the future Tseung Kwan O – Lam Tin Tunnel (TKO-LTT) and Cross Bay Link (CBL). CKR, Trunk Road T2 and TKO-LTT will form a strategic highway link, namely Route 6, connecting West Kowloon and Tseung Kwan O.
- 1.1.2 The Environmental Impact Assessment (EIA) Report for CKR (Register No.: AEIAR-171/2013) was approved on 11 July 2013 under the Environmental Impact Assessment Ordinance (EIAO). Following the approval of the EIA Report, an Environmental Permit (EP) for CKR was granted on 9 August 2013 (EP No.: EP- 457/2013) for the construction and operation. Variations of EP (VEP) were applied after the issuance of the EP. The latest VEP was applied on 20 December 2016, and the corresponding latest version of EP (EP No.: EP-457/2013/C) was issued by the Director of Environmental Protection (DEP) on 16 January 2017. The latest Further Environmental Permit (EP No. FEP-01/457/2013/C) for CKR – Kai Tak West was issued on 28 February 2018.
- 1.1.3 The construction of the CKR had been divided into different civil construction works contracts. Contract No. HY/2014/07 (hereafter referred to as “the Project”) involves the following construction activities:
- a. construction of an approximately 370m long underwater tunnel and the associated temporary reclamation in Kowloon Bay;
 - b. construction of an approximately 160m long cut and cover tunnel in Ma Tau Kok;
 - c. construction of an approximately 125m long depressed road and an approximately 170m long underpass in Kai Tak Development;
 - d. construction and subsequent handover of access shaft, temporary traffic decking and associated noise enclosure in Ma Tau Kok to another contractor for the construction of the central tunnel section of Central Kowloon Route;
 - e. reconstruction of Kowloon City Ferry Pier Public Transport Interchange;
 - f. demolition and removal of the existing landside portion of the existing disused Kowloon City Vehicular Ferry Pier;
 - g. demolition and subsequent re-provisioning of Ma Tau Kok Public Pier; and
 - h. associated drainage and sewerage, waterworks and landscaping works.
- 1.1.4 This Works Contract was awarded to Gammon Construction Limited (the Contractor), and AECOM Asia Company Limited was commissioned by the Contractor to serve as the Project’s Environmental Team (ET) for carrying out the environmental monitoring and audit (EM&A) work of the Project.

1.2 Purpose of this Report

- 1.2.1 This Baseline Monitoring Report is submitted to fulfill Condition 3.2 (a) of the EP, which stipulated that a baseline environmental monitoring shall be conducted for at least 4 weeks prior to the commencement of dredging works. The baseline monitoring has been undertaken based on the approach and methodology presented in the EM&A manual. The monitoring schedule are also presented in **Appendix D**.
- 1.2.2 This report presents the baseline monitoring results on water quality at six locations (CS3, IS1, IS2, CS2, IS3, CS1) obtained from the four weeks of monitoring undertaken between 16 August 2018 and 11 September 2018 and to establish baseline levels for water quality in accordance with the EM&A Manual. These levels would be used as the basis for assessing environmental impact and compliance during construction of the Project.
- 1.2.3 A layout plan of the Project is provided in **Figure 1.1**.

2 WATER QUALITY MONITORING

2.1 Monitoring Requirements

- 2.1.1 In accordance with the EM&A Manual, baseline water quality levels at 6 locations should be established by conducting baseline monitoring for at least 4 weeks prior to the commencement of dredging.

2.2 Monitoring Equipment

- 2.2.1 The brand and model of water quality monitoring equipment is given in **Table 2.1**.

Table 2.1 Water Quality Monitoring Equipment

Equipment	Brand and Model	Detection Limit
Dissolved Oxygen Meter	YSI 6820	0 – 20 mg/L and 0-200% saturation
Water Temperature Meter		0-45 degree Celsius
Salinity Meter		0-40 parts per thousand (ppt)
Turbidimeter		0-1000 NTU
Water Sampler	Kahlsico Water Sampler	N.A
Echo Sounder	Eagle Cuda-168	N.A
Global Positioning System	JRC DGPS 224 Model JLR-4341 with J-NAV 500 Model NWZ4551	N.A

2.3 Monitoring Locations

- 2.3.1 In accordance with the Updated EM&A Manual, the water monitoring stations for baseline water quality monitoring is presented in **Table 2.2** and shown in **Figure 2.1**.

Table 2.2 Baseline Water Quality Monitoring Stations

Type of Station	Station	Location	Easting	Northing
Water Quality Monitoring Station	IS1	Planned Kai Tak Cooling Water Intake (subject to its implementation)	839050	819377
	IS2	To Kwa Wan Typhoon Shelter	838450	819399
	IS3	Tai Wan Salt Water Intake	837948	818202
Control Station	C1	Control Station 1	837787	817712
	C2	Control Station 2	838237	818804
	C3	Control Station 3	839105	819019

2.4 Monitoring Parameters, Frequency and Duration

- 2.4.1 The monitoring parameters, frequency and duration of water quality monitoring are summarized in **Table 2.3**.

Table 2.3 Water Quality Monitoring Parameters, Frequency and Duration

Parameter	Frequency and Duration
Dissolved Oxygen, Temperature, Turbidity, pH value, Salinity, Suspended Solids, Copper and Total PAH	Three days per week, at mid-flood and mid-ebb tides for 4 weeks

2.5 Monitoring Methodology

2.5.1 The water quality monitoring procedures are presented in the following:

- All monitoring equipment were checked and calibrated before use. Responses of sensors and electrodes were also checked with certified standard solutions before each use.
- The interval between 2 sets of monitoring was not less than 36 hours.
- Individual flood and ebb tides not less than 0.5m.
- At least 3 replicate in-situ measurements and water sampling were carried out in each sampling event.
- Measurements were taken at 3 water depths, namely 1m below water surface, mid-depth and 1m above sea bed, except where the water depth less than 6m, the mid-depth station may be omitted. Should the water depth be less than 3m, only the mid-depth station was monitored.
- Analysis of suspended solids was carried out by ALS Technichem (HK) Pty Ltd. Sufficient water samples were collected at the monitoring stations for carrying out the laboratory analysis. The analysis followed the standard methods as described in APHA Standard Methods for the Examination of Water and Wastewater, 19th Edition (APHA 2540D for SS).
- Analysis of copper was carried out by ALS Technichem (HK) Pty Ltd. Sufficient water samples were collected at the monitoring stations for carrying out the laboratory analysis. The analysis followed the standard methods as described in USEPA Method for inductively coupled plasma-mass spectrometry (ICP-MS), Revision 1 (ICP-MS USEPA 6020A for copper).
- Analysis of total polycyclic aromatic hydrocarbon (PAHs) was carried out by ALS Technichem (HK) Pty Ltd. Sufficient water samples were collected at the monitoring stations for carrying out the laboratory analysis. The analysis followed the standard methods as described in USEPA Methods for Gas Chromatography-Mass Spectrometry Detector, Revision 3, (GC-MSD USEPA 3510C, USEPA 3630C, USEPA 8270C for total PAHs).
- Water samples for suspended solids measurements were collected in high density polythene bottles, packed in ice (cooled to 4°C without being frozen), and delivered to a HOKLAS laboratory as soon as possible after collection.
- All monitoring equipment were certified by a laboratory accredited under HOKLAS. Calibration certificates of all monitoring equipment are provided in **Appendix A**.

2.6 Results and Observations

- 2.6.1 The baseline water quality monitoring for 6 locations were carried out 3 days per week for 4 weeks between 16 August 2018 and 11 September 2018. The baseline monitoring data and laboratory results are presented in **Appendix B and Appendix C** respectively.
- 2.6.2 The weather condition during the monitoring period were mainly sunny and fine and occasionally cloudy and rainy. No major pollution source and extreme weather, which might affect the results, was observed during the baseline monitoring period.
- 2.6.3 The baseline water quality monitoring results are summarized in **Table 2.4**.
- 2.6.4 The lab results for laboratory analysis of suspended solids, copper and total PAHs are presented in **Appendix C**

Table 2.4 Summary of baseline Water Quality Monitoring Results

Locations		Parameters							
		Temperature (°C)	Dissolved Oxygen (mg/L)		Turbidity (NTU)	Suspended Solids (mg/L)	Salinity (ppt)	Copper (µg/L)	Total PAH (µg/L)
			Surface & Middle	Bottom					
CS1	Avg.	26.1	4.67	4.42	3.97	7.71	31.6	1.23	1.60
	Min.	28.7	3.42	3.21	1.40	3.30	27.3	<1	<1.6
	Max.	23.0	6.53	6.35	8.00	18.70	40.2	4.00	<1.6
CS2	Avg.	26.3	4.79	4.56	4.18	7.84	31.4	1.27	1.60
	Min.	28.6	3.92	3.90	1.30	2.50	27.7	<1	<1.6
	Max.	23.5	6.83	5.67	8.80	20.20	42.7	13.00	<1.6
CS3	Avg.	26.5	4.95	4.76	3.68	7.69	31.3	1.13	1.60
	Min.	28.5	4.02	3.96	1.20	2.10	27.0	<1	<1.6
	Max.	24.5	6.76	6.38	8.00	20.40	42.2	5.00	<1.6
IS1	Avg.	26.6	4.97	4.80	3.90	7.63	31.1	1.15	1.60
	Min.	28.5	4.06	4.01	1.30	3.00	27.8	<1	<1.6
	Max.	24.3	6.75	6.31	8.40	19.00	41.9	3.00	<1.6
IS2	Avg.	26.5	4.96	4.79	4.02	7.04	31.1	1.19	1.60
	Min.	28.5	3.90	3.89	2.00	2.40	27.9	<1	<1.6
	Max.	24.2	6.78	6.64	8.80	19.20	40.7	12.00	<1.6
IS3	Avg.	26.2	4.75	4.49	3.91	7.67	31.5	1.19	1.60
	Min.	28.4	3.47	3.38	1.30	2.60	27.4	<1	<1.6
	Max.	23.5	6.96	6.31	7.60	16.40	40.9	3.00	<1.6

2.7 Event and Action Levels

2.7.1 The water quality assessment criteria, namely Action and Limit levels are shown in **Table 2.5**.

Table 2.5 Derivation of Action and Limit Levels for Water Quality

Parameters	Action	Limit
Dissolved Oxygen (DO) in mg/L (Surface, Middle & Bottom)	<u>Surface & Middle</u> 5th percentile of baseline data for surface and middle layer <u>Bottom</u> 5th percentile of baseline data for bottom layer	<u>Surface & Middle</u> 4mg/L (5mg/L for FCZ) or 1 st percentile of baseline data for surface and middle layer <u>Bottom</u> 2mg/L or 1 st percentile of baseline data for bottom layer
Suspended Solids (SS) in mg/L (Surface, Middle & Bottom)	95 percentile of baseline data or 120% of upstream control station's SS at the same tide of the same day	99 percentile of baseline data or 130% of upstream control station's SS at the same tide of the same day
Turbidity in NTU (Surface, Middle & Bottom)	95 percentile of baseline data or 120% of upstream control station's Turbidity at the same tide of the same day	99 percentile of baseline data or 130% of upstream control station's Turbidity at the same tide of the same day
Copper in µg/L (depth averaged)	95 percentile of baseline data or 120% of upstream control station's nutrient level at the same tide of the same day	99 percentile of baseline or 130% of upstream control station's nutrient level at the same tide of the same day or 5 µg/L
Total PAH in µg/L (depth averaged)	95 percentile of baseline data or 120% of upstream control station's nutrient level at the same tide of the same day	99 percentile of baseline or 130% of upstream control station's nutrient level at the same tide of the same day or 3 µg/L

Note: 1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, Copper and Total PAH, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary.
4. For baseline monitoring, seasonal and spatial variation should be taken into account when setting up the baseline data.

2.7.2 The derived Action and Limit levels are presented in **Table 2.6**

Table 2.6 Derived Action and Limit Levels for Water Quality

Parameters	Action	Limit
Dissolved Oxygen (DO) in mg/L	<p><u>Surface & Middle:</u> 4.03 (5th percentile of baseline data for surface and middle layer)</p> <p><u>Bottom:</u> 3.94 (5th percentile of baseline data for bottom layer)</p>	<p><u>Surface & Middle:</u> 3.88 (1st percentile of baseline data for surface and middle layer)</p> <p><u>Bottom:</u> 2.00</p>
Suspended Solids (SS) in mg/L	<p>13.80 (95th percentile of baseline data) or 120% of upstream control station's SS at the same tide of the same day</p>	<p>18.70 (99th percentile of baseline data) or 130% of upstream control station's SS at the same tide of the same day</p>
Turbidity in NTU	<p>7.00 (95th percentile of baseline data) or 120% of upstream control station's Turbidity at the same tide of the same day</p>	<p>8.40 (99th percentile of baseline data) or 130% of upstream control station's Turbidity at the same tide of the same day</p>
Copper in µg/L	<p>2.00 (95th percentile of baseline data) or 120% of upstream control station's nutrient level at the same tide of the same day</p>	<p>3.00 (99th percentile of baseline data) or 130% of upstream control station's nutrient level at the same tide of the same day or whichever is the less</p>
Total PAH in µg/L	<p>1.60 (95th percentile of baseline data) or 120% of upstream control station's nutrient level at the same tide of the same day</p>	<p>1.60 (99th percentile of baseline data) or 130% of upstream control station's nutrient level at the same tide of the same day or whichever is the less</p>

Note: 1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, Copper and Total PAH, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

- 2.7.3 Should non-compliance of the criteria occur, action in accordance with the Action Plan in the **Table 2.7** below shall be carried out.

Table 2.7 Event / Action Plan for Water Quality

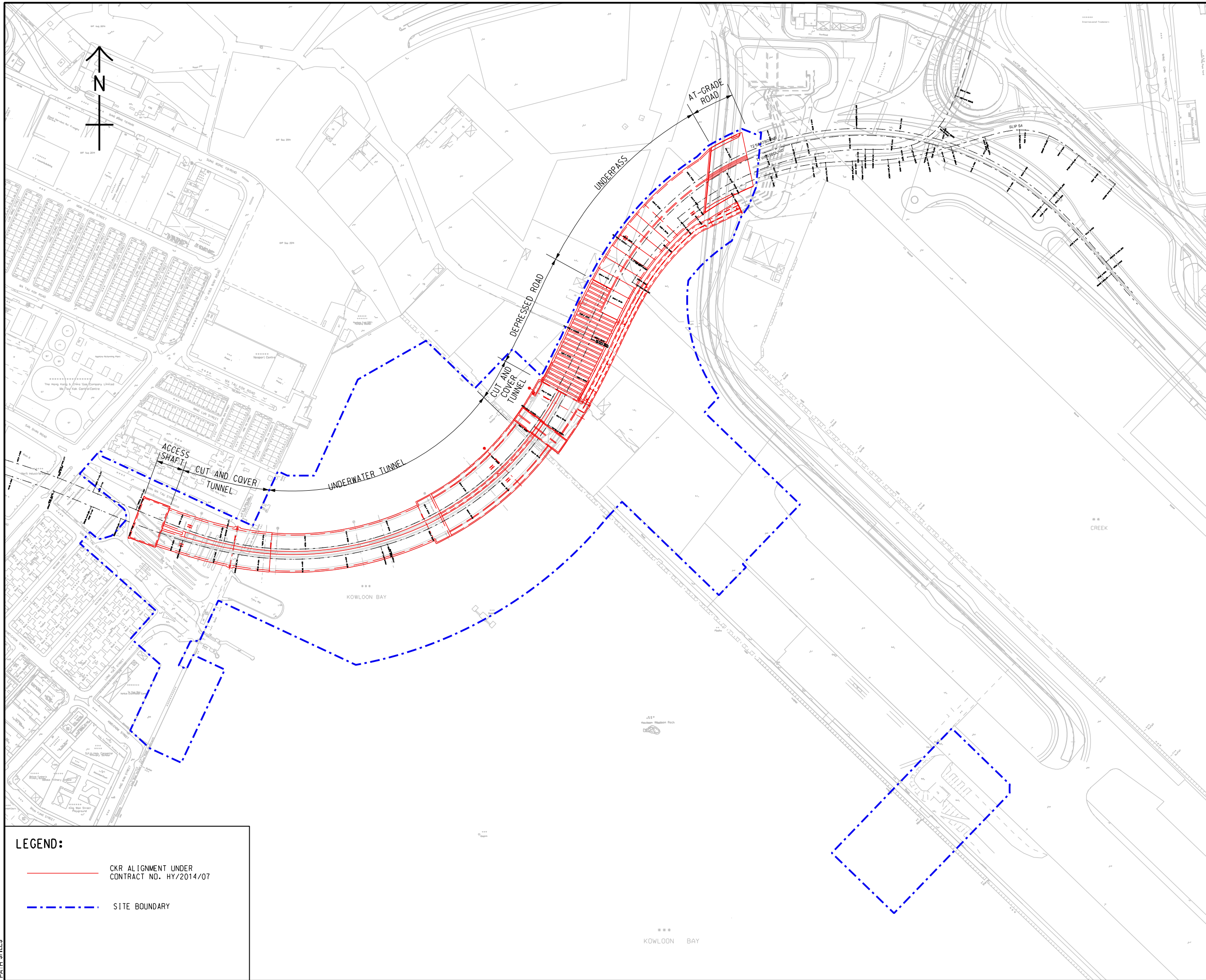
Event	Environmental Team
Action level being exceeded by one sampling day	<ol style="list-style-type: none"> 1. Inform IEC, contractor and ER; 2. Check monitoring data, all plant, equipment and Contractor's working methods; and 3. Discuss remedial measures with IEC and Contractor and ER.
Action level being exceeded by more than one consecutive sampling days	<ol style="list-style-type: none"> 1. Repeat in-situ measurement on next day of exceedance to confirm findings; 2. Inform IEC, contractor and ER; 3. Check monitoring data, all plant, equipment and Contractor's working methods; 4. Discuss remedial measures with IEC, contractor and ER 5. Ensure remedial measures are implemented
Limit level being exceeded by one sampling day	<ol style="list-style-type: none"> 1. Repeat measurement on next day of exceedance to confirm findings; 2. Inform IEC, contractor and ER; 3. Rectify unacceptable practice; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Consider changes of working methods; 6. Discuss mitigation measures with IEC, ER and Contractor; and 7. Ensure the agreed remedial measures are implemented
Limit level being exceeded by more than one consecutive sampling days	<ol style="list-style-type: none"> 1. Inform IEC, contractor and ER; 2. Check monitoring data, all plant, equipment and Contractor's working methods; 3. Discuss mitigation measures with IEC, ER and Contractor; and 4. Ensure mitigation measures are implemented; and 5. Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days

3 CONCLUSIONS AND RECOMMENDATIONS

- 3.1.1 Baseline water quality monitoring was carried out between 16 August 2018 and 11 September 2018 for 6 designated locations. Action and Limit Levels were derived based on the baseline monitoring results and water quality assessment criteria.
- 3.1.2 No recommendation was provided in this baseline monitoring report.

FIGURES

ISO A1 594mm x 841mm
 Project Management Initials: Designer: Checker: Approver:
 PH: FLS BY: SUSERS SDATES
 PATH SPLIES



LEGEND:

— CKR ALIGNMENT UNDER CONTRACT NO. HY/2014/07

- - - - - SITE BOUNDARY

AECOM

PROJECT
 CONTRACT NO.
 HY/2014/07
 CENTRAL KOWLOON
 ROUTE -
 KAI TAK WEST

CLIENT
 GAMMON CONSTRUCTION LIMITED

CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

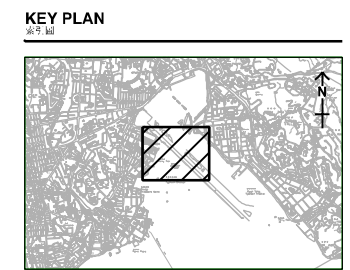
SUB-CONSULTANTS

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.

STATUS

SCALE **DIMENSION UNIT**
 A3 1 : 4000 METRES



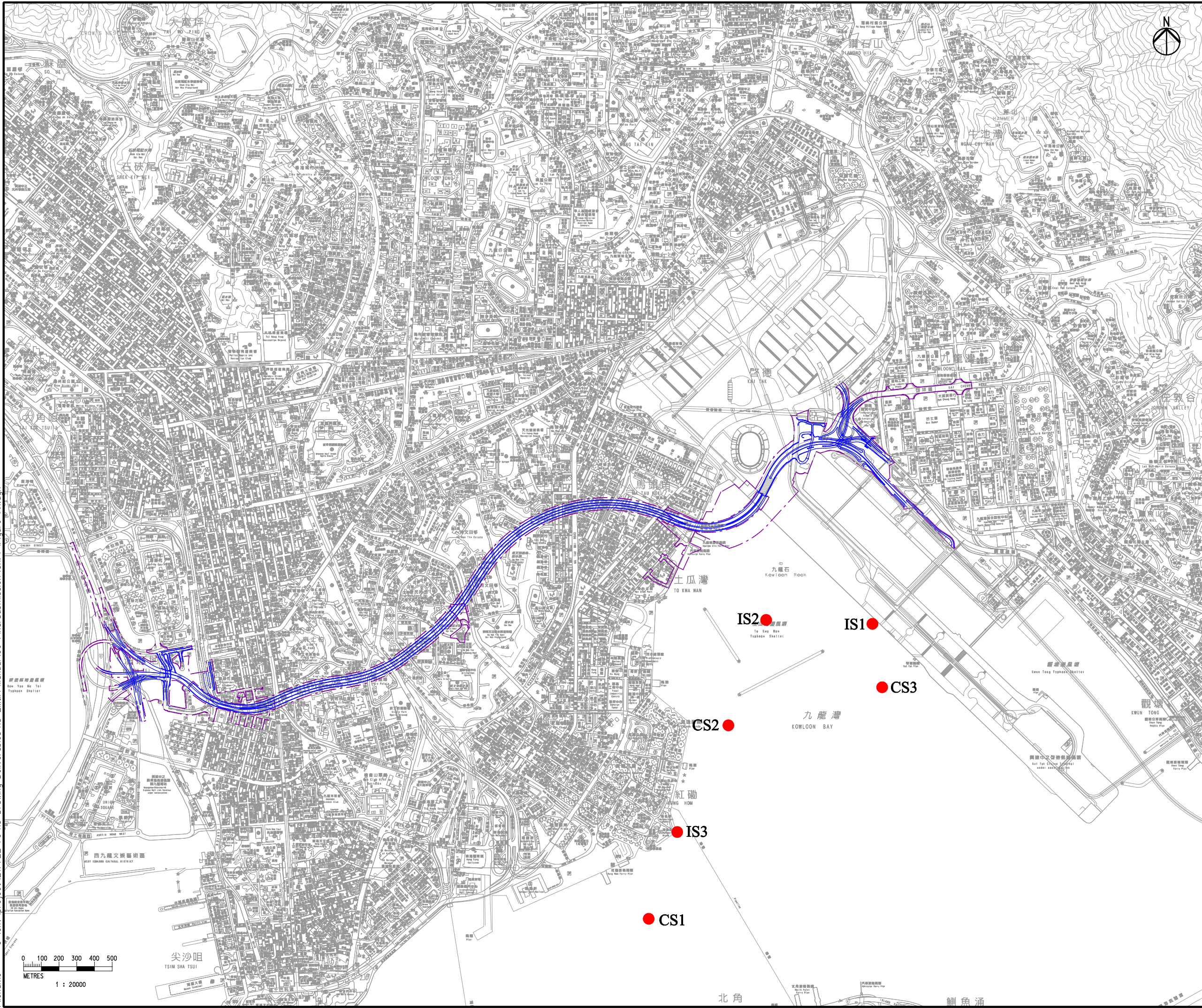
PROJECT NO. **AGREEMENT NO.**

SHEET TITLE
 SITE LAYOUT PLAN

SHEET NUMBER
 FIGURE 1.1

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- Legend
- CKR Alignment
 - - - Works Limit
 - Water Quality Monitoring Stations for Baseline and Construction Phase Monitoring

E	FIFTH ISSUE	GL	01/13
D	FOURTH ISSUE	GL	12/12
C	THIRD ISSUE	GL	10/12
B	SECOND ISSUE	GL	09/12
A	FIRST ISSUE	KM	06/12
Rev	Description	By	Date

Consultant

ARUP **Mott MacDonald**

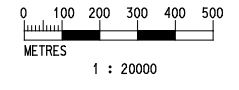
Project title
Agreement No. CE 43/2010 (HY)
Central Kowloon Route - Design and Construction

Drawing title
Location of Water Monitoring Stations for Baseline and Construction Phase Monitoring

Drawing		Figure 2.1		Rev.	E
Drawn	Date	Checked	Approved		
GL	01/13	FC	ST		
Scale	1:20000 ON A3		Status	PRELIMINARY	

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路政署
HIGHWAYS DEPARTMENT
主要工程管理處
MAJOR WORKS PROJECT MANAGEMENT OFFICE



APPENDIX A

Calibration Certificates of Monitoring Equipment



ALS Technichem (HK) Pty Ltd

11/F, Chung Shun Knitting Centre

1-3 Wing Yip Street, Kwai Chung

N.T., Hong Kong

T: +852 2610 1044 | F: +852 2610 2021

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	MR MIKE SHEK	WORK ORDER:	HK1831275
CLIENT:	AECOM ASIA COMPANY LIMITED		
ADDRESS:	1501-10, 15/F, TOWER 1, GRAND CENTRAL PLAZA, 138 SHATIN RURAL COMMITTEE ROAD, SHATIN, NEW TERRITORIES, HONG KONG	SUB-BATCH:	0
		LABORATORY:	HONG KONG
		DATE RECEIVED:	24-May-2018
		DATE OF ISSUE:	31-May-2018

COMMENTS

The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

The "Tolerance Limit" quoted is the acceptance criteria applicable for similar equipment used by the ALS Hong Kong laboratory or quoted from relevant international standards.

The "Next Calibration Date" is recommended according to best practice principle as practised by the ALS Hong Kong laboratory or quoted from relevant international standards.

Scope of Test:	Conductivity, Dissolved Oxygen, pH Value, Turbidity, Salinity and Temperature
Equipment Type:	Multifunctional Meter
Brand Name:	YSI
Model No.:	6820 V2
Serial No.:	00H1019
Equipment No.:	W.026.09
Date of Calibration:	24 May, 2018

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

Ms. Lin Wai Yu
Assistant Manager - Inorganic

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



WORK ORDER: HK1831275
SUB-BATCH: 0
DATE OF ISSUE: 31-May-2018
CLIENT: AECOM ASIA COMPANY LIMITED

Equipment Type: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 00H1019
Equipment No.: W.026.09
Date of Calibration: 24 May, 2018

Date of Next Calibration: 24 August, 2018

PARAMETERS:

Conductivity

Method Ref: APHA (21st edition), 2510B

Expected Reading ($\mu\text{S}/\text{cm}$)	Displayed Reading ($\mu\text{S}/\text{cm}$)	Tolerance (%)
146.9	145.0	-1.3
6667	6610	-0.9
12890	12840	-0.4
58670	58580	-0.2
	Tolerance Limit (%)	± 10.0

Dissolved Oxygen

Method Ref: APHA (21st edition), 4500-O: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.60	3.62	+0.02
5.55	5.56	+0.01
7.45	7.42	-0.03
	Tolerance Limit (mg/L)	± 0.20

pH Value

Method Ref: APHA (21st edition), 4500H:B

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	4.02	+0.02
7.0	7.04	+0.04
10.0	10.05	+0.05
	Tolerance Limit (pH unit)	± 0.20

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu
Assistant Manager - Inorganic

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



WORK ORDER: HK1831275
SUB-BATCH: 0
DATE OF ISSUE: 31-May-2018
CLIENT: AECOM ASIA COMPANY LIMITED

Equipment Type: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 00H1019
Equipment No.: W.026.09
Date of Calibration: 24 May, 2018

Date of Next Calibration: 24 August, 2018

PARAMETERS:

Turbidity

Method Ref: APHA (21st edition), 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	--
4	4.2	+5.0
10	9.8	-2.0
20	19.5	-2.5
50	49.6	-0.8
100	100.5	+0.5
	Tolerance Limit (%)	±10.0

Salinity

Method Ref: APHA (21st edition), 2520B

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	--
10	10.02	+0.2
20	19.95	-0.3
30	29.88	-0.4
	Tolerance Limit (%)	±10.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu
Assistant Manager - Inorganic

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



WORK ORDER: HK1831275
SUB-BATCH: 0
DATE OF ISSUE: 31-May-2018
CLIENT: AECOM ASIA COMPANY LIMITED

Equipment Type: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 00H1019
Equipment No.: W.026.09
Date of Calibration: 24 May, 2018

Date of Next Calibration: 24 August, 2018

PARAMETERS:
Temperature

Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
10.0	10.03	+0.0
20.5	20.51	+0.0
39.0	38.97	-0.0
	Tolerance Limit (°C)	±2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu
Assistant Manager - Inorganic

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



WORK ORDER: HK1845427
SUB- BATCH: 0
DATE OF ISSUE: 27-Aug-2018
CLIENT: AECOM ASIA COMPANY LIMITED

Equipment Type: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 00H1019
Equipment No.: W.026.09
Date of Calibration: 21 August, 2018

Date of Next Calibration: 21 November, 2018

PARAMETERS:

Conductivity

Method Ref: APHA (21st edition), 2510B

Expected Reading ($\mu\text{S}/\text{cm}$)	Displayed Reading ($\mu\text{S}/\text{cm}$)	Tolerance (%)
146.9	145.2	-1.2
6667	6690	+0.3
12890	12940	+0.4
58670	58420	-0.4
	Tolerance Limit (%)	± 10.0

Dissolved Oxygen

Method Ref: APHA (21st edition), 4500- O: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.45	3.41	-0.04
5.45	5.43	-0.02
7.55	7.52	-0.03
	Tolerance Limit (mg/L)	± 0.20

pH Value

Method Ref: APHA (21st edition), 4500H:B

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	4.02	+0.02
7.0	7.01	+0.01
10.0	10.00	+0.00
	Tolerance Limit (pH unit)	± 0.20

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu
Assistant Manager - Inorganic

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



WORK ORDER: HK1845427
SUB- BATCH: 0
DATE OF ISSUE: 27-Aug-2018
CLIENT: AECOM ASIA COMPANY LIMITED

Equipment Type: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 00H1019
Equipment No.: W.026.09
Date of Calibration: 21 August, 2018 **Date of Next Calibration:** 21 November, 2018

PARAMETERS:

Turbidity

Method Ref: APHA (21st edition), 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.00	--
4	3.80	-5.0
10	9.70	-3.0
20	20.1	+0.5
50	50.5	+1.0
100	99.4	-0.6
	Tolerance Limit (%)	±10.0

Salinity

Method Ref: APHA (21st edition), 2520B

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	--
10	10.02	+0.2
20	19.96	-0.2
30	29.94	-0.2
	Tolerance Limit (%)	±10.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu
Assistant Manager - Inorganic

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



WORK ORDER: HK1845427
SUB- BATCH: 0
DATE OF ISSUE: 27-Aug-2018
CLIENT: AECOM ASIA COMPANY LIMITED

Equipment Type: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 00H1019
Equipment No.: W.026.09
Date of Calibration: 21 August, 2018 **Date of Next Calibration:** 21 November, 2018

PARAMETERS:
Temperature

Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
10.5	10.48	-0.0
20.0	19.97	-0.0
39.0	39.03	+0.0
	Tolerance Limit (°C)	±2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

A handwritten signature in black ink, appearing to read 'Lin Wai Yu'.

Ms. Lin Wai Yu
Assistant Manager - Inorganic

APPENDIX B

Baseline Water Quality Monitoring Data

Water Quality Monitoring Results at CS1 - Mid-Ebb Tide

Date	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)			Suspended Solids (mg/L)			Copper (µm/L)			Total PAH (µm/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
16-Aug-18	Sunny	Calm	16:33	Surface	1	28.1	28.1	29.5	29.5	62.30	62.07	4.14	4.12	4.10	3.9	3.9	4.1	8.6	8.8	9.6	<1	1.0	1.0	<1.6	1.6	1.6
						28.1		29.5		61.80		4.10			3.8			8.9			<1			<1.6		
						28.1		29.5		62.10		4.12			3.9			9.0			<1			<1.6		
				Middle	11.0	28.1	29.6	61.60	4.08	4.4	8.9	9.4	<1	1.0	1.0	<1.6	1.6									
						28.1	29.6	61.70	4.09		9.4		<1			<1.6										
						28.1	29.6	61.60	4.08		9.9		<1			<1.6										
Bottom	20.9	28.1	29.8	61.00	4.05	4.06	10.0	10.4	<1	1.0	1.0	<1.6	1.6													
		28.1	29.8	61.10	4.05		10.4		<1			<1.6														
		28.1	29.8	61.30	4.07		10.9		<1			<1.6														
18-Aug-18	Sunny	Calm	4:35	Surface	1	28.1	28.1	28.8	28.8	62.30	62.50	4.25	4.26	4.23	3.6	3.5	4.2	5.2	5.3	6.2	2.0	1.3	1.1	<1.6	1.6	1.6
						28.1		28.8		62.30		4.25			3.4			5.2			<1			<1.6		
						28.1		28.9		62.90		4.28			3.5			5.5			<1			<1.6		
				Middle	10.8	28.1	29.0	61.40	4.18	3.8	5.4	5.5	<1	1.0	1.0	<1.6	1.6									
						28.1	28.9	61.60	4.20		5.8		<1			<1.6										
						28.1	28.9	62.30	4.24		5.4		<1			<1.6										
Bottom	20.5	28.0	29.5	60.90	4.15	4.17	8.1	7.9	<1	1.0	1.0	<1.6	1.6													
		28.0	29.3	61.20	4.17		7.8		<1			<1.6														
		28.1	29.1	61.50	4.19		7.7		<1			<1.6														
21-Aug-18	Cloudy	Calm	8:35	Surface	1	28.6	28.6	30.6	30.5	76.10	76.33	5.49	5.51	5.37	2.7	2.7	5.4	4.5	4.6	6.0	<1	1.0	1.0	<1.6	1.6	1.6
						28.5		30.5		75.80		5.48			4.7			<1			<1.6					
						28.7		30.4		77.10		5.56			4.6			<1			<1.6					
				Middle	10.8	28.3	30.9	72.10	5.24	2.9	6.0	6.2	<1	1.0	1.0	<1.6	1.6									
						28.3	31.0	71.90	5.23		5.9		<1			<1.6										
						28.3	30.8	71.70	5.22		6.7		<1			<1.6										
Bottom	20.7	27.4	33.1	68.90	5.05	5.07	7.3	7.1	<1	1.0	1.0	<1.6	1.6													
		27.5	32.9	69.20	5.06		7.3		<1			<1.6														
		27.7	32.5	69.80	5.09		6.7		<1			<1.6														
23-Aug-18	Cloudy	Moderate	10:19	Surface	1	27.7	27.7	29.8	29.7	76.90	76.97	5.13	5.14	4.29	3.1	3.1	4.3	14.8	14.8	16.5	2.0	2.0	2.0	<1.6	1.6	1.6
						27.7		29.8		77.10		5.15			3.1			2.0			<1.6					
						25.7		32.2		50.40		3.45			16.4			<1.6								
				Middle	10.9	25.4	32.5	49.70	3.42	3.2	16.3	16.2	<1.6	2.0	2.0	<1.6	1.6									
						25.5	32.4	50.10	3.44		15.9		<1.6													
						24.9	33.0	47.10	3.21		18.0		<1.6													
Bottom	20.5	24.8	33.0	48.80	3.39	3.30	18.4	18.4	<1.6	2.0	2.0	<1.6	1.6													
		24.9	33.0	48.40	3.30		18.7		<1.6																	
		24.9	33.0	48.40	3.30		18.7		<1.6																	
25-Aug-18	Sunny	Moderate	11:06	Surface	1	27.0	27.0	31.3	31.3	76.70	76.97	5.13	5.14	4.83	3.4	3.5	4.8	4.6	4.9	6.6	1.0	1.3	1.1	<1.6	1.6	1.6
						27.0		31.3		76.40		5.11			3.5			2.0			<1.6					
						24.9		32.1		67.50		4.54			7.2			<1.6								
				Middle	11.0	24.9	32.0	67.30	4.52	4.5	6.8	7.1	<1	1.0	1.0	<1.6	1.6									
						25.0	32.0	66.80	4.49		7.4		<1			<1.6										
						24.3	33.1	70.90	4.81		7.8		<1			<1.6										
Bottom	21.0	24.3	33.1	70.00	4.81	4.81	8.2	7.9	<1	1.0	1.0	<1.6	1.6													
		24.3	33.1	70.90	4.81		7.7		<1			<1.6														
		24.3	33.1	70.90	4.81		7.7		<1			<1.6														
28-Aug-18	Rainy	Calm	13:36	Surface	1	26.1	26.1	39.2	39.2	64.80	64.97	4.20	4.22	4.20	5.0	5.0	4.2	6.2	6.5	6.8	3.0	3.0	3.0	<1.6	1.6	1.6
						26.2		39.0		65.40		4.25			6.6			<1.6								
						26.2		39.4		64.70		4.20			6.6			<1.6								
				Middle	10.9	26.1	39.9	64.20	4.16	5.2	6.1	6.3	<1.6	3.0	3.0	<1.6	1.6									
						26.1	39.7	64.30	4.17		6.7		<1.6													
						26.0	39.6	64.70	4.19		6.1		<1.6													
Bottom	20.8	25.9	40.2	63.30	4.10	4.12	8.0	7.5	<1.6	3.0	3.0	<1.6	1.6													
		26.0	39.7	64.10	4.16		7.1		<1.6																	
		26.0	39.9	63.40	4.11		7.5		<1.6																	

Water Quality Monitoring Results at CS1 - Mid-Ebb Tide

Date	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)			Copper (µm/L)			Total PAH (µm/L)										
						Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*								
30-Aug-18	Fine	Moderate	15:06	Surface	1	26.0 26.0 26.0	26.0	30.5 30.4 30.4	30.4	61.60 61.60 62.50	61.90	4.21 4.27 4.27	4.23	4.17	3.9 4.2 4.1	4.1	4.2	9.8 10.0 10.3	10.0	11.3	2.0 1.0 1.0	1.3	1.3	<1.6 <1.6 <1.6	1.6	1.6								
					10.9	25.7 25.7 25.7	25.7	30.8 30.8 30.8	30.8	60.00 60.00 60.30	60.10	4.11 4.11 4.13	4.12		5.3 5.5 5.7	5.5		11.4 10.6 11.0	11.0		2.0 1.0 1.0	1.3		<1.6 <1.6 <1.6	1.6									
					20.9	25.6 25.6 25.6	25.6	31.0 30.9 30.9	30.9	60.40 61.00 60.00	60.47	4.15 4.19 4.12	4.15		7.1 6.4 7.0	6.8		13.4 12.8 12.7	13.0		1.0 2.0 1.0	1.3		<1.6 <1.6 <1.6	1.6									
				1-Sep-18	Rainy	Moderate	16:37	Surface	1	26.2 26.2 26.1	26.2	28.3 28.3 28.5	28.4	60.90 60.10 59.20	60.07	4.20 4.14 4.08	4.14	4.06	1.4 1.5 1.7	1.5	4.1	3.7 3.8 4.1	3.9	4.7	1.0 2.0 3.0	2.0	1.8	<1.6 <1.6 <1.6	1.6	1.6				
									11.1	25.7 25.7 25.8	25.7	29.5 29.4 29.3	29.4	57.40 57.80 57.80	57.67	3.96 3.99 3.99	3.98		1.6 1.7 1.8	1.7		4.6 4.7 5.2	4.8		1.0 1.0 2.0	1.3		<1.6 <1.6 <1.6	1.6					
								Middle	11.1	25.7 25.8	25.7	29.4 29.3	29.4	57.80 57.80	57.67	3.99 3.99	3.98	1.7 1.8	1.7	4.7 5.2	4.8	1.0 2.0	1.3	<1.6 <1.6	1.6									
									21.1	25.0 25.2 25.0	25.1	30.9 30.5 30.9	30.8	58.00 57.90 57.90	57.93	4.03 4.00 4.02	4.02	3.7 3.6 3.4	3.6	4.9 5.3 5.6	5.3	2.0 2.0 2.0	2.0	<1.6 <1.6 <1.6	1.6									
								4-Sep-18	Fine	Moderate	6:21	Surface	1	26.5 26.6 26.5	26.5	27.7 27.6 27.6	27.7	66.90 66.10 66.60	66.53	4.60 4.55 4.59	4.58	4.43	2.5 2.6 2.5	2.5	4.4	3.5 4.1 3.6	3.7	4.7	<1.0 1.0 2.0	1.3	1.1	<1.6 <1.6 <1.6	1.6	1.6
													11.2	24.1 24.3 24.2	24.2	31.4 31.5 31.5	31.5	62.40 62.00 61.80	62.07	4.32 4.26 4.25	4.28		2.7 2.9 2.8	2.8		4.5 4.3 4.7	4.5		1.0 1.0 1.0	1.0		<1.6 <1.6 <1.6	1.6	
Middle	11.2	24.3 24.2	24.2	31.5 31.5	31.5	62.00 61.80	62.07					4.26 4.25	4.28	2.9 2.8	2.8	4.3 4.7	4.5	1.0 1.0	1.0	<1.6 <1.6	1.6													
	21.4	23.4 23.3 23.4	23.4	33.0 33.0 33.1	33.0	60.90 61.60 60.60	61.03					4.23 4.26 4.20	4.23	3.3 3.4 3.6	3.4	5.9 6.3 5.8	6.0	1.0 1.0 <1.0	1.0	<1.6 <1.6 <1.6	1.6													
6-Sep-18	Sunny	Moderate	8:48	Surface	1	27.2 27.0 27.2	27.1					27.3 27.4 27.3	27.4	74.60 72.70 73.70	73.67	5.08 4.97 5.02	5.02	4.60	2.4 2.4 2.3	2.4	4.6	3.5 4.0 4.4	4.0	4.4	1.0 1.0 1.0	1.0	1.0	<1.6 <1.6 <1.6	1.6	1.6				
					11.1	23.3 23.2 23.3	23.3					33.4 33.5 33.4	33.5	60.90 57.50 59.00	59.13	4.29 4.06 4.16	4.17		3.2 3.2 3.1	3.2		4.0 4.3 3.7	4.0		<1.0 <1.0 <1.0	1.0		<1.6 <1.6 <1.6	1.6					
				Middle	11.1	23.3 23.3	23.3	33.4 33.4	33.5	60.90 57.50	59.13	4.29 4.06	4.17	3.2 3.1	3.2	4.0 4.3	4.0	1.0 1.0	1.0	<1.6 <1.6	1.6													
					21.1	23.0 23.2 23.1	23.1	33.9 33.5 33.8	33.7	55.40 56.70 55.50	55.87	3.90 3.99 3.90	3.93	3.3 3.3 3.4	3.3	5.1 5.3 4.9	5.1	1.0 <1.0 <1.0	1.0	<1.6 <1.6 <1.6	1.6													
				8-Sep-18	Cloudy	Moderate	10:32	Surface	1	25.8 25.9 25.9	25.8	30.2 30.1 30.0	30.1	72.30 72.40 72.20	72.30	4.97 4.97 4.95	4.96	4.80	4.8 4.6 4.8	4.7	4.8	6.2 7.4 7.0	6.9	7.6	2.0 1.0 <1.0	1.3	1.1	<1.6 <1.6 <1.6	1.6	1.6				
									10.0	24.0 24.1 24.0	24.0	32.7 32.5 32.8	32.7	66.80 66.60 65.80	66.40	4.66 4.64 4.60	4.63		4.6 4.8 4.8	4.7		4.9 4.2 5.7	4.9		1.0 1.0 1.0	1.0		<1.6 <1.6 <1.6	1.6					
Middle	10.0	24.0 24.1 24.0	24.0					32.7 32.5 32.8	32.7	66.80 66.60 65.80	66.40	4.66 4.64 4.60	4.63	4.6 4.8 4.8	4.7	4.9 4.2 5.7	4.9	1.0 1.0 1.0	1.0	<1.6 <1.6 <1.6	1.6													
	19.1	24.0 24.1 23.9	24.0					32.7 32.7 32.9	32.8	65.30 64.70 64.60	64.87	4.56 4.51 4.51	4.53	4.8 4.7 4.7	4.7	10.9 12.3 9.6	10.9	1.0 1.0 1.0	1.0	<1.6 <1.6 <1.6	1.6													
11-Sep-18	Fine	Moderate	14:00					Surface	1	26.1 26.0 26.0	26.0	30.4 30.4 30.3	30.4	75.40 75.20 75.60	75.40	5.18 5.18 5.20	5.19	5.15	4.0 4.1 3.8	4.0	5.2	7.4 7.0 9.7	8.0	9.7	<1.0 1.0 <1.0	1.0	1.0	<1.6 <1.6 <1.6	1.6	1.6				
									11.1	25.8 25.8 25.8	25.8	30.5 30.4 30.4	30.4	73.80 74.10 74.10	74.00	5.09 5.11 5.11	5.10		4.3 4.2 4.6	4.4		9.5 9.9 9.5	9.6		<1.0 <1.0 <1.0	1.0		<1.6 <1.6 <1.6	1.6					
				Middle	11.1	25.8 25.8	25.8	30.5 30.4	30.4	73.80 74.10	74.00	5.09 5.11	5.10	4.3 4.6	4.4	9.5 9.9	9.6	<1.0 <1.0	1.0	<1.6 <1.6	1.6													
					21.1	25.8 25.8 25.8	25.8	30.6 30.5 30.5	30.5	74.20 73.70 73.90	73.93	5.12 5.08 5.10	5.10	6.0 5.4 5.8	5.7	11.8 11.3 11.0	11.4	<1.0 <1.0 <1.0	1.0	<1.6 <1.6 <1.6	1.6													

Water Quality Monitoring Results at CS1 - Mid-Flood Tide

Date	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)			Copper (µm/L)			Total PAH (µm/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
30-Aug-18	Fine	Moderate	7:42	Surface	1	25.9	25.9	30.6	30.6	62.20	62.13	4.25	4.25	4.22	4.0	4.0	4.2	9.6	9.6	10.2	2.0	1.3	1.1	<1.6	1.6	1.6
						25.9		30.7		63.00		4.31			3.9			9.4			1.0			<1.6		
						25.9		30.7		61.20		4.18			4.2			9.8			1.0			<1.6		
				Middle	10.8	25.5	25.4	31.1	31.2	60.20	61.00	4.13	4.12	4.19	4.6	4.4	4.5	4.2	10.0	10.2	1.0	1.0	<1.6	1.6	1.6	
						25.4		31.3		60.00		4.12			4.4			9.6		1.0	<1.6					
						25.4		31.3		62.80		4.32			4.5			10.4		1.0	<1.6					
				Bottom	20.5	25.2	25.3	31.6	31.5	61.10	61.03	4.20	4.19	4.20	5.0	5.2	5.2	11.0	11.1	10.2	1.0	1.0	<1.6	1.6	1.6	
						25.4		31.3		61.00		4.19			5.2			11.4		<1	<1.6					
						25.2		31.5		61.00		4.20			5.3			11.0		1.0	<1.6					
1-Sep-18	Fine	Moderate	9:11	Surface	1	26.1	26.0	28.7	28.7	64.90	63.07	4.53	4.37	4.30	2.2	2.3	2.4	3.3	3.4	3.8	2.0	1.3	1.4	<1.6	1.6	1.6
						26.0		28.7		62.50		4.31			2.2			3.4			1.0			<1.6		
						26.0		28.8		61.80		4.26			2.4			3.4			1.0			<1.6		
				Middle	10.9	24.7	24.7	31.1	31.2	59.60	61.00	4.15	4.42	4.23	2.3	2.3	2.4	4.3	4.0	3.8	1.0	1.3	<1.6	1.6	1.6	
						24.7		31.2		64.10		4.42			2.3			4.3		1.0	<1.6					
						24.7		31.2		59.30		4.12			2.5			3.9		2.0	<1.6					
				Bottom	20.8	24.3	24.3	31.8	31.9	61.80	61.13	4.32	4.16	4.26	3.4	3.2	3.3	4.2	4.0	3.8	<1	1.7	<1.6	1.6	1.6	
						24.2		31.8		59.90		4.16			3.2			4.2		2.0	<1.6					
						24.3		31.8		61.70		4.31			3.4			4.2		2.0	<1.6					
4-Sep-18	Fine	Moderate	14:37	Surface	1	26.8	26.8	28.1	28.1	65.90	65.50	4.50	4.48	4.26	3.8	3.8	3.9	6.9	6.7	7.2	<1	1.0	1.0	<1.6	1.6	1.6
						26.8		28.1		65.00		4.44			3.6			6.3			1.0			<1.6		
						26.8		28.1		65.60		4.49			3.9			6.9			1.0			<1.6		
				Middle	11.4	23.6	23.6	32.9	32.8	57.40	57.50	4.04	4.02	4.04	5.0	4.7	4.9	7.7	7.5	7.2	<1	1.0	<1.6	1.6	1.6	
						23.6		32.7		57.20		4.02			4.7			7.3		1.0	<1.6					
						23.6		32.8		57.90		4.07			4.9			7.5		<1	<1.6					
				Bottom	21.8	22.2	22.2	34.7	34.7	59.10	59.50	4.18	4.25	4.21	5.6	5.8	5.7	7.3	7.3	7.2	1.0	1.0	<1.6	1.6	1.6	
						22.2		34.6		60.00		4.25			5.8			7.0		1.0	<1.6					
						22.2		34.6		59.40		4.20			5.7			7.5		<1	<1.6					
6-Sep-18	Sunny	Moderate	17:08	Surface	1	27.0	26.9	28.5	28.6	86.10	87.50	5.89	5.97	5.40	3.7	3.8	3.9	7.4	7.4	8.4	4.0	2.0	1.3	<1.6	1.6	1.6
						26.6		28.9		85.50		5.84			3.8			7.5			1.0			<1.6		
						27.0		28.4		90.90		6.18			3.9			7.2			1.0			<1.6		
				Middle	11.3	24.0	24.0	32.3	32.4	69.70	69.00	4.88	4.86	4.83	3.8	3.8	3.8	7.9	7.8	8.4	<1	1.0	<1.6	1.6	1.6	
						23.9		32.4		69.50		4.76			3.8			7.6		1.0	<1.6					
						24.0		32.3		67.80		4.76			3.8			7.8		<1	<1.6					
				Bottom	21.6	23.9	23.8	32.5	32.6	64.30	64.13	4.50	4.41	4.49	3.8	3.8	3.8	9.6	10.0	8.4	<1	1.0	<1.6	1.6	1.6	
						23.7		32.8		63.00		4.41			3.8			10.0		1.0	<1.6					
						23.9		32.5		65.10		4.56			3.9			10.3		<1	<1.6					
8-Sep-18	Cloudy	Moderate	18:32	Surface	1	25.6	25.7	29.6	29.4	71.80	72.67	4.99	5.03	4.94	4.5	4.5	4.5	6.0	7.4	9.0	<1	1.0	1.0	<1.6	1.6	1.6
						25.8		29.3		73.60		5.08			4.5			7.6			1.0			<1.6		
						25.8		29.2		72.60		5.01			4.5			8.6			1.0			<1.6		
				Middle	10.8	24.5	24.5	31.7	31.8	71.60	70.07	4.96	4.75	4.86	4.5	4.7	4.7	9.7	9.1	9.0	<1	1.0	<1.6	1.6	1.6	
						24.5		31.9		68.30		4.75			4.7			9.5		1.0	<1.6					
						24.5		31.9		70.30		4.86			4.8			8.2		1.0	<1.6					
				Bottom	20.5	24.5	24.6	32.0	31.9	67.60	67.37	4.70	4.58	4.68	4.5	4.6	4.6	9.2	10.4	9.0	<1	1.0	<1.6	1.6	1.6	
						24.5		31.9		65.90		4.58			4.6			11.1		1.0	<1.6					
						24.7		31.9		68.60		4.77			4.6			10.9		<1	<1.6					
11-Sep-18	Fine	Moderate	6:14	Surface	1	26.1	26.0	30.3	30.3	80.00	78.03	5.48	5.34	5.22	6.6	6.5	6.5	6.0	6.1	6.9	1.0	1.0	1.0	<1.6	1.6	1.6
						25.9		30.3		77.60		5.32			6.4			6.1			1.0			<1.6		
						26.0		30.3		76.50		5.23			6.5			6.3			1.0			<1.6		
				Middle	10.9	25.8	25.7	30.6	30.6	74.30	74.43	5.09	5.13	5.10	7.8	7.2	7.7	6.5	6.7	6.9	<1	1.0	<1.6	1.6	1.6	
						25.7		30.7		74.80		5.09			7.2			6.5		1.0	<1.6					
						25.7		30.7		74.20		5.07			8.0			7.1		1.0	<1.6					
				Bottom	20.8	25.8	25.7	30.7	30.7	74.10	73.60	5.08	5.03	5.05	7.3	7.7	7.5	8.4	8.0	6.9	<1	1.0	<1.6	1.6	1.6	
						25.7		30.7		73.30		5.03			7.7			7.6		1.0	<1.6					
						25.7		30.7		73.40		5.03			7.6			8.0		1.0	<1.6					

Water Quality Monitoring Results at CS2 - Mid-Ebb Tide

Date	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)			Suspended Solids (mg/L)			Copper (µm/L)			Total PAH (µm/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average
16-Aug-18	Sunny	Calm	15:41	Surface	1	28.1	28.1	29.6	29.6	67.20	66.83	4.44	4.41	4.38	4.3	4.4	8.9	7.4	7.8	<1	1.0	1.0	<1.6	1.6	1.6
						28.1		29.7		66.10		4.36			4.5			8.2		<1			<1.6		
						28.1		29.6		67.20		4.44			4.4			7.9		<1			<1.6		
				Middle	5.9	28.1	29.8	65.80	4.36	4.34	4.4	4.6	4.6	9.0	9.0	<1	1.0	1.0	<1.6	1.6	1.6				
						28.0	30.3	65.20	4.32					9.4		<1			<1.6						
						28.1	29.9	65.90	4.35					8.7		<1			<1.6						
Bottom	10.8	28.0	30.5	64.30	4.26	4.27	4.27	5.0	5.0	9.0	9.7	<1	1.0	1.0	<1.6	1.6	1.6								
		28.0	30.5	65.10	4.31					10.3		<1			<1.6										
		28.0	30.6	64.00	4.24					9.9		<1			<1.6										
18-Aug-18	Sunny	Calm	5:13	Surface	1	28.1	28.1	29.1	29.2	61.60	61.07	4.20	4.16	4.12	7.7	7.6	6.2	5.9	6.0	<1	1.0	1.0	<1.6	1.6	1.6
						28.1		29.2		60.80		4.14			6.2			<1		<1.6					
						28.1		29.2		60.80		4.14			6.0			<1		<1.6					
				Middle	5.8	28.0	29.3	59.90	4.08	4.08	4.08	8.2	8.2	5.9	6.0	<1	1.0	1.0	<1.6	1.6	1.6				
						28.0	29.3	60.00	4.09					6.2		<1			<1.6						
						28.0	29.3	59.70	4.07					6.0		1.0			<1.6						
Bottom	10.7	28.0	29.4	59.00	4.02	4.03	4.03	8.6	8.6	6.8	6.7	<1	1.0	1.0	<1.6	1.6	1.6								
		28.0	29.5	59.70	4.07					6.5		<1			<1.6										
		28.0	29.4	58.90	4.01					6.7		<1			<1.6										
21-Aug-18	Cloudy	Calm	9:10	Surface	1	28.6	28.6	31.9	31.9	82.40	83.07	5.70	5.74	5.69	2.2	2.2	5.4	4.3	4.4	<1	1.0	1.0	<1.6	1.6	1.6
						28.6		31.9		84.30		5.82			4.6			<1		<1.6					
						28.6		31.9		82.50		5.71			4.4			<1		<1.6					
				Middle	5.9	28.5	31.9	81.00	5.61	5.63	5.63	2.4	2.4	5.6	5.3	<1	1.0	1.0	<1.6	1.6	1.6				
						28.6	31.9	81.00	5.61					5.3		<1			<1.6						
						28.5	32.0	81.70	5.66					5.1		<1			<1.6						
Bottom	10.6	27.8	33.5	79.00	5.49	5.56	5.56	2.6	2.6	6.1	6.5	1.0	1.0	1.0	<1.6	1.6	1.6								
		28.4	32.0	80.40	5.58					6.8		<1			<1.6										
		28.5	32.0	80.70	5.60					6.7		1.0			<1.6										
23-Aug-18	Cloudy	Moderate	11:00	Surface	1	27.8	27.7	29.5	29.6	79.00	78.03	5.27	5.21	4.88	2.5	2.5	13.5	12.2	12.1	2.0	2.0	2.0	<1.6	1.6	1.6
						27.7		29.7		76.60		5.11			2.5			2.0		<1.6					
						27.7		29.6		78.50		5.24			2.5			2.0		<1.6					
				Middle	6.0	26.9	30.6	66.20	4.49	4.54	4.54	2.8	2.8	13.6	13.5	<1	2.0	2.0	<1.6	1.6	1.6				
						27.2	30.4	67.00	4.55					2.7		2.0			<1.6						
						27.0	30.5	68.00	4.59					2.8		2.0			<1.6						
Bottom	11.0	25.8	32.0	61.50	4.12	4.14	4.14	3.1	3.1	14.5	14.8	2.0	2.0	2.0	<1.6	1.6	1.6								
		26.4	31.4	63.10	4.24					14.7		2.0			<1.6										
		26.0	31.9	60.50	4.07					15.1		2.0			<1.6										
25-Aug-18	Sunny	Moderate	11:50	Surface	1	27.0	27.0	31.5	31.5	89.10	88.97	5.95	5.94	5.52	1.9	1.9	7.1	4.5	4.8	1.0	1.0	1.0	<1.6	1.6	1.6
						27.0		31.4		89.60		5.97			4.7			<1		<1.6					
						26.9		31.5		88.20		5.90			5.2			1.0		<1.6					
				Middle	6.1	25.9	31.9	75.50	5.11	5.10	5.10	2.6	2.6	7.6	7.3	<1	1.0	1.0	<1.6	1.6	1.6				
						25.9	31.9	75.20	5.09					7.4		1.0			<1.6						
						25.9	31.9	75.40	5.10					7.0		1.0			<1.6						
Bottom	11.2	24.8	32.5	80.50	5.53	5.51	5.51	3.7	3.7	9.1	9.1	1.0	1.0	1.0	<1.6	1.6	1.6								
		24.8	32.5	80.10	5.52					9.3		<1			<1.6										
		24.9	32.5	79.90	5.48					8.9		<1			<1.6										
28-Aug-18	Rainy	Calm	12:40	Surface	1	26.2	26.3	38.6	38.5	66.60	67.80	4.33	4.41	4.23	3.1	3.1	8.0	6.3	5.5	<1	1.0	1.2	<1.6	1.6	1.6
						26.3		38.4		69.20		4.50			5.2			1.0		<1.6					
						26.3		38.5		67.60		4.40			5.0			1.0		<1.6					
				Middle	5.9	25.4	40.1	61.20	4.03	4.05	4.05	3.2	3.2	6.6	7.1	<1	1.7	1.2	<1.6	1.6	1.6				
						24.7	41.1	62.20	4.06					7.5		2.0			<1.6						
						25.2	40.3	62.20	4.07					7.1		2.0			<1.6						
Bottom	10.9	24.3	41.9	60.70	3.99	3.96	3.96	4.2	4.2	11.9	11.5	1.0	1.0	1.0	<1.6	1.6	1.6								
		24.4	41.7	59.20	3.90					11.0		1.0			<1.6										
		24.3	41.9	60.70	4.00					11.5		1.0			<1.6										

Water Quality Monitoring Results at CS3 - Mid-Ebb Tide

Date	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)			Suspended Solids (mg/L)			Copper (µm/L)			Total PAH (µm/L)					
						Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*		
16-Aug-18	Sunny	Calm	15:10	Surface	1	28.1	28.1	29.7	29.7	67.00	68.03	4.44	4.50	4.46	3.6	3.5	3.5	6.3	6.2	6.2	<1	1.0	1.0	<1.6	1.6	1.6		
						28.1		29.9		66.50		4.40			4.5			6.2			<1			<1.6				
						28.1		30.0		67.00		4.43			4.1			6.2			<1			<1.6				
				Middle	3.8	28.1	28.1	29.9	29.9	66.80	66.77	4.43	4.41	4.41	4.41	4.3	4.3	4.3	4.3	4.3	7.0	7.5	<1	1.0	1.0	<1.6	1.6	1.6
						28.1		29.9		66.80		4.41		4.3		6.8		<1		<1.6								
						28.1		30.4		66.80		4.41		4.3		6.8		<1		<1.6								
				Bottom	6.5	28.0	28.0	30.4	30.5	66.10	65.70	4.38	4.35	4.35	4.35	5.2	5.2	5.2	9.3	9.3	9.3	<1	1.0	1.0	<1.6	1.6	1.6	
						28.0		30.5		65.20		4.32		5.2		9.1		<1		<1.6								
						28.0		30.5		65.20		4.32		5.2		9.1		<1		<1.6								
18-Aug-18	Sunny	Calm	5:32	Surface	1	28.3	28.2	28.8	28.8	64.70	64.83	4.39	4.41	4.33	4.0	4.1	4.1	3.9	3.9	3.9	<1	1.0	1.0	<1.6	1.6	1.6		
						28.2		29.0		62.40		4.25			4.1			3.6			<1			<1.6				
						28.2		29.0		62.40		4.25			4.1			3.6			<1			<1.6				
				Middle	3.6	28.1	28.1	29.0	29.0	62.50	62.33	4.26	4.25	4.25	4.25	4.6	4.6	4.6	3.9	5.3	5.3	<1	1.0	1.0	<1.6	1.6	1.6	
						28.0		29.1		62.10		4.23		4.7		4.2		<1		<1.6								
						28.0		29.1		62.10		4.23		4.7		4.2		<1		<1.6								
				Bottom	6.3	27.8	27.8	30.0	29.9	61.30	61.40	4.17	4.18	4.18	4.18	5.7	5.7	5.7	8.1	8.1	8.1	<1	1.0	1.0	<1.6	1.6	1.6	
						27.8		30.0		61.40		4.18		5.8		7.9		<1		<1.6								
						27.9		30.0		61.50		4.19		5.5		8.1		<1		<1.6								
21-Aug-18	Cloudy	Calm	9:28	Surface	1	28.5	28.5	32.1	32.0	84.30	84.03	5.82	5.81	5.73	2.3	2.3	2.3	4.8	4.8	4.8	1.0	1.0	1.0	<1.6	1.6	1.6		
						28.5		32.0		83.90		5.80			2.3			5.0			<1			<1.6				
						28.5		32.0		83.90		5.80			2.3			4.7			<1			<1.6				
				Middle	3.7	28.3	28.4	32.5	32.3	81.10	81.60	5.62	5.65	5.65	5.65	2.4	2.4	2.4	6.0	5.9	5.9	1.0	1.0	1.0	<1.6	1.6	1.6	
						28.5		32.2		81.70		5.66		2.4		6.0		<1		<1.6								
						28.5		32.2		81.70		5.66		2.4		6.0		<1		<1.6								
				Bottom	6.3	27.8	27.9	33.4	33.2	79.80	80.00	5.56	5.56	5.56	5.56	2.4	2.4	2.4	7.0	7.0	7.0	<1	1.0	1.0	<1.6	1.6	1.6	
						28.0		33.1		80.30		5.57		2.4		7.0		<1		<1.6								
						28.0		33.1		80.30		5.57		2.4		7.0		<1		<1.6								
23-Aug-18	Cloudy	Moderate	11:23	Surface	1	27.6	27.6	29.7	29.7	84.00	84.20	5.61	5.62	5.56	3.3	3.2	3.2	17.0	16.8	16.8	1.0	1.0	1.0	<1.6	1.6	1.6		
						27.6		29.8		83.00		5.56			3.2			16.7			<1			<1.6				
						27.7		29.7		84.90		5.67			3.2			16.6			<1			<1.6				
				Middle	3.5	27.6	27.5	29.8	29.8	83.00	81.93	5.60	5.49	5.49	5.49	3.6	3.6	3.6	18.8	18.4	18.4	1.0	1.3	1.2	<1.6	1.6	1.6	
						27.5		29.8		83.70		5.60		3.6		18.6		<1		<1.6								
						27.5		29.8		83.70		5.60		3.6		18.6		<1		<1.6								
				Bottom	6.0	27.4	27.3	30.0	30.2	80.50	79.70	5.38	5.33	5.33	5.33	3.6	3.6	3.6	19.6	19.6	19.6	1.0	1.3	1.3	<1.6	1.6	1.6	
						27.2		30.3		77.90		5.21		3.5		19.6		<1		<1.6								
						27.3		30.2		80.70		5.39		3.7		20.4		<1		<1.6								
25-Aug-18	Sunny	Moderate	12:20	Surface	1	27.1	27.2	31.5	31.4	93.20	93.67	6.22	6.24	5.72	2.7	2.8	2.8	5.1	5.1	5.1	1.0	1.0	1.0	<1.6	1.6	1.6		
						27.2		31.4		94.30		6.27			2.8			5.3			<1			<1.6				
						27.1		31.4		93.50		6.24			2.8			5.0			<1			<1.6				
				Middle	3.8	26.1	26.1	31.9	31.8	76.90	76.73	5.20	5.19	5.19	5.19	3.4	3.4	3.4	5.9	5.5	5.5	<1	1.0	1.0	<1.6	1.6	1.6	
						26.1		31.8		75.80		5.13		3.2		5.6		<1		<1.6								
						26.1		31.8		77.50		5.23		3.3		6.2		<1		<1.6								
				Bottom	6.6	25.0	24.9	32.3	32.4	79.90	79.80	5.50	5.48	5.48	5.48	4.7	4.7	4.7	5.5	5.5	5.5	1.0	1.0	1.0	<1.6	1.6	1.6	
						25.0		32.4		79.80		5.48		4.6		5.1		<1		<1.6								
						24.9		32.4		79.70		5.45		4.7		5.5		<1		<1.6								
28-Aug-18	Rainy	Calm	12:12	Surface	1	26.1	26.0	38.6	38.7	74.70	75.10	4.86	4.89	4.73	2.2	2.2	2.2	7.0	6.5	6.5	4.0	2.3	2.0	<1.6	1.6	1.6		
						26.0		38.8		75.70		4.93			2.2			6.1			<1			<1.6				
						26.0		38.8		74.90		4.88			2.3			6.3			<1			<1.6				
				Middle	3.8	25.6	25.8	39.5	39.3	70.20	70.10	4.58	4.57	4.57	4.57	2.3	2.3	2.3	7.6	7.2	7.2	1.0	2.3	2.0	<1.6	1.6	1.6	
						25.6		39.5		70.20		4.58		2.4		7.6		<1		<1.6								
						26.0		38.8		69.90		4.55		2.3		7.4		<1		<1.6								
				Bottom	6.4	25.5	25.7	39.8	39.4	68.80	68.53	4.49	4.48	4.48	4.48	2.4	2.4	2.4	7.4	7.4	7.4	2.0	1.3	1.3	<1.6	1.6	1.6	
						25.6		39.7		68.90		4.50		2.4		7.4		<1		<1.6								
						26.1		38.9		67.90		4.44		2.4		7.7		<1		<1.6								

Water Quality Monitoring Results at CS3 - Mid-Flood Tide

Date	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)			Suspended Solids (mg/L)			Copper (µm/L)			Total PAH (µm/L)											
						Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*								
16-Aug-18	Sunny	Calm	10:04	Surface	1	28.1 28.1 28.0	28.1	29.4 29.4 29.5	29.4	62.30 63.90 61.70	62.63	4.13 4.23 4.10	4.15	4.14	4.3 4.4 4.2	4.3	4.1	8.5 9.3 8.8	8.9	10.8	1.0 <1 <1	1.0	1.0	<1.6 <1.6 <1.6	1.6	1.6								
					3.9	28.0 28.0 28.0	28.0	29.6 29.6 29.6	29.6	61.70 61.70 61.70	62.10	4.17 4.10 4.10	4.12		4.7 4.7 4.6	4.7		11.3 11.4 11.1	11.3		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6									
					6.7	28.0 28.0 28.0	28.0	30.0 29.7 29.7	29.8	62.40 61.60 61.60	61.87	4.14 4.09 4.09	4.11		5.4 5.1 5.2	5.2		12.3 12.7 12.2	12.4		1.0 <1 <1	1.0		<1.6 <1.6 <1.6	1.6									
				18-Aug-18	Sunny	Calm	22:58	Surface	1	28.3 28.4 28.3	28.3	29.0 28.9 29.0	29.0	63.10 63.30 62.80	63.07	4.28 4.29 4.26	4.28	4.20	4.5 4.7 4.6	4.6	4.2	3.7 4.1 4.1	4.0	5.2	<1 <1 <1	1.0	1.0	<1.6 <1.6 <1.6	1.6	1.6				
									3.8	27.9 28.0 28.0	28.0	29.7 29.6 29.4	29.6	60.30 60.60 60.90	60.60	4.11 4.12 4.15	4.13		4.8 4.9 4.8	4.8		5.0 5.4 5.4	5.3		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6					
									6.6	27.8 27.8 27.8	27.8	30.1 30.0 29.9	30.0	59.80 60.20 60.50	60.17	4.08 4.10 4.12	4.10		5.1 5.2 5.0	5.1		6.7 6.2 6.2	6.4		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6					
								21-Aug-18	Cloudy	Calm	16:08	Surface	1	28.6 28.7 28.7	28.6	34.2 34.1 34.0	34.1	90.30 89.80 90.50	90.20	6.15 6.11 6.15	6.14	5.85	2.6 2.6 2.6	2.6	5.9	3.9 4.3 4.1	4.1	4.9	<1 <1 <1	1.0	1.0	<1.6 <1.6 <1.6	1.6	1.6
													3.9	28.3 28.3 28.3	28.3	34.6 34.5 34.6	34.6	82.00 80.60 80.20	80.93	5.62 5.54 5.51	5.56		2.7 2.9 2.8	2.8		5.3 4.9 5.1	5.1		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6	
													6.7	26.9 27.0 26.9	27.0	37.5 37.3 37.5	37.4	74.50 74.50 74.70	74.57	5.17 5.17 5.18	5.17		3.3 3.4 3.4	3.4		5.7 5.3 5.2	5.4		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6	
23-Aug-18	Sunny	Moderate	17:22	Surface	1	27.7 27.6 27.7	27.7	29.7 29.7 29.7	29.7	81.90 79.60 80.50	80.67	5.46 5.31 5.37	5.38	5.13	2.8 2.7 2.8	2.8	5.1	11.2 11.1 11.6	11.3	13.3	<1 1.0 <1	1.0	1.0	<1.6 <1.6 <1.6	1.6	1.6								
					3.7	26.7 26.7 26.7	26.7	30.7 30.8 30.7	30.8	71.90 72.90 72.30	72.37	4.85 4.91 4.87	4.88		3.1 3.1 3.3	3.2		13.6 13.4 13.4	13.5		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6									
					6.3	26.7 26.7 26.7	26.7	30.8 30.8 30.8	30.8	68.20 68.40 68.40	68.33	4.60 4.61 4.61	4.61		3.3 3.3 3.3	3.3		15.8 15.0 15.0	15.3		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6									
				25-Aug-18	Sunny	Moderate	18:21	Surface	1	27.4 27.4 27.4	27.4	30.9 30.9 30.9	30.9	93.20 94.20 92.80	93.40	6.21 6.27 6.18	6.22	5.74	2.9 2.8 2.5	2.7	5.7	8.6 8.6 8.8	8.7	9.1	<1 1.0 1.0	1.0	1.0	<1.6 <1.6 <1.6	1.6	1.6				
									3.9	26.5 26.5 26.5	26.5	31.6 31.6 31.6	31.6	78.20 78.60 77.30	78.03	5.26 5.29 5.21	5.25		3.1 3.5 3.3	3.3		8.6 8.5 8.7	8.6		1.0 1.0 <1	1.0		<1.6 <1.6 <1.6	1.6					
									6.8	24.8 24.8 24.8	24.8	32.8 32.8 32.7	32.8	81.10 80.40 80.90	80.80	5.59 5.51 5.57	5.56		4.8 4.5 4.6	4.6		10.1 10.4 9.5	10.0		1.0 <1 <1	1.0		<1.6 <1.6 <1.6	1.6					
28-Aug-18	Sunny	Calm	6:44	Surface	1	26.1 26.0 26.0	26.0	38.4 39.2 39.0	38.9	66.10 64.50 65.70	65.43	4.30 4.21 4.28	4.26	4.15	3.0 3.1 2.9	3.0	4.2	2.9 2.6 2.1	2.5	3.2	1.0 1.0 1.0	1.0	1.0	<1.6 <1.6 <1.6	1.6	1.6								
					3.9	25.4 24.9 25.2	25.1	40.4 41.1 40.7	40.7	61.40 61.30 62.00	61.57	4.05 4.02 4.04	4.04		4.2 4.2 4.3	4.2		3.5 3.0 3.0	3.2		1.0 1.0 1.0	1.0		<1.6 <1.6 <1.6	1.6									
					6.9	24.1 24.1 24.1	24.1	42.2 42.1 42.2	42.2	60.60 60.60 60.90	60.70	3.99 3.96 4.02	3.99		5.4 5.4 5.5	5.4		3.4 4.1 4.2	3.9		1.0 1.0 1.0	1.0		<1.6 <1.6 <1.6	1.6									

Water Quality Monitoring Results at CS3 - Mid-Flood Tide

Date	Weather Condition	Sea Condition**	Sampling Time	Depth (m)	Temperature (°C)			Salinity (ppt)			DO Saturation (%)			Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)			Copper (µm/L)			Total PAH (µm/L)					
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average
30-Aug-18	Fine	Moderate	8:51	Surface	1	25.9	25.9	30.6	30.6	60.60	61.33	4.15	4.19	4.5	4.3	4.3	4.16	8.6	8.5	10.7	2.0	1.7	1.4	<1.6	1.6	1.6					
						25.9		30.5		61.50		4.20		4.0				8.8			1.0			<1.6							
						25.7		30.9		59.80		4.10		6.6				10.8			1.0			<1.6							
				Middle	3.7	25.7	25.7	30.8	30.9	60.70	60.07	4.16	4.12	6.9	6.8	6.8	4.2	10.9	10.7	10.7	<1	1.3	1.4	<1.6	1.6	1.6					
						25.7		30.9		59.70		4.10		6.8		10.3		2.0		<1.6											
						25.5		31.1		61.40		4.21		7.5		12.9		<1		<1.6											
				Bottom	6.4	25.5	25.5	31.1	31.1	60.00	60.53	4.12	4.16	8.0	7.8	7.8	4.2	13.2	13.1	13.1	<1	1.3	1.4	<1.6	1.6	1.6					
						25.5		31.2		60.20		4.14		7.8		13.1		1.0		<1.6											
						1-Sep-18		Fine		Moderate		10:21		Surface		1		26.1		26.1	28.0			28.2			63.10	63.63	4.37	4.40	1.8
26.1	28.3	64.00	4.42	1.7	3.2		1.0		<1.6																						
26.1	28.3	63.80	4.40	1.9	3.4		<1		<1.6																						
Middle	3.9	25.9	25.8	29.1	29.2		61.50		60.87		4.24		4.20	2.4	2.4	2.4	4.3	3.2	2.8	2.8	2.0	1.3	1.2	<1.6	1.6	1.6					
		25.8		29.2			60.10				4.15			2.3		2.7		<1		<1.6											
		25.8		29.3			61.00				4.21			2.5		2.6		1.0		<1.6											
Bottom	6.8	25.1	25.2	30.7	30.5		60.20		61.97		4.17		4.29	3.3	3.0	3.0	4.29	3.8	4.0	4.0	1.0	1.3	1.2	<1.6	1.6	1.6					
		25.3		30.5			63.40				4.38			3.0		4.1		2.0		<1.6											
		25.3		30.5			62.30				4.31			3.4		4.2		<1		<1.6											
4-Sep-18	Fine	Moderate	13:27	Surface	1	26.7	26.7	28.2	28.2	66.10	66.87	4.52	4.57	2.5	2.5	2.5	4.33	5.6	5.5	6.3	<1	1.0	1.0	<1.6	1.6	1.6					
						26.7		28.1		66.70		4.57		2.5				5.6			<1			<1.6							
						26.8		28.2		67.80		4.63		2.6				5.3			<1			<1.6							
				Middle	3.9	26.1	26.1	30.9	30.9	58.80	58.87	4.09	4.08	3.6	3.6	3.6	4.3	6.3	6.3	6.3	<1	1.0	1.0	<1.6	1.6	1.6					
						26.1		30.9		58.10		4.04		3.5		5.7		<1		<1.6											
						26.1		30.9		59.70		4.11		3.8		6.8		<1		<1.6											
				Bottom	6.8	23.0	23.0	33.7	33.8	63.50	62.83	4.48	4.44	5.1	5.1	5.2	4.44	7.2	7.2	7.2	<1	1.0	1.0	<1.6	1.6	1.6					
						23.0		33.8		62.80		4.44		5.1		7.1		<1		<1.6											
						22.9		33.8		62.20		4.39		5.3		7.3		<1		<1.6											
6-Sep-18	Sunny	Moderate	15:51	Surface	1	27.2	27.3	28.1	28.0	95.90	94.47	6.52	6.41	3.2	3.1	3.1	5.98	5.7	5.7	6.4	1.0	1.0	1.0	<1.6	1.6	1.6					
						27.4		27.9		90.80		6.15		3.1				5.7			1.0			<1.6							
						27.4		27.9		96.70		6.55		3.1				5.6			1.0			<1.6							
				Middle	3.9	25.6	26.2	29.7	29.1	79.10	80.50	5.49	5.55	3.1	3.2	3.2	6.0	6.7	6.7	6.7	<1	1.0	1.0	<1.6	1.6	1.6					
						26.2		29.2		79.80		5.54		3.2		6.7		<1		<1.6											
						26.8		28.5		82.60		5.63		3.2		6.8		<1		<1.6											
				Bottom	6.9	25.1	25.1	30.7	30.7	75.20	77.40	5.20	5.34	3.3	3.3	3.3	5.34	6.4	6.7	6.7	1.0	1.0	1.0	<1.6	1.6	1.6					
						25.1		30.7		79.40		5.50		3.3		6.5		1.0		<1.6											
						25.1		30.7		77.60		5.32		3.2		7.2		<1		<1.6											
8-Sep-18	Cloudy	Moderate	17:27	Surface	1	25.8	25.8	29.3	29.3	79.00	79.17	5.44	5.46	2.2	2.2	2.2	5.44	8.7	8.0	8.5	<1	1.0	1.0	<1.6	1.6	1.6					
						25.8		29.2		79.30		5.47		2.3				7.6			<1			<1.6							
						25.7		29.3		79.20		5.46		2.2				7.7			<1			<1.6							
				Middle	3.8	25.2	25.3	31.0	30.8	78.20	78.47	5.40	5.42	2.2	2.2	2.2	5.4	9.5	9.0	9.0	<1	1.0	1.0	<1.6	1.6	1.6					
						25.4		30.8		78.40		5.42		2.2		9.6		<1		<1.6											
						25.3		30.7		78.80		5.43		2.2		7.8		<1		<1.6											
				Bottom	6.5	25.1	25.3	31.2	31.0	75.30	76.73	5.19	5.29	2.2	2.2	2.2	5.29	8.1	8.5	8.5	<1	1.0	1.0	<1.6	1.6	1.6					
						25.3		31.0		77.20		5.33		2.2		9.3		<1		<1.6											
						25.5		30.9		77.70		5.36		2.3		8.1		<1		<1.6											
11-Sep-18	Fine	Moderate	7:21	Surface	1	26.0	26.0	30.4	30.4	73.40	73.33	5.02	5.02	4.6	4.6	4.6	5.01	5.5	5.7	6.7	<1	1.0	1.0	<1.6	1.6	1.6					
						25.9		30.4		73.10		5.01		4.7				5.7			<1			<1.6							
						26.0		30.3		73.50		5.03		4.4				5.8			<1			<1.6							
				Middle	3.7	25.8	25.8	30.5	30.5	72.80	72.77	4.99	4.99	5.1	4.8	4.8	5.0	6.5	6.5	6.5	<1	1.0	1.0	<1.6	1.6	1.6					
						25.8		30.5		72.80		4.99		4.8		6.1		<1		<1.6											
						25.7		30.6		72.70		4.99		4.5		6.9		<1		<1.6											
				Bottom	6.3	25.7	25.7	30.8	30.8	72.90	72.87	4.99	4.99	5.6	5.0	5.3	4.99	7.8	8.1	8.1	<1	1.0	1.0	<1.6	1.6	1.6					
						25.7		30.8		72.90		5.00		5.0		8.2		<1		<1.6											
						25.7		30.8		72.80		4.99		5.2		8.2		<1		<1.6											

Water Quality Monitoring Results at IS1 - Mid-Ebb Tide

Date	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)			Suspended Solids (mg/L)			Copper (µm/L)			Total PAH (µm/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
16-Aug-18	Sunny	Calm	14:45	Surface	1	28.1	28.1	29.5	29.5	67.50	67.40	4.47	4.45	4.40	4.2	4.1	6.4	6.1	6.6	<1	1.0	1.1	<1.6	1.6	1.6	
						28.1		29.6		68.50		4.52			3.9					5.9			<1			<1.6
						28.1		29.6		66.20		4.37			4.1					6.0			<1			<1.6
				Middle	3.5	28.1	30.1	65.90	4.35	4.4	6.9	<1	1.0	1.1	<1.6	1.6										
						28.0	30.0	65.30	4.33	4.3	7.3	<1	<1.6													
						28.0	29.9	66.10	4.37	4.5	7.1	<1	<1.6													
Bottom	5.9	28.0	30.6	62.30	4.13	5.5	6.5	<1	1.0	1.1	<1.6	1.6														
		28.0	30.6	64.70	4.29	5.6	6.2	2.0	1.3	<1.6	1.6															
		28.0	30.6	64.30	4.26	5.7	7.4	<1	<1.6																	
18-Aug-18	Sunny	Calm	5:51	Surface	1	28.4	28.4	28.9	28.9	64.80	65.17	4.39	4.42	4.39	3.8	3.9	5.0	5.1	6.9	<1	1.0	1.0	<1.6	1.6	1.6	
						28.4		28.9		65.20		4.42			4.0					4.9			<1			<1.6
						28.5		28.8		65.50		4.44			3.9					5.5			<1			<1.6
				Middle	3.4	28.3	28.8	64.10	4.36	4.2	6.8	<1	1.0	1.0	<1.6	1.6										
						28.2	28.8	63.80	4.34	4.3	7.6	<1	<1.6													
						28.4	28.9	64.40	4.36	4.1	7.5	<1	<1.6													
Bottom	5.6	28.0	29.2	63.20	4.30	5.0	8.6	<1	1.0	1.0	<1.6	1.6														
		27.9	29.6	63.20	4.30	5.3	8.3	<1	<1.6																	
		27.9	29.5	62.80	4.28	5.1	8.1	<1	<1.6																	
21-Aug-18	Cloudy	Calm	9:51	Surface	1	28.5	28.5	32.2	32.1	86.50	86.33	5.96	5.95	5.89	2.4	2.4	5.7	5.5	6.3	<1	1.0	1.0	<1.6	1.6	1.6	
						28.5		32.1		86.00		5.93			2.4					5.5			<1			<1.6
						28.5		32.1		86.50		5.97			2.3					5.3			<1			<1.6
				Middle	3.3	28.5	32.2	84.50	5.84	2.5	6.2	<1	1.0	1.0	<1.6	1.6										
						28.5	32.2	84.50	5.84	2.4	6.8	<1	<1.6													
						28.5	32.2	83.80	5.79	2.4	6.4	<1	<1.6													
Bottom	5.6	28.2	32.7	82.60	5.72	2.6	6.8	<1	1.0	1.0	<1.6	1.6														
		28.2	32.7	82.10	5.69	2.6	6.7	<1	<1.6																	
		28.3	32.5	82.70	5.73	2.5	7.3	1.0	<1.6																	
23-Aug-18	Cloudy	Moderate	11:38	Surface	1	27.8	27.7	29.5	29.6	88.90	85.40	5.92	5.69	5.29	2.6	2.6	15.8	16.1	17.2	1.0	1.0	1.0	<1.6	1.6	1.6	
						27.7		29.6		83.70		5.58			2.6					16.2			<1			<1.6
						27.7		29.6		83.60		5.57			2.6					16.2			<1			<1.6
				Middle	3.5	27.3	30.1	72.60	4.91	3.0	16.8	<1	1.0	1.0	<1.6	1.6										
						27.4	30.0	72.30	4.85	2.8	16.6	<1	<1.6													
						27.4	30.0	72.60	4.89	3.0	17.2	1.0	<1.6													
Bottom	6.0	26.8	30.8	72.00	4.84	3.1	18.4	<1	1.0	1.0	<1.6	1.6														
		26.4	31.3	71.10	4.76	3.1	18.8	<1	<1.6																	
		26.8	30.8	72.10	4.82	3.0	19.0	1.0	<1.6																	
25-Aug-18	Sunny	Moderate	12:34	Surface	1	26.9	26.9	31.3	31.3	101.90	101.33	6.74	6.74	6.10	3.2	3.5	5.4	5.3	5.8	<1	1.0	1.0	<1.6	1.6	1.6	
						27.0		31.4		100.50		6.72			3.5					5.2			<1			<1.6
						27.0		31.3		101.60		6.75			3.7					5.2			<1			<1.6
				Middle	3.7	26.4	31.7	81.00	5.46	4.8	5.8	<1	1.0	1.0	<1.6	1.6										
						26.4	31.7	81.00	5.44	4.7	6.3	<1	<1.6													
						26.4	31.7	81.60	5.48	4.5	5.9	<1	<1.6													
Bottom	6.4	25.3	32.4	84.20	5.77	5.3	6.0	<1	1.0	1.0	<1.6	1.6														
		25.3	32.4	83.90	5.77	5.6	6.4	<1	<1.6																	
		25.4	32.3	84.40	5.74	5.5	6.1	1.0	<1.6																	
28-Aug-18	Rainy	Calm	12:11	Surface	1	26.1	26.1	38.6	38.5	75.80	75.70	4.94	4.93	4.91	2.2	2.2	5.2	5.7	5.7	1.0	1.7	1.7	<1.6	1.6	1.6	
						26.1		38.5		75.60		4.92			2.2					6.0			<1			<1.6
						26.1		38.5		75.70		4.93			2.2					6.0			<1			<1.6
				Middle	3.7	26.1	38.6	75.00	4.88	2.2	5.3	<1	1.3	1.7	<1.6	1.6										
						26.1	38.6	75.00	4.88	2.3	5.5	<1	<1.6													
						26.0	38.7	75.00	4.89	2.2	5.9	<1	<1.6													
Bottom	6.5	26.1	38.8	74.50	4.85	2.3	5.7	<1	2.0	2.0	<1.6	1.6														
		26.1	38.8	74.30	4.84	2.4	5.8	<1	<1.6																	
		26.1	38.8	74.50	4.85	2.3	6.2	2.0	<1.6																	

Water Quality Monitoring Results at IS1 - Mid-Ebb Tide

Date	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)			Copper (µm/L)			Total PAH (µm/L)										
						Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*								
30-Aug-18	Fine	Moderate	13:45	Surface	1	26.0 26.3 26.1	26.1	30.4 30.3	30.3	63.70 63.20 63.40	63.43	4.35 4.31 4.33	4.33	4.32	2.0 1.9 1.8	1.9	4.3	11.7 11.5 11.8	11.7	11.9	1.0 1.0 2.0	1.3	1.6	<1.6 <1.6 <1.6	1.6	1.6								
					3.7	25.9 25.9 25.9	25.9	30.6 30.6 30.6	30.6	62.80 62.90 63.20	62.97	4.29 4.30 4.32	4.30		2.4 2.5 2.5	2.5		11.8 11.3 11.3	11.5		2.0 1.0 1.0	1.3		<1.6 <1.6 <1.6	1.6									
					6.3	25.9 26.0 25.9	25.9	30.6 30.5 30.6	30.6	62.60 62.70 63.20	62.83	4.28 4.29 4.32	4.30		2.7 3.1 3.0	2.9		12.5 12.1 12.9	12.5		1.0 2.0 3.0	2.0		<1.6 <1.6 <1.6	1.6									
				1-Sep-18	Rainy	Moderate	15:03	Surface	1	26.2 26.2 26.3	26.2	28.5 28.6 28.5	28.5	61.10 61.20 61.00	61.10	4.21 4.21 4.20	4.21	4.16	1.4 1.5 1.6	1.5	4.2	5.8 6.4 6.3	6.2	6.4	1.0 1.0 1.0	1.0	1.4	<1.6 <1.6 <1.6	1.6	1.6				
									3.5	25.9 25.8 25.9	25.9	29.1 29.3 29.2	29.2	59.80 59.60 59.80	59.73	4.13 4.11 4.12	4.12		2.4 2.3 2.1	2.3		6.5 6.2 6.6	6.4		2.0 1.0 3.0	2.0		<1.6 <1.6 <1.6	1.6					
									6.1	25.7 25.8 25.9	25.8	29.6 29.6 29.3	29.5	60.00 60.30 60.70	60.33	4.14 4.16 4.18	4.16		3.4 3.1 3.1	3.2		6.4 6.6 7.1	6.7		1.0 1.0 2.0	1.3		<1.6 <1.6 <1.6	1.6					
								4-Sep-18	Fine	Moderate	7:49	Surface	1	26.4 26.4 26.4	26.4	28.1 28.1 28.1	28.1	66.70 66.80 65.70	66.40	4.59 4.59 4.52	4.57	4.40	2.6 2.7 2.5	2.6	4.4	4.5 4.4 4.8	4.6	5.9	1.0 1.0 <1	1.0	1.0	<1.6 <1.6 <1.6	1.6	1.6
													3.6	26.2 26.2 26.3	26.2	28.6 28.6 28.6	28.6	61.30 61.70 61.60	61.53	4.21 4.25 4.24	4.23		3.2 3.0 2.9	3.0		5.7 5.5 5.8	5.7		<1 1.0 <1	1.0		<1.6 <1.6 <1.6	1.6	
													6.2	24.9 24.9 24.9	24.9	30.6 30.6 30.6	30.6	59.70 59.10 60.20	59.67	4.15 4.11 4.19	4.15		3.9 3.9 4.0	3.9		7.3 7.5 7.4	7.4		1.0 <1 <1	1.0		<1.6 <1.6 <1.6	1.6	
6-Sep-18	Sunny	Moderate	10:09	Surface	1	26.9 26.9 26.9	26.9	28.1 28.2 28.2	28.1	93.30 93.00 94.30	93.53	6.36 6.35 6.43	6.38	6.34	3.2 3.2 3.2	3.2	6.3	4.3 4.1 4.3	4.2	5.5	<1 <1 <1	1.0	1.0	<1.6 <1.6 <1.6	1.6	1.6								
					3.7	26.4 26.4 26.3	26.4	28.6 28.6 28.6	28.6	93.40 90.30 92.70	92.13	6.40 6.20 6.32	6.31		3.2 3.1 3.2	3.2		5.4 5.3 4.9	5.2		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6									
					6.5	26.3 26.4 26.2	26.3	28.9 29.8 29.0	29.2	92.00 90.10 89.60	90.57	6.31 6.19 6.14	6.21		3.1 3.3 3.3	3.2		6.8 7.4 7.0	7.1		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6									
				8-Sep-18	Cloudy	Moderate	11:53	Surface	1	25.8 25.8 25.9	25.8	30.2 30.2 30.0	30.1	81.70 80.50 78.40	80.20	5.61 5.53 5.38	5.51	5.45	1.5 1.6 1.7	1.6	5.5	8.0 7.4 8.6	8.0	9.5	<1 <1 <1	1.0	1.0	<1.6 <1.6 <1.6	1.6	1.6				
									3.5	24.7 24.8 24.9	24.8	31.9 31.8 31.6	31.7	76.00 78.30 79.40	77.90	5.27 5.43 5.49	5.40		1.6 1.6 1.6	1.6		8.8 10.6 11.2	9.3		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6					
									6.0	24.6 24.3 24.6	24.5	32.0 32.4 32.1	32.2	75.90 77.90 78.10	77.30	5.26 5.42 5.42	5.37		1.6 1.6 1.7	1.6		10.3 12.0	11.2		<1 <1 1.0	1.0		<1.6 <1.6 <1.6	1.6					
11-Sep-18	Fine	Moderate	12:31	Surface	1	26.0 26.0 25.9	26.0	30.3 30.3 30.3	30.3	76.20 76.20 76.10	76.17	5.25 5.24 5.24	5.24	5.23	7.4 7.2 7.6	7.4	5.2	5.3 5.5 5.2	5.3	6.8	1.0 <1 <1	1.0	1.0	<1.6 <1.6 <1.6	1.6	1.6								
					3.8	25.9 25.9 25.9	25.9	30.3 30.3 30.3	30.3	75.80 75.70 75.70	75.73	5.22 5.22 5.21	5.22		7.1 7.4 7.3	7.3		6.6 7.0 7.1	6.9		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6									
					6.4	25.9 25.9 25.9	25.9	30.3 30.3 30.3	30.3	75.90 75.80 75.70	75.80	5.23 5.22 5.22	5.22		8.2 8.4 8.3	8.3		8.3 7.7 8.7	8.2		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6									

Water Quality Monitoring Results at IS1 - Mid-Flood Tide

Date	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)			Copper (µm/L)			Total PAH (µm/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	
16-Aug-18	Sunny	Calm	10:20	Surface	1	28.0	28.0	29.4	29.4	61.70	61.57	4.09	4.09	4.08	4.3	4.2	4.1	4.2	6.6	6.6	8.7	<1	1.0	1.0	<1.6	1.6	1.6
					28.0	29.4		61.50		4.08		4.1			6.9				<1			<1.6					
					28.0	29.4		61.50		4.08		4.1			6.4				<1			<1.6					
				Middle	3.8	28.0	29.5	29.6	61.20	61.23	4.06	4.07	5.6	5.5	5.5	5.5	4.1	8.6	9.0	8.7	<1	1.0	1.0	<1.6	1.6	1.6	
					28.0	29.6	61.40	4.08	5.5	9.4	<1	<1.6															
					28.0	29.6	61.10	4.06	5.3	8.9	<1	<1.6															
				Bottom	6.5	28.0	29.9	29.8	60.80	61.00	4.04	4.05	6.7	6.5	6.5	6.5	4.1	10.3	10.4	8.7	<1	1.0	1.0	<1.6	1.6	1.6	
					28.0	29.8	61.10	4.06	6.5	10.5	<1	<1.6															
					28.0	29.9	61.10	4.05	6.3	10.3	<1	<1.6															
18-Aug-18	Sunny	Calm	22:43	Surface	1	28.2	28.2	29.2	29.1	63.30	63.67	4.30	4.32	4.27	4.9	4.9	4.8	4.9	3.6	4.3	6.2	<1	1.0	1.0	<1.6	1.6	1.6
					28.3	29.0		64.60		4.38		4.8			4.7				<1			<1.6					
					28.2	29.1		63.10		4.29		5.0			4.5				<1			<1.6					
				Middle	3.4	28.0	29.3	29.2	61.60	62.03	4.20	4.22	5.8	5.8	5.8	5.8	4.3	6.0	6.2	6.2	<1	1.0	1.0	<1.6	1.6	1.6	
					28.2	29.1	62.50	4.25	5.8	6.1	<1	<1.6															
					28.0	29.3	62.00	4.22	5.7	6.5	<1	<1.6															
				Bottom	5.9	27.9	29.7	29.7	61.20	61.47	4.17	4.19	5.8	5.9	5.9	5.9	4.1	8.1	8.1	6.2	<1	1.0	1.0	<1.6	1.6	1.6	
					27.9	29.7	61.60	4.20	5.9	7.8	<1	<1.6															
					27.9	29.8	61.60	4.20	6.0	8.4	<1	<1.6															
21-Aug-18	Cloudy	Calm	15:50	Surface	1	28.6	28.7	34.1	34.0	94.20	94.03	6.40	6.38	6.12	2.6	2.7	2.6	2.7	4.3	4.4	4.5	<1	1.0	1.1	<1.6	1.6	1.6
					28.6	34.1		93.70		6.36		2.6			4.6				<1			<1.6					
					28.8	33.9		94.20		6.39		2.8			4.3				<1			<1.6					
				Middle	3.5	28.4	34.3	34.3	85.90	85.57	5.88	5.86	3.2	3.3	3.3	3.3	6.1	3.8	4.0	4.5	2.0	1.3	1.1	<1.6	1.6	1.6	
					28.4	34.3	85.10	5.83	3.4	4.0	<1	<1.6															
					28.4	34.3	85.70	5.87	3.3	4.3	<1	<1.6															
				Bottom	6.0	27.6	36.1	36.0	77.00	77.37	5.32	5.34	4.7	4.4	4.4	4.4	6.1	4.7	4.9	4.5	<1	1.0	1.0	<1.6	1.6	1.6	
					27.7	35.9	77.20	5.33	4.4	5.3	<1	<1.6															
					27.6	36.1	77.90	5.38	4.2	4.8	<1	<1.6															
23-Aug-18	Sunny	Moderate	17:04	Surface	1	27.6	27.6	29.9	29.9	82.10	81.93	5.48	5.47	5.28	2.8	2.8	2.8	2.8	6.6	6.7	8.5	<1	1.0	1.0	<1.6	1.6	1.6
					27.6	29.9		80.90		5.40		2.8			6.8				<1			<1.6					
					27.6	29.8		82.80		5.52		2.7			6.7				<1			<1.6					
				Middle	3.6	27.4	30.1	30.2	72.80	75.87	4.89	5.09	2.8	2.8	2.8	2.8	6.1	9.0	8.9	8.5	1.0	1.0	1.0	<1.6	1.6	1.6	
					27.3	30.2	74.10	4.98	2.8	9.2	<1	<1.6															
					27.3	30.2	80.70	5.40	2.8	8.6	<1	<1.6															
				Bottom	6.3	27.0	30.7	30.6	71.70	71.67	4.80	4.80	2.7	2.8	2.8	2.8	6.1	9.8	9.9	8.5	<1	1.0	1.0	<1.6	1.6	1.6	
					26.9	30.7	69.70	4.67	2.8	10.2	<1	<1.6															
					27.3	30.4	73.60	4.93	2.8	9.6	<1	<1.6															
25-Aug-18	Sunny	Moderate	18:04	Surface	1	27.4	27.4	30.9	30.9	85.90	85.93	5.73	5.73	5.29	4.9	4.7	4.8	4.7	8.0	8.1	8.7	<1	1.0	1.0	<1.6	1.6	1.6
					27.4	30.9		86.60		5.77		4.8			7.9				<1			<1.6					
					27.4	30.9		85.30		5.69		4.5			8.3				<1			<1.6					
				Middle	3.8	25.9	32.0	32.0	72.00	71.43	4.89	4.85	6.3	6.4	6.4	6.4	6.1	8.1	8.2	8.7	<1	1.0	1.0	<1.6	1.6	1.6	
					25.9	32.0	71.00	4.81	6.4	8.2	<1	<1.6															
					25.8	32.1	71.30	4.85	6.5	8.4	<1	<1.6															
				Bottom	6.6	24.6	32.9	32.9	77.70	77.90	5.33	5.36	7.1	7.2	7.1	7.1	6.1	9.5	9.7	8.7	<1	1.0	1.0	<1.6	1.6	1.6	
					24.6	32.9	77.50	5.33	7.2	9.8	<1	<1.6															
					24.7	32.9	78.50	5.41	6.9	9.7	<1	<1.6															
28-Aug-18	Sunny	Calm	7:02	Surface	1	26.1	26.1	39.0	38.8	65.20	64.57	4.24	4.21	4.17	2.8	2.7	2.6	2.7	3.0	3.2	3.5	2.0	2.0	2.0	<1.6	1.6	1.6
					26.1	38.8		64.40		4.21		2.6			3.3				<1			<1.6					
					26.1	38.8		64.40		4.19		2.7			3.2				<1			<1.6					
				Middle	3.9	25.8	39.8	39.8	63.90	63.43	4.17	4.13	4.1	4.3	4.2	4.2	6.1	3.0	3.3	3.5	2.0	2.0	2.0	<1.6	1.6	1.6	
					25.6	40.0	64.00	4.16	4.3	3.2	<1	<1.6															
					25.6	39.7	62.40	4.06	4.2	3.6	<1	<1.6															
				Bottom	6.6	24.4	41.8	41.6	61.40	61.43	4.04	4.03	5.3	5.2	5.3	5.3	6.1	3.9	4.2	3.5	2.0	2.0	2.0	<1.6	1.6	1.6	
					24.3	41.9	62.00	4.04	5.2	4.3	<1	<1.6															
					24.8	41.2	60.90	4.01	5.4	4.3	<1	<1.6															

Water Quality Monitoring Results at IS3 - Mid-Ebb Tide

Date	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)			Copper (µm/L)			Total PAH (µm/L)										
						Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*								
16-Aug-18	Sunny	Calm	16:04	Surface	1	28.2 28.2 28.2	28.2	29.6 29.6 29.6	29.6	62.80 62.40 62.40	62.53	4.15 4.13 4.13	4.14	4.11	3.2 3.2 3.1	3.2	4.1	8.6 7.7 7.9	8.1	10.1	<1 <1 <1	1.0	1.0	<1.6 <1.6 <1.6	1.6	1.6								
					8.2	28.2 28.2 28.2	28.2	29.7 29.7 29.7	29.7	62.10 61.50 61.80	61.80	4.11 4.07 4.09	4.09		3.2 3.5 3.5	3.4		9.0 9.1 9.2	9.1		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6									
					15.1	28.1 28.2 28.2	28.1	29.9 29.9 29.9	29.9	61.20 61.40 61.30	61.30	4.05 4.06 4.05	4.05		4.2 4.5 4.3	4.3		13.4 12.9 13.3	13.2		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6									
				18-Aug-18	Sunny	Calm	4:53	Surface	1	28.1 28.1 28.1	28.1	29.0 29.1 29.1	29.1	60.40 60.60 59.90	60.30	4.11 4.13 4.08	4.11	4.07	3.2 3.4 3.4	3.3	4.1	5.0 5.3 5.9	5.4	6.3	1.0 <1 <1	1.0	1.0	<1.6 <1.6 <1.6	1.6	1.6				
									8.0	28.1 28.1 28.1	28.1	29.3 29.3 29.2	29.2	59.50 59.20 59.00	59.23	4.05 4.03 4.02	4.03		3.6 3.4 3.5	3.5		6.2 6.5 6.2	6.3		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6					
								Middle	8.0	28.1 28.1 28.1	28.1	29.3 29.3 29.2	29.2	59.50 59.20 59.00	59.23	4.05 4.03 4.02	4.03	3.6 3.4 3.5	3.5	4.1	3.2 3.4 3.5	3.3	4.1	5.0 5.3 5.9	5.4	6.3	1.0 <1 <1	1.0	1.0	<1.6 <1.6 <1.6	1.6	1.6		
									14.9	28.0 28.0 28.0	28.0	29.4 29.4 29.4	29.4	58.80 58.50 58.10	58.47	4.00 3.99 3.96	3.98	3.7 3.5 3.6	3.6		7.0 7.2 7.4	7.2		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6						
								21-Aug-18	Cloudy	Calm	8:54	Surface	1	28.3 28.4 28.4	28.3	31.9 31.7 31.6	31.7	76.80 76.30 76.90	76.67	5.53 5.50 5.54	5.52	5.42	2.2 2.2 2.1	2.2	5.4	7.0 5.2 5.2	5.1	6.4	<1 1.0 1.0	1.0	1.0	<1.6 <1.6 <1.6	1.6	1.6
													8.0	28.3 28.2 28.2	28.2	31.8 32.0 32.1	32.0	74.50 73.10 72.80	73.47	5.38 5.29 5.27	5.31		2.3 2.5 2.4	2.4		6.6 7.0 6.8	6.8		<1 <1 <1	1.0		<1.6 <1.6 <1.6	1.6	
15.1	27.9 27.9 27.8	27.9	32.6 32.6 33.0	32.7	72.00 72.00 72.60	72.20	5.23 5.23 5.27					5.24	2.7 2.8 2.6	2.7	7.2 6.9 7.3	7.1	<1 1.0 1.0	1.0	<1.6 <1.6 <1.6	1.6														
23-Aug-18	Cloudy	Moderate	10:45	Surface	1	27.7 27.7 27.7	27.7	29.6 29.7 29.7	29.7	80.90 79.80 77.00	79.23	5.39 5.32 5.13	5.28	4.73	3.0 2.9 2.9	2.9	4.7	9.6 10.0 10.1	9.9	13.3	2.0 2.0 2.0	2.0	2.0	<1.6 <1.6 <1.6	1.6	1.6								
					8.6	26.7 26.6 26.3	26.5	31.1 31.3 31.6	31.3	58.80 63.60 62.20	61.53	3.97 4.32 4.23	4.17		3.5 3.3 3.3	3.4		14.2 13.8 14.0	14.0		2.0 2.0 2.0	2.0		<1.6 <1.6 <1.6	1.6									
				Middle	8.6	26.7 26.6 26.3	26.5	31.1 31.3 31.6	31.3	58.80 63.60 62.20	61.53	3.97 4.32 4.23	4.17	3.5 3.3 3.3	3.4	4.7	3.0 2.9 2.9	2.9	4.7	9.6 10.0 10.1	9.9	13.3	2.0 2.0 2.0	2.0	2.0	<1.6 <1.6 <1.6	1.6	1.6						
					16.8	26.3 25.7 25.9	26.0	31.6 32.1 32.1	32.0	55.20 56.40 56.80	56.13	3.72 3.81 3.83	3.79	3.5 3.4 3.5	3.5		15.7 16.4 15.6	15.9		2.0 2.0 2.0	2.0		<1.6 <1.6 <1.6	1.6										
				25-Aug-18	Sunny	Moderate	11:33	Surface	1	27.1 27.1 27.1	27.1	31.4 31.4 31.4	31.4	96.00 96.80 95.90	96.23	6.40 6.45 6.39	6.41	5.91	2.5 2.6 2.2	2.4	5.9	5.3 5.2 4.6	5.0	6.2	<1 1.0 1.0	1.0	1.1	<1.6 <1.6 <1.6	1.6	1.6				
									8.9	25.3 25.3 25.3	25.3	31.8 31.8 31.8	31.8	80.10 79.70 80.70	80.17	5.41 5.36 5.45	5.41		3.3 3.3 3.1	3.2		6.4 6.0 6.1	6.2		2.0 1.0 1.0	1.3		<1.6 <1.6 <1.6	1.6					
16.8	24.5 24.6 24.5	24.5	32.6 32.7 32.7					32.6	83.10 82.10 83.20	82.80	5.70 5.64 5.69	5.68	4.5 4.5 4.6	4.5	7.3 7.2 7.4	7.3	<1 1.0 1.0	1.0	<1.6 <1.6 <1.6	1.6														
28-Aug-18	Rainy	Calm	12:53	Surface	1	26.1 26.0 26.1	26.1	39.0 39.1 38.9	39.0	64.80 65.20 65.00	65.00	4.22 4.24 4.23	4.23	4.20	4.1 4.1 4.2	4.1	4.2	5.6 5.2 5.6	5.5	5.9	2.0 2.0 2.0	2.0	2.7	<1.6 <1.6 <1.6	1.6	1.6								
					9.7	25.9 25.6 25.9	25.8	39.5 39.9 39.5	39.6	63.60 64.40 64.00	64.00	4.14 4.20 4.19	4.18		4.5 4.4 4.6	4.5		5.5 6.2 5.6	5.8		3.0 3.0 3.0	3.0		<1.6 <1.6 <1.6	1.6									
				Middle	9.7	25.9 25.6 25.9	25.8	39.5 39.9 39.5	39.6	63.60 64.40 64.00	64.00	4.14 4.20 4.19	4.18	4.5 4.4 4.6	4.5	4.2	4.1 4.1 4.2	4.1	4.2	5.6 5.2 5.6	5.5	5.9	2.0 2.0 2.0	2.0	2.7	<1.6 <1.6 <1.6	1.6	1.6						
					18.2	25.8 25.0 25.7	25.5	39.7 40.9 39.8	40.1	63.80 63.30 63.50	63.53	4.15 4.12 4.14	4.14	4.6 4.8 4.6	4.7		6.6 6.7 6.3	6.5		3.0 3.0 3.0	3.0		<1.6 <1.6 <1.6	1.6										

APPENDIX C

Laboratory Results



CERTIFICATE OF ANALYSIS

Client	: AECOM ASIA COMPANY LIMITED	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 31
Contact	: MR YIU WAH FUNG	Contact	: Richard Fung	Work Order	: HK1843668
Address	: 1501-10, 15/F, TOWER 1, GRAND CENTRAL PLAZA, 138 SHATIN RURAL COMMITTEE ROAD, SHATIN, NEW TERRITORIES, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: yw.fung@aecom.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 3105 8544	Telephone	: +852 2610 1044		
Facsimile	: +852 2891 0305	Facsimile	: +852 2610 2021		
Project	: EM&A FOR CENTRAL KOWLOON ROUTE - KAI TAK WEST			Date Samples Received	: 16-Aug-2018
Order number	: 60569734	Quote number	: HKE/1260b/2017	Issue Date	: 27-Aug-2018
C-O-C number	: ---			No. of samples received	: 108
Site	:			No. of samples analysed	: 108

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This document has been signed by those names that appear on this report and are the authorised signatories.

<u>Signatories</u>	<u>Position</u>	<u>Authorised results for</u>
Chan Ka Yu, Karen	Manager - Organics	Organics
Fung Lim Chee, Richard	General Manager	Inorganics
Fung Lim Chee, Richard	General Manager	Metals



General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 16-Aug-2018 to 27-Aug-2018.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK1843668

Sample(s) were picked up from client by ALS Technichem (HK) staff in chilled condition.

Water sample(s) analysed and reported on as received basis.

Water sample(s) were filtered prior to dissolved metal analysis.



Analytical Results

Sub-Matrix: MARINE WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	CS1/S/ Mid-Ebb	CS1/S/Duplicate Mid-Ebb	CS1/S/Triplicate Mid-Ebb	CS1/M/ Mid-Ebb	CS1/M/Duplicate Mid-Ebb
				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018
				HK1843668-001	HK1843668-002	HK1843668-003	HK1843668-004	HK1843668-005
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.6	8.9	9.0	8.9	9.4
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	86.8	50.1	66.1	73.8	76.2
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	108	110	97.5	118	120



Sub-Matrix: MARINE WATER				Client sample ID	CS1/M/Triplicate Mid-Ebb	CS1/B/ Mid-Ebb	CS1/B/Duplicate Mid-Ebb	CS1/B/Triplicate Mid-Ebb	CS2/S/ Mid-Ebb
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-006	HK1843668-007	HK1843668-008	HK1843668-009	HK1843668-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.9	10.0	10.4	10.9	7.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	62.3	75.4	94.3	79.9	71.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	109	118	118	125	112	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Duplicate Mid-Ebb	CS2/S/Triplicate Mid-Ebb	CS2/M/ Mid-Ebb	CS2/M/Duplicate Mid-Ebb	CS2/M/Triplicate Mid-Ebb
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-011	HK1843668-012	HK1843668-013	HK1843668-014	HK1843668-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.2	7.9	9.0	9.4	8.7	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	60.3	51.0	50.2	72.9	83.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	118	114	109	106	124	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/ Mid-Ebb	CS2/B/Duplicate Mid-Ebb	CS2/B/Triplicate Mid-Ebb	CS3/S/ Mid-Ebb	CS3/S/Duplicate Mid-Ebb
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-016	HK1843668-017	HK1843668-018	HK1843668-019	HK1843668-020	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.0	10.3	9.9	6.3	6.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	102	65.6	81.4	51.8	51.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	120	111	118	104	98.5	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/S/Triplicate Mid-Ebb	CS3/M/ Mid-Ebb	CS3/M/Duplicate Mid-Ebb	CS3/M/Triplicate Mid-Ebb	CS3/B/ Mid-Ebb
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-021	HK1843668-022	HK1843668-023	HK1843668-024	HK1843668-025	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	6.9	7.3	6.8	9.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.8	57.9	89.7	50.2	52.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	105	101	104	107	95.2	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Duplicate Mid-Ebb	CS3/B/Triplicate Mid-Ebb	IS1/S/ Mid-Ebb	IS1/S/Duplicate Mid-Ebb	IS1/S/Triplicate Mid-Ebb
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-026	HK1843668-027	HK1843668-028	HK1843668-029	HK1843668-030	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.6	9.1	6.4	5.9	6.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	75.9	54.2	58.0	68.6	52.9	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	85.2	101	109	101	107	



Sub-Matrix: MARINE WATER				Client sample ID				
				IS1/M/ Mid-Ebb	IS1/M/Duplicate Mid-Ebb	IS1/M/Triplicate Mid-Ebb	IS1/B/ Mid-Ebb	IS1/B/Duplicate Mid-Ebb
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018
Compound	CAS Number	LOR	Unit	HK1843668-031	HK1843668-032	HK1843668-033	HK1843668-034	HK1843668-035
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.9	7.3	7.1	6.5	6.2
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	2
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.4	70.0	52.8	83.8	98.4
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	95.2	91.3	107	110	110



Sub-Matrix: MARINE WATER				Client sample ID	IS1/B/Triplicate Mid-Ebb	IS2/S/ Mid-Ebb	IS2/S/Duplicate Mid-Ebb	IS2/S/Triplicate Mid-Ebb	IS2/M/ Mid-Ebb
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-036	HK1843668-037	HK1843668-038	HK1843668-039	HK1843668-040	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.4	5.2	5.6	6.4	6.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	90.3	99.8	69.8	54.5	91.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	123	116	107	97.6	120	



Sub-Matrix: MARINE WATER				Client sample ID				
				IS2/M/Duplicate Mid-Ebb	IS2/M/Triplicate Mid-Ebb	IS2/B/ Mid-Ebb	IS2/B/Duplicate Mid-Ebb	IS2/B/Triplicate Mid-Ebb
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018
Compound	CAS Number	LOR	Unit	HK1843668-041	HK1843668-042	HK1843668-043	HK1843668-044	HK1843668-045
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.5	6.1	6.5	7.1	7.5
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	77.5	72.8	54.7	50.8	56.4
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	115	105	106	105	106



Sub-Matrix: MARINE WATER				Client sample ID				
				IS3/S/ Mid-Ebb	IS3/S/Duplicate Mid-Ebb	IS3/S/Triplicate Mid-Ebb	IS3/M/ Mid-Ebb	IS3/M/Duplicate Mid-Ebb
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018
Compound	CAS Number	LOR	Unit	HK1843668-046	HK1843668-047	HK1843668-048	HK1843668-049	HK1843668-050
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.6	7.7	7.9	9.0	9.1
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.3	51.0	84.1	64.9	75.6
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	103	111	123	113	121



Sub-Matrix: MARINE WATER				Client sample ID	IS3/M/Triplicate Mid-Ebb	IS3/B/ Mid-Ebb	IS3/B/Duplicate Mid-Ebb	IS3/B/Triplicate Mid-Ebb	CS1/S/ Mid-Flood
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-051	HK1843668-052	HK1843668-053	HK1843668-054	HK1843668-055	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.2	13.4	12.9	13.3	5.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.2	56.3	74.7	77.1	112	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	107	109	123	120	124	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/S/Duplicate Mid-Flood	CS1/S/Triplicate Mid-Flood	CS1/M/ Mid-Flood	CS1/M/Duplicate Mid-Flood	CS1/M/Triplicate Mid-Flood
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-056	HK1843668-057	HK1843668-058	HK1843668-059	HK1843668-060	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	5.9	7.1	7.9	7.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	65.0	57.3	50.7	63.6	50.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	124	83.8	108	93.1	70.9	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/B/ Mid-Flood	CS1/B/Duplicate Mid-Flood	CS1/B/Triplicate Mid-Flood	CS2/S/ Mid-Flood	CS2/S/Duplicate Mid-Flood
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-061	HK1843668-062	HK1843668-063	HK1843668-064	HK1843668-065	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.8	9.1	8.7	6.3	5.9	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	91.1	50.2	50.4	68.1	50.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	102	98.1	102	98.6	95.8	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Triplicate Mid-Flood	CS2/M/ Mid-Flood	CS2/M/Duplicate Mid-Flood	CS2/M/Triplicate Mid-Flood	CS2/B/ Mid-Flood
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-066	HK1843668-067	HK1843668-068	HK1843668-069	HK1843668-070	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.8	7.8	7.2	7.9	10.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.3	61.1	51.0	54.8	72.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	98.5	102	92.3	105	90.2	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/Duplicate Mid-Flood	CS2/B/Triplicate Mid-Flood	CS3/S/ Mid-Flood	CS3/S/Duplicate Mid-Flood	CS3/S/Triplicate Mid-Flood
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-071	HK1843668-072	HK1843668-073	HK1843668-074	HK1843668-075	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	11.0	10.6	8.5	9.3	8.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	78.4	50.7	69.9	53.1	54.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	96.4	87.2	79.0	72.4	72.7	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/M/ Mid-Flood	CS3/M/Duplicate Mid-Flood	CS3/M/Triplicate Mid-Flood	CS3/B/ Mid-Flood	CS3/B/Duplicate Mid-Flood
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-076	HK1843668-077	HK1843668-078	HK1843668-079	HK1843668-080	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	11.3	11.4	11.1	12.3	12.7	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	60.8	53.6	52.7	50.1	50.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	81.6	77.5	88.5	83.1	92.5	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Triplicate Mid-Flood	IS1/S/ Mid-Flood	IS1/S/Duplicate Mid-Flood	IS1/S/Triplicate Mid-Flood	IS1/M/ Mid-Flood
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-081	HK1843668-082	HK1843668-083	HK1843668-084	HK1843668-085	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	12.2	6.6	6.9	6.4	8.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	60.4	52.2	50.2	54.1	71.7	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	86.5	87.4	87.0	86.4	105	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/Duplicate Mid-Flood	IS1/M/Triplicate Mid-Flood	IS1/B/ Mid-Flood	IS1/B/Duplicate Mid-Flood	IS1/B/Triplicate Mid-Flood
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-086	HK1843668-087	HK1843668-088	HK1843668-089	HK1843668-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.4	8.9	10.3	10.5	10.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	105	51.5	50.5	58.9	51.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	111	87.5	80.2	90.0	77.4	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/S/ Mid-Flood	IS2/S/Duplicate Mid-Flood	IS2/S/Triplicate Mid-Flood	IS2/M/ Mid-Flood	IS2/M/Duplicate Mid-Flood
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-091	HK1843668-092	HK1843668-093	HK1843668-094	HK1843668-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	4.4	4.9	5.1	5.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.6	88.2	51.2	50.4	57.7	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	82.4	100	83.0	68.2	110	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Triplicate Mid-Flood	IS2/B/ Mid-Flood	IS2/B/Duplicate Mid-Flood	IS2/B/Triplicate Mid-Flood	IS3/S/ Mid-Flood
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-096	HK1843668-097	HK1843668-098	HK1843668-099	HK1843668-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.5	7.7	7.5	7.5	5.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	66.0	73.9	57.6	52.2	52.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	105	89.9	100	88.5	65.4	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/Duplicate Mid-Flood	IS3/S/Triplicate Mid-Flood	IS3/M/ Mid-Flood	IS3/M/Duplicate Mid-Flood	IS3/M/Triplicate Mid-Flood
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	16-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1843668-101	HK1843668-102	HK1843668-103	HK1843668-104	HK1843668-105	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.9	5.4	7.9	7.4	8.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.4	52.6	50.6	51.4	50.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	70.4	79.7	86.2	88.7	66.1	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/B/ Mid-Flood	IS3/B/Duplicate Mid-Flood	IS3/B/Triplicate Mid-Flood	---	--
Client sampling date / time				16-Aug-2018	16-Aug-2018	16-Aug-2018	----	----	
Compound	CAS Number	LOR	Unit	HK1843668-106	HK1843668-107	HK1843668-108	-----	-----	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.1	9.8	9.3	---	---	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	---	---	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	---	---	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.5	50.1	58.3	---	---	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	78.9	82.2	74.8	---	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1881914)								
HK1843668-001	CS1/S/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.6	8.4	2.34
HK1843668-011	CS2/S/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.2	8.4	2.71
EA/ED: Physical and Aggregate Properties (QC Lot: 1881915)								
HK1843668-021	CS3/S/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	6.4	3.97
HK1843668-031	IS1/M/Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.9	6.5	5.99
EA/ED: Physical and Aggregate Properties (QC Lot: 1881916)								
HK1843668-042	IS2/M/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	6.8	12.0
HK1843668-051	IS3/M/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.2	8.8	4.44
EA/ED: Physical and Aggregate Properties (QC Lot: 1881917)								
HK1843668-061	CS1/B/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.8	9.2	4.72
HK1843668-071	CS2/B/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	11.0	11.4	3.34
EA/ED: Physical and Aggregate Properties (QC Lot: 1881918)								
HK1843668-081	CS3/B/Triplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	12.2	12.4	2.44
HK1843668-092	IS2/S/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.4	4.2	6.41
EA/ED: Physical and Aggregate Properties (QC Lot: 1881919)								
HK1843668-101	IS3/S/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.9	5.2	6.93
EG: Metals and Major Cations - Filtered (QC Lot: 1883885)								
HK1843668-002	CS1/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1843668-011	CS2/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1883886)								
HK1843668-022	CS3/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1843668-031	IS1/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1883887)								
HK1843668-042	IS2/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1843668-051	IS3/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1883888)								
HK1843668-062	CS1/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1843668-071	CS2/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1883889)								
HK1843668-082	IS1/M/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 1883889) - Continued								
HK1843668-091	IS2/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1883890)								
HK1843668-102	IS3/S/Triplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)		
						LCS	DCS	Low	High	Value	Control Limit	
EA/ED: Physical and Aggregate Properties (QC Lot: 1881914)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1881915)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1881916)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1881917)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1881918)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1881919)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.5	----	85	115	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1883885)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	107	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1883886)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	101	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1883887)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	99.1	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1883888)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	99.0	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1883889)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	103	----	85	117	----	----	



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1883889) - Continued											
EG: Metals and Major Cations - Filtered (QC Lot: 1883890)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	102	---	85	117	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1884787)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	50.1	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	54.5	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	51.2	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	51.0	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	59.8	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	63.8	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	87.3	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	87.3	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	95.4	---	67	110	---	---
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	94.0	---	64	110	---	---
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	97.8	---	73	113	---	---
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	96.0	---	65	111	---	---
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	96.1	---	62	109	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	92.8	---	56	112	---	---
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	91.1	---	53	110	---	---
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	94.8	---	40	123	---	---
Total PAH	---	1.6	µg/L	<1.6	8 µg/L	78.9	---	50	130	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1884788)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	50.6	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	56.1	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	50.9	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	51.0	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	59.7	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	62.6	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	87.4	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	87.4	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	94.5	---	67	110	---	---



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1884788) - Continued											
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	92.1	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	96.3	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	94.0	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	94.8	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	87.2	----	56	112	----	----
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	85.7	----	53	110	----	----
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	92.1	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	77.7	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1884789)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	54.6	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	53.8	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	54.6	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	54.0	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	60.6	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	64.9	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	88.8	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	88.8	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	96.8	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	95.4	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	99.0	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	95.8	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	97.2	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	91.2	----	56	112	----	----
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	90.0	----	53	110	----	----
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	94.4	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	80.0	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1884790)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	50.2	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	58.6	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	52.3	----	44	67	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1884790) - Continued											
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	54.9	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	63.2	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	67.8	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	90.7	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	91.4	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	100	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	99.5	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	101	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	100	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	102	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	94.7	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	90.8	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	95.9	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	82.1	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1884792)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	52.1	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	54.1	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	51.9	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	53.1	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	58.0	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	62.6	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	85.7	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	85.0	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	99.2	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	97.4	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	97.8	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	99.6	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	97.7	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	82.5	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	90.6	----	53	110	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1884792) - Continued											
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	90.0	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	78.6	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1884793)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	50.8	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	55.9	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	50.1	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	55.1	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	58.2	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	63.4	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	85.0	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	85.6	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	98.7	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	98.2	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	100	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	98.2	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	97.6	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	83.3	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	89.8	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	87.8	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	78.6	----	50	130	----	----



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER

					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1883885)										
HK1843668-001	CS1/S/ Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	104	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1883886)										
HK1843668-021	CS3/S/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	94.2	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1883887)										
HK1843668-041	IS2/M/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	91.6	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1883888)										
HK1843668-061	CS1/B/ Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	100	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1883889)										
HK1843668-081	CS3/B/Triplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	107	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1883890)										
HK1843668-101	IS3/S/Duplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	102	----	80	120	----	----

Surrogate Control Limits

Sub-Matrix: MARINE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130



CERTIFICATE OF ANALYSIS

Client	: AECOM ASIA COMPANY LIMITED	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 31
Contact	: MR Y W FUNG	Contact	: Richard Fung	Work Order	: HK1844376
Address	: 1501-10, 15/F, TOWER 1, GRAND CENTRAL PLAZA, 138 SHATIN RURAL COMMITTEE ROAD, SHATIN, NEW TERRITORIES, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: yw.fung@aecom.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 3105 8544	Telephone	: +852 2610 1044		
Facsimile	: ---	Facsimile	: +852 2610 2021		
Project	: EM&A FOR CENTRAL KOWLOON ROUTE - KAI TAK WEST			Date Samples Received	: 19-Aug-2018
Order number	: 60569734	Quote number	: HKE/1260b/2017	Issue Date	: 29-Aug-2018
C-O-C number	: ---			No. of samples received	: 108
Site	:			No. of samples analysed	: 108

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This document has been signed by those names that appear on this report and are the authorised signatories.

<u>Signatories</u>	<u>Position</u>	<u>Authorised results for</u>
Chan Ka Yu, Karen	Manager - Organics	Organics
Fung Lim Chee, Richard	General Manager	Inorganics
Fung Lim Chee, Richard	General Manager	Metals



General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 19-Aug-2018 to 28-Aug-2018.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK1844376

Sample(s) were received in chilled condition.

Water sample(s) analysed and reported on as received basis.



Analytical Results

Sub-Matrix: MARINE WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	CS1/S/ Mid-Ebb	CS1/S/Duplicate Mid-Ebb	CS1/S/Triplicate Mid-Ebb	CS1/M/ Mid-Ebb	CS1/M/Duplicate Mid-Ebb
				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018
				HK1844376-001	HK1844376-002	HK1844376-003	HK1844376-004	HK1844376-005
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.2	5.2	5.5	5.4	5.8
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	2	<1	<1	<1	<1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.0	50.5	52.8	50.2	50.5
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	105	85.9	102	89.6	100



Sub-Matrix: MARINE WATER				Client sample ID	CS1/M/Triplicate Mid-Ebb	CS1/B/ Mid-Ebb	CS1/B/Duplicate Mid-Ebb	CS1/B/Triplicate Mid-Ebb	CS2/S/ Mid-Ebb
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-006	HK1844376-007	HK1844376-008	HK1844376-009	HK1844376-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.4	8.1	7.8	7.7	5.9	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	83.5	52.5	51.0	91.8	74.7	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	104	102	87.0	125	106	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Duplicate Mid-Ebb	CS2/S/Triplicate Mid-Ebb	CS2/M/ Mid-Ebb	CS2/M/Duplicate Mid-Ebb	CS2/M/Triplicate Mid-Ebb
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-011	HK1844376-012	HK1844376-013	HK1844376-014	HK1844376-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	6.0	5.9	6.2	6.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.2	66.5	50.1	94.8	51.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	124	115	87.7	116	113	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/ Mid-Ebb	CS2/B/Duplicate Mid-Ebb	CS2/B/Triplicate Mid-Ebb	CS3/S/ Mid-Ebb	CS3/S/Duplicate Mid-Ebb
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-016	HK1844376-017	HK1844376-018	HK1844376-019	HK1844376-020	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.8	6.5	6.7	3.9	3.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	62.2	82.6	59.3	68.6	55.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	98.1	130	107	110	89.6	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/S/Triplicate Mid-Ebb	CS3/M/ Mid-Ebb	CS3/M/Duplicate Mid-Ebb	CS3/M/Triplicate Mid-Ebb	CS3/B/ Mid-Ebb
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-021	HK1844376-022	HK1844376-023	HK1844376-024	HK1844376-025	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.3	4.0	3.6	4.2	7.9	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	67.2	78.9	80.3	61.5	50.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	126	124	104	130	102	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Duplicate Mid-Ebb	CS3/B/Triplicate Mid-Ebb	IS1/S/ Mid-Ebb	IS1/S/Duplicate Mid-Ebb	IS1/S/Triplicate Mid-Ebb
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-026	HK1844376-027	HK1844376-028	HK1844376-029	HK1844376-030	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.2	8.1	5.0	4.9	5.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.1	78.0	78.0	50.2	50.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	87.1	116	109	99.7	97.4	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/ Mid-Ebb	IS1/M/Duplicate Mid-Ebb	IS1/M/Triplicate Mid-Ebb	IS1/B/ Mid-Ebb	IS1/B/Duplicate Mid-Ebb
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-031	HK1844376-032	HK1844376-033	HK1844376-034	HK1844376-035	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.8	7.6	7.5	8.6	8.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	56.8	97.3	50.5	107	87.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	122	126	106	117	106	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/B/Triplicate Mid-Ebb	IS2/S/ Mid-Ebb	IS2/S/Duplicate Mid-Ebb	IS2/S/Triplicate Mid-Ebb	IS2/M/ Mid-Ebb
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-036	HK1844376-037	HK1844376-038	HK1844376-039	HK1844376-040	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.1	5.1	5.4	4.8	6.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	75.2	54.8	51.4	51.3	50.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	115	119	86.6	73.2	101	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Duplicate Mid-Ebb	IS2/M/Triplicate Mid-Ebb	IS2/B/ Mid-Ebb	IS2/B/Duplicate Mid-Ebb	IS2/B/Triplicate Mid-Ebb
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-041	HK1844376-042	HK1844376-043	HK1844376-044	HK1844376-045	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.6	6.4	7.5	7.8	7.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	69.4	50.7	52.5	59.8	92.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	118	101	106	130	128	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/ Mid-Ebb	IS3/S/Duplicate Mid-Ebb	IS3/S/Triplicate Mid-Ebb	IS3/M/ Mid-Ebb	IS3/M/Duplicate Mid-Ebb
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-046	HK1844376-047	HK1844376-048	HK1844376-049	HK1844376-050	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.0	5.3	5.9	6.2	6.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.4	53.6	50.4	50.3	53.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	117	115	102	88.8	83.3	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/M/Triplicate Mid-Ebb	IS3/B/ Mid-Ebb	IS3/B/Duplicate Mid-Ebb	IS3/B/Triplicate Mid-Ebb	CS1/S/ Mid-Flood
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-051	HK1844376-052	HK1844376-053	HK1844376-054	HK1844376-055	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	7.0	7.2	7.4	6.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.1	53.4	73.1	81.0	50.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	107	81.9	109	104	90.8	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/S/Duplicate Mid-Flood	CS1/S/Triplicate Mid-Flood	CS1/M/ Mid-Flood	CS1/M/Duplicate Mid-Flood	CS1/M/Triplicate Mid-Flood
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-056	HK1844376-057	HK1844376-058	HK1844376-059	HK1844376-060	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.5	6.4	7.1	7.1	7.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	56.7	88.6	75.7	70.1	85.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	80.3	99.6	102	104	101	



Sub-Matrix: MARINE WATER				Client sample ID				
				CS1/B/ Mid-Flood	CS1/B/Duplicate Mid-Flood	CS1/B/Triplicate Mid-Flood	CS2/S/ Mid-Flood	CS2/S/Duplicate Mid-Flood
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018
Compound	CAS Number	LOR	Unit	HK1844376-061	HK1844376-062	HK1844376-063	HK1844376-064	HK1844376-065
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.2	8.2	8.0	7.4	6.8
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.7	50.5	54.2	55.4	57.2
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	89.9	99.0	103	102	112



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Triplicate Mid-Flood	CS2/M/ Mid-Flood	CS2/M/Duplicate Mid-Flood	CS2/M/Triplicate Mid-Flood	CS2/B/ Mid-Flood
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-066	HK1844376-067	HK1844376-068	HK1844376-069	HK1844376-070	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.2	7.7	7.7	8.3	8.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.8	53.7	59.5	85.6	79.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	91.8	69.2	99.7	120	112	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/Duplicate Mid-Flood	CS2/B/Triplicate Mid-Flood	CS3/S/ Mid-Flood	CS3/S/Duplicate Mid-Flood	CS3/S/Triplicate Mid-Flood
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-071	HK1844376-072	HK1844376-073	HK1844376-074	HK1844376-075	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.0	8.3	3.7	4.1	4.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.8	50.2	76.8	51.6	51.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	84.6	101	119	108	99.8	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/M/ Mid-Flood	CS3/M/Duplicate Mid-Flood	CS3/M/Triplicate Mid-Flood	CS3/B/ Mid-Flood	CS3/B/Duplicate Mid-Flood
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-076	HK1844376-077	HK1844376-078	HK1844376-079	HK1844376-080	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.0	5.4	5.4	6.7	6.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	58.4	74.2	77.2	79.4	81.9	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	94.9	122	113	103	116	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Triplicate Mid-Flood	IS1/S/ Mid-Flood	IS1/S/Duplicate Mid-Flood	IS1/S/Triplicate Mid-Flood	IS1/M/ Mid-Flood
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-081	HK1844376-082	HK1844376-083	HK1844376-084	HK1844376-085	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	3.6	4.7	4.5	6.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	72.4	53.1	51.0	56.1	52.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	92.1	97.2	101	107	106	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/Duplicate Mid-Flood	IS1/M/Triplicate Mid-Flood	IS1/B/ Mid-Flood	IS1/B/Duplicate Mid-Flood	IS1/B/Triplicate Mid-Flood
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-086	HK1844376-087	HK1844376-088	HK1844376-089	HK1844376-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	6.5	8.1	7.8	8.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	72.2	55.6	81.4	85.0	103	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	106	108	99.5	104	114	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/S/ Mid-Flood	IS2/S/Duplicate Mid-Flood	IS2/S/Triplicate Mid-Flood	IS2/M/ Mid-Flood	IS2/M/Duplicate Mid-Flood
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-091	HK1844376-092	HK1844376-093	HK1844376-094	HK1844376-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.3	3.9	3.8	6.3	6.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.0	57.8	82.9	71.8	112	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	89.3	99.8	108	117	120	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Triplicate Mid-Flood	IS2/B/ Mid-Flood	IS2/B/Duplicate Mid-Flood	IS2/B/Triplicate Mid-Flood	IS3/S/ Mid-Flood
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-096	HK1844376-097	HK1844376-098	HK1844376-099	HK1844376-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	7.1	6.6	7.7	5.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	94.3	90.0	59.2	53.9	78.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	109	114	107	105	111	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/Duplicate Mid-Flood	IS3/S/Triplicate Mid-Flood	IS3/M/ Mid-Flood	IS3/M/Duplicate Mid-Flood	IS3/M/Triplicate Mid-Flood
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	18-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1844376-101	HK1844376-102	HK1844376-103	HK1844376-104	HK1844376-105	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.4	5.5	5.5	6.1	6.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.6	81.6	50.4	94.3	67.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	105	110	98.8	95.6	99.9	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/B/ Mid-Flood	IS3/B/Duplicate Mid-Flood	IS3/B/Triplicate Mid-Flood	---	---
Client sampling date / time				18-Aug-2018	18-Aug-2018	18-Aug-2018	----	----	
Compound	CAS Number	LOR	Unit	HK1844376-106	HK1844376-107	HK1844376-108	-----	-----	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.7	7.0	7.3	---	---	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	---	---	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	---	---	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.6	54.2	77.1	---	---	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	85.3	88.8	90.6	---	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1885204)								
HK1844376-001	CS1/S/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.2	5.6	6.03
HK1844376-011	CS2/S/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	6.4	3.95
EA/ED: Physical and Aggregate Properties (QC Lot: 1885205)								
HK1844376-021	CS3/S/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.3	4.0	6.61
HK1844376-031	IS1/M/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.8	7.1	3.95
EA/ED: Physical and Aggregate Properties (QC Lot: 1885206)								
HK1844376-041	IS2/M/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.6	6.8	1.86
HK1844376-051	IS3/M/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	5.8	6.61
EA/ED: Physical and Aggregate Properties (QC Lot: 1885207)								
HK1844376-061	CS1/B/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.2	8.9	3.05
HK1844376-072	CS2/B/Triplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.3	8.5	2.08
EA/ED: Physical and Aggregate Properties (QC Lot: 1885208)								
HK1844376-081	CS3/B/Triplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	6.4	3.97
HK1844376-091	IS2/S/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.3	3.9	10.4
EA/ED: Physical and Aggregate Properties (QC Lot: 1885209)								
HK1844376-101	IS3/S/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.4	5.1	5.71
EG: Metals and Major Cations - Filtered (QC Lot: 1885067)								
HK1844376-002	CS1/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1844376-011	CS2/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1885069)								
HK1844376-022	CS3/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1844376-031	IS1/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1885070)								
HK1844376-042	IS2/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1844376-051	IS3/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1885071)								
HK1844376-062	CS1/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1844376-071	CS2/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1885072)								
HK1844376-082	IS1/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 1885072) - Continued								
HK1844376-091	IS2/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1885073)								
HK1844376-102	IS3/S/Triplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)		
						LCS	DCS	Low	High	Value	Control Limit	
EA/ED: Physical and Aggregate Properties (QC Lot: 1885204)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1885205)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1885206)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.0	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1885207)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1885208)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1885209)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.5	----	85	115	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1885067)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	98.6	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1885069)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	100	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1885070)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	97.9	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1885071)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	103	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1885072)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	102	----	85	117	----	----	



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1885072) - Continued											
EG: Metals and Major Cations - Filtered (QC Lot: 1885073)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	98.4	---	85	117	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1884793)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	50.8	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	55.9	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	50.1	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	55.1	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	58.2	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	63.4	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	85.0	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	85.6	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	98.7	---	67	110	---	---
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	98.2	---	64	110	---	---
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	100	---	73	113	---	---
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	98.2	---	65	111	---	---
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	97.6	---	62	109	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	83.3	---	56	112	---	---
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	89.8	---	53	110	---	---
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	87.8	---	40	123	---	---
Total PAH	---	1.6	µg/L	<1.6	8 µg/L	78.6	---	50	130	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1886681)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	50.3	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	51.7	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	51.2	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	57.6	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	63.6	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	67.2	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	91.1	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	82.0	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	90.9	---	67	110	---	---



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1886681) - Continued											
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	91.9	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	96.9	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	92.7	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	95.7	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	95.3	----	56	112	----	----
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	98.0	----	53	110	----	----
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	95.7	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	79.5	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1886682)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	50.7	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	59.9	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	50.3	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	54.0	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	56.8	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	59.0	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	83.5	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	83.3	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	95.3	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	94.4	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	101	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	100	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	106	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	94.3	----	56	112	----	----
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	103	----	53	110	----	----
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	96.3	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	80.5	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1886683)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	50.2	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	59.1	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	50.9	----	44	67	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report								
		Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
								LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1886683) - Continued													
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	56.6	----	39	73	----	----		
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	63.0	----	41	77	----	----		
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	64.1	----	38	79	----	----		
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	88.2	----	51	112	----	----		
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	89.6	----	51	113	----	----		
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	100	----	67	110	----	----		
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	98.2	----	64	110	----	----		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	103	----	73	113	----	----		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	101	----	65	111	----	----		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	100	----	62	109	----	----		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	95.2	----	56	112	----	----		
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	100	----	53	110	----	----		
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	93.6	----	40	123	----	----		
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	82.1	----	50	130	----	----		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1886684)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	55.1	----	44	69	----	----		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	56.7	----	37	81	----	----		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	52.0	----	44	67	----	----		
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	62.6	----	39	73	----	----		
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	57.6	----	41	77	----	----		
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	59.4	----	38	79	----	----		
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	68.9	----	51	112	----	----		
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	69.7	----	51	113	----	----		
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	87.9	----	67	110	----	----		
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	90.5	----	64	110	----	----		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	84.6	----	73	113	----	----		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	82.9	----	65	111	----	----		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	80.9	----	62	109	----	----		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	89.2	----	56	112	----	----		
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	90.5	----	53	110	----	----		



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report								
		Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
								LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1886684) - Continued													
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	89.0	----	40	123	----	----		
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	73.6	----	50	130	----	----		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1886685)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	50.9	----	44	69	----	----		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	58.6	----	37	81	----	----		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	51.9	----	44	67	----	----		
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	51.6	----	39	73	----	----		
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	57.9	----	41	77	----	----		
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	62.4	----	38	79	----	----		
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	85.2	----	51	112	----	----		
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	84.6	----	51	113	----	----		
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	96.6	----	67	110	----	----		
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	95.1	----	64	110	----	----		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	89.4	----	73	113	----	----		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	94.5	----	65	111	----	----		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	86.3	----	62	109	----	----		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	72.1	----	56	112	----	----		
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	74.6	----	53	110	----	----		
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	66.6	----	40	123	----	----		
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	73.6	----	50	130	----	----		



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER

					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1885067)										
HK1844376-001	CS1/S/ Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	102	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1885069)										
HK1844376-021	CS3/S/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	94.1	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1885070)										
HK1844376-041	IS2/M/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	104	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1885071)										
HK1844376-061	CS1/B/ Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	91.5	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1885072)										
HK1844376-081	CS3/B/Triplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	92.9	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1885073)										
HK1844376-101	IS3/S/Duplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	95.1	----	80	120	----	----

Surrogate Control Limits

Sub-Matrix: MARINE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130



CERTIFICATE OF ANALYSIS

Client	: AECOM ASIA COMPANY LIMITED	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 31
Contact	: MR YIU WAH FUNG	Contact	: Richard Fung	Work Order	: HK1845072
Address	: 1501-10, 15/F, TOWER 1, GRAND CENTRAL PLAZA, 138 SHATIN RURAL COMMITTEE ROAD, SHATIN, NEW TERRITORIES, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: yw.fung@aecom.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 3105 8544	Telephone	: +852 2610 1044		
Facsimile	: +852 2891 0305	Facsimile	: +852 2610 2021		
Project	: EM&A FOR CENTRAL KOWLOON ROUTE - KAI TAK WEST			Date Samples Received	: 21-Aug-2018
Order number	: 60569734	Quote number	: HKE/1260b/2017	Issue Date	: 30-Aug-2018
C-O-C number	: ---			No. of samples received	: 108
Site	:			No. of samples analysed	: 108

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This document has been signed by those names that appear on this report and are the authorised signatories.

<u>Signatories</u>	<u>Position</u>	<u>Authorised results for</u>
Chan Ka Yu, Karen	Manager - Organics	Organics
Fung Lim Chee, Richard	General Manager	Inorganics
Fung Lim Chee, Richard	General Manager	Metals



General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 21-Aug-2018 to 29-Aug-2018.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK1845072

Sample(s) were picked up from client by ALS Technichem (HK) staff in chilled condition.

Water sample(s) analysed and reported on as received basis.

Water sample(s) were filtered prior to dissolved metal analysis.



Analytical Results

Sub-Matrix: MARINE WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	CS1/S/ Mid-Ebb	CS1/S/Duplicate Mid-Ebb	CS1/S/Triplicate Mid-Ebb	CS1/M/ Mid-Ebb	CS1/M/Duplicate Mid-Ebb
				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018
				HK1845072-001	HK1845072-002	HK1845072-003	HK1845072-004	HK1845072-005
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.5	4.7	4.6	6.0	5.9
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.3	55.5	99.6	53.6	51.6
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	89.6	87.4	108	81.0	75.2



Sub-Matrix: MARINE WATER				Client sample ID	CS1/M/Triplicate Mid-Ebb	CS1/B/ Mid-Ebb	CS1/B/Duplicate Mid-Ebb	CS1/B/Triplicate Mid-Ebb	CS2/S/ Mid-Ebb
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-006	HK1845072-007	HK1845072-008	HK1845072-009	HK1845072-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.7	7.3	7.3	6.7	4.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	54.5	63.1	66.8	54.2	88.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	88.4	90.8	87.2	76.2	103	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Duplicate Mid-Ebb	CS2/S/Triplicate Mid-Ebb	CS2/M/ Mid-Ebb	CS2/M/Duplicate Mid-Ebb	CS2/M/Triplicate Mid-Ebb
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-011	HK1845072-012	HK1845072-013	HK1845072-014	HK1845072-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.6	4.4	5.6	5.3	5.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	61.6	74.4	52.5	90.9	51.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	95.8	109	109	117	105	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/ Mid-Ebb	CS2/B/Duplicate Mid-Ebb	CS2/B/Triplicate Mid-Ebb	CS3/S/ Mid-Ebb	CS3/S/Duplicate Mid-Ebb
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-016	HK1845072-017	HK1845072-018	HK1845072-019	HK1845072-020	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	6.8	6.7	4.8	5.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.1	58.7	55.4	51.0	52.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	97.7	109	96.7	84.3	121	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/S/Triplicate Mid-Ebb	CS3/M/ Mid-Ebb	CS3/M/Duplicate Mid-Ebb	CS3/M/Triplicate Mid-Ebb	CS3/B/ Mid-Ebb
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-021	HK1845072-022	HK1845072-023	HK1845072-024	HK1845072-025	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.7	5.5	6.0	6.4	6.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	69.6	57.2	52.2	55.3	52.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	108	103	100	99.3	106	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Duplicate Mid-Ebb	CS3/B/Triplicate Mid-Ebb	IS1/S/ Mid-Ebb	IS1/S/Duplicate Mid-Ebb	IS1/S/Triplicate Mid-Ebb
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-026	HK1845072-027	HK1845072-028	HK1845072-029	HK1845072-030	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.0	7.1	5.7	5.5	5.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.6	54.7	60.0	52.1	63.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	98.2	104	99.4	106	102	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/ Mid-Ebb	IS1/M/Duplicate Mid-Ebb	IS1/M/Triplicate Mid-Ebb	IS1/B/ Mid-Ebb	IS1/B/Duplicate Mid-Ebb
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-031	HK1845072-032	HK1845072-033	HK1845072-034	HK1845072-035	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	6.8	6.4	6.8	6.7	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	59.5	52.7	85.0	58.5	60.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	96.8	84.9	103	103	105	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/B/Triplicate Mid-Ebb	IS2/S/ Mid-Ebb	IS2/S/Duplicate Mid-Ebb	IS2/S/Triplicate Mid-Ebb	IS2/M/ Mid-Ebb
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-036	HK1845072-037	HK1845072-038	HK1845072-039	HK1845072-040	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.3	4.2	5.3	5.1	6.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	70.5	59.2	57.0	50.0	50.7	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	116	101	100	102	97.3	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Duplicate Mid-Ebb	IS2/M/Triplicate Mid-Ebb	IS2/B/ Mid-Ebb	IS2/B/Duplicate Mid-Ebb	IS2/B/Triplicate Mid-Ebb
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-041	HK1845072-042	HK1845072-043	HK1845072-044	HK1845072-045	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.3	7.0	7.0	7.5	7.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.4	56.4	55.7	58.9	52.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	101	104	118	92.3	87.2	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/ Mid-Ebb	IS3/S/Duplicate Mid-Ebb	IS3/S/Triplicate Mid-Ebb	IS3/M/ Mid-Ebb	IS3/M/Duplicate Mid-Ebb
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-046	HK1845072-047	HK1845072-048	HK1845072-049	HK1845072-050	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.0	5.2	5.2	6.6	7.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	77.4	52.7	50.1	84.3	76.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	100	104	93.7	102	106	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/M/Triplicate Mid-Ebb	IS3/B/ Mid-Ebb	IS3/B/Duplicate Mid-Ebb	IS3/B/Triplicate Mid-Ebb	CS1/S/ Mid-Flood
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-051	HK1845072-052	HK1845072-053	HK1845072-054	HK1845072-055	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.8	7.2	6.9	7.3	3.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.5	60.3	50.6	60.2	69.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	99.0	100	113	104	109	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/S/Duplicate Mid-Flood	CS1/S/Triplicate Mid-Flood	CS1/M/ Mid-Flood	CS1/M/Duplicate Mid-Flood	CS1/M/Triplicate Mid-Flood
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-056	HK1845072-057	HK1845072-058	HK1845072-059	HK1845072-060	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.9	4.4	5.3	5.5	5.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.4	98.2	88.7	69.2	96.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	106	117	115	97.6	122	



Sub-Matrix: MARINE WATER				Client sample ID				
				CS1/B/ Mid-Flood	CS1/B/Duplicate Mid-Flood	CS1/B/Triplicate Mid-Flood	CS2/S/ Mid-Flood	CS2/S/Duplicate Mid-Flood
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018
Compound	CAS Number	LOR	Unit	HK1845072-061	HK1845072-062	HK1845072-063	HK1845072-064	HK1845072-065
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.0	6.3	6.7	3.7	3.5
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.3	51.1	58.4	71.3	79.3
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	101	101	112	116	102



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Triplicate Mid-Flood	CS2/M/ Mid-Flood	CS2/M/Duplicate Mid-Flood	CS2/M/Triplicate Mid-Flood	CS2/B/ Mid-Flood
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-066	HK1845072-067	HK1845072-068	HK1845072-069	HK1845072-070	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.5	4.2	4.4	3.9	4.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.2	81.2	56.6	50.6	53.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	115	107	118	105	98.6	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/Duplicate Mid-Flood	CS2/B/Triplicate Mid-Flood	CS3/S/ Mid-Flood	CS3/S/Duplicate Mid-Flood	CS3/S/Triplicate Mid-Flood
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-071	HK1845072-072	HK1845072-073	HK1845072-074	HK1845072-075	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.0	3.8	3.9	4.3	4.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	65.7	50.5	69.7	64.1	84.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	112	102	117	102	69.6	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/M/ Mid-Flood	CS3/M/Duplicate Mid-Flood	CS3/M/Triplicate Mid-Flood	CS3/B/ Mid-Flood	CS3/B/Duplicate Mid-Flood
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-076	HK1845072-077	HK1845072-078	HK1845072-079	HK1845072-080	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.3	4.9	5.1	5.7	5.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	91.2	51.3	62.5	70.3	54.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	115	86.4	107	110	85.8	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Triplicate Mid-Flood	IS1/S/ Mid-Flood	IS1/S/Duplicate Mid-Flood	IS1/S/Triplicate Mid-Flood	IS1/M/ Mid-Flood
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-081	HK1845072-082	HK1845072-083	HK1845072-084	HK1845072-085	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.2	4.3	4.6	4.3	3.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.1	59.8	71.3	51.2	54.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	111	112	105	111	99.9	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/Duplicate Mid-Flood	IS1/M/Triplicate Mid-Flood	IS1/B/ Mid-Flood	IS1/B/Duplicate Mid-Flood	IS1/B/Triplicate Mid-Flood
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-086	HK1845072-087	HK1845072-088	HK1845072-089	HK1845072-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.0	4.3	4.7	5.3	4.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.0	69.0	81.8	52.8	53.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	111	106	109	99.9	100	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/S/ Mid-Flood	IS2/S/Duplicate Mid-Flood	IS2/S/Triplicate Mid-Flood	IS2/M/ Mid-Flood	IS2/M/Duplicate Mid-Flood
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-091	HK1845072-092	HK1845072-093	HK1845072-094	HK1845072-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.4	3.7	4.2	4.3	4.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	<1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	72.6	51.3	56.6	59.4	58.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	114	110	98.4	100	95.6	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Triplicate Mid-Flood	IS2/B/ Mid-Flood	IS2/B/Duplicate Mid-Flood	IS2/B/Triplicate Mid-Flood	IS3/S/ Mid-Flood
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-096	HK1845072-097	HK1845072-098	HK1845072-099	HK1845072-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.1	5.9	5.6	5.7	4.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.5	52.4	50.4	51.6	79.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	97.8	94.1	91.9	96.1	111	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/Duplicate Mid-Flood	IS3/S/Triplicate Mid-Flood	IS3/M/ Mid-Flood	IS3/M/Duplicate Mid-Flood	IS3/M/Triplicate Mid-Flood
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	21-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845072-101	HK1845072-102	HK1845072-103	HK1845072-104	HK1845072-105	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.8	3.7	4.2	4.3	4.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	79.6	60.9	60.4	96.6	52.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	112	110	115	118	93.3	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/B/ Mid-Flood	IS3/B/Duplicate Mid-Flood	IS3/B/Triplicate Mid-Flood	---	---
Client sampling date / time				21-Aug-2018	21-Aug-2018	21-Aug-2018	----	----	
Compound	CAS Number	LOR	Unit	HK1845072-106	HK1845072-107	HK1845072-108	-----	-----	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.3	4.3	4.4	---	---	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	---	---	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	---	---	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.2	56.6	62.7	---	---	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	105	84.9	95.3	---	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1890116)								
HK1845072-001	CS1/S/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.5	4.6	2.18
HK1845072-011	CS2/S/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.6	4.3	4.94
EA/ED: Physical and Aggregate Properties (QC Lot: 1890117)								
HK1845072-021	CS3/S/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.7	4.5	3.79
HK1845072-031	IS1/M/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	6.5	5.35
EA/ED: Physical and Aggregate Properties (QC Lot: 1890118)								
HK1845072-041	IS2/M/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.3	6.9	9.85
HK1845072-051	IS3/M/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.8	6.3	7.59
EA/ED: Physical and Aggregate Properties (QC Lot: 1890119)								
HK1845072-061	CS1/B/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.0	6.4	5.62
HK1845072-071	CS2/B/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.0	3.7	9.87
EA/ED: Physical and Aggregate Properties (QC Lot: 1890120)								
HK1845072-081	CS3/B/Triplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.2	4.8	10.0
HK1845072-091	IS2/S/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.4	3.5	2.86
EA/ED: Physical and Aggregate Properties (QC Lot: 1890121)								
HK1845072-101	IS3/S/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.8	4.1	7.55
EG: Metals and Major Cations - Filtered (QC Lot: 1892494)								
HK1845072-002	CS1/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1845072-011	CS2/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1892495)								
HK1845072-022	CS3/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
HK1845072-031	IS1/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1892496)								
HK1845072-042	IS2/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1845072-051	IS3/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1892497)								
HK1845072-062	CS1/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1845072-071	CS2/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1892498)								
HK1845072-082	IS1/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 1892498) - Continued								
HK1845072-091	IS2/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1892499)								
HK1845072-102	IS3/S/Triplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 1890116)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1890117)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1890118)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1890119)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1890120)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1890121)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1892494)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	97.2	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1892495)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	91.0	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1892496)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	97.4	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1892497)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	94.2	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1892498)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	93.7	----	85	117	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1892498) - Continued											
EG: Metals and Major Cations - Filtered (QC Lot: 1892499)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	95.7	---	85	117	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1890148)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	59.0	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	52.5	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	55.1	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	54.4	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	63.9	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	68.7	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	93.4	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	94.0	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	103	---	67	110	---	---
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	103	---	64	110	---	---
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	94.9	---	73	113	---	---
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	104	---	65	111	---	---
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	93.0	---	62	109	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	75.0	---	56	112	---	---
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	80.6	---	53	110	---	---
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	72.4	---	40	123	---	---
Total PAH	---	1.6	µg/L	<1.6	8 µg/L	79.1	---	50	130	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1890149)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	50.4	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	67.8	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	61.4	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	67.9	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	67.2	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	69.5	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	80.2	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	79.2	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	84.9	---	67	110	---	---



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1890149) - Continued											
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	92.3	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	73.9	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	84.4	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	72.5	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	86.4	----	56	112	----	----
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	94.1	----	53	110	----	----
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	91.1	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	76.5	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1890152)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	53.0	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	64.6	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	53.3	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	63.2	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	63.6	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	65.9	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	88.0	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	88.5	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	95.5	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	94.5	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	87.2	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	93.1	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	87.9	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	94.1	----	56	112	----	----
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	96.4	----	53	110	----	----
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	93.7	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	80.2	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1890153)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	55.2	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	60.6	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	59.8	----	44	67	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1890153) - Continued											
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	70.5	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	61.5	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	65.2	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	87.1	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	87.4	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	94.0	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	95.5	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	83.9	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	93.0	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	88.0	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	94.3	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	96.7	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	96.6	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	80.6	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1890158)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	59.2	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	65.6	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	51.0	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	57.9	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	65.0	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	68.4	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	86.7	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	86.3	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	97.4	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	100.0	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	85.3	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	93.3	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	84.9	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	85.5	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	99.9	----	53	110	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1890158) - Continued											
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	95.2	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	80.1	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1890159)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	61.5	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	75.8	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	60.8	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	66.8	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	67.3	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	69.1	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	79.9	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	79.5	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	89.5	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	90.4	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	80.6	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	78.6	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	73.3	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	83.9	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	94.7	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	94.2	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	77.9	----	50	130	----	----



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER

					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1892494)										
HK1845072-001	CS1/S/ Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	105	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1892495)										
HK1845072-021	CS3/S/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	93.8	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1892496)										
HK1845072-041	IS2/M/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	98.2	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1892497)										
HK1845072-061	CS1/B/ Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	97.2	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1892498)										
HK1845072-081	CS3/B/Triplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	90.6	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1892499)										
HK1845072-101	IS3/S/Duplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	92.0	----	80	120	----	----

Surrogate Control Limits

Sub-Matrix: MARINE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130



CERTIFICATE OF ANALYSIS

Client	: AECOM ASIA COMPANY LIMITED	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 31
Contact	: MR YIU WAH FUNG	Contact	: Richard Fung	Work Order	: HK1845077
Address	: 1501-10, 15/F, TOWER 1, GRAND CENTRAL PLAZA, 138 SHATIN RURAL COMMITTEE ROAD, SHATIN, NEW TERRITORIES, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: yw.fung@aecom.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 3105 8544	Telephone	: +852 2610 1044		
Facsimile	: +852 2891 0305	Facsimile	: +852 2610 2021		
Project	: EM&A FOR CENTRAL KOWLOON ROUTE - KAI TAK WEST			Date Samples Received	: 23-Aug-2018
Order number	: 60569734	Quote number	: HKE/1260b/2017	Issue Date	: 03-Sep-2018
C-O-C number	: ---			No. of samples received	: 108
Site	:			No. of samples analysed	: 108

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This document has been signed by those names that appear on this report and are the authorised signatories.

<u>Signatories</u>	<u>Position</u>	<u>Authorised results for</u>
Chan Ka Yu, Karen	Manager - Organics	Organics
Fung Lim Chee, Richard	General Manager	Inorganics
Fung Lim Chee, Richard	General Manager	Metals



General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 23-Aug-2018 to 03-Sep-2018.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK1845077

Sample(s) were picked up from client by ALS Technichem (HK) staff in chilled condition.

Water sample(s) analysed and reported on as received basis.

Water sample(s) were filtered prior to dissolved metal analysis.



Analytical Results

Sub-Matrix: MARINE WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	CS1/S/ Mid-Ebb	CS1/S/Duplicate Mid-Ebb	CS1/S/Triplicate Mid-Ebb	CS1/M/ Mid-Ebb	CS1/M/Duplicate Mid-Ebb
				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018
				HK1845077-001	HK1845077-002	HK1845077-003	HK1845077-004	HK1845077-005
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	14.8	15.0	14.7	16.4	16.3
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	2	2	2	2	2
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.7	51.3	54.7	51.8	85.4
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	106	112	121	99.0	118



Sub-Matrix: MARINE WATER				Client sample ID	CS1/M/Triplicate Mid-Ebb	CS1/B/ Mid-Ebb	CS1/B/Duplicate Mid-Ebb	CS1/B/Triplicate Mid-Ebb	CS2/S/ Mid-Ebb
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-006	HK1845077-007	HK1845077-008	HK1845077-009	HK1845077-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	15.9	18.0	18.4	18.7	12.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	2	2	2	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.1	50.3	85.2	51.3	60.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	119	125	124	114	109	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Duplicate Mid-Ebb	CS2/S/Triplicate Mid-Ebb	CS2/M/ Mid-Ebb	CS2/M/Duplicate Mid-Ebb	CS2/M/Triplicate Mid-Ebb
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-011	HK1845077-012	HK1845077-013	HK1845077-014	HK1845077-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	11.8	12.3	13.6	13.8	13.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	2	2	2	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	57.3	52.9	52.0	56.7	67.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	86.4	101	104	118	89.0	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/ Mid-Ebb	CS2/B/Duplicate Mid-Ebb	CS2/B/Triplicate Mid-Ebb	CS3/S/ Mid-Ebb	CS3/S/Duplicate Mid-Ebb
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-016	HK1845077-017	HK1845077-018	HK1845077-019	HK1845077-020	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	14.5	14.7	15.1	17.0	16.7	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	2	2	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	59.6	57.1	51.2	50.4	59.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	105	114	113	101	112	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/S/Triplicate Mid-Ebb	CS3/M/ Mid-Ebb	CS3/M/Duplicate Mid-Ebb	CS3/M/Triplicate Mid-Ebb	CS3/B/ Mid-Ebb
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-021	HK1845077-022	HK1845077-023	HK1845077-024	HK1845077-025	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	16.6	18.7	19.1	18.6	18.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	2	1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.1	52.4	62.4	50.4	56.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	98.1	98.4	110	106	103	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Duplicate Mid-Ebb	CS3/B/Triplicate Mid-Ebb	IS1/S/ Mid-Ebb	IS1/S/Duplicate Mid-Ebb	IS1/S/Triplicate Mid-Ebb
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-026	HK1845077-027	HK1845077-028	HK1845077-029	HK1845077-030	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	19.6	20.4	15.8	16.2	16.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	2	1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	55.8	54.7	55.2	65.3	68.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	115	106	106	117	116	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/ Mid-Ebb	IS1/M/Duplicate Mid-Ebb	IS1/M/Triplicate Mid-Ebb	IS1/B/ Mid-Ebb	IS1/B/Duplicate Mid-Ebb
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-031	HK1845077-032	HK1845077-033	HK1845077-034	HK1845077-035	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	16.8	16.6	17.2	18.4	18.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.8	67.0	61.9	66.6	52.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	90.6	115	107	102	104	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/B/Triplicate Mid-Ebb	IS2/S/ Mid-Ebb	IS2/S/Duplicate Mid-Ebb	IS2/S/Triplicate Mid-Ebb	IS2/M/ Mid-Ebb
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-036	HK1845077-037	HK1845077-038	HK1845077-039	HK1845077-040	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	19.0	8.8	8.5	8.6	8.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	55.5	52.6	63.7	65.5	60.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	114	92.2	119	112	110	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Duplicate Mid-Ebb	IS2/M/Triplicate Mid-Ebb	IS2/B/ Mid-Ebb	IS2/B/Duplicate Mid-Ebb	IS2/B/Triplicate Mid-Ebb
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-041	HK1845077-042	HK1845077-043	HK1845077-044	HK1845077-045	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.6	9.2	11.8	11.6	12.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	56.8	50.9	53.4	56.0	84.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	101	90.2	90.8	91.9	103	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/ Mid-Ebb	IS3/S/Duplicate Mid-Ebb	IS3/S/Triplicate Mid-Ebb	IS3/M/ Mid-Ebb	IS3/M/Duplicate Mid-Ebb
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-046	HK1845077-047	HK1845077-048	HK1845077-049	HK1845077-050	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.6	10.0	10.1	14.2	13.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	2	2	2	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	60.2	74.6	51.4	64.2	56.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	88.8	112	105	83.2	94.3	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/M/Triplicate Mid-Ebb	IS3/B/ Mid-Ebb	IS3/B/Duplicate Mid-Ebb	IS3/B/Triplicate Mid-Ebb	CS1/S/ Mid-Flood
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-051	HK1845077-052	HK1845077-053	HK1845077-054	HK1845077-055	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	14.0	15.7	16.4	15.6	11.9	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	2	2	2	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	74.3	54.1	74.0	50.2	59.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	106	102	106	98.0	99.4	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/S/Duplicate Mid-Flood	CS1/S/Triplicate Mid-Flood	CS1/M/ Mid-Flood	CS1/M/Duplicate Mid-Flood	CS1/M/Triplicate Mid-Flood
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-056	HK1845077-057	HK1845077-058	HK1845077-059	HK1845077-060	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	11.5	11.8	14.1	14.2	13.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.6	53.4	52.5	69.3	77.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	95.9	98.4	101	103	99.9	



Sub-Matrix: MARINE WATER				Client sample ID				
				CS1/B/ Mid-Flood	CS1/B/Duplicate Mid-Flood	CS1/B/Triplicate Mid-Flood	CS2/S/ Mid-Flood	CS2/S/Duplicate Mid-Flood
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018
Compound	CAS Number	LOR	Unit	HK1845077-061	HK1845077-062	HK1845077-063	HK1845077-064	HK1845077-065
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	13.5	13.4	14.4	11.2	11.7
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	1	<1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.9	54.9	80.5	102	54.5
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	73.4	96.5	102	107	95.0



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Triplicate Mid-Flood	CS2/M/ Mid-Flood	CS2/M/Duplicate Mid-Flood	CS2/M/Triplicate Mid-Flood	CS2/B/ Mid-Flood
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-066	HK1845077-067	HK1845077-068	HK1845077-069	HK1845077-070	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	11.6	16.6	16.8	17.5	20.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	2	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	54.5	64.3	53.4	64.9	81.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	84.2	102	106	89.0	110	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/Duplicate Mid-Flood	CS2/B/Triplicate Mid-Flood	CS3/S/ Mid-Flood	CS3/S/Duplicate Mid-Flood	CS3/S/Triplicate Mid-Flood
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-071	HK1845077-072	HK1845077-073	HK1845077-074	HK1845077-075	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	19.6	20.2	11.2	11.1	11.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	65.6	61.0	71.8	57.9	54.7	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	85.5	106	107	95.8	106	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/M/ Mid-Flood	CS3/M/Duplicate Mid-Flood	CS3/M/Triplicate Mid-Flood	CS3/B/ Mid-Flood	CS3/B/Duplicate Mid-Flood
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-076	HK1845077-077	HK1845077-078	HK1845077-079	HK1845077-080	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	13.6	13.4	13.4	15.8	15.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	58.2	51.5	83.0	90.2	99.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	102	103	102	91.7	107	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Triplicate Mid-Flood	IS1/S/ Mid-Flood	IS1/S/Duplicate Mid-Flood	IS1/S/Triplicate Mid-Flood	IS1/M/ Mid-Flood
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-081	HK1845077-082	HK1845077-083	HK1845077-084	HK1845077-085	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	15.0	6.6	6.8	6.7	9.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	<1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.4	66.1	55.4	50.2	50.7	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	115	122	108	110	119	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/Duplicate Mid-Flood	IS1/M/Triplicate Mid-Flood	IS1/B/ Mid-Flood	IS1/B/Duplicate Mid-Flood	IS1/B/Triplicate Mid-Flood
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-086	HK1845077-087	HK1845077-088	HK1845077-089	HK1845077-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.2	8.6	9.8	10.2	9.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	<1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.6	51.2	55.2	50.8	75.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	117	98.7	128	128	125	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/S/ Mid-Flood	IS2/S/Duplicate Mid-Flood	IS2/S/Triplicate Mid-Flood	IS2/M/ Mid-Flood	IS2/M/Duplicate Mid-Flood
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-091	HK1845077-092	HK1845077-093	HK1845077-094	HK1845077-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.7	7.4	7.2	9.3	9.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.4	58.7	51.6	51.0	71.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	93.3	114	110	120	112	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Triplicate Mid-Flood	IS2/B/ Mid-Flood	IS2/B/Duplicate Mid-Flood	IS2/B/Triplicate Mid-Flood	IS3/S/ Mid-Flood
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-096	HK1845077-097	HK1845077-098	HK1845077-099	HK1845077-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.0	10.2	9.9	9.7	7.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	57.9	54.0	59.1	56.4	62.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	108	112	114	117	123	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/Duplicate Mid-Flood	IS3/S/Triplicate Mid-Flood	IS3/M/ Mid-Flood	IS3/M/Duplicate Mid-Flood	IS3/M/Triplicate Mid-Flood
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	23-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845077-101	HK1845077-102	HK1845077-103	HK1845077-104	HK1845077-105	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.0	7.8	11.8	11.7	12.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	<1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.7	70.1	69.0	83.6	69.9	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	112	129	121	122	129	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/B/ Mid-Flood	IS3/B/Duplicate Mid-Flood	IS3/B/Triplicate Mid-Flood	---	---
Client sampling date / time				23-Aug-2018	23-Aug-2018	23-Aug-2018	----	----	
Compound	CAS Number	LOR	Unit	HK1845077-106	HK1845077-107	HK1845077-108	-----	-----	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	14.6	14.3	15.2	---	---	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	---	---	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	---	---	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	61.0	54.3	58.4	---	---	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	123	111	130	---	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1897508)								
HK1845077-001	CS1/S/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	14.8	14.6	1.36
HK1845077-011	CS2/S/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	11.8	12.0	1.46
EA/ED: Physical and Aggregate Properties (QC Lot: 1897509)								
HK1845077-021	CS3/S/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	16.6	17.0	2.24
HK1845077-033	IS1/M/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	17.2	17.0	1.46
EA/ED: Physical and Aggregate Properties (QC Lot: 1897510)								
HK1845077-041	IS2/M/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.6	8.3	3.56
HK1845077-051	IS3/M/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	14.0	13.8	1.62
EA/ED: Physical and Aggregate Properties (QC Lot: 1897511)								
HK1845077-061	CS1/B/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	13.5	13.8	2.20
HK1845077-071	CS2/B/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	19.6	19.9	1.52
EA/ED: Physical and Aggregate Properties (QC Lot: 1897512)								
HK1845077-081	CS3/B/Triplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	15.0	15.4	2.80
HK1845077-092	IS2/S/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.4	7.0	4.52
EA/ED: Physical and Aggregate Properties (QC Lot: 1897513)								
HK1845077-101	IS3/S/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.0	8.3	3.36
EG: Metals and Major Cations - Filtered (QC Lot: 1897313)								
HK1845077-002	CS1/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	2	2	0.00
HK1845077-011	CS2/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	2	2	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1897314)								
HK1845077-022	CS3/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	2	2	0.00
HK1845077-031	IS1/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1897315)								
HK1845077-042	IS2/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1845077-051	IS3/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	2	2	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1897316)								
HK1845077-062	CS1/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	1	0.00
HK1845077-071	CS2/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1897317)								
HK1845077-082	IS1/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 1897317) - Continued								
HK1845077-091	IS2/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1897318)								
HK1845077-102	IS3/S/Triplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	1	0.00

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 1897508)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1897509)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1897510)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1897511)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1897512)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1897513)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1897313)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	96.8	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1897314)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	100	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1897315)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	106	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1897316)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	101	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1897317)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	101	----	85	117	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1897317) - Continued											
EG: Metals and Major Cations - Filtered (QC Lot: 1897318)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	97.6	---	85	117	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1890159)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	61.5	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	75.8	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	60.8	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	66.8	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	67.3	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	69.1	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	79.9	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	79.5	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	89.5	---	67	110	---	---
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	90.4	---	64	110	---	---
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	80.6	---	73	113	---	---
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	78.6	---	65	111	---	---
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	73.3	---	62	109	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	83.9	---	56	112	---	---
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	94.7	---	53	110	---	---
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	94.2	---	40	123	---	---
Total PAH	---	1.6	µg/L	<1.6	8 µg/L	77.9	---	50	130	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1899566)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	58.7	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	71.7	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	64.9	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	71.1	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	76.1	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	76.9	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	95.2	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	91.9	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	96.0	---	67	110	---	---



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report								
		Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
								LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1899566) - Continued													
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	88.7	----	64	110	----	----		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	91.8	----	73	113	----	----		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	92.0	----	65	111	----	----		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	77.7	----	62	109	----	----		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	86.0	----	56	112	----	----		
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	97.8	----	53	110	----	----		
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	102	----	40	123	----	----		
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	83.7	----	50	130	----	----		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1899567)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	56.5	----	44	69	----	----		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	69.2	----	37	81	----	----		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	66.4	----	44	67	----	----		
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	72.2	----	39	73	----	----		
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	75.1	----	41	77	----	----		
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	78.4	----	38	79	----	----		
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	94.8	----	51	112	----	----		
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	91.7	----	51	113	----	----		
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	93.9	----	67	110	----	----		
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	104	----	64	110	----	----		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	95.8	----	73	113	----	----		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	91.4	----	65	111	----	----		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	80.9	----	62	109	----	----		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	84.8	----	56	112	----	----		
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	103	----	53	110	----	----		
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	105	----	40	123	----	----		
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	85.2	----	50	130	----	----		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1899568)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	58.0	----	44	69	----	----		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	75.2	----	37	81	----	----		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	66.3	----	44	67	----	----		



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1899568) - Continued											
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	70.2	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	73.7	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	75.7	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	92.2	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	91.5	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	97.9	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	97.8	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	94.8	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	97.2	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	89.8	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	97.8	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	98.1	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	100	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	86.0	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1899569)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	66.6	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	77.4	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	64.5	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	71.5	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	73.2	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	76.8	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	103	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	100.0	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	107	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	109	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	107	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	106	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	87.2	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	107	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	101	----	53	110	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1899569) - Continued											
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	102	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	91.2	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1899608)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	52.9	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	65.8	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	66.7	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	71.6	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	69.8	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	72.1	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	87.2	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	85.8	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	89.6	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	94.2	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	87.8	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	91.6	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	85.8	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	93.3	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	98.1	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	106	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	82.4	----	50	130	----	----



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER

					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
<i>Laboratory sample ID</i>	<i>Client sample ID</i>	<i>Method: Compound</i>	<i>CAS Number</i>	<i>Spike Concentration</i>	<i>Spike Recovery (%)</i>		<i>Recovery Limits (%)</i>		<i>RPD (%)</i>	
					<i>MS</i>	<i>MSD</i>	<i>Low</i>	<i>High</i>	<i>Value</i>	<i>Control Limit</i>
EG: Metals and Major Cations - Filtered (QC Lot: 1897313)										
HK1845077-001	CS1/S/ Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	98.2	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1897314)										
HK1845077-021	CS3/S/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	88.6	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1897315)										
HK1845077-041	IS2/M/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	101	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1897316)										
HK1845077-061	CS1/B/ Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	100	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1897317)										
HK1845077-081	CS3/B/Triplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	101	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1897318)										
HK1845077-101	IS3/S/Duplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	94.8	----	80	120	----	----

Surrogate Control Limits

Sub-Matrix: MARINE WATER		<i>Recovery Limits (%)</i>	
<i>Compound</i>	<i>CAS Number</i>	<i>Low</i>	<i>High</i>
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130



CERTIFICATE OF ANALYSIS

Client	: AECOM ASIA COMPANY LIMITED	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 31
Contact	: MR YIU WAH FUNG	Contact	: Richard Fung	Work Order	: HK1845566
Address	: 1501-10, 15/F, TOWER 1, GRAND CENTRAL PLAZA, 138 SHATIN RURAL COMMITTEE ROAD, SHATIN, NEW TERRITORIES, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: yw.fung@aecom.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 3105 8544	Telephone	: +852 2610 1044		
Facsimile	: +852 2891 0305	Facsimile	: +852 2610 2021		
Project	: EM&A FOR CENTRAL KOWLOON ROUTE - KAI TAK WEST			Date Samples Received	: 25-Aug-2018
Order number	: 60569734	Quote number	: HKE/1260b/2017	Issue Date	: 04-Sep-2018
C-O-C number	: ---			No. of samples received	: 108
Site	:			No. of samples analysed	: 108

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This document has been signed by those names that appear on this report and are the authorised signatories.

<u>Signatories</u>	<u>Position</u>	<u>Authorised results for</u>
Chan Ka Yu, Karen	Manager - Organics	Organics
Fung Lim Chee, Richard	General Manager	Inorganics
Fung Lim Chee, Richard	General Manager	Metals



General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 25-Aug-2018 to 04-Sep-2018.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK1845566

Sample(s) were picked up from client by ALS Technichem (HK) staff in chilled condition.

Water sample(s) analysed and reported on as received basis.

Water sample(s) were filtered prior to dissolved metal analysis.



Analytical Results

Sub-Matrix: MARINE WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	CS1/S/ Mid-Ebb	CS1/S/Duplicate Mid-Ebb	CS1/S/Triplicate Mid-Ebb	CS1/M/ Mid-Ebb	CS1/M/Duplicate Mid-Ebb
				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018
				HK1845566-001	HK1845566-002	HK1845566-003	HK1845566-004	HK1845566-005
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.6	4.8	5.3	7.2	6.8
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	1	1	2	<1	1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.1	59.2	93.7	82.2	66.4
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	81.4	91.4	92.5	78.9	77.4



Sub-Matrix: MARINE WATER				Client sample ID	CS1/M/Triplicate Mid-Ebb	CS1/B/ Mid-Ebb	CS1/B/Duplicate Mid-Ebb	CS1/B/Triplicate Mid-Ebb	CS2/S/ Mid-Ebb
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-006	HK1845566-007	HK1845566-008	HK1845566-009	HK1845566-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.4	7.8	8.2	7.7	4.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.0	55.3	51.3	65.5	51.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	87.9	91.7	89.1	83.6	80.9	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Duplicate Mid-Ebb	CS2/S/Triplicate Mid-Ebb	CS2/M/ Mid-Ebb	CS2/M/Duplicate Mid-Ebb	CS2/M/Triplicate Mid-Ebb
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-011	HK1845566-012	HK1845566-013	HK1845566-014	HK1845566-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.7	5.2	7.6	7.4	7.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	54.1	51.0	51.5	60.4	51.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	88.0	86.2	62.9	90.6	79.0	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/ Mid-Ebb	CS2/B/Duplicate Mid-Ebb	CS2/B/Triplicate Mid-Ebb	CS3/S/ Mid-Ebb	CS3/S/Duplicate Mid-Ebb
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-016	HK1845566-017	HK1845566-018	HK1845566-019	HK1845566-020	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.1	9.3	8.9	5.1	5.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	<1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	54.8	62.6	54.5	56.8	51.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	67.8	71.7	74.0	75.6	78.9	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/S/Triplicate Mid-Ebb	CS3/M/ Mid-Ebb	CS3/M/Duplicate Mid-Ebb	CS3/M/Triplicate Mid-Ebb	CS3/B/ Mid-Ebb
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-021	HK1845566-022	HK1845566-023	HK1845566-024	HK1845566-025	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.0	5.9	5.6	6.2	5.9	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	58.8	52.8	60.1	55.8	50.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	75.3	79.1	79.0	69.6	80.4	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Duplicate Mid-Ebb	CS3/B/Triplicate Mid-Ebb	IS1/S/ Mid-Ebb	IS1/S/Duplicate Mid-Ebb	IS1/S/Triplicate Mid-Ebb
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-026	HK1845566-027	HK1845566-028	HK1845566-029	HK1845566-030	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.1	5.5	5.4	5.2	5.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	54.5	50.7	69.5	53.6	57.9	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	76.2	86.6	83.0	69.8	87.4	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/ Mid-Ebb	IS1/M/Duplicate Mid-Ebb	IS1/M/Triplicate Mid-Ebb	IS1/B/ Mid-Ebb	IS1/B/Duplicate Mid-Ebb
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-031	HK1845566-032	HK1845566-033	HK1845566-034	HK1845566-035	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.8	6.3	5.9	6.0	6.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	<1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	60.7	52.6	51.8	58.9	81.7	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	83.5	89.3	94.3	72.8	90.3	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/B/Triplicate Mid-Ebb	IS2/S/ Mid-Ebb	IS2/S/Duplicate Mid-Ebb	IS2/S/Triplicate Mid-Ebb	IS2/M/ Mid-Ebb
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-036	HK1845566-037	HK1845566-038	HK1845566-039	HK1845566-040	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	5.0	5.1	4.8	5.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.3	65.9	55.9	57.7	67.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	86.5	95.1	83.0	87.2	86.3	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Duplicate Mid-Ebb	IS2/M/Triplicate Mid-Ebb	IS2/B/ Mid-Ebb	IS2/B/Duplicate Mid-Ebb	IS2/B/Triplicate Mid-Ebb
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-041	HK1845566-042	HK1845566-043	HK1845566-044	HK1845566-045	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.7	6.2	6.1	6.4	6.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.9	50.8	57.7	53.4	70.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	88.7	93.4	98.9	101	99.1	



Sub-Matrix: MARINE WATER				Client sample ID				
				IS3/S/ Mid-Ebb	IS3/S/Duplicate Mid-Ebb	IS3/S/Triplicate Mid-Ebb	IS3/M/ Mid-Ebb	IS3/M/Duplicate Mid-Ebb
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018
Compound	CAS Number	LOR	Unit	HK1845566-046	HK1845566-047	HK1845566-048	HK1845566-049	HK1845566-050
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.3	5.2	4.6	6.4	6.0
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	1	1	2	1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	55.9	63.1	51.3	52.3	61.9
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	91.1	107	86.6	95.8	111



Sub-Matrix: MARINE WATER				Client sample ID	IS3/M/Triplicate Mid-Ebb	IS3/B/ Mid-Ebb	IS3/B/Duplicate Mid-Ebb	IS3/B/Triplicate Mid-Ebb	CS1/S/ Mid-Flood
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-051	HK1845566-052	HK1845566-053	HK1845566-054	HK1845566-055	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	7.3	7.2	7.4	5.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.1	51.8	50.4	60.9	52.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	96.0	92.8	101	93.2	95.2	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/S/Duplicate Mid-Flood	CS1/S/Triplicate Mid-Flood	CS1/M/ Mid-Flood	CS1/M/Duplicate Mid-Flood	CS1/M/Triplicate Mid-Flood
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-056	HK1845566-057	HK1845566-058	HK1845566-059	HK1845566-060	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	6.4	8.0	7.6	7.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	<1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.3	50.6	57.8	50.6	61.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	91.7	97.4	101	85.0	108	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/B/ Mid-Flood	CS1/B/Duplicate Mid-Flood	CS1/B/Triplicate Mid-Flood	CS2/S/ Mid-Flood	CS2/S/Duplicate Mid-Flood
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-061	HK1845566-062	HK1845566-063	HK1845566-064	HK1845566-065	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.5	8.7	9.1	6.8	6.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	<1	<1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.6	58.3	57.4	53.8	53.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	96.0	101	77.7	97.1	98.1	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Triplicate Mid-Flood	CS2/M/ Mid-Flood	CS2/M/Duplicate Mid-Flood	CS2/M/Triplicate Mid-Flood	CS2/B/ Mid-Flood
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-066	HK1845566-067	HK1845566-068	HK1845566-069	HK1845566-070	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.3	6.9	6.8	6.6	8.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	<1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.0	55.9	56.0	51.2	52.7	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	89.2	94.7	93.9	97.7	102	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/Duplicate Mid-Flood	CS2/B/Triplicate Mid-Flood	CS3/S/ Mid-Flood	CS3/S/Duplicate Mid-Flood	CS3/S/Triplicate Mid-Flood
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-071	HK1845566-072	HK1845566-073	HK1845566-074	HK1845566-075	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.1	7.8	8.6	8.6	8.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	<1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	60.8	50.1	58.3	67.8	58.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	90.7	106	107	107	108	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/M/ Mid-Flood	CS3/M/Duplicate Mid-Flood	CS3/M/Triplicate Mid-Flood	CS3/B/ Mid-Flood	CS3/B/Duplicate Mid-Flood
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-076	HK1845566-077	HK1845566-078	HK1845566-079	HK1845566-080	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.6	8.5	8.7	10.1	10.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	<1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.7	81.7	86.6	61.1	56.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	95.9	94.6	110	107	119	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Triplicate Mid-Flood	IS1/S/ Mid-Flood	IS1/S/Duplicate Mid-Flood	IS1/S/Triplicate Mid-Flood	IS1/M/ Mid-Flood
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-081	HK1845566-082	HK1845566-083	HK1845566-084	HK1845566-085	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.5	8.0	7.9	8.3	8.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	64.8	53.9	53.3	54.1	105	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	79.0	61.6	101	98.5	95.9	



Sub-Matrix: MARINE WATER				Client sample ID				
				IS1/M/Duplicate Mid-Flood	IS1/M/Triplicate Mid-Flood	IS1/B/ Mid-Flood	IS1/B/Duplicate Mid-Flood	IS1/B/Triplicate Mid-Flood
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018
Compound	CAS Number	LOR	Unit	HK1845566-086	HK1845566-087	HK1845566-088	HK1845566-089	HK1845566-090
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.2	8.4	9.5	9.8	9.7
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	84.6	68.2	50.3	74.8	87.0
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	79.5	84.4	87.7	73.9	86.5



Sub-Matrix: MARINE WATER				Client sample ID	IS2/S/ Mid-Flood	IS2/S/Duplicate Mid-Flood	IS2/S/Triplicate Mid-Flood	IS2/M/ Mid-Flood	IS2/M/Duplicate Mid-Flood
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-091	HK1845566-092	HK1845566-093	HK1845566-094	HK1845566-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	10.2	9.9	9.7	9.9	9.7	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.6	78.7	66.5	57.4	82.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	88.4	87.3	80.3	89.2	92.9	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Triplicate Mid-Flood	IS2/B/ Mid-Flood	IS2/B/Duplicate Mid-Flood	IS2/B/Triplicate Mid-Flood	IS3/S/ Mid-Flood
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-096	HK1845566-097	HK1845566-098	HK1845566-099	HK1845566-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	10.3	10.0	10.4	9.8	8.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.8	86.7	91.9	53.9	95.7	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	86.8	88.9	92.6	93.7	88.9	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/Duplicate Mid-Flood	IS3/S/Triplicate Mid-Flood	IS3/M/ Mid-Flood	IS3/M/Duplicate Mid-Flood	IS3/M/Triplicate Mid-Flood
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	25-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845566-101	HK1845566-102	HK1845566-103	HK1845566-104	HK1845566-105	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.2	8.0	10.1	9.3	10.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	91.8	95.1	67.9	50.5	51.9	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	93.4	98.6	95.1	85.6	80.7	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/B/ Mid-Flood	IS3/B/Duplicate Mid-Flood	IS3/B/Triplicate Mid-Flood	---	---
Client sampling date / time				25-Aug-2018	25-Aug-2018	25-Aug-2018	----	----	
Compound	CAS Number	LOR	Unit	HK1845566-106	HK1845566-107	HK1845566-108	-----	-----	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.7	10.6	10.1	---	---	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	1	---	---	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	---	---	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	58.6	50.2	55.8	---	---	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	85.0	91.6	69.6	---	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1901499)								
HK1845566-001	CS1/S/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.6	4.6	0.00
HK1845566-011	CS2/S/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.7	5.0	5.18
EA/ED: Physical and Aggregate Properties (QC Lot: 1901500)								
HK1845566-021	CS3/S/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.0	5.1	2.49
HK1845566-031	IS1/M/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.8	5.6	3.06
EA/ED: Physical and Aggregate Properties (QC Lot: 1901501)								
HK1845566-041	IS2/M/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.7	5.9	3.89
HK1845566-051	IS3/M/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	5.9	2.91
EA/ED: Physical and Aggregate Properties (QC Lot: 1901502)								
HK1845566-061	CS1/B/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.5	8.2	3.59
HK1845566-071	CS2/B/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.1	8.0	1.56
EA/ED: Physical and Aggregate Properties (QC Lot: 1901503)								
HK1845566-081	CS3/B/Triplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.5	9.8	2.85
HK1845566-091	IS2/S/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	10.2	9.8	4.51
EA/ED: Physical and Aggregate Properties (QC Lot: 1901504)								
HK1845566-101	IS3/S/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.2	8.4	2.10
EG: Metals and Major Cations - Filtered (QC Lot: 1901067)								
HK1845566-002	CS1/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
HK1845566-011	CS2/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1901068)								
HK1845566-022	CS3/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1845566-031	IS1/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1901069)								
HK1845566-042	IS2/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	<1	0.00
HK1845566-051	IS3/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1901070)								
HK1845566-062	CS1/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1845566-071	CS2/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1901071)								
HK1845566-082	IS1/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	1	0.00



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 1901071) - Continued								
HK1845566-091	IS2/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1901072)								
HK1845566-102	IS3/S/Triplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)		
						LCS	DCS	Low	High	Value	Control Limit	
EA/ED: Physical and Aggregate Properties (QC Lot: 1901499)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1901500)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.0	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1901501)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1901502)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.0	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1901503)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1901504)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1901067)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	109	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1901068)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	102	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1901069)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	106	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1901070)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	100	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1901071)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	98.0	----	85	117	----	----	



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1901071) - Continued											
EG: Metals and Major Cations - Filtered (QC Lot: 1901072)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	106	---	85	117	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1901154)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	59.4	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	73.8	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	63.5	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	71.1	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	75.6	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	77.6	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	102	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	99.7	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	105	---	67	110	---	---
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	108	---	64	110	---	---
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	103	---	73	113	---	---
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	109	---	65	111	---	---
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	83.8	---	62	109	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	97.2	---	56	112	---	---
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	97.3	---	53	110	---	---
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	103	---	40	123	---	---
Total PAH	---	1.6	µg/L	<1.6	8 µg/L	89.4	---	50	130	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1901155)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	57.4	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	71.5	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	66.2	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	67.6	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	73.6	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	73.1	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	97.1	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	95.1	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	99.2	---	67	110	---	---



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1901155) - Continued											
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	101	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	101	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	102	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	79.8	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	93.4	----	56	112	----	----
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	96.7	----	53	110	----	----
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	101	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	86.0	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1901174)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	64.7	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	74.0	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	65.9	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	72.6	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	75.2	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	75.7	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	99.1	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	97.0	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	99.1	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	104	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	98.9	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	102	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	80.7	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	96.4	----	56	112	----	----
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	98.3	----	53	110	----	----
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	99.0	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	87.7	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1901175)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	61.6	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	76.0	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	65.5	----	44	67	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1901175) - Continued											
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	70.9	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	75.1	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	78.5	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	102	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	99.4	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	101	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	103	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	98.3	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	107	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	80.6	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	99.4	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	101	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	106	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	89.0	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1901181)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	57.2	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	69.8	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	63.1	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	72.8	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	75.9	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	72.0	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	91.9	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	88.4	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	87.5	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	95.4	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	87.3	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	93.3	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	76.4	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	91.9	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	103	----	53	110	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1901181) - Continued											
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	117	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	84.0	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1901182)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	52.8	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	65.6	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	65.1	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	71.7	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	75.6	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	75.9	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	95.3	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	90.7	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	87.2	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	96.4	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	83.0	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	95.5	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	75.4	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	97.2	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	102	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	101	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	83.2	----	50	130	----	----



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER

					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1901067)										
HK1845566-001	CS1/S/ Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	89.6	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1901068)										
HK1845566-021	CS3/S/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	97.6	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1901069)										
HK1845566-041	IS2/M/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	102	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1901070)										
HK1845566-061	CS1/B/ Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	88.0	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1901071)										
HK1845566-081	CS3/B/Triplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	89.5	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1901072)										
HK1845566-101	IS3/S/Duplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	87.5	----	80	120	----	----

Surrogate Control Limits

Sub-Matrix: MARINE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130



CERTIFICATE OF ANALYSIS

Client	: AECOM ASIA COMPANY LIMITED	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 31
Contact	: MR YIU WAH FUNG	Contact	: Richard Fung	Work Order	: HK1845571
Address	: 1501-10, 15/F, TOWER 1, GRAND CENTRAL PLAZA, 138 SHATIN RURAL COMMITTEE ROAD, SHATIN, NEW TERRITORIES, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: yw.fung@aecom.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 3105 8544	Telephone	: +852 2610 1044		
Facsimile	: +852 2891 0305	Facsimile	: +852 2610 2021		
Project	: EM&A FOR CENTRAL KOWLOON ROUTE - KAI TAK WEST			Date Samples Received	: 28-Aug-2018
Order number	: 60569734	Quote number	: HKE/1260b/2017	Issue Date	: 06-Sep-2018
C-O-C number	: ---			No. of samples received	: 108
Site	:			No. of samples analysed	: 108

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This document has been signed by those names that appear on this report and are the authorised signatories.

<u>Signatories</u>	<u>Position</u>	<u>Authorised results for</u>
Chan Ka Yu, Karen	Manager - Organics	Organics
Fung Lim Chee, Richard	General Manager	Inorganics
Fung Lim Chee, Richard	General Manager	Metals



General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 28-Aug-2018 to 06-Sep-2018.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK1845571

Sample(s) were picked up from client by ALS Technichem (HK) staff in chilled condition.

Water sample(s) analysed and reported on as received basis.

Water sample(s) were filtered prior to dissolved metal analysis.



Analytical Results

Sub-Matrix: MARINE WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	CS1/S/ Mid-Ebb	CS1/S/Duplicate Mid-Ebb	CS1/S/Triplicate Mid-Ebb	CS1/M/ Mid-Ebb	CS1/M/Duplicate Mid-Ebb
				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018
				HK1845571-001	HK1845571-002	HK1845571-003	HK1845571-004	HK1845571-005
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	6.6	6.6	6.1	6.7
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	3	3	3	3	3
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	69.6	61.8	60.0	53.6	80.8
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	100	98.1	106	95.5	106



Sub-Matrix: MARINE WATER				Client sample ID	CS1/M/Triplicate Mid-Ebb	CS1/B/ Mid-Ebb	CS1/B/Duplicate Mid-Ebb	CS1/B/Triplicate Mid-Ebb	CS2/S/ Mid-Ebb
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-006	HK1845571-007	HK1845571-008	HK1845571-009	HK1845571-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	8.0	7.1	7.5	6.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	3	3	3	3	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.4	82.6	52.2	53.1	73.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	95.2	114	109	103	116	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Duplicate Mid-Ebb	CS2/S/Triplicate Mid-Ebb	CS2/M/ Mid-Ebb	CS2/M/Duplicate Mid-Ebb	CS2/M/Triplicate Mid-Ebb
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-011	HK1845571-012	HK1845571-013	HK1845571-014	HK1845571-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.2	5.0	6.6	7.5	7.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	2	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	58.5	52.4	61.4	56.2	55.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	93.6	97.0	85.2	102	93.1	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/ Mid-Ebb	CS2/B/Duplicate Mid-Ebb	CS2/B/Triplicate Mid-Ebb	CS3/S/ Mid-Ebb	CS3/S/Duplicate Mid-Ebb
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-016	HK1845571-017	HK1845571-018	HK1845571-019	HK1845571-020	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	11.9	11.0	11.5	7.0	6.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	4	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	68.2	59.5	76.3	51.5	78.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	79.7	84.1	92.6	76.6	89.4	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/S/Triplicate Mid-Ebb	CS3/M/ Mid-Ebb	CS3/M/Duplicate Mid-Ebb	CS3/M/Triplicate Mid-Ebb	CS3/B/ Mid-Ebb
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-021	HK1845571-022	HK1845571-023	HK1845571-024	HK1845571-025	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.3	7.7	7.6	7.4	7.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	1	5	1	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	85.6	51.8	77.8	70.4	53.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	96.2	94.8	91.6	88.0	98.0	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Duplicate Mid-Ebb	CS3/B/Triplicate Mid-Ebb	IS1/S/ Mid-Ebb	IS1/S/Duplicate Mid-Ebb	IS1/S/Triplicate Mid-Ebb
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-026	HK1845571-027	HK1845571-028	HK1845571-029	HK1845571-030	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.4	7.7	5.2	6.0	6.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	2	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	61.3	98.0	55.5	52.2	52.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	94.1	95.8	91.8	92.3	87.8	



Sub-Matrix: MARINE WATER				Client sample ID				
				IS1/M/ Mid-Ebb	IS1/M/Duplicate Mid-Ebb	IS1/M/Triplicate Mid-Ebb	IS1/B/ Mid-Ebb	IS1/B/Duplicate Mid-Ebb
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018
Compound	CAS Number	LOR	Unit	HK1845571-031	HK1845571-032	HK1845571-033	HK1845571-034	HK1845571-035
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.3	5.5	5.9	5.7	5.8
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	2	<1	<1	3	<1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	58.0	80.3	53.6	64.8	52.1
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	87.9	99.4	84.1	99.4	94.7



Sub-Matrix: MARINE WATER				Client sample ID	IS1/B/Triplicate Mid-Ebb	IS2/S/ Mid-Ebb	IS2/S/Duplicate Mid-Ebb	IS2/S/Triplicate Mid-Ebb	IS2/M/ Mid-Ebb
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-036	HK1845571-037	HK1845571-038	HK1845571-039	HK1845571-040	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	2.7	2.4	2.7	5.7	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	2	5	3	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	69.9	91.3	62.0	79.4	55.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	91.8	97.0	95.9	101	100	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Duplicate Mid-Ebb	IS2/M/Triplicate Mid-Ebb	IS2/B/ Mid-Ebb	IS2/B/Duplicate Mid-Ebb	IS2/B/Triplicate Mid-Ebb
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-041	HK1845571-042	HK1845571-043	HK1845571-044	HK1845571-045	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	5.5	11.1	10.4	10.9	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	1	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	69.0	71.8	69.8	53.0	65.9	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	82.3	90.4	92.0	83.6	101	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/ Mid-Ebb	IS3/S/Duplicate Mid-Ebb	IS3/S/Triplicate Mid-Ebb	IS3/M/ Mid-Ebb	IS3/M/Duplicate Mid-Ebb
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-046	HK1845571-047	HK1845571-048	HK1845571-049	HK1845571-050	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.6	5.2	5.6	5.5	6.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	2	2	3	3	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.8	52.1	63.4	53.1	63.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	92.9	107	116	86.6	104	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/M/Triplicate Mid-Ebb	IS3/B/ Mid-Ebb	IS3/B/Duplicate Mid-Ebb	IS3/B/Triplicate Mid-Ebb	CS1/S/ Mid-Flood
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-051	HK1845571-052	HK1845571-053	HK1845571-054	HK1845571-055	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.6	6.6	6.7	6.3	4.9	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	3	3	3	3	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	71.9	52.8	55.2	52.9	57.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	107	75.4	104	96.3	102	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/S/Duplicate Mid-Flood	CS1/S/Triplicate Mid-Flood	CS1/M/ Mid-Flood	CS1/M/Duplicate Mid-Flood	CS1/M/Triplicate Mid-Flood
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-056	HK1845571-057	HK1845571-058	HK1845571-059	HK1845571-060	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.8	4.2	4.8	4.3	5.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	2	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.2	58.9	62.9	89.3	52.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	72.7	108	113	98.0	114	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/B/ Mid-Flood	CS1/B/Duplicate Mid-Flood	CS1/B/Triplicate Mid-Flood	CS2/S/ Mid-Flood	CS2/S/Duplicate Mid-Flood
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-061	HK1845571-062	HK1845571-063	HK1845571-064	HK1845571-065	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.1	5.3	5.7	3.0	3.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	2	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.9	70.8	56.1	61.9	73.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	103	108	104	114	105	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Triplicate Mid-Flood	CS2/M/ Mid-Flood	CS2/M/Duplicate Mid-Flood	CS2/M/Triplicate Mid-Flood	CS2/B/ Mid-Flood
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-066	HK1845571-067	HK1845571-068	HK1845571-069	HK1845571-070	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	2.8	5.0	5.5	4.8	5.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	2	1	1	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.8	70.8	92.8	63.7	76.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	100	97.6	106	91.5	125	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/Duplicate Mid-Flood	CS2/B/Triplicate Mid-Flood	CS3/S/ Mid-Flood	CS3/S/Duplicate Mid-Flood	CS3/S/Triplicate Mid-Flood
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-071	HK1845571-072	HK1845571-073	HK1845571-074	HK1845571-075	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.7	5.5	2.9	2.6	2.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	1	1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	74.6	51.5	54.1	57.1	83.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	99.3	88.7	112	98.3	110	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/M/ Mid-Flood	CS3/M/Duplicate Mid-Flood	CS3/M/Triplicate Mid-Flood	CS3/B/ Mid-Flood	CS3/B/Duplicate Mid-Flood
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-076	HK1845571-077	HK1845571-078	HK1845571-079	HK1845571-080	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.5	3.0	3.0	3.4	4.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.9	58.5	53.4	88.2	69.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	94.4	113	90.8	98.1	93.9	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Triplicate Mid-Flood	IS1/S/ Mid-Flood	IS1/S/Duplicate Mid-Flood	IS1/S/Triplicate Mid-Flood	IS1/M/ Mid-Flood
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-081	HK1845571-082	HK1845571-083	HK1845571-084	HK1845571-085	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	3.0	3.3	3.2	3.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	2	2	2	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.7	69.5	67.5	80.2	65.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	82.7	90.7	105	78.3	63.5	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/Duplicate Mid-Flood	IS1/M/Triplicate Mid-Flood	IS1/B/ Mid-Flood	IS1/B/Duplicate Mid-Flood	IS1/B/Triplicate Mid-Flood
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-086	HK1845571-087	HK1845571-088	HK1845571-089	HK1845571-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.2	3.6	3.9	4.3	4.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	2	2	2	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	80.5	52.9	53.8	53.0	74.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	95.4	88.3	89.7	61.3	89.2	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/S/ Mid-Flood	IS2/S/Duplicate Mid-Flood	IS2/S/Triplicate Mid-Flood	IS2/M/ Mid-Flood	IS2/M/Duplicate Mid-Flood
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-091	HK1845571-092	HK1845571-093	HK1845571-094	HK1845571-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.3	4.7	4.5	4.8	5.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	76.9	93.3	69.0	51.6	75.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	92.9	94.8	96.8	124	92.7	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Triplicate Mid-Flood	IS2/B/ Mid-Flood	IS2/B/Duplicate Mid-Flood	IS2/B/Triplicate Mid-Flood	IS3/S/ Mid-Flood
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-096	HK1845571-097	HK1845571-098	HK1845571-099	HK1845571-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.2	5.4	5.5	4.8	3.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	2	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	58.5	77.3	92.6	58.4	71.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	98.4	94.9	83.1	86.3	79.0	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/Duplicate Mid-Flood	IS3/S/Triplicate Mid-Flood	IS3/M/ Mid-Flood	IS3/M/Duplicate Mid-Flood	IS3/M/Triplicate Mid-Flood
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	28-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845571-101	HK1845571-102	HK1845571-103	HK1845571-104	HK1845571-105	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.8	4.2	3.9	3.8	4.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	2	2	2	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	83.9	84.6	86.1	69.0	96.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	92.9	101	97.0	91.7	97.7	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/B/ Mid-Flood	IS3/B/Duplicate Mid-Flood	IS3/B/Triplicate Mid-Flood	---	---
Client sampling date / time				28-Aug-2018	28-Aug-2018	28-Aug-2018	----	----	
Compound	CAS Number	LOR	Unit	HK1845571-106	HK1845571-107	HK1845571-108	-----	-----	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.9	4.5	4.7	---	---	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	2	1	---	---	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	---	---	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	82.5	113	103	---	---	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	96.2	93.5	99.4	---	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1902585)								
HK1845571-001	CS1/S/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	6.6	7.06
HK1845571-011	CS2/S/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.2	6.1	17.3
EA/ED: Physical and Aggregate Properties (QC Lot: 1902586)								
HK1845571-021	CS3/S/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.3	7.0	9.77
HK1845571-031	IS1/M/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.3	5.5	3.23
EA/ED: Physical and Aggregate Properties (QC Lot: 1902587)								
HK1845571-041	IS2/M/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	5.5	10.7
HK1845571-051	IS3/M/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.6	5.8	3.51
EA/ED: Physical and Aggregate Properties (QC Lot: 1902588)								
HK1845571-061	CS1/B/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.1	4.6	9.72
HK1845571-071	CS2/B/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.7	5.6	1.76
EA/ED: Physical and Aggregate Properties (QC Lot: 1902589)								
HK1845571-081	CS3/B/Triplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	4.6	9.04
HK1845571-091	IS2/S/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.3	5.0	14.6
EA/ED: Physical and Aggregate Properties (QC Lot: 1902590)								
HK1845571-101	IS3/S/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.8	4.1	9.52
EG: Metals and Major Cations - Filtered (QC Lot: 1903492)								
HK1845571-002	CS1/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	3	3	0.00
HK1845571-011	CS2/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1903493)								
HK1845571-022	CS3/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
HK1845571-031	IS1/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	2	2	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1903494)								
HK1845571-042	IS2/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
HK1845571-051	IS3/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	3	2	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1903495)								
HK1845571-062	CS1/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
HK1845571-071	CS2/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	2	1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1903496)								
HK1845571-082	IS1/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	2	2	0.00



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 1903496) - Continued								
HK1845571-091	IS2/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1903497)								
HK1845571-102	IS3/S/Triplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	2	2	0.00

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)		
						LCS	DCS	Low	High	Value	Control Limit	
EA/ED: Physical and Aggregate Properties (QC Lot: 1902585)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1902586)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1902587)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.0	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1902588)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1902589)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	103	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1902590)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.5	----	85	115	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1903492)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	98.9	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1903493)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	99.3	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1903494)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	101	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1903495)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	99.5	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1903496)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	107	----	85	117	----	----	



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1903496) - Continued											
EG: Metals and Major Cations - Filtered (QC Lot: 1903497)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	103	---	85	117	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1901182)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	52.8	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	65.6	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	65.1	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	71.7	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	75.6	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	75.9	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	95.3	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	90.7	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	87.2	---	67	110	---	---
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	96.4	---	64	110	---	---
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	83.0	---	73	113	---	---
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	95.5	---	65	111	---	---
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	75.4	---	62	109	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	97.2	---	56	112	---	---
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	102	---	53	110	---	---
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	101	---	40	123	---	---
Total PAH	---	1.6	µg/L	<1.6	8 µg/L	83.2	---	50	130	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1903523)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	55.8	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	69.6	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	65.9	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	66.1	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	75.3	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	71.4	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	92.7	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	88.2	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	95.9	---	67	110	---	---



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1903523) - Continued											
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	104	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	97.2	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	108	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	85.7	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	92.7	----	56	112	----	----
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	100	----	53	110	----	----
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	99.7	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	85.5	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1903524)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	53.4	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	79.3	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	62.3	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	71.5	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	75.9	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	74.7	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	93.0	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	89.1	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	95.6	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	102	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	95.7	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	99.6	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	79.4	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	96.0	----	56	112	----	----
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	104	----	53	110	----	----
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	110	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	86.4	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1903527)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	55.9	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	69.9	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	62.6	----	44	67	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1903527) - Continued											
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	73.0	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	74.2	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	76.5	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	98.2	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	93.8	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	90.4	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	101	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	87.8	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	102	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	77.9	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	90.9	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	105	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	110	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	85.6	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1903528)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	54.3	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	68.4	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	65.5	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	72.2	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	76.5	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	77.2	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	100	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	96.4	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	94.0	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	103	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	101	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	102	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	84.5	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	86.7	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	105	----	53	110	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1903528) - Continued											
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	107	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	87.2	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1903534)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	61.5	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	66.3	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	65.4	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	72.8	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	71.3	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	75.2	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	89.0	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	87.6	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	92.5	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	101	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	84.9	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	103	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	82.4	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	83.0	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	90.0	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	106	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	83.2	----	50	130	----	----



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER

					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1903492)										
HK1845571-001	CS1/S/ Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	103	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1903493)										
HK1845571-021	CS3/S/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	95.6	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1903494)										
HK1845571-041	IS2/M/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	97.4	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1903495)										
HK1845571-061	CS1/B/ Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	110	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1903496)										
HK1845571-081	CS3/B/Triplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	105	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1903497)										
HK1845571-101	IS3/S/Duplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	104	----	80	120	----	----

Surrogate Control Limits

Sub-Matrix: MARINE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130



CERTIFICATE OF ANALYSIS

Client	: AECOM ASIA COMPANY LIMITED	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 32
Contact	: MR YIU WAH FUNG	Contact	: Richard Fung	Work Order	: HK1845578
Address	: 1501-10, 15/F, TOWER 1, GRAND CENTRAL PLAZA, 138 SHATIN RURAL COMMITTEE ROAD, SHATIN, NEW TERRITORIES, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: yw.fung@aecom.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 3105 8544	Telephone	: +852 2610 1044		
Facsimile	: +852 2891 0305	Facsimile	: +852 2610 2021		
Project	: EM&A FOR CENTRAL KOWLOON ROUTE - KAI TAK WEST			Date Samples Received	: 30-Aug-2018
Order number	: 60569734	Quote number	: HKE/1260b/2017	Issue Date	: 10-Sep-2018
C-O-C number	: ---			No. of samples received	: 108
Site	:			No. of samples analysed	: 108

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This document has been signed by those names that appear on this report and are the authorised signatories.

<u>Signatories</u>	<u>Position</u>	<u>Authorised results for</u>
Chan Ka Yu, Karen	Manager - Organics	Organics
Fung Lim Chee, Richard	General Manager	Inorganics
Fung Lim Chee, Richard	General Manager	Metals



General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 30-Aug-2018 to 10-Sep-2018.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK1845578

Sample(s) were picked up from client by ALS Technichem (HK) staff in chilled condition.

Water sample(s) analysed and reported on as received basis.

Water sample(s) were filtered prior to dissolved metal analysis.



Analytical Results

Sub-Matrix: MARINE WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	CS1/S/ Mid-Ebb	CS1/S/Duplicate Mid-Ebb	CS1/S/Triplicate Mid-Ebb	CS1/M/ Mid-Ebb	CS1/M/Duplicate Mid-Ebb
				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018
				HK1845578-001	HK1845578-002	HK1845578-003	HK1845578-004	HK1845578-005
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.8	10.0	10.3	11.4	10.6
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	2	1	1	2	1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	95.8	110	100.0	68.7	54.0
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	116	104	107	96.8	89.1



Sub-Matrix: MARINE WATER				Client sample ID	CS1/M/Triplicate Mid-Ebb	CS1/B/ Mid-Ebb	CS1/B/Duplicate Mid-Ebb	CS1/B/Triplicate Mid-Ebb	CS2/S/ Mid-Ebb
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-006	HK1845578-007	HK1845578-008	HK1845578-009	HK1845578-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	11.0	13.4	12.8	12.7	9.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	2	1	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	81.4	51.5	82.7	60.5	53.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	88.9	92.3	97.0	90.1	97.0	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Duplicate Mid-Ebb	CS2/S/Triplicate Mid-Ebb	CS2/M/ Mid-Ebb	CS2/M/Duplicate Mid-Ebb	CS2/M/Triplicate Mid-Ebb
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-011	HK1845578-012	HK1845578-013	HK1845578-014	HK1845578-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.2	9.0	10.9	10.7	11.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	1	1	2	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	72.4	64.4	70.8	65.5	73.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	93.3	93.1	83.4	85.2	88.4	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/ Mid-Ebb	CS2/B/Duplicate Mid-Ebb	CS2/B/Triplicate Mid-Ebb	CS3/S/ Mid-Ebb	CS3/S/Duplicate Mid-Ebb
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-016	HK1845578-017	HK1845578-018	HK1845578-019	HK1845578-020	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	11.1	11.9	11.5	9.4	9.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	13	1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	59.6	56.2	62.7	75.0	65.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	82.7	93.6	86.2	79.1	85.5	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/S/Triplicate Mid-Ebb	CS3/M/ Mid-Ebb	CS3/M/Duplicate Mid-Ebb	CS3/M/Triplicate Mid-Ebb	CS3/B/ Mid-Ebb
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-021	HK1845578-022	HK1845578-023	HK1845578-024	HK1845578-025	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.9	11.4	11.8	11.6	13.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	1	3	1	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	74.6	86.6	51.9	52.3	53.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	100	102	112	114	93.4	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Duplicate Mid-Ebb	CS3/B/Triplicate Mid-Ebb	IS1/S/ Mid-Ebb	IS1/S/Duplicate Mid-Ebb	IS1/S/Triplicate Mid-Ebb
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-026	HK1845578-027	HK1845578-028	HK1845578-029	HK1845578-030	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	13.5	12.6	11.7	11.5	11.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	1	1	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	86.6	64.6	52.0	69.1	98.7	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	105	87.9	88.1	107	108	



Sub-Matrix: MARINE WATER				Client sample ID				
				IS1/M/ Mid-Ebb	IS1/M/Duplicate Mid-Ebb	IS1/M/Triplicate Mid-Ebb	IS1/B/ Mid-Ebb	IS1/B/Duplicate Mid-Ebb
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018
Compound	CAS Number	LOR	Unit	HK1845578-031	HK1845578-032	HK1845578-033	HK1845578-034	HK1845578-035
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	11.8	11.3	11.3	12.5	12.1
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	2	1	1	1	2
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	99.8	74.6	55.0	87.5	78.6
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	104	102	86.4	105	112



Sub-Matrix: MARINE WATER				Client sample ID	IS1/B/Triplicate Mid-Ebb	IS2/S/ Mid-Ebb	IS2/S/Duplicate Mid-Ebb	IS2/S/Triplicate Mid-Ebb	IS2/M/ Mid-Ebb
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-036	HK1845578-037	HK1845578-038	HK1845578-039	HK1845578-040	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	12.9	9.9	10.2	10.4	11.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	3	12	1	3	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.8	58.6	60.3	82.3	89.9	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	91.3	100	95.7	87.5	112	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Duplicate Mid-Ebb	IS2/M/Triplicate Mid-Ebb	IS2/B/ Mid-Ebb	IS2/B/Duplicate Mid-Ebb	IS2/B/Triplicate Mid-Ebb
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-041	HK1845578-042	HK1845578-043	HK1845578-044	HK1845578-045	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	11.8	11.0	18.9	18.8	19.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	3	1	2	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.1	91.7	53.6	82.6	52.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	80.3	87.3	76.5	81.0	75.4	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/ Mid-Ebb	IS3/S/Duplicate Mid-Ebb	IS3/S/Triplicate Mid-Ebb	IS3/M/ Mid-Ebb	IS3/M/Duplicate Mid-Ebb
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-046	HK1845578-047	HK1845578-048	HK1845578-049	HK1845578-050	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.9	8.7	8.5	8.6	8.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	55.4	83.1	91.6	55.9	65.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	82.6	121	87.7	78.3	113	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/M/Triplicate Mid-Ebb	IS3/B/ Mid-Ebb	IS3/B/Duplicate Mid-Ebb	IS3/B/Triplicate Mid-Ebb	CS1/S/ Mid-Flood
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-051	HK1845578-052	HK1845578-053	HK1845578-054	HK1845578-055	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.3	9.8	9.7	9.4	9.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	3	1	2	1	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.3	73.2	83.7	60.0	110	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	78.3	80.7	82.9	74.2	86.4	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/S/Duplicate Mid-Flood	CS1/S/Triplicate Mid-Flood	CS1/M/ Mid-Flood	CS1/M/Duplicate Mid-Flood	CS1/M/Triplicate Mid-Flood
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-056	HK1845578-057	HK1845578-058	HK1845578-059	HK1845578-060	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.4	9.8	9.9	9.6	10.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	70.7	79.1	72.7	56.5	51.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	81.8	85.2	81.9	83.3	83.9	



Sub-Matrix: MARINE WATER				Client sample ID				
				CS1/B/ Mid-Flood	CS1/B/Duplicate Mid-Flood	CS1/B/Triplicate Mid-Flood	CS2/S/ Mid-Flood	CS2/S/Duplicate Mid-Flood
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018
Compound	CAS Number	LOR	Unit	HK1845578-061	HK1845578-062	HK1845578-063	HK1845578-064	HK1845578-065
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	11.0	11.4	11.0	12.9	13.1
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	1	<1	1	2	2
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.4	52.9	55.3	72.7	94.0
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	84.8	79.0	80.4	50.3	69.5



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Triplicate Mid-Flood	CS2/M/ Mid-Flood	CS2/M/Duplicate Mid-Flood	CS2/M/Triplicate Mid-Flood	CS2/B/ Mid-Flood
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-066	HK1845578-067	HK1845578-068	HK1845578-069	HK1845578-070	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	12.6	13.3	13.0	12.2	15.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	2	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	84.7	69.6	60.1	73.0	106	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	83.4	72.0	74.8	51.2	122	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/Duplicate Mid-Flood	CS2/B/Triplicate Mid-Flood	CS3/S/ Mid-Flood	CS3/S/Duplicate Mid-Flood	CS3/S/Triplicate Mid-Flood
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-071	HK1845578-072	HK1845578-073	HK1845578-074	HK1845578-075	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	14.9	15.5	8.6	8.1	8.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	2	2	1	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	60.9	90.0	85.3	80.8	96.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	92.4	69.4	83.2	87.7	88.8	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/M/ Mid-Flood	CS3/M/Duplicate Mid-Flood	CS3/M/Triplicate Mid-Flood	CS3/B/ Mid-Flood	CS3/B/Duplicate Mid-Flood
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-076	HK1845578-077	HK1845578-078	HK1845578-079	HK1845578-080	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	10.8	10.9	10.3	12.9	13.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	2	2	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	98.8	97.2	66.8	95.5	91.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	90.9	91.0	84.2	90.0	86.8	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Triplicate Mid-Flood	IS1/S/ Mid-Flood	IS1/S/Duplicate Mid-Flood	IS1/S/Triplicate Mid-Flood	IS1/M/ Mid-Flood
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-081	HK1845578-082	HK1845578-083	HK1845578-084	HK1845578-085	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	13.1	11.6	11.0	11.8	13.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	2	1	2	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	92.1	61.3	67.1	51.1	84.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	112	96.4	106	104	101	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/Duplicate Mid-Flood	IS1/M/Triplicate Mid-Flood	IS1/B/ Mid-Flood	IS1/B/Duplicate Mid-Flood	IS1/B/Triplicate Mid-Flood
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-086	HK1845578-087	HK1845578-088	HK1845578-089	HK1845578-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	13.5	13.6	15.3	14.7	14.9	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	2	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	67.4	95.2	94.5	78.5	96.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	91.2	102	102	103	100	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/S/ Mid-Flood	IS2/S/Duplicate Mid-Flood	IS2/S/Triplicate Mid-Flood	IS2/M/ Mid-Flood	IS2/M/Duplicate Mid-Flood
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-091	HK1845578-092	HK1845578-093	HK1845578-094	HK1845578-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.8	9.1	9.4	11.2	11.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	<1	2	<1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	95.6	76.5	90.3	83.1	74.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	107	99.1	102	96.2	102	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Triplicate Mid-Flood	IS2/B/ Mid-Flood	IS2/B/Duplicate Mid-Flood	IS2/B/Triplicate Mid-Flood	IS3/S/ Mid-Flood
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-096	HK1845578-097	HK1845578-098	HK1845578-099	HK1845578-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	10.9	12.2	12.4	12.0	10.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	2	<1	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.7	71.0	71.5	80.2	73.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	104	96.9	98.3	90.4	94.8	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/Duplicate Mid-Flood	IS3/S/Triplicate Mid-Flood	IS3/M/ Mid-Flood	IS3/M/Duplicate Mid-Flood	IS3/M/Triplicate Mid-Flood
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	30-Aug-2018	
Compound	CAS Number	LOR	Unit	HK1845578-101	HK1845578-102	HK1845578-103	HK1845578-104	HK1845578-105	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	10.7	10.4	11.2	11.0	11.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	2	1	<1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	78.4	85.2	61.8	62.4	62.7	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	96.2	105	88.5	83.6	74.5	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/B/ Mid-Flood	IS3/B/Duplicate Mid-Flood	IS3/B/Triplicate Mid-Flood	---	---
Client sampling date / time				30-Aug-2018	30-Aug-2018	30-Aug-2018	----	----	
Compound	CAS Number	LOR	Unit	HK1845578-106	HK1845578-107	HK1845578-108	-----	-----	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	14.6	14.9	15.3	---	---	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	<1	---	---	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	---	---	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.1	50.9	84.8	---	---	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	91.0	87.2	82.7	---	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1909359)								
HK1845578-001	CS1/S/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.8	9.3	4.72
HK1845578-011	CS2/S/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.2	9.0	2.48
EA/ED: Physical and Aggregate Properties (QC Lot: 1909360)								
HK1845578-021	CS3/S/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.9	9.0	10.0
HK1845578-031	IS1/M/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	11.8	11.7	1.06
EA/ED: Physical and Aggregate Properties (QC Lot: 1909361)								
HK1845578-041	IS2/M/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	11.8	11.5	2.36
HK1845578-051	IS3/M/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.3	8.5	2.67
EA/ED: Physical and Aggregate Properties (QC Lot: 1909362)								
HK1845578-061	CS1/B/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	11.0	10.6	4.40
HK1845578-071	CS2/B/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	14.9	15.1	1.34
EA/ED: Physical and Aggregate Properties (QC Lot: 1909363)								
HK1845578-081	CS3/B/Triplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	13.1	12.6	3.30
HK1845578-091	IS2/S/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.8	9.6	8.44
EA/ED: Physical and Aggregate Properties (QC Lot: 1909364)								
HK1845578-101	IS3/S/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	10.7	10.4	2.84
EG: Metals and Major Cations - Filtered (QC Lot: 1910716)								
HK1845578-002	CS1/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
HK1845578-011	CS2/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	2	2	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1910717)								
HK1845578-022	CS3/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
HK1845578-031	IS1/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	2	1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1910718)								
HK1845578-042	IS2/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	3	3	0.00
HK1845578-051	IS3/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	3	3	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1910719)								
HK1845578-062	CS1/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1845578-071	CS2/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	2	1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1910720)								
HK1845578-082	IS1/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	2	<1	0.00



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 1910720) - Continued								
HK1845578-091	IS2/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	2	1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1910721)								
HK1845578-102	IS3/S/Triplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	2	2	0.00

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)		
						LCS	DCS	Low	High	Value	Control Limit	
EA/ED: Physical and Aggregate Properties (QC Lot: 1909359)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1909360)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	104	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1909361)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1909362)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	100	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1909363)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.0	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1909364)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	103	----	85	115	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1910716)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	95.1	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1910717)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	93.7	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1910718)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	92.6	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1910719)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	113	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1910720)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	107	----	85	117	----	----	



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1910720) - Continued											
EG: Metals and Major Cations - Filtered (QC Lot: 1910721)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	110	---	85	117	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1903534)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	61.5	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	66.3	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	65.4	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	72.8	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	71.3	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	75.2	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	89.0	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	87.6	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	92.5	---	67	110	---	---
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	101	---	64	110	---	---
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	84.9	---	73	113	---	---
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	103	---	65	111	---	---
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	82.4	---	62	109	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	83.0	---	56	112	---	---
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	90.0	---	53	110	---	---
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	106	---	40	123	---	---
Total PAH	---	1.6	µg/L	<1.6	8 µg/L	83.2	---	50	130	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1909509)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	55.1	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	74.9	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	64.5	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	68.8	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	74.2	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	72.3	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	95.6	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	91.2	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	96.2	---	67	110	---	---



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report								
		Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
								LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1909509) - Continued													
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	98.9	----	64	110	----	----		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	87.4	----	73	113	----	----		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	95.4	----	65	111	----	----		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	77.0	----	62	109	----	----		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	84.0	----	56	112	----	----		
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	98.9	----	53	110	----	----		
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	94.0	----	40	123	----	----		
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	83.0	----	50	130	----	----		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1909510)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	64.6	----	44	69	----	----		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	79.6	----	37	81	----	----		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	61.5	----	44	67	----	----		
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	66.0	----	39	73	----	----		
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	60.3	----	41	77	----	----		
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	59.7	----	38	79	----	----		
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	70.1	----	51	112	----	----		
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	73.0	----	51	113	----	----		
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	81.2	----	67	110	----	----		
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	93.6	----	64	110	----	----		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	81.0	----	73	113	----	----		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	98.4	----	65	111	----	----		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	85.1	----	62	109	----	----		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	74.6	----	56	112	----	----		
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	98.0	----	53	110	----	----		
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	98.2	----	40	123	----	----		
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	77.8	----	50	130	----	----		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1909511)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	57.6	----	44	69	----	----		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	69.2	----	37	81	----	----		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	57.9	----	44	67	----	----		



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1909511) - Continued											
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	61.7	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	64.4	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	63.4	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	83.0	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	80.2	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	99.0	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	95.7	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	99.0	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	94.0	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	91.7	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	77.1	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	88.0	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	96.0	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	79.9	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1909512)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	55.4	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	69.1	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	58.8	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	62.8	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	68.6	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	68.8	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	83.5	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	81.4	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	93.4	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	100	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	99.7	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	99.7	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	91.2	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	78.8	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	96.9	----	53	110	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1909512) - Continued											
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	94.5	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	81.4	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1909516)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	58.8	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	63.9	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	62.3	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	64.4	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	61.1	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	66.6	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	80.7	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	78.0	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	84.5	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	99.6	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	91.6	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	101	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	91.3	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	77.5	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	107	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	94.2	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	80.1	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1909517)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	54.6	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	71.8	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	62.2	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	67.1	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	62.5	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	59.2	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	82.6	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	79.3	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	83.4	----	67	110	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1909517) - Continued											
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	98.9	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	91.3	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	100	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	89.7	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	73.6	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	98.5	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	97.1	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	79.5	----	50	130	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1910716)										
HK1845578-001	CS1/S/ Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	94.2	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1910717)										
HK1845578-021	CS3/S/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	92.9	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1910718)										
HK1845578-041	IS2/M/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	97.3	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1910719)										
HK1845578-061	CS1/B/ Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	118	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1910720)										
HK1845578-081	CS3/B/Triplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	106	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1910721)										
HK1845578-101	IS3/S/Duplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	104	----	80	120	----	----

Surrogate Control Limits

Sub-Matrix: MARINE WATER

Recovery Limits (%)



Sub-Matrix: MARINE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130



CERTIFICATE OF ANALYSIS

Client	: AECOM ASIA COMPANY LIMITED	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 31
Contact	: MR YIU WAH FUNG	Contact	: Richard Fung	Work Order	: HK1845583
Address	: 1501-10, 15/F, TOWER 1, GRAND CENTRAL PLAZA, 138 SHATIN RURAL COMMITTEE ROAD, SHATIN, NEW TERRITORIES, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: yw.fung@aecom.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 3105 8544	Telephone	: +852 2610 1044		
Facsimile	: +852 2891 0305	Facsimile	: +852 2610 2021		
Project	: EM&A FOR CENTRAL KOWLOON ROUTE - KAI TAK WEST			Date Samples Received	: 01-Sep-2018
Order number	: 60569734	Quote number	: HKE/1260b/2017	Issue Date	: 11-Sep-2018
C-O-C number	: ---			No. of samples received	: 108
Site	:			No. of samples analysed	: 108

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This document has been signed by those names that appear on this report and are the authorised signatories.

<u>Signatories</u>	<u>Position</u>	<u>Authorised results for</u>
Chan Ka Yu, Karen	Manager - Organics	Organics
Fung Lim Chee, Richard	General Manager	Inorganics
Fung Lim Chee, Richard	General Manager	Metals



General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 01-Sep-2018 to 11-Sep-2018.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK1845583

Sample(s) were picked up from client by ALS Technichem (HK) staff in chilled condition.

Water sample(s) analysed and reported on as received basis.

Water sample(s) were filtered prior to dissolved metal analysis.



Analytical Results

Sub-Matrix: MARINE WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	CS1/S/ Mid-Ebb	CS1/S/Duplicate Mid-Ebb	CS1/S/Triplicate Mid-Ebb	CS1/M/ Mid-Ebb	CS1/M/Duplicate Mid-Ebb
				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018
				HK1845583-001	HK1845583-002	HK1845583-003	HK1845583-004	HK1845583-005
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.7	3.8	4.1	4.6	4.7
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	1	2	3	1	1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	56.0	95.7	54.3	73.7	69.8
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	113	98.5	93.8	90.4	83.7



Sub-Matrix: MARINE WATER				Client sample ID	CS1/M/Triplicate Mid-Ebb	CS1/B/ Mid-Ebb	CS1/B/Duplicate Mid-Ebb	CS1/B/Triplicate Mid-Ebb	CS2/S/ Mid-Ebb
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-006	HK1845583-007	HK1845583-008	HK1845583-009	HK1845583-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.2	4.9	5.3	5.6	2.7	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	2	2	2	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	76.1	96.3	85.8	101	53.9	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	75.1	113	87.8	87.4	98.5	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Duplicate Mid-Ebb	CS2/S/Triplicate Mid-Ebb	CS2/M/ Mid-Ebb	CS2/M/Duplicate Mid-Ebb	CS2/M/Triplicate Mid-Ebb
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-011	HK1845583-012	HK1845583-013	HK1845583-014	HK1845583-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	2.5	3.1	4.9	5.2	5.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	2	2	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	77.9	64.3	74.2	64.2	96.9	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	104	95.5	96.2	108	98.6	



Sub-Matrix: MARINE WATER				Client sample ID				
				CS2/B/ Mid-Ebb	CS2/B/Duplicate Mid-Ebb	CS2/B/Triplicate Mid-Ebb	CS3/S/ Mid-Ebb	CS3/S/Duplicate Mid-Ebb
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018
Compound	CAS Number	LOR	Unit	HK1845583-016	HK1845583-017	HK1845583-018	HK1845583-019	HK1845583-020
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.5	7.3	7.8	5.1	4.5
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	3	2	2	1	1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	84.2	50.8	52.1	53.2	58.9
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	111	106	98.5	103	98.1



Sub-Matrix: MARINE WATER				Client sample ID	CS3/S/Triplicate Mid-Ebb	CS3/M/ Mid-Ebb	CS3/M/Duplicate Mid-Ebb	CS3/M/Triplicate Mid-Ebb	CS3/B/ Mid-Ebb
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-021	HK1845583-022	HK1845583-023	HK1845583-024	HK1845583-025	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.8	5.7	6.0	5.6	8.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	2	2	2	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	55.0	73.6	76.1	98.1	84.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	103	87.2	112	99.2	91.2	



Sub-Matrix: MARINE WATER				Client sample ID				
				CS3/B/Duplicate Mid-Ebb	CS3/B/Triplicate Mid-Ebb	IS1/S/ Mid-Ebb	IS1/S/Duplicate Mid-Ebb	IS1/S/Triplicate Mid-Ebb
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018
Compound	CAS Number	LOR	Unit	HK1845583-026	HK1845583-027	HK1845583-028	HK1845583-029	HK1845583-030
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.9	8.3	5.8	6.4	6.3
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	2	1	1	1	1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	61.8	91.8	86.9	83.3	108
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	83.2	93.5	87.0	94.2	72.9



Sub-Matrix: MARINE WATER				Client sample ID				
				IS1/M/ Mid-Ebb	IS1/M/Duplicate Mid-Ebb	IS1/M/Triplicate Mid-Ebb	IS1/B/ Mid-Ebb	IS1/B/Duplicate Mid-Ebb
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018
Compound	CAS Number	LOR	Unit	HK1845583-031	HK1845583-032	HK1845583-033	HK1845583-034	HK1845583-035
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.5	6.2	6.6	6.4	6.6
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	2	1	3	1	1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.4	64.5	72.7	103	68.5
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	118	75.4	90.3	94.4	120



Sub-Matrix: MARINE WATER				Client sample ID	IS1/B/Triplicate Mid-Ebb	IS2/S/ Mid-Ebb	IS2/S/Duplicate Mid-Ebb	IS2/S/Triplicate Mid-Ebb	IS2/M/ Mid-Ebb
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-036	HK1845583-037	HK1845583-038	HK1845583-039	HK1845583-040	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.1	3.4	3.2	2.7	2.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	3	1	1	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	107	68.2	55.0	93.3	64.9	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	106	87.2	119	83.4	83.4	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Duplicate Mid-Ebb	IS2/M/Triplicate Mid-Ebb	IS2/B/ Mid-Ebb	IS2/B/Duplicate Mid-Ebb	IS2/B/Triplicate Mid-Ebb
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-041	HK1845583-042	HK1845583-043	HK1845583-044	HK1845583-045	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.0	2.9	4.5	4.5	4.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	1	3	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	75.5	51.2	77.2	63.4	113	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	114	91.1	68.6	67.6	82.2	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/ Mid-Ebb	IS3/S/Duplicate Mid-Ebb	IS3/S/Triplicate Mid-Ebb	IS3/M/ Mid-Ebb	IS3/M/Duplicate Mid-Ebb
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-046	HK1845583-047	HK1845583-048	HK1845583-049	HK1845583-050	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	2.6	3.3	3.0	3.9	3.7	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	73.7	78.3	62.4	61.9	70.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	75.5	51.8	52.4	122	97.9	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/M/Triplicate Mid-Ebb	IS3/B/ Mid-Ebb	IS3/B/Duplicate Mid-Ebb	IS3/B/Triplicate Mid-Ebb	CS1/S/ Mid-Flood
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-051	HK1845583-052	HK1845583-053	HK1845583-054	HK1845583-055	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.0	7.2	6.7	6.9	3.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	<1	1	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	69.8	52.9	50.0	51.7	98.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	81.2	75.0	55.7	124	82.8	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/S/Duplicate Mid-Flood	CS1/S/Triplicate Mid-Flood	CS1/M/ Mid-Flood	CS1/M/Duplicate Mid-Flood	CS1/M/Triplicate Mid-Flood
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-056	HK1845583-057	HK1845583-058	HK1845583-059	HK1845583-060	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.4	3.4	3.7	4.3	3.9	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	<1	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.3	52.1	51.1	56.4	62.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	66.8	74.6	78.6	51.2	90.5	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/B/ Mid-Flood	CS1/B/Duplicate Mid-Flood	CS1/B/Triplicate Mid-Flood	CS2/S/ Mid-Flood	CS2/S/Duplicate Mid-Flood
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-061	HK1845583-062	HK1845583-063	HK1845583-064	HK1845583-065	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.5	4.2	4.2	3.3	3.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	2	2	2	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	61.4	60.1	65.6	60.9	52.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	94.8	94.6	66.5	75.7	87.3	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Triplicate Mid-Flood	CS2/M/ Mid-Flood	CS2/M/Duplicate Mid-Flood	CS2/M/Triplicate Mid-Flood	CS2/B/ Mid-Flood
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-066	HK1845583-067	HK1845583-068	HK1845583-069	HK1845583-070	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.4	4.2	4.0	4.3	3.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	3	4	2	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.2	54.0	56.2	89.2	77.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	58.9	82.5	114	85.3	76.9	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/Duplicate Mid-Flood	CS2/B/Triplicate Mid-Flood	CS3/S/ Mid-Flood	CS3/S/Duplicate Mid-Flood	CS3/S/Triplicate Mid-Flood
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-071	HK1845583-072	HK1845583-073	HK1845583-074	HK1845583-075	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	3.9	2.8	3.2	3.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.0	79.1	71.8	94.0	80.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	113	74.9	87.5	93.3	93.7	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/M/ Mid-Flood	CS3/M/Duplicate Mid-Flood	CS3/M/Triplicate Mid-Flood	CS3/B/ Mid-Flood	CS3/B/Duplicate Mid-Flood
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-076	HK1845583-077	HK1845583-078	HK1845583-079	HK1845583-080	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.2	2.7	2.6	3.8	4.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	<1	1	1	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	89.5	84.5	79.9	70.2	69.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	90.4	96.7	104	113	87.4	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Triplicate Mid-Flood	IS1/S/ Mid-Flood	IS1/S/Duplicate Mid-Flood	IS1/S/Triplicate Mid-Flood	IS1/M/ Mid-Flood
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-081	HK1845583-082	HK1845583-083	HK1845583-084	HK1845583-085	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	3.9	3.7	3.8	6.9	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	<1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.7	74.4	110	52.8	105	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	77.8	99.1	112	116	110	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/Duplicate Mid-Flood	IS1/M/Triplicate Mid-Flood	IS1/B/ Mid-Flood	IS1/B/Duplicate Mid-Flood	IS1/B/Triplicate Mid-Flood
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-086	HK1845583-087	HK1845583-088	HK1845583-089	HK1845583-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.3	7.4	12.1	12.5	12.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	2	<1	1	2	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	107	76.4	57.1	55.2	83.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	104	97.3	94.8	98.0	99.7	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/S/ Mid-Flood	IS2/S/Duplicate Mid-Flood	IS2/S/Triplicate Mid-Flood	IS2/M/ Mid-Flood	IS2/M/Duplicate Mid-Flood
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-091	HK1845583-092	HK1845583-093	HK1845583-094	HK1845583-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.6	6.4	6.0	6.6	7.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	2	2	3	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	104	86.7	85.0	70.3	99.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	97.5	102	102	94.1	91.8	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Triplicate Mid-Flood	IS2/B/ Mid-Flood	IS2/B/Duplicate Mid-Flood	IS2/B/Triplicate Mid-Flood	IS3/S/ Mid-Flood
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-096	HK1845583-097	HK1845583-098	HK1845583-099	HK1845583-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.2	9.8	10.2	10.5	4.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	3	1	1	2	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	86.3	91.0	107	107	87.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	94.8	106	95.3	87.8	99.0	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/Duplicate Mid-Flood	IS3/S/Triplicate Mid-Flood	IS3/M/ Mid-Flood	IS3/M/Duplicate Mid-Flood	IS3/M/Triplicate Mid-Flood
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	01-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845583-101	HK1845583-102	HK1845583-103	HK1845583-104	HK1845583-105	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.9	3.9	4.5	3.8	3.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	2	2	1	2	3	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	82.4	74.0	79.3	74.8	72.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	92.2	104	97.9	104	93.0	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/B/ Mid-Flood	IS3/B/Duplicate Mid-Flood	IS3/B/Triplicate Mid-Flood	---	---
Client sampling date / time				01-Sep-2018	01-Sep-2018	01-Sep-2018	----	----	
Compound	CAS Number	LOR	Unit	HK1845583-106	HK1845583-107	HK1845583-108	-----	-----	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.0	5.1	4.7	---	---	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	2	---	---	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	---	---	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	66.3	56.9	86.8	---	---	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	105	82.1	97.2	---	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1912063)								
HK1845583-001	CS1/S/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.7	3.4	8.51
HK1845583-011	CS2/S/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.5	3.0	15.5
EA/ED: Physical and Aggregate Properties (QC Lot: 1912064)								
HK1845583-021	CS3/S/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.8	4.6	4.77
HK1845583-031	IS1/M/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.5	6.4	2.72
EA/ED: Physical and Aggregate Properties (QC Lot: 1912065)								
HK1845583-041	IS2/M/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.0	2.8	9.44
HK1845583-051	IS3/M/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.0	3.8	5.82
EA/ED: Physical and Aggregate Properties (QC Lot: 1912066)								
HK1845583-061	CS1/B/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.5	4.0	13.3
HK1845583-071	CS2/B/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	3.9	9.23
EA/ED: Physical and Aggregate Properties (QC Lot: 1912067)								
HK1845583-081	CS3/B/Triplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	3.7	13.2
HK1845583-091	IS2/S/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.6	6.2	9.28
EA/ED: Physical and Aggregate Properties (QC Lot: 1912068)								
HK1845583-101	IS3/S/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.9	4.1	5.61
EG: Metals and Major Cations - Filtered (QC Lot: 1912946)								
HK1845583-002	CS1/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	2	2	0.00
HK1845583-011	CS2/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	2	2	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1912947)								
HK1845583-022	CS3/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	2	1	0.00
HK1845583-031	IS1/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	2	2	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1912948)								
HK1845583-042	IS2/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
HK1845583-051	IS3/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1912949)								
HK1845583-062	CS1/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	2	2	0.00
HK1845583-071	CS2/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1912950)								
HK1845583-082	IS1/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 1912950) - Continued								
HK1845583-091	IS2/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1912951)								
HK1845583-102	IS3/S/Triplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	2	2	0.00

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 1912063)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1912064)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1912065)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1912066)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1912067)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1912068)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1912946)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	100	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1912947)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	100	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1912948)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	110	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1912949)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	109	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1912950)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	106	----	85	117	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report								
		Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
								LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1912950) - Continued													
EG: Metals and Major Cations - Filtered (QC Lot: 1912951)													
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	102	---	85	117	---	---		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1909517)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	54.6	---	44	69	---	---		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	71.8	---	37	81	---	---		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	62.2	---	44	67	---	---		
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	67.1	---	39	73	---	---		
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	62.5	---	41	77	---	---		
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	59.2	---	38	79	---	---		
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	82.6	---	51	112	---	---		
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	79.3	---	51	113	---	---		
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	83.4	---	67	110	---	---		
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	98.9	---	64	110	---	---		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	91.3	---	73	113	---	---		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	100	---	65	111	---	---		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	89.7	---	62	109	---	---		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	73.6	---	56	112	---	---		
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	98.5	---	53	110	---	---		
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	97.1	---	40	123	---	---		
Total PAH	---	1.6	µg/L	<1.6	8 µg/L	79.5	---	50	130	---	---		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1912077)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	55.2	---	44	69	---	---		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	80.3	---	37	81	---	---		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	60.6	---	44	67	---	---		
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	65.0	---	39	73	---	---		
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	74.0	---	41	77	---	---		
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	75.4	---	38	79	---	---		
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	86.5	---	51	112	---	---		
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	84.1	---	51	113	---	---		
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	93.2	---	67	110	---	---		



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report								
		Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
								LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1912077) - Continued													
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	96.4	----	64	110	----	----		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	92.3	----	73	113	----	----		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	99.9	----	65	111	----	----		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	92.6	----	62	109	----	----		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	94.1	----	56	112	----	----		
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	103	----	53	110	----	----		
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	102	----	40	123	----	----		
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	84.7	----	50	130	----	----		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1912078)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	50.1	----	44	69	----	----		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	63.8	----	37	81	----	----		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	61.0	----	44	67	----	----		
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	65.4	----	39	73	----	----		
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	71.4	----	41	77	----	----		
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	76.4	----	38	79	----	----		
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	77.0	----	51	112	----	----		
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	73.9	----	51	113	----	----		
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	93.7	----	67	110	----	----		
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	99.3	----	64	110	----	----		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	93.7	----	73	113	----	----		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	89.2	----	65	111	----	----		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	92.5	----	62	109	----	----		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	74.2	----	56	112	----	----		
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	92.3	----	53	110	----	----		
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	90.4	----	40	123	----	----		
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	79.0	----	50	130	----	----		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1912079)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	55.1	----	44	69	----	----		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	70.5	----	37	81	----	----		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	58.9	----	44	67	----	----		



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1912079) - Continued											
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	63.3	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	73.5	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	74.7	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	111	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	104	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	89.8	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	97.3	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	93.7	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	95.4	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	90.0	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	77.4	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	87.2	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	86.4	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	83.1	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1912080)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	56.8	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	63.1	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	60.2	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	63.6	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	75.8	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	77.0	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	87.9	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	85.5	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	94.2	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	95.3	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	75.4	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	80.4	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	74.4	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	74.3	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	91.8	----	53	110	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report								
		Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
								LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1912080) - Continued													
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	88.8	----	40	123	----	----		
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	77.8	----	50	130	----	----		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1912081)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	58.8	----	44	69	----	----		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	57.7	----	37	81	----	----		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	60.4	----	44	67	----	----		
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	65.3	----	39	73	----	----		
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	62.9	----	41	77	----	----		
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	72.7	----	38	79	----	----		
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	79.7	----	51	112	----	----		
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	74.5	----	51	113	----	----		
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	71.3	----	67	110	----	----		
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	96.2	----	64	110	----	----		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	86.8	----	73	113	----	----		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	101	----	65	111	----	----		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	93.6	----	62	109	----	----		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	88.3	----	56	112	----	----		
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	102	----	53	110	----	----		
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	103	----	40	123	----	----		
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	79.6	----	50	130	----	----		



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER

					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1912946)										
HK1845583-001	CS1/S/ Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	99.9	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1912947)										
HK1845583-021	CS3/S/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	103	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1912948)										
HK1845583-041	IS2/M/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	105	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1912949)										
HK1845583-061	CS1/B/ Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	111	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1912950)										
HK1845583-081	CS3/B/Triplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	99.4	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1912951)										
HK1845583-101	IS3/S/Duplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	101	----	80	120	----	----

Surrogate Control Limits

Sub-Matrix: MARINE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130



CERTIFICATE OF ANALYSIS

Client	: AECOM ASIA COMPANY LIMITED	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 32
Contact	: MR YIU WAH FUNG	Contact	: Richard Fung	Work Order	: HK1845585
Address	: 1501-10, 15/F, TOWER 1, GRAND CENTRAL PLAZA, 138 SHATIN RURAL COMMITTEE ROAD, SHATIN, NEW TERRITORIES, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: yw.fung@aecom.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 3105 8544	Telephone	: +852 2610 1044		
Facsimile	: +852 2891 0305	Facsimile	: +852 2610 2021		
Project	: EM&A FOR CENTRAL KOWLOON ROUTE - KAI TAK WEST			Date Samples Received	: 04-Sep-2018
Order number	: 60569734	Quote number	: HKE/1260b/2017	Issue Date	: 13-Sep-2018
C-O-C number	: ---			No. of samples received	: 108
Site	:			No. of samples analysed	: 108

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This document has been signed by those names that appear on this report and are the authorised signatories.

<u>Signatories</u>	<u>Position</u>	<u>Authorised results for</u>
Chan Ka Yu, Karen	Manager - Organics	Organics
Fung Lim Chee, Richard	General Manager	Inorganics
Fung Lim Chee, Richard	General Manager	Metals



General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 04-Sep-2018 to 13-Sep-2018.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK1845585

Sample(s) were picked up from client by ALS Technichem (HK) staff in chilled condition.

Water sample(s) analysed and reported on as received basis.

Water sample(s) were filtered prior to dissolved metal analysis.



Analytical Results

Sub-Matrix: MARINE WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	CS1/S/ Mid-Ebb	CS1/S/Duplicate Mid-Ebb	CS1/S/Triplicate Mid-Ebb	CS1/M/ Mid-Ebb	CS1/M/Duplicate Mid-Ebb
				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018
				HK1845585-001	HK1845585-002	HK1845585-003	HK1845585-004	HK1845585-005
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.5	4.1	3.6	4.5	4.3
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	1	2	1	1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	78.3	56.2	50.0	62.6	81.2
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	73.6	86.5	79.5	85.6	87.7



Sub-Matrix: MARINE WATER				Client sample ID	CS1/M/Triplicate Mid-Ebb	CS1/B/ Mid-Ebb	CS1/B/Duplicate Mid-Ebb	CS1/B/Triplicate Mid-Ebb	CS2/S/ Mid-Ebb
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-006	HK1845585-007	HK1845585-008	HK1845585-009	HK1845585-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.7	5.9	6.3	5.8	3.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	54.5	60.5	69.9	67.2	100	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	75.7	52.3	81.5	88.1	110	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Duplicate Mid-Ebb	CS2/S/Triplicate Mid-Ebb	CS2/M/ Mid-Ebb	CS2/M/Duplicate Mid-Ebb	CS2/M/Triplicate Mid-Ebb
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-011	HK1845585-012	HK1845585-013	HK1845585-014	HK1845585-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	2.9	3.2	4.1	4.2	4.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	76.2	51.8	58.8	79.1	53.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	61.1	78.5	96.3	86.2	102	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/ Mid-Ebb	CS2/B/Duplicate Mid-Ebb	CS2/B/Triplicate Mid-Ebb	CS3/S/ Mid-Ebb	CS3/S/Duplicate Mid-Ebb
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-016	HK1845585-017	HK1845585-018	HK1845585-019	HK1845585-020	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.9	4.2	4.3	4.3	4.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	95.3	64.7	62.8	67.6	62.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	99.5	95.3	87.6	94.1	102	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/S/Triplicate Mid-Ebb	CS3/M/ Mid-Ebb	CS3/M/Duplicate Mid-Ebb	CS3/M/Triplicate Mid-Ebb	CS3/B/ Mid-Ebb
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-021	HK1845585-022	HK1845585-023	HK1845585-024	HK1845585-025	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.4	4.9	5.3	4.7	5.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.8	50.0	55.5	85.8	54.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	84.5	55.7	81.0	91.5	113	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Duplicate Mid-Ebb	CS3/B/Triplicate Mid-Ebb	IS1/S/ Mid-Ebb	IS1/S/Duplicate Mid-Ebb	IS1/S/Triplicate Mid-Ebb
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-026	HK1845585-027	HK1845585-028	HK1845585-029	HK1845585-030	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.9	6.1	4.5	4.4	4.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	67.7	108	105	75.3	103	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	88.7	115	77.0	95.0	81.7	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/ Mid-Ebb	IS1/M/Duplicate Mid-Ebb	IS1/M/Triplicate Mid-Ebb	IS1/B/ Mid-Ebb	IS1/B/Duplicate Mid-Ebb
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-031	HK1845585-032	HK1845585-033	HK1845585-034	HK1845585-035	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.7	5.5	5.8	7.3	7.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	<1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	78.5	94.1	54.6	82.3	54.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	113	77.1	83.0	86.8	115	



Sub-Matrix: MARINE WATER				Client sample ID				
				IS1/B/Triplicate Mid-Ebb	IS2/S/ Mid-Ebb	IS2/S/Duplicate Mid-Ebb	IS2/S/Triplicate Mid-Ebb	IS2/M/ Mid-Ebb
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018
Compound	CAS Number	LOR	Unit	HK1845585-036	HK1845585-037	HK1845585-038	HK1845585-039	HK1845585-040
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.4	5.9	6.4	6.1	6.8
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	1	1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	85.0	59.8	87.4	56.7	88.8
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	60.9	51.2	53.9	115	84.4



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Duplicate Mid-Ebb	IS2/M/Triplicate Mid-Ebb	IS2/B/ Mid-Ebb	IS2/B/Duplicate Mid-Ebb	IS2/B/Triplicate Mid-Ebb
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-041	HK1845585-042	HK1845585-043	HK1845585-044	HK1845585-045	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.6	7.2	6.8	7.0	7.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	<1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	67.0	86.2	71.0	81.6	102	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	100	86.3	96.3	91.5	99.2	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/ Mid-Ebb	IS3/S/Duplicate Mid-Ebb	IS3/S/Triplicate Mid-Ebb	IS3/M/ Mid-Ebb	IS3/M/Duplicate Mid-Ebb
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-046	HK1845585-047	HK1845585-048	HK1845585-049	HK1845585-050	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.0	7.1	6.5	8.8	8.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	<1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	98.5	97.6	106	89.3	74.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	100	109	101	93.6	115	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/M/Triplicate Mid-Ebb	IS3/B/ Mid-Ebb	IS3/B/Duplicate Mid-Ebb	IS3/B/Triplicate Mid-Ebb	CS1/S/ Mid-Flood
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-051	HK1845585-052	HK1845585-053	HK1845585-054	HK1845585-055	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.7	9.5	9.2	10.1	6.9	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.4	92.0	57.2	51.1	57.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	98.4	87.0	81.2	80.1	93.5	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/S/Duplicate Mid-Flood	CS1/S/Triplicate Mid-Flood	CS1/M/ Mid-Flood	CS1/M/Duplicate Mid-Flood	CS1/M/Triplicate Mid-Flood
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-056	HK1845585-057	HK1845585-058	HK1845585-059	HK1845585-060	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.3	6.9	7.7	7.3	7.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	90.3	78.2	89.4	51.0	86.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	77.2	75.9	96.1	51.7	92.7	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/B/ Mid-Flood	CS1/B/Duplicate Mid-Flood	CS1/B/Triplicate Mid-Flood	CS2/S/ Mid-Flood	CS2/S/Duplicate Mid-Flood
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-061	HK1845585-062	HK1845585-063	HK1845585-064	HK1845585-065	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.3	7.0	7.5	6.2	6.9	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	98.3	72.7	91.4	101	69.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	97.1	85.5	76.4	83.2	84.4	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Triplicate Mid-Flood	CS2/M/ Mid-Flood	CS2/M/Duplicate Mid-Flood	CS2/M/Triplicate Mid-Flood	CS2/B/ Mid-Flood
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-066	HK1845585-067	HK1845585-068	HK1845585-069	HK1845585-070	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.0	7.1	6.6	6.5	10.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	54.9	84.3	92.6	95.7	92.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	83.5	80.9	82.5	93.4	92.0	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/Duplicate Mid-Flood	CS2/B/Triplicate Mid-Flood	CS3/S/ Mid-Flood	CS3/S/Duplicate Mid-Flood	CS3/S/Triplicate Mid-Flood
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-071	HK1845585-072	HK1845585-073	HK1845585-074	HK1845585-075	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	10.5	11.4	5.6	5.6	5.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	92.5	81.3	72.2	73.6	85.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	75.6	89.1	91.2	91.6	85.0	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/M/ Mid-Flood	CS3/M/Duplicate Mid-Flood	CS3/M/Triplicate Mid-Flood	CS3/B/ Mid-Flood	CS3/B/Duplicate Mid-Flood
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-076	HK1845585-077	HK1845585-078	HK1845585-079	HK1845585-080	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.3	5.7	6.8	7.2	7.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	62.5	78.4	79.8	64.8	100.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	82.6	89.7	90.7	80.6	90.8	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Triplicate Mid-Flood	IS1/S/ Mid-Flood	IS1/S/Duplicate Mid-Flood	IS1/S/Triplicate Mid-Flood	IS1/M/ Mid-Flood
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-081	HK1845585-082	HK1845585-083	HK1845585-084	HK1845585-085	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.3	6.0	6.6	6.9	7.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	61.8	54.6	59.0	83.1	54.7	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	91.8	91.4	85.3	50.1	92.2	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/Duplicate Mid-Flood	IS1/M/Triplicate Mid-Flood	IS1/B/ Mid-Flood	IS1/B/Duplicate Mid-Flood	IS1/B/Triplicate Mid-Flood
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-086	HK1845585-087	HK1845585-088	HK1845585-089	HK1845585-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.1	7.4	7.9	8.4	8.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	62.5	64.4	73.0	55.7	59.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	77.6	119	87.3	120	90.8	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/S/ Mid-Flood	IS2/S/Duplicate Mid-Flood	IS2/S/Triplicate Mid-Flood	IS2/M/ Mid-Flood	IS2/M/Duplicate Mid-Flood
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-091	HK1845585-092	HK1845585-093	HK1845585-094	HK1845585-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.8	8.0	8.2	7.9	8.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	67.3	57.5	60.3	88.3	86.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	83.3	79.9	83.6	55.7	84.6	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Triplicate Mid-Flood	IS2/B/ Mid-Flood	IS2/B/Duplicate Mid-Flood	IS2/B/Triplicate Mid-Flood	IS3/S/ Mid-Flood
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-096	HK1845585-097	HK1845585-098	HK1845585-099	HK1845585-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.4	8.2	8.4	8.5	8.7	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	93.5	51.5	55.4	54.6	86.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	86.1	119	104	67.4	79.6	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/Duplicate Mid-Flood	IS3/S/Triplicate Mid-Flood	IS3/M/ Mid-Flood	IS3/M/Duplicate Mid-Flood	IS3/M/Triplicate Mid-Flood
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	04-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1845585-101	HK1845585-102	HK1845585-103	HK1845585-104	HK1845585-105	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.5	8.7	11.1	10.7	11.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	69.5	52.2	85.2	54.4	67.7	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	89.9	102	98.9	98.5	87.6	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/B/ Mid-Flood	IS3/B/Duplicate Mid-Flood	IS3/B/Triplicate Mid-Flood	---	---
Client sampling date / time				04-Sep-2018	04-Sep-2018	04-Sep-2018	----	----	
Compound	CAS Number	LOR	Unit	HK1845585-106	HK1845585-107	HK1845585-108	-----	-----	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	13.2	13.1	12.8	---	---	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	---	---	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	---	---	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.9	63.6	53.8	---	---	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	83.8	106	111	---	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1916019)								
HK1845585-001	CS1/S/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.5	3.7	4.84
HK1845585-011	CS2/S/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.9	3.0	4.18
EA/ED: Physical and Aggregate Properties (QC Lot: 1916020)								
HK1845585-021	CS3/S/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.4	4.4	0.00
HK1845585-031	IS1/M/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.7	5.8	1.74
EA/ED: Physical and Aggregate Properties (QC Lot: 1916021)								
HK1845585-041	IS2/M/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.6	6.8	4.11
HK1845585-051	IS3/M/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.7	9.1	4.21
EA/ED: Physical and Aggregate Properties (QC Lot: 1916022)								
HK1845585-061	CS1/B/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.3	7.0	5.25
HK1845585-071	CS2/B/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	10.5	10.2	2.42
EA/ED: Physical and Aggregate Properties (QC Lot: 1916023)								
HK1845585-081	CS3/B/Triplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.3	7.5	3.38
HK1845585-091	IS2/S/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.8	8.1	4.11
EA/ED: Physical and Aggregate Properties (QC Lot: 1916024)								
HK1845585-101	IS3/S/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.5	8.6	1.17
EG: Metals and Major Cations - Filtered (QC Lot: 1918042)								
HK1845585-002	CS1/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
HK1845585-011	CS2/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1918043)								
HK1845585-022	CS3/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1845585-031	IS1/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1918044)								
HK1845585-042	IS2/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	<1	0.00
HK1845585-051	IS3/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1918045)								
HK1845585-062	CS1/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
HK1845585-071	CS2/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1918046)								
HK1845585-082	IS1/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 1918046) - Continued								
HK1845585-091	IS2/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1918047)								
HK1845585-102	IS3/S/Triplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 1916019)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1916020)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1916021)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1916022)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1916023)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1916024)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1918042)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	103	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1918043)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	108	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1918044)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	107	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1918045)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	102	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1918046)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	100	----	85	117	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1918046) - Continued											
EG: Metals and Major Cations - Filtered (QC Lot: 1918047)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	107	---	85	117	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1912081)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	58.8	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	57.7	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	60.4	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	65.3	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	62.9	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	72.7	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	79.7	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	74.5	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	71.3	---	67	110	---	---
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	96.2	---	64	110	---	---
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	86.8	---	73	113	---	---
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	101	---	65	111	---	---
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	93.6	---	62	109	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	88.3	---	56	112	---	---
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	102	---	53	110	---	---
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	103	---	40	123	---	---
Total PAH	---	1.6	µg/L	<1.6	8 µg/L	79.6	---	50	130	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1916263)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	57.3	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	60.8	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	63.3	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	70.0	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	72.9	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	78.5	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	91.0	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	88.8	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	92.5	---	67	110	---	---



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report								
		Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
								LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1916263) - Continued													
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	99.4	----	64	110	----	----		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	91.5	----	73	113	----	----		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	94.5	----	65	111	----	----		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	91.6	----	62	109	----	----		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	68.4	----	56	112	----	----		
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	86.3	----	53	110	----	----		
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	78.6	----	40	123	----	----		
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	80.3	----	50	130	----	----		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1916264)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	66.1	----	44	69	----	----		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	75.9	----	37	81	----	----		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	59.5	----	44	67	----	----		
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	62.0	----	39	73	----	----		
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	75.4	----	41	77	----	----		
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	75.7	----	38	79	----	----		
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	88.1	----	51	112	----	----		
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	85.3	----	51	113	----	----		
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	95.3	----	67	110	----	----		
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	102	----	64	110	----	----		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	94.3	----	73	113	----	----		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	104	----	65	111	----	----		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	93.0	----	62	109	----	----		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	106	----	56	112	----	----		
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	84.0	----	53	110	----	----		
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	78.6	----	40	123	----	----		
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	84.0	----	50	130	----	----		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1916266)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	61.6	----	44	69	----	----		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	65.3	----	37	81	----	----		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	61.0	----	44	67	----	----		



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1916266) - Continued											
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	62.0	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	61.6	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	56.2	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	85.0	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	82.1	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	79.1	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	96.5	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	84.5	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	99.1	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	84.7	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	72.4	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	99.1	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	94.9	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	77.8	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1916267)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	60.6	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	58.0	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	60.1	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	61.5	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	67.3	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	73.8	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	74.9	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	77.2	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	70.5	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	91.6	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	74.6	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	99.5	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	81.1	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	78.4	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	100	----	53	110	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1916267) - Continued											
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	94.7	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	76.5	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1916268)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	51.9	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	62.8	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	61.8	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	70.8	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	76.1	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	76.7	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	89.4	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	86.5	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	92.4	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	98.0	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	90.4	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	86.3	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	90.2	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	64.0	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	81.6	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	78.4	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	78.6	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1916269)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	59.4	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	76.6	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	59.4	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	42.2	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	72.2	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	77.4	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	90.9	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	88.0	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	92.6	----	67	110	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1916269) - Continued											
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	97.5	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	91.2	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	98.8	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	88.5	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	73.5	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	81.4	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	74.6	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	79.0	----	50	130	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1918042)										
HK1845585-001	CS1/S/ Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	118	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1918043)										
HK1845585-021	CS3/S/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	107	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1918044)										
HK1845585-041	IS2/M/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	108	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1918045)										
HK1845585-061	CS1/B/ Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	100	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1918046)										
HK1845585-081	CS3/B/Triplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	102	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1918047)										
HK1845585-101	IS3/S/Duplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	96.5	----	80	120	----	----

Surrogate Control Limits

Sub-Matrix: MARINE WATER

Recovery Limits (%)



Sub-Matrix: MARINE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130



CERTIFICATE OF ANALYSIS

Client	: AECOM ASIA COMPANY LIMITED	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 31
Contact	: MR YIU WAH FUNG	Contact	: Richard Fung	Work Order	: HK1847727
Address	: 1501-10, 15/F, TOWER 1, GRAND CENTRAL PLAZA, 138 SHATIN RURAL COMMITTEE ROAD, SHATIN, NEW TERRITORIES, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: yw.fung@aecom.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 3105 8544	Telephone	: +852 2610 1044		
Facsimile	: +852 2891 0305	Facsimile	: +852 2610 2021		
Project	: EM&A FOR CENTRAL KOWLOON ROUTE - KAI TAK WEST			Date Samples Received	: 06-Sep-2018
Order number	: 60569734	Quote number	: HKE/1260b/2017	Issue Date	: 18-Sep-2018
C-O-C number	: ---			No. of samples received	: 108
Site	:			No. of samples analysed	: 108

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This document has been signed by those names that appear on this report and are the authorised signatories.

<u>Signatories</u>	<u>Position</u>	<u>Authorised results for</u>
Chan Ka Yu, Karen	Manager - Organics	Organics
Fung Lim Chee, Richard	General Manager	Inorganics
Fung Lim Chee, Richard	General Manager	Metals



General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 06-Sep-2018 to 17-Sep-2018.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK1847727

Sample(s) were picked up from client by ALS Technichem (HK) staff in chilled condition.

Water sample(s) analysed and reported on as received basis.

Water sample(s) were filtered prior to dissolved metal analysis.



Analytical Results

Sub-Matrix: MARINE WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	CS1/S/ Mid-Ebb	CS1/S/Duplicate Mid-Ebb	CS1/S/Triplicate Mid-Ebb	CS1/M/ Mid-Ebb	CS1/M/Duplicate Mid-Ebb
				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018
				HK1847727-001	HK1847727-002	HK1847727-003	HK1847727-004	HK1847727-005
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.5	4.0	4.4	4.0	4.3
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	1	1	1	<1	<1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	54.4	56.0	50.9	75.1	56.5
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	88.8	105	98.9	92.2	96.6



Sub-Matrix: MARINE WATER				Client sample ID	CS1/M/Triplicate Mid-Ebb	CS1/B/ Mid-Ebb	CS1/B/Duplicate Mid-Ebb	CS1/B/Triplicate Mid-Ebb	CS2/S/ Mid-Ebb
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847727-006	HK1847727-007	HK1847727-008	HK1847727-009	HK1847727-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.7	5.1	5.3	4.9	2.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	<1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	83.3	76.1	63.5	50.2	111	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	83.4	89.1	82.2	87.1	94.8	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Duplicate Mid-Ebb	CS2/S/Triplicate Mid-Ebb	CS2/M/ Mid-Ebb	CS2/M/Duplicate Mid-Ebb	CS2/M/Triplicate Mid-Ebb
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847727-011	HK1847727-012	HK1847727-013	HK1847727-014	HK1847727-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	3.2	3.1	4.6	5.2	4.7	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	1	<1	4	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	63.4	84.1	74.5	50.8	67.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	89.5	98.0	92.7	85.1	88.1	



Sub-Matrix: MARINE WATER				Client sample ID				
				CS2/B/ Mid-Ebb	CS2/B/Duplicate Mid-Ebb	CS2/B/Triplicate Mid-Ebb	CS3/S/ Mid-Ebb	CS3/S/Duplicate Mid-Ebb
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018
Compound	CAS Number	LOR	Unit	HK1847727-016	HK1847727-017	HK1847727-018	HK1847727-019	HK1847727-020
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	6.4	6.2	4.6	5.2
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	<1	<1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.8	78.1	78.4	72.2	50.9
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	87.9	96.0	95.9	103	99.2



Sub-Matrix: MARINE WATER				Client sample ID	CS3/S/Triplicate Mid-Ebb	CS3/M/ Mid-Ebb	CS3/M/Duplicate Mid-Ebb	CS3/M/Triplicate Mid-Ebb	CS3/B/ Mid-Ebb
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847727-021	HK1847727-022	HK1847727-023	HK1847727-024	HK1847727-025	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.2	5.6	6.0	6.2	6.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	62.3	84.6	50.3	64.1	76.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	102	93.4	97.5	86.5	96.5	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Duplicate Mid-Ebb	CS3/B/Triplicate Mid-Ebb	IS1/S/ Mid-Ebb	IS1/S/Duplicate Mid-Ebb	IS1/S/Triplicate Mid-Ebb
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847727-026	HK1847727-027	HK1847727-028	HK1847727-029	HK1847727-030	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.7	6.5	4.3	4.1	4.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	74.1	73.0	50.9	56.8	70.7	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	79.7	91.3	91.0	98.5	94.5	



Sub-Matrix: MARINE WATER				Client sample ID				
				IS1/M/ Mid-Ebb	IS1/M/Duplicate Mid-Ebb	IS1/M/Triplicate Mid-Ebb	IS1/B/ Mid-Ebb	IS1/B/Duplicate Mid-Ebb
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018
Compound	CAS Number	LOR	Unit	HK1847727-031	HK1847727-032	HK1847727-033	HK1847727-034	HK1847727-035
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.4	5.3	4.9	6.8	7.4
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	75.3	93.7	70.3	76.5	61.5
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	84.8	95.1	61.2	84.0	98.8



Sub-Matrix: MARINE WATER				Client sample ID	IS1/B/Triplicate Mid-Ebb	IS2/S/ Mid-Ebb	IS2/S/Duplicate Mid-Ebb	IS2/S/Triplicate Mid-Ebb	IS2/M/ Mid-Ebb
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847727-036	HK1847727-037	HK1847727-038	HK1847727-039	HK1847727-040	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.0	3.3	3.6	4.0	4.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	<1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	60.3	59.1	89.8	100	90.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	92.7	106	99.6	93.1	103	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Duplicate Mid-Ebb	IS2/M/Triplicate Mid-Ebb	IS2/B/ Mid-Ebb	IS2/B/Duplicate Mid-Ebb	IS2/B/Triplicate Mid-Ebb
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847727-041	HK1847727-042	HK1847727-043	HK1847727-044	HK1847727-045	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.4	4.2	4.4	4.3	4.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.5	50.3	55.4	58.8	97.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	93.7	53.5	79.2	64.6	83.2	



Sub-Matrix: MARINE WATER				Client sample ID				
				IS3/S/ Mid-Ebb	IS3/S/Duplicate Mid-Ebb	IS3/S/Triplicate Mid-Ebb	IS3/M/ Mid-Ebb	IS3/M/Duplicate Mid-Ebb
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018
Compound	CAS Number	LOR	Unit	HK1847727-046	HK1847727-047	HK1847727-048	HK1847727-049	HK1847727-050
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.8	4.5	4.9	5.8	6.3
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	57.4	67.0	80.2	70.5	90.4
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	86.7	94.6	76.4	90.1	96.0



Sub-Matrix: MARINE WATER				Client sample ID	IS3/M/Triplicate Mid-Ebb	IS3/B/ Mid-Ebb	IS3/B/Duplicate Mid-Ebb	IS3/B/Triplicate Mid-Ebb	CS1/S/ Mid-Flood
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847727-051	HK1847727-052	HK1847727-053	HK1847727-054	HK1847727-055	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.4	6.6	6.9	7.1	7.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	<1	<1	4	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	86.5	97.5	71.9	75.6	56.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	81.2	99.9	89.4	85.0	91.7	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/S/Duplicate Mid-Flood	CS1/S/Triplicate Mid-Flood	CS1/M/ Mid-Flood	CS1/M/Duplicate Mid-Flood	CS1/M/Triplicate Mid-Flood
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847727-056	HK1847727-057	HK1847727-058	HK1847727-059	HK1847727-060	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.5	7.2	7.9	7.6	7.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	95.5	57.5	85.9	73.7	62.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	94.1	95.2	82.2	91.9	88.9	



Sub-Matrix: MARINE WATER				Client sample ID				
				CS1/B/ Mid-Flood	CS1/B/Duplicate Mid-Flood	CS1/B/Triplicate Mid-Flood	CS2/S/ Mid-Flood	CS2/S/Duplicate Mid-Flood
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018
Compound	CAS Number	LOR	Unit	HK1847727-061	HK1847727-062	HK1847727-063	HK1847727-064	HK1847727-065
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.6	10.0	10.3	7.1	7.4
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	1	1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	86.2	73.0	84.3	64.5	106
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	85.1	84.4	87.8	83.0	90.9



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Triplicate Mid-Flood	CS2/M/ Mid-Flood	CS2/M/Duplicate Mid-Flood	CS2/M/Triplicate Mid-Flood	CS2/B/ Mid-Flood
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847727-066	HK1847727-067	HK1847727-068	HK1847727-069	HK1847727-070	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.4	9.1	9.5	9.2	9.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.6	91.0	66.0	102	54.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	67.7	87.7	92.4	89.6	77.6	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/Duplicate Mid-Flood	CS2/B/Triplicate Mid-Flood	CS3/S/ Mid-Flood	CS3/S/Duplicate Mid-Flood	CS3/S/Triplicate Mid-Flood
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847727-071	HK1847727-072	HK1847727-073	HK1847727-074	HK1847727-075	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.3	9.1	5.7	5.7	5.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	92.2	75.8	76.8	75.4	107	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	91.9	100	93.9	80.3	95.2	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/M/ Mid-Flood	CS3/M/Duplicate Mid-Flood	CS3/M/Triplicate Mid-Flood	CS3/B/ Mid-Flood	CS3/B/Duplicate Mid-Flood
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847727-076	HK1847727-077	HK1847727-078	HK1847727-079	HK1847727-080	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.7	6.7	6.8	6.4	6.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	75.0	83.1	77.5	77.9	83.9	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	86.9	96.5	88.8	94.4	87.1	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Triplicate Mid-Flood	IS1/S/ Mid-Flood	IS1/S/Duplicate Mid-Flood	IS1/S/Triplicate Mid-Flood	IS1/M/ Mid-Flood
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847727-081	HK1847727-082	HK1847727-083	HK1847727-084	HK1847727-085	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.2	4.8	5.4	5.1	5.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	54.7	50.0	56.5	55.2	56.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	87.2	72.3	80.2	76.4	83.2	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/Duplicate Mid-Flood	IS1/M/Triplicate Mid-Flood	IS1/B/ Mid-Flood	IS1/B/Duplicate Mid-Flood	IS1/B/Triplicate Mid-Flood
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847727-086	HK1847727-087	HK1847727-088	HK1847727-089	HK1847727-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.1	4.9	5.9	5.7	6.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.7	53.3	57.9	54.7	50.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	79.6	79.4	78.2	80.0	71.1	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/S/ Mid-Flood	IS2/S/Duplicate Mid-Flood	IS2/S/Triplicate Mid-Flood	IS2/M/ Mid-Flood	IS2/M/Duplicate Mid-Flood
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847727-091	HK1847727-092	HK1847727-093	HK1847727-094	HK1847727-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	5.9	6.0	5.8	5.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	54.3	55.5	52.6	51.4	65.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	73.9	75.3	82.0	64.0	84.5	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Triplicate Mid-Flood	IS2/B/ Mid-Flood	IS2/B/Duplicate Mid-Flood	IS2/B/Triplicate Mid-Flood	IS3/S/ Mid-Flood
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847727-096	HK1847727-097	HK1847727-098	HK1847727-099	HK1847727-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.3	6.2	6.5	6.6	5.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	2	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.8	51.7	65.5	51.8	63.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	84.7	81.6	88.9	77.2	79.3	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/Duplicate Mid-Flood	IS3/S/Triplicate Mid-Flood	IS3/M/ Mid-Flood	IS3/M/Duplicate Mid-Flood	IS3/M/Triplicate Mid-Flood
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	06-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847727-101	HK1847727-102	HK1847727-103	HK1847727-104	HK1847727-105	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	6.0	6.3	6.4	6.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.7	50.4	58.6	54.8	51.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	75.8	79.5	86.5	67.1	87.1	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/B/ Mid-Flood	IS3/B/Duplicate Mid-Flood	IS3/B/Triplicate Mid-Flood	---	---
Client sampling date / time				06-Sep-2018	06-Sep-2018	06-Sep-2018	----	----	
Compound	CAS Number	LOR	Unit	HK1847727-106	HK1847727-107	HK1847727-108	-----	-----	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.8	7.1	7.0	---	---	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	1	---	---	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	---	---	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.8	70.5	67.7	---	---	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	81.0	88.9	83.2	---	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1921446)								
HK1847727-001	CS1/S/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.5	3.6	0.00
HK1847727-011	CS2/S/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.2	3.0	6.41
EA/ED: Physical and Aggregate Properties (QC Lot: 1921447)								
HK1847727-021	CS3/S/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.2	5.6	6.90
HK1847727-031	IS1/M/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.4	5.0	8.09
EA/ED: Physical and Aggregate Properties (QC Lot: 1921448)								
HK1847727-041	IS2/M/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.4	4.2	4.08
HK1847727-051	IS3/M/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.4	6.1	5.13
EA/ED: Physical and Aggregate Properties (QC Lot: 1921449)								
HK1847727-061	CS1/B/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.6	10.1	5.35
HK1847727-071	CS2/B/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.3	8.7	5.78
EA/ED: Physical and Aggregate Properties (QC Lot: 1921450)								
HK1847727-081	CS3/B/Triplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.2	6.9	3.56
HK1847727-091	IS2/S/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	6.4	2.85
EA/ED: Physical and Aggregate Properties (QC Lot: 1921451)								
HK1847727-101	IS3/S/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	6.2	2.43
EG: Metals and Major Cations - Filtered (QC Lot: 1922017)								
HK1847727-002	CS1/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
HK1847727-011	CS2/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1922018)								
HK1847727-022	CS3/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1847727-031	IS1/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1922019)								
HK1847727-042	IS2/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	1	0.00
HK1847727-051	IS3/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1922020)								
HK1847727-062	CS1/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	1	<1	0.00
HK1847727-071	CS2/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1922021)								
HK1847727-082	IS1/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 1922021) - Continued								
HK1847727-091	IS2/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1922022)								
HK1847727-102	IS3/S/Triplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)		
						LCS	DCS	Low	High	Value	Control Limit	
EA/ED: Physical and Aggregate Properties (QC Lot: 1921446)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1921447)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1921448)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.5	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1921449)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.0	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1921450)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 1921451)												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1922017)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	101	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1922018)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	102	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1922019)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	97.8	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1922020)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	98.5	----	85	117	----	----	
EG: Metals and Major Cations - Filtered (QC Lot: 1922021)												
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	94.7	----	85	117	----	----	



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report								
		Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
								LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1922021) - Continued													
EG: Metals and Major Cations - Filtered (QC Lot: 1922022)													
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	105	---	85	117	---	---		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1916269)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	59.4	---	44	69	---	---		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	76.6	---	37	81	---	---		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	59.4	---	44	67	---	---		
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	42.2	---	39	73	---	---		
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	72.2	---	41	77	---	---		
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	77.4	---	38	79	---	---		
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	90.9	---	51	112	---	---		
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	88.0	---	51	113	---	---		
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	92.6	---	67	110	---	---		
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	97.5	---	64	110	---	---		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	91.2	---	73	113	---	---		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	98.8	---	65	111	---	---		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	88.5	---	62	109	---	---		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	73.5	---	56	112	---	---		
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	81.4	---	53	110	---	---		
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	74.6	---	40	123	---	---		
Total PAH	---	1.6	µg/L	<1.6	8 µg/L	79.0	---	50	130	---	---		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1921754)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	53.5	---	44	69	---	---		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	50.1	---	37	81	---	---		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	51.0	---	44	67	---	---		
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	58.6	---	39	73	---	---		
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	51.4	---	41	77	---	---		
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	58.8	---	38	79	---	---		
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	91.6	---	51	112	---	---		
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	91.9	---	51	113	---	---		
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	78.1	---	67	110	---	---		



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1921754) - Continued											
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	98.2	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	89.8	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	93.8	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	97.0	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	74.2	----	56	112	----	----
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	101	----	53	110	----	----
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	97.6	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	77.3	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1921755)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	54.3	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	59.2	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	50.8	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	53.2	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	51.0	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	64.1	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	96.5	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	98.0	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	77.0	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	100	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	95.6	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	96.9	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	93.2	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	65.6	----	56	112	----	----
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	96.2	----	53	110	----	----
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	100	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	78.3	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1922868)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	68.7	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	74.2	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	60.7	----	44	67	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report								
		Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
								LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1922868) - Continued													
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	72.4	----	39	73	----	----		
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	74.9	----	41	77	----	----		
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	74.6	----	38	79	----	----		
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	99.6	----	51	112	----	----		
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	100	----	51	113	----	----		
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	96.6	----	67	110	----	----		
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	102	----	64	110	----	----		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	76.2	----	73	113	----	----		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	84.8	----	65	111	----	----		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	78.6	----	62	109	----	----		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	67.7	----	56	112	----	----		
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	101	----	53	110	----	----		
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	98.7	----	40	123	----	----		
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	83.2	----	50	130	----	----		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1922869)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	52.7	----	44	69	----	----		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	67.9	----	37	81	----	----		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	65.6	----	44	67	----	----		
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	69.4	----	39	73	----	----		
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	65.4	----	41	77	----	----		
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	59.3	----	38	79	----	----		
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	88.6	----	51	112	----	----		
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	88.4	----	51	113	----	----		
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	82.1	----	67	110	----	----		
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	97.5	----	64	110	----	----		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	82.7	----	73	113	----	----		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	84.8	----	65	111	----	----		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	79.5	----	62	109	----	----		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	69.4	----	56	112	----	----		
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	95.2	----	53	110	----	----		



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report								
		Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
								LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1922869) - Continued													
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	92.2	----	40	123	----	----		
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	77.5	----	50	130	----	----		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1922876)													
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	57.7	----	44	69	----	----		
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	56.9	----	37	81	----	----		
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	54.4	----	44	67	----	----		
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	55.7	----	39	73	----	----		
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	62.6	----	41	77	----	----		
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	55.8	----	38	79	----	----		
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	77.2	----	51	112	----	----		
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	78.8	----	51	113	----	----		
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	79.9	----	67	110	----	----		
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	81.8	----	64	110	----	----		
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	84.8	----	73	113	----	----		
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	81.3	----	65	111	----	----		
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	71.8	----	62	109	----	----		
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	91.7	----	56	112	----	----		
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	92.1	----	53	110	----	----		
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	98.4	----	40	123	----	----		
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	73.8	----	50	130	----	----		



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER

					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1922017)										
HK1847727-001	CS1/S/ Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	94.6	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1922018)										
HK1847727-021	CS3/S/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	86.3	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1922019)										
HK1847727-041	IS2/M/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	84.7	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1922020)										
HK1847727-061	CS1/B/ Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	95.8	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1922021)										
HK1847727-081	CS3/B/Triplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	96.0	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1922022)										
HK1847727-101	IS3/S/Duplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	94.7	----	80	120	----	----

Surrogate Control Limits

Sub-Matrix: MARINE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130



CERTIFICATE OF ANALYSIS

Client	: AECOM ASIA COMPANY LIMITED	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 32
Contact	: MR YIU WAH FUNG	Contact	: Richard Fung	Work Order	: HK1847730
Address	: 1501-10, 15/F, TOWER 1, GRAND CENTRAL PLAZA, 138 SHATIN RURAL COMMITTEE ROAD, SHATIN, NEW TERRITORIES, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: yw.fung@aecom.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 3105 8544	Telephone	: +852 2610 1044		
Facsimile	: +852 2891 0305	Facsimile	: +852 2610 2021		
Project	: EM&A FOR CENTRAL KOWLOON ROUTE - KAI TAK WEST			Date Samples Received	: 08-Sep-2018
Order number	: 60569734	Quote number	: HKE/1260b/2017	Issue Date	: 18-Sep-2018
C-O-C number	: ---			No. of samples received	: 108
Site	:			No. of samples analysed	: 108

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This document has been signed by those names that appear on this report and are the authorised signatories.

<u>Signatories</u>	<u>Position</u>	<u>Authorised results for</u>
Chan Ka Yu, Karen	Manager - Organics	Organics
Fung Lim Chee, Richard	General Manager	Inorganics
Fung Lim Chee, Richard	General Manager	Metals



General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 08-Sep-2018 to 18-Sep-2018.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK1847730

Sample(s) were picked up from client by ALS Technichem (HK) staff in chilled condition.

Water sample(s) analysed and reported on as received basis.

Water sample(s) were filtered prior to dissolved metal analysis.



Analytical Results

Sub-Matrix: MARINE WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	CS1/S/ Mid-Ebb	CS1/S/Duplicate Mid-Ebb	CS1/S/Triplicate Mid-Ebb	CS1/M/ Mid-Ebb	CS1/M/Duplicate Mid-Ebb
				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018
				HK1847730-001	HK1847730-002	HK1847730-003	HK1847730-004	HK1847730-005
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	7.4	7.0	4.9	4.2
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	2	1	<1	1	1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	59.3	66.1	53.6	69.1	50.6
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	95.4	100	95.8	116	86.5



Sub-Matrix: MARINE WATER				Client sample ID	CS1/M/Triplicate Mid-Ebb	CS1/B/ Mid-Ebb	CS1/B/Duplicate Mid-Ebb	CS1/B/Triplicate Mid-Ebb	CS2/S/ Mid-Ebb
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-006	HK1847730-007	HK1847730-008	HK1847730-009	HK1847730-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.7	10.9	12.3	9.6	5.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	1	1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.0	54.3	58.7	58.3	63.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	96.9	86.5	88.8	94.9	103	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Duplicate Mid-Ebb	CS2/S/Triplicate Mid-Ebb	CS2/M/ Mid-Ebb	CS2/M/Duplicate Mid-Ebb	CS2/M/Triplicate Mid-Ebb
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-011	HK1847730-012	HK1847730-013	HK1847730-014	HK1847730-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.0	7.2	5.4	6.6	5.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	59.2	62.1	53.6	53.4	66.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	95.0	85.7	82.8	98.5	86.6	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/ Mid-Ebb	CS2/B/Duplicate Mid-Ebb	CS2/B/Triplicate Mid-Ebb	CS3/S/ Mid-Ebb	CS3/S/Duplicate Mid-Ebb
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-016	HK1847730-017	HK1847730-018	HK1847730-019	HK1847730-020	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	7.9	5.3	6.5	5.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	2	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	55.4	56.3	82.0	56.4	86.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	94.7	88.3	97.0	112	104	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/S/Triplicate Mid-Ebb	CS3/M/ Mid-Ebb	CS3/M/Duplicate Mid-Ebb	CS3/M/Triplicate Mid-Ebb	CS3/B/ Mid-Ebb
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-021	HK1847730-022	HK1847730-023	HK1847730-024	HK1847730-025	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.0	6.2	7.8	7.8	10.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	71.1	64.9	82.8	60.6	62.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	107	78.2	98.2	97.3	101	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Duplicate Mid-Ebb	CS3/B/Triplicate Mid-Ebb	IS1/S/ Mid-Ebb	IS1/S/Duplicate Mid-Ebb	IS1/S/Triplicate Mid-Ebb
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-026	HK1847730-027	HK1847730-028	HK1847730-029	HK1847730-030	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.9	10.0	8.0	7.4	8.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.3	66.2	57.5	72.4	62.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	88.4	93.8	82.7	83.7	55.1	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/ Mid-Ebb	IS1/M/Duplicate Mid-Ebb	IS1/M/Triplicate Mid-Ebb	IS1/B/ Mid-Ebb	IS1/B/Duplicate Mid-Ebb
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-031	HK1847730-032	HK1847730-033	HK1847730-034	HK1847730-035	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.6	8.8	10.6	11.2	10.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	74.1	67.6	77.6	94.4	78.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	87.1	92.7	101	87.6	91.9	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/B/Triplicate Mid-Ebb	IS2/S/ Mid-Ebb	IS2/S/Duplicate Mid-Ebb	IS2/S/Triplicate Mid-Ebb	IS2/M/ Mid-Ebb
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-036	HK1847730-037	HK1847730-038	HK1847730-039	HK1847730-040	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	12.0	8.0	5.9	6.3	6.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	73.4	73.8	74.7	89.3	94.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	90.0	97.6	98.3	97.0	98.6	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Duplicate Mid-Ebb	IS2/M/Triplicate Mid-Ebb	IS2/B/ Mid-Ebb	IS2/B/Duplicate Mid-Ebb	IS2/B/Triplicate Mid-Ebb
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-041	HK1847730-042	HK1847730-043	HK1847730-044	HK1847730-045	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.7	7.0	8.5	8.0	6.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.4	76.9	50.2	76.5	91.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	106	83.1	93.8	110	110	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/ Mid-Ebb	IS3/S/Duplicate Mid-Ebb	IS3/S/Triplicate Mid-Ebb	IS3/M/ Mid-Ebb	IS3/M/Duplicate Mid-Ebb
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-046	HK1847730-047	HK1847730-048	HK1847730-049	HK1847730-050	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	10.1	8.2	8.4	9.5	8.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	73.6	88.0	102	93.0	107	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	104	101	102	103	101	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/M/Triplicate Mid-Ebb	IS3/B/ Mid-Ebb	IS3/B/Duplicate Mid-Ebb	IS3/B/Triplicate Mid-Ebb	CS1/S/ Mid-Flood
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-051	HK1847730-052	HK1847730-053	HK1847730-054	HK1847730-055	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.0	6.5	5.8	6.9	6.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	66.2	72.8	96.4	89.3	87.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	76.4	93.4	98.7	99.8	97.4	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/S/Duplicate Mid-Flood	CS1/S/Triplicate Mid-Flood	CS1/M/ Mid-Flood	CS1/M/Duplicate Mid-Flood	CS1/M/Triplicate Mid-Flood
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-056	HK1847730-057	HK1847730-058	HK1847730-059	HK1847730-060	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.6	8.6	9.7	9.5	8.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	77.4	106	90.4	57.8	51.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	89.1	85.8	83.7	75.0	92.4	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/B/ Mid-Flood	CS1/B/Duplicate Mid-Flood	CS1/B/Triplicate Mid-Flood	CS2/S/ Mid-Flood	CS2/S/Duplicate Mid-Flood
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-061	HK1847730-062	HK1847730-063	HK1847730-064	HK1847730-065	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.2	11.1	10.9	9.4	9.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	82.6	104	106	100	59.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	86.3	92.7	84.4	70.6	90.2	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Triplicate Mid-Flood	CS2/M/ Mid-Flood	CS2/M/Duplicate Mid-Flood	CS2/M/Triplicate Mid-Flood	CS2/B/ Mid-Flood
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-066	HK1847730-067	HK1847730-068	HK1847730-069	HK1847730-070	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.8	10.2	8.7	8.5	7.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	58.7	98.5	95.6	91.5	77.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	104	103	98.2	82.8	89.1	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/Duplicate Mid-Flood	CS2/B/Triplicate Mid-Flood	CS3/S/ Mid-Flood	CS3/S/Duplicate Mid-Flood	CS3/S/Triplicate Mid-Flood
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-071	HK1847730-072	HK1847730-073	HK1847730-074	HK1847730-075	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.6	8.9	8.7	7.6	7.7	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	59.0	95.9	72.7	98.2	53.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	97.3	89.1	94.7	97.6	87.2	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/M/ Mid-Flood	CS3/M/Duplicate Mid-Flood	CS3/M/Triplicate Mid-Flood	CS3/B/ Mid-Flood	CS3/B/Duplicate Mid-Flood
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-076	HK1847730-077	HK1847730-078	HK1847730-079	HK1847730-080	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.5	9.6	7.8	8.1	9.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	96.2	87.8	70.8	80.4	52.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	95.1	89.6	83.6	98.6	106	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Triplicate Mid-Flood	IS1/S/ Mid-Flood	IS1/S/Duplicate Mid-Flood	IS1/S/Triplicate Mid-Flood	IS1/M/ Mid-Flood
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-081	HK1847730-082	HK1847730-083	HK1847730-084	HK1847730-085	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.1	6.2	6.4	6.4	7.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	54.5	94.6	69.0	76.7	80.7	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	82.8	108	93.9	97.2	101	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/Duplicate Mid-Flood	IS1/M/Triplicate Mid-Flood	IS1/B/ Mid-Flood	IS1/B/Duplicate Mid-Flood	IS1/B/Triplicate Mid-Flood
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-086	HK1847730-087	HK1847730-088	HK1847730-089	HK1847730-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.4	6.5	6.5	6.4	5.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	69.2	73.8	90.9	77.8	85.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	99.8	101	88.0	92.6	102	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/S/ Mid-Flood	IS2/S/Duplicate Mid-Flood	IS2/S/Triplicate Mid-Flood	IS2/M/ Mid-Flood	IS2/M/Duplicate Mid-Flood
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-091	HK1847730-092	HK1847730-093	HK1847730-094	HK1847730-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.4	5.4	5.0	5.4	5.5	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	68.9	79.2	95.9	98.2	51.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	108	103	117	96.9	107	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Triplicate Mid-Flood	IS2/B/ Mid-Flood	IS2/B/Duplicate Mid-Flood	IS2/B/Triplicate Mid-Flood	IS3/S/ Mid-Flood
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-096	HK1847730-097	HK1847730-098	HK1847730-099	HK1847730-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	4.4	3.9	3.8	6.7	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	59.0	78.1	60.9	65.0	71.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	112	107	98.0	99.5	83.0	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/Duplicate Mid-Flood	IS3/S/Triplicate Mid-Flood	IS3/M/ Mid-Flood	IS3/M/Duplicate Mid-Flood	IS3/M/Triplicate Mid-Flood
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	08-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1847730-101	HK1847730-102	HK1847730-103	HK1847730-104	HK1847730-105	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.0	7.4	5.1	5.4	4.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	54.9	66.1	80.4	80.4	67.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	84.1	88.7	105	104	93.9	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/B/ Mid-Flood	IS3/B/Duplicate Mid-Flood	IS3/B/Triplicate Mid-Flood	---	---
Client sampling date / time				08-Sep-2018	08-Sep-2018	08-Sep-2018	----	----	
Compound	CAS Number	LOR	Unit	HK1847730-106	HK1847730-107	HK1847730-108	-----	-----	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.1	8.1	7.3	---	---	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	---	---	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	---	---	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	68.4	101	93.4	---	---	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	98.1	81.4	77.8	---	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1923835)								
HK1847730-001	CS1/S/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	5.0	22.3
HK1847730-011	CS2/S/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.0	9.0	10.9
EA/ED: Physical and Aggregate Properties (QC Lot: 1923836)								
HK1847730-021	CS3/S/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.0	6.6	28.6
HK1847730-031	IS1/M/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.6	7.9	8.75
EA/ED: Physical and Aggregate Properties (QC Lot: 1923837)								
HK1847730-041	IS2/M/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.7	7.4	4.64
HK1847730-051	IS3/M/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.0	7.4	7.17
EA/ED: Physical and Aggregate Properties (QC Lot: 1923838)								
HK1847730-061	CS1/B/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.2	8.4	9.66
HK1847730-071	CS2/B/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.6	7.0	7.20
EA/ED: Physical and Aggregate Properties (QC Lot: 1923839)								
HK1847730-081	CS3/B/Triplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.1	9.3	13.8
HK1847730-091	IS2/S/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.4	5.0	6.76
EA/ED: Physical and Aggregate Properties (QC Lot: 1923840)								
HK1847730-101	IS3/S/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.0	6.4	7.46
EG: Metals and Major Cations - Filtered (QC Lot: 1924806)								
HK1847730-002	CS1/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
HK1847730-011	CS2/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1924807)								
HK1847730-022	CS3/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1847730-031	IS1/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1924808)								
HK1847730-042	IS2/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1847730-051	IS3/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1924809)								
HK1847730-062	CS1/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1847730-071	CS2/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1924810)								
HK1847730-082	IS1/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 1924810) - Continued								
HK1847730-091	IS2/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1924811)								
HK1847730-102	IS3/S/Triplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 1923835)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	96.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1923836)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	110	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1923837)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	110	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1923838)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	112	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1923839)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	111	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1923840)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	110	----	85	115	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1924806)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	100	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1924807)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	97.4	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1924808)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	103	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1924809)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	95.3	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1924810)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	101	----	85	117	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1924810) - Continued											
EG: Metals and Major Cations - Filtered (QC Lot: 1924811)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	100	---	85	117	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1922876)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	57.7	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	56.9	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	54.4	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	55.7	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	62.6	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	55.8	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	77.2	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	78.8	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	79.9	---	67	110	---	---
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	81.8	---	64	110	---	---
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	84.8	---	73	113	---	---
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	81.3	---	65	111	---	---
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	71.8	---	62	109	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	91.7	---	56	112	---	---
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	92.1	---	53	110	---	---
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	98.4	---	40	123	---	---
Total PAH	---	1.6	µg/L	<1.6	8 µg/L	73.8	---	50	130	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1925099)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	56.6	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	58.1	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	54.6	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	55.9	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	62.6	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	54.7	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	75.3	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	76.9	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	80.3	---	67	110	---	---



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1925099) - Continued											
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	81.8	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	82.4	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	89.0	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	76.0	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	95.9	----	56	112	----	----
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	94.7	----	53	110	----	----
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	101	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	74.8	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1925100)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	52.2	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	55.0	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	56.5	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	54.1	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	50.8	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	51.9	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	69.1	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	71.7	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	75.5	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	77.5	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	77.6	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	83.0	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	74.2	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	88.4	----	56	112	----	----
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	87.5	----	53	110	----	----
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	93.2	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	69.9	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1925101)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	52.1	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	55.8	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	51.2	----	44	67	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1925101) - Continued											
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	51.7	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	51.3	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	57.8	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	88.4	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	88.4	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	70.9	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	94.5	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	80.9	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	86.4	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	71.0	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	68.8	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	90.6	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	86.3	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	71.6	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1925102)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	53.4	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	55.5	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	51.0	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	54.0	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	53.2	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	59.3	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	99.2	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	98.6	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	78.8	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	109	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	79.9	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	98.9	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	83.4	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	68.2	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	96.8	----	53	110	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1925102) - Continued											
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	104	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	77.7	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1925103)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	54.1	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	51.8	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	50.7	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	51.6	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	53.4	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	61.8	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	99.6	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	101	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	80.3	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	97.2	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	85.3	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	82.3	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	80.4	----	62	109	----	----
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	64.1	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	92.8	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	86.9	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	74.6	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1925104)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	52.3	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	56.4	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	50.9	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	53.3	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	50.6	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	61.0	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	94.0	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	95.1	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	67.7	----	67	110	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1925104) - Continued											
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	94.7	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	82.0	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	92.2	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	73.6	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	58.2	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	83.9	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	82.5	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	71.8	----	50	130	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1924806)										
HK1847730-001	CS1/S/ Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	90.8	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1924807)										
HK1847730-021	CS3/S/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	97.8	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1924808)										
HK1847730-041	IS2/M/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	95.9	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1924809)										
HK1847730-061	CS1/B/ Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	92.4	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1924810)										
HK1847730-081	CS3/B/Triplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	96.6	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1924811)										
HK1847730-101	IS3/S/Duplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	111	----	80	120	----	----

Surrogate Control Limits

Sub-Matrix: MARINE WATER

Recovery Limits (%)



Sub-Matrix: MARINE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130



CERTIFICATE OF ANALYSIS

Client	: AECOM ASIA COMPANY LIMITED	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 31
Contact	: MR YIU WAH FUNG	Contact	: Richard Fung	Work Order	: HK1848059
Address	: 1501-10, 15/F, TOWER 1, GRAND CENTRAL PLAZA, 138 SHATIN RURAL COMMITTEE ROAD, SHATIN, NEW TERRITORIES, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: yw.fung@aecom.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 3105 8544	Telephone	: +852 2610 1044		
Facsimile	: +852 2891 0305	Facsimile	: +852 2610 2021		
Project	: EM&A FOR CENTRAL KOWLOON ROUTE - KAI TAK WEST			Date Samples Received	: 11-Sep-2018
Order number	: 60569734	Quote number	: HKE/1260b/2017	Issue Date	: 20-Sep-2018
C-O-C number	: ---			No. of samples received	: 108
Site	:			No. of samples analysed	: 108

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This document has been signed by those names that appear on this report and are the authorised signatories.

<u>Signatories</u>	<u>Position</u>	<u>Authorised results for</u>
Chan Ka Yu, Karen	Manager - Organics	Organics
Fung Lim Chee, Richard	General Manager	Inorganics
Fung Lim Chee, Richard	General Manager	Metals



General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 11-Sep-2018 to 20-Sep-2018.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK1848059

Sample(s) were picked up from client by ALS Technichem (HK) staff in chilled condition.

Water sample(s) analysed and reported on as received basis.

Water sample(s) were filtered prior to dissolved metal analysis.



Analytical Results

Sub-Matrix: MARINE WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	CS1/S/ Mid-Ebb	CS1/S/Duplicate Mid-Ebb	CS1/S/Triplicate Mid-Ebb	CS1/M/ Mid-Ebb	CS1/M/Duplicate Mid-Ebb
				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018
				HK1848059-001	HK1848059-002	HK1848059-003	HK1848059-004	HK1848059-005
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.4	7.0	9.7	9.5	9.9
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	<1	<1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.3	53.5	54.0	74.4	51.6
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	83.3	80.1	77.5	89.8	85.7



Sub-Matrix: MARINE WATER				Client sample ID	CS1/M/Triplicate Mid-Ebb	CS1/B/ Mid-Ebb	CS1/B/Duplicate Mid-Ebb	CS1/B/Triplicate Mid-Ebb	CS2/S/ Mid-Ebb
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-006	HK1848059-007	HK1848059-008	HK1848059-009	HK1848059-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.5	11.8	11.3	11.0	7.9	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	61.5	60.8	50.8	57.3	55.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	79.4	87.6	84.0	78.0	84.4	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Duplicate Mid-Ebb	CS2/S/Triplicate Mid-Ebb	CS2/M/ Mid-Ebb	CS2/M/Duplicate Mid-Ebb	CS2/M/Triplicate Mid-Ebb
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-011	HK1848059-012	HK1848059-013	HK1848059-014	HK1848059-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.9	7.3	11.6	12.0	12.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.1	57.7	54.3	53.7	50.5	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	84.0	76.8	85.0	82.1	80.7	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/ Mid-Ebb	CS2/B/Duplicate Mid-Ebb	CS2/B/Triplicate Mid-Ebb	CS3/S/ Mid-Ebb	CS3/S/Duplicate Mid-Ebb
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-016	HK1848059-017	HK1848059-018	HK1848059-019	HK1848059-020	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	13.8	13.7	13.2	9.2	9.9	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.2	52.4	58.6	50.5	50.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	78.5	78.6	77.7	79.6	79.3	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/S/Triplicate Mid-Ebb	CS3/M/ Mid-Ebb	CS3/M/Duplicate Mid-Ebb	CS3/M/Triplicate Mid-Ebb	CS3/B/ Mid-Ebb
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-021	HK1848059-022	HK1848059-023	HK1848059-024	HK1848059-025	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.4	10.3	9.8	10.6	10.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.8	53.7	55.8	51.2	55.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	84.7	83.8	82.2	84.8	78.6	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Duplicate Mid-Ebb	CS3/B/Triplicate Mid-Ebb	IS1/S/ Mid-Ebb	IS1/S/Duplicate Mid-Ebb	IS1/S/Triplicate Mid-Ebb
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-026	HK1848059-027	HK1848059-028	HK1848059-029	HK1848059-030	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	10.9	10.6	5.3	5.5	5.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.4	56.7	93.1	80.7	87.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	87.8	83.3	73.2	99.0	83.4	



Sub-Matrix: MARINE WATER				Client sample ID				
				IS1/M/ Mid-Ebb	IS1/M/Duplicate Mid-Ebb	IS1/M/Triplicate Mid-Ebb	IS1/B/ Mid-Ebb	IS1/B/Duplicate Mid-Ebb
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018
Compound	CAS Number	LOR	Unit	HK1848059-031	HK1848059-032	HK1848059-033	HK1848059-034	HK1848059-035
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.6	7.0	7.1	8.3	7.7
EG: Metals and Major Cations - Filtered								
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	65.0	96.5	52.5	72.0	76.3
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	72.4	75.0	73.6	83.2	78.5



Sub-Matrix: MARINE WATER				Client sample ID	IS1/B/Triplicate Mid-Ebb	IS2/S/ Mid-Ebb	IS2/S/Duplicate Mid-Ebb	IS2/S/Triplicate Mid-Ebb	IS2/M/ Mid-Ebb
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-036	HK1848059-037	HK1848059-038	HK1848059-039	HK1848059-040	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.7	6.6	7.1	6.8	7.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	53.6	52.1	56.4	89.8	58.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	64.1	75.7	59.9	73.7	83.3	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Duplicate Mid-Ebb	IS2/M/Triplicate Mid-Ebb	IS2/B/ Mid-Ebb	IS2/B/Duplicate Mid-Ebb	IS2/B/Triplicate Mid-Ebb
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-041	HK1848059-042	HK1848059-043	HK1848059-044	HK1848059-045	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.2	7.8	8.3	7.9	7.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.5	59.3	57.0	56.5	68.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	68.7	77.6	74.4	80.1	85.8	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/ Mid-Ebb	IS3/S/Duplicate Mid-Ebb	IS3/S/Triplicate Mid-Ebb	IS3/M/ Mid-Ebb	IS3/M/Duplicate Mid-Ebb
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-046	HK1848059-047	HK1848059-048	HK1848059-049	HK1848059-050	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.3	5.3	5.9	5.8	5.9	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	78.2	97.1	71.2	98.8	72.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	78.9	89.8	87.3	81.7	86.9	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/M/Triplicate Mid-Ebb	IS3/B/ Mid-Ebb	IS3/B/Duplicate Mid-Ebb	IS3/B/Triplicate Mid-Ebb	CS1/S/ Mid-Flood
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-051	HK1848059-052	HK1848059-053	HK1848059-054	HK1848059-055	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.4	7.9	7.7	8.3	6.0	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	1	1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	67.8	77.7	62.2	65.0	89.3	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	85.0	96.1	66.1	86.0	72.2	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/S/Duplicate Mid-Flood	CS1/S/Triplicate Mid-Flood	CS1/M/ Mid-Flood	CS1/M/Duplicate Mid-Flood	CS1/M/Triplicate Mid-Flood
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-056	HK1848059-057	HK1848059-058	HK1848059-059	HK1848059-060	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	6.3	6.5	6.5	7.1	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	85.7	63.5	71.5	65.5	60.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	88.0	81.4	64.5	70.3	68.0	



Sub-Matrix: MARINE WATER				Client sample ID	CS1/B/ Mid-Flood	CS1/B/Duplicate Mid-Flood	CS1/B/Triplicate Mid-Flood	CS2/S/ Mid-Flood	CS2/S/Duplicate Mid-Flood
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-061	HK1848059-062	HK1848059-063	HK1848059-064	HK1848059-065	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.4	7.6	8.0	5.8	5.7	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	64.9	58.3	52.7	72.2	65.4	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	82.9	87.9	105	82.2	85.3	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/S/Triplicate Mid-Flood	CS2/M/ Mid-Flood	CS2/M/Duplicate Mid-Flood	CS2/M/Triplicate Mid-Flood	CS2/B/ Mid-Flood
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-066	HK1848059-067	HK1848059-068	HK1848059-069	HK1848059-070	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	5.5	7.4	7.2	7.5	7.7	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	1	2	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	95.9	81.2	75.8	52.2	96.9	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	86.9	92.1	92.6	72.6	85.2	



Sub-Matrix: MARINE WATER				Client sample ID	CS2/B/Duplicate Mid-Flood	CS2/B/Triplicate Mid-Flood	CS3/S/ Mid-Flood	CS3/S/Duplicate Mid-Flood	CS3/S/Triplicate Mid-Flood
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-071	HK1848059-072	HK1848059-073	HK1848059-074	HK1848059-075	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	7.9	7.2	5.5	5.7	5.8	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.6	72.9	69.3	52.3	82.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	83.1	91.5	83.5	82.9	76.9	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/M/ Mid-Flood	CS3/M/Duplicate Mid-Flood	CS3/M/Triplicate Mid-Flood	CS3/B/ Mid-Flood	CS3/B/Duplicate Mid-Flood
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-076	HK1848059-077	HK1848059-078	HK1848059-079	HK1848059-080	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.5	6.1	6.9	7.8	8.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	75.1	73.4	61.7	66.6	80.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	86.4	69.4	72.9	84.0	89.2	



Sub-Matrix: MARINE WATER				Client sample ID	CS3/B/Triplicate Mid-Flood	IS1/S/ Mid-Flood	IS1/S/Duplicate Mid-Flood	IS1/S/Triplicate Mid-Flood	IS1/M/ Mid-Flood
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-081	HK1848059-082	HK1848059-083	HK1848059-084	HK1848059-085	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.2	6.4	7.1	6.9	8.4	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	52.2	54.7	50.5	50.6	50.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	101	90.9	88.8	82.3	75.0	



Sub-Matrix: MARINE WATER				Client sample ID	IS1/M/Duplicate Mid-Flood	IS1/M/Triplicate Mid-Flood	IS1/B/ Mid-Flood	IS1/B/Duplicate Mid-Flood	IS1/B/Triplicate Mid-Flood
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-086	HK1848059-087	HK1848059-088	HK1848059-089	HK1848059-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.1	8.5	9.3	9.2	9.6	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.1	56.1	50.6	50.7	55.6	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	83.9	88.8	85.5	84.4	84.7	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/S/ Mid-Flood	IS2/S/Duplicate Mid-Flood	IS2/S/Triplicate Mid-Flood	IS2/M/ Mid-Flood	IS2/M/Duplicate Mid-Flood
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-091	HK1848059-092	HK1848059-093	HK1848059-094	HK1848059-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	6.4	6.8	7.1	8.1	8.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	50.4	74.5	51.1	52.7	52.9	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	65.5	82.6	78.3	85.2	74.1	



Sub-Matrix: MARINE WATER				Client sample ID	IS2/M/Triplicate Mid-Flood	IS2/B/ Mid-Flood	IS2/B/Duplicate Mid-Flood	IS2/B/Triplicate Mid-Flood	IS3/S/ Mid-Flood
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-096	HK1848059-097	HK1848059-098	HK1848059-099	HK1848059-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	8.4	9.4	9.4	8.7	9.2	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	<1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	62.0	65.4	60.3	62.8	66.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	90.0	89.3	82.3	85.0	88.4	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/S/Duplicate Mid-Flood	IS3/S/Triplicate Mid-Flood	IS3/M/ Mid-Flood	IS3/M/Duplicate Mid-Flood	IS3/M/Triplicate Mid-Flood
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	11-Sep-2018	
Compound	CAS Number	LOR	Unit	HK1848059-101	HK1848059-102	HK1848059-103	HK1848059-104	HK1848059-105	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	9.2	9.0	9.8	9.5	9.3	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	<1	<1	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	51.5	53.1	62.5	61.5	65.2	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	79.0	88.6	86.1	82.9	84.8	



Sub-Matrix: MARINE WATER				Client sample ID	IS3/B/ Mid-Flood	IS3/B/Duplicate Mid-Flood	IS3/B/Triplicate Mid-Flood	---	---
Client sampling date / time				11-Sep-2018	11-Sep-2018	11-Sep-2018	---	---	
Compound	CAS Number	LOR	Unit	HK1848059-106	HK1848059-107	HK1848059-108	---	---	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	0.5	mg/L	12.2	12.6	13.2	---	---	
EG: Metals and Major Cations - Filtered									
EG029: Copper	7440-50-8	1	µg/L	<1	1	<1	---	---	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---	
EP076HK: Total PAH	----	1.6	µg/L	<1.6	<1.6	<1.6	---	---	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	65.8	51.5	83.0	---	---	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	91.1	76.4	91.3	---	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1927925)								
HK1848059-001	CS1/S/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.4	7.2	2.38
HK1848059-012	CS2/S/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.3	7.6	4.36
EA/ED: Physical and Aggregate Properties (QC Lot: 1927926)								
HK1848059-021	CS3/S/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.4	9.4	0.00
HK1848059-031	IS1/M/ Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.6	6.7	0.00
EA/ED: Physical and Aggregate Properties (QC Lot: 1927927)								
HK1848059-041	IS2/M/Duplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.2	7.0	2.10
HK1848059-051	IS3/M/Triplicate Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.4	6.8	6.40
EA/ED: Physical and Aggregate Properties (QC Lot: 1927928)								
HK1848059-061	CS1/B/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.4	8.3	1.49
HK1848059-071	CS2/B/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.9	7.4	7.53
EA/ED: Physical and Aggregate Properties (QC Lot: 1927929)								
HK1848059-081	CS3/B/Triplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.2	8.3	1.21
HK1848059-091	IS2/S/ Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.4	6.5	0.00
EA/ED: Physical and Aggregate Properties (QC Lot: 1927930)								
HK1848059-101	IS3/S/Duplicate Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.2	9.4	2.70
EG: Metals and Major Cations - Filtered (QC Lot: 1929273)								
HK1848059-002	CS1/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00
HK1848059-011	CS2/S/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1929274)								
HK1848059-022	CS3/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1848059-031	IS1/M/ Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1929275)								
HK1848059-042	IS2/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1848059-051	IS3/M/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1929276)								
HK1848059-062	CS1/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
HK1848059-071	CS2/B/Duplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1929277)								
HK1848059-082	IS1/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 1929277) - Continued								
HK1848059-091	IS2/S/ Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	<1	<1	0.00
EG: Metals and Major Cations - Filtered (QC Lot: 1929278)								
HK1848059-102	IS3/S/Triplicate Mid-Flood	EG029: Copper	7440-50-8	1	µg/L	1	1	0.00

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 1927925)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1927926)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1927927)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1927928)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1927929)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 1927930)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.0	----	85	115	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1929273)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	117	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1929274)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	108	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1929275)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	110	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1929276)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	101	----	85	117	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1929277)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	109	----	85	117	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 1929277) - Continued											
EG: Metals and Major Cations - Filtered (QC Lot: 1929278)											
EG029: Copper	7440-50-8	1	µg/L	<1	10 µg/L	102	---	85	117	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1925104)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	52.3	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	56.4	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	50.9	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	53.3	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	50.6	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	61.0	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	94.0	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	95.1	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	67.7	---	67	110	---	---
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	94.7	---	64	110	---	---
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	82.0	---	73	113	---	---
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	92.2	---	65	111	---	---
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	73.6	---	62	109	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	58.2	---	56	112	---	---
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	83.9	---	53	110	---	---
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	82.5	---	40	123	---	---
Total PAH	---	1.6	µg/L	<1.6	8 µg/L	71.8	---	50	130	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1928276)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	53.2	---	44	69	---	---
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	54.1	---	37	81	---	---
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	54.6	---	44	67	---	---
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	53.3	---	39	73	---	---
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	53.2	---	41	77	---	---
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	52.4	---	38	79	---	---
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	73.6	---	51	112	---	---
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	74.3	---	51	113	---	---
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	84.8	---	67	110	---	---



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1928276) - Continued											
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	84.6	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	91.4	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	89.9	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	79.6	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	87.4	----	56	112	----	----
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	85.7	----	53	110	----	----
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	87.5	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	72.5	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1928277)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	64.5	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	64.4	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	54.2	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	57.6	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	50.2	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	64.6	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	91.0	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	90.5	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	72.5	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	98.8	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	73.7	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	96.9	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	71.1	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	95.1	----	56	112	----	----
Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	91.3	----	53	110	----	----
Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	75.2	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	75.7	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1928278)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	53.8	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	68.4	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	65.4	----	44	67	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1928278) - Continued											
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	69.6	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	65.6	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	76.5	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	97.8	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	93.7	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	73.3	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	98.7	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	75.2	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	87.6	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	83.6	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	95.2	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	86.3	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	86.7	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	79.8	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1928279)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	65.4	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	75.6	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	65.1	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	66.3	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	64.0	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	75.7	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	98.4	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	91.8	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	67.1	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	96.4	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	85.8	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	96.5	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	81.4	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	73.4	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	95.5	----	53	110	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1928279) - Continued											
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	94.6	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	80.8	----	50	130	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 1928280)											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	56.5	----	44	69	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	59.5	----	37	81	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	57.2	----	44	67	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	61.0	----	39	73	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	71.5	----	41	77	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	66.2	----	38	79	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	82.9	----	51	112	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	82.9	----	51	113	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	81.6	----	67	110	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	81.2	----	64	110	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	89.6	----	73	113	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	82.0	----	65	111	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	78.5	----	62	109	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	85.9	----	56	112	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	86.2	----	53	110	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	87.4	----	40	123	----	----
Total PAH	----	1.6	µg/L	<1.6	8 µg/L	75.6	----	50	130	----	----



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER

					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
<i>Laboratory sample ID</i>	<i>Client sample ID</i>	<i>Method: Compound</i>	<i>CAS Number</i>	<i>Spike Concentration</i>	<i>Spike Recovery (%)</i>		<i>Recovery Limits (%)</i>		<i>RPD (%)</i>	
					<i>MS</i>	<i>MSD</i>	<i>Low</i>	<i>High</i>	<i>Value</i>	<i>Control Limit</i>
EG: Metals and Major Cations - Filtered (QC Lot: 1929273)										
HK1848059-001	CS1/S/ Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	100	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1929274)										
HK1848059-021	CS3/S/Triplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	98.2	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1929275)										
HK1848059-041	IS2/M/Duplicate Mid-Ebb	EG029: Copper	7440-50-8	10 µg/L	98.1	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1929276)										
HK1848059-061	CS1/B/ Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	95.9	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1929277)										
HK1848059-081	CS3/B/Triplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	97.0	----	80	120	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 1929278)										
HK1848059-101	IS3/S/Duplicate Mid-Flood	EG029: Copper	7440-50-8	10 µg/L	97.0	----	80	120	----	----

Surrogate Control Limits

Sub-Matrix: MARINE WATER		<i>Recovery Limits (%)</i>	
<i>Compound</i>	<i>CAS Number</i>	<i>Low</i>	<i>High</i>
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130

APPENDIX D

Baseline Water Quality Monitoring Schedule

**Central Kowloon Route - Kai Tak West
Baseline Water Quality Monitoring Schedule**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
12-Aug-18	13-Aug-18	14-Aug-18	15-Aug-18	16-Aug-18	17-Aug-18	18-Aug-18
		Mid-Flood ⁽¹⁾ 7:57 Mid-Ebb ⁽¹⁾ 14:33		Mid-Flood 9:40 Mid-Ebb 16:02		Mid-Ebb 5:35 Mid-Flood 23:54
19-Aug-18	20-Aug-18	21-Aug-18	22-Aug-18	23-Aug-18	24-Aug-18	25-Aug-18
		Mid-Ebb 9:27 Mid-Flood 16:57		Mid-Ebb 10:41 Mid-Flood 18:04		Mid-Ebb 11:50 Mid-Flood 18:59
26-Aug-18	27-Aug-18	28-Aug-18	29-Aug-18	30-Aug-18	31-Aug-18	1-Sep-18
		Mid-Flood 6:58 Mid-Ebb 13:29		Mid-Flood 8:22 Mid-Ebb 14:39		Mid-Flood 9:58 Mid-Ebb 15:57
2-Sep-18	3-Sep-18	4-Sep-18	5-Sep-18	6-Sep-18	7-Sep-18	8-Sep-18
		Mid-Ebb 7:09 Mid-Flood 14:09		Mid-Ebb 9:23 Mid-Flood 16:45		Mid-Ebb 11:10 Mid-Flood 18:06
9-Sep-18	10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep
		Mid-Flood 7:01 Mid-Ebb 13:28				

The schedule is subject to change due to unforeseeable circumstances (e.g. adverse weather, etc)

Remark:

(1) Due to the bad weather condition (No.3 Tropical Cyclone Warning Signal) on 14 August 2018, the baseline water quality monitoring was cancelled. The additional baseline water monitoring will be added on 11 September 2018.