




保華-中國中鐵聯營體
PAUL Y.-CREC JOINT VENTURE

Contract No. DC/2019/10
Yuen Long Effluent Polishing Plant
Main Works for Stage 1

CONTRACTOR'S SUBMISSION FORM (CSF)

CSF No.:	DATE:
DC/2019/10/01.01/CSF/GS/0164/01	18 October 2021
From : Contractor's Representative, Paul Y. – CREC Joint Venture	
To : Project Manager's Representative (Attn: Yeung Hon Man, Simon)	
Document Title: Contamination Assessment Report for Main Storeroom & Workshops with Independent Environmental Checker (IEC) / Environmental Team (ET)'s Certificate	*New Submission / Resubmission
AECOM Ref. No.: -	
Originator: Teddy Orr	
Contractor's Comments: We resubmit herewith the finalized Contamination Assessment Report (CAR) for Main Storeroom & Workshops with Independent Environment Checker (IEC) & Environmental Team (ET)'s Certificates for your review.	
Attachments: Contamination Assessment Report for Main Storeroom & Workshops	
Relevant Specifications or Documents No.: PS Cl. 1.145	
Reviewed By: Tom Tong	
 _____ Contractor's Representative	18 October 2021 _____ Date

CPL/HS/TT/to


Date 15 October 2021

Our Ref. MCL/ED/0403/2021/C

Paul Y.-CREC Joint Venture,
11/F, Paul Y. Centre,
51 Hung To Road,
Kwun Tong, Kowloon,
Hong Kong

BY E-MAIL

Attn: Mr. David LAU

Dear Sir,

Contract No. SPW 07/2020
Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Environmental Permits: EP-565/2019
Contract No. DC/2019/10 - Certification of Contamination Assessment Report for Main Storeroom & Workshops

We refer to your Contamination Assessment Report (CAR) for Main Storeroom & Workshops (Version 1.1) submitted on 12 October 2021 for the captioned project. We are pleased to certify the captioned submission pursuant to Environmental Permit No. EP-565/2019 Condition 2.14.

Thank you for your attention. Should there be any queries, please contact Mr. Cyrus LAI on 3565-4442 or the undersigned on 3565-4373.

Yours faithfully,
for and on behalf of
FUGRO TECHNICAL SERVICES LIMITED



Alvin L.B. YU
Environmental Team Leader

c.c. DSD
AECOM
Ramboll HK Limited

Engineer
ER
IEC

Attn: Mr. LAM Yu Wang (by E-mail)
Attn: Mr. Simon YEUNG (by E-mail)
Attn: Mr. FN WONG (by E-mail)

Encl.

Ref.: DSDYLSTWEM00_0_0199L.21

15 October 2021

By E-mail and Post

AECOM
12/F Grand Central Plaza, Tower 2
138 Shatin Rural Committee Road
Shatin, Hong Kong.

Attention: Mr YEUNG H. M. Simon

Dear Mr YEUNG

**Re: Contract No. SPW 08/2020
Independent Environmental Checker for
Construction of Yuen Long Effluent Polishing Plant Stage 1**

Contamination Assessment Report
for Main Storeroom & Workshops (Version 1.1)

Reference is made to Contamination Assessment Report for Main Storeroom & Workshops (Version 1.1) by CINOTECH Consultants Limited (the CAR) dated September 2021 and the ET's certification ref. MCL/ED/0403/2021/C dated 15 October 2021.

We have no further comments on the CAR and herewith verify that the CAR has complied with the requirements as set out in Condition 2.14 of the Environmental Permit No. EP-565/2019.

Please contact the undersigned or our Mr. HUI Y.H. should you have any questions on the matter.

Yours sincerely,



WONG Fu Nam
Independent Environmental Checker

c.c.

AECOM
Fugro

Mr YEUNG H. M. Simon
Mr YU Lap Bong


Drainage Services Department

**Contract No. DC/2019/10
Yuen Long Effluent Polishing Plant –
Main Works for Stage 1**

**Contamination Assessment Report
for
Main Storeroom & Workshops**

(Version 1.1)

September 2021

Checked By	 _____ (Land Contamination Specialist)
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REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties.

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1 INTRODUCTION

Background

- 1.1 The existing Yuen Long Sewage Treatment Works (YLSTW/ the Site), was commissioned in 1984 with a design capacity of 70,000 m³/d at average dry weather flow (ADWF), provides secondary level treatment to sewage collected from Yuen Long area such as Wang Chau, Yuen Long Industrial Estate, the Yuen Long Town and Kam Tin. Drainage Services Department (DSD) has proposed to upgrade the YLSTW (the Project) into the Yuen Long Effluent Polishing Plant (YLEPP), in order to cope with the forecast increase in sewage flow upon completion of sewerage under interfacing projects, projects, extension of village sewerage in area as planned by Environmental Protection Department (EPD), as well as the proposed housing developments in the region. The Site location is attached in **Appendix A**.
- 1.2 A Project Profile (No. PP-458/2012) was submitted to the Environmental Protection Department (EPD) on 27 February 2012 for application for an Environmental Impact Assessment (EIA) Study Brief under section 5(1)(a) of the EIAO and the EIA Study Brief No. ESB-241/2012 for the Project was issued on 5 April 2012 under the EIAO. A revised Project Profile, entitled “Yuen Long Effluent Polishing Plant”, was submitted on 9 Oct 2018 (No. PP-570/2018) and a revised EIA Study Brief No. ESB-309/2018 was issued on 14 November 2018 under the EIAO. An Environmental Impact Assessment (EIA) Report was approved under EIAO in April 2019 (No.: AEIAR-220-2019) in accordance with the EIA Study Brief (No. ESB-309/2018) and the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM).
- 1.3 According to the Contamination Assessment Plan in the EIA Report (EIA-CAP), prior to commencement of the SI works, a review of the EIA-CAP should be conducted to confirm whether the proposed SI works are still valid, and Supplementary Contamination Assessment Plan (s) (SCAPs), presenting findings of the review, the latest site conditions and any updated sampling strategy and testing protocol, should be submitted to EPD for endorsement. As stipulated in EP condition 2.14, the SCAPs shall be submitted to EPD no later than three months before the commencement of site investigation (SI) at the concerned facilities/ areas; subsequently, the SI works should be carried out according to EPD’s agreed SCAPs, with Remediation Action Plan (RAPs) if contamination is confirmed and remediation is deemed necessary, for remediation in accordance with the approved RAPs and submit Remediation Report(s) (RRs) to document the remediation programme for approval by the Director. No construction works at the concerned facilities/ area shall be commenced before the approval of respective SCAPs by the Director and the satisfactory completion of necessary decontamination works.
- 1.4 The Contract No. DC/2019/10 – Yuen Long Effluent Polishing Plant – Main Works for Stage 1 (the Contract) was commissioned by DSD on November 2020 to carry out the works for phase I of the Project for the provision of facilities, such as Inlet works building, Lamella Primary Sedimentation Tank, Bio-reactor systems, Tertiary Digesters, Biogas Holders, Administration Building, Transformer Rooms and Switch Rooms, Storage Building, etc.

- 1.5 The final version of the Supplementary Contamination Assessment Plan (SCAP) has been submitted and approved by Environment Protection Department (EPD) in April 2021. According to the agreed SCAP, SI works are required for some of the facilities in the plant, namely the Waste Storage Area, Surplus Activated Sludge (SAS) Thickener House, Wash Water Pumping Station, Transformer House ‘A’, Mechanical Workshop, Main Storeroom and Workshops, Screening Press House under this contract. However, in order to ensure that the existing sewage treatment works can operate normally, SI works for different facilities/ areas have to be conducted in separate stages and hence this Contamination Assessment Report (CAR - Part 1) shall only entail the SI results for the “Main Storeroom and Workshops”, covering 4 Boreholes, namely BH-34, BH-35, BH-36 and BH-37. SI works for other facilities/ areas shall be carried out under separate submissions. The locations of the facilities in the plant are illustrated in **Appendix A**.

Objective & Scope

- 1.6 Cinotech Consultants Limited (Cinotech) was commissioned by Paul.Y – CREC Joint Venture on behalf of the DSD to conduct Land Contamination Assessment focusing on the Contract for the partial fulfilment of the Submission Requirement as per EP condition 2.14 and Section 6 of EM&A Manual (No.: AEIAR-220-2019). CAR-Part 1 provides the findings of the SI works and present the laboratory results and their interpretation of the collected samples for “Main Storeroom & Workshops”.
- 1.7 CAR-Part 1 is prepared to present the findings of the land contamination assessments with reference of the following legislation, guidelines and standards:
- Practice Guide for Investigation and Remediation of Contaminated Land (PG);
 - Guidance Note for Contaminated Land Assessment and Remediation;
 - Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management;
 - Waste Disposal (Chemical Waste) (General) Regulation (Cap 354C);
 - Dangerous Goods Ordinance (Cap 295).
- 1.8 The CAR provides a summary of the Supplementary Contamination Assessment Plan (SCAP) as agreed in April 2021, describe the SI and sampling works conducted in this assessment and present the laboratory results and their interpretation of the collected samples for “Main Storeroom & Workshops”. CAR(s) for other facility/ area that required SI under this contract shall be prepared under separate submission once the laboratory results and their interpretation of the collected samples are ready.

2 SITE INVESTIGATION

Sampling Strategy

2.1 According to the agreed SCAP, there were 4 proposed sampling locations (ENV-BH34, ENV-BH35, ENV-BH36 and ENV-BH37) for the SI under the CAR-Part 1. The sampling locations and Chemicals of Concern (CoCs) proposed in the agreed SCAP are summarised in **Table 2-1** below.

Table 2-1 Summary of Proposed Sampling Points & CoCs for “Main Storeroom & Workshops”

Potentially Contaminated Area	Sampling Location ID in this report ⁽¹⁾	Sampling Location ID in SCAP	Sampling Matrix/ Depths ^{(2) (4)}		Proposed Testing Parameters ⁽⁴⁾
Main Storeroom & Workshops	ENV-BH37A, ENV-BH36, ENV-BH35, ENV-BH34A	ENV-BH34, ENV-BH35, ENV-BH36, ENV-BH37	Soil	(i) 0.5m bgl (ii) 1.5m bgl (iii) 3.0m bgl (iv) above GW level if present or if no GW encountered, 6m bgl	Metals: Full List VOCs: Full List SVOCs: Full List PCRs: Full List
			GW	If present	Metals: Mercury VOCs: Full List SVOCs: Full List PCRs: Full List
Notes:					
(1) Sampling Location IDs have been renamed after the locations have relocated in the SI under the CAR-Part 1.					
(2) m bgl = meter below ground level; GW – groundwater					
(3) - Full list refers to the parameters as shown in Table 2.1 – RBRGs for Soil and Soil Saturation Limit and Table 2.2 – RBRGs for Groundwater and Solubility Limit under VOCs, SVOCs, metals and PCRs in the Guidance Manual. - BTEX includes benzene, toluene, ethylbenzene and total xylenes - PAHs include acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, 23fluorine, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene and pyrene. - Since RBRG value of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, bis-(2-Ethylhexyl)phthalate, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene and Phenol were not available for groundwater, the said parameters would not be tested in groundwater sample.					
(4) Groundwater samples will only be collected if groundwater is encountered during SI works					

Sampling Methodology

2.2 Prior to commencement of sampling & drilling, trial pitting was conducted to inspect for subsurface utilities and obstructions that could pose a hazard or hinder the sampling works. Two boreholes, namely ENV-BH34 and ENV-BH37, were relocated slightly due to the presence of hard materials encountered during borehole drilling, and hence they were renamed as ENV-BH34A and ENV-BH37A respectively. All drilling machine and equipment were decontaminated using a non-phosphate detergent and distilled water prior to the SI.

- 2.3 A disturbed soil sample was collected at every trial pit at a nominal depth of 0.5m bgl using a hand-held sampler.
- 2.4 3 undisturbed samples were collected, as far as possible, at every borehole in U76 sampler at nominal depths of 1.5mbgl, 3.0mbgl and 4.5mbgl below the excavation pit using dry borehole drilling and hammer dropping method. According to sampling plan, summarised in **Table 2-1**, the final sample proposed for each sampling location should be “above GW level if present or if no GW encountered, 6m bgl”. As high GW levels were recorded at all boreholes, when not enough soil was presented at sampling depths below the GW levels, less than 3 undisturbed samples were able to be collected.
- 2.5 When groundwater was encountered within the sampling depth, the borehole(s) was drilled to a minimum depth of 2m below the water table to allow for the installation of a groundwater monitoring well, from which a groundwater sample was collected.
- 2.6 The sampling exercise was supervised by land contamination specialist to determine the sampling depths for each sampling locations, and inspect for the presence of non-aqueous phase liquid (NAPL) or other signs of potential land contamination.
- 2.7 All collected Soil and Groundwater samples were stored and transported at a temperature of 4°C. The samples were delivered to ALS Technichem (HK) Pty Ltd, a Hong Kong Laboratory Accreditation Scheme (HOKLAS) analytical laboratory, on the same day as far as possible, for testing and analysis on the proposed the Chemicals of Concern (CoCs).

Quality Control and Quality Assurance (QA/QC)

- 2.8 A chain of custody system shall be operated as part of the QA/QC procedure. The laboratory accredited QA/QC procedures shall be followed as below:

Table 2-2 QA/QC Requirements

Samples taken under QA/QC procedures	Sampling Frequency	Testing Parameters
Duplicate samples	- 1 for every 20 Soil samples - 1 for every 20 GW samples	All parameters that are tested for the proposed soil and groundwater samples at the proposed sampling points ¹
Equipment blank	- 1 for every 20 Soil samples - 1 for every 20 GW samples	All parameters that are tested for the proposed soil and groundwater samples at the proposed sampling points ¹
Field Blank	- 1 for every 20 Soil samples - 1 for every 20 GW samples	All parameters that are tested for the proposed soil and groundwater samples at the proposed sampling points ¹
Trip Blank	1 for every trip with samples that require the analysis of VOCs	All VOCs parameters that are tested for the proposed soil and groundwater samples at the proposed sampling points ¹

Remarks:

- 1) Refer to **Table 2-1** for the proposed testing parameters at the proposed sampling points and **Table 3-2** and **Table 3-3** for the laboratory analysis schedule.

3 CONTAMINATION ASSESSMENT RESULTS

Summary of Samples Collected

- 3.1 The sampling for boreholes ENV-BH34A, ENV-BH35, ENV-BH36 and ENV-BH37A had been conducted between 30^h June 2021 to 16th July 2021 and supervised by land contamination specialist from Cinotech. A total of 13 soil samples and 4 groundwater samples were taken and their findings are summarized in this CAR. The as-built sampling locations and drillhole records are illustrated in **Figure 1** and attached in **Appendix C** respectively.
- 3.2 The list of samples taken are summarized in **Table 3-1**. The details of the samples taken at each borehole, including sampling date, depth of each soil and groundwater sample, and the field measurements taken before groundwater sampling are enclosed in **Appendix D**.

Table 3-1 Samples Inventory

Sampling Location	Sampling Depth [mbgl] of Soil Sample no. [N]				No. of GW Samples Collected
	N=1	N=2	N=3	N=4	
BH34A	0.5	1.5	3.0	4.0	1
BH35	0.5	1.5	3.0	4.5	1
BH36	0.5	1.5	[1]	[1]	1
BH37A	0.5	1.5	3.0	[1]	1
Total no. of Samples (Soil /GW) Collected	13				4
[1] Not enough soil was present at the sampling locations for obtaining the sample at the sampling depths, which are below the GW levels. * N is the ordinal number for the sample collected at each sampling location					

- 3.3 According to sampling frequency shown in **Table 2-2**, 1 duplicate sample, 1 equipment blank and 1 field blank sample are collected for soil and groundwater sampling respectively; while a total of 6 trip blank samples are collected for the SI.
- 3.4 The soil and groundwater samples were sent to the ALS Technichem (HK) Pty Limited, a HOKLAS accredited laboratory for analysing the CoCs listed in **Table 2-1**. All laboratory test methods have been accredited by the Hong Kong Laboratory Accreditation Scheme (HOKLAS). The reporting limit for laboratory analysis provided by the ALS Technichem (HK) Pty Limited is also listed in **Table 3-2** and **Table 3-3**.

On site Observation

- 3.5 Before drilling and during the SI for all boreholes, no abnormal smell and/ or other trace of pollutant on the ground surfaces was observed. The photo records and the drillhole records for the SI works at the “Main Storeroom & Workshops” can be found in **Appendix B** and **Appendix C** respectively.

- 3.6 The boreholes at all sampling locations have been drilled to at least 2m below the final groundwater level. No exceedance was recorded in the sampling results and no traces of contamination were detected during the borehole drilling within the “Main Storeroom & Workshops”. Therefore, no additional sampling at further depths is required.
- 3.7 During the groundwater purging/ sampling processes, no abnormal smell, colour, or NAPL has been observed. Prior to sampling, the wells were purged with at least approximately five times the well volume at each sampling event to remove silt and drilling fluid residue from the wells, with reference to the SCAP. Samples were taken by using a bailer within 24 hours of the wells being purged.

Laboratory Results & Interpretation

- 3.8 All of the soil and groundwater samples (including duplicate samples, trip blank, equipment blank and field blanks) were delivered to ALS Technichem (HK) Pty Limited for laboratory analysis. The laboratory reports and chain of custody forms are enclosed in **Appendix F**.
- 3.9 According to the agreed SCAP, the RBRGs for the land use of industrial, as listed in Table 2.1 of EPD’s *Guidance Manual for Use of Risk-Based Remediation Goals for Contaminated Land Management*, are adopted for the interpretation of SI results at the “Main Storeroom & Workshops”. The laboratory results are compared against the adopted RBRGs and soil saturation limit (C_{sat}) for groundwater samples. No exceedance of RBRG, soil saturation limit and solubility limits are recorded for both soil samples and groundwater samples. Therefore, no further sampling and remediation are required. The detailed laboratory testing results and the point-by-point comparison for each sample are listed in **Appendix E**.

Interpretation of Laboratory Results of QA/QC Samples

- 3.10 The field QA/QC samples include 1 duplicate soil sample, 1 duplicate water sample, 1 equipment blank for soil sample, 1 equipment blank for water sample, 1 field blank sample for soil, 1 field blank for water and 6 trip blank samples. All duplicate samples are consistent with the respective first samples, and all results of the tested parameters for the field, equipment and trip blanks are below the corresponding reporting limits. Hence, the sampling method is consistent throughout the SI; all soil/ groundwater samples were not contaminated from the sampling handling, and that the decontamination procedures had been followed. All field QA/AC results are included in the laboratory chemical testing reports attached in **Appendix F**.

Table 3-2 Soil Sample Concentrations and Exceedances of RBRGs and Csat

Chemical	Frequency of Detection (x/y)	Range of Detected Concentration	Range of Method Reporting Limit (mg/kg)	Analytical Method	Industrial RBRG (mg/kg)	Csat (mg/kg)	Maximum Detected Concentration Exceeds (check if applicable)	
							RBRG	Csat
Metal								
Antimony	2/13	BDL - 1.00E+0	1	USEPA Method 6020	2.61E+02	-	FALSE	----
Arsenic	12/13	BDL - 1.20E+1	1		1.96E+02	-	FALSE	----
Barium	13/13	1.42E+1 - 1.32E+2	1		1.00E+04	-	FALSE	----
Cadmium	0/13	BDL	0.2		6.53E+02	-	FALSE	----
Chromium (III)	13/13	1.60E+0 - 5.43E+1	1		1.00E+04	-	FALSE	----
Chromium (VI)	0/13	BDL	1	USEPA Method 3060 APHA Method 3500 Cr:D	1.96E+03	-	FALSE	----
Cobalt	13/13	1.30E+0 - 3.17E+1	1	USEPA Method 6020	1.00E+04	-	FALSE	----
Copper	13/13	6.00E+0 - 1.46E+2	1		1.00E+04	-	FALSE	----
Lead	13/13	1.80E+1 - 1.42E+2	1		2.29E+03	-	FALSE	----
Manganese	13/13	2.66E+2 - 2.28E+3	1		1.00E+04	-	FALSE	----
Mercury	2/13	BDL - 6.00E-2	0.05	USEPA Method 3112B	3.84E+01	-	FALSE	----
Molybdenum	9/13	BDL - 9.00E+0	1	USEPA Method 6020	3.26E+03	-	FALSE	----
Nickel	12/13	BDL - 2.80E+1	1		1.00E+04*	-	----	----
Tin	13/13	1.80E+0 - 3.62E+1	1		1.00E+04	-	FALSE	----
Zinc	13/13	1.90E+1 - 1.15E+2	1		1.00E+04	-	FALSE	----
VOCs								
2-Propanone (Acetone)	0/13	BDL	50	USEPA Method 8260	1.00E+04*	***	----	----
Benzene	0/13	BDL	0.2		9.21E+00	3.36E+02	FALSE	FALSE
Bromodichloromethane	0/13	BDL	0.1		2.85E+00	1.03E+03	FALSE	FALSE
2-Butanone (MEK)	0/13	BDL	5		1.00E+04	***	FALSE	----
Chloroform	0/13	BDL	0.04		1.54E+00	1.10E+03	FALSE	FALSE
Ethylbenzene	0/13	BDL	0.5		8.24E+03	1.38E+02	FALSE	FALSE
Methyl tert-Butyl Ether	0/13	BDL	0.5		7.01E+01	2.38E+03	FALSE	FALSE
Methylene Chloride	0/13	BDL	0.5		1.39E+01	9.21E+02	FALSE	FALSE
Styrene	0/13	BDL	0.5		1.00E+04*	4.97E+02	----	FALSE
Tetrachloroethene	0/13	BDL	0.04		7.77E-01	9.71E+01	FALSE	FALSE
Toluene	0/13	BDL	0.5		1.00E+04*	2.35E+02	----	FALSE
Trichloroethene	0/13	BDL	0.1		5.68E+00	4.88E+02	FALSE	FALSE
Xylenes (Total)	0/13	BDL	2		1.23E+03	1.50E+02	FALSE	FALSE

Chemical	Frequency of Detection (x/y)	Range of Detected Concentration	Range of Method Reporting Limit (mg/kg)	Analytical Method	Industrial RBRG (mg/kg)	Csat (mg/kg)	Maximum Detected Concentration Exceeds (check if applicable)	
							RBRG	Csat
SVOCs								
Acenaphthene	0/13	BDL	0.5	USEPA Method 8270	1.00E+04	6.02E+01	FALSE	FALSE
Acenaphthylene	0/13	BDL	0.5		1.00E+04	1.98E+01	FALSE	FALSE
Anthracene	0/13	BDL	0.5		1.00E+04	2.56E+00	FALSE	FALSE
Benzo(a)anthracene	0/13	BDL	0.5		9.18E+01	-	FALSE	----
Benzo(a)pyrene	0/13	BDL	0.5		9.18E+00	-	FALSE	----
Benzo(b)fluoranthene	0/13	BDL	0.5		1.78E+01	-	FALSE	----
Benzo(g,h,i)perylene	0/13	BDL	0.5		1.00E+04	-	FALSE	----
Benzo(k)fluoranthene	0/13	BDL	0.5		9.18E+02	-	FALSE	----
bis(2-ethylhexyl)phthalate	0/13	BDL	5		9.18E+01	-	FALSE	----
Chrysene	0/13	BDL	0.5		1.14E+03	-	FALSE	----
Dibenz(a,h)anthracene	0/13	BDL	0.1		9.18E+00	-	FALSE	----
Fluoranthene	0/13	BDL	0.5		1.00E+04	-	FALSE	----
Fluorene	0/13	BDL	0.5		1.00E+04	5.47E+01	FALSE	FALSE
Hexachlorobenzene	0/13	BDL	0.2		5.82E-01	-	FALSE	----
Indeno(1.2.3.cd)pyrene	0/13	BDL	0.1		9.18E+01	-	FALSE	----
Naphthalene	0/13	BDL	0.5		4.53E+02	1.25E+02	FALSE	FALSE
Phenanthrene	0/13	BDL	0.5		1.00E+04	2.80E+01	FALSE	FALSE
Phenol	0/13	BDL	0.5		1.00E+04	7.26E+03	FALSE	FALSE
Pyrene	0/13	BDL	0.5		1.00E+04*	-	----	----
PCRs								
C6 - C8 Fraction	0/13	BDL	5	USEPA Method 8260/8015	1.00E+04	1.00E+03	FALSE	FALSE
C9 - C16 Fraction	0/13	BDL	200		1.00E+04	3.00E+03	FALSE	FALSE
C17 - C35 Fraction	0/13	BDL	500		1.00E+04	5.00E+03	FALSE	FALSE
<p>Noted: All results are presented in mg/kg BDL denotes below detection limit. "x = number of samples in which chemical was found above the method reporting limit y = number of samples analyzed for chemical" * indicates a 'ceiling limit' concentration # Chromium III = Total Chromium – Chromium VI ---- = Not applicable as no soil saturation limit is given.</p>								

Table 3-3 Groundwater Sample Concentrations and Exceedances of RBRGs and Solubility Limits

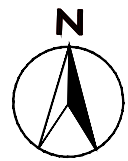
Chemical	Frequency of Detection (x/y)	Range of Detected Concentration	Range of Method Reporting Limit	Analytical Method	Industrial (mg/L)	Solubility Limit (mg/L)	Maximum Detected Concentration Exceeds (check if applicable)		
							RBRG	Solubility	
Metal									
Mercury	0/4	BDL	5.00E-04	USEPA Method 3112B	6.79E+00	-	FALSE	----	
VOCs									
2-Propanone (Acetone)	1/4	BDL - 7.11E-1	5.00E-01	USEPA Method 8260	1.00E+04	***	FALSE	----	
Benzene	0/4	BDL	5.00E-03		5.40E+01	1.75E+03	FALSE	FALSE	
Bromodichloromethane	0/4	BDL	5.00E-03		2.62E+01	6.74E+03	FALSE	FALSE	
2-Butanone (MEK)	3/4	BDL - 1.62E+0	5.00E-02		1.00E+04	***	FALSE	----	
Chloroform	1/4	BDL - 7.00E-3	5.00E-03		1.13E+01	7.92E+03	FALSE	FALSE	
Ethylbenzene	0/4	BDL	5.00E-03		1.00E+04	1.69E+02	FALSE	FALSE	
Methyl tert-Butyl Ether	0/4	BDL	5.00E-03		1.81E+03	***	FALSE	----	
Methylene Chloride	0/4	BDL	5.00E-02		2.24E+02	***	FALSE	----	
Styrene	0/4	BDL	5.00E-03		1.00E+04	3.10E+02	FALSE	FALSE	
Tetrachloroethene	0/4	BDL	5.00E-03		2.95E+00	2.00E+02	FALSE	FALSE	
Toluene	0/4	BDL	5.00E-03		1.00E+04	5.26E+02	FALSE	FALSE	
Trichloroethene	0/4	BDL	5.00E-03		1.42E+01	1.10E+03	FALSE	FALSE	
Xylenes (Total)	0/4	BDL	2.00E-02		1.57E+03	1.75E+02	FALSE	FALSE	
SVOCs									
Acenaphthene	0/4	BDL	2.00E-03	USEPA Method 8270	1.00E+04	4.24E+00	FALSE	FALSE	
Acenaphthylene	0/4	BDL	2.00E-03		1.00E+04	3.93E+00	FALSE	FALSE	
Anthracene	0/4	BDL	2.00E-03		1.00E+04	4.34E-02	FALSE	FALSE	
Benzo(b)fluoranthene	0/4	BDL	1.00E-03		7.53E+00	1.50E-03	FALSE	FALSE	
Chrysene	0/4	BDL	1.00E-03		8.12E+02	1.60E-03	FALSE	FALSE	
Fluoranthene	0/4	BDL	2.00E-03		1.00E+04	2.06E-01	FALSE	FALSE	
Fluorene	0/4	BDL	2.00E-03		1.00E+04	1.98E+00	FALSE	FALSE	
Hexachlorobenzene	0/4	BDL	4.00E-03		6.95E-01	6.20E+00	FALSE	FALSE	
Naphthalene	0/4	BDL	2.00E-03		8.62E+02	3.10E+01	FALSE	FALSE	
Phenanthrene	0/4	BDL	2.00E-03		1.00E+04	1.00E+00	FALSE	FALSE	
Pyrene	0/4	BDL	2.00E-03		1.00E+04	1.35E-01	FALSE	FALSE	
PCRs									
C6 - C8 Fraction	0/4	BDL	2.00E-02		USEPA Method 8260/8015	1.15E+03	5.23E+00	FALSE	FALSE
C9 - C16 Fraction	1/4	BDL - 5.00E-1	5.00E-01	9.98E+03		2.80E+00	FALSE	FALSE	
C17 - C35 Fraction	3/4	BDL - 1.00E+0	5.00E-01	1.78E+02		2.80E+00	FALSE	FALSE	
Notes: All results are presented in mg/L BDL denotes below detection limit. x = number of samples in which chemical was found above the method reporting limit y = number of samples analyzed for chemical * indicates a 'ceiling limit' concentration *** indicates that the solubility limit exceeds the 'ceiling limit' therefore the RBRG applies. ---- = Not applicable as no solubility limit is given.									

4 CONCLUSION

CAR

- 4.1 In accordance to the approved SCAP, the sampling works for boreholes ENV-BH 34A, ENV-BH35, ENV-BH36 and ENV-BH37A were collected and supervised by Cinotech.
- 4.2 RBRGs for Industrial have been adopted for the “Main Storeroom & Workshops” and the laboratory results for the sampling works show that there are no exceedances of the adopted RBRGs for the “Main Storeroom & Workshops”. As no contaminated soil and groundwater was found within the “Main Storeroom & Workshops”, no remediation actions are required for contaminated soil and groundwater for the scheduled land use of the “Main Storeroom & Workshops”.

FIGURES



Road

+ 5.4

4.9

4.9
+

ENV_BH37A

ENV_BH36

ENV_BH34A

ENV_BH35

Legend

Workshops



As-built
Sampling
Locations



Borehole ID	Easting	Northing
ENV_BH34A	820877.08	836377.33
ENV_BH35	820883.68	836376.40
ENV_BH36	820882.34	836384.70
ENV_BH37A	820876.98	836385.46



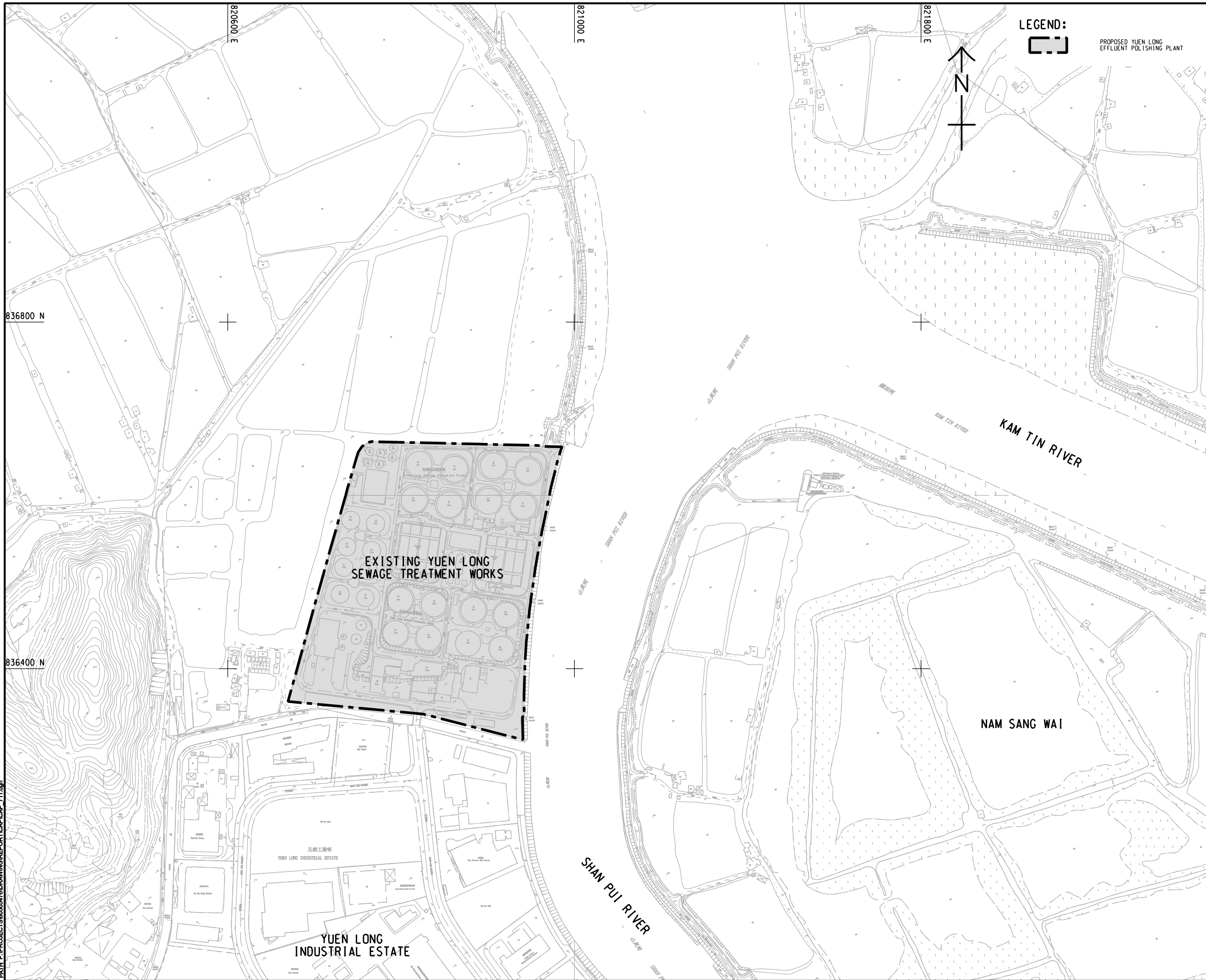
Contract No. DC/2019/10
Yuen Long Effluent Polishing Plant - Main Works for Stage 1

As-built Sampling Locations Plan (Main Storeroom & Workshops)

SCALE	1:200@A3	DATE	July 2021
CHECK	KC	DRAWN	SC
JOB No.	MA21002	DRAWING No.	Figure 1
		REV	-

APPENDIX A
SITE LOCATIONS & LAYOUT PLANS

Pd File by: ZENGFX 2017/01/13
 PATH: P:\PROJECTS\60505476\DRAWING\REPORT\CAP\CAP_711.dgn
 Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm



AECOM

PROJECT
 項目
YUEN LONG EFFLUENT POLISHING PLANT - INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT
 業主
 **渠務署**
 Drainage Services Department

CONSULTANT
 工程顧問公司
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS
 分門工程顧問公司

ISSUE/REVISION
 修訂

I/R	DATE	DESCRIPTION	CHK.

STATUS
 階段

SCALE
 比例
 A1 1:2000

DIMENSION UNIT
 尺寸單位
 METRES

KEY PLAN
 索引圖

PROJECT NO.
 項目編號
 60505476

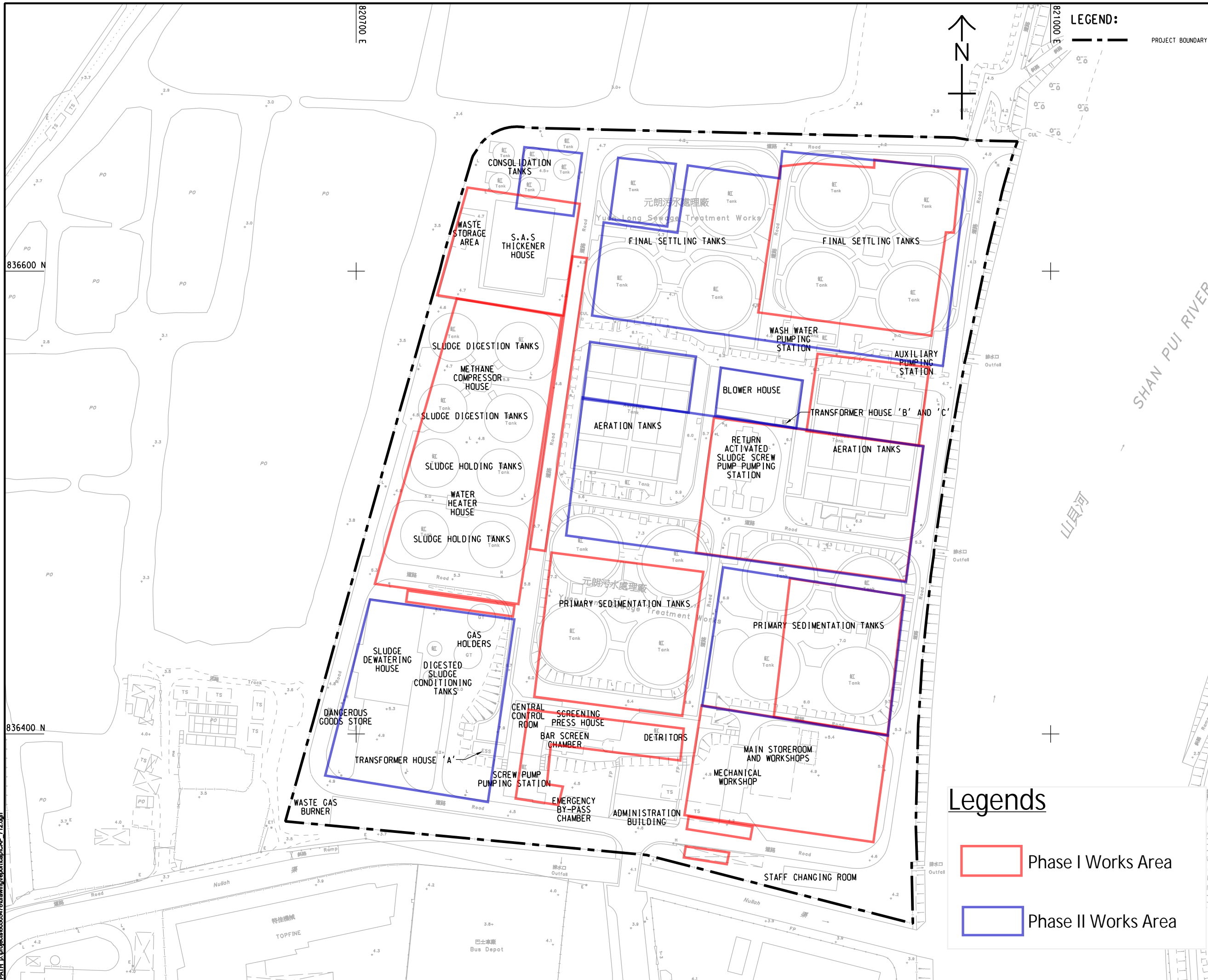
CONTRACT NO.
 合約編號
 CE 3/2015 (DS)

SHEET TITLE
 圖紙名稱
 LOCATION OF PROPOSED YUEN LONG EFFLUENT POLISHING PLANT

SHEET NUMBER
 圖紙編號
 60505476/CAP/711

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ISO A1 594mm x 841mm
 Approved:
 Checked:
 Designer:
 Project Management Initials: 836600 N
 836400 N
 Pld File by: CAOPA 2017/10/29
 PATH: E:\projects\6050476\drawing\cap\712.dgn



AECOM

PROJECT
 項目
YUEN LONG EFFLUENT POLISHING PLANT - INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT
 業主
 渠務署
 Drainage Services Department

CONSULTANT
 工程顧問公司
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS
 分判工程顧問公司

ISSUE/REVISION
 修訂

IR/	DATE	DESCRIPTION	CHK.
修訂	日期	內容描述	核對

STATUS
 階段

SCALE
 比例
 A3 1: 1500

DIMENSION UNIT
 尺寸單位
 METRES

KEY PLAN
 索引圖

PROJECT NO.
 項目編號
 60505476

CONTRACT NO.
 合約編號
 CE 3/2015 (DS)

SHEET TITLE
 圖名
 GENERAL SITE LAYOUT PLAN OF EXISTING YLSTW

SHEET NUMBER
 圖號
 60505476/CAP/712

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SHAN PUI RIVER
 山貝河

**APPENDIX B
PHOTO RECORD**



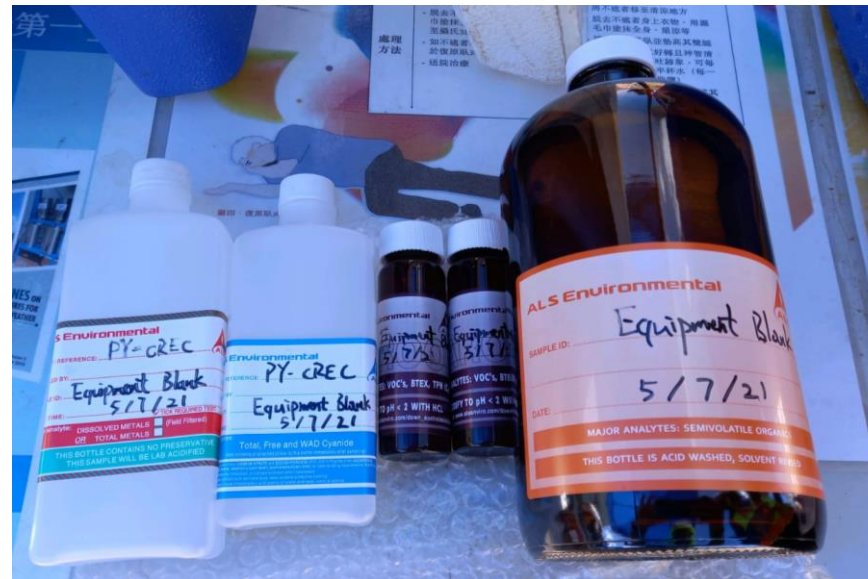
lab-grade detergent



Cleaning with lab-grade detergent and distilled Water



Collecting Equipment Blank for GW Sampling



Equipment Blank for Soil Sampling



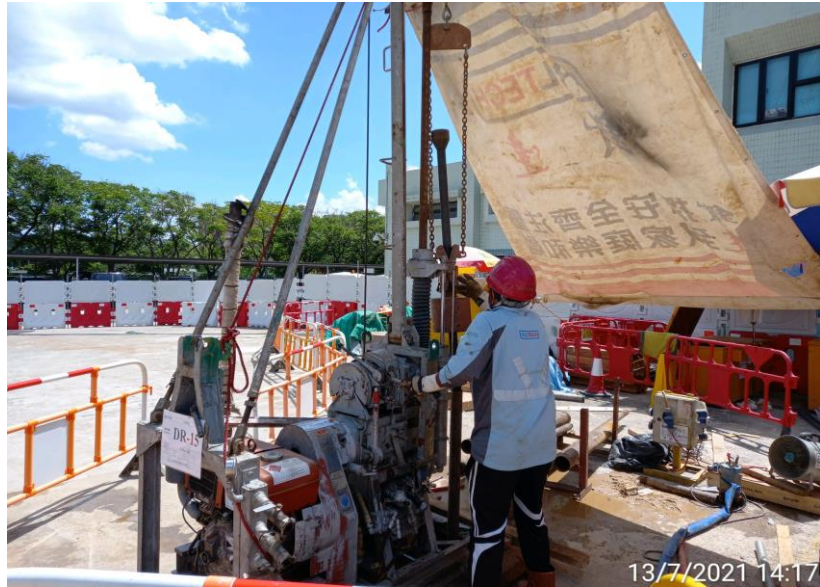
Field Blanks



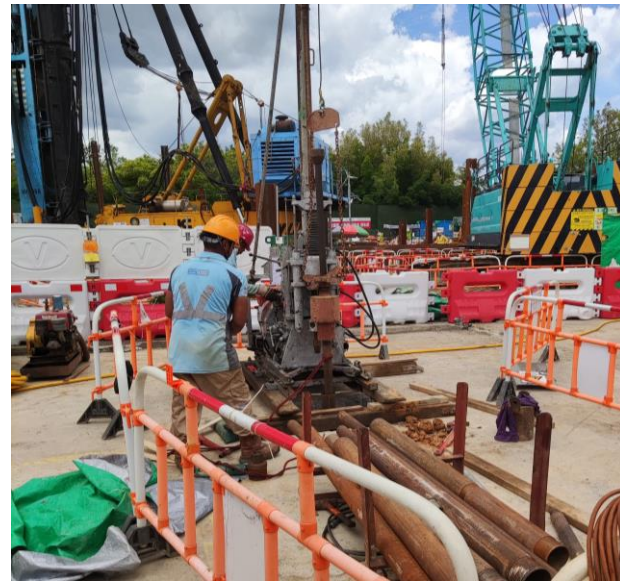
Trial Pits



Collecting Soil Samples at 0.5m bgl



Preparation for Drilling



Sampling using U76



Soil Samples



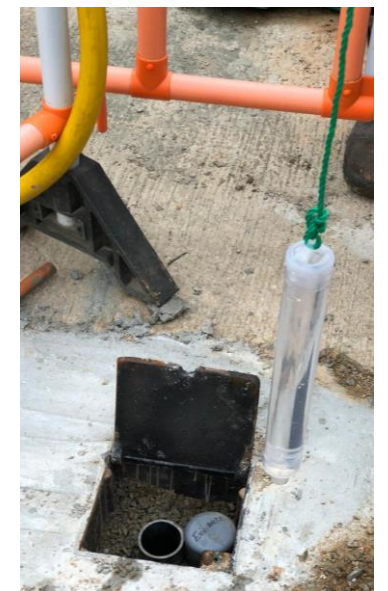
Set-up of Monitoring Well



Purging



Ground Water Samples



**APPENDIX C
DRILLHOLE RECORD**



DRILLHOLE RECORD

CONTRACT NO. DC/2019/10

HOLE NO. **ENV-BH34A**

SHEET **1** of **1**

PROJECT **Yuen Long Effluent Polishing Plant - Main Works for Stage 1**

METHOD **ROTARY**

CO-ORDINATES

WORKS ORDER NO. **D-836**

MACHINE **SD29**

E **820877.01**

DATE **13.07.2021** to **13.07.2021**

N **836377.21**

FLUSHING MEDIUM **Dry**

ORIENTATION **VERTICAL**

GROUND LEVEL **+4.85 mPD**

Drilling Progress	Casing Size	Water Level (m) Shift Start/End	TCR%	SCR%	RQD%	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
13.07.2021	HW								0.00	+4.85	0.00		Light brown and yellowish brown, slightly silty fine to coarse SAND with some angular fine to medium gravel sized rock fragments. (FILL)
1								1	0.45	+4.35	0.50		Brown, very silty fine to coarse SAND with occasional angular fine to medium gravel sized rock fragments. (FILL)
2			78				B=38	4	1.50	+3.35	1.50		Brown, brownish yellow and locally brownish grey, sandy slightly clayey SILT with occasional angular fine to medium gravel sized rock fragments. (FILL)
3								6	3.00				
4			71				B=27	7	3.45				
4								8	4.00	+0.85	4.00		Grey and greyish brown, slightly silty fine to coarse SAND with occasional angular fine to medium gravel sized rock fragments. (FILL)
13.07.2021	HW 4.50m	1.20 at 1300	29				B=17	9	4.45	+0.35	4.50		End of hole at 4.50 m.
5													
6													
7													
8													
9													
10													

- ⇩ SMALL DISTURBED SAMPLE
- ⇩ LARGE DISTURBED SAMPLE
- U76 SAMPLE
- PISTON SAMPLE (76mm)
- MAZIER SAMPLE
- SPT LINER SAMPLE
- POINT LOAD TEST
- U100 SAMPLE
- WATER SAMPLE
- STANDARD PENETRATION TEST
- IN-SITU VANE SHEAR TEST
- PACKER TEST
- PERMEABILITY TEST
- PRESSUREMETER TEST
- BOREHOLE TELEVIEWER
- UNCONFINED COMPRESSION STRENGTH (UCS)
- PIEZOMETER TIP
- STANDPIPE TIP

LOGGED C. Chan

DATE 31.07.2021

CHECKED C. Lun

DATE 31.07.2021

REMARKS

- An inspection pit was excavated to 1.20m deep by hand tools.
- A 50mm PVC pipe was installed at 4.00m.



DRILLHOLE RECORD

CONTRACT NO. DC/2019/10

HOLE NO. **ENV-BH35**

SHEET **1** of **1**

PROJECT **Yuen Long Effluent Polishing Plant - Main Works for Stage 1**

METHOD **ROTARY**

CO-ORDINATES

WORKS ORDER NO. **D-836**

E **820883.41**

MACHINE **SD29**

N **836376.52**

DATE

06.07.2021 to

07.07.2021

FLUSHING MEDIUM **Dry**

ORIENTATION **VERTICAL**

GROUND LEVEL

+4.90 mPD

Drilling Progress	Casing Size	Water Level (m) Shift Start/End	TCR%	SCR%	RQD%	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
06.07.2021	HW								0.00	+4.90	0.00		Grey, angular to subangular fine to coarse GRAVEL sized concrete fragments. (FILL)
1							B=14	1 0.45 2 0.95 3 1.15	+4.40	0.50			Brown and brownish yellow, very sandy SILT with occasional angular fine to medium gravel sized rock fragments. (FILL)
2			100					7 1.50 8 1.95					
3		1.00 at 1800	100				B=36	9 3.00 7 3.45					
06.07.2021 07.07.2021													
4							B=21	8 4.50	+0.40	4.50			Brownish grey, slightly sandy silty CLAY with occasional angular fine gravel sized rock fragments. (FILL)
07.07.2021	HW 5.00m	1.20 at 1300	60					9 4.95	-0.10	5.00			End of hole at 5.00 m.
6													
7													
8													
9													
10													

- ⇩ SMALL DISTURBED SAMPLE
- ⇩ LARGE DISTURBED SAMPLE
- U76 SAMPLE
- PISTON SAMPLE (76mm)
- MAZIER SAMPLE
- SPT LINER SAMPLE
- POINT LOAD TEST
- U100 SAMPLE
- WATER SAMPLE

- ⇩ STANDARD PENETRATION TEST
- ∨ IN-SITU VANE SHEAR TEST
- PACKER TEST
- PERMEABILITY TEST
- PRESSUREMETER TEST
- BOREHOLE TELEVIEWER
- UNCONFINED COMPRESSION STRENGTH (UCS)
- PIEZOMETER TIP
- STANDPIPE TIP

LOGGED **C. Chan**

DATE **31.07.2021**

CHECKED **C. Lun**

DATE **31.07.2021**

REMARKS

1. An inspection pit was excavated to 1.20m deep by hand tools.
2. A 50mm PVC pipe was installed at 4.50m.



DRILLHOLE RECORD

CONTRACT NO. DC/2019/10

HOLE NO. **ENV-BH36**

SHEET **1** of **1**

PROJECT **Yuen Long Effluent Polishing Plant - Main Works for Stage 1**

METHOD **ROTARY**

CO-ORDINATES

WORKS ORDER NO. **D-836**

MACHINE **SD29**

E 820882.80
N 836834.76

DATE **09.07.2021** to **09.07.2021**

FLUSHING MEDIUM **Dry**

ORIENTATION **VERTICAL**

GROUND LEVEL **+5.02 mPD**

Drilling Progress	Casing Size	Water Level (m) Shift Start/End	TCR%	SCR%	RQD%	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
09.07.2021	HW								0.00	+5.02	0.00		Brown and brownish grey, sandy angular to subangular fine to coarse GRAVEL sized rock and concrete fragments. (FILL)
1								0.45					
2								0.95					
			82				B=31		+3.52	1.50			Brown and brownish yellow, sandy slightly clayey SILT with occasional angular fine gravel sized rock fragments. (FILL)
2								1.95					
							B=37		+2.02	3.00			Brown, angular to subangular fine to coarse GRAVEL sized rock and occasional steel fragments. (FILL)
3			0					3.45					
							B=28		+1.02	4.00			Light brown, brown and grey, slightly sandy angular to subangular fine to medium GRAVEL sized rock fragments. (FILL)
4		1.20 at 1300	0					4.45					
09.07.2021	HW 4.50m								+0.52	4.50			End of hole at 4.50 m.
5													
6													
7													
8													
9													
10													

- ⇩ SMALL DISTURBED SAMPLE
- ⇩ LARGE DISTURBED SAMPLE
- ▨ U76 SAMPLE
- ▨ PISTON SAMPLE (76mm)
- ▨ MAZIER SAMPLE
- SPT LINER SAMPLE
- ▲ POINT LOAD TEST
- U100 SAMPLE
- △ WATER SAMPLE
- ↓ STANDARD PENETRATION TEST
- ∨ IN-SITU VANE SHEAR TEST
- PACKER TEST
- PERMEABILITY TEST
- PRESSUREMETER TEST
- BOREHOLE TELEVIEWER
- ↑ UNCONFINED COMPRESSION STRENGTH (UCS)
- ⬇️ PIEZOMETER TIP
- STANDPIPE TIP

LOGGED C. Chan

DATE 31.07.2021

CHECKED C. Lun

DATE 31.07.2021

REMARKS

1. An inspection pit was excavated to 1.20m deep by hand tools.

2. A 50mm PVC pipe was installed at 4.00m.



DRILLHOLE RECORD

CONTRACT NO. DC/2019/10

HOLE NO. **ENV-BH37A**

SHEET **1** of **1**

PROJECT **Yuen Long Effluent Polishing Plant - Main Works for Stage 1**

METHOD **ROTARY**

CO-ORDINATES

WORKS ORDER NO. **D-836**

E 820877.17

N 836385.51

DATE

12.07.2021

to **12.07.2021**

MACHINE **SD29**

FLUSHING MEDIUM **Dry**

ORIENTATION **VERTICAL**

GROUND LEVEL

+4.89 mPD

Drilling Progress	Casing Size	Water Level (m) Shift Start/End	TCR%	SCR%	RQD%	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
12.07.2021	HW								0.00	+4.89	0.00		Brown and brownish yellow, sandy angular to subangular fine to coarse GRAVEL sized rock and occasional concrete fragments. (FILL)
1								0.45					
2								0.95					
3								1.15					
4			62				B=37	1.50	+3.39	1.50			Brownish yellow, very sandy clayey SILT with occasional angular to subangular fine to medium gravel sized rock fragments. (FILL)
5								1.95					
6								3.00					
7			53				B=25	3.45					
8								4.00	+0.89	4.00			Brown and locally grey, sandy angular to subangular fine to medium GRAVEL sized rock and occasional cement fragments. (FILL)
12.07.2021	HW 4.50m	1.30 at 1300	0				B=31	4.45	+0.39	4.50			
5													End of hole at 4.50 m.
6													
7													
8													
9													
10													

- ⇩ SMALL DISTURBED SAMPLE
- ⇩ LARGE DISTURBED SAMPLE
- U76 SAMPLE
- PISTON SAMPLE (76mm)
- MAZIER SAMPLE
- SPT LINER SAMPLE
- POINT LOAD TEST
- U100 SAMPLE
- WATER SAMPLE
- STANDARD PENETRATION TEST
- IN-SITU VANE SHEAR TEST
- PACKER TEST
- PERMEABILITY TEST
- PRESSUREMETER TEST
- BOREHOLE TELEVIEWER
- UNCONFINED COMPRESSION STRENGTH (UCS)
- PIEZOMETER TIP
- STANDPIPE TIP

LOGGED C. Chan
 DATE 31.07.2021
 CHECKED C. Lun
 DATE 31.07.2021

REMARKS
 1. An inspection pit was excavated to 1.20m deep by hand tools.
 2. A 50mm PVC pipe was installed at 4.00m.

**APPENDIX D
LIST OF SOIL AND GROUNDWATER
SAMPLE**

List of Samples for Main Storeroom & Workshops

Borehole		ENV-BH34A	ENV-BH35	ENV-BH36	ENV-BH37A
		As-built Coordinate			
Easting (m)		820877.08	820883.68	820882.34	820876.98
Northing (m)		836377.33	836376.40	836384.70	836385.46
		Date and Depth of the Samples			
Soil Sample 1	Sample ID	ENV-BH34A-0.5m¹	ENV-BH35(0.5m)	ENV-BH36(0.5m)	ENV-BH37A-0.5m
	Depth (m bgl)	0.5	0.5	0.5	0.5
	Date	13-Jul-21	30-Jun-21	30-Jun-21	13-Jul-21
Soil Sample 2	Sample ID	ENV-BH34A-1.5m	ENV-BH35-1.5m	ENV-BH36-1.5m	ENV-BH37A-1.5m
	Depth (m bgl)	1.5	1.5	1.5	1.5
	Date	13-Jul-21	6-Jul-21	9-Jul-21	13-Jul-21
Soil Sample 3	Sample ID	ENV-BH34A-3m	ENV-BH35-3.0m	N/A	ENV-BH37A-3m
	Depth (m bgl)	3	3.0	N/A	3
	Date	13-Jul-21	6-Jul-21	N/A	13-Jul-21
Soil Sample 4	Sample ID	ENV-BH34A-4m	ENV-BH35-4.5m	N/A	N/A
	Depth (m bgl)	4	4.5	N/A	N/A
	Date	13-Jul-21	7-Jul-21	N/A	N/A
Groundwater Sample	Sample ID	ENV-BH34A	ENV-BH35	ENV-BH36	ENV-BH37A²
	Date	16-Jul-21	16-Jul-21	16-Jul-21	16-Jul-21
	G.W. Level (m bgl)	0.8	0.8	0.7	0.7
	pH Value	7.3	6.9	7.6	6.5
	Temperature (°C)	28.5	28.2	27.7	28.0

Note:

[1] Duplicate Soil Samples have been taken for ENV-BH34A-0.5m.

[2] Duplicate Groundwater Samples have been taken for ENV-BH37A.

APPENDIX E
SUMMARY OF LABORATORY RESULT

DC/2019/10 Detailed Soil Sampling Analytical Results

Parameters	> Criteria	Industrial RBRG (mg/kg)	Soil Saturation Limit (Csat) (mg/kg)	Reporting Limit (mg/kg)	Maximum Value (mg/kg)	BH34A				BH35			
						ENV-BH34A-0.5m	ENV-BH34A-1.5m	ENV-BH34A-3m	ENV-BH34A-4m	ENV-BH35 (0.5m)	ENV-BH35-1.5m	ENV-BH35-3.0m	ENV-BH35-4.5m
Metal													
Antimony	No	2.61E+02	-	1.00E+00	1.00E+00	BDL	1.00E+00	BDL	BDL	BDL	1.00E+00	BDL	BDL
Arsenic	No	1.96E+02	-	1.00E+00	1.20E+01	5.00E+00	7.00E+00	1.20E+01	1.10E+01	BDL	1.10E+01	4.00E+00	9.00E+00
Barium	No	1.00E+04	-	1.00E+00	1.32E+02	9.79E+01	1.32E+02	7.55E+01	6.62E+01	1.42E+01	1.11E+02	7.03E+01	6.46E+01
Cadmium	No	6.53E+02	-	2.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chromium (III)	No	1.00E+04	-	1.00E+00	5.43E+01	2.61E+01	3.75E+01	3.84E+01	3.95E+01	1.60E+00	5.18E+01	4.68E+01	3.58E+01
Chromium (VI)	No	1.96E+03	-	1.00E+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cobalt	No	1.00E+04	-	1.00E+00	3.17E+01	1.32E+01	1.88E+01	2.05E+01	1.11E+01	1.30E+00	1.81E+01	1.38E+01	1.76E+01
Copper	No	1.00E+04	-	1.00E+00	1.46E+02	3.30E+01	4.00E+01	1.80E+01	1.50E+01	6.00E+00	4.90E+01	1.46E+02	1.80E+01
Lead	No	2.29E+03	-	1.00E+00	1.42E+02	5.30E+01	3.00E+01	4.20E+01	3.50E+01	1.42E+02	4.20E+01	1.80E+01	2.90E+01
Manganese	No	1.00E+04	-	1.00E+00	2.28E+03	9.35E+02	2.28E+03	1.06E+03	3.33E+02	3.15E+02	1.30E+03	5.13E+02	3.84E+02
Mercury	No	3.84E+01	-	5.00E-02	6.00E-02	BDL	BDL	6.00E-02	5.00E-02	BDL	BDL	BDL	BDL
Molybdenum	No	3.26E+03	-	1.00E+00	9.00E+00	4.00E+00	BDL	2.00E+00	2.00E+00	9.00E+00	BDL	1.00E+00	2.00E+00
Nickel	No	1.00E+04*	-	1.00E+00	2.80E+01	1.40E+01	2.10E+01	2.30E+01	2.00E+01	BDL	1.70E+01	1.20E+01	2.80E+01
Tin	No	1.00E+04	-	1.00E+00	3.62E+01	1.82E+01	3.62E+01	5.00E+00	3.20E+00	5.00E+00	2.48E+01	2.43E+01	4.30E+00
Zinc	No	1.00E+04	-	1.00E+00	1.15E+02	6.30E+01	7.70E+01	8.70E+01	8.20E+01	1.90E+01	8.70E+01	1.15E+02	8.50E+01
VOCs													
2-Propanone (Acetone)	No	1.00E+04*	***	5.00E+01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzene	No	9.21E+00	3.36E+02	2.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bromodichloromethane	No	2.85E+00	1.03E+03	1.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2-Butanone (MEK)	No	1.00E+04	***	5.00E+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chloroform	No	1.54E+00	1.10E+03	4.00E-02	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ethylbenzene	No	8.24E+03	1.38E+02	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Methyl tert-Butyl Ether	No	7.01E+01	2.38E+03	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Methylene Chloride	No	1.39E+01	9.21E+02	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Styrene	No	1.00E+04*	4.97E+02	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Tetrachloroethene	No	7.77E-01	9.71E+01	4.00E-02	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Toluene	No	1.00E+04*	2.35E+02	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Trichloroethene	No	5.68E+00	4.88E+02	1.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Xylenes (Total)	No	1.23E+03	1.50E+02	2.00E+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
SVOCs													
Acenaphthene	No	1.00E+04	6.02E+01	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Acenaphthylene	No	1.00E+04	1.98E+01	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Anthracene	No	1.00E+04	2.56E+00	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzo(a)anthracene	No	9.18E+01	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzo(a)pyrene	No	9.18E+00	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzo(b)fluoranthene	No	1.78E+01	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzo(g,h,i)perylene	No	1.00E+04	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzo(k)fluoranthene	No	9.18E+02	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bis(2-ethylhexyl)phthalate	No	9.18E+01	-	5.00E+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chrysene	No	1.14E+03	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Dibenz(a,h)anthracene	No	9.18E+00	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Fluoranthene	No	1.00E+04	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Fluorene	No	1.00E+04	5.47E+01	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Hexachlorobenzene	No	5.82E-01	-	2.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Indeno(1,2,3-cd)pyrene	No	9.18E+01	-	1.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Naphthalene	No	4.53E+02	1.25E+02	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Phenanthrene	No	1.00E+04	2.80E+01	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Phenol	No	1.00E+04	7.26E+03	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pyrene	No	1.00E+04*	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
PCRs													
C6 - C8 Fraction	No	1.00E+04	1.00E+03	5.00E+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
C9 - C16 Fraction	No	1.00E+04	3.00E+03	2.00E+02	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
C17 - C35 Fraction	No	1.00E+04	5.00E+03	5.00E+02	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Notes:

BDL denotes below detection limit.

The highlighted value(s) in bold indicates exceedance of the adopted RBRG, while the underlined value(s) indicate exceedance of the soil saturation limit

* indicates a 'ceiling limit' concentration

*** indicates that the soil saturation limit exceeds the 'ceiling limit' therefore the RBRG applies.

DC/2019/10 Detailed Soil Sampling Analytical Results

Parameters	> Criteria	Industrial RBRG (mg/kg)	Soil Saturation Limit (Csat) (mg/kg)	Reporting Limit (mg/kg)	Maximum Value (mg/kg)	BH36		BH37A		
						ENV-BH36 (0.5m)	ENV-BH36-1.5m	ENV-BH37A-0.5m	ENV-BH37A-1.5m	ENV-BH37A-3m
Metal										
Antimony	No	2.61E+02	-	1.00E+00	1.00E+00	BDL	BDL	BDL	BDL	BDL
Arsenic	No	1.96E+02	-	1.00E+00	1.20E+01	4.00E+00	7.00E+00	3.00E+00	4.00E+00	1.00E+01
Barium	No	1.00E+04	-	1.00E+00	1.32E+02	6.11E+01	3.22E+01	4.95E+01	5.15E+01	7.06E+01
Cadmium	No	6.53E+02	-	2.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Chromium (III)	No	1.00E+04	-	1.00E+00	5.43E+01	2.40E+01	2.55E+01	1.52E+01	5.04E+01	5.43E+01
Chromium (VI)	No	1.96E+03	-	1.00E+00	BDL	BDL	BDL	BDL	BDL	BDL
Cobalt	No	1.00E+04	-	1.00E+00	3.17E+01	7.90E+00	8.60E+00	7.60E+00	1.57E+01	3.17E+01
Copper	No	1.00E+04	-	1.00E+00	1.46E+02	2.40E+01	1.00E+01	1.80E+01	4.00E+01	4.20E+01
Lead	No	2.29E+03	-	1.00E+00	1.42E+02	7.40E+01	2.50E+01	5.60E+01	3.10E+01	4.90E+01
Manganese	No	1.00E+04	-	1.00E+00	2.28E+03	8.39E+02	3.34E+02	2.66E+02	9.35E+02	1.18E+03
Mercury	No	3.84E+01	-	5.00E-02	6.00E-02	BDL	BDL	BDL	BDL	BDL
Molybdenum	No	3.26E+03	-	1.00E+00	9.00E+00	3.00E+00	BDL	5.00E+00	BDL	1.00E+00
Nickel	No	1.00E+04*	-	1.00E+00	2.80E+01	1.00E+01	1.80E+01	7.00E+00	1.80E+01	1.90E+01
Tin	No	1.00E+04	-	1.00E+00	3.62E+01	1.28E+01	1.80E+00	9.90E+00	1.90E+01	1.10E+01
Zinc	No	1.00E+04	-	1.00E+00	1.15E+02	6.70E+01	7.40E+01	4.80E+01	6.60E+01	6.00E+01
VOCs										
2-Propanone (Acetone)	No	1.00E+04*	***	5.00E+01	BDL	BDL	BDL	BDL	BDL	BDL
Benzene	No	9.21E+00	3.36E+02	2.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Bromodichloromethane	No	2.85E+00	1.03E+03	1.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
2-Butanone (MEK)	No	1.00E+04	***	5.00E+00	BDL	BDL	BDL	BDL	BDL	BDL
Chloroform	No	1.54E+00	1.10E+03	4.00E-02	BDL	BDL	BDL	BDL	BDL	BDL
Ethylbenzene	No	8.24E+03	1.38E+02	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Methyl tert-Butyl Ether	No	7.01E+01	2.38E+03	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Methylene Chloride	No	1.39E+01	9.21E+02	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Styrene	No	1.00E+04*	4.97E+02	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Tetrachloroethene	No	7.77E-01	9.71E+01	4.00E-02	BDL	BDL	BDL	BDL	BDL	BDL
Toluene	No	1.00E+04*	2.35E+02	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Trichloroethene	No	5.68E+00	4.88E+02	1.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Xylenes (Total)	No	1.23E+03	1.50E+02	2.00E+00	BDL	BDL	BDL	BDL	BDL	BDL
SVOCs										
Acenaphthene	No	1.00E+04	6.02E+01	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Acenaphthylene	No	1.00E+04	1.98E+01	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Anthracene	No	1.00E+04	2.56E+00	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Benzo(a)anthracene	No	9.18E+01	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Benzo(a)pyrene	No	9.18E+00	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Benzo(b)fluoranthene	No	1.78E+01	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Benzo(g,h,i)perylene	No	1.00E+04	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Benzo(k)fluoranthene	No	9.18E+02	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Bis(2-ethylhexyl)phthalate	No	9.18E+01	-	5.00E+00	BDL	BDL	BDL	BDL	BDL	BDL
Chrysene	No	1.14E+03	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Dibenz(a,h)anthracene	No	9.18E+00	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Fluoranthene	No	1.00E+04	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Fluorene	No	1.00E+04	5.47E+01	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Hexachlorobenzene	No	5.82E-01	-	2.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Indeno(1.2.3.cd)pyrene	No	9.18E+01	-	1.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Naphthalene	No	4.53E+02	1.25E+02	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Phenanthrene	No	1.00E+04	2.80E+01	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Phenol	No	1.00E+04	7.26E+03	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
Pyrene	No	1.00E+04*	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL
PCRs										
C6 - C8 Fraction	No	1.00E+04	1.00E+03	5.00E+00	BDL	BDL	BDL	BDL	BDL	BDL
C9 - C16 Fraction	No	1.00E+04	3.00E+03	2.00E+02	BDL	BDL	BDL	BDL	BDL	BDL
C17 - C35 Fraction	No	1.00E+04	5.00E+03	5.00E+02	BDL	BDL	BDL	BDL	BDL	BDL

Notes:

BDL denotes below detection limit.

The highlighted value(s) in bold indicates exceedance of the adopted RBRG, while the underlined value(s) indicate exceedance of the soil saturation limit

* indicates a 'ceiling limit' concentration

*** indicates that the soil saturation limit exceeds the 'ceiling limit' therefore the RBRG applies.

DC/2019/10 Detailed Groundwater Sampling Analytical Results

Parameters	> Criteria	Industrial RBRG (mg/L)	Solubility Limit (mg/L)	Reporting Limit (mg/L)	Maximum Value (mg/L)	BH34A	BH35	BH36	BH37A
						ENV-BH34A	ENV-BH35	ENV-BH36	ENV-BH37A
Metal									
Mercury	No	6.79E+00	-	5.00E-04	BDL	BDL	BDL	BDL	BDL
VOCs									
2-Propanone (Acetone)	No	1.00E+04	***	5.00E-01	7.11E-01	7.11E-01	BDL	BDL	BDL
Benzene	No	5.40E+01	1.75E+03	5.00E-03	BDL	BDL	BDL	BDL	BDL
Bromodichloromethane	No	2.62E+01	6.74E+03	5.00E-03	BDL	BDL	BDL	BDL	BDL
2-Butanone (MEK)	No	1.00E+04	***	5.00E-02	1.62E+00	1.62E+00	BDL	1.89E-01	5.47E-01
Chloroform	No	1.13E+01	7.92E+03	5.00E-03	7.00E-03	7.00E-03	BDL	BDL	BDL
Ethylbenzene	No	1.00E+04	1.69E+02	5.00E-03	BDL	BDL	BDL	BDL	BDL
Methyl tert-Butyl Ether	No	1.81E+03	***	5.00E-03	BDL	BDL	BDL	BDL	BDL
Methylene Chloride	No	2.24E+02	***	5.00E-02	BDL	BDL	BDL	BDL	BDL
Styrene	No	1.00E+04	3.10E+02	5.00E-03	BDL	BDL	BDL	BDL	BDL
Tetrachloroethene	No	2.95E+00	2.00E+02	5.00E-03	BDL	BDL	BDL	BDL	BDL
Toluene	No	1.00E+04	5.26E+02	5.00E-03	BDL	BDL	BDL	BDL	BDL
Trichloroethene	No	1.42E+01	1.10E+03	5.00E-03	BDL	BDL	BDL	BDL	BDL
Xylenes (Total)	No	1.57E+03	1.75E+02	2.00E-02	BDL	BDL	BDL	BDL	BDL
SVOCs									
Acenaphthene	No	1.00E+04	4.24E+00	2.00E-03	BDL	BDL	BDL	BDL	BDL
Acenaphthylene	No	1.00E+04	3.93E+00	2.00E-03	BDL	BDL	BDL	BDL	BDL
Anthracene	No	1.00E+04	4.34E-02	2.00E-03	BDL	BDL	BDL	BDL	BDL
Benzo(b)fluoranthene	No	7.53E+00	1.50E-03	1.00E-03	BDL	BDL	BDL	BDL	BDL
Chrysene	No	8.12E+02	1.60E-03	1.00E-03	BDL	BDL	BDL	BDL	BDL
Fluoranthene	No	1.00E+04	2.06E-01	2.00E-03	BDL	BDL	BDL	BDL	BDL
Fluorene	No	1.00E+04	1.98E+00	2.00E-03	BDL	BDL	BDL	BDL	BDL
Hexachlorobenzene	No	6.95E-01	6.20E+00	4.00E-03	BDL	BDL	BDL	BDL	BDL
Naphthalene	No	8.62E+02	3.10E+01	2.00E-03	BDL	BDL	BDL	BDL	BDL
Phenanthrene	No	1.00E+04	1.00E+00	2.00E-03	BDL	BDL	BDL	BDL	BDL
Pyrene	No	1.00E+04	1.35E-01	2.00E-03	BDL	BDL	BDL	BDL	BDL
PCRs									
C6 - C8 Fraction	No	1.15E+03	5.23E+00	2.00E-02	BDL	BDL	BDL	BDL	BDL
C9 - C16 Fraction	No	9.98E+03	2.80E+00	5.00E-01	5.00E-01	5.00E-01	BDL	BDL	BDL
C17 - C35 Fraction	No	1.78E+02	2.80E+00	5.00E-01	1.00E+00	1.00E+00	7.00E-01	9.00E-01	BDL

Notes:

BDL denotes below detection limit.

The highlighted value(s) in bold indicates exceedance of the adopted RBRG, while the underlined value(s) indicate exceedance of the solubility limit

* indicates a 'ceiling limit' concentration

*** indicates that the solubility limit exceeds the 'ceiling limit' therefore the RBRG applies.

DC/2019/10 Detailed Soil Duplicate Sampling Analytical Results

Parameters	> Criteria	Industrial RBRG (mg/kg)	Saturation Limit (Csat) (mg/kg)	Reporting Limit (mg/kg)	Maximum Value (mg/kg)	BH34A	
						ENV-BH34A- 0.5m	ENV-BH34A- Duplicate 0.5m
Metal							
Antimony	No	2.61E+02	-	1.00E+00	BDL	BDL	BDL
Arsenic	No	1.96E+02	-	1.00E+00	5.00E+00	5.00E+00	BDL
Barium	No	1.00E+04	-	1.00E+00	9.79E+01	9.79E+01	7.30E+00
Cadmium	No	6.53E+02	-	2.00E-01	BDL	BDL	BDL
Chromium (III)	No	1.00E+04	-	1.00E+00	2.61E+01	2.61E+01	1.50E+00
Chromium (VI)	No	1.96E+03	-	1.00E+00	BDL	BDL	BDL
Cobalt	No	1.00E+04	-	1.00E+00	1.32E+01	1.32E+01	BDL
Copper	No	1.00E+04	-	1.00E+00	3.30E+01	3.30E+01	6.00E+00
Lead	No	2.29E+03	-	1.00E+00	7.30E+01	5.30E+01	7.30E+01
Manganese	No	1.00E+04	-	1.00E+00	9.35E+02	9.35E+02	1.07E+02
Mercury	No	3.84E+01	-	5.00E-02	BDL	BDL	BDL
Molybdenum	No	3.26E+03	-	1.00E+00	5.00E+00	4.00E+00	5.00E+00
Nickel	No	1.00E+04*	-	1.00E+00	1.40E+01	1.40E+01	BDL
Tin	No	1.00E+04	-	1.00E+00	1.82E+01	1.82E+01	5.00E+00
Zinc	No	1.00E+04	-	1.00E+00	6.30E+01	6.30E+01	1.70E+01
VOCs							
2-Propanone (Acetone)	No	1.00E+04*	***	5.00E+01	BDL	BDL	BDL
Benzene	No	9.21E+00	3.36E+02	2.00E-01	BDL	BDL	BDL
Bromodichloromethane	No	2.85E+00	1.03E+03	1.00E-01	BDL	BDL	BDL
2-Butanone (MEK)	No	1.00E+04	***	5.00E+00	BDL	BDL	BDL
Chloroform	No	1.54E+00	1.10E+03	4.00E-02	BDL	BDL	BDL
Ethylbenzene	No	8.24E+03	1.38E+02	5.00E-01	BDL	BDL	BDL
Methyl tert-Butyl Ether	No	7.01E+01	2.38E+03	5.00E-01	BDL	BDL	BDL
Methylene Chloride	No	1.39E+01	9.21E+02	5.00E-01	BDL	BDL	BDL
Styrene	No	1.00E+04*	4.97E+02	5.00E-01	BDL	BDL	BDL
Tetrachloroethene	No	7.77E-01	9.71E+01	4.00E-02	BDL	BDL	BDL
Toluene	No	1.00E+04*	2.35E+02	5.00E-01	BDL	BDL	BDL
Trichloroethene	No	5.68E+00	4.88E+02	1.00E-01	BDL	BDL	BDL
Xylenes (Total)	No	1.23E+03	1.50E+02	2.00E+00	BDL	BDL	BDL
SVOCs							
Acenaphthene	No	1.00E+04	6.02E+01	5.00E-01	BDL	BDL	BDL
Acenaphthylene	No	1.00E+04	1.98E+01	5.00E-01	BDL	BDL	BDL
Anthracene	No	1.00E+04	2.56E+00	5.00E-01	BDL	BDL	BDL
Benzo(a)anthracene	No	9.18E+01	-	5.00E-01	BDL	BDL	BDL
Benzo(a)pyrene	No	9.18E+00	-	5.00E-01	BDL	BDL	BDL
Benzo(b)fluoranthene	No	1.78E+01	-	5.00E-01	BDL	BDL	BDL
Benzo(g,h,i)perylene	No	1.00E+04	-	5.00E-01	BDL	BDL	BDL
Benzo(k)fluoranthene	No	9.18E+02	-	5.00E-01	BDL	BDL	BDL
Bis(2-ethylhexyl)phthalate	No	9.18E+01	-	5.00E+00	BDL	BDL	BDL
Chrysene	No	1.14E+03	-	5.00E-01	BDL	BDL	BDL
Dibenz(a,h)anthracene	No	9.18E+00	-	5.00E-01	BDL	BDL	BDL
Fluoranthene	No	1.00E+04	-	5.00E-01	BDL	BDL	BDL
Fluorene	No	1.00E+04	5.47E+01	5.00E-01	BDL	BDL	BDL
Hexachlorobenzene	No	5.82E-01	-	2.00E-01	BDL	BDL	BDL
Indeno(1,2,3.cd)pyrene	No	9.18E+01	-	1.00E-01	BDL	BDL	BDL
Naphthalene	No	4.53E+02	1.25E+02	5.00E-01	BDL	BDL	BDL
Phenanthrene	No	1.00E+04	2.80E+01	5.00E-01	BDL	BDL	BDL
Phenol	No	1.00E+04	7.26E+03	5.00E-01	BDL	BDL	BDL
Pyrene	No	1.00E+04*	-	5.00E-01	BDL	BDL	BDL
PCRs							
C6 - C8 Fraction	No	1.00E+04	1.00E+03	5.00E+00	BDL	BDL	BDL
C9 - C16 Fraction	No	1.00E+04	3.00E+03	2.00E+02	BDL	BDL	BDL
C17 - C35 Fraction	No	1.00E+04	5.00E+03	5.00E+02	BDL	BDL	BDL

BDL denotes below detection limit.

The highlighted value(s) in bold indicates exceedance of the adopted RBRG, while the underlined value(s) indicate exceedance of the soil saturation limit.

“-”: No criteria / soil saturation limit is provided in RBRG.

“-----”: Not tested according to the QA/QC Requirements in **Table 2-2**

*** indicates that the soil saturation limit exceeds the 'ceiling limit' therefore the RBRG applies.

DC/2019/10 Detailed Groundwater Duplicate Sampling Analytical Results

Parameters	> Criteria	Industrial RBRG (mg/L)	Solubility Limit (mg/L)	Reporting Limit (mg/kg)	Maximum Value (mg/kg)	BH37A	
						ENV-BH37A	Duplicate ENV-BH37A
Metal						GW	
Mercury	No	6.79E+00	-	5.00E-02	BDL	BDL	BDL
VOCs							
2-Propanone (Acetone)	No	1.00E+04	***	5.00E+01	BDL	BDL	BDL
Benzene	No	5.40E+01	1.75E+03	2.00E-01	BDL	BDL	BDL
Bromodichloromethane	No	2.62E+01	6.74E+03	1.00E-01	BDL	BDL	BDL
2-Butanone (MEK)	No	1.00E+04	***	5.00E+00	5.92E-01	5.47E-01	5.92E-01
Chloroform	No	1.13E+01	7.92E+03	4.00E-02	BDL	BDL	BDL
Ethylbenzene	No	1.00E+04	1.69E+02	5.00E-01	BDL	BDL	BDL
Methyl tert-Butyl Ether	No	1.81E+03	***	5.00E-01	BDL	BDL	BDL
Methylene Chloride	No	2.24E+02	***	5.00E-01	BDL	BDL	BDL
Styrene	No	1.00E+04	3.10E+02	5.00E-01	BDL	BDL	BDL
Tetrachloroethene	No	2.95E+00	2.00E+02	4.00E-02	BDL	BDL	BDL
Toluene	No	1.00E+04	5.26E+02	5.00E-01	BDL	BDL	BDL
Trichloroethene	No	1.42E+01	1.10E+03	1.00E-01	BDL	BDL	BDL
Xylenes (Total)	No	1.57E+03	1.75E+02	2.00E+00	BDL	BDL	BDL
SVOCs							
Acenaphthene	No	1.00E+04	4.24E+00	5.00E-01	BDL	BDL	BDL
Acenaphthylene	No	1.00E+04	3.93E+00	5.00E-01	BDL	BDL	BDL
Anthracene	No	1.00E+04	4.34E-02	5.00E-01	BDL	BDL	BDL
Benzo(b)fluoranthene	No	7.53E+00	1.50E-03	5.00E-01	BDL	BDL	BDL
Chrysene	No	8.12E+02	1.60E-03	5.00E-01	BDL	BDL	BDL
Fluoranthene	No	1.00E+04	2.06E-01	5.00E-01	BDL	BDL	BDL
Fluorene	No	1.00E+04	1.98E+00	5.00E-01	BDL	BDL	BDL
Hexachlorobenzene	No	6.95E-01	6.20E+00	2.00E-01	BDL	BDL	BDL
Naphthalene	No	8.62E+02	3.10E+01	5.00E-01	BDL	BDL	BDL
Phenanthrene	No	1.00E+04	1.00E+00	5.00E-01	BDL	BDL	BDL
Pyrene	No	1.00E+04	1.35E-01	5.00E-01	BDL	BDL	BDL
PCRs							
C6 - C8 Fraction	No	1.15E+03	5.23E+00	5.00E+00	BDL	BDL	BDL
C9 - C16 Fraction	No	9.98E+03	2.80E+00	2.00E+02	BDL	BDL	BDL
C17 - C35 Fraction	No	1.78E+02	2.80E+00	5.00E+02	BDL	BDL	BDL

BDL denotes below detection limit.

The highlighted value(s) in bold indicates exceedance of the adopted RBRG, while the underlined value(s) indicate exceedance of the solubility limit.

“-”: No criteria / solubility limit is provided in RBRG.

“-----”: Not tested according to the QA/QC Requirements in **Table 2-2**

*** indicates that the solubility limit exceeds the 'ceiling limit' therefore the RBRG applies.

Detailed QA/QC Sampling Analytical Results

Parameters	> Criteria (RBRG)	Industrial RBRG (mg/L)	Solubility Limit (mg/L)	Reporting Limit (mg/L)	Maximum Value (mg/L)	Trip Blank	Field Blank	Equipment Blank	Equipment Blank	Field Blank
Metal						30/6/2021 to 16/07/2021 (Soil & GW)	05/07/2021 (Soil)	05/07/2022 (Soil)	16/7/2021 (GW)	16/7/2022 (GW)
Antimony	No	-	-	0.001	BDL	----	BDL	BDL	----	----
Arsenic	No	-	-	0.01	BDL	----	BDL	BDL	----	----
Barium	No	-	-	0.001	BDL	----	BDL	BDL	----	----
Cadmium	No	-	-	0.0002	BDL	----	BDL	BDL	----	----
Chromium (III)	No	-	-	0.02	BDL	----	BDL	BDL	----	----
Chromium (VI)	No	-	-	0.02	BDL	----	BDL	BDL	----	----
Cobalt	No	-	-	0.001	BDL	----	BDL	BDL	----	----
Copper	No	-	-	0.001	BDL	----	BDL	BDL	----	----
Lead	No	-	-	0.001	BDL	----	BDL	BDL	----	----
Manganese	No	-	-	0.001	0.012	----	BDL	0.012	----	----
Mercury	No	6.79E+00	-	0.0005	BDL	----	BDL	BDL	BDL	BDL
Molybdenum	No	-	-	0.001	BDL	----	BDL	BDL	----	----
Nickel	No	-	-	0.001	BDL	----	BDL	BDL	----	----
Tin	No	-	-	0.001	BDL	----	BDL	BDL	----	----
Zinc	No	-	-	0.01	BDL	----	BDL	BDL	----	----
VOCs										
2-Propanone (Acetone)	No	1.00E+04	***	0.5	BDL	BDL	BDL	BDL	BDL	BDL
Benzene	No	5.40E+01	1.75E+03	0.005	BDL	BDL	BDL	BDL	BDL	BDL
Bromodichloromethane	No	2.62E+01	6.74E+03	0.005	BDL	BDL	BDL	BDL	BDL	BDL
2-Butanone (MEK)	No	1.00E+04	***	0.05	BDL	BDL	BDL	BDL	BDL	BDL
Chloroform	No	1.13E+01	7.92E+03	0.005	BDL	BDL	BDL	BDL	BDL	BDL
Ethylbenzene	No	1.00E+04	1.69E+02	0.005	BDL	BDL	BDL	BDL	BDL	BDL
Methyl tert-Butyl Ether	No	1.81E+03	***	0.005	BDL	BDL	BDL	BDL	BDL	BDL
Methylene Chloride	No	2.24E+02	***	0.05	BDL	BDL	BDL	BDL	BDL	BDL
Styrene	No	1.00E+04	3.10E+02	0.005	BDL	BDL	BDL	BDL	BDL	BDL
Tetrachloroethene	No	2.95E+00	2.00E+02	0.005	BDL	BDL	BDL	BDL	BDL	BDL
Toluene	No	1.00E+04	5.26E+02	0.005	BDL	BDL	BDL	BDL	BDL	BDL
Trichloroethene	No	1.42E+01	1.10E+03	0.005	BDL	BDL	BDL	BDL	BDL	BDL
Xylenes (Total)	No	1.57E+03	1.75E+02	0.02	BDL	BDL	BDL	BDL	BDL	BDL
SVOCs										
Acenaphthene	No	1.00E+04	4.24E+00	0.002	BDL	----	BDL	BDL	BDL	BDL
Acenaphthylene	No	1.00E+04	3.93E+00	0.002	BDL	----	BDL	BDL	BDL	BDL
Anthracene	No	1.00E+04	4.34E-02	0.002	BDL	----	BDL	BDL	BDL	BDL
Benzo(b)fluoranthene	No	7.53E+00	1.50E-03	0.001	BDL	----	BDL	BDL	BDL	BDL
Chrysene	No	8.12E+02	1.60E-03	0.001	BDL	----	BDL	BDL	BDL	BDL
Fluoranthene	No	1.00E+04	2.06E-01	0.002	BDL	----	BDL	BDL	BDL	BDL
Fluorene	No	1.00E+04	1.98E+00	0.002	BDL	----	BDL	BDL	BDL	BDL
Hexachlorobenzene	No	6.95E-01	6.20E+00	0.004	BDL	----	BDL	BDL	BDL	BDL
Naphthalene	No	8.62E+02	3.10E+01	0.002	BDL	----	BDL	BDL	BDL	BDL
Phenanthrene	No	1.00E+04	1.00E+00	0.002	BDL	----	BDL	BDL	BDL	BDL
Pyrene	No	1.00E+04	1.35E-01	0.002	BDL	----	BDL	BDL	BDL	BDL
PCRs										
C6 - C8 Fraction	No	1.15E+03	5.23E+00	0.02	BDL	----	BDL	BDL	BDL	BDL
C9 - C16 Fraction	No	9.98E+03	2.80E+00	0.5	BDL	----	BDL	BDL	BDL	BDL
C17 - C35 Fraction	No	1.78E+02	2.80E+00	0.5	BDL	----	BDL	BDL	BDL	BDL

Notes:

BDL denotes below detection limit.

The highlighted value(s) in bold indicates exceedance of the adopted RBRG, while the underlined value(s) indicate exceedance of the solubility limit.

"-": No criteria / solubility limit is provided in RBRG.

"-----": Not tested according to the QA/QC Requirements in **Table 2-2**

*** indicates that the solubility limit exceeds the 'ceiling limit' therefore the RBRG applies.

APPENDIX F
LABORATORY TESTING REPORTS

CHAIN OF CUSTODY DOCUMENTATION

H 044302



ALS Laboratory Group

CLIENT: Paul Y - CREC Joint Venture
 ADDRESS / OFFICE: Wang Lee St. Yuen Long Industrial Estate
 PROJECT MANAGER (PM):

SAMPLER: Justia Yu
 MOBILE: 9513 7829 7259
 PHONE:

PROJECT ID:
 SITE: P.O. NO.:

EMAIL REPORT TO: Refer To FS3
 EMAIL INVOICE TO: (if different to report)

RESULTS REQUIRED (Date): QUOTE NO.:

ANALYSIS REQUIRED including SUITES (note - suite codes must be listed to attract suite prices)

FOR LABORATORY USE ONLY
 COOLER SEAL (circle appropriate)
 Intact: Yes No (N/A)
 SAMPLE TEMPERATURE
 CHILLED: (Yes) No

COMMENTS / SPECIAL HANDLING / STORAGE OR DIPOSAL:

Metals	Chromium & VI	VOC	SVOC	PCRs															
✓	✓	✓	✓	✓															
✓	✓	✓	✓	✓															
✓	✓	✓	✓	✓															
✓	✓	✓	✓	✓															
✓	✓	✓	✓	✓															
		✓																	

Notes: e.g. Highly contaminated samples
 e.g. "High PAHs expected"
 Extra volume for QC or trace LORs etc.

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION	
ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles
1	ENV-BH37 (0.5m)	S	29/06/21	16:00	Glass	1
2	ENV-BH37 (0.5m) Duplicate	S	"	"	"	1
3	ENV-BH36 (0.5m)	S	30/06/21	15:25	Glass	1
4	ENV-BH35 (0.5m)	S	30/06/21	15:12	Glass	1
5	ENV-BH34 (0.5m)	S	30/06/21	15:20	Glass	1
6	Trip Blank	W	30/06/21	15:30	Glass	2

Wet

RELINQUISHED BY:
 Name: Karina Chan Date: 30/06/21
 Of: Cinotech Consultants Ltd. Time: 15:30
 Name: Date:
 Of: Time:

RECEIVED BY:
 Name: Date: 30/6
 Of: [Signature] Time: 30/6
 Name: Date:
 Of: Time:

METHOD OF SHIPMENT
 Con' Note No:
 Transport Co:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved;
 V = VOA Vial HCl Preserved; VS = VOA Vial Sulphuric Preserved; SG = Sulfuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
 Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottle; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soil; B = Unpreserved Bag.






CERTIFICATE OF ANALYSIS

Client	: PAUL Y - CREC JOINT VENTURE	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 16
Contact	: TEDDY ORR	Contact	: Richard Fung	Work Order	: HK2126089
Address	: 11/F, PAUL Y CENTRE, 51 HUNG TO ROAD, KWUN TONG, KL, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: teddyorr@pyengineering.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: ---	Telephone	: +852 2610 1044		
Facsimile	: +852 2621 5618	Facsimile	: +852 2610 2021		
Project	: DC/2019/10 - YUEN LONG EFFLUENT POLISHING PLANT - MAIN WORKS FOR STAGE 1			Date Samples Received	: 30-Jun-2021
Order number	: P5120-002A	Quote number	: HKE/1853/2021_V2	Issue Date	: 12-Jul-2021
C-O-C number	: H044302			No. of samples received	: 6
Site	:			No. of samples analysed	: 6

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

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

Signatories	Position	Authorised results for
 Anh Ngoc Huynh .	Senior Chemist	Organics_ENV
 Lin Wai Yu , Iris	Assistant Manager - Inorganics	Inorganics
 Wong Wing , Kenneth	Manager - Metals	Metals_ENV



General Comments

This report supersedes any previous report(s) with this reference. 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-Jun-2021 to 12-Jul-2021.

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: HK2126089

Sample(s) was/ were picked up from client by ALS staff. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of soil/sediment sample(s) was / were reported on dry weight basis.

EP070 is the numeric code for internal use. Test method for C6-C9 Fraction of TPH is EP071.

Sample(s) as received, digested by in-house method E-ASTM D3974-09 prior to determination of metals. The in-house method is developed based on ASTM D3974-09 method.

Test Method - EG3060 - Sample(s) as received, digested by in-house method E-3060 prior to the determination of Hexavalent Chromium (Cr6+). The in-house method is developed based on USEPA method 3060.



Analytical Results

Sub-Matrix: SOIL

Sample ID

Sampling date / time

				ENV-BH37 (0.5m)	ENV-BH37 (0.5m) Duplicate	ENV-BH36 (0.5m)	ENV-BH35 (0.5m)	ENV-BH34 (0.5m)
				29-Jun-2021 16:00	29-Jun-2021 16:00	30-Jun-2021 15:25	30-Jun-2021 15:12	30-Jun-2021 15:20
Compound	CAS Number	LOR	Unit	HK2126089-001	HK2126089-002	HK2126089-003	HK2126089-004	HK2126089-005
EA/ED: Physical and Aggregate Properties								
EA055: Moisture Content (dried @ 103°C)	----	0.1	%	18.5	18.3	27.6	15.0	10.1
EG: Metals and Major Cations								
EG020: Antimony	7440-36-0	1	mg/kg	2	2	<1	<1	<1
EG020: Arsenic	7440-38-2	1	mg/kg	9	8	4	<1	4
EG020: Barium	7440-39-3	1.0	mg/kg	142	122	61.1	14.2	80.2
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
EG020: Cobalt	7440-48-4	1.0	mg/kg	17.1	16.2	7.9	1.3	14.6
EG020: Copper	7440-50-8	1	mg/kg	37	36	24	6	34
EG020: Lead	7439-92-1	1	mg/kg	33	33	74	142	66
EG020: Manganese	7439-96-5	1.0	mg/kg	2220	1650	839	315	625
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EG020: Molybdenum	7439-98-7	1	mg/kg	<1	<1	3	9	3
EG020: Nickel	7440-02-0	1	mg/kg	18	17	10	<1	26
EG020: Tin	7440-31-5	1.0	mg/kg	32.6	30.3	12.8	5.0	17.6
EG020: Zinc	7440-66-6	1	mg/kg	96	87	67	19	144
EG049: Trivalent Chromium	16065-83-1	1.0	mg/kg	39.1	37.2	24.0	1.6	33.5
EG3060: Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Acenaphthylene	208-96-8	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Acenaphthene	83-32-9	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Fluorene	86-73-7	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Phenanthrene	85-01-8	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Anthracene	120-12-7	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Fluoranthene	206-44-0	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Pyrene	129-00-0	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Benz(a)anthracene	56-55-3	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Chrysene	218-01-9	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500



Sub-Matrix: SOIL				Sample ID	ENV-BH37 (0.5m)	ENV-BH37 (0.5m) Duplicate	ENV-BH36 (0.5m)	ENV-BH35 (0.5m)	ENV-BH34 (0.5m)
Sampling date / time					29-Jun-2021 16:00	29-Jun-2021 16:00	30-Jun-2021 15:25	30-Jun-2021 15:12	30-Jun-2021 15:20
Compound	CAS Number	LOR	Unit	HK2126089-001	HK2126089-002	HK2126089-003	HK2126089-004	HK2126089-005	
EP-074 SR-E: Halogenated Aliohatics - Continued									
EP074_SR: Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
EP-074_SR-G: Trihalomethanes (THM)									
EP074_SR: Chloroform	67-66-3	0.04	mg/kg	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
EP074_SR: Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
EP-074_SR-I: Methyl-tert-butyl Ether									
EP074_SR: Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	92.8	92.9	90.8	96.1	97.8	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	87.0	88.4	85.5	87.8	91.3	
EP-080_SRS: TPH(Volatile)/BTEX Surrogate									
EP070HK_SR: Dibromofluoromethane	1868-53-7	0.1	%	90.4	93.4	90.5	91.9	90.3	
EP070HK_SR: Toluene-D8	2037-26-5	0.1	%	96.7	95.0	95.0	96.4	94.9	
EP070HK_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	106	104	102	105	102	
EP-074_SR-S: VOC Surrogates									
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	90.4	93.4	90.5	91.9	90.3	
EP074_SR: Toluene-D8	2037-26-5	0.1	%	96.7	95.0	95.0	96.4	94.9	
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	106	104	102	105	102	



Sub-Matrix: WATER				Sample ID	Trip Blank	---	---	---	---
				Sampling date / time	30-Jun-2021 15:30	---	---	---	---
Compound	CAS Number	LOR	Unit	HK2126089-006	---	---	---	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH)									
EP074_SR: Benzene	71-43-2	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Toluene	108-88-3	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Ethylbenzene	100-41-4	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	<10	---	---	---	---	---
EP074_SR: Styrene	100-42-5	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: ortho-Xylene	95-47-6	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Xylenes (Total)	----	20	µg/L	<20	---	---	---	---	---
EP-074_SR-B: Oxygenated Compounds									
EP074_SR: 2-Propanone (Acetone)	67-64-1	500	µg/L	<500	---	---	---	---	---
EP074_SR: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	---	---	---	---	---
EP-074_SR-E: Halogenated Aliphatics									
EP074_SR: Methylene chloride	75-09-2	50	µg/L	<50	---	---	---	---	---
EP074_SR: Trichloroethene	79-01-6	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Tetrachloroethene	127-18-4	5.0	µg/L	<5.0	---	---	---	---	---
EP-074_SR-G: Trihalomethanes (THM)									
EP074_SR: Chloroform	67-66-3	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Bromodichloromethane	75-27-4	5.0	µg/L	<5.0	---	---	---	---	---
EP-074_SR-I: Methyl-tert-butyl Ether									
EP074_SR: Methyl tert-Butyl Ether (MTBE)	1634-04-4	5.0	µg/L	<5.0	---	---	---	---	---
EP-074_SR-S: VOC Surrogates									
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	95.0	---	---	---	---	---
EP074_SR: Toluene-D8	2037-26-5	0.1	%	97.6	---	---	---	---	---
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	107	---	---	---	---	---



Laboratory Duplicate (DUP) Report

Matrix: SOIL				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 3770630)								
HK2126089-001	ENV-BH37 (0.5m)	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	18.5	18.2	1.8
EG: Metals and Major Cations (QC Lot: 3770598)								
HK2126066-002	Anonymous	EG3060: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<1.0	<1.0	0.0
EG: Metals and Major Cations (QC Lot: 3770602)								
HK2126066-002	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Barium	7440-39-3	0.5	mg/kg	16.8	17.2	2.6
		EG020: Cobalt	7440-48-4	0.5	mg/kg	<1.0	<1.0	0.0
		EG020: Manganese	7439-96-5	0.5	mg/kg	13.7	12.8	6.6
		EG020: Tin	7440-31-5	0.5	mg/kg	<1.0	<1.0	0.0
		EG020: Antimony	7440-36-0	1	mg/kg	<1	<1	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	<1	<1	0.0
		EG020: Copper	7440-50-8	1	mg/kg	3	3	0.0
		EG020: Lead	7439-92-1	1	mg/kg	15	14	8.9
		EG020: Molybdenum	7439-98-7	1	mg/kg	<1	<1	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	1	1	0.0
EG020: Zinc	7440-66-6	1	mg/kg	18	20	13.5		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3770853)								
HK2126089-001	ENV-BH37 (0.5m)	Naphthalene	91-20-3	50	µg/kg	<0.500 mg/kg	<500	0.0
		Acenaphthylene	208-96-8	50	µg/kg	<0.500 mg/kg	<500	0.0
		Acenaphthene	83-32-9	50	µg/kg	<0.500 mg/kg	<500	0.0
		Fluorene	86-73-7	50	µg/kg	<0.500 mg/kg	<500	0.0
		Phenanthrene	85-01-8	50	µg/kg	<0.500 mg/kg	<500	0.0
		Anthracene	120-12-7	50	µg/kg	<0.500 mg/kg	<500	0.0
		Fluoranthene	206-44-0	50	µg/kg	<0.500 mg/kg	<500	0.0
		Pyrene	129-00-0	50	µg/kg	<0.500 mg/kg	<500	0.0
		Benz(a)anthracene	56-55-3	50	µg/kg	<0.500 mg/kg	<500	0.0
		Chrysene	218-01-9	50	µg/kg	<0.500 mg/kg	<500	0.0
		Benzo(b)fluoranthene	205-99-2	50	µg/kg	<0.500 mg/kg	<500	0.0
		Benzo(k)fluoranthene	207-08-9	50	µg/kg	<0.500 mg/kg	<500	0.0



Matrix: SOIL				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3770853) - Continued								
HK2126089-001	ENV-BH37 (0.5m)	Benzo(a)pyrene	50-32-8	50	µg/kg	<0.500 mg/kg	<500	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	50	µg/kg	<0.500 mg/kg	<500	0.0
		Dibenz(a.h)anthracene	53-70-3	50	µg/kg	<0.500 mg/kg	<500	0.0
		Benzo(g.h.i)perylene	191-24-2	50	µg/kg	<0.500 mg/kg	<500	0.0
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3770853)								
HK2126089-001	ENV-BH37 (0.5m)	Bis(2-ethylhexyl)phthalate	117-81-7	1000	µg/kg	<5.00 mg/kg	<5000	0.0
		Hexachlorobenzene (HCB)	118-74-1	50	µg/kg	<0.200 mg/kg	<200	0.0
		Phenol	108-95-2	500	µg/kg	<0.50 mg/kg	<500	0.0
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3770854)								
HK2126089-001	ENV-BH37 (0.5m)	C9 - C16 Fraction	----	200	mg/kg	<200	<200	0.0
		C17 - C35 Fraction	----	500	mg/kg	<500	<500	0.0
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3773847)								
HK2125805-001	Anonymous	C6 - C8 Fraction	----	5	mg/kg	<5	<5	0.0
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3773848)								
HK2125805-001	Anonymous	Benzene	71-43-2	0.1	mg/kg	<0.2	<0.2	0.0
		Toluene	108-88-3	0.2	mg/kg	<0.5	<0.5	0.0
		Ethylbenzene	100-41-4	0.2	mg/kg	<0.5	<0.5	0.0
		Styrene	100-42-5	0.2	mg/kg	<0.2	<0.2	0.0
		ortho-Xylene	95-47-6	0.2	mg/kg	<0.5	<0.5	0.0
		meta- & para-Xylene	108-38-3	0.4	mg/kg	<1.0	<1.0	0.0
		Xylenes (Total)	106-42-3	----	1	mg/kg	<2.0	<2.0
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3773848)								
HK2125805-001	Anonymous	2-Propanone (Acetone)	67-64-1	2	mg/kg	<50	<50	0.0
		2-Butanone (MEK)	78-93-3	2	mg/kg	<2	<2	0.0
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3773848)								
HK2125805-001	Anonymous	Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	<0.04	0.0
		Trichloroethene	79-01-6	0.1	mg/kg	<0.1	<0.1	0.0
		Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	0.0
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3773848)								
HK2125805-001	Anonymous	Chloroform	67-66-3	0.04	mg/kg	<0.04	<0.04	0.0



Matrix: SOIL				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3773848) - Continued								
HK2125805-001	Anonymous	Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	<0.1	0.0
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3773848)								
HK2125805-001	Anonymous	Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.2	mg/kg	<0.5	<0.5	0.0

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

Matrix: SOIL		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 (QC Lot: 3770598)											
EG3060: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	2.5 mg/kg	102	----	85.0	1120000	----	----
EG: Metals and Major Cations (QC Lot: 3770602)											
EG020: Antimony	7440-36-0	1	mg/kg	<1	5 mg/kg	97.4	----	85.0	108	----	----
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	94.6	----	87.2	110	----	----
EG020: Barium	7440-39-3	0.5	mg/kg	<0.5	5 mg/kg	91.4	----	85.0	110	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	0.5 mg/kg	98.7	----	85.0	113	----	----
EG020: Cobalt	7440-48-4	0.5	mg/kg	<0.5	5 mg/kg	97.4	----	89.8	110	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	100	----	92.0	115	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	94.3	----	86.7	115	----	----
EG020: Manganese	7439-96-5	0.5	mg/kg	<0.5	5 mg/kg	94.6	----	85.8	108	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	101	----	86.6	115	----	----
EG020: Molybdenum	7439-98-7	1	mg/kg	<1	5 mg/kg	102	----	85.2	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	96.6	----	90.6	111	----	----
EG020: Tin	7440-31-5	0.5	mg/kg	<0.5	5 mg/kg	98.1	----	85.0	109	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	106	----	90.9	115	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3770853)											
Naphthalene	91-20-3	50	µg/kg	<50	250 µg/kg	99.1	----	85.0	106	----	----
Acenaphthylene	208-96-8	50	µg/kg	<50	250 µg/kg	96.2	----	79.0	108	----	----
Acenaphthene	83-32-9	50	µg/kg	<50	250 µg/kg	99.0	----	82.0	104	----	----
Fluorene	86-73-7	50	µg/kg	<50	250 µg/kg	94.3	----	77.0	105	----	----
Phenanthrene	85-01-8	50	µg/kg	<50	250 µg/kg	94.7	----	77.0	110	----	----



Matrix: SOIL		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 (%)	
						LCS	DCS	Low	High	Value	Control Limit
Method: Compound	CAS Number										
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3770853) - Continued											
Anthracene	120-12-7	50	µg/kg	<50	250 µg/kg	101	----	76.0	108	----	----
Fluoranthene	206-44-0	50	µg/kg	<50	250 µg/kg	96.2	----	81.0	109	----	----
Pyrene	129-00-0	50	µg/kg	<50	250 µg/kg	95.6	----	82.0	111	----	----
Benz(a)anthracene	56-55-3	50	µg/kg	<50	250 µg/kg	90.5	----	81.0	107	----	----
Chrysene	218-01-9	50	µg/kg	<50	250 µg/kg	103	----	83.0	121	----	----
Benzo(b)fluoranthene	205-99-2	50	µg/kg	<50	250 µg/kg	76.6	----	48.0	118	----	----
Benzo(k)fluoranthene	207-08-9	50	µg/kg	<50	250 µg/kg	94.3	----	64.0	129	----	----
Benzo(a)pyrene	50-32-8	50	µg/kg	<50	250 µg/kg	78.1	----	47.0	107	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	50	µg/kg	<50	250 µg/kg	74.6	----	55.0	97.0	----	----
Dibenz(a,h)anthracene	53-70-3	50	µg/kg	<50	250 µg/kg	62.4	----	34.0	120	----	----
Benzo(g,h,i)perylene	191-24-2	50	µg/kg	<50	250 µg/kg	60.1	----	34.0	119	----	----
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3770853)											
Phenol	108-95-2	500	µg/kg	<500	250 µg/kg	103	----	61.0	113	----	----
Hexachlorobenzene (HCB)	118-74-1	50	µg/kg	<50	250 µg/kg	95.7	----	75.0	110	----	----
Bis(2-ethylhexyl)phthalate	117-81-7	1000	µg/kg	<1000	250 µg/kg	104	----	89.0	128	----	----
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3770854)											
C9 - C16 Fraction	----	200	mg/kg	<200	31.5 mg/kg	89.0	----	76.0	104	----	----
C17 - C35 Fraction	----	500	mg/kg	<500	67.5 mg/kg	97.3	----	56.0	103	----	----
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3773847)											
C6 - C8 Fraction	----	5	mg/kg	<5	4.5 mg/kg	106	----	80.0	118	----	----
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3773848)											
Benzene	71-43-2	0.1	mg/kg	<0.1	0.25 mg/kg	93.1	----	79.0	121	----	----
Toluene	108-88-3	0.2	mg/kg	<0.2	0.25 mg/kg	105	----	78.0	124	----	----
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.25 mg/kg	108	----	79.0	121	----	----
meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	0.5 mg/kg	107	----	79.0	121	----	----
	106-42-3										
Styrene	100-42-5	0.2	mg/kg	<0.2	0.25 mg/kg	95.4	----	78.0	121	----	----
ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	0.25 mg/kg	109	----	79.0	119	----	----
Xylenes (Total)	----	1	mg/kg	<1.0	0.75 mg/kg	108	----	79.0	121	----	----
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3773848)											



Matrix: SOIL		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-074_SR-B: Oxygenated Compounds (QC Lot: 3773848) - Continued											
2-Propanone (Acetone)	67-64-1	2	mg/kg	<2	2.5 mg/kg	102	----	77.0	124	----	----
2-Butanone (MEK)	78-93-3	2	mg/kg	<2	2.5 mg/kg	91.4	----	79.0	121	----	----
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3773848)											
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	0.25 mg/kg	110	----	79.0	122	----	----
Trichloroethene	79-01-6	0.1	mg/kg	<0.1	0.25 mg/kg	91.0	----	77.0	122	----	----
Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	0.25 mg/kg	110	----	79.0	119	----	----
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3773848)											
Chloroform	67-66-3	0.04	mg/kg	<0.04	0.25 mg/kg	90.8	----	79.0	122	----	----
Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	0.25 mg/kg	94.3	----	78.0	121	----	----
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3773848)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.2	mg/kg	<0.2	0.25 mg/kg	90.1	----	78.0	123	----	----
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-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3774549)											
Benzene	71-43-2	0.5	µg/L	<0.5	2 µg/L	109	----	80.0	121	----	----
Toluene	108-88-3	0.5	µg/L	<0.5	2 µg/L	105	----	76.0	121	----	----
Ethylbenzene	100-41-4	0.5	µg/L	<0.5	2 µg/L	109	----	79.0	123	----	----
meta- & para-Xylene	108-38-3 106-42-3	1	µg/L	<1	4 µg/L	105	----	78.0	121	----	----
Styrene	100-42-5	0.5	µg/L	<0.5	2 µg/L	94.3	----	78.0	122	----	----
ortho-Xylene	95-47-6	0.5	µg/L	<0.5	2 µg/L	110	----	78.0	121	----	----
Xylenes (Total)	----	2	µg/L	<2	6 µg/L	107	----	79.0	121	----	----
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3774549)											
2-Propanone (Acetone)	67-64-1	5	µg/L	<5	20 µg/L	109	----	79.0	124	----	----
2-Butanone (MEK)	78-93-3	5	µg/L	<5	20 µg/L	106	----	80.0	121	----	----
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3774549)											
Methylene chloride	75-09-2	5	µg/L	<5	2 µg/L	95.9	----	78.0	120	----	----



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-074_SR-E: Halogenated Aliphatics (QC Lot: 3774549) - Continued											
Trichloroethene	79-01-6	0.5	µg/L	<0.5	2 µg/L	108	----	78.0	127	----	----
Tetrachloroethene	127-18-4	0.5	µg/L	<0.5	2 µg/L	108	----	81.0	121	----	----
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3774549)											
Chloroform	67-66-3	0.5	µg/L	<0.5	2 µg/L	107	----	76.0	124	----	----
Bromodichloromethane	75-27-4	0.5	µg/L	<0.5	2 µg/L	105	----	78.0	119	----	----
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3774549)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	µg/L	<0.5	2 µg/L	106	----	78.0	123	----	----



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

Matrix: SOIL

					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	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 (QC Lot: 3770598)										
HK2126066-001	Anonymous	EG3060: Hexavalent Chromium	18540-29-9	2.5 mg/kg	96.6	----	75.0	125	----	----
EG: Metals and Major Cations (QC Lot: 3770602)										
HK2126066-001	Anonymous	EG020: Antimony	7440-36-0	5 mg/kg	108	----	75.0	125	----	----
		EG020: Arsenic	7440-38-2	5 mg/kg	92.1	----	75.0	125	----	----
		EG020: Barium	7440-39-3	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Cadmium	7440-43-9	0.5 mg/kg	85.8	----	75.0	125	----	----
		EG020: Cobalt	7440-48-4	5 mg/kg	76.8	----	75.0	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	78.4	----	75.0	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Manganese	7439-96-5	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	113	----	75.0	125	----	----
		EG020: Molybdenum	7439-98-7	5 mg/kg	114	----	75.0	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	84.3	----	75.0	125	----	----
		EG020: Tin	7440-31-5	5 mg/kg	101	----	75.0	125	----	----
EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75.0	125	----	----		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3770853)										
HK2126089-002	ENV-BH37 (0.5m) Duplicate	Naphthalene	91-20-3	250 µg/kg	90.1	----	50.0	130	----	----
		Acenaphthylene	208-96-8	250 µg/kg	90.5	----	50.0	130	----	----
		Acenaphthene	83-32-9	250 µg/kg	87.4	----	50.0	130	----	----
		Fluorene	86-73-7	250 µg/kg	83.7	----	50.0	130	----	----
		Phenanthrene	85-01-8	250 µg/kg	95.2	----	50.0	130	----	----
		Anthracene	120-12-7	250 µg/kg	85.9	----	50.0	130	----	----
		Fluoranthene	206-44-0	250 µg/kg	91.0	----	50.0	130	----	----



Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3770853) - Continued										
HK2126089-002	ENV-BH37 (0.5m) Duplicate	Pyrene	129-00-0	250 µg/kg	90.5	----	50.0	130	----	----
		Benz(a)anthracene	56-55-3	250 µg/kg	86.8	----	50.0	130	----	----
		Chrysene	218-01-9	250 µg/kg	91.5	----	50.0	130	----	----
		Benzo(b)fluoranthene	205-99-2	250 µg/kg	78.2	----	50.0	130	----	----
		Benzo(k)fluoranthene	207-08-9	250 µg/kg	81.8	----	50.0	130	----	----
		Benzo(a)pyrene	50-32-8	250 µg/kg	70.3	----	50.0	130	----	----
		Indeno(1.2.3.cd)pyrene	193-39-5	250 µg/kg	68.3	----	50.0	130	----	----
		Dibenz(a,h)anthracene	53-70-3	250 µg/kg	60.7	----	50.0	130	----	----
		Benzo(g,h,i)perylene	191-24-2	250 µg/kg	60.8	----	50.0	130	----	----
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3770853)										
HK2126089-002	ENV-BH37 (0.5m) Duplicate	Phenol	108-95-2	250 µg/kg	94.4	----	50.0	130	----	----
		Hexachlorobenzene (HCB)	118-74-1	250 µg/kg	84.4	----	50.0	130	----	----
		Bis(2-ethylhexyl)phthalate	117-81-7	250 µg/kg	118	----	50.0	130	----	----
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3770854)										
HK2126089-003	ENV-BH36 (0.5m)	C9 - C16 Fraction	----	31.5 mg/kg	85.0	----	50.0	130	----	----
		C17 - C35 Fraction	----	67.5 mg/kg	95.6	----	50.0	130	----	----
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3773847)										
HK2125805-002	Anonymous	C6 - C8 Fraction	----	4.5 mg/kg	102	----	50.0	130	----	----
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3773848)										
HK2125916-001	Anonymous	Benzene	71-43-2	0.25 mg/kg	99.3	----	50.0	130	----	----
		Toluene	108-88-3	0.25 mg/kg	108	----	50.0	130	----	----
		Ethylbenzene	100-41-4	0.25 mg/kg	107	----	50.0	130	----	----
		meta- & para-Xylene	108-38-3	0.5 mg/kg	108	----	50.0	130	----	----
			106-42-3							
		Styrene	100-42-5	0.25 mg/kg	101	----	50.0	130	----	----
		ortho-Xylene	95-47-6	0.25 mg/kg	111	----	50.0	130	----	----
		Xylenes (Total)	----	0.75 mg/kg	109	----	50.0	130	----	----
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3773848)										
HK2125916-001	Anonymous	2-Propanone (Acetone)	67-64-1	2.5 mg/kg	105	----	50.0	130	----	----



Matrix: SOIL				<i>Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report</i>						
<i>Laboratory sample ID</i>	<i>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>
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3773848) - Continued										
HK2125916-001	Anonymous	2-Butanone (MEK)	78-93-3	2.5 mg/kg	90.4	----	50.0	130	----	----
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3773848)										
HK2125916-001	Anonymous	Methylene chloride	75-09-2	0.25 mg/kg	101	----	50.0	130	----	----
		Trichloroethene	79-01-6	0.25 mg/kg	107	----	50.0	130	----	----
		Tetrachloroethene	127-18-4	0.25 mg/kg	106	----	50.0	130	----	----
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3773848)										
HK2125916-001	Anonymous	Chloroform	67-66-3	0.25 mg/kg	91.0	----	50.0	130	----	----
		Bromodichloromethane	75-27-4	0.25 mg/kg	94.3	----	50.0	130	----	----
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3773848)										
HK2125916-001	Anonymous	Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.25 mg/kg	92.9	----	50.0	130	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		<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
EP-080_SRS: TPH(Volatile)/BTEX Surrogate			
Dibromofluoromethane	1868-53-7	80	120
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121
EP-074_SR-S: VOC Surrogates			
Dibromofluoromethane	1868-53-7	80	120
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121

Sub-Matrix: WATER		<i>Recovery Limits (%)</i>	
<i>Compound</i>	<i>CAS Number</i>	<i>Low</i>	<i>High</i>
EP-074_SR-S: VOC Surrogates			



Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-074_SR-S: VOC Surrogates - Continued			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115



CERTIFICATE OF ANALYSIS

Client	: PAUL Y - CREC JOINT VENTURE	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 22
Contact	: TEDDY ORR	Contact	: Richard Fung	Work Order	: HK2126936
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Facsimile	: +852 2621 5618	Facsimile	: +852 2610 2021		
Project	: DC/2019/10 - YUEN LONG EFFLUENT POLISHING PLANT - MAIN WORKS FOR STAGE 1			Date Samples Received	: 06-Jul-2021
Order number	: P5120-002A	Quote number	: HKE/1853/2021_V2	Issue Date	: 15-Jul-2021
C-O-C number	: H044303			No. of samples received	: 6
Site	:			No. of samples analysed	: 6

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

Signatories	Position	Authorised results for
Anh Ngoc Huynh .	Senior Chemist	Organics_ENV
Chan Siu Ming , Vico	Manager - Inorganics	Inorganics
Leung Chak Cheong , Mike	Assistant Manager - Metals	Metals_ENV



General Comments

This report supersedes any previous report(s) with this reference. 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-Jul-2021 to 15-Jul-2021.

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: HK2126936

Sample(s) was/ were picked up from client by ALS staff. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of soil/sediment sample(s) was / were reported on dry weight basis.

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

EP070 is the numeric code for internal use. Test method for C6-C9 Fraction of TPH is EP071.

Sample(s) as received, digested by in-house method E-ASTM D3974-09 prior to determination of metals. The in-house method is developed based on ASTM D3974-09 method.

Test Method - EG3060 - Sample(s) as received, digested by in-house method E-3060 prior to the determination of Hexavalent Chromium (Cr6+). The in-house method is developed based on USEPA method 3060.



Analytical Results

Sub-Matrix: SOIL

				Sample ID	ENV-BH37-1.5m	ENV-BH35-1.5m	ENV-BH35-3.0m	---	---
				Sampling date / time	05-Jul-2021 15:38	06-Jul-2021 13:37	06-Jul-2021 16:00	---	---
Compound	CAS Number	LOR	Unit	HK2126936-001	HK2126936-004	HK2126936-005	---	---	---
EA/ED: Physical and Aggregate Properties									
EA055: Moisture Content (dried @ 103°C)	----	0.1	%	22.9	27.2	26.5	---	---	---
EG: Metals and Major Cations									
EG020: Antimony	7440-36-0	1	mg/kg	2	1	<1	---	---	---
EG020: Arsenic	7440-38-2	1	mg/kg	8	11	4	---	---	---
EG020: Barium	7440-39-3	1.0	mg/kg	288	111	70.3	---	---	---
EG020: Cadmium	7440-43-9	0.2	mg/kg	0.3	<0.2	<0.2	---	---	---
EG020: Cobalt	7440-48-4	1.0	mg/kg	39.4	18.1	13.8	---	---	---
EG020: Copper	7440-50-8	1	mg/kg	55	49	146	---	---	---
EG020: Lead	7439-92-1	1	mg/kg	56	42	18	---	---	---
EG020: Manganese	7439-96-5	1.0	mg/kg	2780	1300	513	---	---	---
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	<0.05	---	---	---
EG020: Molybdenum	7439-98-7	1	mg/kg	1	<1	1	---	---	---
EG020: Nickel	7440-02-0	1	mg/kg	29	17	12	---	---	---
EG020: Tin	7440-31-5	1.0	mg/kg	8.2	24.8	24.3	---	---	---
EG020: Zinc	7440-66-6	1	mg/kg	170	87	115	---	---	---
EG049: Trivalent Chromium	16065-83-1	1.0	mg/kg	54.1	51.8	46.8	---	---	---
EG3060: Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	<1.0	<1.0	---	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.500	mg/kg	<0.500	<0.500	<0.500	---	---	---
EP076HK: Acenaphthylene	208-96-8	0.500	mg/kg	<0.500	<0.500	<0.500	---	---	---
EP076HK: Acenaphthene	83-32-9	0.500	mg/kg	<0.500	<0.500	<0.500	---	---	---
EP076HK: Fluorene	86-73-7	0.500	mg/kg	<0.500	<0.500	<0.500	---	---	---
EP076HK: Phenanthrene	85-01-8	0.500	mg/kg	<0.500	<0.500	<0.500	---	---	---
EP076HK: Anthracene	120-12-7	0.500	mg/kg	<0.500	<0.500	<0.500	---	---	---
EP076HK: Fluoranthene	206-44-0	0.500	mg/kg	<0.500	<0.500	<0.500	---	---	---
EP076HK: Pyrene	129-00-0	0.500	mg/kg	<0.500	<0.500	<0.500	---	---	---
EP076HK: Benz(a)anthracene	56-55-3	0.500	mg/kg	<0.500	<0.500	<0.500	---	---	---
EP076HK: Chrysene	218-01-9	0.500	mg/kg	<0.500	<0.500	<0.500	---	---	---
EP076HK: Benzo(b)fluoranthene	205-99-2	0.500	mg/kg	<0.500	<0.500	<0.500	---	---	---



Sub-Matrix: SOIL				Sample ID	ENV-BH37-1.5m	ENV-BH35-1.5m	ENV-BH35-3.0m	---	---
				Sampling date / time	05-Jul-2021 15:38	06-Jul-2021 13:37	06-Jul-2021 16:00	---	---
Compound	CAS Number	LOR	Unit	HK2126936-001	HK2126936-004	HK2126936-005	---	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued									
EP076HK: Benzo(k)fluoranthene	207-08-9	0.500	mg/kg	<0.500	<0.500	<0.500	---	---	---
EP076HK: Benzo(a)pyrene	50-32-8	0.500	mg/kg	<0.500	<0.500	<0.500	---	---	---
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.500	mg/kg	<0.500	<0.500	<0.500	---	---	---
EP076HK: Dibenz(a.h)anthracene	53-70-3	0.500	mg/kg	<0.500	<0.500	<0.500	---	---	---
EP076HK: Benzo(g.h.i)perylene	191-24-2	0.500	mg/kg	<0.500	<0.500	<0.500	---	---	---
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate									
EP076HK: Phenol	108-95-2	0.50	mg/kg	<0.50	<0.50	<0.50	---	---	---
EP076HK: Hexachlorobenzene (HCB)	118-74-1	0.200	mg/kg	<0.200	<0.200	<0.200	---	---	---
EP076HK: Bis(2-ethylhexyl)phthalate	117-81-7	5.00	mg/kg	<5.00	<5.00	<5.00	---	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH)									
EP070HK_SR: C6 - C8 Fraction	----	5	mg/kg	<5	<5	<5	---	---	---
EP071HK_SR: C9 - C16 Fraction	----	200	mg/kg	<200	<200	<200	---	---	---
EP071HK_SR: C17 - C35 Fraction	----	500	mg/kg	<500	<500	<500	---	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH)									
EP074_SR: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	---	---	---
EP074_SR: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	---	---	---
EP074_SR: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	---	---	---
EP074_SR: meta- & para-Xylene	108-38-3 106-42-3	1.0	mg/kg	<1.0	<1.0	<1.0	---	---	---
EP074_SR: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	---	---	---
EP074_SR: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	---	---	---
EP074_SR: Xylenes (Total)	----	2.0	mg/kg	<2.0	<2.0	<2.0	---	---	---
EP-074_SR-B: Oxygenated Compounds									
EP074_SR: 2-Propanone (Acetone)	67-64-1	50	mg/kg	<50	<50	<50	---	---	---
EP074_SR: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	<5	---	---	---
EP-074_SR-E: Halogenated Aliphatics									
EP074_SR: Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	<0.5	---	---	---
EP074_SR: Trichloroethene	79-01-6	0.1	mg/kg	<0.1	<0.1	<0.1	---	---	---
EP074_SR: Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	<0.04	<0.04	---	---	---
EP-074_SR-G: Trihalomethanes (THM)									



Sub-Matrix: SOIL				ENV-BH37-1.5m	ENV-BH35-1.5m	ENV-BH35-3.0m	---	---
Sample ID				05-Jul-2021 15:38	06-Jul-2021 13:37	06-Jul-2021 16:00	---	---
Sampling date / time				05-Jul-2021 15:38	06-Jul-2021 13:37	06-Jul-2021 16:00	---	---
Compound	CAS Number	LOR	Unit	HK2126936-001	HK2126936-004	HK2126936-005	---	---
EP-074_SR-G: Trihalomethanes (THM) - Continued								
EP074_SR: Chloroform	67-66-3	0.04	mg/kg	<0.04	<0.04	<0.04	---	---
EP074_SR: Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	<0.1	<0.1	---	---
EP-074_SR-I: Methyl-tert-butyl Ether								
EP074_SR: Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	mg/kg	<0.5	<0.5	<0.5	---	---
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	93.9	97.6	97.1	---	---
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	91.6	85.0	89.5	---	---
EP-080_SRS: TPH(Volatile)/BTEX Surrogate								
EP070HK_SR: Dibromofluoromethane	1868-53-7	0.1	%	91.5	95.2	92.1	---	---
EP070HK_SR: Toluene-D8	2037-26-5	0.1	%	95.1	96.1	95.9	---	---
EP070HK_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	105	103	105	---	---
EP-074_SR-S: VOC Surrogates								
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	91.5	95.2	92.1	---	---
EP074_SR: Toluene-D8	2037-26-5	0.1	%	95.1	96.1	95.9	---	---
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	105	103	105	---	---



Sub-Matrix: WATER				Sample ID	Field Blank	Equipment Blank	Trip Blank	---	---
				Sampling date / time	05-Jul-2021 13:30	05-Jul-2021 16:00	06-Jul-2021 16:00	----	----
Compound	CAS Number	LOR	Unit	HK2126936-002	HK2126936-003	HK2126936-006	-----	-----	-----
EG: Metals and Major Cations - Filtered									
EG020: Antimony	7440-36-0	1	µg/L	<1	<1	---	---	---	---
EG020: Arsenic	7440-38-2	10	µg/L	<10	<10	---	---	---	---
EG020: Barium	7440-39-3	1	µg/L	<1	<1	---	---	---	---
EG020: Cadmium	7440-43-9	0.2	µg/L	<0.2	<0.2	---	---	---	---
EG020: Cobalt	7440-48-4	1	µg/L	<1	<1	---	---	---	---
EG020: Copper	7440-50-8	1	µg/L	<1	<1	---	---	---	---
EG020: Lead	7439-92-1	1	µg/L	<1	<1	---	---	---	---
EG020: Manganese	7439-96-5	1	µg/L	<1	12	---	---	---	---
EG020: Mercury	7439-97-6	0.5	µg/L	<0.5	<0.5	---	---	---	---
EG020: Molybdenum	7439-98-7	1	µg/L	<1	<1	---	---	---	---
EG020: Nickel	7440-02-0	1	µg/L	<1	<1	---	---	---	---
EG020: Tin	7440-31-5	1	µg/L	<1	<1	---	---	---	---
EG020: Zinc	7440-66-6	10	µg/L	<10	<10	---	---	---	---
EG049: Trivalent Chromium	16065-83-1	20	µg/L	<20	<20	---	---	---	---
EG050: Hexavalent Chromium	18540-29-9	20	µg/L	<20	<20	---	---	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	2.0	µg/L	<2.0	<2.0	---	---	---	---
EP076HK: Acenaphthylene	208-96-8	2.0	µg/L	<2.0	<2.0	---	---	---	---
EP076HK: Acenaphthene	83-32-9	2.0	µg/L	<2.0	<2.0	---	---	---	---
EP076HK: Fluorene	86-73-7	2.0	µg/L	<2.0	<2.0	---	---	---	---
EP076HK: Phenanthrene	85-01-8	2.0	µg/L	<2.0	<2.0	---	---	---	---
EP076HK: Anthracene	120-12-7	2.0	µg/L	<2.0	<2.0	---	---	---	---
EP076HK: Fluoranthene	206-44-0	2.0	µg/L	<2.0	<2.0	---	---	---	---
EP076HK: Pyrene	129-00-0	2.0	µg/L	<2.0	<2.0	---	---	---	---
EP076HK: Benz(a)anthracene	56-55-3	2.0	µg/L	<2.0	<2.0	---	---	---	---
EP076HK: Chrysene	218-01-9	1.0	µg/L	<1.0	<1.0	---	---	---	---
EP076HK: Benzo(b)fluoranthene	205-99-2	1.0	µg/L	<1.0	<1.0	---	---	---	---
EP076HK: Benzo(k)fluoranthene	207-08-9	2.0	µg/L	<2.0	<2.0	---	---	---	---
EP076HK: Benzo(a)pyrene	50-32-8	2.0	µg/L	<2.0	<2.0	---	---	---	---
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	2.0	µg/L	<2.0	<2.0	---	---	---	---



Sub-Matrix: WATER				Sample ID	Field Blank	Equipment Blank	Trip Blank	---	---
				Sampling date / time	05-Jul-2021 13:30	05-Jul-2021 16:00	06-Jul-2021 16:00	----	----
Compound	CAS Number	LOR	Unit	HK2126936-002	HK2126936-003	HK2126936-006	-----	-----	-----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued									
EP076HK: Dibenz(a,h)anthracene	53-70-3	2.0	µg/L	<2.0	<2.0	---	---	---	---
EP076HK: Benzo(g,h,i)perylene	191-24-2	2.0	µg/L	<2.0	<2.0	---	---	---	---
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate									
EP076HK: Phenol	108-95-2	2.0	µg/L	<2.0	<2.0	---	---	---	---
EP076HK: Hexachlorobenzene (HCB)	118-74-1	4.0	µg/L	<4.0	<4.0	---	---	---	---
EP076HK: Bis(2-ethylhexyl)phthalate	117-81-7	20.0	µg/L	<20.0	<20.0	---	---	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH)									
EP070HK_SR: C6 - C8 Fraction	----	20	µg/L	<20	<20	---	---	---	---
EP071HK_SR: C9 - C16 Fraction	----	500	µg/L	<500	<500	---	---	---	---
EP071HK_SR: C17 - C35 Fraction	----	500	µg/L	<500	<500	---	---	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH)									
EP074_SR: Benzene	71-43-2	5.0	µg/L	<5.0	<5.0	<5.0	---	---	---
EP074_SR: Toluene	108-88-3	5.0	µg/L	<5.0	<5.0	<5.0	---	---	---
EP074_SR: Ethylbenzene	100-41-4	5.0	µg/L	<5.0	<5.0	<5.0	---	---	---
EP074_SR: meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	<10	<10	<10	---	---	---
EP074_SR: Styrene	100-42-5	5.0	µg/L	<5.0	<5.0	<5.0	---	---	---
EP074_SR: ortho-Xylene	95-47-6	5.0	µg/L	<5.0	<5.0	<5.0	---	---	---
EP074_SR: Xylenes (Total)	----	20	µg/L	<20	<20	<20	---	---	---
EP-074_SR-B: Oxygenated Compounds									
EP074_SR: 2-Propanone (Acetone)	67-64-1	500	µg/L	<500	<500	<500	---	---	---
EP074_SR: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	<50	<50	---	---	---
EP-074_SR-E: Halogenated Aliphatics									
EP074_SR: Methylene chloride	75-09-2	50	µg/L	<50	<50	<50	---	---	---
EP074_SR: Trichloroethene	79-01-6	5.0	µg/L	<5.0	<5.0	<5.0	---	---	---
EP074_SR: Tetrachloroethene	127-18-4	5.0	µg/L	<5.0	<5.0	<5.0	---	---	---
EP-074_SR-G: Trihalomethanes (THM)									
EP074_SR: Chloroform	67-66-3	5.0	µg/L	<5.0	<5.0	<5.0	---	---	---
EP074_SR: Bromodichloromethane	75-27-4	5.0	µg/L	<5.0	<5.0	<5.0	---	---	---
EP-074_SR-I: Methyl-tert-butyl Ether									



Sub-Matrix: WATER				Field Blank	Equipment Blank	Trip Blank	---	---
Sample ID				05-Jul-2021 13:30	05-Jul-2021 16:00	06-Jul-2021 16:00	----	----
Sampling date / time				HK2126936-002	HK2126936-003	HK2126936-006	-----	-----
Compound	CAS Number	LOR	Unit					
EP-074 SR-I: Methyl-tert-butyl Ether - Continued								
EP074_SR: Methyl tert-Butyl Ether (MTBE)	1634-04-4	5.0	µg/L	<5.0	<5.0	<5.0	---	---
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	91.8	51.5	---	---	---
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	91.0	97.0	---	---	---
EP-080_SRS: TPH(Volatile)/BTEX Surrogate								
EP070HK_SR: Dibromofluoromethane	1868-53-7	0.1	%	93.4	93.8	---	---	---
EP070HK_SR: Toluene-D8	2037-26-5	0.1	%	100	101	---	---	---
EP070HK_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	101	102	---	---	---
EP-074_SR-S: VOC Surrogates								
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	93.4	93.8	94.9	---	---
EP074_SR: Toluene-D8	2037-26-5	0.1	%	100	101	99.6	---	---
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	101	102	101	---	---



Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 3783246)								
HK2126936-001	ENV-BH37-1.5m	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	22.9	22.6	1.0
HK2127184-033	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	66.5	66.1	0.6
EG: Metals and Major Cations (QC Lot: 3778284)								
HK2126804-002	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Barium	7440-39-3	0.5	mg/kg	36.2	35.3	2.5
		EG020: Cobalt	7440-48-4	0.5	mg/kg	11.4	11.3	1.1
		EG020: Manganese	7439-96-5	0.5	mg/kg	445	442	0.5
		EG020: Tin	7440-31-5	0.5	mg/kg	2.3	2.2	0.0
		EG020: Antimony	7440-36-0	1	mg/kg	<1	<1	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	8	8	0.0
		EG020: Copper	7440-50-8	1	mg/kg	14	13	0.0
		EG020: Lead	7439-92-1	1	mg/kg	33	32	0.0
		EG020: Molybdenum	7439-98-7	1	mg/kg	<1	<1	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	25	24	0.0
EG020: Zinc	7440-66-6	1	mg/kg	88	87	1.3		
EG: Metals and Major Cations (QC Lot: 3778288)								
HK2126705-002	Anonymous	EG3060: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<1.0	<1.0	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3778662)								
HK2126936-001	ENV-BH37-1.5m	Naphthalene	91-20-3	50	µg/kg	<0.500 mg/kg	<500	0.0
		Acenaphthylene	208-96-8	50	µg/kg	<0.500 mg/kg	<500	0.0
		Acenaphthene	83-32-9	50	µg/kg	<0.500 mg/kg	<500	0.0
		Fluorene	86-73-7	50	µg/kg	<0.500 mg/kg	<500	0.0
		Phenanthrene	85-01-8	50	µg/kg	<0.500 mg/kg	<500	0.0
		Anthracene	120-12-7	50	µg/kg	<0.500 mg/kg	<500	0.0
		Fluoranthene	206-44-0	50	µg/kg	<0.500 mg/kg	<500	0.0
		Pyrene	129-00-0	50	µg/kg	<0.500 mg/kg	<500	0.0
		Benz(a)anthracene	56-55-3	50	µg/kg	<0.500 mg/kg	<500	0.0
		Chrysene	218-01-9	50	µg/kg	<0.500 mg/kg	<500	0.0
		Benzo(b)fluoranthene	205-99-2	50	µg/kg	<0.500 mg/kg	<500	0.0



Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3778662) - Continued									
HK2126936-001	ENV-BH37-1.5m	Benzo(k)fluoranthene	207-08-9	50	µg/kg	<0.500 mg/kg	<500	0.0	
		Benzo(a)pyrene	50-32-8	50	µg/kg	<0.500 mg/kg	<500	0.0	
		Indeno(1.2.3.cd)pyrene	193-39-5	50	µg/kg	<0.500 mg/kg	<500	0.0	
		Dibenz(a,h)anthracene	53-70-3	50	µg/kg	<0.500 mg/kg	<500	0.0	
		Benzo(g,h,i)perylene	191-24-2	50	µg/kg	<0.500 mg/kg	<500	0.0	
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3778662)									
HK2126936-001	ENV-BH37-1.5m	Bis(2-ethylhexyl)phthalate	117-81-7	1000	µg/kg	<5.00 mg/kg	<5000	0.0	
		Hexachlorobenzene (HCB)	118-74-1	50	µg/kg	<0.200 mg/kg	<200	0.0	
		Phenol	108-95-2	500	µg/kg	<0.50 mg/kg	<500	0.0	
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3778663)									
HK2126936-001	ENV-BH37-1.5m	C9 - C16 Fraction	----	200	mg/kg	<200	<200	0.0	
		C17 - C35 Fraction	----	500	mg/kg	<500	<500	0.0	
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3779469)									
HK2126378-001	Anonymous	C6 - C8 Fraction	----	5	mg/kg	<5	<5	0.0	
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3779470)									
HK2126378-001	Anonymous	Benzene	71-43-2	0.1	mg/kg	<0.2	<0.2	0.0	
		Toluene	108-88-3	0.2	mg/kg	<0.5	<0.5	0.0	
		Ethylbenzene	100-41-4	0.2	mg/kg	<0.5	<0.5	0.0	
		Styrene	100-42-5	0.2	mg/kg	<0.2	<0.2	0.0	
		ortho-Xylene	95-47-6	0.2	mg/kg	<0.5	<0.5	0.0	
		meta- & para-Xylene	108-38-3	0.4	mg/kg	<1.0	<1.0	0.0	
			106-42-3						
		Xylenes (Total)	----	1	mg/kg	<2.0	<2.0	0.0	
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3779470)									
HK2126378-001	Anonymous	2-Propanone (Acetone)	67-64-1	2	mg/kg	<50	<50	0.0	
		2-Butanone (MEK)	78-93-3	2	mg/kg	<2	<2	0.0	
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3779470)									
HK2126378-001	Anonymous	Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	<0.04	0.0	
		Trichloroethene	79-01-6	0.1	mg/kg	<0.1	<0.1	0.0	
		Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	0.0	
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3779470)									



Matrix: SOIL				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3779470) - Continued								
HK2126378-001	Anonymous	Chloroform	67-66-3	0.04	mg/kg	<0.04	<0.04	0.0
		Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	<0.1	0.0
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3779470)								
HK2126378-001	Anonymous	Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.2	mg/kg	<0.5	<0.5	0.0
Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 3778301)								
HK2126910-002	Anonymous	EG020: Cadmium	7440-43-9	0.2	µg/L	<0.2	<0.2	0.0
		EG020: Mercury	7439-97-6	0.5	µg/L	<0.5	<0.5	0.0
		EG020: Antimony	7440-36-0	1	µg/L	<1	<1	0.0
		EG020: Arsenic	7440-38-2	1	µg/L	<1	<1	0.0
		EG020: Barium	7440-39-3	1	µg/L	41	41	0.0
		EG020: Cobalt	7440-48-4	1	µg/L	<1	<1	0.0
		EG020: Copper	7440-50-8	1	µg/L	1	1	0.0
		EG020: Lead	7439-92-1	1	µg/L	<1	<1	0.0
		EG020: Manganese	7439-96-5	1	µg/L	22	23	5.1
		EG020: Molybdenum	7439-98-7	1	µg/L	<1	<1	0.0
		EG020: Nickel	7440-02-0	1	µg/L	<1	<1	0.0
		EG020: Tin	7440-31-5	1	µg/L	<1	<1	0.0
EG020: Zinc	7440-66-6	10	µg/L	10	10	0.0		
EG: Metals and Major Cations - Filtered (QC Lot: 3781809)								
HK2127128-001	Anonymous	EG020: Cadmium	7440-43-9	0.2	µg/L	<0.2	<0.2	0.0
		EG020: Mercury	7439-97-6	0.5	µg/L	<0.5	<0.5	0.0
		EG020: Antimony	7440-36-0	1	µg/L	<1	<1	0.0
		EG020: Arsenic	7440-38-2	1	µg/L	<10	<10	0.0
		EG020: Barium	7440-39-3	1	µg/L	<1	<1	0.0
		EG020: Cobalt	7440-48-4	1	µg/L	<1	<1	0.0
		EG020: Copper	7440-50-8	1	µg/L	<1	<1	0.0
		EG020: Lead	7439-92-1	1	µg/L	<1	<1	0.0
EG020: Manganese	7439-96-5	1	µg/L	<1	<1	0.0		



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 3781809) - Continued								
HK2127128-001	Anonymous	EG020: Molybdenum	7439-98-7	1	µg/L	<1	<1	0.0
		EG020: Nickel	7440-02-0	1	µg/L	<1	<1	0.0
		EG020: Tin	7440-31-5	1	µg/L	<1	<1	0.0
		EG020: Zinc	7440-66-6	10	µg/L	<10	<10	0.0
EG: Metals and Major Cations - Filtered (QC Lot: 3793486)								
HK2126378-009	Anonymous	EG050: Hexavalent Chromium	18540-29-9	20	µg/L	<20	<20	0.0

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

Matrix: SOIL		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 (QC Lot: 3778284)												
EG020: Antimony	7440-36-0	1	mg/kg	<1	5 mg/kg	99.3	----	85.0	108	----	----	
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	96.8	----	87.2	110	----	----	
EG020: Barium	7440-39-3	0.5	mg/kg	<0.5	5 mg/kg	93.8	----	85.0	110	----	----	
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	0.5 mg/kg	98.9	----	85.0	113	----	----	
EG020: Cobalt	7440-48-4	0.5	mg/kg	<0.5	5 mg/kg	98.0	----	89.8	110	----	----	
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	104	----	92.0	115	----	----	
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	94.2	----	86.7	115	----	----	
EG020: Manganese	7439-96-5	0.5	mg/kg	<0.5	5 mg/kg	93.5	----	85.8	108	----	----	
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	105	----	86.6	115	----	----	
EG020: Molybdenum	7439-98-7	1	mg/kg	<1	5 mg/kg	106	----	85.2	113	----	----	
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	99.4	----	90.6	111	----	----	
EG020: Tin	7440-31-5	0.5	mg/kg	<0.5	5 mg/kg	97.9	----	85.0	109	----	----	
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	108	----	90.9	115	----	----	
EG: Metals and Major Cations (QC Lot: 3778288)												
EG3060: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	2.5 mg/kg	97.5	----	85.0	1120000	----	----	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3778662)												
Naphthalene	91-20-3	50	µg/kg	<50	250 µg/kg	97.3	----	85.0	106	----	----	
Acenaphthylene	208-96-8	50	µg/kg	<50	250 µg/kg	96.7	----	79.0	108	----	----	



Matrix: SOIL		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: 3778662) - Continued											
Acenaphthene	83-32-9	50	µg/kg	<50	250 µg/kg	96.4	----	82.0	104	----	----
Fluorene	86-73-7	50	µg/kg	<50	250 µg/kg	93.3	----	77.0	105	----	----
Phenanthrene	85-01-8	50	µg/kg	<50	250 µg/kg	91.2	----	77.0	110	----	----
Anthracene	120-12-7	50	µg/kg	<50	250 µg/kg	96.6	----	76.0	108	----	----
Fluoranthene	206-44-0	50	µg/kg	<50	250 µg/kg	92.0	----	81.0	109	----	----
Pyrene	129-00-0	50	µg/kg	<50	250 µg/kg	93.2	----	82.0	111	----	----
Benz(a)anthracene	56-55-3	50	µg/kg	<50	250 µg/kg	98.0	----	81.0	107	----	----
Chrysene	218-01-9	50	µg/kg	<50	250 µg/kg	96.0	----	83.0	121	----	----
Benzo(b)fluoranthene	205-99-2	50	µg/kg	<50	250 µg/kg	88.9	----	48.0	118	----	----
Benzo(k)fluoranthene	207-08-9	50	µg/kg	<50	250 µg/kg	95.5	----	64.0	129	----	----
Benzo(a)pyrene	50-32-8	50	µg/kg	<50	250 µg/kg	85.6	----	47.0	107	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	50	µg/kg	<50	250 µg/kg	60.8	----	55.0	97.0	----	----
Dibenz(a,h)anthracene	53-70-3	50	µg/kg	<50	250 µg/kg	66.9	----	34.0	120	----	----
Benzo(g,h,i)perylene	191-24-2	50	µg/kg	<50	250 µg/kg	66.1	----	34.0	119	----	----
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3778662)											
Phenol	108-95-2	500	µg/kg	<500	250 µg/kg	98.2	----	61.0	113	----	----
Hexachlorobenzene (HCB)	118-74-1	50	µg/kg	<50	250 µg/kg	95.7	----	75.0	110	----	----
Bis(2-ethylhexyl)phthalate	117-81-7	1000	µg/kg	<1000	250 µg/kg	105	----	89.0	128	----	----
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3778663)											
C9 - C16 Fraction	----	200	mg/kg	<200	31.5 mg/kg	85.8	----	76.0	104	----	----
C17 - C35 Fraction	----	500	mg/kg	<500	67.5 mg/kg	92.0	----	56.0	103	----	----
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3779469)											
C6 - C8 Fraction	----	5	mg/kg	<5	4.5 mg/kg	105	----	80.0	118	----	----
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3779470)											
Benzene	71-43-2	0.1	mg/kg	<0.1	0.25 mg/kg	108	----	79.0	121	----	----
Toluene	108-88-3	0.2	mg/kg	<0.2	0.25 mg/kg	105	----	78.0	124	----	----
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.25 mg/kg	108	----	79.0	121	----	----
meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	0.5 mg/kg	110	----	79.0	121	----	----
	106-42-3										
Styrene	100-42-5	0.2	mg/kg	<0.2	0.25 mg/kg	97.9	----	78.0	121	----	----



Matrix: SOIL		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-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3779470) - Continued											
ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	0.25 mg/kg	102	----	79.0	119	----	----
Xylenes (Total)	----	1	mg/kg	<1.0	0.75 mg/kg	107	----	79.0	121	----	----
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3779470)											
2-Propanone (Acetone)	67-64-1	2	mg/kg	<2	2.5 mg/kg	106	----	77.0	124	----	----
2-Butanone (MEK)	78-93-3	2	mg/kg	<2	2.5 mg/kg	107	----	79.0	121	----	----
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3779470)											
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	0.25 mg/kg	108	----	79.0	122	----	----
Trichloroethene	79-01-6	0.1	mg/kg	<0.1	0.25 mg/kg	109	----	77.0	122	----	----
Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	0.25 mg/kg	93.8	----	79.0	119	----	----
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3779470)											
Chloroform	67-66-3	0.04	mg/kg	<0.04	0.25 mg/kg	109	----	79.0	122	----	----
Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	0.25 mg/kg	94.4	----	78.0	121	----	----
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3779470)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.2	mg/kg	<0.2	0.25 mg/kg	107	----	78.0	123	----	----
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: 3778301)											
EG020: Antimony	7440-36-0	1	µg/L	<1	50 µg/L	104	----	87.4	106	----	----
EG020: Arsenic	7440-38-2	1	µg/L	<1	50 µg/L	96.1	----	88.1	110	----	----
EG020: Barium	7440-39-3	1	µg/L	<1	50 µg/L	99.9	----	87.4	106	----	----
EG020: Cadmium	7440-43-9	0.2	µg/L	<0.2	5 µg/L	101	----	85.0	113	----	----
EG020: Cobalt	7440-48-4	1	µg/L	<1	50 µg/L	95.4	----	86.1	110	----	----
EG020: Copper	7440-50-8	1	µg/L	<1	50 µg/L	96.5	----	89.2	111	----	----
EG020: Lead	7439-92-1	1	µg/L	<1	50 µg/L	92.5	----	86.9	110	----	----
EG020: Manganese	7439-96-5	1	µg/L	<1	50 µg/L	101	----	86.9	110	----	----
EG020: Mercury	7439-97-6	0.5	µg/L	<0.5	2 µg/L	92.3	----	85.0	115	----	----
EG020: Molybdenum	7439-98-7	1	µg/L	<1	50 µg/L	97.7	----	85.8	105	----	----



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: 3778301) - Continued											
EG020: Nickel	7440-02-0	1	µg/L	<1	50 µg/L	95.7	----	88.4	109	----	----
EG020: Tin	7440-31-5	1	µg/L	<1	50 µg/L	102	----	89.3	103	----	----
EG020: Zinc	7440-66-6	10	µg/L	<10	50 µg/L	95.8	----	89.1	113	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 3781809)											
EG020: Antimony	7440-36-0	1	µg/L	<1	50 µg/L	99.2	----	87.4	106	----	----
EG020: Arsenic	7440-38-2	1	µg/L	<1	50 µg/L	96.9	----	88.1	110	----	----
EG020: Barium	7440-39-3	1	µg/L	<1	50 µg/L	97.7	----	87.4	106	----	----
EG020: Cadmium	7440-43-9	0.2	µg/L	<0.2	5 µg/L	98.8	----	85.0	113	----	----
EG020: Cobalt	7440-48-4	1	µg/L	<1	50 µg/L	97.2	----	86.1	110	----	----
EG020: Copper	7440-50-8	1	µg/L	<1	50 µg/L	95.1	----	89.2	111	----	----
EG020: Lead	7439-92-1	1	µg/L	<1	50 µg/L	92.5	----	86.9	110	----	----
EG020: Manganese	7439-96-5	1	µg/L	<1	50 µg/L	102	----	86.9	110	----	----
EG020: Mercury	7439-97-6	0.5	µg/L	<0.5	2 µg/L	97.3	----	85.0	115	----	----
EG020: Molybdenum	7439-98-7	1	µg/L	<1	50 µg/L	96.9	----	85.8	105	----	----
EG020: Nickel	7440-02-0	1	µg/L	<1	50 µg/L	96.0	----	88.4	109	----	----
EG020: Tin	7440-31-5	1	µg/L	<1	50 µg/L	99.8	----	89.3	103	----	----
EG020: Zinc	7440-66-6	10	µg/L	<10	50 µg/L	99.8	----	89.1	113	----	----
EG: Metals and Major Cations - Filtered (QC Lot: 3793486)											
EG050: Hexavalent Chromium	18540-29-9	20	µg/L	<20	100 µg/L	99.6	----	80.0	106	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3781003)											
Naphthalene	91-20-3	0.1	µg/L	<0.1	0.5 µg/L	99.8	----	50.0	116	----	----
Acenaphthylene	208-96-8	0.1	µg/L	<0.1	0.5 µg/L	88.2	----	50.0	110	----	----
Acenaphthene	83-32-9	0.1	µg/L	<0.1	0.5 µg/L	75.1	----	46.0	112	----	----
Fluorene	86-73-7	0.1	µg/L	<0.1	0.5 µg/L	66.3	----	51.0	110	----	----
Phenanthrene	85-01-8	0.1	µg/L	<0.1	0.5 µg/L	71.9	----	51.0	119	----	----
Anthracene	120-12-7	0.1	µg/L	<0.1	0.5 µg/L	73.7	----	48.0	121	----	----
Fluoranthene	206-44-0	0.1	µg/L	<0.1	0.5 µg/L	89.4	----	61.0	130	----	----
Pyrene	129-00-0	0.1	µg/L	<0.1	0.5 µg/L	90.4	----	62.0	133	----	----
Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	0.5 µg/L	94.2	----	65.0	132	----	----
Chrysene	218-01-9	0.1	µg/L	<0.1	0.5 µg/L	101	----	77.0	125	----	----



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: 3781003) - Continued											
Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	0.5 µg/L	93.6	----	46.0	124	----	----
Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	0.5 µg/L	89.8	----	59.0	125	----	----
Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	0.5 µg/L	92.8	----	46.0	120	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	0.5 µg/L	68.8	----	54.0	89.0	----	----
Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	0.5 µg/L	75.4	----	40.0	102	----	----
Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	0.5 µg/L	73.5	----	43.0	97.0	----	----
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3781003)											
Phenol	108-95-2	5	µg/L	<5.0	0.5 µg/L	83.7	----	50.0	106	----	----
Hexachlorobenzene (HCB)	118-74-1	4	µg/L	<4.0	0.5 µg/L	69.7	----	49.0	112	----	----
Bis(2-ethylhexyl)phthalate	117-81-7	10	µg/L	<10.0	0.5 µg/L	107	----	84.0	124	----	----
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3781004)											
C9 - C16 Fraction	----	0.5	mg/L	<0.5	0.21 mg/L	74.5	----	63.0	99.0	----	----
C17 - C35 Fraction	----	0.5	mg/L	<0.5	0.45 mg/L	76.0	----	54.0	118	----	----
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3781888)											
C6 - C8 Fraction	----	0.02	mg/L	<0.02	0.03 mg/L	100.0	----	79.0	117	----	----
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3781889)											
Benzene	71-43-2	0.5	µg/L	<0.5	2 µg/L	93.9	----	80.0	121	----	----
Toluene	108-88-3	0.5	µg/L	<0.5	2 µg/L	104	----	76.0	121	----	----
Ethylbenzene	100-41-4	0.5	µg/L	<0.5	2 µg/L	106	----	79.0	123	----	----
meta- & para-Xylene	108-38-3 106-42-3	1	µg/L	<1	4 µg/L	110	----	78.0	121	----	----
Styrene	100-42-5	0.5	µg/L	<0.5	2 µg/L	106	----	78.0	122	----	----
ortho-Xylene	95-47-6	0.5	µg/L	<0.5	2 µg/L	110	----	78.0	121	----	----
Xylenes (Total)	----	2	µg/L	<2	6 µg/L	110	----	79.0	121	----	----
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3781889)											
2-Propanone (Acetone)	67-64-1	5	µg/L	<5	20 µg/L	107	----	79.0	124	----	----
2-Butanone (MEK)	78-93-3	5	µg/L	<5	20 µg/L	92.2	----	80.0	121	----	----
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3781889)											
Methylene chloride	75-09-2	5	µg/L	<5	2 µg/L	110	----	78.0	120	----	----
Trichloroethene	79-01-6	0.5	µg/L	<0.5	2 µg/L	93.5	----	78.0	127	----	----



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-074_SR-E: Halogenated Aliphatics (QC Lot: 3781889) - Continued											
Tetrachloroethene	127-18-4	0.5	µg/L	<0.5	2 µg/L	94.9	----	81.0	121	----	----
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3781889)											
Chloroform	67-66-3	0.5	µg/L	<0.5	2 µg/L	93.6	----	76.0	124	----	----
Bromodichloromethane	75-27-4	0.5	µg/L	<0.5	2 µg/L	93.2	----	78.0	119	----	----
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3781889)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	µg/L	<0.5	2 µg/L	91.3	----	78.0	123	----	----



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

Matrix: SOIL

					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	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 (QC Lot: 3778284)										
HK2126804-001	Anonymous	EG020: Antimony	7440-36-0	5 mg/kg	87.6	----	75.0	125	----	----
		EG020: Arsenic	7440-38-2	5 mg/kg	111	----	75.0	125	----	----
		EG020: Barium	7440-39-3	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Cadmium	7440-43-9	0.5 mg/kg	103	----	75.0	125	----	----
		EG020: Cobalt	7440-48-4	5 mg/kg	106	----	75.0	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	83.1	----	75.0	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	112	----	75.0	125	----	----
		EG020: Manganese	7439-96-5	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	109	----	75.0	125	----	----
		EG020: Molybdenum	7439-98-7	5 mg/kg	108	----	75.0	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	81.1	----	75.0	125	----	----
		EG020: Tin	7440-31-5	5 mg/kg	112	----	75.0	125	----	----
EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75.0	125	----	----		
EG: Metals and Major Cations (QC Lot: 3778288)										
HK2126705-001	Anonymous	EG3060: Hexavalent Chromium	18540-29-9	2.5 mg/kg	96.9	----	75.0	125	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3778662)										
HK2126936-005	ENV-BH35-3.0m	Naphthalene	91-20-3	250 µg/kg	98.7	----	50.0	130	----	----
		Acenaphthylene	208-96-8	250 µg/kg	97.8	----	50.0	130	----	----
		Acenaphthene	83-32-9	250 µg/kg	95.8	----	50.0	130	----	----
		Fluorene	86-73-7	250 µg/kg	93.2	----	50.0	130	----	----
		Phenanthrene	85-01-8	250 µg/kg	96.6	----	50.0	130	----	----
		Anthracene	120-12-7	250 µg/kg	93.5	----	50.0	130	----	----
		Fluoranthene	206-44-0	250 µg/kg	98.9	----	50.0	130	----	----
		Pyrene	129-00-0	250 µg/kg	96.6	----	50.0	130	----	----



Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report							
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)		
					MS	MSD	Low	High	Value	Control Limit	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3778662) - Continued											
HK2126936-005	ENV-BH35-3.0m	Benz(a)anthracene	56-55-3	250 µg/kg	99.2	----	50.0	130	----	----	
		Chrysene	218-01-9	250 µg/kg	107	----	50.0	130	----	----	
		Benzo(b)fluoranthene	205-99-2	250 µg/kg	86.4	----	50.0	130	----	----	
		Benzo(k)fluoranthene	207-08-9	250 µg/kg	99.0	----	50.0	130	----	----	
		Benzo(a)pyrene	50-32-8	250 µg/kg	82.5	----	50.0	130	----	----	
		Indeno(1.2.3.cd)pyrene	193-39-5	250 µg/kg	63.8	----	50.0	130	----	----	
		Dibenz(a,h)anthracene	53-70-3	250 µg/kg	67.5	----	50.0	130	----	----	
		Benzo(g,h,i)perylene	191-24-2	250 µg/kg	68.2	----	50.0	130	----	----	
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3778662)											
HK2126936-005	ENV-BH35-3.0m	Phenol	108-95-2	250 µg/kg	102	----	50.0	130	----	----	
		Hexachlorobenzene (HCB)	118-74-1	250 µg/kg	94.4	----	50.0	130	----	----	
		Bis(2-ethylhexyl)phthalate	117-81-7	250 µg/kg	116	----	50.0	130	----	----	
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3778663)											
HK2126936-004	ENV-BH35-1.5m	C9 - C16 Fraction	----	31.5 mg/kg	83.2	----	50.0	130	----	----	
		C17 - C35 Fraction	----	67.5 mg/kg	70.2	----	50.0	130	----	----	
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3779469)											
HK2126378-002	Anonymous	C6 - C8 Fraction	----	4.5 mg/kg	106	----	50.0	130	----	----	
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3779470)											
HK2126378-003	Anonymous	Benzene	71-43-2	0.25 mg/kg	98.1	----	50.0	130	----	----	
		Toluene	108-88-3	0.25 mg/kg	105	----	50.0	130	----	----	
		Ethylbenzene	100-41-4	0.25 mg/kg	108	----	50.0	130	----	----	
		meta- & para-Xylene	108-38-3	0.5 mg/kg	104	----	50.0	130	----	----	
			106-42-3								
		Styrene	100-42-5	0.25 mg/kg	93.3	----	50.0	130	----	----	
		ortho-Xylene	95-47-6	0.25 mg/kg	101	----	50.0	130	----	----	
		Xylenes (Total)	----	0.75 mg/kg	103	----	50.0	130	----	----	
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3779470)											
HK2126378-003	Anonymous	2-Propanone (Acetone)	67-64-1	2.5 mg/kg	90.2	----	50.0	130	----	----	
		2-Butanone (MEK)	78-93-3	2.5 mg/kg	94.4	----	50.0	130	----	----	



Matrix: SOIL

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number		MS	MSD	Low	High	Value	Control Limit
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3779470)										
HK2126378-003	Anonymous	Methylene chloride	75-09-2	0.25 mg/kg	92.6	----	50.0	130	----	----
		Trichloroethene	79-01-6	0.25 mg/kg	108	----	50.0	130	----	----
		Tetrachloroethene	127-18-4	0.25 mg/kg	107	----	50.0	130	----	----
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3779470)										
HK2126378-003	Anonymous	Chloroform	67-66-3	0.25 mg/kg	105	----	50.0	130	----	----
		Bromodichloromethane	75-27-4	0.25 mg/kg	106	----	50.0	130	----	----
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3779470)										
HK2126378-003	Anonymous	Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.25 mg/kg	92.1	----	50.0	130	----	----

Matrix: WATER

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number		MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 3778301)										
HK2126910-001	Anonymous	EG020: Antimony	7440-36-0	50 µg/L	103	----	75.0	125	----	----
		EG020: Arsenic	7440-38-2	50 µg/L	99.7	----	75.0	125	----	----
		EG020: Barium	7440-39-3	50 µg/L	# Not Determined	----	75.0	125	----	----
		EG020: Cadmium	7440-43-9	5 µg/L	104	----	75.0	125	----	----
		EG020: Cobalt	7440-48-4	50 µg/L	94.5	----	75.0	125	----	----
		EG020: Copper	7440-50-8	50 µg/L	93.8	----	75.0	125	----	----
		EG020: Lead	7439-92-1	50 µg/L	92.2	----	75.0	125	----	----
		EG020: Manganese	7439-96-5	50 µg/L	# Not Determined	----	75.0	125	----	----
		EG020: Mercury	7439-97-6	2 µg/L	92.4	----	75.0	125	----	----
		EG020: Molybdenum	7439-98-7	50 µg/L	96.6	----	75.0	125	----	----
		EG020: Nickel	7440-02-0	50 µg/L	92.7	----	75.0	125	----	----
		EG020: Tin	7440-31-5	50 µg/L	102	----	75.0	125	----	----
EG020: Zinc	7440-66-6	50 µg/L	93.7	----	75.0	125	----	----		
EG: Metals and Major Cations - Filtered (QC Lot: 3781809)										



Matrix: WATER

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

Laboratory sample ID	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: 3781809) - Continued										
HK2126936-003	Equipment Blank	EG020: Antimony	7440-36-0	50 µg/L	99.6	----	75.0	125	----	----
		EG020: Arsenic	7440-38-2	50 µg/L	100	----	75.0	125	----	----
		EG020: Barium	7440-39-3	50 µg/L	95.4	----	75.0	125	----	----
		EG020: Cadmium	7440-43-9	5 µg/L	104	----	75.0	125	----	----
		EG020: Cobalt	7440-48-4	50 µg/L	97.4	----	75.0	125	----	----
		EG020: Copper	7440-50-8	50 µg/L	96.7	----	75.0	125	----	----
		EG020: Lead	7439-92-1	50 µg/L	91.2	----	75.0	125	----	----
		EG020: Manganese	7439-96-5	50 µg/L	103	----	75.0	125	----	----
		EG020: Mercury	7439-97-6	2 µg/L	92.8	----	75.0	125	----	----
		EG020: Molybdenum	7439-98-7	50 µg/L	95.8	----	75.0	125	----	----
		EG020: Nickel	7440-02-0	50 µg/L	96.2	----	75.0	125	----	----
		EG020: Tin	7440-31-5	50 µg/L	99.1	----	75.0	125	----	----
EG020: Zinc	7440-66-6	50 µg/L	95.4	----	75.0	125	----	----		
EG: Metals and Major Cations - Filtered (QC Lot: 3793486)										
HK2126378-008	Anonymous	EG050: Hexavalent Chromium	18540-29-9	100 µg/L	97.7	----	75.0	125	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		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
EP-080_SRS: TPH(Volatile)/BTEX Surrogate			
Dibromofluoromethane	1868-53-7	80	120
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121
EP-074_SR-S: VOC Surrogates			
Dibromofluoromethane	1868-53-7	80	120



Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-074_SR-S: VOC Surrogates - Continued			
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121

Sub-Matrix: 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
EP-080_SRS: TPH(Volatile)/BTEX Surrogate			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP-074_SR-S: VOC Surrogates			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115



CERTIFICATE OF ANALYSIS

Client	: PAUL Y - CREC JOINT VENTURE	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 16
Contact	: TEDDY ORR	Contact	: Richard Fung	Work Order	: HK2127463
Address	: 11/F, PAUL Y CENTRE, 51 HUNG TO ROAD, KWUN TONG, KL, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Teddyorr@pyengineering.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: ---	Telephone	: +852 2610 1044		
Facsimile	: +852 2621 5618	Facsimile	: +852 2610 2021		
Project	: DC/2019/10 - YUEN LONG EFFLUENT POLISHING PLANT - MAIN WORKS FOR STAGE 1			Date Samples Received	: 08-Jul-2021
Order number	: P5120-002A	Quote number	: HKE/1853/2021_V2	Issue Date	: 19-Jul-2021
C-O-C number	: H044304			No. of samples received	: 2
Site	:			No. of samples analysed	: 2

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

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

Signatories	Position	Authorised results for
Anh Ngoc Huynh .	Senior Chemist	Organics_ENV
Chan Siu Ming , Vico	Manager - Inorganics	Inorganics
Leung Chak Cheong , Mike	Assistant Manager - Metals	Metals_ENV



General Comments

This report supersedes any previous report(s) with this reference. 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-Jul-2021 to 16-Jul-2021.

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: HK2127463

Sample(s) was/ were picked up from client by ALS staff. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of soil/sediment sample(s) was / were reported on dry weight basis.

EP070 is the numeric code for internal use. Test method for C6-C9 Fraction of TPH is EP071.

Sample(s) as received, digested by in-house method E-ASTM D3974-09 prior to determination of metals. The in-house method is developed based on ASTM D3974-09 method.

Test Method - EG3060 - Sample(s) as received, digested by in-house method E-3060 prior to the determination of Hexavalent Chromium (Cr6+). The in-house method is developed based on USEPA method 3060.



Analytical Results

Sub-Matrix: SOIL

Sample ID

ENV-BH35-4.5m

Sampling date / time

07-Jul-2021 11:07

Compound	CAS Number	LOR	Unit	HK2127463-001	---	---	---	---
----------	------------	-----	------	---------------	-----	-----	-----	-----

EA/ED: Physical and Aggregate Properties

EA055: Moisture Content (dried @ 103°C)	---	0.1	%	30.2	---	---	---	---
---	-----	-----	---	------	-----	-----	-----	-----

EG: Metals and Major Cations

EG020: Antimony	7440-36-0	1	mg/kg	<1	---	---	---	---
EG020: Arsenic	7440-38-2	1	mg/kg	9	---	---	---	---
EG020: Barium	7440-39-3	1.0	mg/kg	64.6	---	---	---	---
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	---	---	---	---
EG020: Cobalt	7440-48-4	1.0	mg/kg	17.6	---	---	---	---
EG020: Copper	7440-50-8	1	mg/kg	18	---	---	---	---
EG020: Lead	7439-92-1	1	mg/kg	29	---	---	---	---
EG020: Manganese	7439-96-5	1.0	mg/kg	384	---	---	---	---
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	---	---	---	---
EG020: Molybdenum	7439-98-7	1	mg/kg	2	---	---	---	---
EG020: Nickel	7440-02-0	1	mg/kg	28	---	---	---	---
EG020: Tin	7440-31-5	1.0	mg/kg	4.3	---	---	---	---
EG020: Zinc	7440-66-6	1	mg/kg	85	---	---	---	---
EG049: Trivalent Chromium	16065-83-1	1.0	mg/kg	35.8	---	---	---	---
EG3060: Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	---	---	---	---

EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)

EP076HK: Naphthalene	91-20-3	0.500	mg/kg	<0.500	---	---	---	---
EP076HK: Acenaphthylene	208-96-8	0.500	mg/kg	<0.500	---	---	---	---
EP076HK: Acenaphthene	83-32-9	0.500	mg/kg	<0.500	---	---	---	---
EP076HK: Fluorene	86-73-7	0.500	mg/kg	<0.500	---	---	---	---
EP076HK: Phenanthrene	85-01-8	0.500	mg/kg	<0.500	---	---	---	---
EP076HK: Anthracene	120-12-7	0.500	mg/kg	<0.500	---	---	---	---
EP076HK: Fluoranthene	206-44-0	0.500	mg/kg	<0.500	---	---	---	---
EP076HK: Pyrene	129-00-0	0.500	mg/kg	<0.500	---	---	---	---
EP076HK: Benz(a)anthracene	56-55-3	0.500	mg/kg	<0.500	---	---	---	---
EP076HK: Chrysene	218-01-9	0.500	mg/kg	<0.500	---	---	---	---
EP076HK: Benzo(b)fluoranthene	205-99-2	0.500	mg/kg	<0.500	---	---	---	---



Sub-Matrix: SOIL			Sample ID	ENV-BH35-4.5m	---	---	---	---
			Sampling date / time	07-Jul-2021 11:07	---	---	---	---
Compound	CAS Number	LOR	Unit	HK2127463-001	---	---	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued								
EP076HK: Benzo(k)fluoranthene	207-08-9	0.500	mg/kg	<0.500	---	---	---	---
EP076HK: Benzo(a)pyrene	50-32-8	0.500	mg/kg	<0.500	---	---	---	---
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.500	mg/kg	<0.500	---	---	---	---
EP076HK: Dibenz(a.h)anthracene	53-70-3	0.500	mg/kg	<0.500	---	---	---	---
EP076HK: Benzo(g.h.i)perylene	191-24-2	0.500	mg/kg	<0.500	---	---	---	---
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate								
EP076HK: Phenol	108-95-2	0.50	mg/kg	<0.50	---	---	---	---
EP076HK: Hexachlorobenzene (HCB)	118-74-1	0.200	mg/kg	<0.200	---	---	---	---
EP076HK: Bis(2-ethylhexyl)phthalate	117-81-7	5.00	mg/kg	<5.00	---	---	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH)								
EP070HK_SR: C6 - C8 Fraction	----	5	mg/kg	<5	---	---	---	---
EP071HK_SR: C9 - C16 Fraction	----	200	mg/kg	<200	---	---	---	---
EP071HK_SR: C17 - C35 Fraction	----	500	mg/kg	<500	---	---	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH)								
EP074_SR: Benzene	71-43-2	0.2	mg/kg	<0.2	---	---	---	---
EP074_SR: Toluene	108-88-3	0.5	mg/kg	<0.5	---	---	---	---
EP074_SR: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	---	---	---	---
EP074_SR: meta- & para-Xylene	108-38-3 106-42-3	1.0	mg/kg	<1.0	---	---	---	---
EP074_SR: Styrene	100-42-5	0.5	mg/kg	<0.5	---	---	---	---
EP074_SR: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	---	---	---	---
EP074_SR: Xylenes (Total)	----	2.0	mg/kg	<2.0	---	---	---	---
EP-074_SR-B: Oxygenated Compounds								
EP074_SR: 2-Propanone (Acetone)	67-64-1	50	mg/kg	<50	---	---	---	---
EP074_SR: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	---	---	---	---
EP-074_SR-E: Halogenated Aliphatics								
EP074_SR: Methylene chloride	75-09-2	0.5	mg/kg	<0.5	---	---	---	---
EP074_SR: Trichloroethene	79-01-6	0.1	mg/kg	<0.1	---	---	---	---
EP074_SR: Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	---	---	---	---
EP-074_SR-G: Trihalomethanes (THM)								



Sub-Matrix: SOIL			Sample ID	ENV-BH35-4.5m	---	---	---	---
			Sampling date / time	07-Jul-2021 11:07	---	---	---	---
Compound	CAS Number	LOR	Unit	HK2127463-001	---	---	---	---
EP-074_SR-G: Trihalomethanes (THM) - Continued								
EP074_SR: Chloroform	67-66-3	0.04	mg/kg	<0.04	---	---	---	---
EP074_SR: Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	---	---	---	---
EP-074_SR-I: Methyl-tert-butyl Ether								
EP074_SR: Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	mg/kg	<0.5	---	---	---	---
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	86.8	---	---	---	---
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	82.6	---	---	---	---
EP-080_SRS: TPH(Volatile)/BTEX Surrogate								
EP070HK_SR: Dibromofluoromethane	1868-53-7	0.1	%	92.8	---	---	---	---
EP070HK_SR: Toluene-D8	2037-26-5	0.1	%	94.0	---	---	---	---
EP070HK_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	105	---	---	---	---
EP-074_SR-S: VOC Surrogates								
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	92.8	---	---	---	---
EP074_SR: Toluene-D8	2037-26-5	0.1	%	94.0	---	---	---	---
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	105	---	---	---	---



Sub-Matrix: WATER				Sample ID	Trip Blank	---	---	---	---
				Sampling date / time	08-Jul-2021 16:00	---	---	---	---
Compound	CAS Number	LOR	Unit	HK2127463-002	---	---	---	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH)									
EP074_SR: Benzene	71-43-2	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Toluene	108-88-3	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Ethylbenzene	100-41-4	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	<10	---	---	---	---	---
EP074_SR: Styrene	100-42-5	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: ortho-Xylene	95-47-6	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Xylenes (Total)	----	20	µg/L	<20	---	---	---	---	---
EP-074_SR-B: Oxygenated Compounds									
EP074_SR: 2-Propanone (Acetone)	67-64-1	500	µg/L	<500	---	---	---	---	---
EP074_SR: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	---	---	---	---	---
EP-074_SR-E: Halogenated Aliphatics									
EP074_SR: Methylene chloride	75-09-2	50	µg/L	<50	---	---	---	---	---
EP074_SR: Trichloroethene	79-01-6	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Tetrachloroethene	127-18-4	5.0	µg/L	<5.0	---	---	---	---	---
EP-074_SR-G: Trihalomethanes (THM)									
EP074_SR: Chloroform	67-66-3	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Bromodichloromethane	75-27-4	5.0	µg/L	<5.0	---	---	---	---	---
EP-074_SR-I: Methyl-tert-butyl Ether									
EP074_SR: Methyl tert-Butyl Ether (MTBE)	1634-04-4	5.0	µg/L	<5.0	---	---	---	---	---
EP-074_SR-S: VOC Surrogates									
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	94.8	---	---	---	---	---
EP074_SR: Toluene-D8	2037-26-5	0.1	%	95.5	---	---	---	---	---
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	103	---	---	---	---	---



Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 3783248)								
HK2127184-063	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	51.2	50.4	1.6
EG: Metals and Major Cations (QC Lot: 3783226)								
HK2127227-001	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	0.20	0.24	21.1
		EG020: Cadmium	7440-43-9	0.2	mg/kg	0.2	<0.2	0.0
		EG020: Barium	7440-39-3	0.5	mg/kg	55.5	46.1	18.4
		EG020: Cobalt	7440-48-4	0.5	mg/kg	2.5	2.3	9.5
		EG020: Manganese	7439-96-5	0.5	mg/kg	321	342	6.5
		EG020: Tin	7440-31-5	0.5	mg/kg	4.3	4.8	11.0
		EG020: Antimony	7440-36-0	1	mg/kg	<1	<1	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	3	3	0.0
		EG020: Copper	7440-50-8	1	mg/kg	34	32	5.8
		EG020: Lead	7439-92-1	1	mg/kg	98	95	3.3
		EG020: Molybdenum	7439-98-7	1	mg/kg	2	2	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	4	4	0.0
EG020: Zinc	7440-66-6	1	mg/kg	117	121	3.6		
EG: Metals and Major Cations (QC Lot: 3783230)								
HK2127121-001	Anonymous	EG3060: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<1.0	<1.0	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3783194)								
HK2127222-001	Anonymous	Naphthalene	91-20-3	50	µg/kg	<0.500 mg/kg	<500	0.0
		Acenaphthylene	208-96-8	50	µg/kg	<0.500 mg/kg	<500	0.0
		Acenaphthene	83-32-9	50	µg/kg	<0.500 mg/kg	<500	0.0
		Fluorene	86-73-7	50	µg/kg	<0.500 mg/kg	<500	0.0
		Phenanthrene	85-01-8	50	µg/kg	<0.500 mg/kg	<500	0.0
		Anthracene	120-12-7	50	µg/kg	<0.500 mg/kg	<500	0.0
		Fluoranthene	206-44-0	50	µg/kg	<0.500 mg/kg	<500	0.0
		Pyrene	129-00-0	50	µg/kg	<0.500 mg/kg	<500	0.0
		Benz(a)anthracene	56-55-3	50	µg/kg	<0.500 mg/kg	<500	0.0
		Chrysene	218-01-9	50	µg/kg	<0.500 mg/kg	<500	0.0
		Benzo(b)fluoranthene	205-99-2	50	µg/kg	<0.500 mg/kg	<500	0.0
		Benzo(k)fluoranthene	207-08-9	50	µg/kg	<0.500 mg/kg	<500	0.0



Matrix: SOIL				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3783194) - Continued								
HK2127222-001	Anonymous	Benzo(a)pyrene	50-32-8	50	µg/kg	<0.500 mg/kg	<500	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	50	µg/kg	<0.500 mg/kg	<500	0.0
		Dibenz(a.h)anthracene	53-70-3	50	µg/kg	<0.500 mg/kg	<500	0.0
		Benzo(g.h.i)perylene	191-24-2	50	µg/kg	<0.500 mg/kg	<500	0.0
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3783194)								
HK2127222-001	Anonymous	Bis(2-ethylhexyl)phthalate	117-81-7	1000	µg/kg	<5.00 mg/kg	<5000	0.0
		Hexachlorobenzene (HCB)	118-74-1	50	µg/kg	<0.200 mg/kg	<200	0.0
		Phenol	108-95-2	500	µg/kg	<0.50 mg/kg	<500	0.0
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3783195)								
HK2127222-001	Anonymous	C9 - C16 Fraction	----	200	mg/kg	<200	<200	0.0
		C17 - C35 Fraction	----	500	mg/kg	<500	<500	0.0
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3787019)								
HK2127222-001	Anonymous	C6 - C8 Fraction	----	5	mg/kg	<5	<5	0.0
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3787020)								
HK2127222-001	Anonymous	Benzene	71-43-2	0.1	mg/kg	<0.2	<0.2	0.0
		Toluene	108-88-3	0.2	mg/kg	<0.5	<0.5	0.0
		Ethylbenzene	100-41-4	0.2	mg/kg	<0.5	<0.5	0.0
		Styrene	100-42-5	0.2	mg/kg	<0.5	<0.5	0.0
		ortho-Xylene	95-47-6	0.2	mg/kg	<0.5	<0.5	0.0
		meta- & para-Xylene	108-38-3	0.4	mg/kg	<1.0	<1.0	0.0
		Xylenes (Total)	106-42-3	----	1	mg/kg	<2.0	<2.0
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3787020)								
HK2127222-001	Anonymous	2-Propanone (Acetone)	67-64-1	2	mg/kg	<50	<50	0.0
		2-Butanone (MEK)	78-93-3	2	mg/kg	<5	<5	0.0
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3787020)								
HK2127222-001	Anonymous	Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	<0.04	0.0
		Trichloroethene	79-01-6	0.1	mg/kg	<0.1	<0.1	0.0
		Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	0.0
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3787020)								
HK2127222-001	Anonymous	Chloroform	67-66-3	0.04	mg/kg	<0.04	<0.04	0.0



Matrix: SOIL				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3787020) - Continued								
HK2127222-001	Anonymous	Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	<0.1	0.0
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3787020)								
HK2127222-001	Anonymous	Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.2	mg/kg	<0.5	<0.5	0.0

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

Matrix: SOIL		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 (QC Lot: 3783226)											
EG020: Antimony	7440-36-0	1	mg/kg	<1	5 mg/kg	96.8	----	85.0	108	----	----
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	95.2	----	87.2	110	----	----
EG020: Barium	7440-39-3	0.5	mg/kg	<0.5	5 mg/kg	91.6	----	85.0	110	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	0.5 mg/kg	96.1	----	85.0	113	----	----
EG020: Cobalt	7440-48-4	0.5	mg/kg	<0.5	5 mg/kg	95.8	----	89.8	110	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	102	----	92.0	115	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	91.7	----	86.7	115	----	----
EG020: Manganese	7439-96-5	0.5	mg/kg	<0.5	5 mg/kg	92.3	----	85.8	108	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	109	----	86.6	115	----	----
EG020: Molybdenum	7439-98-7	1	mg/kg	<1	5 mg/kg	108	----	85.2	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	99.6	----	90.6	111	----	----
EG020: Tin	7440-31-5	0.5	mg/kg	<0.5	5 mg/kg	95.6	----	85.0	109	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	109	----	90.9	115	----	----
EG: Metals and Major Cations (QC Lot: 3783230)											
EG3060: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	2.5 mg/kg	106	----	85.0	1120000	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3783194)											
Naphthalene	91-20-3	50	µg/kg	<50	250 µg/kg	101	----	85.0	106	----	----
Acenaphthylene	208-96-8	50	µg/kg	<50	250 µg/kg	102	----	79.0	108	----	----
Acenaphthene	83-32-9	50	µg/kg	<50	250 µg/kg	102	----	82.0	104	----	----
Fluorene	86-73-7	50	µg/kg	<50	250 µg/kg	98.3	----	77.0	105	----	----
Phenanthrene	85-01-8	50	µg/kg	<50	250 µg/kg	97.5	----	77.0	110	----	----



Matrix: SOIL		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 (%)	
						LCS	DCS	Low	High	Value	Control Limit
Method: Compound	CAS Number										
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3783194) - Continued											
Anthracene	120-12-7	50	µg/kg	<50	250 µg/kg	95.0	----	76.0	108	----	----
Fluoranthene	206-44-0	50	µg/kg	<50	250 µg/kg	98.1	----	81.0	109	----	----
Pyrene	129-00-0	50	µg/kg	<50	250 µg/kg	99.2	----	82.0	111	----	----
Benz(a)anthracene	56-55-3	50	µg/kg	<50	250 µg/kg	95.6	----	81.0	107	----	----
Chrysene	218-01-9	50	µg/kg	<50	250 µg/kg	100	----	83.0	121	----	----
Benzo(b)fluoranthene	205-99-2	50	µg/kg	<50	250 µg/kg	85.3	----	48.0	118	----	----
Benzo(k)fluoranthene	207-08-9	50	µg/kg	<50	250 µg/kg	99.7	----	64.0	129	----	----
Benzo(a)pyrene	50-32-8	50	µg/kg	<50	250 µg/kg	84.5	----	47.0	107	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	50	µg/kg	<50	250 µg/kg	84.4	----	55.0	97.0	----	----
Dibenz(a,h)anthracene	53-70-3	50	µg/kg	<50	250 µg/kg	68.9	----	34.0	120	----	----
Benzo(g,h,i)perylene	191-24-2	50	µg/kg	<50	250 µg/kg	62.9	----	34.0	119	----	----
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3783194)											
Phenol	108-95-2	500	µg/kg	<500	250 µg/kg	99.6	----	61.0	113	----	----
Hexachlorobenzene (HCB)	118-74-1	50	µg/kg	<50	250 µg/kg	101	----	75.0	110	----	----
Bis(2-ethylhexyl)phthalate	117-81-7	1000	µg/kg	<1000	250 µg/kg	105	----	89.0	128	----	----
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3783195)											
C9 - C16 Fraction	----	200	mg/kg	<200	31.5 mg/kg	82.0	----	76.0	104	----	----
C17 - C35 Fraction	----	500	mg/kg	<500	67.5 mg/kg	83.0	----	56.0	103	----	----
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3787019)											
C6 - C8 Fraction	----	5	mg/kg	<5	4.5 mg/kg	92.0	----	80.0	118	----	----
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3787020)											
Benzene	71-43-2	0.1	mg/kg	<0.1	0.25 mg/kg	90.4	----	79.0	121	----	----
Toluene	108-88-3	0.2	mg/kg	<0.2	0.25 mg/kg	94.5	----	78.0	124	----	----
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.25 mg/kg	91.4	----	79.0	121	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.4	mg/kg	<0.4	0.5 mg/kg	96.2	----	79.0	121	----	----
Styrene	100-42-5	0.2	mg/kg	<0.2	0.25 mg/kg	92.7	----	78.0	121	----	----
ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	0.25 mg/kg	93.6	----	79.0	119	----	----
Xylenes (Total)	----	1	mg/kg	<1.0	0.75 mg/kg	95.4	----	79.0	121	----	----
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3787020)											



Matrix: SOIL		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-074_SR-B: Oxygenated Compounds (QC Lot: 3787020) - Continued											
2-Propanone (Acetone)	67-64-1	2	mg/kg	<2	2.5 mg/kg	93.0	----	77.0	124	----	----
2-Butanone (MEK)	78-93-3	2	mg/kg	<2	2.5 mg/kg	93.6	----	79.0	121	----	----
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3787020)											
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	0.25 mg/kg	94.3	----	79.0	122	----	----
Trichloroethene	79-01-6	0.1	mg/kg	<0.1	0.25 mg/kg	92.5	----	77.0	122	----	----
Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	0.25 mg/kg	94.8	----	79.0	119	----	----
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3787020)											
Chloroform	67-66-3	0.04	mg/kg	<0.04	0.25 mg/kg	95.3	----	79.0	122	----	----
Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	0.25 mg/kg	95.7	----	78.0	121	----	----
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3787020)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.2	mg/kg	<0.2	0.25 mg/kg	93.9	----	78.0	123	----	----
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-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3787331)											
Benzene	71-43-2	0.5	µg/L	<0.5	2 µg/L	95.1	----	80.0	121	----	----
Toluene	108-88-3	0.5	µg/L	<0.5	2 µg/L	94.2	----	76.0	121	----	----
Ethylbenzene	100-41-4	0.5	µg/L	<0.5	2 µg/L	96.0	----	79.0	123	----	----
meta- & para-Xylene	108-38-3 106-42-3	1	µg/L	<1	4 µg/L	95.2	----	78.0	121	----	----
Styrene	100-42-5	0.5	µg/L	<0.5	2 µg/L	92.6	----	78.0	122	----	----
ortho-Xylene	95-47-6	0.5	µg/L	<0.5	2 µg/L	93.5	----	78.0	121	----	----
Xylenes (Total)	----	2	µg/L	<2	6 µg/L	94.6	----	79.0	121	----	----
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3787331)											
2-Propanone (Acetone)	67-64-1	5	µg/L	<5	20 µg/L	97.0	----	79.0	124	----	----
2-Butanone (MEK)	78-93-3	5	µg/L	<5	20 µg/L	104	----	80.0	121	----	----
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3787331)											
Methylene chloride	75-09-2	5	µg/L	<5	2 µg/L	92.4	----	78.0	120	----	----



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 (%)	
						LCS	DCS	Low	High	Value	Control Limit
Method: Compound	CAS Number										
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3787331) - Continued											
Trichloroethene	79-01-6	0.5	µg/L	<0.5	2 µg/L	106	----	78.0	127	----	----
Tetrachloroethene	127-18-4	0.5	µg/L	<0.5	2 µg/L	108	----	81.0	121	----	----
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3787331)											
Chloroform	67-66-3	0.5	µg/L	<0.5	2 µg/L	90.2	----	76.0	124	----	----
Bromodichloromethane	75-27-4	0.5	µg/L	<0.5	2 µg/L	109	----	78.0	119	----	----
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3787331)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	µg/L	<0.5	2 µg/L	106	----	78.0	123	----	----



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

Matrix: SOIL

					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	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 (QC Lot: 3783226)										
HK2127222-001	Anonymous	EG020: Antimony	7440-36-0	5 mg/kg	81.5	----	75.0	125	----	----
		EG020: Arsenic	7440-38-2	5 mg/kg	78.1	----	75.0	125	----	----
		EG020: Barium	7440-39-3	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Cadmium	7440-43-9	0.5 mg/kg	120	----	75.0	125	----	----
		EG020: Cobalt	7440-48-4	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Manganese	7439-96-5	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	89.2	----	75.0	125	----	----
		EG020: Molybdenum	7439-98-7	5 mg/kg	101	----	75.0	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	84.0	----	75.0	125	----	----
EG020: Tin	7440-31-5	5 mg/kg	98.2	----	75.0	125	----	----		
EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75.0	125	----	----		
EG: Metals and Major Cations (QC Lot: 3783230)										
HK2127112-001	Anonymous	EG3060: Hexavalent Chromium	18540-29-9	2.5 mg/kg	104	----	75.0	125	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3783194)										
HK2127227-001	Anonymous	Naphthalene	91-20-3	250 µg/kg	98.8	----	50.0	130	----	----
		Acenaphthylene	208-96-8	250 µg/kg	103	----	50.0	130	----	----
		Acenaphthene	83-32-9	250 µg/kg	101	----	50.0	130	----	----
		Fluorene	86-73-7	250 µg/kg	96.6	----	50.0	130	----	----
		Phenanthrene	85-01-8	250 µg/kg	106	----	50.0	130	----	----
		Anthracene	120-12-7	250 µg/kg	107	----	50.0	130	----	----



Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report							
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)		
					MS	MSD	Low	High	Value	Control Limit	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3783194) - Continued											
HK2127227-001	Anonymous	Fluoranthene	206-44-0	250 µg/kg	116	----	50.0	130	----	----	
		Pyrene	129-00-0	250 µg/kg	113	----	50.0	130	----	----	
		Benz(a)anthracene	56-55-3	250 µg/kg	109	----	50.0	130	----	----	
		Chrysene	218-01-9	250 µg/kg	104	----	50.0	130	----	----	
		Benzo(b)fluoranthene	205-99-2	250 µg/kg	95.0	----	50.0	130	----	----	
		Benzo(k)fluoranthene	207-08-9	250 µg/kg	101	----	50.0	130	----	----	
		Benzo(a)pyrene	50-32-8	250 µg/kg	89.0	----	50.0	130	----	----	
		Indeno(1.2.3.cd)pyrene	193-39-5	250 µg/kg	79.8	----	50.0	130	----	----	
		Dibenz(a,h)anthracene	53-70-3	250 µg/kg	74.0	----	50.0	130	----	----	
Benzo(g,h,i)perylene	191-24-2	250 µg/kg	62.8	----	50.0	130	----	----			
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3783194)											
HK2127227-001	Anonymous	Phenol	108-95-2	250 µg/kg	100	----	50.0	130	----	----	
		Hexachlorobenzene (HCB)	118-74-1	250 µg/kg	96.6	----	50.0	130	----	----	
		Bis(2-ethylhexyl)phthalate	117-81-7	250 µg/kg	86.7	----	50.0	130	----	----	
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3783195)											
HK2127229-001	Anonymous	C9 - C16 Fraction	----	31.5 mg/kg	89.4	----	50.0	130	----	----	
		C17 - C35 Fraction	----	67.5 mg/kg	82.4	----	50.0	130	----	----	
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3787019)											
HK2127227-001	Anonymous	C6 - C8 Fraction	----	4.5 mg/kg	98.8	----	50.0	130	----	----	
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3787020)											
HK2127229-001	Anonymous	Benzene	71-43-2	0.25 mg/kg	99.2	----	50.0	130	----	----	
		Toluene	108-88-3	0.25 mg/kg	106	----	50.0	130	----	----	
		Ethylbenzene	100-41-4	0.25 mg/kg	99.0	----	50.0	130	----	----	
		meta- & para-Xylene	108-38-3	0.5 mg/kg	102	----	50.0	130	----	----	
			106-42-3								
		Styrene	100-42-5	0.25 mg/kg	108	----	50.0	130	----	----	
		ortho-Xylene	95-47-6	0.25 mg/kg	97.2	----	50.0	130	----	----	
Xylenes (Total)	----	0.75 mg/kg	101	----	50.0	130	----	----			
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3787020)											



Matrix: SOIL				<i>Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report</i>						
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3787020) - Continued										
HK2127229-001	Anonymous	2-Propanone (Acetone)	67-64-1	2.5 mg/kg	104	----	50.0	130	----	----
		2-Butanone (MEK)	78-93-3	2.5 mg/kg	95.2	----	50.0	130	----	----
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3787020)										
HK2127229-001	Anonymous	Methylene chloride	75-09-2	0.25 mg/kg	95.6	----	50.0	130	----	----
		Trichloroethene	79-01-6	0.25 mg/kg	104	----	50.0	130	----	----
		Tetrachloroethene	127-18-4	0.25 mg/kg	98.0	----	50.0	130	----	----
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3787020)										
HK2127229-001	Anonymous	Chloroform	67-66-3	0.25 mg/kg	92.9	----	50.0	130	----	----
		Bromodichloromethane	75-27-4	0.25 mg/kg	95.8	----	50.0	130	----	----
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3787020)										
HK2127229-001	Anonymous	Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.25 mg/kg	97.8	----	50.0	130	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		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
EP-080_SRS: TPH(Volatile)/BTEX Surrogate			
Dibromofluoromethane	1868-53-7	80	120
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121
EP-074_SR-S: VOC Surrogates			
Dibromofluoromethane	1868-53-7	80	120
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High



Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-074_SR-S: VOC Surrogates			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115

CHAIN OF CUSTODY DOCUMENTATION

H 044305



ALS Laboratory Group

CLIENT: PY-CREC JV
 ADDRESS / OFFICE: Wang Lee St. Yuen Long Industrial Estate
 PROJECT MANAGER (PM):

SAMPLER: Justin Yu
 MOBILE: 9513 7259
 PHONE:

PROJECT ID:
 SITE: YLS1W P.O. NO.:

EMAIL REPORT TO: Refer to ESS
 EMAIL INVOICE TO: (if different to report)

RESULTS REQUIRED (Date): QUOTE NO.:

ANALYSIS REQUIRED including SUITES (note - suite codes must be listed to attract suite prices)

FOR LABORATORY USE ONLY
 COOLER SEAL (circle appropriate)
 Intact: Yes No N/A
 SAMPLE TEMPERATURE
 CHILLED: Yes No

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

metals	Cr III, VI	VOCs	SVOCs	PCRS																
--------	------------	------	-------	------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes: e.g. Highly contaminated samples
 e.g. "High PAHs expected"
 Extra volume for QC or trace LORs etc.

SAMPLE INFORMATION (note: S = Soil, W=Water) CONTAINER INFORMATION

ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles
1	ENV-BH36-1.5m	S	9/7/21	16:00	UT6	1
	ENV-BH37A-0.5m	S	10/7/21	10:00	Glass	1
	ENV-BH37A-0.5m	S	10/7/21	10:15	Glass	1
2-	Trip Blank	W	10/7/21	10:30	AG	2

metals	Cr III, VI	VOCs	SVOCs	PCRS																
--------	------------	------	-------	------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

RELINQUISHED BY:
 Name: Karina Chan Date: 10/7/21
 Of: Geotech Consultants Time: 11:00

RECEIVED BY:
 Name: Lu. Wai Hong Date: 10-07-21
 Of: ALS Time: 11:25
 Name: Ketan Lam Date: 10 JUL 2021
 Of: ALS HK Time: 12:25

METHOD OF SHIPMENT
 Con' Note No:
 Transport Co:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved;
 V = VOA Vial HCl Preserved; VS = VOA Vial Sulphuric Preserved; SG = Sulfuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
 Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottle; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soil; B = Unpreserved Bag.






CERTIFICATE OF ANALYSIS

Client	: PAUL Y - CREC JOINT VENTURE	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 16
Contact	: TEDDY ORR	Contact	: Richard Fung	Work Order	: HK2127854
Address	: 11/F, PAUL Y CENTRE, 51 HUNG TO ROAD, KWUN TONG, KL, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Teddyorr@pyengineering.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: ---	Telephone	: +852 2610 1044		
Facsimile	: +852 2621 5618	Facsimile	: +852 2610 2021		
Project	: DC/2019/10 - YUEN LONG EFFLUENT POLISHING PLANT - MAIN WORKS FOR STAGE 1			Date Samples Received	: 10-Jul-2021
Order number	: P5120-002A	Quote number	: HKE/1853/2021_V2	Issue Date	: 20-Jul-2021
C-O-C number	: H044305			No. of samples received	: 2
Site	:			No. of samples analysed	: 2

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

Signatories	Position	Authorised results for
 Anh Ngoc Huynh .	Senior Chemist	Organics_ENV
 Chan Siu Ming , Vico	Manager - Inorganics	Inorganics
 Leung Chak Cheong , Mike	Assistant Manager - Metals	Metals_ENV



General Comments

This report supersedes any previous report(s) with this reference. 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 10-Jul-2021 to 20-Jul-2021.

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: HK2127854

Sample(s) was/ were picked up from client by ALS staff. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of soil/sediment sample(s) was / were reported on dry weight basis.

EP070 is the numeric code for internal use. Test method for C6-C9 Fraction of TPH is EP071.

Sample(s) as received, digested by in-house method E-ASTM D3974-09 prior to determination of metals. The in-house method is developed based on ASTM D3974-09 method.

Test Method - EG3060 - Sample(s) as received, digested by in-house method E-3060 prior to the determination of Hexavalent Chromium (Cr6+). The in-house method is developed based on USEPA method 3060.



Analytical Results

Sub-Matrix: SOIL

				Sample ID	ENV-BH36-1.5m	---	---	---	---
				Sampling date / time	09-Jul-2021 16:00	---	---	---	---
Compound	CAS Number	LOR	Unit	HK2127854-001	---	---	---	---	---
EA/ED: Physical and Aggregate Properties									
EA055: Moisture Content (dried @ 103°C)	---	0.1	%	22.1	---	---	---	---	---
EG: Metals and Major Cations									
EG020: Antimony	7440-36-0	1	mg/kg	<1	---	---	---	---	---
EG020: Arsenic	7440-38-2	1	mg/kg	7	---	---	---	---	---
EG020: Barium	7440-39-3	1.0	mg/kg	32.2	---	---	---	---	---
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	---	---	---	---	---
EG020: Cobalt	7440-48-4	1.0	mg/kg	8.6	---	---	---	---	---
EG020: Copper	7440-50-8	1	mg/kg	10	---	---	---	---	---
EG020: Lead	7439-92-1	1	mg/kg	25	---	---	---	---	---
EG020: Manganese	7439-96-5	1.0	mg/kg	334	---	---	---	---	---
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	---	---	---	---	---
EG020: Molybdenum	7439-98-7	1	mg/kg	<1	---	---	---	---	---
EG020: Nickel	7440-02-0	1	mg/kg	18	---	---	---	---	---
EG020: Tin	7440-31-5	1.0	mg/kg	1.8	---	---	---	---	---
EG020: Zinc	7440-66-6	1	mg/kg	74	---	---	---	---	---
EG049: Trivalent Chromium	16065-83-1	1.0	mg/kg	25.5	---	---	---	---	---
EG3060: Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	---	---	---	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)									
EP076HK: Naphthalene	91-20-3	0.500	mg/kg	<0.500	---	---	---	---	---
EP076HK: Acenaphthylene	208-96-8	0.500	mg/kg	<0.500	---	---	---	---	---
EP076HK: Acenaphthene	83-32-9	0.500	mg/kg	<0.500	---	---	---	---	---
EP076HK: Fluorene	86-73-7	0.500	mg/kg	<0.500	---	---	---	---	---
EP076HK: Phenanthrene	85-01-8	0.500	mg/kg	<0.500	---	---	---	---	---
EP076HK: Anthracene	120-12-7	0.500	mg/kg	<0.500	---	---	---	---	---
EP076HK: Fluoranthene	206-44-0	0.500	mg/kg	<0.500	---	---	---	---	---
EP076HK: Pyrene	129-00-0	0.500	mg/kg	<0.500	---	---	---	---	---
EP076HK: Benz(a)anthracene	56-55-3	0.500	mg/kg	<0.500	---	---	---	---	---
EP076HK: Chrysene	218-01-9	0.500	mg/kg	<0.500	---	---	---	---	---
EP076HK: Benzo(b)fluoranthene	205-99-2	0.500	mg/kg	<0.500	---	---	---	---	---



Sub-Matrix: SOIL				Sample ID	ENV-BH36-1.5m	---	---	---	---
				Sampling date / time	09-Jul-2021 16:00	---	---	---	---
Compound	CAS Number	LOR	Unit	HK2127854-001	---	---	---	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued									
EP076HK: Benzo(k)fluoranthene	207-08-9	0.500	mg/kg	<0.500	---	---	---	---	---
EP076HK: Benzo(a)pyrene	50-32-8	0.500	mg/kg	<0.500	---	---	---	---	---
EP076HK: Indeno(1.2.3.cd)pyrene	193-39-5	0.500	mg/kg	<0.500	---	---	---	---	---
EP076HK: Dibenz(a.h)anthracene	53-70-3	0.500	mg/kg	<0.500	---	---	---	---	---
EP076HK: Benzo(g.h.i)perylene	191-24-2	0.500	mg/kg	<0.500	---	---	---	---	---
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate									
EP076HK: Phenol	108-95-2	0.50	mg/kg	<0.50	---	---	---	---	---
EP076HK: Hexachlorobenzene (HCB)	118-74-1	0.200	mg/kg	<0.200	---	---	---	---	---
EP076HK: Bis(2-ethylhexyl)phthalate	117-81-7	5.00	mg/kg	<5.00	---	---	---	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH)									
EP070HK_SR: C6 - C8 Fraction	----	5	mg/kg	<5	---	---	---	---	---
EP071HK_SR: C9 - C16 Fraction	----	200	mg/kg	<200	---	---	---	---	---
EP071HK_SR: C17 - C35 Fraction	----	500	mg/kg	<500	---	---	---	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH)									
EP074_SR: Benzene	71-43-2	0.2	mg/kg	<0.2	---	---	---	---	---
EP074_SR: Toluene	108-88-3	0.5	mg/kg	<0.5	---	---	---	---	---
EP074_SR: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	---	---	---	---	---
EP074_SR: meta- & para-Xylene	108-38-3 106-42-3	1.0	mg/kg	<1.0	---	---	---	---	---
EP074_SR: Styrene	100-42-5	0.5	mg/kg	<0.5	---	---	---	---	---
EP074_SR: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	---	---	---	---	---
EP074_SR: Xylenes (Total)	----	2.0	mg/kg	<2.0	---	---	---	---	---
EP-074_SR-B: Oxygenated Compounds									
EP074_SR: 2-Propanone (Acetone)	67-64-1	50	mg/kg	<50	---	---	---	---	---
EP074_SR: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	---	---	---	---	---
EP-074_SR-E: Halogenated Aliphatics									
EP074_SR: Methylene chloride	75-09-2	0.5	mg/kg	<0.5	---	---	---	---	---
EP074_SR: Trichloroethene	79-01-6	0.1	mg/kg	<0.1	---	---	---	---	---
EP074_SR: Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	---	---	---	---	---
EP-074_SR-G: Trihalomethanes (THM)									



Sub-Matrix: SOIL				Sample ID	ENV-BH36-1.5m	---	---	---	---
				Sampling date / time	09-Jul-2021 16:00	---	---	---	---
Compound	CAS Number	LOR	Unit	HK2127854-001	---	---	---	---	---
EP-074_SR-G: Trihalomethanes (THM) - Continued									
EP074_SR: Chloroform	67-66-3	0.04	mg/kg	<0.04	---	---	---	---	---
EP074_SR: Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	---	---	---	---	---
EP-074_SR-I: Methyl-tert-butyl Ether									
EP074_SR: Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	mg/kg	<0.5	---	---	---	---	---
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	97.1	---	---	---	---	---
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	90.3	---	---	---	---	---
EP-080_SRS: TPH(Volatile)/BTEX Surrogate									
EP070HK_SR: Dibromofluoromethane	1868-53-7	0.1	%	91.5	---	---	---	---	---
EP070HK_SR: Toluene-D8	2037-26-5	0.1	%	94.6	---	---	---	---	---
EP070HK_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	106	---	---	---	---	---
EP-074_SR-S: VOC Surrogates									
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	91.5	---	---	---	---	---
EP074_SR: Toluene-D8	2037-26-5	0.1	%	94.6	---	---	---	---	---
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	106	---	---	---	---	---



Sub-Matrix: WATER				Sample ID	Trip Blank	---	---	---	---
				Sampling date / time	10-Jul-2021 10:30	---	---	---	---
Compound	CAS Number	LOR	Unit	HK2127854-002	---	---	---	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH)									
EP074_SR: Benzene	71-43-2	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Toluene	108-88-3	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Ethylbenzene	100-41-4	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	<10	---	---	---	---	---
EP074_SR: Styrene	100-42-5	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: ortho-Xylene	95-47-6	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Xylenes (Total)	----	20	µg/L	<20	---	---	---	---	---
EP-074_SR-B: Oxygenated Compounds									
EP074_SR: 2-Propanone (Acetone)	67-64-1	500	µg/L	<500	---	---	---	---	---
EP074_SR: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	---	---	---	---	---
EP-074_SR-E: Halogenated Aliphatics									
EP074_SR: Methylene chloride	75-09-2	50	µg/L	<50	---	---	---	---	---
EP074_SR: Trichloroethene	79-01-6	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Tetrachloroethene	127-18-4	5.0	µg/L	<5.0	---	---	---	---	---
EP-074_SR-G: Trihalomethanes (THM)									
EP074_SR: Chloroform	67-66-3	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Bromodichloromethane	75-27-4	5.0	µg/L	<5.0	---	---	---	---	---
EP-074_SR-I: Methyl-tert-butyl Ether									
EP074_SR: Methyl tert-Butyl Ether (MTBE)	1634-04-4	5.0	µg/L	<5.0	---	---	---	---	---
EP-074_SR-S: VOC Surrogates									
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	105	---	---	---	---	---
EP074_SR: Toluene-D8	2037-26-5	0.1	%	96.8	---	---	---	---	---
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	103	---	---	---	---	---



Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 3788721)								
HK2127653-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	10.1	10.0	0.0
HK2127717-008	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	12.4	12.4	0.0
EG: Metals and Major Cations (QC Lot: 3788566)								
HK2127899-001	Anonymous	EG3060: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<1.0	<1.0	0.0
EG: Metals and Major Cations (QC Lot: 3788567)								
HK2127732-002	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Barium	7440-39-3	0.5	mg/kg	44.8	43.8	2.3
		EG020: Cobalt	7440-48-4	0.5	mg/kg	10.6	10.6	0.0
		EG020: Manganese	7439-96-5	0.5	mg/kg	524	539	2.7
		EG020: Tin	7440-31-5	0.5	mg/kg	2.3	2.5	7.5
		EG020: Antimony	7440-36-0	1	mg/kg	<1	<1	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	10	11	0.0
		EG020: Copper	7440-50-8	1	mg/kg	13	14	0.0
		EG020: Lead	7439-92-1	1	mg/kg	32	33	4.6
		EG020: Molybdenum	7439-98-7	1	mg/kg	<1	<1	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	24	24	0.0
EG020: Zinc	7440-66-6	1	mg/kg	100	96	3.2		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3786651)								
HK2127564-001	Anonymous	Naphthalene	91-20-3	50	µg/kg	114	128	11.7
		Acenaphthylene	208-96-8	50	µg/kg	327	321	2.1
		Acenaphthene	83-32-9	50	µg/kg	63	61	3.0
		Fluorene	86-73-7	50	µg/kg	<50	<50	0.0
		Phenanthrene	85-01-8	50	µg/kg	1390	1400	0.4
		Anthracene	120-12-7	50	µg/kg	344	333	3.1
		Fluoranthene	206-44-0	50	µg/kg	3100	3270	5.5
		Pyrene	129-00-0	50	µg/kg	3110	3340	7.1
		Benz(a)anthracene	56-55-3	50	µg/kg	1910	1810	5.6
		Chrysene	218-01-9	50	µg/kg	2000	1860	7.1
		Benzo(b)fluoranthene	205-99-2	50	µg/kg	2180	2140	1.8



Matrix: SOIL				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3786651) - Continued								
HK2127564-001	Anonymous	Benzo(k)fluoranthene	207-08-9	50	µg/kg	642	671	4.3
		Benzo(a)pyrene	50-32-8	50	µg/kg	1.59 mg/kg	1350	16.1
		Indeno(1.2.3.cd)pyrene	193-39-5	50	µg/kg	976	956	2.0
		Dibenz(a,h)anthracene	53-70-3	50	µg/kg	198	183	8.0
		Benzo(g,h,i)perylene	191-24-2	50	µg/kg	810	804	0.8
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3786651)								
HK2127564-001	Anonymous	Bis(2-ethylhexyl)phthalate	117-81-7	1000	µg/kg	<500	<500	0.0
		Hexachlorobenzene (HCB)	118-74-1	50	µg/kg	<50	<50	0.0
		Phenol	108-95-2	500	µg/kg	<500	<500	0.0
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3786652)								
HK2127651-001	Anonymous	C9 - C16 Fraction	----	200	mg/kg	<200	<200	0.0
		C17 - C35 Fraction	----	500	mg/kg	<500	<500	0.0
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3787019)								
HK2127222-001	Anonymous	C6 - C8 Fraction	----	5	mg/kg	<5	<5	0.0
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3787020)								
HK2127222-001	Anonymous	Benzene	71-43-2	0.1	mg/kg	<0.2	<0.2	0.0
		Toluene	108-88-3	0.2	mg/kg	<0.5	<0.5	0.0
		Ethylbenzene	100-41-4	0.2	mg/kg	<0.5	<0.5	0.0
		Styrene	100-42-5	0.2	mg/kg	<0.5	<0.5	0.0
		ortho-Xylene	95-47-6	0.2	mg/kg	<0.5	<0.5	0.0
		meta- & para-Xylene	108-38-3	0.4	mg/kg	<1.0	<1.0	0.0
		Xylenes (Total)	106-42-3	----	1	mg/kg	<2.0	<2.0
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3787020)								
HK2127222-001	Anonymous	2-Propanone (Acetone)	67-64-1	2	mg/kg	<50	<50	0.0
		2-Butanone (MEK)	78-93-3	2	mg/kg	<5	<5	0.0
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3787020)								
HK2127222-001	Anonymous	Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	<0.04	0.0
		Trichloroethene	79-01-6	0.1	mg/kg	<0.1	<0.1	0.0
		Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	0.0
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3787020)								



Matrix: SOIL				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3787020) - Continued								
HK2127222-001	Anonymous	Chloroform	67-66-3	0.04	mg/kg	<0.04	<0.04	0.0
		Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	<0.1	0.0
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3787020)								
HK2127222-001	Anonymous	Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.2	mg/kg	<0.5	<0.5	0.0

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

Matrix: SOIL				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 (QC Lot: 3788566)												
EG3060: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	2.5 mg/kg	96.5	----	85.0	1120000	----	----	
EG: Metals and Major Cations (QC Lot: 3788567)												
EG020: Antimony	7440-36-0	1	mg/kg	<1	5 mg/kg	98.3	----	85.0	108	----	----	
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	102	----	87.2	110	----	----	
EG020: Barium	7440-39-3	0.5	mg/kg	<0.5	5 mg/kg	99.6	----	85.0	110	----	----	
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	0.5 mg/kg	104	----	85.0	113	----	----	
EG020: Cobalt	7440-48-4	0.5	mg/kg	<0.5	5 mg/kg	96.6	----	89.8	110	----	----	
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	100	----	92.0	115	----	----	
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	102	----	86.7	115	----	----	
EG020: Manganese	7439-96-5	0.5	mg/kg	<0.5	5 mg/kg	90.5	----	85.8	108	----	----	
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	104	----	86.6	115	----	----	
EG020: Molybdenum	7439-98-7	1	mg/kg	<1	5 mg/kg	108	----	85.2	113	----	----	
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	96.8	----	90.6	111	----	----	
EG020: Tin	7440-31-5	0.5	mg/kg	<0.5	5 mg/kg	99.3	----	85.0	109	----	----	
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	108	----	90.9	115	----	----	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3786651)												
Naphthalene	91-20-3	50	µg/kg	<50	250 µg/kg	98.6	----	85.0	106	----	----	
Acenaphthylene	208-96-8	50	µg/kg	<50	250 µg/kg	98.5	----	79.0	108	----	----	
Acenaphthene	83-32-9	50	µg/kg	<50	250 µg/kg	98.0	----	82.0	104	----	----	
Fluorene	86-73-7	50	µg/kg	<50	250 µg/kg	96.6	----	77.0	105	----	----	



Matrix: SOIL		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: 3786651) - Continued											
Phenanthrene	85-01-8	50	µg/kg	<50	250 µg/kg	97.3	----	77.0	110	----	----
Anthracene	120-12-7	50	µg/kg	<50	250 µg/kg	99.5	----	76.0	108	----	----
Fluoranthene	206-44-0	50	µg/kg	<50	250 µg/kg	98.4	----	81.0	109	----	----
Pyrene	129-00-0	50	µg/kg	<50	250 µg/kg	98.0	----	82.0	111	----	----
Benz(a)anthracene	56-55-3	50	µg/kg	<50	250 µg/kg	91.3	----	81.0	107	----	----
Chrysene	218-01-9	50	µg/kg	<50	250 µg/kg	98.6	----	83.0	121	----	----
Benzo(b)fluoranthene	205-99-2	50	µg/kg	<50	250 µg/kg	70.3	----	48.0	118	----	----
Benzo(k)fluoranthene	207-08-9	50	µg/kg	<50	250 µg/kg	90.2	----	64.0	129	----	----
Benzo(a)pyrene	50-32-8	50	µg/kg	<50	250 µg/kg	75.8	----	47.0	107	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	50	µg/kg	<50	250 µg/kg	63.3	----	55.0	97.0	----	----
Dibenz(a,h)anthracene	53-70-3	50	µg/kg	<50	250 µg/kg	63.5	----	34.0	120	----	----
Benzo(g,h,i)perylene	191-24-2	50	µg/kg	<50	250 µg/kg	61.3	----	34.0	119	----	----
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3786651)											
Phenol	108-95-2	500	µg/kg	<500	250 µg/kg	101	----	61.0	113	----	----
Hexachlorobenzene (HCB)	118-74-1	50	µg/kg	<50	250 µg/kg	98.8	----	75.0	110	----	----
Bis(2-ethylhexyl)phthalate	117-81-7	1000	µg/kg	<1000	250 µg/kg	105	----	89.0	128	----	----
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3786652)											
C9 - C16 Fraction	----	200	mg/kg	<200	31.5 mg/kg	84.9	----	76.0	104	----	----
C17 - C35 Fraction	----	500	mg/kg	<500	67.5 mg/kg	91.2	----	56.0	103	----	----
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3787019)											
C6 - C8 Fraction	----	5	mg/kg	<5	4.5 mg/kg	92.0	----	80.0	118	----	----
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3787020)											
Benzene	71-43-2	0.1	mg/kg	<0.1	0.25 mg/kg	90.4	----	79.0	121	----	----
Toluene	108-88-3	0.2	mg/kg	<0.2	0.25 mg/kg	94.5	----	78.0	124	----	----
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.25 mg/kg	91.4	----	79.0	121	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.4	mg/kg	<0.4	0.5 mg/kg	96.2	----	79.0	121	----	----
Styrene	100-42-5	0.2	mg/kg	<0.2	0.25 mg/kg	92.7	----	78.0	121	----	----
ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	0.25 mg/kg	93.6	----	79.0	119	----	----
Xylenes (Total)	----	1	mg/kg	<1.0	0.75 mg/kg	95.4	----	79.0	121	----	----



Matrix: SOIL		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-074_SR-B: Oxygenated Compounds (QC Lot: 3787020)											
2-Propanone (Acetone)	67-64-1	2	mg/kg	<2	2.5 mg/kg	93.0	----	77.0	124	----	----
2-Butanone (MEK)	78-93-3	2	mg/kg	<2	2.5 mg/kg	93.6	----	79.0	121	----	----
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3787020)											
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	0.25 mg/kg	94.3	----	79.0	122	----	----
Trichloroethene	79-01-6	0.1	mg/kg	<0.1	0.25 mg/kg	92.5	----	77.0	122	----	----
Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	0.25 mg/kg	94.8	----	79.0	119	----	----
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3787020)											
Chloroform	67-66-3	0.04	mg/kg	<0.04	0.25 mg/kg	95.3	----	79.0	122	----	----
Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	0.25 mg/kg	95.7	----	78.0	121	----	----
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3787020)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.2	mg/kg	<0.2	0.25 mg/kg	93.9	----	78.0	123	----	----
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-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3787331)											
Benzene	71-43-2	0.5	µg/L	<0.5	2 µg/L	95.1	----	80.0	121	----	----
Toluene	108-88-3	0.5	µg/L	<0.5	2 µg/L	94.2	----	76.0	121	----	----
Ethylbenzene	100-41-4	0.5	µg/L	<0.5	2 µg/L	96.0	----	79.0	123	----	----
meta- & para-Xylene	108-38-3 106-42-3	1	µg/L	<1	4 µg/L	95.2	----	78.0	121	----	----
Styrene	100-42-5	0.5	µg/L	<0.5	2 µg/L	92.6	----	78.0	122	----	----
ortho-Xylene	95-47-6	0.5	µg/L	<0.5	2 µg/L	93.5	----	78.0	121	----	----
Xylenes (Total)	----	2	µg/L	<2	6 µg/L	94.6	----	79.0	121	----	----
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3787331)											
2-Propanone (Acetone)	67-64-1	5	µg/L	<5	20 µg/L	97.0	----	79.0	124	----	----
2-Butanone (MEK)	78-93-3	5	µg/L	<5	20 µg/L	104	----	80.0	121	----	----
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3787331)											
Methylene chloride	75-09-2	5	µg/L	<5	2 µg/L	92.4	----	78.0	120	----	----



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-074_SR-E: Halogenated Aliphatics (QC Lot: 3787331) - Continued											
Trichloroethene	79-01-6	0.5	µg/L	<0.5	2 µg/L	106	----	78.0	127	----	----
Tetrachloroethene	127-18-4	0.5	µg/L	<0.5	2 µg/L	108	----	81.0	121	----	----
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3787331)											
Chloroform	67-66-3	0.5	µg/L	<0.5	2 µg/L	90.2	----	76.0	124	----	----
Bromodichloromethane	75-27-4	0.5	µg/L	<0.5	2 µg/L	109	----	78.0	119	----	----
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3787331)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	µg/L	<0.5	2 µg/L	106	----	78.0	123	----	----



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

Matrix: SOIL

					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	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 (QC Lot: 3788566)										
HK2127854-001	ENV-BH36-1.5m	EG3060: Hexavalent Chromium	18540-29-9	2.5 mg/kg	90.3	----	75.0	125	----	----
EG: Metals and Major Cations (QC Lot: 3788567)										
HK2127732-001	Anonymous	EG020: Antimony	7440-36-0	5 mg/kg	104	----	75.0	125	----	----
		EG020: Arsenic	7440-38-2	5 mg/kg	116	----	75.0	125	----	----
		EG020: Barium	7440-39-3	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Cadmium	7440-43-9	0.5 mg/kg	106	----	75.0	125	----	----
		EG020: Cobalt	7440-48-4	5 mg/kg	91.9	----	75.0	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	98.9	----	75.0	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	112	----	75.0	125	----	----
		EG020: Manganese	7439-96-5	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	122	----	75.0	125	----	----
		EG020: Molybdenum	7439-98-7	5 mg/kg	109	----	75.0	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	101	----	75.0	125	----	----
EG020: Tin	7440-31-5	5 mg/kg	108	----	75.0	125	----	----		
EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75.0	125	----	----		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3786651)										
HK2127564-002	Anonymous	Naphthalene	91-20-3	250 µg/kg	95.7	----	50.0	130	----	----
		Acenaphthylene	208-96-8	250 µg/kg	128	----	50.0	130	----	----
		Acenaphthene	83-32-9	250 µg/kg	61.9	----	50.0	130	----	----
		Fluorene	86-73-7	250 µg/kg	72.4	----	50.0	130	----	----
		Phenanthrene	85-01-8	250 µg/kg	# Not Determined	----	50.0	130	----	----
		Anthracene	120-12-7	250 µg/kg	# Not Determined	----	50.0	130	----	----



Matrix: SOIL

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

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3786651) - Continued										
HK2127564-002	Anonymous	Fluoranthene	206-44-0	250 µg/kg	# Not Determined	----	50.0	130	----	----
		Pyrene	129-00-0	250 µg/kg	# Not Determined	----	50.0	130	----	----
		Benz(a)anthracene	56-55-3	250 µg/kg	# Not Determined	----	50.0	130	----	----
		Chrysene	218-01-9	250 µg/kg	# Not Determined	----	50.0	130	----	----
		Benzo(b)fluoranthene	205-99-2	250 µg/kg	# Not Determined	----	50.0	130	----	----
		Benzo(k)fluoranthene	207-08-9	250 µg/kg	# Not Determined	----	50.0	130	----	----
		Benzo(a)pyrene	50-32-8	250 µg/kg	# Not Determined	----	50.0	130	----	----
		Indeno(1.2.3.cd)pyrene	193-39-5	250 µg/kg	# Not Determined	----	50.0	130	----	----
		Dibenz(a,h)anthracene	53-70-3	250 µg/kg	53.3	----	50.0	130	----	----
Benzo(g,h,i)perylene	191-24-2	250 µg/kg	97.7	----	50.0	130	----	----		
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3786651)										
HK2127564-002	Anonymous	Phenol	108-95-2	250 µg/kg	106	----	50.0	130	----	----
		Hexachlorobenzene (HCB)	118-74-1	250 µg/kg	103	----	50.0	130	----	----
		Bis(2-ethylhexyl)phthalate	117-81-7	250 µg/kg	104	----	50.0	130	----	----
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3786652)										
HK2127653-001	Anonymous	C9 - C16 Fraction	----	31.5 mg/kg	84.7	----	50.0	130	----	----
		C17 - C35 Fraction	----	67.5 mg/kg	84.6	----	50.0	130	----	----
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3787019)										
HK2127227-001	Anonymous	C6 - C8 Fraction	----	4.5 mg/kg	98.8	----	50.0	130	----	----
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3787020)										
HK2127229-001	Anonymous	Benzene	71-43-2	0.25 mg/kg	99.2	----	50.0	130	----	----
		Toluene	108-88-3	0.25 mg/kg	106	----	50.0	130	----	----



Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3787020) - Continued										
HK2127229-001	Anonymous	Ethylbenzene	100-41-4	0.25 mg/kg	99.0	----	50.0	130	----	----
		meta- & para-Xylene	108-38-3 106-42-3	0.5 mg/kg	102	----	50.0	130	----	----
		Styrene	100-42-5	0.25 mg/kg	108	----	50.0	130	----	----
		ortho-Xylene	95-47-6	0.25 mg/kg	97.2	----	50.0	130	----	----
		Xylenes (Total)	----	0.75 mg/kg	101	----	50.0	130	----	----
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3787020)										
HK2127229-001	Anonymous	2-Propanone (Acetone)	67-64-1	2.5 mg/kg	104	----	50.0	130	----	----
		2-Butanone (MEK)	78-93-3	2.5 mg/kg	95.2	----	50.0	130	----	----
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3787020)										
HK2127229-001	Anonymous	Methylene chloride	75-09-2	0.25 mg/kg	95.6	----	50.0	130	----	----
		Trichloroethene	79-01-6	0.25 mg/kg	104	----	50.0	130	----	----
		Tetrachloroethene	127-18-4	0.25 mg/kg	98.0	----	50.0	130	----	----
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3787020)										
HK2127229-001	Anonymous	Chloroform	67-66-3	0.25 mg/kg	92.9	----	50.0	130	----	----
		Bromodichloromethane	75-27-4	0.25 mg/kg	95.8	----	50.0	130	----	----
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3787020)										
HK2127229-001	Anonymous	Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.25 mg/kg	97.8	----	50.0	130	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		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
EP-080_SRS: TPH(Volatile)/BTEX Surrogate			
Dibromofluoromethane	1868-53-7	80	120
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121



Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-074_SR-S: VOC Surrogates			
Dibromofluoromethane	1868-53-7	80	120
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-074_SR-S: VOC Surrogates			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115

CHAIN OF CUSTODY DOCUMENTATION

H 044451



ALS Laboratory Group

CLIENT: PY - CREC JV
 ADDRESS / OFFICE: Wang Lee St. Yuen Long Industrial Estate
 PROJECT MANAGER (PM):

SAMPLER: Justin Yu
 MOBILE: 9515 7259
 PHONE:

PROJECT ID:
 SITE: YLSTW P.O. NO.:

EMAIL REPORT TO: Refer to FSS
 EMAIL INVOICE TO: (if different to report)

RESULTS REQUIRED (Date): QUOTE NO.:

ANALYSIS REQUIRED including SUITES (note - suite codes must be listed to attract suite prices)

FOR LABORATORY USE ONLY
 COOLER SEAL (circle appropriate)
 Intact: Yes No (N/A)
 SAMPLE TEMPERATURE
 CHILLED: (Yes) No

COMMENTS / SPECIAL HANDLING / STORAGE OR DIPOSAL:

Metals	Cr, Pb, Cu	Volcs	SVOCs	PCRS																
--------	------------	-------	-------	------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes: e.g. Highly contaminated samples
 e.g. "High PAHs expected"
 Extra volume for QC or trace LORs etc.

SAMPLE INFORMATION (note: S = Soil, W=Water) CONTAINER INFORMATION

ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles
1	ENV-BH37A-0.5m	S	12/7/21	0900	Glass	1
2	ENV-BH37A-0.5m	S	12/7/21	0930	Glass	1
3	ENV-BH37A-Duplicate	S	12/7/21	0930	Glass	1
4	ENV-BH37A-1.5m	S	12/7/21	1100	u7b	1
5	ENV-BH37A-3m	S	12/7/21	1430	u7b	1
6	ENV-BH37A-4m	S	13/7/21	1430	u7b	1
7	ENV-BH37A-3m	S	13/7/21	1330	u7b	1
8	ENV-BH37A-1.5m	S	13/7/21	1100	u7b	1
9	Trip Blank	W	13/7/21	1600	AG	2

RELINQUISHED BY:
 Name: Karina Chan Date: 13/7/21
 Of: Gmetech Consultants Time: 1600

RECEIVED BY:
 Name: [Signature] Date: 13/7
 Of: [Signature] Time: 13/7

METHOD OF SHIPMENT
 Con' Note No:
 Transport Co:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved;
 V = VOA Vial HCl Preserved; VS = VOA Vial Sulphuric Preserved; SG = Sulfuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
 Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottle; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soil; B = Unpreserved Bag.



CERTIFICATE OF ANALYSIS

Client	: PAUL Y - CREC JOINT VENTURE	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 20
Contact	: TEDDY ORR	Contact	: Richard Fung	Work Order	: HK2128169
Address	: 11/F, PAUL Y CENTRE, 51 HUNG TO ROAD, KWUN TONG, KL, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Teddyorr@pyengineering.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: ---	Telephone	: +852 2610 1044		
Facsimile	: +852 2621 5618	Facsimile	: +852 2610 2021		
Project	: DC/2019/10 - YUEN LONG EFFLUENT POLISHING PLANT - MAIN WORKS FOR STAGE 1			Date Samples Received	: 13-Jul-2021
Order number	: P5120-002A	Quote	: HKE/1853/2021_V2	Issue Date	: 22-Jul-2021
		number			
C-O-C number	: H044451			No. of samples received	: 9
Site	:			No. of samples analysed	: 9

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

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

Signatories	Position	Authorised results for
Anh Ngoc Huynh .	Senior Chemist	Organics_ENV
Chan Siu Ming , Vico	Manager - Inorganics	Inorganics
Leung Chak Cheong , Mike	Assistant Manager - Metals	Metals_ENV



General Comments

This report supersedes any previous report(s) with this reference. 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 13-Jul-2021 to 22-Jul-2021.

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: HK2128169

Sample(s) was/ were picked up from client by ALS staff. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of soil/sediment sample(s) was / were reported on dry weight basis.

EP070 is the numeric code for internal use. Test method for C6-C9 Fraction of TPH is EP071.

Sample(s) as received, digested by in-house method E-ASTM D3974-09 prior to determination of metals. The in-house method is developed based on ASTM D3974-09 method.

Test Method - EG3060 - Sample(s) as received, digested by in-house method E-3060 prior to the determination of Hexavalent Chromium (Cr6+). The in-house method is developed based on USEPA method 3060.



Analytical Results

Sub-Matrix: SOIL

Sample ID

Sampling date / time

Compound	CAS Number	LOR	Unit	ENV-BH37A-0.5m	ENV-BH34A-0.5m	ENV-BH34A-Duplicate	ENV-BH37A-1.5m	ENV-BH37A-3m
				13-Jul-2021 09:00	13-Jul-2021 09:30	13-Jul-2021 09:30	13-Jul-2021 11:00	13-Jul-2021 14:30
				HK2128169-001	HK2128169-002	HK2128169-003	HK2128169-004	HK2128169-005

EA/ED: Physical and Aggregate Properties

EA055: Moisture Content (dried @ 103°C)	----	0.1	%	19.2	20.0	16.1	19.0	27.4
---	------	-----	---	------	------	------	------	------

EG: Metals and Major Cations

EG020: Antimony	7440-36-0	1	mg/kg	<1	<1	<1	<1	<1
EG020: Arsenic	7440-38-2	1	mg/kg	3	5	<1	4	10
EG020: Barium	7440-39-3	1.0	mg/kg	49.5	97.9	7.3	51.5	70.6
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
EG020: Cobalt	7440-48-4	1.0	mg/kg	7.6	13.2	<1.0	15.7	31.7
EG020: Copper	7440-50-8	1	mg/kg	18	33	6	40	42
EG020: Lead	7439-92-1	1	mg/kg	56	53	73	31	49
EG020: Manganese	7439-96-5	1.0	mg/kg	266	935	107	935	1180
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EG020: Molybdenum	7439-98-7	1	mg/kg	5	4	5	<1	1
EG020: Nickel	7440-02-0	1	mg/kg	7	14	<1	18	19
EG020: Tin	7440-31-5	1.0	mg/kg	9.9	18.2	5.0	19.0	11.0
EG020: Zinc	7440-66-6	1	mg/kg	48	63	17	66	60
EG049: Trivalent Chromium	16065-83-1	1.0	mg/kg	15.2	26.1	1.5	50.4	54.3
EG3060: Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0

EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)

EP076HK: Naphthalene	91-20-3	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Acenaphthylene	208-96-8	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Acenaphthene	83-32-9	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Fluorene	86-73-7	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Phenanthrene	85-01-8	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Anthracene	120-12-7	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Fluoranthene	206-44-0	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Pyrene	129-00-0	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Benz(a)anthracene	56-55-3	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Chrysene	218-01-9	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500



Sub-Matrix: SOIL				Sample ID	ENV-BH37A-0.5m	ENV-BH34A-0.5m	ENV-BH34A-Duplicate	ENV-BH37A-1.5m	ENV-BH37A-3m
				Sampling date / time	13-Jul-2021 09:00	13-Jul-2021 09:30	13-Jul-2021 09:30	13-Jul-2021 11:00	13-Jul-2021 14:30
Compound	CAS Number	LOR	Unit	HK2128169-001	HK2128169-002	HK2128169-003	HK2128169-004	HK2128169-005	
EP-074 SR-E: Halogenated Aliphatics - Continued									
EP074_SR: Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	<0.04	<0.04	<0.04	<0.04	
EP-074_SR-G: Trihalomethanes (THM)									
EP074_SR: Chloroform	67-66-3	0.04	mg/kg	<0.04	<0.04	<0.04	<0.04	<0.04	
EP074_SR: Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
EP-074_SR-I: Methyl-tert-butyl Ether									
EP074_SR: Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	92.3	103	103	93.7	100.0	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	88.2	98.2	99.7	95.8	94.6	
EP-080_SRS: TPH(Volatile)/BTEX Surrogate									
EP070HK_SR: Dibromofluoromethane	1868-53-7	0.1	%	92.8	90.3	92.7	91.3	90.6	
EP070HK_SR: Toluene-D8	2037-26-5	0.1	%	100	98.9	97.6	99.0	98.6	
EP070HK_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	104	106	105	106	106	
EP-074_SR-S: VOC Surrogates									
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	92.8	90.3	92.7	91.3	90.6	
EP074_SR: Toluene-D8	2037-26-5	0.1	%	100	98.9	97.6	99.0	98.6	
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	104	106	105	106	106	



Sub-Matrix: SOIL				ENV-BH34A-4m	ENV-BH34A-3m	ENV-BH34A-1.5m	---	---
Sample ID				13-Jul-2021 14:30	13-Jul-2021 13:30	13-Jul-2021 11:00	---	---
Sampling date / time				13-Jul-2021 14:30	13-Jul-2021 13:30	13-Jul-2021 11:00	---	---
Compound	CAS Number	LOR	Unit	HK2128169-006	HK2128169-007	HK2128169-008	---	---
EA/ED: Physical and Aggregate Properties								
EA055: Moisture Content (dried @ 103°C)	---	0.1	%	29.4	33.2	25.5	---	---
EG: Metals and Major Cations								
EG020: Antimony	7440-36-0	1	mg/kg	<1	<1	1	---	---
EG020: Arsenic	7440-38-2	1	mg/kg	11	12	7	---	---
EG020: Barium	7440-39-3	1.0	mg/kg	66.2	75.5	132	---	---
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	<0.2	---	---
EG020: Cobalt	7440-48-4	1.0	mg/kg	11.1	20.5	18.8	---	---
EG020: Copper	7440-50-8	1	mg/kg	15	18	40	---	---
EG020: Lead	7439-92-1	1	mg/kg	35	42	30	---	---
EG020: Manganese	7439-96-5	1.0	mg/kg	333	1060	2280	---	---
EG020: Mercury	7439-97-6	0.05	mg/kg	0.05	0.06	<0.05	---	---
EG020: Molybdenum	7439-98-7	1	mg/kg	2	2	<1	---	---
EG020: Nickel	7440-02-0	1	mg/kg	20	23	21	---	---
EG020: Tin	7440-31-5	1.0	mg/kg	3.2	5.0	36.2	---	---
EG020: Zinc	7440-66-6	1	mg/kg	82	87	77	---	---
EG049: Trivalent Chromium	16065-83-1	1.0	mg/kg	39.5	38.4	37.5	---	---
EG3060: Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	<1.0	<1.0	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	0.500	mg/kg	<0.500	<0.500	<0.500	---	---
EP076HK: Acenaphthylene	208-96-8	0.500	mg/kg	<0.500	<0.500	<0.500	---	---
EP076HK: Acenaphthene	83-32-9	0.500	mg/kg	<0.500	<0.500	<0.500	---	---
EP076HK: Fluorene	86-73-7	0.500	mg/kg	<0.500	<0.500	<0.500	---	---
EP076HK: Phenanthrene	85-01-8	0.500	mg/kg	<0.500	<0.500	<0.500	---	---
EP076HK: Anthracene	120-12-7	0.500	mg/kg	<0.500	<0.500	<0.500	---	---
EP076HK: Fluoranthene	206-44-0	0.500	mg/kg	<0.500	<0.500	<0.500	---	---
EP076HK: Pyrene	129-00-0	0.500	mg/kg	<0.500	<0.500	<0.500	---	---
EP076HK: Benz(a)anthracene	56-55-3	0.500	mg/kg	<0.500	<0.500	<0.500	---	---
EP076HK: Chrysene	218-01-9	0.500	mg/kg	<0.500	<0.500	<0.500	---	---
EP076HK: Benzo(b)fluoranthene	205-99-2	0.500	mg/kg	<0.500	<0.500	<0.500	---	---
EP076HK: Benzo(k)fluoranthene	207-08-9	0.500	mg/kg	<0.500	<0.500	<0.500	---	---



Sub-Matrix: SOIL				ENV-BH34A-4m	ENV-BH34A-3m	ENV-BH34A-1.5m	---	---
Sample ID				13-Jul-2021 14:30	13-Jul-2021 13:30	13-Jul-2021 11:00	---	---
Sampling date / time				13-Jul-2021 14:30	13-Jul-2021 13:30	13-Jul-2021 11:00	---	---
Compound	CAS Number	LOR	Unit	HK2128169-006	HK2128169-007	HK2128169-008	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued								
EP076HK: Benzo(a)pyrene	50-32-8	0.500	mg/kg	<0.500	<0.500	<0.500	---	---
EP076HK: Indeno(1,2,3-cd)pyrene	193-39-5	0.500	mg/kg	<0.500	<0.500	<0.500	---	---
EP076HK: Dibenz(a,h)anthracene	53-70-3	0.500	mg/kg	<0.500	<0.500	<0.500	---	---
EP076HK: Benzo(g,h,i)perylene	191-24-2	0.500	mg/kg	<0.500	<0.500	<0.500	---	---
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate								
EP076HK: Phenol	108-95-2	0.50	mg/kg	<0.50	<0.50	<0.50	---	---
EP076HK: Hexachlorobenzene (HCB)	118-74-1	0.200	mg/kg	<0.200	<0.200	<0.200	---	---
EP076HK: Bis(2-ethylhexyl)phthalate	117-81-7	5.00	mg/kg	<5.00	<5.00	<5.00	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH)								
EP070HK_SR: C6 - C8 Fraction	----	5	mg/kg	<5	<5	<5	---	---
EP071HK_SR: C9 - C16 Fraction	----	200	mg/kg	<200	<200	<200	---	---
EP071HK_SR: C17 - C35 Fraction	----	500	mg/kg	<500	<500	<500	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH)								
EP074_SR: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	---	---
EP074_SR: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	---	---
EP074_SR: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	---	---
EP074_SR: meta- & para-Xylene	108-38-3 106-42-3	1.0	mg/kg	<1.0	<1.0	<1.0	---	---
EP074_SR: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	---	---
EP074_SR: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	---	---
EP074_SR: Xylenes (Total)	----	2.0	mg/kg	<2.0	<2.0	<2.0	---	---
EP-074_SR-B: Oxygenated Compounds								
EP074_SR: 2-Propanone (Acetone)	67-64-1	50	mg/kg	<50	<50	<50	---	---
EP074_SR: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	<5	---	---
EP-074_SR-E: Halogenated Aliphatics								
EP074_SR: Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	<0.5	---	---
EP074_SR: Trichloroethene	79-01-6	0.1	mg/kg	<0.1	<0.1	<0.1	---	---
EP074_SR: Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	<0.04	<0.04	---	---
EP-074_SR-G: Trihalomethanes (THM)								
EP074_SR: Chloroform	67-66-3	0.04	mg/kg	<0.04	<0.04	<0.04	---	---



Sub-Matrix: SOIL				ENV-BH34A-4m	ENV-BH34A-3m	ENV-BH34A-1.5m	---	---
Sample ID				13-Jul-2021 14:30	13-Jul-2021 13:30	13-Jul-2021 11:00	---	---
Sampling date / time				13-Jul-2021 14:30	13-Jul-2021 13:30	13-Jul-2021 11:00	---	---
Compound	CAS Number	LOR	Unit	HK2128169-006	HK2128169-007	HK2128169-008	---	---
EP-074_SR-G: Trihalomethanes (THM) - Continued								
EP074_SR: Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	<0.1	<0.1	---	---
EP-074_SR-I: Methyl-tert-butyl Ether								
EP074_SR: Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	mg/kg	<0.5	<0.5	<0.5	---	---
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	91.8	99.0	103	---	---
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	93.4	85.2	99.7	---	---
EP-080_SRS: TPH(Volatile)/BTEX Surrogate								
EP070HK_SR: Dibromofluoromethane	1868-53-7	0.1	%	91.4	90.4	92.9	---	---
EP070HK_SR: Toluene-D8	2037-26-5	0.1	%	100.0	98.9	97.5	---	---
EP070HK_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	106	106	108	---	---
EP-074_SR-S: VOC Surrogates								
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	91.4	90.4	92.9	---	---
EP074_SR: Toluene-D8	2037-26-5	0.1	%	100.0	98.9	97.5	---	---
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	106	106	108	---	---



Sub-Matrix: WATER				Sample ID	Trip Blank	---	---	---	---
				Sampling date / time	13-Jul-2021 16:00	---	---	---	---
Compound	CAS Number	LOR	Unit	HK2128169-009	---	---	---	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH)									
EP074_SR: Benzene	71-43-2	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Toluene	108-88-3	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Ethylbenzene	100-41-4	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	<10	---	---	---	---	---
EP074_SR: Styrene	100-42-5	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: ortho-Xylene	95-47-6	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Xylenes (Total)	----	20	µg/L	<20	---	---	---	---	---
EP-074_SR-B: Oxygenated Compounds									
EP074_SR: 2-Propanone (Acetone)	67-64-1	500	µg/L	<500	---	---	---	---	---
EP074_SR: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	---	---	---	---	---
EP-074_SR-E: Halogenated Aliphatics									
EP074_SR: Methylene chloride	75-09-2	50	µg/L	<50	---	---	---	---	---
EP074_SR: Trichloroethene	79-01-6	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Tetrachloroethene	127-18-4	5.0	µg/L	<5.0	---	---	---	---	---
EP-074_SR-G: Trihalomethanes (THM)									
EP074_SR: Chloroform	67-66-3	5.0	µg/L	<5.0	---	---	---	---	---
EP074_SR: Bromodichloromethane	75-27-4	5.0	µg/L	<5.0	---	---	---	---	---
EP-074_SR-I: Methyl-tert-butyl Ether									
EP074_SR: Methyl tert-Butyl Ether (MTBE)	1634-04-4	5.0	µg/L	<5.0	---	---	---	---	---
EP-074_SR-S: VOC Surrogates									
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	97.7	---	---	---	---	---
EP074_SR: Toluene-D8	2037-26-5	0.1	%	96.5	---	---	---	---	---
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	103	---	---	---	---	---



Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 3796014)								
HK2128169-001	ENV-BH37A-0.5m	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	19.2	19.3	0.7
HK2128513-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	16.4	16.3	0.8
EG: Metals and Major Cations (QC Lot: 3790976)								
HK2127437-002	Anonymous	EG3060: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<1.0	<1.0	0.0
EG: Metals and Major Cations (QC Lot: 3790996)								
HK2127437-002	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	0.09	0.08	13.4
		EG020: Cadmium	7440-43-9	0.2	mg/kg	0.4	0.4	0.0
		EG020: Barium	7440-39-3	0.5	mg/kg	66.1	59.2	11.1
		EG020: Cobalt	7440-48-4	0.5	mg/kg	4.6	4.4	5.5
		EG020: Manganese	7439-96-5	0.5	mg/kg	285	344	18.9
		EG020: Tin	7440-31-5	0.5	mg/kg	5.7	4.9	14.8
		EG020: Antimony	7440-36-0	1	mg/kg	1	<1	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	5	6	0.0
		EG020: Copper	7440-50-8	1	mg/kg	55	46	17.2
		EG020: Lead	7439-92-1	1	mg/kg	59	61	2.6
		EG020: Molybdenum	7439-98-7	1	mg/kg	2	2	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	18	15	18.0
EG020: Zinc	7440-66-6	1	mg/kg	754	675	11.1		
EG: Metals and Major Cations (QC Lot: 3790997)								
HK2128169-006	ENV-BH34A-4m	EG020: Mercury	7439-97-6	0.05	mg/kg	0.05	0.06	22.2
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Barium	7440-39-3	0.5	mg/kg	66.2	65.4	1.1
		EG020: Cobalt	7440-48-4	0.5	mg/kg	11.1	11.5	3.6
		EG020: Manganese	7439-96-5	0.5	mg/kg	333	327	1.8
		EG020: Tin	7440-31-5	0.5	mg/kg	3.2	3.4	4.6
		EG020: Antimony	7440-36-0	1	mg/kg	<1	<1	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	11	12	12.8
		EG020: Copper	7440-50-8	1	mg/kg	15	15	0.0
		EG020: Lead	7439-92-1	1	mg/kg	35	40	12.9
		EG020: Molybdenum	7439-98-7	1	mg/kg	2	3	0.0



Matrix: SOIL				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations (QC Lot: 3790997) - Continued								
HK2128169-006	ENV-BH34A-4m	EG020: Nickel	7440-02-0	1	mg/kg	20	20	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	82	84	2.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3794000)								
HK2128169-001	ENV-BH37A-0.5m	Naphthalene	91-20-3	50	µg/kg	<0.500 mg/kg	<500	0.0
		Acenaphthylene	208-96-8	50	µg/kg	<0.500 mg/kg	<500	0.0
		Acenaphthene	83-32-9	50	µg/kg	<0.500 mg/kg	<500	0.0
		Fluorene	86-73-7	50	µg/kg	<0.500 mg/kg	<500	0.0
		Phenanthrene	85-01-8	50	µg/kg	<0.500 mg/kg	<500	0.0
		Anthracene	120-12-7	50	µg/kg	<0.500 mg/kg	<500	0.0
		Fluoranthene	206-44-0	50	µg/kg	<0.500 mg/kg	<500	0.0
		Pyrene	129-00-0	50	µg/kg	<0.500 mg/kg	<500	0.0
		Benz(a)anthracene	56-55-3	50	µg/kg	<0.500 mg/kg	<500	0.0
		Chrysene	218-01-9	50	µg/kg	<0.500 mg/kg	<500	0.0
		Benzo(b)fluoranthene	205-99-2	50	µg/kg	<0.500 mg/kg	<500	0.0
		Benzo(k)fluoranthene	207-08-9	50	µg/kg	<0.500 mg/kg	<500	0.0
		Benzo(a)pyrene	50-32-8	50	µg/kg	<0.500 mg/kg	<500	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	50	µg/kg	<0.500 mg/kg	<500	0.0
		Dibenz(a,h)anthracene	53-70-3	50	µg/kg	<0.500 mg/kg	<500	0.0
		Benzo(g,h,i)perylene	191-24-2	50	µg/kg	<0.500 mg/kg	<500	0.0
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3794000)								
HK2128169-001	ENV-BH37A-0.5m	Bis(2-ethylhexyl)phthalate	117-81-7	1000	µg/kg	<5.00 mg/kg	<5000	0.0
		Hexachlorobenzene (HCB)	118-74-1	50	µg/kg	<0.200 mg/kg	<200	0.0
		Phenol	108-95-2	500	µg/kg	<0.50 mg/kg	<500	0.0
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3794001)								
HK2128169-001	ENV-BH37A-0.5m	C9 - C16 Fraction	----	200	mg/kg	<200	<200	0.0
		C17 - C35 Fraction	----	500	mg/kg	<500	<500	0.0
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3794216)								
HK2128169-001	ENV-BH37A-0.5m	C6 - C8 Fraction	----	5	mg/kg	<5	<5	0.0
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3794217)								
HK2128169-001	ENV-BH37A-0.5m	Benzene	71-43-2	0.1	mg/kg	<0.2	<0.2	0.0
		Toluene	108-88-3	0.2	mg/kg	<0.5	<0.5	0.0



Matrix: SOIL				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3794217) - Continued								
HK2128169-001	ENV-BH37A-0.5m	Ethylbenzene	100-41-4	0.2	mg/kg	<0.5	<0.5	0.0
		Styrene	100-42-5	0.2	mg/kg	<0.5	<0.5	0.0
		ortho-Xylene	95-47-6	0.2	mg/kg	<0.5	<0.5	0.0
		meta- & para-Xylene	108-38-3	0.4	mg/kg	<1.0	<1.0	0.0
		Xylenes (Total)	106-42-3	1	mg/kg	<2.0	<2.0	0.0
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3794217)								
HK2128169-001	ENV-BH37A-0.5m	2-Propanone (Acetone)	67-64-1	2	mg/kg	<50	<50	0.0
		2-Butanone (MEK)	78-93-3	2	mg/kg	<5	<5	0.0
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3794217)								
HK2128169-001	ENV-BH37A-0.5m	Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	<0.04	0.0
		Trichloroethene	79-01-6	0.1	mg/kg	<0.1	<0.1	0.0
		Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	0.0
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3794217)								
HK2128169-001	ENV-BH37A-0.5m	Chloroform	67-66-3	0.04	mg/kg	<0.04	<0.04	0.0
		Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	<0.1	0.0
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3794217)								
HK2128169-001	ENV-BH37A-0.5m	Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.2	mg/kg	<0.5	<0.5	0.0

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

Matrix: SOIL		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 (QC Lot: 3790976)												
EG3060: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	2.5 mg/kg	102	----	85.0	1120000	----	----	
EG: Metals and Major Cations (QC Lot: 3790996)												
EG020: Antimony	7440-36-0	1	mg/kg	<1	5 mg/kg	97.4	----	85.0	108	----	----	
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	98.2	----	87.2	110	----	----	
EG020: Barium	7440-39-3	0.5	mg/kg	<0.5	5 mg/kg	94.5	----	85.0	110	----	----	
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	0.5 mg/kg	97.1	----	85.0	113	----	----	
EG020: Cobalt	7440-48-4	0.5	mg/kg	<0.5	5 mg/kg	101	----	89.8	110	----	----	



Matrix: SOIL		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 (QC Lot: 3790996) - Continued											
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	104	----	92.0	115	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	97.0	----	86.7	115	----	----
EG020: Manganese	7439-96-5	0.5	mg/kg	<0.5	5 mg/kg	97.4	----	85.8	108	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	102	----	86.6	115	----	----
EG020: Molybdenum	7439-98-7	1	mg/kg	<1	5 mg/kg	101	----	85.2	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	101	----	90.6	111	----	----
EG020: Tin	7440-31-5	0.5	mg/kg	<0.5	5 mg/kg	97.6	----	85.0	109	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	110	----	90.9	115	----	----
EG: Metals and Major Cations (QC Lot: 3790997)											
EG020: Antimony	7440-36-0	1	mg/kg	<1	5 mg/kg	97.4	----	85.0	108	----	----
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	100	----	87.2	110	----	----
EG020: Barium	7440-39-3	0.5	mg/kg	<0.5	5 mg/kg	95.0	----	85.0	110	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	0.5 mg/kg	96.7	----	85.0	113	----	----
EG020: Cobalt	7440-48-4	0.5	mg/kg	<0.5	5 mg/kg	101	----	89.8	110	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	105	----	92.0	115	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	95.6	----	86.7	115	----	----
EG020: Manganese	7439-96-5	0.5	mg/kg	<0.5	5 mg/kg	99.0	----	85.8	108	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	102	----	86.6	115	----	----
EG020: Molybdenum	7439-98-7	1	mg/kg	<1	5 mg/kg	106	----	85.2	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	102	----	90.6	111	----	----
EG020: Tin	7440-31-5	0.5	mg/kg	<0.5	5 mg/kg	96.2	----	85.0	109	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	113	----	90.9	115	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3794000)											
Naphthalene	91-20-3	50	µg/kg	<50	250 µg/kg	91.4	----	85.0	106	----	----
Acenaphthylene	208-96-8	50	µg/kg	<50	250 µg/kg	90.2	----	79.0	108	----	----
Acenaphthene	83-32-9	50	µg/kg	<50	250 µg/kg	89.1	----	82.0	104	----	----
Fluorene	86-73-7	50	µg/kg	<50	250 µg/kg	79.5	----	77.0	105	----	----
Phenanthrene	85-01-8	50	µg/kg	<50	250 µg/kg	79.2	----	77.0	110	----	----
Anthracene	120-12-7	50	µg/kg	<50	250 µg/kg	95.3	----	76.0	108	----	----
Fluoranthene	206-44-0	50	µg/kg	<50	250 µg/kg	99.8	----	81.0	109	----	----



Matrix: SOIL		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 (%)	
						LCS	DCS	Low	High	Value	Control Limit
Method: Compound	CAS Number										
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3794000) - Continued											
Pyrene	129-00-0	50	µg/kg	<50	250 µg/kg	99.5	----	82.0	111	----	----
Benz(a)anthracene	56-55-3	50	µg/kg	<50	250 µg/kg	88.0	----	81.0	107	----	----
Chrysene	218-01-9	50	µg/kg	<50	250 µg/kg	100.0	----	83.0	121	----	----
Benzo(b)fluoranthene	205-99-2	50	µg/kg	<50	250 µg/kg	74.9	----	48.0	118	----	----
Benzo(k)fluoranthene	207-08-9	50	µg/kg	<50	250 µg/kg	99.9	----	64.0	129	----	----
Benzo(a)pyrene	50-32-8	50	µg/kg	<50	250 µg/kg	90.1	----	47.0	107	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	50	µg/kg	<50	250 µg/kg	67.6	----	55.0	97.0	----	----
Dibenz(a,h)anthracene	53-70-3	50	µg/kg	<50	250 µg/kg	82.9	----	34.0	120	----	----
Benzo(g,h,i)perylene	191-24-2	50	µg/kg	<50	250 µg/kg	85.3	----	34.0	119	----	----
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3794000)											
Phenol	108-95-2	500	µg/kg	<500	250 µg/kg	94.6	----	61.0	113	----	----
Hexachlorobenzene (HCB)	118-74-1	50	µg/kg	<50	250 µg/kg	85.0	----	75.0	110	----	----
Bis(2-ethylhexyl)phthalate	117-81-7	1000	µg/kg	<1000	250 µg/kg	106	----	89.0	128	----	----
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3794001)											
C9 - C16 Fraction	----	200	mg/kg	<200	31.5 mg/kg	85.4	----	76.0	104	----	----
C17 - C35 Fraction	----	500	mg/kg	<500	67.5 mg/kg	83.0	----	56.0	103	----	----
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3794216)											
C6 - C8 Fraction	----	5	mg/kg	<5	4.5 mg/kg	93.2	----	80.0	118	----	----
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3794217)											
Benzene	71-43-2	0.1	mg/kg	<0.1	0.25 mg/kg	95.0	----	79.0	121	----	----
Toluene	108-88-3	0.2	mg/kg	<0.2	0.25 mg/kg	94.6	----	78.0	124	----	----
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.25 mg/kg	94.4	----	79.0	121	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.4	mg/kg	<0.4	0.5 mg/kg	92.3	----	79.0	121	----	----
Styrene	100-42-5	0.2	mg/kg	<0.2	0.25 mg/kg	90.3	----	78.0	121	----	----
ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	0.25 mg/kg	96.0	----	79.0	119	----	----
Xylenes (Total)	----	1	mg/kg	<1.0	0.75 mg/kg	93.5	----	79.0	121	----	----
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3794217)											
2-Propanone (Acetone)	67-64-1	2	mg/kg	<2	2.5 mg/kg	110	----	77.0	124	----	----
2-Butanone (MEK)	78-93-3	2	mg/kg	<2	2.5 mg/kg	107	----	79.0	121	----	----



Matrix: SOIL		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-074_SR-E: Halogenated Aliphatics (QC Lot: 3794217)											
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	0.25 mg/kg	108	----	79.0	122	----	----
Trichloroethene	79-01-6	0.1	mg/kg	<0.1	0.25 mg/kg	96.0	----	77.0	122	----	----
Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	0.25 mg/kg	92.4	----	79.0	119	----	----
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3794217)											
Chloroform	67-66-3	0.04	mg/kg	<0.04	0.25 mg/kg	108	----	79.0	122	----	----
Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	0.25 mg/kg	109	----	78.0	121	----	----
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3794217)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.2	mg/kg	<0.2	0.25 mg/kg	90.7	----	78.0	123	----	----
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-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3797195)											
Benzene	71-43-2	0.5	µg/L	<0.5	2 µg/L	104	----	80.0	121	----	----
Toluene	108-88-3	0.5	µg/L	<0.5	2 µg/L	108	----	76.0	121	----	----
Ethylbenzene	100-41-4	0.5	µg/L	<0.5	2 µg/L	108	----	79.0	123	----	----
meta- & para-Xylene	108-38-3 106-42-3	1	µg/L	<1	4 µg/L	108	----	78.0	121	----	----
Styrene	100-42-5	0.5	µg/L	<0.5	2 µg/L	108	----	78.0	122	----	----
ortho-Xylene	95-47-6	0.5	µg/L	<0.5	2 µg/L	108	----	78.0	121	----	----
Xylenes (Total)	----	2	µg/L	<2	6 µg/L	108	----	79.0	121	----	----
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3797195)											
2-Propanone (Acetone)	67-64-1	5	µg/L	<5	20 µg/L	104	----	79.0	124	----	----
2-Butanone (MEK)	78-93-3	5	µg/L	<5	20 µg/L	94.3	----	80.0	121	----	----
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3797195)											
Methylene chloride	75-09-2	5	µg/L	<5	2 µg/L	94.6	----	78.0	120	----	----
Trichloroethene	79-01-6	0.5	µg/L	<0.5	2 µg/L	109	----	78.0	127	----	----
Tetrachloroethene	127-18-4	0.5	µg/L	<0.5	2 µg/L	106	----	81.0	121	----	----
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3797195)											



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-074_SR-G: Trihalomethanes (THM) (QC Lot: 3797195) - Continued											
Chloroform	67-66-3	0.5	µg/L	<0.5	2 µg/L	106	----	76.0	124	----	----
Bromodichloromethane	75-27-4	0.5	µg/L	<0.5	2 µg/L	106	----	78.0	119	----	----
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3797195)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	µg/L	<0.5	2 µg/L	107	----	78.0	123	----	----



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

Matrix: SOIL

					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	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 (QC Lot: 3790976)										
HK2127437-001	Anonymous	EG3060: Hexavalent Chromium	18540-29-9	2.5 mg/kg	104	----	75.0	125	----	----
EG: Metals and Major Cations (QC Lot: 3790996)										
HK2127437-001	Anonymous	EG020: Antimony	7440-36-0	5 mg/kg	120	----	75.0	125	----	----
		EG020: Arsenic	7440-38-2	5 mg/kg	93.3	----	75.0	125	----	----
		EG020: Barium	7440-39-3	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Cadmium	7440-43-9	0.5 mg/kg	123	----	75.0	125	----	----
		EG020: Cobalt	7440-48-4	5 mg/kg	96.6	----	75.0	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Manganese	7439-96-5	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	110	----	75.0	125	----	----
		EG020: Molybdenum	7439-98-7	5 mg/kg	101	----	75.0	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	# Not Determined	----	75.0	125	----	----
EG020: Tin	7440-31-5	5 mg/kg	93.2	----	75.0	125	----	----		
EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75.0	125	----	----		
EG: Metals and Major Cations (QC Lot: 3790997)										
HK2128169-005	ENV-BH37A-3m	EG020: Antimony	7440-36-0	5 mg/kg	93.4	----	75.0	125	----	----
		EG020: Arsenic	7440-38-2	5 mg/kg	91.8	----	75.0	125	----	----
		EG020: Barium	7440-39-3	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Cadmium	7440-43-9	0.5 mg/kg	106	----	75.0	125	----	----



Matrix: SOIL

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

Laboratory sample ID	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 (QC Lot: 3790997) - Continued										
HK2128169-005	ENV-BH37A-3m	EG020: Cobalt	7440-48-4	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Manganese	7439-96-5	5 mg/kg	# Not Determined	----	75.0	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	101	----	75.0	125	----	----
		EG020: Molybdenum	7439-98-7	5 mg/kg	87.6	----	75.0	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	78.1	----	75.0	125	----	----
		EG020: Tin	7440-31-5	5 mg/kg	85.4	----	75.0	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75.0	125	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3794000)										
HK2128169-002	ENV-BH34A-0.5m	Naphthalene	91-20-3	250 µg/kg	98.0	----	50.0	130	----	----
		Acenaphthylene	208-96-8	250 µg/kg	107	----	50.0	130	----	----
		Acenaphthene	83-32-9	250 µg/kg	95.1	----	50.0	130	----	----
		Fluorene	86-73-7	250 µg/kg	90.1	----	50.0	130	----	----
		Phenanthrene	85-01-8	250 µg/kg	89.2	----	50.0	130	----	----
		Anthracene	120-12-7	250 µg/kg	86.2	----	50.0	130	----	----
		Fluoranthene	206-44-0	250 µg/kg	103	----	50.0	130	----	----
		Pyrene	129-00-0	250 µg/kg	102	----	50.0	130	----	----
		Benz(a)anthracene	56-55-3	250 µg/kg	91.9	----	50.0	130	----	----
		Chrysene	218-01-9	250 µg/kg	97.3	----	50.0	130	----	----
		Benzo(b)fluoranthene	205-99-2	250 µg/kg	85.2	----	50.0	130	----	----
		Benzo(k)fluoranthene	207-08-9	250 µg/kg	112	----	50.0	130	----	----
		Benzo(a)pyrene	50-32-8	250 µg/kg	96.6	----	50.0	130	----	----
		Indeno(1.2.3.cd)pyrene	193-39-5	250 µg/kg	77.2	----	50.0	130	----	----
Dibenz(a,h)anthracene	53-70-3	250 µg/kg	86.8	----	50.0	130	----	----		



Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report							
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)		
					MS	MSD	Low	High	Value	Control Limit	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3794000) - Continued											
HK2128169-002	ENV-BH34A-0.5m	Benzo(g,h,i)perylene	191-24-2	250 µg/kg	90.2	----	50.0	130	----	----	
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3794000)											
HK2128169-002	ENV-BH34A-0.5m	Phenol	108-95-2	250 µg/kg	103	----	50.0	130	----	----	
		Hexachlorobenzene (HCB)	118-74-1	250 µg/kg	97.8	----	50.0	130	----	----	
		Bis(2-ethylhexyl)phthalate	117-81-7	250 µg/kg	77.8	----	50.0	130	----	----	
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3794001)											
HK2128169-003	ENV-BH34A-Duplicate	C9 - C16 Fraction	----	31.5 mg/kg	76.3	----	50.0	130	----	----	
		C17 - C35 Fraction	----	67.5 mg/kg	70.0	----	50.0	130	----	----	
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3794216)											
HK2128169-002	ENV-BH34A-0.5m	C6 - C8 Fraction	----	4.5 mg/kg	103	----	50.0	130	----	----	
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3794217)											
HK2128169-003	ENV-BH34A-Duplicate	Benzene	71-43-2	0.25 mg/kg	101	----	50.0	130	----	----	
		Toluene	108-88-3	0.25 mg/kg	109	----	50.0	130	----	----	
		Ethylbenzene	100-41-4	0.25 mg/kg	94.0	----	50.0	130	----	----	
		meta- & para-Xylene	108-38-3	0.5 mg/kg	106	----	50.0	130	----	----	
			106-42-3								
		Styrene	100-42-5	0.25 mg/kg	103	----	50.0	130	----	----	
		ortho-Xylene	95-47-6	0.25 mg/kg	104	----	50.0	130	----	----	
Xylenes (Total)	----	0.75 mg/kg	105	----	50.0	130	----	----			
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3794217)											
HK2128169-003	ENV-BH34A-Duplicate	2-Propanone (Acetone)	67-64-1	2.5 mg/kg	109	----	50.0	130	----	----	
		2-Butanone (MEK)	78-93-3	2.5 mg/kg	98.6	----	50.0	130	----	----	
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3794217)											
HK2128169-003	ENV-BH34A-Duplicate	Methylene chloride	75-09-2	0.25 mg/kg	100	----	50.0	130	----	----	
		Trichloroethene	79-01-6	0.25 mg/kg	109	----	50.0	130	----	----	
		Tetrachloroethene	127-18-4	0.25 mg/kg	106	----	50.0	130	----	----	
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3794217)											
HK2128169-003	ENV-BH34A-Duplicate	Chloroform	67-66-3	0.25 mg/kg	93.3	----	50.0	130	----	----	
		Bromodichloromethane	75-27-4	0.25 mg/kg	91.6	----	50.0	130	----	----	



Matrix: SOIL				<i>Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report</i>						
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3794217)										
HK2128169-003	ENV-BH34A-Duplicate	Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.25 mg/kg	97.0	----	50.0	130	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		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
EP-080_SRS: TPH(Volatile)/BTEX Surrogate			
Dibromofluoromethane	1868-53-7	80	120
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121
EP-074_SR-S: VOC Surrogates			
Dibromofluoromethane	1868-53-7	80	120
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-074_SR-S: VOC Surrogates			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115

CHAIN OF CUSTODY DOCUMENTATION

H 022636



ALS Laboratory Group

CLIENT: PAULY - CREC Smart Venice
 ADDRESS / OFFICE:
 PROJECT MANAGER (PM):
 PROJECT ID:
 SITE: P.O. NO.:

SAMPLER:
 MOBILE:
 PHONE: ✓
 EMAIL REPORT TO: REPAIR TO PSS.
 EMAIL INVOICE TO: (if different to report)

RESULTS REQUIRED (Date): QUOTE NO.:

ANALYSIS REQUIRED including SUITES (note - suite codes must be listed to attract suite prices)

FOR LABORATORY USE ONLY
 COOLER SEAL (circle appropriate)
 Intact: Yes No (N/A)
 SAMPLE TEMPERATURE
 CHILLED: (Yes) No

COMMENTS / SPECIAL HANDLING / STORAGE OR DIPOSAL:

Notes: e.g. Highly contaminated samples
 e.g. "High PAHs expected"
 Extra volume for QC or trace LORs etc.

SAMPLE INFORMATION (note: S = Soil, W=Water) CONTAINER INFORMATION

ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles
1	ENV-BH34A	GW	16/7/21	14:00	P/G	5
2	ENV-BH35	GW	11	14:30	P/G	5
3	ENV-BH36	GW	11	14:45	P/G	5
4	ENV-BH37A	GW	11	15:00	P/G	5
5	Duplicate ENV-BH37A	GW	11	15:15	P/G	5
6	Equipment blank	GW	11	15:30	P/G	5
7	Field blank	GW	11	15:30	P/G	5
8	Trip blank	GW	11	15:30	P/G	2

Metals - Mercury	PCRs	VOCs	SVOCs																	
✓	✓	✓	✓																	
✓	✓	✓	✓																	
✓	✓	✓	✓																	
✓	✓	✓	✓																	
✓	✓	✓	✓																	
✓	✓	✓	✓																	

RELINQUISHED BY:
 Name: Pauline Ym
 Of: PAULY - CREC JV
 Date: 16/7/21
 Time: 15:30

RECEIVED BY:
 Name: Luke Ming Ho
 Of: ALS
 Date: 16/7/21
 Time: 15:30

METHOD OF SHIPMENT
 Con' Note No:
 Transport Co:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved;
 V = VOA Vial HCl Preserved; VS = VOA Vial Sulphuric Preserved; SG = Sulfuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
 Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottle; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soil; B = Unpreserved Bag.





CERTIFICATE OF ANALYSIS

Client	: PAUL Y - CREC JOINT VENTURE	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 9
Contact	: TEDDY ORR	Contact	: Richard Fung	Work Order	: HK2128945
Address	: 11/F, PAUL Y CENTRE, 51 HUNG TO ROAD, KWUN TONG, KL, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Teddyorr@pyengineering.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: ---	Telephone	: +852 2610 1044		
Facsimile	: +852 2621 5618	Facsimile	: +852 2610 2021		
Project	: DC/2019/10 - YUEN LONG EFFLUENT POLISHING PLANT - MAIN WORKS FOR STAGE 1			Date Samples Received	: 16-Jul-2021
Order number	: P5120-002A	Quote number	: HKE/1853/2021_V3	Issue Date	: 21-Jul-2021
C-O-C number	: H022636			No. of samples received	: 8
Site	:			No. of samples analysed	: 8

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

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

Signatories	Position	Authorised results for
 Anh Ngoc Huynh .	Senior Chemist	Organics_ENV
 Leung Chak Cheong , Mike	Assistant Manager - Metals	Metals_ENV



General Comments

This report supersedes any previous report(s) with this reference. 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-Jul-2021 to 21-Jul-2021.

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: HK2128945

Sample(s) was/ were sampled by ALS staff. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

ALS Technichem (HK) Pty Ltd is HOKLAS accredited for the testing provided in this report. The sampling activity involved is not covered under HOKLAS accreditation.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

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

EP070 is the numeric code for internal use. Test method for C6-C9 Fraction of TPH is EP071.



Analytical Results

Sub-Matrix: GROUNDWATER

Sample ID

Sampling date / time

				ENV-BH34A	ENV-BH35	ENV-BH36	ENV-BH37A	Duplicate ENV-BH37A
				16-Jul-2021 14:00	16-Jul-2021 14:30	16-Jul-2021 14:45	16-Jul-2021 15:00	16-Jul-2021 15:15
Compound	CAS Number	LOR	Unit	HK2128945-001	HK2128945-002	HK2128945-003	HK2128945-004	HK2128945-005
EG: Metals and Major Cations - Filtered								
EG020: Mercury	7439-97-6	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0
EP076HK: Acenaphthylene	208-96-8	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0
EP076HK: Acenaphthene	83-32-9	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0
EP076HK: Fluorene	86-73-7	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0
EP076HK: Phenanthrene	85-01-8	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0
EP076HK: Anthracene	120-12-7	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0
EP076HK: Fluoranthene	206-44-0	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0
EP076HK: Pyrene	129-00-0	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0
EP076HK: Chrysene	218-01-9	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
EP076HK: Benzo(b)fluoranthene	205-99-2	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate								
EP076HK: Hexachlorobenzene (HCB)	118-74-1	4.0	µg/L	<4.0	<4.0	<4.0	<4.0	<4.0
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH)								
EP070HK_SR: C6 - C8 Fraction	----	20	µg/L	<20	<20	<20	<20	<20
EP071HK_SR: C9 - C16 Fraction	----	500	µg/L	500	<500	<500	<500	<500
EP071HK_SR: C17 - C35 Fraction	----	500	µg/L	1000	700	900	<500	<500
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH)								
EP074_SR: Benzene	71-43-2	5.0	µg/L	<5.0	<5.0	<5.0	<5.0	<5.0
EP074_SR: Toluene	108-88-3	5.0	µg/L	<5.0	<5.0	<5.0	<5.0	<5.0
EP074_SR: Ethylbenzene	100-41-4	5.0	µg/L	<5.0	<5.0	<5.0	<5.0	<5.0
EP074_SR: meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	<10	<10	<10	<10	<10
EP074_SR: Styrene	100-42-5	5.0	µg/L	<5.0	<5.0	<5.0	<5.0	<5.0
EP074_SR: ortho-Xylene	95-47-6	5.0	µg/L	<5.0	<5.0	<5.0	<5.0	<5.0
EP074_SR: Xylenes (Total)	----	20	µg/L	<20	<20	<20	<20	<20
EP-074_SR-B: Oxygenated Compounds								



Sub-Matrix: GROUNDWATER				Sample ID	ENV-BH34A	ENV-BH35	ENV-BH36	ENV-BH37A	Duplicate ENV-BH37A
				Sampling date / time	16-Jul-2021 14:00	16-Jul-2021 14:30	16-Jul-2021 14:45	16-Jul-2021 15:00	16-Jul-2021 15:15
Compound	CAS Number	LOR	Unit	HK2128945-001	HK2128945-002	HK2128945-003	HK2128945-004	HK2128945-005	
EP-074 SR-B: Oxvaenated Compounds - Continued									
EP074_SR: 2-Propanone (Acetone)	67-64-1	500	µg/L	711	<500	<500	<500	<500	<500
EP074_SR: 2-Butanone (MEK)	78-93-3	50	µg/L	1620	<50	189	547	592	
EP-074_SR-E: Halogenated Aliphatics									
EP074_SR: Methylene chloride	75-09-2	50	µg/L	<50	<50	<50	<50	<50	<50
EP074_SR: Trichloroethene	79-01-6	5.0	µg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
EP074_SR: Tetrachloroethene	127-18-4	5.0	µg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
EP-074_SR-G: Trihalomethanes (THM)									
EP074_SR: Chloroform	67-66-3	5.0	µg/L	7.0	<5.0	<5.0	<5.0	<5.0	<5.0
EP074_SR: Bromodichloromethane	75-27-4	5.0	µg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
EP-074_SR-I: Methyl-tert-butyl Ether									
EP074_SR: Methyl tert-Butyl Ether (MTBE)	1634-04-4	5.0	µg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	69.0	70.6	81.3	93.9	95.1	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	78.6	71.2	72.0	102	94.5	
EP-080_SRS: TPH(Volatile)/BTEX Surrogate									
EP070HK_SR: Dibromofluoromethane	1868-53-7	0.1	%	92.0	92.4	90.5	92.4	92.2	
EP070HK_SR: Toluene-D8	2037-26-5	0.1	%	98.5	100	100	98.2	98.5	
EP070HK_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	107	105	105	107	105	
EP-074_SR-S: VOC Surrogates									
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	92.0	92.4	90.5	92.4	92.2	
EP074_SR: Toluene-D8	2037-26-5	0.1	%	98.5	100	100	98.2	98.5	
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	107	105	105	107	105	



Sub-Matrix: WATER				Equipment Blank	Field Blank	Trip Blank	---	---
Sample ID				16-Jul-2021 15:30	16-Jul-2021 15:30	16-Jul-2021 15:30	---	---
Sampling date / time				16-Jul-2021 15:30	16-Jul-2021 15:30	16-Jul-2021 15:30	---	---
Compound	CAS Number	LOR	Unit	HK2128945-006	HK2128945-007	HK2128945-008	---	---
EG: Metals and Major Cations - Filtered								
EG020: Mercury	7439-97-6	0.5	µg/L	<0.5	<0.5	---	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	2.0	µg/L	<2.0	<2.0	---	---	---
EP076HK: Acenaphthylene	208-96-8	2.0	µg/L	<2.0	<2.0	---	---	---
EP076HK: Acenaphthene	83-32-9	2.0	µg/L	<2.0	<2.0	---	---	---
EP076HK: Fluorene	86-73-7	2.0	µg/L	<2.0	<2.0	---	---	---
EP076HK: Phenanthrene	85-01-8	2.0	µg/L	<2.0	<2.0	---	---	---
EP076HK: Anthracene	120-12-7	2.0	µg/L	<2.0	<2.0	---	---	---
EP076HK: Fluoranthene	206-44-0	2.0	µg/L	<2.0	<2.0	---	---	---
EP076HK: Pyrene	129-00-0	2.0	µg/L	<2.0	<2.0	---	---	---
EP076HK: Chrysene	218-01-9	1.0	µg/L	<1.0	<1.0	---	---	---
EP076HK: Benzo(b)fluoranthene	205-99-2	1.0	µg/L	<1.0	<1.0	---	---	---
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate								
EP076HK: Hexachlorobenzene (HCB)	118-74-1	4.0	µg/L	<4.0	<4.0	---	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH)								
EP070HK_SR: C6 - C8 Fraction	----	20	µg/L	<20	<20	---	---	---
EP071HK_SR: C9 - C16 Fraction	----	500	µg/L	<500	<500	---	---	---
EP071HK_SR: C17 - C35 Fraction	----	500	µg/L	<500	<500	---	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH)								
EP074_SR: Benzene	71-43-2	5.0	µg/L	<5.0	<5.0	<5.0	---	---
EP074_SR: Toluene	108-88-3	5.0	µg/L	<5.0	<5.0	<5.0	---	---
EP074_SR: Ethylbenzene	100-41-4	5.0	µg/L	<5.0	<5.0	<5.0	---	---
EP074_SR: meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	<10	<10	<10	---	---
EP074_SR: Styrene	100-42-5	5.0	µg/L	<5.0	<5.0	<5.0	---	---
EP074_SR: ortho-Xylene	95-47-6	5.0	µg/L	<5.0	<5.0	<5.0	---	---
EP074_SR: Xylenes (Total)	----	20	µg/L	<20	<20	<20	---	---
EP-074_SR-B: Oxygenated Compounds								
EP074_SR: 2-Propanone (Acetone)	67-64-1	500	µg/L	<500	<500	<500	---	---
EP074_SR: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	<50	<50	---	---



Sub-Matrix: WATER				Sample ID	Equipment Blank	Field Blank	Trip Blank	---	---
				Sampling date / time	16-Jul-2021 15:30	16-Jul-2021 15:30	16-Jul-2021 15:30	---	---
Compound	CAS Number	LOR	Unit	HK2128945-006	HK2128945-007	HK2128945-008	---	---	
EP-074_SR-E: Halogenated Aliphatics									
EP074_SR: Methylene chloride	75-09-2	50	µg/L	<50	<50	<50	---	---	
EP074_SR: Trichloroethene	79-01-6	5.0	µg/L	<5.0	<5.0	<5.0	---	---	
EP074_SR: Tetrachloroethene	127-18-4	5.0	µg/L	<5.0	<5.0	<5.0	---	---	
EP-074_SR-G: Trihalomethanes (THM)									
EP074_SR: Chloroform	67-66-3	5.0	µg/L	<5.0	<5.0	<5.0	---	---	
EP074_SR: Bromodichloromethane	75-27-4	5.0	µg/L	<5.0	<5.0	<5.0	---	---	
EP-074_SR-I: Methyl-tert-butyl Ether									
EP074_SR: Methyl tert-Butyl Ether (MTBE)	1634-04-4	5.0	µg/L	<5.0	<5.0	<5.0	---	---	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	65.6	71.2	---	---	---	
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	74.8	100	---	---	---	
EP-080_SRS: TPH(Volatile)/BTEX Surrogate									
EP070HK_SR: Dibromofluoromethane	1868-53-7	0.1	%	90.5	92.9	---	---	---	
EP070HK_SR: Toluene-D8	2037-26-5	0.1	%	101	101	---	---	---	
EP070HK_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	105	104	---	---	---	
EP-074_SR-S: VOC Surrogates									
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	90.5	92.9	92.2	---	---	
EP074_SR: Toluene-D8	2037-26-5	0.1	%	101	101	101	---	---	
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	105	104	104	---	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 3798907)								
HK2128723-002	Anonymous	EG020: Mercury	7439-97-6	0.5	µg/L	<0.5	<0.5	0.0

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	
EG: Metals and Major Cations - Filtered (QC Lot: 3798907)												
EG020: Mercury	7439-97-6	0.5	µg/L	<0.5	2 µg/L	92.3	----	85.0	115	----	----	
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3798869)												
Naphthalene	91-20-3	0.1	µg/L	<0.1	0.5 µg/L	89.5	----	50.0	116	----	----	
Acenaphthylene	208-96-8	0.1	µg/L	<0.1	0.5 µg/L	82.7	----	50.0	110	----	----	
Acenaphthene	83-32-9	0.1	µg/L	<0.1	0.5 µg/L	77.6	----	46.0	112	----	----	
Fluorene	86-73-7	0.1	µg/L	<0.1	0.5 µg/L	75.6	----	51.0	110	----	----	
Phenanthrene	85-01-8	0.1	µg/L	<0.1	0.5 µg/L	86.3	----	51.0	119	----	----	
Anthracene	120-12-7	0.1	µg/L	<0.1	0.5 µg/L	86.1	----	48.0	121	----	----	
Fluoranthene	206-44-0	0.1	µg/L	<0.1	0.5 µg/L	102	----	61.0	130	----	----	
Pyrene	129-00-0	0.1	µg/L	<0.1	0.5 µg/L	97.0	----	62.0	133	----	----	
Chrysene	218-01-9	0.1	µg/L	<0.1	0.5 µg/L	101	----	77.0	125	----	----	
Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	0.5 µg/L	96.5	----	46.0	124	----	----	
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3798869)												
Hexachlorobenzene (HCB)	118-74-1	4	µg/L	<4.0	0.5 µg/L	81.2	----	49.0	112	----	----	
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3798870)												
C9 - C16 Fraction	----	0.5	mg/L	<0.5	0.21 mg/L	77.1	----	63.0	99.0	----	----	
C17 - C35 Fraction	----	0.5	mg/L	<0.5	0.45 mg/L	85.0	----	54.0	118	----	----	
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3801543)												
C6 - C8 Fraction	----	0.02	mg/L	<0.02	0.03 mg/L	108	----	80.0	118	----	----	
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3801542)												
Benzene	71-43-2	0.5	µg/L	<0.5	2 µg/L	93.8	----	80.0	121	----	----	



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-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3801542) - Continued											
Toluene	108-88-3	0.5	µg/L	<0.5	2 µg/L	109	----	76.0	121	----	----
Ethylbenzene	100-41-4	0.5	µg/L	<0.5	2 µg/L	109	----	79.0	123	----	----
meta- & para-Xylene	108-38-3 106-42-3	1	µg/L	<1	4 µg/L	107	----	78.0	121	----	----
Styrene	100-42-5	0.5	µg/L	<0.5	2 µg/L	103	----	78.0	122	----	----
ortho-Xylene	95-47-6	0.5	µg/L	<0.5	2 µg/L	109	----	78.0	121	----	----
Xylenes (Total)	----	2	µg/L	<2	6 µg/L	108	----	79.0	121	----	----
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3801542)											
2-Propanone (Acetone)	67-64-1	5	µg/L	<5	20 µg/L	107	----	79.0	124	----	----
2-Butanone (MEK)	78-93-3	5	µg/L	<5	20 µg/L	90.9	----	80.0	121	----	----
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3801542)											
Methylene chloride	75-09-2	5	µg/L	<5	2 µg/L	106	----	78.0	120	----	----
Trichloroethene	79-01-6	0.5	µg/L	<0.5	2 µg/L	108	----	78.0	127	----	----
Tetrachloroethene	127-18-4	0.5	µg/L	<0.5	2 µg/L	108	----	81.0	121	----	----
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3801542)											
Chloroform	67-66-3	0.5	µg/L	<0.5	2 µg/L	93.9	----	76.0	124	----	----
Bromodichloromethane	75-27-4	0.5	µg/L	<0.5	2 µg/L	91.0	----	78.0	119	----	----
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3801542)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	µg/L	<0.5	2 µg/L	89.0	----	78.0	123	----	----

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

Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	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: 3798907)										
HK2128723-001	Anonymous	EG020: Mercury	7439-97-6	2 µg/L	95.0	----	75.0	125	----	----

Surrogate Control Limits



Sub-Matrix: GROUNDWATER		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
EP-080_SRS: TPH(Volatile)/BTEX Surrogate			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP-074_SR-S: VOC Surrogates			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115

Sub-Matrix: 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
EP-080_SRS: TPH(Volatile)/BTEX Surrogate			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP-074_SR-S: VOC Surrogates			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115