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Your Ref. : -
Our Ref. : YLEPP/(DC/2019/10)M45/840/(0031)

23 November 2021

By Hand

The EIA Ordinance Register Office
Environmental Protection Department
27/F., Southorn Centre,
130 Hennessy Road,
Wan Chai, Hong Kong

Attn.: Dr. MA Chi Wai

Dear Sir,

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

Environmental Permit No. EP-565/2019
Submission of Contamination Assessment Report for Mechanical Workshop

I, on behalf of the Permit Holder, Drainage Services Department, resubmit herewith three hard copies of the Contamination Assessment Report (CAR) for Mechanical Workshop, with a CD containing an electronic copy thereof, to the Director of Environmental Protection.

This CAR has addressed the comments provided in the email dated 3 November 2021, and has been certified by the ET Leader and verified by the IEC of the Project accordingly.

Should you have any queries, please feel free to contact our Senior Resident Engineer, Mr. Patrick Leung at 6124 8838 or the undersigned at 9075 7172.

Yours faithfully,

Simon H. M. Yeung
Project Manager's Delegate
AECOM Asia Co. Ltd.

Encl.

c.c. The *Client* (CE/SP, DSD, HKSAR) - Attn.: Mr. YIP Tat Ming, Ben (w/CD)
The *Project Manager* for this contract, AECOM - Attn.: Mr. Robert Chan (w/CD)
Paul Y. – CREC Joint Venture - Attn.: Mr. David Lau (w/o)
Fugro (ET) By email (w/o)
Ramboll (IEC) By email (w/o)

SY/PL/YL/JL/jc

Comments from EPD dated 03 November 2021	Our response
1. S1.3: The "Final Contamination Assessment Plan (Final CAP)" is referring to the CAP submitted as Appendix 7.1 of the EIA Report. As a Supplementary CAP is later prepared and endorsed by EPD, please consider to rephrase the "Final CAP" as the CAP in the EIA Report (EIA-CAP).	"Final CAP" is rephrased to "EIA-CAP"
2. S2.8 and Table 2-2: It is noted the information in S2.8 and Table 2-2 are same as S4.2.28 and Table 4-2 in the SCAP. The Consultants should provided the actual sampling information (eg number of duplicate samples and trip/ equipment/ field blanks samples collected) for the Mechanical Workshop in this CAR.	The actual sampling information is presented in Section 3.3.
3. S3.9: For clarity, please provide a table to summarize the laboratory testing results for QA/QC soil and groundwater samples.	QA/QC and duplicate results for soil and groundwater samples are summarized in Appendix E

Ref.: DSDYLSTWEM00_0_0232L.21

9 November 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 Mechanical Workshops (Version 1.1)

Reference is made to Contamination Assessment Report for Mechanical Workshops (Version 1.1) by CINOTECH Consultants Limited (the CAR) dated November 2021 and the ET's certification ref. MCL/ED/0433/2021/C dated 9 November 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.

DSD	Mr LAM Yu Wang	(By E-mail)
Fugro	Mr YU Lap Bong	(By E-mail)

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FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Date 9 November 2021
Our Ref. MCL/ED/0433/2021/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 Mechanical Workshop

We refer to your Contamination Assessment Report (CAR) for Mechanical Workshop (Version 1.1) submitted on 9 November 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	Engineer	Attn: Mr. LAM Yu Wang (by E-mail)
	AECOM	ER	Attn: Mr. Simon YEUNG (by E-mail)
	Ramboll HK Limited	IEC	Attn: Mr. FN WONG (by E-mail)

Drainage Services Department

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

Contamination Assessment Report for Mechanical Workshop

(Version 1.1)

November 2021

Checked By _____
(Land Contamination Specialist)

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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TABLE OF CONTENTS

Page

1 INTRODUCTION 3

Background 3
Objective & Scope 4

2 SITE INVESTIGATION 5

Sampling Strategy 5
Sampling Methodology 5
Quality Control and Quality Assurance (QA/QC) 6

3 CONTAMINATION ASSESSMENT RESULTS 7

Summary of Samples Collected 7
On site Observation 7
Laboratory Results & Interpretation 8
Interpretation of Laboratory Results of QA/QC Samples 12

4 CONCLUSION 13

LIST OF TABLES

Table 2-1 Summary of Proposed Sampling Points & CoCs for "Mechanical Workshop" 5
Table 2-2 QA/QC Requirements 6
Table 3-1 Samples Inventory 7
Table 3-2 Soil Sample Concentrations and Exceedances of RBRGs and Csat 9
Table 3-3 Groundwater Sample Concentrations and Exceedances of RBRGs and Solubility Limits ...11

LIST OF FIGURES

Figure 1 Sampling Locations at the "Mechanical Workshop".

LIST OF APPENDICES

Appendix A Site Locations & Layout Plans
Appendix B Photo Record
Appendix C Drillhole Record
Appendix D List of Soil and Groundwater Sample
Appendix E Summary of Laboratory Result
Appendix F Laboratory Testing Reports

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 m^3/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, 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 2) shall only entail the SI results for the "Mechanical Workshop", covering 3 Boreholes, namely ENV-BH31, ENV-BH32 and ENV-BH33. 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 2 provides the findings of the SI works and present the laboratory results and their interpretation of the collected samples for "Mechanical Workshop".

1.7 CAR-Part 2 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-Part 2 provides a summary of the SCAP as agreed in April 2021, describing the SI and sampling works conducted in this assessment and present the laboratory results and their interpretation of the collected samples for "Mechanical Workshop". CAR(s) for other facility/ area that required SI under this contract shall be prepared under separate submissions once the corresponding SI works, laboratory results and their interpretation of the collected samples are completed.

2 SITE INVESTIGATION

Sampling Strategy

2.1 According to the agreed SCAP, there were 3 proposed sampling locations (ENV-BH31, ENV-BH32 and ENV-BH33) for the SI under the CAR-Part 2. 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 "Mechanical Workshop"

Potentially Contaminated Area	Sampling Location ID in this report	Sampling Location ID in SCAP	Sampling Matrix/ Depths (1) (3)		Proposed Testing Parameters (3)
Mechanical Workshop	ENV-BH31, ENV-BH32, ENV-BH33	ENV-BH31, ENV-BH32, ENV-BH33	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) m bgl = meter below ground level; GW – groundwater
(2) - 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, 23luorine, 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.
(3) 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. 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 with U76 tube sampler (nominal 76mm diameter) 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 groundwater level if present or if no groundwater encountered, 6m bgl". As high groundwater levels were recorded at all boreholes, when not enough soil was presented at sampling depths below the groundwater 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 4ºC. 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-BH31, ENV-BH32 and ENV-BH33 had been conducted between 23rd July 2021 to 4th August 2021 and supervised by land contamination specialist from Cinotech. A total of 11 soil samples and 3 groundwater samples were taken and their findings are summarized in this CAR-Part 2. 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	
ENV-BH31	0.5	1.5	3.0	4.0	1
ENV-BH32	0.5	[1]	3.0	4.0	1
ENV-BH33	0.5	1.5	3.0	4.0	1

[1] Referring to the lithologic description (**Appendix C**), not enough soil was present at the sampling depth, which are below the GW level, for sampling. A sample was initially collected at the nominal depth of 1.5mbgl, as far as possible, and was delivered to the HOKLAS lab, however it was also confirmed later by the lab that not enough soil was present for testing and analyzing the sample. Hence, no sample was adopted at the sampling depth.
* 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 4 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 "Mechanical Workshop" 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 "Mechanical Workshop". 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 "Mechanical Workshop". The laboratory results are compared against the adopted RBRGs and soil saturation limit (Csat) for soil samples and the adopted RBRGs and the solubility limits 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**.

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	2/11	BDL - 1.00E+0	1.00E+00	USEPA Method 6020	2.61E+02	-	FALSE	----
Arsenic	11/11	3.00E+0 - 2.00E+1	1.00E+00		1.96E+02	-	FALSE	----
Barium	11/11	4.90E+1 - 1.91E+2	1.00E+00		1.00E+04	-	FALSE	----
Cadmium	2/11	BDL - 2.00E-1	2.00E-01		6.53E+02	-	FALSE	----
Chromium (III)	11/11	3.49E+1 - 7.67E+1	1.00E+00		1.00E+04	-	FALSE	----
Chromium (VI)	0/11	BDL	1.00E+00	USEPA Method 3060 APHA Method 3500 Cr:D	1.96E+03	-	FALSE	----
Cobalt	11/11	1.48E+1 - 4.62E+1	1.00E+00	USEPA Method 6020	1.00E+04	-	FALSE	----
Copper	11/11	7.00E+0 - 6.40E+1	1.00E+00		1.00E+04	-	FALSE	----
Lead	11/11	1.30E+1 - 7.40E+1	1.00E+00		2.29E+03	-	FALSE	----
Manganese	11/11	1.82E+2 - 2.74E+3	1.00E+00		1.00E+04	-	FALSE	----
Mercury	1/11	BDL - 1.20E-1	5.00E-02	USEPA Method 3112B	3.84E+01	-	FALSE	----
Molybdenum	6/11	BDL - 2.00E+0	1.00E+00	USEPA Method 6020	3.26E+03	-	FALSE	----
Nickel	11/11	1.70E+1 - 2.70E+1	1.00E+00		1.00E+04*	-	----	----
Tin	11/11	3.30E+0 - 4.34E+1	1.00E+00		1.00E+04	-	FALSE	----
Zinc	11/11	5.60E+1 - 1.69E+2	1.00E+00		1.00E+04	-	FALSE	----
VOCs								
2-Propanone (Acetone)	0/11	BDL	5.00E+01	USEPA Method 8260	1.00E+04*	***	----	----
Benzene	0/11	BDL	2.00E-01		9.21E+00	3.36E+02	FALSE	FALSE
Bromodichloromethane	0/11	BDL	1.00E-01		2.85E+00	1.03E+03	FALSE	FALSE
2-Butanone (MEK)	0/11	BDL	5.00E+00		1.00E+04	***	FALSE	----
Chloroform	0/11	BDL	4.00E-02		1.54E+00	1.10E+03	FALSE	FALSE
Ethylbenzene	0/11	BDL	5.00E-01		8.24E+03	1.38E+02	FALSE	FALSE
Methyl tert-Butyl Ether	0/11	BDL	5.00E-01		7.01E+01	2.38E+03	FALSE	FALSE
Methylene Chloride	0/11	BDL	5.00E-01		1.39E+01	9.21E+02	FALSE	FALSE
Styrene	0/11	BDL	5.00E-01		1.00E+04*	4.97E+02	----	FALSE
Tetrachloroethene	0/11	BDL	4.00E-02		7.77E-01	9.71E+01	FALSE	FALSE
Toluene	0/11	BDL	5.00E-01		1.00E+04*	2.35E+02	----	FALSE
Trichloroethene	0/11	BDL	1.00E-01		5.68E+00	4.88E+02	FALSE	FALSE
Xylenes (Total)	0/11	BDL	2.00E+00		1.23E+03	1.50E+02	FALSE	FALSE
SVOCs								
Acenaphthene	0/11	BDL	5.00E-01	USEPA Method 8270	1.00E+04	6.02E+01	FALSE	FALSE
Acenaphthylene	0/11	BDL	5.00E-01		1.00E+04	1.98E+01	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
Anthracene	0/11	BDL	5.00E-01		1.00E+04	2.56E+00	FALSE	FALSE
Benzo(a)anthracene	0/11	BDL	5.00E-01		9.18E+01	-	FALSE	----
Benzo(a)pyrene	0/11	BDL	5.00E-01		9.18E+00	-	FALSE	----
Benzo(b)fluoranthene	0/11	BDL	5.00E-01		1.78E+01	-	FALSE	----
Benzo(g,h,i)perylene	0/11	BDL	5.00E-01		1.00E+04	-	FALSE	----
Benzo(k)fluoranthene	0/11	BDL	5.00E-01		9.18E+02	-	FALSE	----
bis(2-ethylhexyl)phthalate	0/11	BDL	5.00E+00		9.18E+01	-	FALSE	----
Chrysene	0/11	BDL	5.00E-01		1.14E+03	-	FALSE	----
Dibenz(a.h)anthracene	0/11	BDL	5.00E-01		9.18E+00	-	FALSE	----
Fluoranthene	0/11	BDL	5.00E-01		1.00E+04	-	FALSE	----
Fluorene	0/11	BDL	5.00E-01		1.00E+04	5.47E+01	FALSE	FALSE
Hexachlorobenzene	0/11	BDL	2.00E-01		5.82E-01	-	FALSE	----
Indeno(1.2.3.cd)pyrene	0/11	BDL	5.00E-01		9.18E+01	-	FALSE	----
Naphthalene	0/11	BDL	5.00E-01		4.53E+02	1.25E+02	FALSE	FALSE
Phenanthrene	0/11	BDL	5.00E-01		1.00E+04	2.80E+01	FALSE	FALSE
Phenol	0/11	BDL	5.00E-01		1.00E+04	7.26E+03	FALSE	FALSE
Pyrene	0/11	BDL	5.00E-01		1.00E+04*	-	----	----
PCRs								
C6 - C8 Fraction	0/11	BDL	5.00E+00	USEPA Method 8260/8015	1.00E+04	1.00E+03	FALSE	FALSE
C9 - C16 Fraction	0/11	BDL	2.00E+02		1.00E+04	3.00E+03	FALSE	FALSE
C17 - C35 Fraction	0/11	BDL	5.00E+02		1.00E+04	5.00E+03	FALSE	FALSE

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
*** indicates that the soil saturation limit exceeds the 'ceiling limit' therefore the RBRG applies.
# Chromium III = Total Chromium – Chromium VI
---- = Not applicable as no soil saturation limit is given.

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 (mg/L)	Analytical Method	Industrial (mg/L)	Solubility Limit (mg/L)	Maximum Detected Concentration Exceeds (check if applicable)	
							RBRG	Solubility
Metal								
Mercury	0/3	BDL	5.00E-04	USEPA Method 3112B	6.79E+00	-	FALSE	----
VOCs								
2-Propanone (Acetone)	0/3	BDL	5.00E-01	USEPA Method 8260	1.00E+04	***	FALSE	----
Benzene	0/3	BDL	5.00E-03		5.40E+01	1.75E+03	FALSE	FALSE
Bromodichloromethane	0/3	BDL	5.00E-03		2.62E+01	6.74E+03	FALSE	FALSE
2-Butanone (MEK)	3/3	7.80E-2 - 7.51E-1	5.00E-02		1.00E+04	***	FALSE	----
Chloroform	0/3	BDL	5.00E-03		1.13E+01	7.92E+03	FALSE	FALSE
Ethylbenzene	0/3	BDL	5.00E-03		1.00E+04	1.69E+02	FALSE	FALSE
Methyl tert-Butyl Ether	0/3	BDL	5.00E-03		1.81E+03	***	FALSE	----
Methylene Chloride	0/3	BDL	5.00E-02		2.24E+02	***	FALSE	----
Styrene	0/3	BDL	5.00E-03		1.00E+04	3.10E+02	FALSE	FALSE
Tetrachloroethene	0/3	BDL	5.00E-03		2.95E+00	2.00E+02	FALSE	FALSE
Toluene	0/3	BDL	5.00E-03		1.00E+04	5.26E+02	FALSE	FALSE
Trichloroethene	0/3	BDL	5.00E-03		1.42E+01	1.10E+03	FALSE	FALSE
Xylenes (Total)	0/3	BDL	2.00E-02		1.57E+03	1.75E+02	FALSE	FALSE
SVOCs								
Acenaphthene	0/3	BDL	2.00E-03	USEPA Method 8270	1.00E+04	4.24E+00	FALSE	FALSE
Acenaphthylene	0/3	BDL	2.00E-03		1.00E+04	3.93E+00	FALSE	FALSE
Anthracene	0/3	BDL	2.00E-03		1.00E+04	4.34E-02	FALSE	FALSE
Benzo(b)fluoranthene	0/3	BDL	1.00E-03		7.53E+00	1.50E-03	FALSE	FALSE
Chrysene	0/3	BDL	1.00E-03		8.12E+02	1.60E-03	FALSE	FALSE
Fluoranthene	0/3	BDL	2.00E-03		1.00E+04	2.06E-01	FALSE	FALSE
Fluorene	0/3	BDL	2.00E-03		1.00E+04	1.98E+00	FALSE	FALSE
Hexachlorobenzene	0/3	BDL	4.00E-03		6.95E-01	6.20E+00	FALSE	FALSE
Naphthalene	0/3	BDL	2.00E-03		8.62E+02	3.10E+01	FALSE	FALSE
Phenanthrene	0/3	BDL	2.00E-03		1.00E+04	1.00E+00	FALSE	FALSE
Pyrene	0/3	BDL	2.00E-03		1.00E+04	1.35E-01	FALSE	FALSE
PCRs								
C6 - C8 Fraction	0/3	BDL	2.00E-02	USEPA Method 8260/8015	1.15E+03	5.23E+00	FALSE	FALSE
C9 - C16 Fraction	0/3	BDL	5.00E-01		9.98E+03	2.80E+00	FALSE	FALSE
C17 - C35 Fraction	1/3	BDL - 9.00E-1	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.

Interpretation of Laboratory Results of QA/QC Samples

3.10 The field QA/QC samples include 1 duplicate soil sample, 1 duplicate groundwater sample, 1 equipment blank for soil sample, 1 equipment blank for groundwater sample, 1 field blank sample for soil, 1 field blank for water and 4 trip blank samples.

3.11 All results of the tested parameters for the field, equipment and trip blanks are below the corresponding reporting limits. The relative percentage difference (RPD) was used to measure the representativeness and/or precision of the duplicate samples. In accordance with the USEPA guideline, the acceptable limits for the RPDs are less than 50% and 30% for soil and groundwater samples respectively. The greatest RPD calculated for the duplicated soil samples collected from ENV-BH32 is 21.81% while that calculated for the duplicated groundwater samples from ENV-BH33 is 8.59% which are well within the acceptable limit. Therefore, the results of the original and duplicate samples are considered as identical samples.

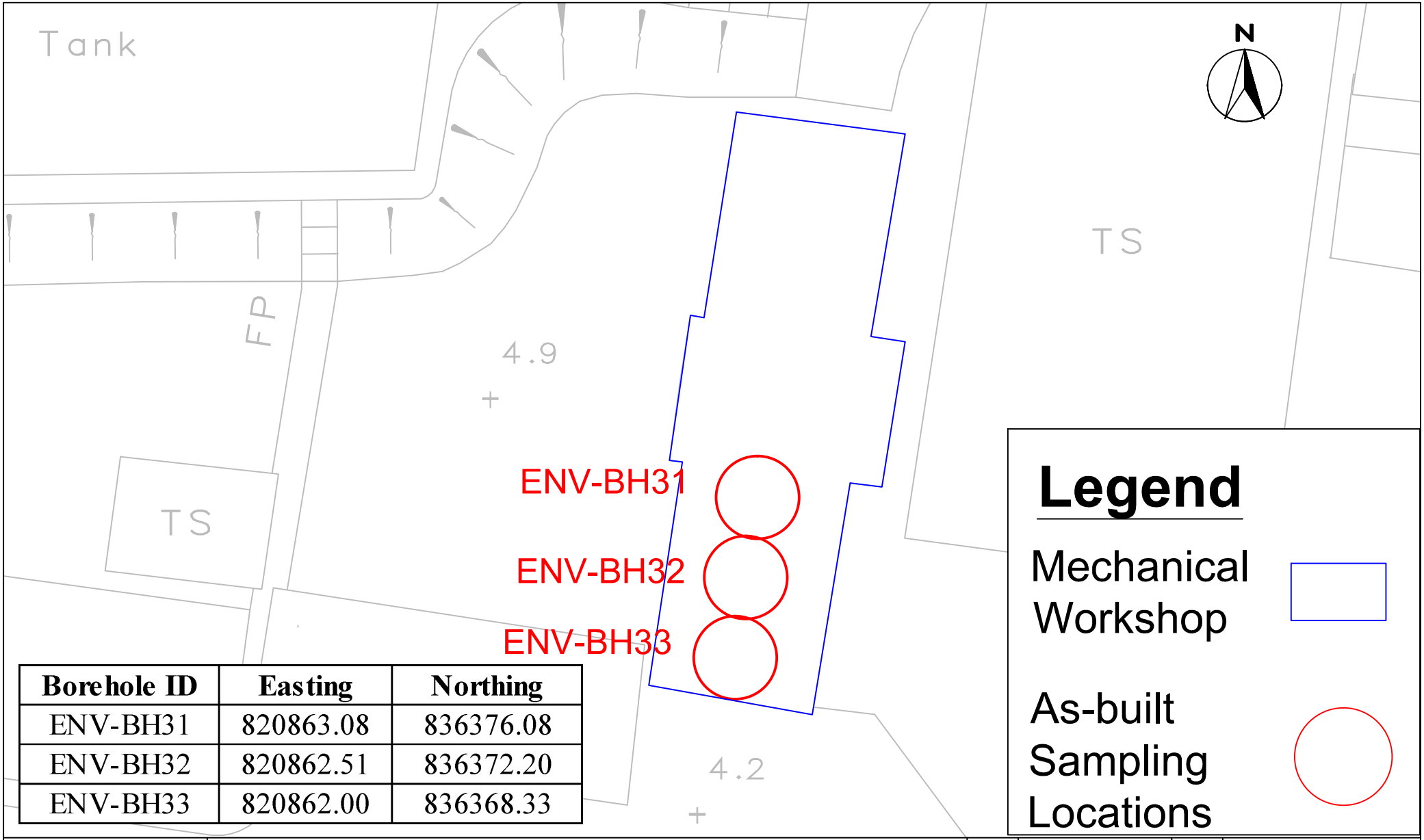
3.12 Hence, the sampling method is consistent throughout the SI; all soil/ groundwater samples were not contaminated from the sampling handling, and that the decontamination procedures had been followed. All field QA/AC results are included in the laboratory chemical testing reports attached in **Appendix F**.

4 CONCLUSION

4.1 In accordance to the approved SCAP, the sampling works for boreholes ENV-BH31, ENV-BH32 and ENV-BH33 were collected and supervised by Cinotech. The soil and groundwater samples were delivered to ALS Technichem (HK) Pty Ltd for testing and analysis of the CoCs according to the SCAP.

4.2 RBRGs for Industrial have been adopted for the "Mechanical Workshop" and the laboratory results for the sampling works show that there are no exceedances of the adopted RBRGs for the "Mechanical Workshop". As no contaminated soil and groundwater was found within the "Mechanical Workshop", no remediation actions are required for contaminated soil and groundwater for the scheduled land use of the "Mechanical Workshop".

FIGURES



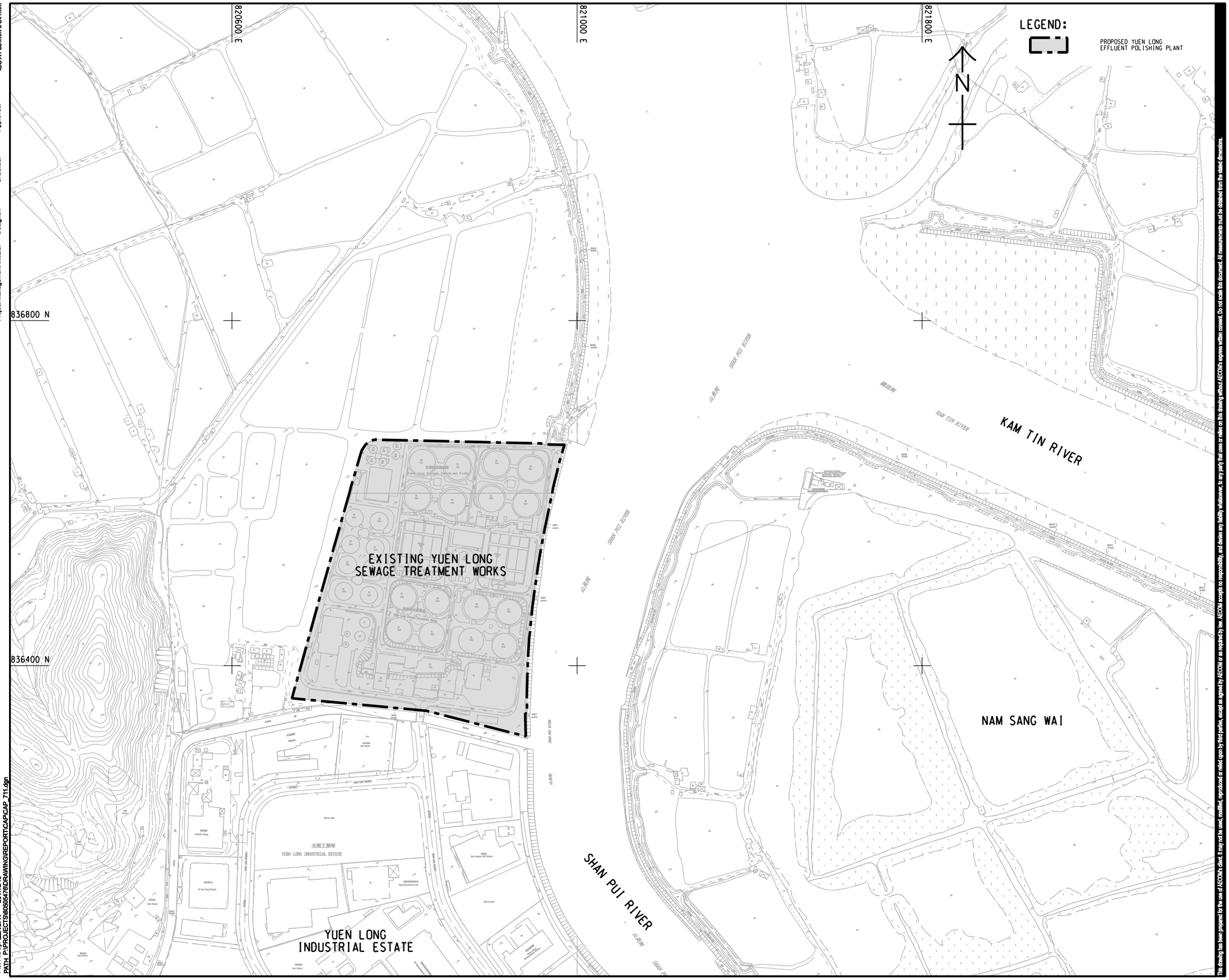
Borehole ID	Easting	Northing
ENV-BH31	820863.08	836376.08
ENV-BH32	820862.51	836372.20
ENV-BH33	820862.00	836368.33

CINOTECH
Cinotech Consultants Limited

Contract No. DC/2019/10
Yuen Long Effluent Polishing Plant - Main Works for Stage 1
As-built Sampling Locations Plan (Mechanical Workshop)

SCALE	1:250@A4	DATE	Aug 2021
CHECK	KC	DRAWN	SC
JOB No.	MA21002	FIGURE NO. 1	REV -

APPENDIX A
SITE LOCATIONS & LAYOUT PLANS



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

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核狀

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

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

820700 E

820000 E

836600 N

836400 N

N

LEGEND:

PROJECT BOUNDARY

CONSOLIDATION TANKS

WASTE STORAGE AREA

S.A.S THICKENER HOUSE

元朗污水處理廠

Yuen Long Sewage Treatment Works

FINAL SETTLING TANKS

FINAL SETTLING TANKS

WASH WATER PUMPING STATION

AUXILIARY PUMPING STATION

SLUDGE DIGESTION TANKS

METHANE COMPRESSOR HOUSE

SLUDGE DIGESTION TANKS

BLOWER HOUSE

TRANSFORMER HOUSE 'B' AND 'C'

AERATION TANKS

RETURN ACTIVATED SLUDGE SCREW PUMP PUMPING STATION

AERATION TANKS

SLUDGE HOLDING TANKS

WATER HEATER HOUSE

SLUDGE HOLDING TANKS

元朗污水處理廠

Yuen Long Sewage Treatment Works

PRIMARY SEDIMENTATION TANKS

PRIMARY SEDIMENTATION TANKS

SLUDGE DEWATERING HOUSE

GAS HOLDERS

DIGESTED SLUDGE CONDITIONING TANKS

DANGEROUS GOODS STORE

CENTRAL CONTROL ROOM

SCREENING PRESS HOUSE

BAR SCREEN CHAMBER

DETRITORS

TRANSFORMER HOUSE 'A'

SCREW PUMP PUMPING STATION

MAIN STOREROOM AND WORKSHOPS

MECHANICAL WORKSHOP

WASTE GAS BURNER

EMERGENCY BY-PASS CHAMBER

ADMINISTRATION BUILDING

STAFF CHANGING ROOM

SHAN PUI RIVER

山貝河

Nullah

TOPFINE

巴士車廠
Bus Depot

Legends

Phase I Works Area

Phase II Works Area

Plot File by: CAOPA 2017/6/29
PATH: p:\projects\60505476\drawing\report\cap\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

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核

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
圖紙名稱

GENERAL SITE LAYOUT PLAN OF EXISTING YLSTW

SHEET NUMBER
圖紙編號

60505476/CAP/712

APPENDIX B
PHOTO RECORD

lab-grade detergent

Cleaning with lab-grade detergent and distilled Water

Equipment Blanks

Collecting Equipment Blank for GW Sampling

Collecting Equipment Blank for Soil Sampling

Field Blanks

CINOTECH 漢臻 consultants limited

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

Decontamination prior to Sampling (Mechanical Workshop)

SCALE	N.T.S.	DATE	Aug-21	
CHECK	K.C.	DRAWN	SC	
JOB NO.	MA21002	Appendix A		REV.
				1

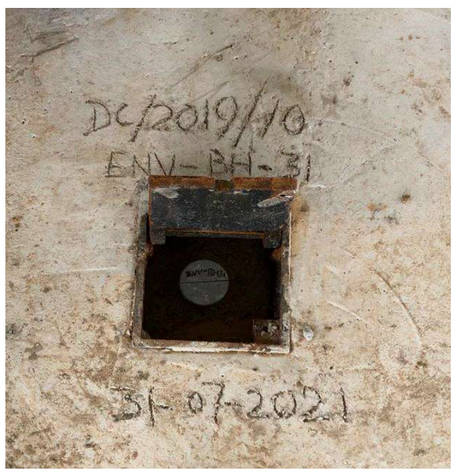
Trial Pits

Collecting Soil Samples at 0.5m bgl

Preparation for Drilling

Samping using U76

Soil Samples



Set-up of Monitoring Well

Purging

Ground Water Samples

CINOTECH 漢驊 consultants limited

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

Photos Records for Sampling Works (Mechanical Workshop)

SCALE	N.T.S.	DATE	Aug-21
CHECK	K.C.	DRAWN	SC
JOB NO.	MA21002	Appendix A	REV. 1

APPENDIX C
DRILLHOLE RECORD

DRiLTECH

DRILLHOLE RECORD

CONTRACT NO. **DC/2019/10**

HOLE NO. **ENV-BH31**

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

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

METHOD **ROTARY**	CO-ORDINATES E **820863.12** N **836375.64**	WORKS ORDER NO. **D-836**
MACHINE **SD29**		DATE **30.07.2021** to **30.07.2021**
FLUSHING MEDIUM **Dry**	ORIENTATION **VERTICAL**	GROUND LEVEL **+5.00** 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
30.07.2021	HW							1 INSPECTION PIT 0.00 0.45	+5.00	0.00			Brown, sandy angular to subangular fine to coarse GRAVEL sized rock and occasional concrete fragments. (FILL)
								2 0.95 3 1.15					
			64				B=41	4 1.50 5 1.95	+3.50	1.50			Brownish yellow and brownish red, sandy SILT with occasional angular fine to medium gravel sized rock fragments. (FILL)
			56				B=28	6 3.00 7 3.45					
			67				△ B=12	8 4.00	+1.00	4.00			
30.07.2021	HW 4.50m	1.10 at 1300						9 4.45	+0.50	4.50			Dark grey, spotted black , sandy clayey SILT with occasional angular fine to medium gravel sized rock fragments. (FILL)
													End of hole at 4.50 m.

- 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.

DRiLTECH

DRILLHOLE RECORD

CONTRACT NO. **DC/2019/10**

HOLE NO. **ENV-BH32**

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

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

METHOD **ROTARY**	CO-ORDINATES E **820862.65** N **836372.17**	WORKS ORDER NO. **D-836**
MACHINE **SD29**		DATE **28.07.2021** to **28.07.2021**
FLUSHING MEDIUM **Dry**	ORIENTATION **VERTICAL**	GROUND LEVEL **+5.00** 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
28.07.2021	HW							1 INSPECTION PIT 0.00 / 0.45	+5.00	0.00			Brown and locally grey, angular to subangular fine to coarse GRAVEL sized rock and occasional concrete fragments. (FILL)
								2 0.95 / 3 1.15					
1								4 1.50 / 5 1.95					
			44				B=26						
2													
3							B=17	6 3.00	+2.00	3.00			Brown, brownish yellow and grey, slightly silty fine to coarse SAND with some angular fine to medium gravel sized rock fragments. (FILL)
			78					7 3.45					
4													
28.07.2021	HW 4.50m	1.20 at 1300	42				B=15	8 4.00 / 9 4.45	+0.50	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.

DRiLTECH

DRILLHOLE RECORD

CONTRACT NO. **DC/2019/10**

HOLE NO. **ENV-BH33**

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

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

METHOD **ROTARY**	CO-ORDINATES E **820862.07** N **836369.09**	WORKS ORDER NO. **D-836**
MACHINE **SD29**		DATE **27.07.2021** to **27.07.2021**
FLUSHING MEDIUM **Dry**	ORIENTATION **VERTICAL**	GROUND LEVEL **+4.99** 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
27.07.2021	HW							1 INSPECTION PIT 0.00 0.45	+4.99	0.00			Brown and locally grey, slightly sandy angular to subangular fine to coarse GRAVEL sized rock and occasional concrete fragments. (FILL)
								2 0.95 3 1.15					
1								4 1.50	+3.49	1.50			Brown and light brownish grey, sandy clayey SILT with occasional angular fine to medium gravel sized rock fragments. (FILL)
			49				B=29	5 1.95					
2													
								6 3.00					
3							B=34	7 3.45					
			60										
4							B=17	8 4.00					
27.07.2021	HW 4.50m	1.10 at 1300	38					9 4.45	+0.49	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.

APPENDIX D
LIST OF SOIL AND GROUNDWATER SAMPLE

List of Samples for Mechanical Workshop

Borehole		ENV-BH31	ENV-BH32	ENV-BH33
		As-built Coordinate		
Easting (m)		820863.08	820862.51	820862.00
Northing (m)		836376.08	836372.20	836368.33
		Date and Depth of the Samples		
Soil Sample 1	Sample ID	ENV-BH31-0.5m	ENV-BH32-0.5m [1]	ENV-BH33 (0.5m)
	Depth (m bgl)	0.5	0.5	0.5
	Date	27-Jul-21	23-Jul-21	24-Jul-21
Soil Sample 2	Sample ID	ENV-BH31-1.5m	N/A	ENV-BH33-1.5m
	Depth (m bgl)	1.5	N/A	1.5
	Date	31-Jul-21	N/A	27-Jul-21
Soil Sample 3	Sample ID	ENV-BH31-3.0m	ENV-BH32-3.0m	ENV-BH33-3.0m
	Depth (m bgl)	3.0	3.0	3.0
	Date	31-Jul-21	28-Jul-21	27-Jul-21
Soil Sample 4	Sample ID	ENV-BH31-4.0m	ENV-BH32-4.0m	ENV-BH33-4.0m
	Depth (m bgl)	4.0	4.0	4.0
	Date	31-Jul-21	28-Jul-21	27-Jul-21
Groundwater Sample	Sample ID	ENV-BH31	ENV-BH32	ENV-BH33 [2]
	Date	4-Aug-21	4-Aug-21	4-Aug-21
	G.W. Level (m bgl)	0.94	0.96	0.93
	pH Value	8.5	8.4	7.8
	Temperature (°C)	30.0	29.6	29.3

Note:

[1] Duplicate Soil Sample has been taken for ENV-BH32-0.5m.

[2] Duplicate Groundwater Sample has been taken for ENV-BH33.

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)	ENV-BH31				ENV-BH32			ENV-BH33			
						ENV-BH31-0.5m	ENV-BH31-1.5m	ENV-BH31-3.0m	ENV-BH31-4.0m	ENV-BH32-0.5m	ENV-BH32-3.0m	ENV-BH32-4.0m	ENV-BH33-0.5m	ENV-BH33-1.5m	ENV-BH33-3.0m	ENV-BH33-4.0m
Metal																
Antimony	No	2.61E+02	-	1.00E+00	1.00E+00	BDL	BDL	BDL	1.00E+00	BDL	BDL	BDL	1.00E+00	BDL	BDL	BDL
Arsenic	No	1.96E+02	-	1.00E+00	2.00E+01	6.00E+00	5.00E+00	3.00E+00	2.00E+01	6.00E+00	8.00E+00	4.00E+00	5.00E+00	4.00E+00	3.00E+00	3.00E+00
Barium	No	1.00E+04	-	1.00E+00	1.91E+02	1.90E+02	1.09E+02	7.48E+01	4.90E+01	1.29E+02	1.91E+02	1.27E+02	1.43E+02	1.11E+02	1.16E+02	8.20E+01
Cadmium	No	6.53E+02	-	2.00E-01	2.00E-01	2.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	2.00E-01	BDL	BDL	BDL
Chromium (III)	No	1.00E+04	-	1.00E+00	7.67E+01	4.12E+01	4.90E+01	3.96E+01	3.59E+01	3.78E+01	7.67E+01	3.96E+01	4.12E+01	5.29E+01	3.49E+01	3.49E+01
Chromium (VI)	No	1.96E+03	-	1.00E+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cobalt	No	1.00E+04	-	1.00E+00	4.62E+01	3.16E+01	2.12E+01	1.85E+01	1.48E+01	2.39E+01	3.02E+01	2.47E+01	2.16E+01	4.62E+01	2.10E+01	3.37E+01
Copper	No	1.00E+04	-	1.00E+00	6.40E+01	4.00E+01	4.00E+01	7.00E+00	2.10E+01	3.60E+01	6.40E+01	2.40E+01	5.00E+01	3.80E+01	2.50E+01	1.00E+01
Lead	No	2.29E+03	-	1.00E+00	7.40E+01	5.20E+01	3.40E+01	2.40E+01	5.80E+01	3.80E+01	2.10E+01	2.90E+01	7.40E+01	3.20E+01	1.30E+01	6.80E+01
Manganese	No	1.00E+04	-	1.00E+00	2.74E+03	2.74E+03	1.32E+03	3.83E+02	1.82E+02	1.86E+03	2.46E+03	1.08E+03	2.03E+03	1.72E+03	1.28E+03	1.46E+03
Mercury	No	3.84E+01	-	5.00E-02	1.20E-01	BDL	BDL	BDL	1.20E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Molybdenum	No	3.26E+03	-	1.00E+00	2.00E+00	1.00E+00	1.00E+00	BDL	2.00E+00	1.00E+00	BDL	BDL	2.00E+00	1.00E+00	BDL	BDL
Nickel	No	1.00E+04*	-	1.00E+00	2.70E+01	2.70E+01	2.00E+01	2.70E+01	2.60E+01	1.70E+01	1.70E+01	2.60E+01	2.10E+01	2.40E+01	2.70E+01	2.40E+01
Tin	No	1.00E+04	-	1.00E+00	4.34E+01	3.74E+01	1.85E+01	4.80E+00	5.10E+00	2.54E+01	4.34E+01	5.50E+00	2.15E+01	1.50E+01	3.88E+01	3.30E+00
Zinc	No	1.00E+04	-	1.00E+00	1.69E+02	9.50E+01	6.10E+01	8.20E+01	1.69E+02	8.00E+01	5.60E+01	8.40E+01	9.90E+01	7.40E+01	8.90E+01	7.50E+01
VOCs																
2-Propanone (Acetone)	No	1.00E+04*	***	5.00E+01	BDL	BDL	BDL	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	BDL	BDL	BDL
Bromodichloromethane	No	2.85E+00	1.03E+03	1.00E-01	BDL	BDL	BDL	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	BDL	BDL	BDL
Chloroform	No	1.54E+00	1.10E+03	4.00E-02	BDL	BDL	BDL	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	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	BDL	BDL	BDL
Methylene Chloride	No	1.39E+01	9.21E+02	5.00E-01	BDL	BDL	BDL	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	BDL	BDL	BDL
Tetrachloroethene	No	7.77E-01	9.71E+01	4.00E-02	BDL	BDL	BDL	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	BDL	BDL	BDL
Trichloroethene	No	5.68E+00	4.88E+02	1.00E-01	BDL	BDL	BDL	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	BDL	BDL	BDL
SVOCs																
Acenaphthene	No	1.00E+04	6.02E+01	5.00E-01	BDL	BDL	BDL	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	BDL	BDL	BDL
Anthracene	No	1.00E+04	2.56E+00	5.00E-01	BDL	BDL	BDL	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	BDL	BDL	BDL
Benzo(a)pyrene	No	9.18E+00	-	5.00E-01	BDL	BDL	BDL	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	BDL	BDL	BDL
Benzo(g,h,i)perylene	No	1.00E+04	-	5.00E-01	BDL	BDL	BDL	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	BDL	BDL	BDL
Bis(2-ethylhexyl)phthalate	No	9.18E+01	-	5.00E+00	BDL	BDL	BDL	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	BDL	BDL	BDL
Dibenz(a.h)anthracene	No	9.18E+00	-	5.00E-01	BDL	BDL	BDL	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	BDL	BDL	BDL
Fluorene	No	1.00E+04	5.47E+01	5.00E-01	BDL	BDL	BDL	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	BDL	BDL	BDL
Indeno(1.2.3.cd)pyrene	No	9.18E+01	-	5.00E-01	BDL	BDL	BDL	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	BDL	BDL	BDL
Phenanthrene	No	1.00E+04	2.80E+01	5.00E-01	BDL	BDL	BDL	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	BDL	BDL	BDL
Pyrene	No	1.00E+04*	-	5.00E-01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Hydrocarbons - PCRs																
C6 - C8 Fraction	No	1.00E+04	1.00E+03	5.00E+00	BDL	BDL	BDL	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	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	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)		ENV-BH31	ENV-BH32	ENV-BH33
							ENV-BH31	ENV-BH32	ENV-BH33
Metal									
Mercury	No	6.79E+00	-	5.00E-04	BDL		BDL	BDL	BDL
VOCs									
2-Propanone (Acetone)	No	1.00E+04	***	5.00E-01	BDL		BDL	BDL	BDL
Benzene	No	5.40E+01	1.75E+03	5.00E-03	BDL		BDL	BDL	BDL
Bromodichloromethane	No	2.62E+01	6.74E+03	5.00E-03	BDL		BDL	BDL	BDL
2-Butanone (MEK)	No	1.00E+04	***	5.00E-02	7.51E-01		7.28E-01	7.51E-01	7.80E-02
Chloroform	No	1.13E+01	7.92E+03	5.00E-03	BDL		BDL	BDL	BDL
Ethylbenzene	No	1.00E+04	1.69E+02	5.00E-03	BDL		BDL	BDL	BDL
Methyl tert-Butyl Ether	No	1.81E+03	***	5.00E-03	BDL		BDL	BDL	BDL
Methylene Chloride	No	2.24E+02	***	5.00E-02	BDL		BDL	BDL	BDL
Styrene	No	1.00E+04	3.10E+02	5.00E-03	BDL		BDL	BDL	BDL
Tetrachloroethene	No	2.95E+00	2.00E+02	5.00E-03	BDL		BDL	BDL	BDL
Toluene	No	1.00E+04	5.26E+02	5.00E-03	BDL		BDL	BDL	BDL
Trichloroethene	No	1.42E+01	1.10E+03	5.00E-03	BDL		BDL	BDL	BDL
Xylenes (Total)	No	1.57E+03	1.75E+02	2.00E-02	BDL		BDL	BDL	BDL
SVOCs									
Acenaphthene	No	1.00E+04	4.24E+00	2.00E-03	BDL		BDL	BDL	BDL
Acenaphthylene	No	1.00E+04	3.93E+00	2.00E-03	BDL		BDL	BDL	BDL
Anthracene	No	1.00E+04	4.34E-02	2.00E-03	BDL		BDL	BDL	BDL
Benzo(b)fluoranthene	No	7.53E+00	1.50E-03	1.00E-03	BDL		BDL	BDL	BDL
Chrysene	No	8.12E+02	1.60E-03	1.00E-03	BDL		BDL	BDL	BDL
Fluoranthene	No	1.00E+04	2.06E-01	2.00E-03	BDL		BDL	BDL	BDL
Fluorene	No	1.00E+04	1.98E+00	2.00E-03	BDL		BDL	BDL	BDL
Hexachlorobenzene	No	6.95E-01	6.20E+00	4.00E-03	BDL		BDL	BDL	BDL
Naphthalene	No	8.62E+02	3.10E+01	2.00E-03	BDL		BDL	BDL	BDL
Phenanthrene	No	1.00E+04	1.00E+00	2.00E-03	BDL		BDL	BDL	BDL
Pyrene	No	1.00E+04	1.35E-01	2.00E-03	BDL		BDL	BDL	BDL
PCRs									
C6 - C8 Fraction	No	1.15E+03	5.23E+00	2.00E-02	BDL		BDL	BDL	BDL
C9 - C16 Fraction	No	9.98E+03	2.80E+00	5.00E-01	BDL		BDL	BDL	BDL
C17 - C35 Fraction	No	1.78E+02	2.80E+00	5.00E-01	9.00E-01		BDL	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 soil saturation limit

* indicates a 'ceiling limit' concentration

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

DC/2019/10_Detailed Soil Sampling Analytical Results (Duplicate)

Parameters	> Criteria	Industrial RBRG (mg/kg)	Soil Saturation Limit (Csat) (mg/kg)	Reporting Limit (mg/kg)	Maximum Value (mg/kg)		ENV-BH32	
							ENV-BH32-0.5m	ENV-BH32-Duplicate 0.5m
Metal								
Antimony	No	2.61E+02	-	1.00E+00	BDL		BDL	BDL
Arsenic	No	1.96E+02	-	1.00E+00	6.00E+00		6.00E+00	6.00E+00
Barium	No	1.00E+04	-	1.00E+00	1.29E+02		1.29E+02	1.20E+02
Cadmium	No	6.53E+02	-	2.00E-01	BDL		BDL	BDL
Chromium (III)	No	1.00E+04	-	1.00E+00	3.78E+01		3.78E+01	3.60E+01
Chromium (VI)	No	1.96E+03	-	1.00E+00	BDL		BDL	BDL
Cobalt	No	1.00E+04	-	1.00E+00	2.39E+01		2.39E+01	1.92E+01
Copper	No	1.00E+04	-	1.00E+00	3.60E+01		3.60E+01	3.50E+01
Lead	No	2.29E+03	-	1.00E+00	4.60E+01		3.80E+01	4.60E+01
Manganese	No	1.00E+04	-	1.00E+00	1.95E+03		1.86E+03	1.95E+03
Mercury	No	3.84E+01	-	5.00E-02	BDL		BDL	BDL
Molybdenum	No	3.26E+03	-	1.00E+00	1.00E+00		1.00E+00	1.00E+00
Nickel	No	1.00E+04*	-	1.00E+00	1.80E+01		1.70E+01	1.80E+01
Tin	No	1.00E+04	-	1.00E+00	2.74E+01		2.54E+01	2.74E+01
Zinc	No	1.00E+04	-	1.00E+00	8.00E+01		8.00E+01	7.90E+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	-	5.00E-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
Hydrocarbons - 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

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

"-----": 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 Sampling Analytical Results (Duplicate)

Parameters	> Criteria	Industrial RBRG (mg/L)	Solubility Limit (mg/L)	Reporting Limit (mg/L)	Maximum Value (mg/L)		ENV-BH33	
							ENV-BH33	Duplicate-ENV-BH33
Metal								
Mercury	No	6.79E+00	-	5.00E-04	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	5.00E-03	BDL		BDL	BDL
Bromodichloromethane	No	2.62E+01	6.74E+03	5.00E-03	BDL		BDL	BDL
2-Butanone (MEK)	No	1.00E+04	***	5.00E-02	8.50E-02		7.80E-02	8.50E-02
Chloroform	No	1.13E+01	7.92E+03	5.00E-03	BDL		BDL	BDL
Ethylbenzene	No	1.00E+04	1.69E+02	5.00E-03	BDL		BDL	BDL
Methyl tert-Butyl Ether	No	1.81E+03	***	5.00E-03	BDL		BDL	BDL
Methylene Chloride	No	2.24E+02	***	5.00E-02	BDL		BDL	BDL
Styrene	No	1.00E+04	3.10E+02	5.00E-03	BDL		BDL	BDL
Tetrachloroethene	No	2.95E+00	2.00E+02	5.00E-03	BDL		BDL	BDL
Toluene	No	1.00E+04	5.26E+02	5.00E-03	BDL		BDL	BDL
Trichloroethene	No	1.42E+01	1.10E+03	5.00E-03	BDL		BDL	BDL
Xylenes (Total)	No	1.57E+03	1.75E+02	2.00E-02	BDL		BDL	BDL
SVOCs								
Acenaphthene	No	1.00E+04	4.24E+00	2.00E-03	BDL		BDL	BDL
Acenaphthylene	No	1.00E+04	3.93E+00	2.00E-03	BDL		BDL	BDL
Anthracene	No	1.00E+04	4.34E-02	2.00E-03	BDL		BDL	BDL
Benzo(b)fluoranthene	No	7.53E+00	1.50E-03	1.00E-03	BDL		BDL	BDL
Chrysene	No	8.12E+02	1.60E-03	1.00E-03	BDL		BDL	BDL
Fluoranthene	No	1.00E+04	2.06E-01	2.00E-03	BDL		BDL	BDL
Fluorene	No	1.00E+04	1.98E+00	2.00E-03	BDL		BDL	BDL
Hexachlorobenzene	No	6.95E-01	6.20E+00	4.00E-03	BDL		BDL	BDL
Naphthalene	No	8.62E+02	3.10E+01	2.00E-03	BDL		BDL	BDL
Phenanthrene	No	1.00E+04	1.00E+00	2.00E-03	BDL		BDL	BDL
Pyrene	No	1.00E+04	1.35E-01	2.00E-03	BDL		BDL	BDL
PCRs								
C6 - C8 Fraction	No	1.15E+03	5.23E+00	2.00E-02	BDL		BDL	BDL
C9 - C16 Fraction	No	9.98E+03	2.80E+00	5.00E-01	BDL		BDL	BDL
C17 - C35 Fraction	No	1.78E+02	2.80E+00	5.00E-01	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.

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	Trip Blank	Trip Blank	Equipment Blank
Metal						24/7/2021	28/7/2021	31/7/2021	31/7/2021
Antimony	No	-	-	-	BDL	----	----	----	BDL
Arsenic	No	-	-	-	BDL	----	----	----	BDL
Barium	No	-	-	-	BDL	----	----	----	BDL
Cadmium	No	-	-	-	BDL	----	----	----	BDL
Chromium (III)	No	-	-	-	BDL	----	----	----	BDL
Chromium (VI)	No	-	-	-	BDL	----	----	----	BDL
Cobalt	No	-	-	-	BDL	----	----	----	BDL
Copper	No	-	-	-	BDL	----	----	----	BDL
Lead	No	-	-	-	BDL	----	----	----	BDL
Manganese	No	-	-	-	BDL	----	----	----	BDL
Mercury	No	6.79E+00	-	0.0005	BDL	----	----	----	BDL
Molybdenum	No	-	-	-	BDL	----	----	----	BDL
Nickel	No	-	-	-	BDL	----	----	----	BDL
Tin	No	-	-	-	BDL	----	----	----	BDL
Zinc	No	-	-	-	BDL	----	----	----	BDL
VOCs									
2-Propanone (Acetone)	No	1.00E+04	***	0.5	BDL	BDL	BDL	BDL	BDL
Benzene	No	5.40E+01	1.75E+03	0.005	BDL	BDL	BDL	BDL	BDL
Bromodichloromethane	No	2.62E+01	6.74E+03	0.005	BDL	BDL	BDL	BDL	BDL
2-Butanone (MEK)	No	1.00E+04	***	0.05	BDL	BDL	BDL	BDL	BDL
Chloroform	No	1.13E+01	7.92E+03	0.005	BDL	BDL	BDL	BDL	BDL
Ethylbenzene	No	1.00E+04	1.69E+02	0.005	BDL	BDL	BDL	BDL	BDL
Methyl tert-Butyl Ether	No	1.81E+03	***	0.005	BDL	BDL	BDL	BDL	BDL
Methylene Chloride	No	2.24E+02	***	0.05	BDL	BDL	BDL	BDL	BDL
Styrene	No	1.00E+04	3.10E+02	0.005	BDL	BDL	BDL	BDL	BDL
Tetrachloroethene	No	2.95E+00	2.00E+02	0.005	BDL	BDL	BDL	BDL	BDL
Toluene	No	1.00E+04	5.26E+02	0.005	BDL	BDL	BDL	BDL	BDL
Trichloroethene	No	1.42E+01	1.10E+03	0.005	BDL	BDL	BDL	BDL	BDL
Xylenes (Total)	No	1.57E+03	1.75E+02	0.02	BDL	BDL	BDL	BDL	BDL
SVOCs									
Acenaphthene	No	1.00E+04	4.24E+00	0.002	BDL	----	----	----	BDL
Acenaphthylene	No	1.00E+04	3.93E+00	0.002	BDL	----	----	----	BDL
Anthracene	No	1.00E+04	4.34E-02	0.002	BDL	----	----	----	BDL
Benzo(b)fluoranthene	No	7.53E+00	1.50E-03	0.001	BDL	----	----	----	BDL
Chrysene	No	8.12E+02	1.60E-03	0.001	BDL	----	----	----	BDL
Fluoranthene	No	1.00E+04	2.06E-01	0.002	BDL	----	----	----	BDL
Fluorene	No	1.00E+04	1.98E+00	0.002	BDL	----	----	----	BDL
Hexachlorobenzene	No	6.95E-01	6.20E+00	0.004	BDL	----	----	----	BDL
Naphthalene	No	8.62E+02	3.10E+01	0.002	BDL	----	----	----	BDL
Phenanthrene	No	1.00E+04	1.00E+00	0.002	BDL	----	----	----	BDL
Pyrene	No	1.00E+04	1.35E-01	0.002	BDL	----	----	----	BDL
PCRs									
C6 - C8 Fraction	No	1.15E+03	5.23E+00	0.02	BDL	----	----	----	BDL
C9 - C16 Fraction	No	9.98E+03	2.80E+00	0.5	BDL	----	----	----	BDL
C17 - C35 Fraction	No	1.78E+02	2.80E+00	0.5	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

"**-**": 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)	Field Blank	Trip Blank	Equipment Blank	Field Blank
Metal						31/7/2021	4/8/2021	4/8/2021	4/8/2021
Antimony	No	-	-	-	BDL	BDL	----	----	----
Arsenic	No	-	-	-	BDL	BDL	----	----	----
Barium	No	-	-	-	BDL	BDL	----	----	----
Cadmium	No	-	-	-	BDL	BDL	----	----	----
Chromium (III)	No	-	-	-	BDL	BDL	----	----	----
Chromium (VI)	No	-	-	-	BDL	BDL	----	----	----
Cobalt	No	-	-	-	BDL	BDL	----	----	----
Copper	No	-	-	-	BDL	BDL	----	----	----
Lead	No	-	-	-	BDL	BDL	----	----	----
Manganese	No	-	-	-	BDL	BDL	----	----	----
Mercury	No	6.79E+00	-	0.0005	BDL	BDL	----	BDL	BDL
Molybdenum	No	-	-	-	BDL	BDL	----	----	----
Nickel	No	-	-	-	BDL	BDL	----	----	----
Tin	No	-	-	-	BDL	BDL	----	----	----
Zinc	No	-	-	-	BDL	BDL	----	----	----
VOCs									
2-Propanone (Acetone)	No	1.00E+04	***	0.5	BDL	BDL	BDL	BDL	BDL
Benzene	No	5.40E+01	1.75E+03	0.005	BDL	BDL	BDL	BDL	BDL
Bromodichloromethane	No	2.62E+01	6.74E+03	0.005	BDL	BDL	BDL	BDL	BDL
2-Butanone (MEK)	No	1.00E+04	***	0.05	BDL	BDL	BDL	BDL	BDL
Chloroform	No	1.13E+01	7.92E+03	0.005	BDL	BDL	BDL	BDL	BDL
Ethylbenzene	No	1.00E+04	1.69E+02	0.005	BDL	BDL	BDL	BDL	BDL
Methyl tert-Butyl Ether	No	1.81E+03	***	0.005	BDL	BDL	BDL	BDL	BDL
Methylene Chloride	No	2.24E+02	***	0.05	BDL	BDL	BDL	BDL	BDL
Styrene	No	1.00E+04	3.10E+02	0.005	BDL	BDL	BDL	BDL	BDL
Tetrachloroethene	No	2.95E+00	2.00E+02	0.005	BDL	BDL	BDL	BDL	BDL
Toluene	No	1.00E+04	5.26E+02	0.005	BDL	BDL	BDL	BDL	BDL
Trichloroethene	No	1.42E+01	1.10E+03	0.005	BDL	BDL	BDL	BDL	BDL
Xylenes (Total)	No	1.57E+03	1.75E+02	0.02	BDL	BDL	BDL	BDL	BDL
SVOCs									
Acenaphthene	No	1.00E+04	4.24E+00	0.002	BDL	BDL	----	BDL	BDL
Acenaphthylene	No	1.00E+04	3.93E+00	0.002	BDL	BDL	----	BDL	BDL
Anthracene	No	1.00E+04	4.34E-02	0.002	BDL	BDL	----	BDL	BDL
Benzo(b)fluoranthene	No	7.53E+00	1.50E-03	0.001	BDL	BDL	----	BDL	BDL
Chrysene	No	8.12E+02	1.60E-03	0.001	BDL	BDL	----	BDL	BDL
Fluoranthene	No	1.00E+04	2.06E-01	0.002	BDL	BDL	----	BDL	BDL
Fluorene	No	1.00E+04	1.98E+00	0.002	BDL	BDL	----	BDL	BDL
Hexachlorobenzene	No	6.95E-01	6.20E+00	0.004	BDL	BDL	----	BDL	BDL
Naphthalene	No	8.62E+02	3.10E+01	0.002	BDL	BDL	----	BDL	BDL
Phenanthrene	No	1.00E+04	1.00E+00	0.002	BDL	BDL	----	BDL	BDL
Pyrene	No	1.00E+04	1.35E-01	0.002	BDL	BDL	----	BDL	BDL
PCRs									
C6 - C8 Fraction	No	1.15E+03	5.23E+00	0.02	BDL	BDL	----	BDL	BDL
C9 - C16 Fraction	No	9.98E+03	2.80E+00	0.5	BDL	BDL	----	BDL	BDL
C17 - C35 Fraction	No	1.78E+02	2.80E+00	0.5	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

"**-**": 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 044452

ALS Laboratory Group

CLIENT: PY-CREC-IV	SAMPLER: Justin Yu
ADDRESS / OFFICE: Wang Lee St. Yuen Long Industrial Estate	MOBILE: 95157259
PROJECT MANAGER (PM):	PHONE /
PROJECT ID:	EMAIL REPORT TO: Refer to FSS
SITE: YLSTW P.O. NO.:	EMAIL INVOICE TO: (if different to report)
RESULTS REQUIRED (Date): QUOTE NO.:	

FOR LABORATORY USE ONLY

COOLER SEAL (circle appropriate)

Intact: Yes No (N/A)

SAMPLE TEMPERATURE

CHILLED: (Yes) No

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

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

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		Metals	Cr III, VI	VOCs	SVOCs	PCBs								
ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles													
1	ENV-BH32-0.5m	S	23/7/21	1600	Glass	1	✓	✓	✓	✓	✓								
2	ENV-BH32-Duplicate	S	23/7/21	1600	Glass	1	✓	✓	✓	✓	✓								
3	ENV-BH33-0.5m	S	24/7/21	0945	Glass	1	✓	✓	✓	✓	✓								
4	Trip Blank	W	24/7/21	1030	AG	2			✓										

RELINQUISHED BY:			RECEIVED BY			METHOD OF SHIPMENT
Name: Karina Chan	Date: 24/7/21		Name: Hugo NG	Date: 24/7/21		Con' Note No:
Of: Cinotech Consultants	Time: 1030		Of: ALS	Time: 17:00		
Name:	Date:		Name:	Date:		Transport Co:
Of:	Time:		Of:	Time:		

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.

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYICAL CHEMISTRY & TESTING SERVICES

HOKLAS 066 TEST

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	: HK2130014
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	Amendment	: 1
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	: 24-Jul-2021
Order number	: P5120-002A	Quote number	: HKE/1853/2021_V4	Issue Date	: 13-Aug-2021
C-O-C number	: H044452			No. of samples received	: 4
Site	:			No. of samples analysed	: 4

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	Assistant Manager - Environmental	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 24-Jul-2021 to 03-Aug-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: HK2130014

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.

This is an amendment of the Certificate of Analysis.

The sample ID for sample HK2130014-002 has been amended.

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-BH32-0.5m	ENV-BH32-Duplicate	ENV-BH33-0.5m	---	---
			Sampling date / time	23-Jul-2021 16:00	23-Jul-2021 16:00	24-Jul-2021 08:45	---	---
Compound	CAS Number	LOR	Unit	HK2130014-001	HK2130014-002	HK2130014-003	------	------
EA/ED: Physical and Aggregate Properties								
EA055: Moisture Content (dried @ 103°C)	---	0.1	%	17.5	17.9	20.9	---	---
EG: Metals and Major Cations								
EG020: Antimony	7440-36-0	1	mg/kg	<1	<1	1	---	---
EG020: Arsenic	7440-38-2	1	mg/kg	6	6	5	---	---
EG020: Barium	7440-39-3	1.0	mg/kg	129	120	143	---	---
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.2	---	---
EG020: Cobalt	7440-48-4	1.0	mg/kg	23.9	19.2	21.6	---	---
EG020: Copper	7440-50-8	1	mg/kg	36	35	50	---	---
EG020: Lead	7439-92-1	1	mg/kg	38	46	74	---	---
EG020: Manganese	7439-96-5	1.0	mg/kg	1860	1950	2030	---	---
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	2	---	---
EG020: Nickel	7440-02-0	1	mg/kg	17	18	21	---	---
EG020: Tin	7440-31-5	1.0	mg/kg	25.4	27.4	21.5	---	---
EG020: Zinc	7440-66-6	1	mg/kg	80	79	99	---	---
EG049: Trivalent Chromium	16065-83-1	1.0	mg/kg	37.8	36.0	41.2	---	---
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	---	---

Sub-Matrix: SOIL				Sample ID	ENV-BH32-0.5m	ENV-BH32-Duplicate	ENV-BH33-0.5m	----	----
				Sampling date / time	23-Jul-2021 16:00	23-Jul-2021 16:00	24-Jul-2021 08:45	----	----
Compound	CAS Number	LOR	Unit		HK2130014-001	HK2130014-002	HK2130014-003	------	------
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued									
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	----	----
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	----	----

Sub-Matrix: SOIL			Sample ID	ENV-BH32-0.5m	ENV-BH32-Duplicate	ENV-BH33-0.5m	----	----
			Sampling date / time	23-Jul-2021 16:00	23-Jul-2021 16:00	24-Jul-2021 08:45	----	----
Compound	CAS Number	LOR	Unit	HK2130014-001	HK2130014-002	HK2130014-003	-------	-------
EP-074_SR-E: Halogenated Aliphatics - Continued								
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	----	----
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	%	**72.5**	**97.7**	**98.6**	----	----
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	**67.4**	**113**	**88.8**	----	----
EP-080_SRS: TPH(Volatile)/BTEX Surrogate								
EP070HK_SR: Dibromofluoromethane	1868-53-7	0.1	%	**94.8**	**93.6**	**94.3**	----	----
EP070HK_SR: Toluene-D8	2037-26-5	0.1	%	**91.8**	**91.7**	**91.4**	----	----
EP070HK_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	**107**	**108**	**107**	----	----
EP-074_SR-S: VOC Surrogates								
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	**94.8**	**93.6**	**94.3**	----	----
EP074_SR: Toluene-D8	2037-26-5	0.1	%	**91.8**	**91.7**	**91.4**	----	----
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	**107**	**108**	**107**	----	----

Sub-Matrix: WATER			Sample ID	Trip Blank	---	---	---	---
			Sampling date / time	24-Jul-2021 10:30	---	---	---	---
Compound	CAS Number	LOR	Unit	HK2130014-004	------	------	------	------
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	%	**93.4**	---	---	---	---
EP074_SR: Toluene-D8	2037-26-5	0.1	%	**93.4**	---	---	---	---
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	**106**	---	---	---	---

Laboratory Duplicate (DUP) Report

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 3813524)								
HK2129594-001	Anonymous	**EA055: Moisture Content (dried @ 103°C)**	----	0.1	%	34.2	33.7	1.5
HK2130031-001	Anonymous	**EA055: Moisture Content (dried @ 103°C)**	----	0.1	%	51.6	50.8	1.6
EG: Metals and Major Cations (QC Lot: 3813637)								
HK2129594-002	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	28.8	28.4	1.2
		EG020: Cobalt	7440-48-4	0.5	mg/kg	9.9	9.7	1.8
		EG020: Manganese	7439-96-5	0.5	mg/kg	415	415	0.0
		EG020: Tin	7440-31-5	0.5	mg/kg	1.4	1.5	0.0
		EG020: Antimony	7440-36-0	1	mg/kg	<1	<1	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	6	7	0.0
		EG020: Copper	7440-50-8	1	mg/kg	9	9	0.0
		EG020: Lead	7439-92-1	1	mg/kg	22	23	0.0
		EG020: Molybdenum	7439-98-7	1	mg/kg	2	2	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	22	21	5.0
		EG020: Zinc	7440-66-6	1	mg/kg	85	84	1.8
EG: Metals and Major Cations (QC Lot: 3813638)								
HK2130014-002	ENV-BH32-Duplicate	**EG3060: Hexavalent Chromium**	18540-29-9	0.5	mg/kg	<1.0	<1.0	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3812350)								
HK2129859-001	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

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3812350) - Continued								
HK2129859-001	Anonymous	**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: 3812350)								
HK2129859-001	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: 3812351)								
HK2129859-001	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: 3812539)								
HK2129722-001	Anonymous	**C6 - C8 Fraction**	---	5	mg/kg	<5	<5	0.0
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3812540)								
HK2129722-001	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	108-38-3 106-42-3	0.4	mg/kg	<1.0	<1.0	0.0
		Xylenes (Total)	---	1	mg/kg	<2.0	<2.0	0.0
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3812540)								
HK2129722-001	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: 3812540)								
HK2129722-001	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: 3812540)								

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report: LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3812540) - Continued								
HK2129722-001	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: 3812540)								
HK2129722-001	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: Compound	CAS Number	Method Blank (MB) Report: LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%): LCS	DCS	Recovery Limits(%): Low	High	RPD (%): Value	Control Limit
EG: Metals and Major Cations (QC Lot: 3813637)											
EG020: Antimony	7440-36-0	1	mg/kg	<1	5 mg/kg	100	---	85.0	108	---	---
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	97.1	---	87.2	110	---	---
EG020: Barium	7440-39-3	0.5	mg/kg	<0.5	5 mg/kg	101	---	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	95.9	---	89.8	110	---	---
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	98.6	---	92.0	115	---	---
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	100	---	86.7	115	---	---
EG020: Manganese	7439-96-5	0.5	mg/kg	<0.5	5 mg/kg	93.7	---	85.8	108	---	---
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	108	---	86.6	115	---	---
EG020: Molybdenum	7439-98-7	1	mg/kg	<1	5 mg/kg	104	---	85.2	113	---	---
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	96.5	---	90.6	111	---	---
EG020: Tin	7440-31-5	0.5	mg/kg	<0.5	5 mg/kg	104	---	85.0	109	---	---
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	105	---	90.9	115	---	---
EG: Metals and Major Cations (QC Lot: 3813638)											
EG3060: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	2.5 mg/kg	103	---	85.0	1120000	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3812350)											
Naphthalene	91-20-3	50	µg/kg	<50	250 µg/kg	100	---	84.0	112	---	---
Acenaphthylene	208-96-8	50	µg/kg	<50	250 µg/kg	103	---	84.0	110	---	---
Acenaphthene	83-32-9	50	µg/kg	<50	250 µg/kg	97.4	---	84.0	109	---	---
Fluorene	86-73-7	50	µg/kg	<50	250 µg/kg	97.0	---	79.0	110	---	---

Matrix: **SOIL**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3812350) - Continued											
Phenanthrene	85-01-8	50	µg/kg	<50	250 µg/kg	97.6	---	78.0	112	---	---
Anthracene	120-12-7	50	µg/kg	<50	250 µg/kg	101	---	80.0	113	---	---
Fluoranthene	206-44-0	50	µg/kg	<50	250 µg/kg	99.6	---	80.0	112	---	---
Pyrene	129-00-0	50	µg/kg	<50	250 µg/kg	98.2	---	79.0	113	---	---
Benz(a)anthracene	56-55-3	50	µg/kg	<50	250 µg/kg	93.3	---	74.0	110	---	---
Chrysene	218-01-9	50	µg/kg	<50	250 µg/kg	97.8	---	86.0	112	---	---
Benzo(b)fluoranthene	205-99-2	50	µg/kg	<50	250 µg/kg	87.4	---	53.0	119	---	---
Benzo(k)fluoranthene	207-08-9	50	µg/kg	<50	250 µg/kg	93.3	---	67.0	121	---	---
Benzo(a)pyrene	50-32-8	50	µg/kg	<50	250 µg/kg	83.3	---	53.0	117	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	50	µg/kg	<50	250 µg/kg	63.1	---	45.0	109	---	---
Dibenz(a.h)anthracene	53-70-3	50	µg/kg	<50	250 µg/kg	64.5	---	38.0	112	---	---
Benzo(g.h.i)perylene	191-24-2	50	µg/kg	<50	250 µg/kg	64.3	---	31.0	117	---	---
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3812350)											
Phenol	108-95-2	500	µg/kg	<500	250 µg/kg	103	---	61.0	126	---	---
Hexachlorobenzene (HCB)	118-74-1	50	µg/kg	<50	250 µg/kg	93.1	---	81.0	111	---	---
Bis(2-ethylhexyl)phthalate	117-81-7	1000	µg/kg	<1000	250 µg/kg	99.4	---	89.0	120	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3812351)											
C9 - C16 Fraction	---	200	mg/kg	<200	31.5 mg/kg	80.6	---	76.0	104	---	---
C17 - C35 Fraction	---	500	mg/kg	<500	67.5 mg/kg	72.0	---	56.0	103	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3812539)											
C6 - C8 Fraction	---	5	mg/kg	<5	4.5 mg/kg	90.9	---	80.0	118	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3812540)											
Benzene	71-43-2	0.1	mg/kg	<0.1	0.25 mg/kg	92.1	---	79.0	121	---	---
Toluene	108-88-3	0.2	mg/kg	<0.2	0.25 mg/kg	95.4	---	78.0	124	---	---
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.25 mg/kg	106	---	79.0	121	---	---
meta- & para-Xylene	108-38-3 106-42-3	0.4	mg/kg	<0.4	0.5 mg/kg	91.7	---	79.0	121	---	---
Styrene	100-42-5	0.2	mg/kg	<0.2	0.25 mg/kg	104	---	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	92.3	---	79.0	121	---	---

Matrix: **SOIL**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3812540)											
2-Propanone (Acetone)	67-64-1	2	mg/kg	<2	2.5 mg/kg	93.8	---	77.0	124	---	---
2-Butanone (MEK)	78-93-3	2	mg/kg	<2	2.5 mg/kg	94.0	---	79.0	121	---	---
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3812540)											
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	0.25 mg/kg	100	---	79.0	122	---	---
Trichloroethene	79-01-6	0.1	mg/kg	<0.1	0.25 mg/kg	105	---	77.0	122	---	---
Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	0.25 mg/kg	106	---	79.0	119	---	---
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3812540)											
Chloroform	67-66-3	0.04	mg/kg	<0.04	0.25 mg/kg	96.0	---	79.0	122	---	---
Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	0.25 mg/kg	90.8	---	78.0	121	---	---
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3812540)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.2	mg/kg	<0.2	0.25 mg/kg	95.3	---	78.0	123	---	---

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3814381)											
Benzene	71-43-2	0.5	µg/L	<0.5	2 µg/L	107	---	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	107	---	79.0	123	---	---
meta- & para-Xylene	108-38-3 106-42-3	1	µg/L	<1	4 µg/L	106	---	78.0	121	---	---
Styrene	100-42-5	0.5	µg/L	<0.5	2 µg/L	110	---	78.0	122	---	---
ortho-Xylene	95-47-6	0.5	µg/L	<0.5	2 µg/L	106	---	78.0	121	---	---
Xylenes (Total)	---	2	µg/L	<2	6 µg/L	106	---	79.0	121	---	---
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3814381)											
2-Propanone (Acetone)	67-64-1	5	µg/L	<5	20 µg/L	90.4	---	79.0	124	---	---
2-Butanone (MEK)	78-93-3	5	µg/L	<5	20 µg/L	92.5	---	80.0	121	---	---
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3814381)											
Methylene chloride	75-09-2	5	µg/L	<5	2 µg/L	91.1	---	78.0	120	---	---

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3814381) - Continued											
Trichloroethene	79-01-6	0.5	µg/L	<0.5	2 µg/L	107	---	78.0	127	---	---
Tetrachloroethene	127-18-4	0.5	µg/L	<0.5	2 µg/L	110	---	81.0	121	---	---
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3814381)											
Chloroform	67-66-3	0.5	µg/L	<0.5	2 µg/L	92.6	---	76.0	124	---	---
Bromodichloromethane	75-27-4	0.5	µg/L	<0.5	2 µg/L	95.0	---	78.0	119	---	---
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3814381)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	µg/L	<0.5	2 µg/L	105	---	78.0	123	---	---

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

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations (QC Lot: 3813637)										
HK2129594-001	Anonymous	**EG020: Antimony**	7440-36-0	5 mg/kg	83.2	---	75.0	125	---	---
		EG020: Arsenic	7440-38-2	5 mg/kg	122	---	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	102	---	75.0	125	---	---
		EG020: Cobalt	7440-48-4	5 mg/kg	106	---	75.0	125	---	---
		EG020: Copper	7440-50-8	5 mg/kg	108	---	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	118	---	75.0	125	---	---
		EG020: Molybdenum	7439-98-7	5 mg/kg	103	---	75.0	125	---	---
		EG020: Nickel	7440-02-0	5 mg/kg	88.6	---	75.0	125	---	---
		EG020: Tin	7440-31-5	5 mg/kg	114	---	75.0	125	---	---
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	---	75.0	125	---	---
EG: Metals and Major Cations (QC Lot: 3813638)										
HK2130014-001	ENV-BH32-0.5m	**EG3060: Hexavalent Chromium**	18540-29-9	2.5 mg/kg	102	---	75.0	125	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3812350)										
HK2129859-001	Anonymous	**Naphthalene**	91-20-3	250 µg/kg	98.8	---	50.0	130	---	---
		Acenaphthylene	208-96-8	250 µg/kg	105	---	50.0	130	---	---
		Acenaphthene	83-32-9	250 µg/kg	95.9	---	50.0	130	---	---
		Fluorene	86-73-7	250 µg/kg	96.8	---	50.0	130	---	---
		Phenanthrene	85-01-8	250 µg/kg	97.8	---	50.0	130	---	---
		Anthracene	120-12-7	250 µg/kg	94.9	---	50.0	130	---	---
		Fluoranthene	206-44-0	250 µg/kg	102	---	50.0	130	---	---

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Concentration	Spike Recovery (%): MS	Spike Recovery (%): MSD	Recovery Limits (%): Low	Recovery Limits (%): High	RPD (%): Value	RPD (%): Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3812350) - Continued										
HK2129859-001	Anonymous	**Pyrene**	129-00-0	250 µg/kg	101	---	50.0	130	---	---
		Benz(a)anthracene	56-55-3	250 µg/kg	97.9	---	50.0	130	---	---
		Chrysene	218-01-9	250 µg/kg	105	---	50.0	130	---	---
		Benzo(b)fluoranthene	205-99-2	250 µg/kg	95.5	---	50.0	130	---	---
		Benzo(k)fluoranthene	207-08-9	250 µg/kg	86.5	---	50.0	130	---	---
		Benzo(a)pyrene	50-32-8	250 µg/kg	87.8	---	50.0	130	---	---
		Indeno(1.2.3.cd)pyrene	193-39-5	250 µg/kg	65.1	---	50.0	130	---	---
		Dibenz(a.h)anthracene	53-70-3	250 µg/kg	66.9	---	50.0	130	---	---
		Benzo(g.h.i)perylene	191-24-2	250 µg/kg	65.4	---	50.0	130	---	---
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3812350)										
HK2129859-001	Anonymous	**Phenol**	108-95-2	250 µg/kg	104	---	50.0	130	---	---
		Hexachlorobenzene (HCB)	118-74-1	250 µg/kg	92.9	---	50.0	130	---	---
		Bis(2-ethylhexyl)phthalate	117-81-7	250 µg/kg	106	---	50.0	130	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3812351)										
HK2130014-001	ENV-BH32-0.5m	**C9 - C16 Fraction**	---	31.5 mg/kg	71.4	---	50.0	130	---	---
		C17 - C35 Fraction	---	67.5 mg/kg	61.6	---	50.0	130	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3812539)										
HK2129722-002	Anonymous	**C6 - C8 Fraction**	---	4.5 mg/kg	98.1	---	50.0	130	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3812540)										
HK2129722-003	Anonymous	**Benzene**	71-43-2	0.25 mg/kg	101	---	50.0	130	---	---
		Toluene	108-88-3	0.25 mg/kg	104	---	50.0	130	---	---
		Ethylbenzene	100-41-4	0.25 mg/kg	101	---	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	96.0	---	50.0	130	---	---
		ortho-Xylene	95-47-6	0.25 mg/kg	104	---	50.0	130	---	---
		Xylenes (Total)	---	0.75 mg/kg	103	---	50.0	130	---	---
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3812540)										
HK2129722-003	Anonymous	**2-Propanone (Acetone)**	67-64-1	2.5 mg/kg	90.0	---	50.0	130	---	---

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Concentration	Spike Recovery (%): MS	Spike Recovery (%): MSD	Recovery Limits (%): Low	Recovery Limits (%): High	RPD (%): Value	RPD (%): Control Limit
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3812540) - Continued										
HK2129722-003	Anonymous	**2-Butanone (MEK)**	78-93-3	2.5 mg/kg	92.2	---	50.0	130	---	---
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3812540)										
HK2129722-003	Anonymous	**Methylene chloride**	75-09-2	0.25 mg/kg	90.2	---	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: 3812540)										
HK2129722-003	Anonymous	**Chloroform**	67-66-3	0.25 mg/kg	93.5	---	50.0	130	---	---
		Bromodichloromethane	75-27-4	0.25 mg/kg	97.9	---	50.0	130	---	---
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3812540)										
HK2129722-003	Anonymous	**Methyl tert-Butyl Ether (MTBE)**	1634-04-4	0.25 mg/kg	91.6	---	50.0	130	---	---

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%): Low	Recovery Limits (%): 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**

Compound	CAS Number	Recovery Limits (%): Low	Recovery Limits (%): High
EP-074_SR-S: VOC Surrogates			

Sub-Matrix: **WATER**

Compound	CAS Number	Recovery Limits (%) 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

CHAIN OF CUSTODY DOCUMENTATION

H 044453

ALS Laboratory Group

CLIENT: PT - CREC JV
ADDRESS / OFFICE: Wang Lee St, Yuen Long Industrial Estate
PROJECT MANAGER (PM):
PROJECT ID:
SITE: YLSTW
P.O. NO.:
RESULTS REQUIRED (Date):
QUOTE NO.:

SAMPLER: Justin Yu
MOBILE: 9513 7259
PHONE /
EMAIL REPORT TO: Refer to FSS
EMAIL INVOICE TO: (if different to report)

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

COMMENTS / SPECIAL HANDLING / STORAGE OR DIPOSAL:
Sample #6 was cancelled due to only stone and rocks received.
29-July-21

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

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		Metals	Cr VI, TT	VOCs	SVOCs	PCBs								
ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles													
1	ENV-BH31-0.5m	S	27/7/21	0945	Glass	1	✓	✓	✓	✓	✓								
2	ENV-BH33-1.5m	S	27/7/21	1130	U76	1	✓	✓	✓	✓	✓								
3	ENV-BH33-3.0m	S	27/7/21	1230	U76	1	✓	✓	✓	✓	✓								
4	ENV-BH33-4.0m	S	27/7/21	1345	U76	1	✓	✓	✓	✓	✓								
5	Trip Blank	W	28/7/21	16:10	AG	2			✓										
~~6~~	~~ENV-BH32-1.5m~~	~~S~~	~~28/7/21~~	~~1230~~	~~U76~~	~~1~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~								
7	ENV-BH32-3.0m	S	28/7/21	13:30	U76	1	✓	✓	✓	✓	✓								
8	ENV-BH32-4.0m	S	28/7/21	14:30	U76	1	✓	✓	✓	✓	✓								

RELINQUISHED BY:

Name:	Karina Chan	Date:	
Of:	Cinotech Consultants	Time:	
Name:		Date:	
Of:		Time:	

RECEIVED BY

Name:	Hugo NG	Date:	
Of:	ALS	Time:	
Name:		Date:	
Of:		Time:	17:18

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.

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYICAL CHEMISTRY & TESTING SERVICES

HOKLAS 066 TEST

CERTIFICATE OF ANALYSIS

Client	: PAUL Y - CREC JOINT VENTURE	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 19
Contact	: TEDDY ORR	Contact	: Richard Fung	Work Order	: HK2130434
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	: 28-Jul-2021
Order number	: P5120-002A	Quote number	: HKE/1853/2021_V4	Issue Date	: 06-Aug-2021
C-O-C number	: H044453			No. of samples received	: 8
Site	:			No. of samples analysed	: 7

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
Wong Wing , Kenneth	Assistant Manager - Environmental	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 28-Jul-2021 to 06-Aug-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: HK2130434

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-BH31-0.5m	ENV-BH33-1.5m	ENV-BH33-3.0m	ENV-BH33-4.0m	ENV-BH32-3.0m
			Sampling date / time	27-Jul-2021 09:45	27-Jul-2021 11:30	27-Jul-2021 12:30	27-Jul-2021 13:45	28-Jul-2021 13:30
Compound	CAS Number	LOR	Unit	HK2130434-001	HK2130434-002	HK2130434-003	HK2130434-004	HK2130434-007
EA/ED: Physical and Aggregate Properties								
EA055: Moisture Content (dried @ 103°C)	---	0.1	%	20.5	23.0	24.9	24.9	33.0
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	6	4	3	3	8
EG020: Barium	7440-39-3	1.0	mg/kg	190	111	116	82.0	191
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	31.6	46.2	21.0	33.7	30.2
EG020: Copper	7440-50-8	1	mg/kg	40	38	25	10	64
EG020: Lead	7439-92-1	1	mg/kg	52	32	13	68	21
EG020: Manganese	7439-96-5	1.0	mg/kg	2740	1720	1280	1460	2460
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	<1	<1	<1
EG020: Nickel	7440-02-0	1	mg/kg	27	24	27	24	17
EG020: Tin	7440-31-5	1.0	mg/kg	37.4	15.0	38.8	3.3	43.4
EG020: Zinc	7440-66-6	1	mg/kg	95	74	89	75	56
EG049: Trivalent Chromium	16065-83-1	1.0	mg/kg	41.2	52.9	34.9	34.9	76.7
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
EP076HK: Benzo(b)fluoranthene	205-99-2	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500

Sub-Matrix: SOIL			Sample ID	ENV-BH31-0.5m	ENV-BH33-1.5m	ENV-BH33-3.0m	ENV-BH33-4.0m	ENV-BH32-3.0m
			Sampling date / time	27-Jul-2021 09:45	27-Jul-2021 11:30	27-Jul-2021 12:30	27-Jul-2021 13:45	28-Jul-2021 13:30
Compound	CAS Number	LOR	Unit	HK2130434-001	HK2130434-002	HK2130434-003	HK2130434-004	HK2130434-007
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued								
EP076HK: Benzo(k)fluoranthene	207-08-9	0.500	mg/kg	<0.500	<0.500	<0.500	<0.500	<0.500
EP076HK: Benzo(a)pyrene	50-32-8	0.500	mg/kg	<0.500	<0.500	<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	<0.500	<0.500
EP076HK: Dibenz(a.h)anthracene	53-70-3	0.500	mg/kg	<0.500	<0.500	<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	<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	<0.50	<0.50
EP076HK: Hexachlorobenzene (HCB)	118-74-1	0.200	mg/kg	<0.200	<0.200	<0.200	<0.200	<0.200
EP076HK: Bis(2-ethylhexyl)phthalate	117-81-7	5.00	mg/kg	<5.00	<5.00	<5.00	<5.00	<5.00
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH)								
EP070HK_SR: C6 - C8 Fraction	---	5	mg/kg	<5	<5	<5	<5	<5
EP071HK_SR: C9 - C16 Fraction	---	200	mg/kg	<200	<200	<200	<200	<200
EP071HK_SR: C17 - C35 Fraction	---	500	mg/kg	<500	<500	<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	<0.2	<0.2
EP074_SR: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP074_SR: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<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	<1.0	<1.0
EP074_SR: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP074_SR: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP074_SR: Xylenes (Total)	---	2.0	mg/kg	<2.0	<2.0	<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	<50	<50
EP074_SR: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	<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	<0.5	<0.5
EP074_SR: Trichloroethene	79-01-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
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)								

Sub-Matrix: SOIL				Sample ID	ENV-BH31-0.5m	ENV-BH33-1.5m	ENV-BH33-3.0m	ENV-BH33-4.0m	ENV-BH32-3.0m
				Sampling date / time	27-Jul-2021 09:45	27-Jul-2021 11:30	27-Jul-2021 12:30	27-Jul-2021 13:45	28-Jul-2021 13:30
Compound	*CAS Number*	*LOR*	*Unit*		HK2130434-001	HK2130434-002	HK2130434-003	HK2130434-004	HK2130434-007
EP-074_SR-G: Trihalomethanes (THM) - Continued									
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	%		**97.6**	**102**	**96.6**	**111**	**100**
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%		**84.4**	**85.6**	**85.0**	**93.2**	**83.7**
EP-080_SRS: TPH(Volatile)/BTEX Surrogate									
EP070HK_SR: Dibromofluoromethane	1868-53-7	0.1	%		**93.0**	**90.8**	**91.7**	**90.5**	**91.1**
EP070HK_SR: Toluene-D8	2037-26-5	0.1	%		**91.4**	**91.8**	**90.2**	**91.9**	**91.1**
EP070HK_SR: 4-Bromofluorobenzene	460-00-4	0.1	%		**108**	**108**	**108**	**107**	**108**
EP-074_SR-S: VOC Surrogates									
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%		**93.0**	**90.8**	**91.7**	**90.5**	**91.1**
EP074_SR: Toluene-D8	2037-26-5	0.1	%		**91.4**	**91.8**	**90.2**	**91.9**	**91.1**
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%		**108**	**108**	**108**	**107**	**108**

Sub-Matrix: SOIL				Sample ID	ENV-BH32-4.0m	---	---	---	---
				Sampling date / time	28-Jul-2021 14:30	---	---	---	---
Compound	CAS Number	LOR	Unit		HK2130434-008	------	------	------	------
EA/ED: Physical and Aggregate Properties									
EA055: Moisture Content (dried @ 103°C)	---	0.1	%		23.6	---	---	---	---
EG: Metals and Major Cations									
EG020: Antimony	7440-36-0	1	mg/kg		<1	---	---	---	---
EG020: Arsenic	7440-38-2	1	mg/kg		4	---	---	---	---
EG020: Barium	7440-39-3	1.0	mg/kg		127	---	---	---	---
EG020: Cadmium	7440-43-9	0.2	mg/kg		<0.2	---	---	---	---
EG020: Cobalt	7440-48-4	1.0	mg/kg		24.7	---	---	---	---
EG020: Copper	7440-50-8	1	mg/kg		24	---	---	---	---
EG020: Lead	7439-92-1	1	mg/kg		29	---	---	---	---
EG020: Manganese	7439-96-5	1.0	mg/kg		1080	---	---	---	---
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		26	---	---	---	---
EG020: Tin	7440-31-5	1.0	mg/kg		5.5	---	---	---	---
EG020: Zinc	7440-66-6	1	mg/kg		84	---	---	---	---
EG049: Trivalent Chromium	16065-83-1	1.0	mg/kg		39.6	---	---	---	---
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	---	---	---	---
EP076HK: Benzo(k)fluoranthene	207-08-9	0.500	mg/kg		<0.500	---	---	---	---

Sub-Matrix: SOIL				Sample ID	ENV-BH32-4.0m	---	---	---	---
				Sampling date / time	28-Jul-2021 14:30	---	---	---	---
Compound	CAS Number	LOR	Unit		HK2130434-008	------	------	------	------
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued									
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)									
EP074_SR: Chloroform	67-66-3	0.04	mg/kg		<0.04	---	---	---	---

Sub-Matrix: SOIL			Sample ID	ENV-BH32-4.0m	---	---	---	---
			Sampling date / time	28-Jul-2021 14:30	---	---	---	---
Compound	CAS Number	LOR	Unit	HK2130434-008	------	------	------	------
EP-074_SR-G: Trihalomethanes (THM) - Continued								
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	%	98.3	---	---	---	---
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	86.6	---	---	---	---
EP-080_SRS: TPH(Volatile)/BTEX Surrogate								
EP070HK_SR: Dibromofluoromethane	1868-53-7	0.1	%	91.8	---	---	---	---
EP070HK_SR: Toluene-D8	2037-26-5	0.1	%	90.9	---	---	---	---
EP070HK_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	109	---	---	---	---
EP-074_SR-S: VOC Surrogates								
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	91.8	---	---	---	---
EP074_SR: Toluene-D8	2037-26-5	0.1	%	90.9	---	---	---	---
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	109	---	---	---	---

Sub-Matrix: WATER			Sample ID	Trip Blank	----	----	----	----
			Sampling date / time	28-Jul-2021 16:10	----	----	----	----
Compound	CAS Number	LOR	Unit	HK2130434-005	------	------	------	------
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	%	**99.6**	----	----	----	----
EP074_SR: Toluene-D8	2037-26-5	0.1	%	**92.5**	----	----	----	----
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	**110**	----	----	----	----

Laboratory Duplicate (DUP) Report

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 3820475)								
HK2130259-002	Anonymous	**EA055: Moisture Content (dried @ 103°C)**	----	0.1	%	22.9	22.7	0.8
HK2130410-001	Anonymous	**EA055: Moisture Content (dried @ 103°C)**	----	0.1	%	16.2	16.1	0.0
EG: Metals and Major Cations (QC Lot: 3818166)								
HK2130259-003	Anonymous	**EG3060: Hexavalent Chromium**	18540-29-9	0.5	mg/kg	<1.0	<1.0	0.0
EG: Metals and Major Cations (QC Lot: 3818178)								
HK2130259-003	Anonymous	**EG020: Mercury**	7439-97-6	0.05	mg/kg	0.16	0.14	12.8
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Barium	7440-39-3	0.5	mg/kg	32.8	31.6	3.9
		EG020: Cobalt	7440-48-4	0.5	mg/kg	2.8	2.5	10.6
		EG020: Manganese	7439-96-5	0.5	mg/kg	554	626	12.2
		EG020: Tin	7440-31-5	0.5	mg/kg	12.7	14.2	10.7
		EG020: Antimony	7440-36-0	1	mg/kg	<1	<1	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	2	2	0.0
		EG020: Copper	7440-50-8	1	mg/kg	16	14	13.7
		EG020: Lead	7439-92-1	1	mg/kg	66	62	5.6
		EG020: Molybdenum	7439-98-7	1	mg/kg	9	10	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	2	2	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	95	96	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3818108)								
HK2130271-001	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

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3818108) - Continued								
HK2130271-001	Anonymous	**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: 3818108)								
HK2130271-001	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: 3818109)								
HK2130271-001	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: 3824142)								
HK2130410-001	Anonymous	**C6 - C8 Fraction**	---	5	mg/kg	<5	<5	0.0
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3824143)								
HK2130410-001	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	108-38-3 106-42-3	0.4	mg/kg	<1.0	<1.0	0.0
		Xylenes (Total)	---	1	mg/kg	<2.0	<2.0	0.0
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3824143)								
HK2130410-001	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: 3824143)								
HK2130410-001	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: 3824143)								

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report: LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3824143) - Continued								
HK2130410-001	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: 3824143)								
HK2130410-001	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: Compound	CAS Number	Method Blank (MB) Report: LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%): LCS	DCS	Recovery Limits(%): Low	High	RPD (%): Value	Control Limit
EG: Metals and Major Cations (QC Lot: 3818166)											
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: 3818178)											
EG020: Antimony	7440-36-0	1	mg/kg	<1	5 mg/kg	102	---	85.0	108	---	---
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	95.1	---	87.2	110	---	---
EG020: Barium	7440-39-3	0.5	mg/kg	<0.5	5 mg/kg	100	---	85.0	110	---	---
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	0.5 mg/kg	105	---	85.0	113	---	---
EG020: Cobalt	7440-48-4	0.5	mg/kg	<0.5	5 mg/kg	96.0	---	89.8	110	---	---
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	96.4	---	92.0	115	---	---
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	98.1	---	86.7	115	---	---
EG020: Manganese	7439-96-5	0.5	mg/kg	<0.5	5 mg/kg	90.4	---	85.8	108	---	---
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	106	---	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	97.2	---	90.6	111	---	---
EG020: Tin	7440-31-5	0.5	mg/kg	<0.5	5 mg/kg	104	---	85.0	109	---	---
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	103	---	90.9	115	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3818108)											
Naphthalene	91-20-3	50	µg/kg	<50	250 µg/kg	97.0	---	84.0	112	---	---
Acenaphthylene	208-96-8	50	µg/kg	<50	250 µg/kg	100	---	84.0	110	---	---
Acenaphthene	83-32-9	50	µg/kg	<50	250 µg/kg	95.9	---	84.0	109	---	---
Fluorene	86-73-7	50	µg/kg	<50	250 µg/kg	93.5	---	79.0	110	---	---

Matrix: **SOIL**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3818108) - Continued											
Phenanthrene	85-01-8	50	µg/kg	<50	250 µg/kg	96.6	---	78.0	112	---	---
Anthracene	120-12-7	50	µg/kg	<50	250 µg/kg	98.9	---	80.0	113	---	---
Fluoranthene	206-44-0	50	µg/kg	<50	250 µg/kg	93.5	---	80.0	112	---	---
Pyrene	129-00-0	50	µg/kg	<50	250 µg/kg	91.7	---	79.0	113	---	---
Benz(a)anthracene	56-55-3	50	µg/kg	<50	250 µg/kg	92.2	---	74.0	110	---	---
Chrysene	218-01-9	50	µg/kg	<50	250 µg/kg	101	---	86.0	112	---	---
Benzo(b)fluoranthene	205-99-2	50	µg/kg	<50	250 µg/kg	89.9	---	53.0	119	---	---
Benzo(k)fluoranthene	207-08-9	50	µg/kg	<50	250 µg/kg	100	---	67.0	121	---	---
Benzo(a)pyrene	50-32-8	50	µg/kg	<50	250 µg/kg	91.8	---	53.0	117	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	50	µg/kg	<50	250 µg/kg	75.4	---	45.0	109	---	---
Dibenz(a.h)anthracene	53-70-3	50	µg/kg	<50	250 µg/kg	79.8	---	38.0	112	---	---
Benzo(g.h.i)perylene	191-24-2	50	µg/kg	<50	250 µg/kg	80.3	---	31.0	117	---	---
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3818108)											
Phenol	108-95-2	500	µg/kg	<500	250 µg/kg	96.6	---	61.0	126	---	---
Hexachlorobenzene (HCB)	118-74-1	50	µg/kg	<50	250 µg/kg	95.3	---	81.0	111	---	---
Bis(2-ethylhexyl)phthalate	117-81-7	1000	µg/kg	<1000	250 µg/kg	108	---	89.0	120	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3818109)											
C9 - C16 Fraction	---	200	mg/kg	<200	31.5 mg/kg	80.0	---	76.0	104	---	---
C17 - C35 Fraction	---	500	mg/kg	<500	67.5 mg/kg	88.5	---	56.0	103	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3824142)											
C6 - C8 Fraction	---	5	mg/kg	<5	4.5 mg/kg	108	---	80.0	118	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3824143)											
Benzene	71-43-2	0.1	mg/kg	<0.1	0.25 mg/kg	106	---	77.0	121	---	---
Toluene	108-88-3	0.2	mg/kg	<0.2	0.25 mg/kg	108	---	78.0	121	---	---
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.25 mg/kg	110	---	79.0	122	---	---
meta- & para-Xylene	108-38-3 106-42-3	0.4	mg/kg	<0.4	0.5 mg/kg	107	---	78.0	123	---	---
Styrene	100-42-5	0.2	mg/kg	<0.2	0.25 mg/kg	107	---	79.0	120	---	---
ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	0.25 mg/kg	110	---	80.0	120	---	---
Xylenes (Total)	---	1	mg/kg	<1.0	0.75 mg/kg	108	---	79.0	121	---	---

Matrix: **SOIL**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3824143)											
2-Propanone (Acetone)	67-64-1	2	mg/kg	<2	2.5 mg/kg	103	---	77.0	121	---	---
2-Butanone (MEK)	78-93-3	2	mg/kg	<2	2.5 mg/kg	107	---	77.0	121	---	---
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3824143)											
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	0.25 mg/kg	107	---	76.0	124	---	---
Trichloroethene	79-01-6	0.1	mg/kg	<0.1	0.25 mg/kg	107	---	80.0	122	---	---
Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	0.25 mg/kg	108	---	79.0	122	---	---
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3824143)											
Chloroform	67-66-3	0.04	mg/kg	<0.04	0.25 mg/kg	108	---	77.0	121	---	---
Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	0.25 mg/kg	110	---	79.0	122	---	---
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3824143)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.2	mg/kg	<0.2	0.25 mg/kg	106	---	77.0	120	---	---

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3819126)											
Benzene	71-43-2	0.5	µg/L	<0.5	2 µg/L	90.0	---	80.0	121	---	---
Toluene	108-88-3	0.5	µg/L	<0.5	2 µg/L	90.9	---	76.0	121	---	---
Ethylbenzene	100-41-4	0.5	µg/L	<0.5	2 µg/L	90.7	---	79.0	123	---	---
meta- & para-Xylene	108-38-3 106-42-3	1	µg/L	<1	4 µg/L	94.8	---	78.0	121	---	---
Styrene	100-42-5	0.5	µg/L	<0.5	2 µg/L	92.1	---	78.0	122	---	---
ortho-Xylene	95-47-6	0.5	µg/L	<0.5	2 µg/L	91.6	---	78.0	121	---	---
Xylenes (Total)	---	2	µg/L	<2	6 µg/L	93.8	---	79.0	121	---	---
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3819126)											
2-Propanone (Acetone)	67-64-1	5	µg/L	<5	20 µg/L	91.5	---	79.0	124	---	---
2-Butanone (MEK)	78-93-3	5	µg/L	<5	20 µg/L	95.5	---	80.0	121	---	---
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3819126)											
Methylene chloride	75-09-2	5	µg/L	<5	2 µg/L	109	---	78.0	120	---	---

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3819126) - Continued											
Trichloroethene	79-01-6	0.5	µg/L	<0.5	2 µg/L	92.5	---	78.0	127	---	---
Tetrachloroethene	127-18-4	0.5	µg/L	<0.5	2 µg/L	91.0	---	81.0	121	---	---
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3819126)											
Chloroform	67-66-3	0.5	µg/L	<0.5	2 µg/L	92.2	---	76.0	124	---	---
Bromodichloromethane	75-27-4	0.5	µg/L	<0.5	2 µg/L	93.1	---	78.0	119	---	---
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3819126)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	µg/L	<0.5	2 µg/L	92.4	---	78.0	123	---	---

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

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations (QC Lot: 3818166)										
HK2130259-002	Anonymous	**EG3060: Hexavalent Chromium**	18540-29-9	2.5 mg/kg	101	---	75.0	125	---	---
EG: Metals and Major Cations (QC Lot: 3818178)										
HK2130259-002	Anonymous	**EG020: Antimony**	7440-36-0	5 mg/kg	78.5	---	75.0	125	---	---
		EG020: Arsenic	7440-38-2	5 mg/kg	99.2	---	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	109	---	75.0	125	---	---
		EG020: Copper	7440-50-8	5 mg/kg	94.6	---	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	109	---	75.0	125	---	---
		EG020: Molybdenum	7439-98-7	5 mg/kg	87.5	---	75.0	125	---	---
		EG020: Nickel	7440-02-0	5 mg/kg	91.2	---	75.0	125	---	---
		EG020: Tin	7440-31-5	5 mg/kg	89.4	---	75.0	125	---	---
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	---	75.0	125	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3818108)										
HK2130410-001	Anonymous	**Naphthalene**	91-20-3	250 µg/kg	101	---	50.0	130	---	---
		Acenaphthylene	208-96-8	250 µg/kg	100	---	50.0	130	---	---
		Acenaphthene	83-32-9	250 µg/kg	97.8	---	50.0	130	---	---
		Fluorene	86-73-7	250 µg/kg	98.1	---	50.0	130	---	---
		Phenanthrene	85-01-8	250 µg/kg	103	---	50.0	130	---	---
		Anthracene	120-12-7	250 µg/kg	99.6	---	50.0	130	---	---
		Fluoranthene	206-44-0	250 µg/kg	107	---	50.0	130	---	---

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3818108) - Continued										
HK2130410-001	Anonymous	**Pyrene**	129-00-0	250 µg/kg	106	---	50.0	130	---	---
		Benz(a)anthracene	56-55-3	250 µg/kg	102	---	50.0	130	---	---
		Chrysene	218-01-9	250 µg/kg	107	---	50.0	130	---	---
		Benzo(b)fluoranthene	205-99-2	250 µg/kg	103	---	50.0	130	---	---
		Benzo(k)fluoranthene	207-08-9	250 µg/kg	105	---	50.0	130	---	---
		Benzo(a)pyrene	50-32-8	250 µg/kg	104	---	50.0	130	---	---
		Indeno(1.2.3.cd)pyrene	193-39-5	250 µg/kg	93.1	---	50.0	130	---	---
		Dibenz(a.h)anthracene	53-70-3	250 µg/kg	79.5	---	50.0	130	---	---
		Benzo(g.h.i)perylene	191-24-2	250 µg/kg	83.7	---	50.0	130	---	---
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3818108)										
HK2130410-001	Anonymous	**Phenol**	108-95-2	250 µg/kg	101	---	50.0	130	---	---
		Hexachlorobenzene (HCB)	118-74-1	250 µg/kg	96.5	---	50.0	130	---	---
		Bis(2-ethylhexyl)phthalate	117-81-7	250 µg/kg	110	---	50.0	130	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3818109)										
HK2130413-001	Anonymous	**C9 - C16 Fraction**	---	31.5 mg/kg	75.2	---	50.0	130	---	---
		C17 - C35 Fraction	---	67.5 mg/kg	101	---	50.0	130	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3824142)										
HK2130413-001	Anonymous	**C6 - C8 Fraction**	---	4.5 mg/kg	97.0	---	50.0	130	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3824143)										
HK2130415-001	Anonymous	**Benzene**	71-43-2	0.25 mg/kg	106	---	50.0	130	---	---
		Toluene	108-88-3	0.25 mg/kg	108	---	50.0	130	---	---
		Ethylbenzene	100-41-4	0.25 mg/kg	102	---	50.0	130	---	---
		meta- & para-Xylene	108-38-3 106-42-3	0.5 mg/kg	103	---	50.0	130	---	---
		Styrene	100-42-5	0.25 mg/kg	108	---	50.0	130	---	---
		ortho-Xylene	95-47-6	0.25 mg/kg	109	---	50.0	130	---	---
		Xylenes (Total)	---	0.75 mg/kg	105	---	50.0	130	---	---
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3824143)										
HK2130415-001	Anonymous	**2-Propanone (Acetone)**	67-64-1	2.5 mg/kg	88.5	---	50.0	130	---	---

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3824143) - Continued										
HK2130415-001	Anonymous	**2-Butanone (MEK)**	78-93-3	2.5 mg/kg	99.1	---	50.0	130	---	---
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3824143)										
HK2130415-001	Anonymous	**Methylene chloride**	75-09-2	0.25 mg/kg	103	---	50.0	130	---	---
		Trichloroethene	79-01-6	0.25 mg/kg	109	---	50.0	130	---	---
		Tetrachloroethene	127-18-4	0.25 mg/kg	108	---	50.0	130	---	---
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3824143)										
HK2130415-001	Anonymous	**Chloroform**	67-66-3	0.25 mg/kg	97.4	---	50.0	130	---	---
		Bromodichloromethane	75-27-4	0.25 mg/kg	103	---	50.0	130	---	---
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3824143)										
HK2130415-001	Anonymous	**Methyl tert-Butyl Ether (MTBE)**	1634-04-4	0.25 mg/kg	101	---	50.0	130	---	---

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%)	
		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**

Compound	CAS Number	Recovery Limits (%)	
		Low	High
EP-074_SR-S: VOC Surrogates			

Sub-Matrix: **WATER**

Compound	CAS Number	Recovery Limits (%) 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

CHAIN OF CUSTODY DOCUMENTATION

H 044454

ALS Laboratory Group

CLIENT: PY - CREC JV

ADDRESS / OFFICE: [redacted] Wang Lee St. Yuen Long Industrial Est

PROJECT MANAGER (PM):

PROJECT ID:

SITE: YLSTW

P.O. NO.:

RESULTS REQUIRED (Date):

QUOTE NO.:

SAMPLER: JUSTIN YIU

MOBILE: 9515 7259

PHONE

EMAIL REPORT TO: Refer to FSS

EMAIL INVOICE TO: (if different to report)

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		Metals	Cr III, VI	VOCs	SVOCs	PCBs								
ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles													
1	ENV-BH31 - 1.5m	S	29/7/21	0945	U76	1	√	√	√	√	√								
2	ENV-BH31 - 3.0m	S	29/7/21	1130	U76	1	√	√	√	√	√								
3	ENV-BH31 - 4.0m	S	29/7/21	1230	U76	1	√	√	√	√	√								
4	Trip Blank	W	30/7/21	1000	AG	2			√										
5	Equipment Blank	W	"	1000	AG	5	√	√	√	√	√								
6	Field Blank	W	"	1000	AG	5	√	√	√	√	√								

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: Karina Chan	Date: 30/7/2021	Name: Hugo Au	Date: 31/7/2021	Con' Note No:
Of: Cinotech Consultants	Time: 1000	Of: ALS	Time: 1200	
Name:	Date:	Name: Ketsu Lau	Date: 31-July-2021	Transport Co:
Of:	Time:	Of: ALS HK	Time: 1250	

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 21
Contact	: TEDDY ORR	Contact	: Richard Fung	Work Order	: HK2130864
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	: 31-Jul-2021
Order number	: P5120-001R2	Quote number	: HKE/1853/2021_V4	Issue Date	: 10-Aug-2021
C-O-C number	: H044454			No. of samples received	: 6
Site	:			No. of samples analysed	: 6

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
Wong Wing , Kenneth	Assistant Manager - Environmental	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 31-Jul-2021 to 10-Aug-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: HK2130864

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(s) was/ were submitted by client. 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-BH31-1.5m	ENV-BH31-3.0m	ENV-BH31-4.0m	---	---
			Sampling date / time	31-Jul-2021 09:45	31-Jul-2021 11:30	31-Jul-2021 12:30	---	---
Compound	CAS Number	LOR	Unit	HK2130864-001	HK2130864-002	HK2130864-003	-------	-------
EA/ED: Physical and Aggregate Properties								
EA055: Moisture Content (dried @ 103°C)	---	0.1	%	20.8	23.4	36.8	---	---
EG: Metals and Major Cations								
EG020: Antimony	7440-36-0	1	mg/kg	<1	<1	1	---	---
EG020: Arsenic	7440-38-2	1	mg/kg	5	3	20	---	---
EG020: Barium	7440-39-3	1.0	mg/kg	109	74.8	49.0	---	---
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	<0.2	---	---
EG020: Cobalt	7440-48-4	1.0	mg/kg	21.2	18.5	14.8	---	---
EG020: Copper	7440-50-8	1	mg/kg	40	7	21	---	---
EG020: Lead	7439-92-1	1	mg/kg	34	24	58	---	---
EG020: Manganese	7439-96-5	1.0	mg/kg	1320	383	182	---	---
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.12	---	---
EG020: Molybdenum	7439-98-7	1	mg/kg	1	<1	2	---	---
EG020: Nickel	7440-02-0	1	mg/kg	20	27	26	---	---
EG020: Tin	7440-31-5	1.0	mg/kg	18.5	4.8	5.1	---	---
EG020: Zinc	7440-66-6	1	mg/kg	61	82	169	---	---
EG049: Trivalent Chromium	16065-83-1	1.0	mg/kg	49.0	39.6	35.9	---	---
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-BH31-1.5m	ENV-BH31-3.0m	ENV-BH31-4.0m	----	----
			Sampling date / time	31-Jul-2021 09:45	31-Jul-2021 11:30	31-Jul-2021 12:30	----	----
Compound	CAS Number	LOR	Unit	HK2130864-001	HK2130864-002	HK2130864-003	------	------
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			Sample ID	ENV-BH31-1.5m	ENV-BH31-3.0m	ENV-BH31-4.0m	----	----
			Sampling date / time	31-Jul-2021 09:45	31-Jul-2021 11:30	31-Jul-2021 12:30	----	----
Compound	CAS Number	LOR	Unit	HK2130864-001	HK2130864-002	HK2130864-003	-------	------
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	%	99.5	81.7	114	----	----
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	84.2	74.9	87.1	----	----
EP-080_SRS: TPH(Volatile)/BTEX Surrogate								
EP070HK_SR: Dibromofluoromethane	1868-53-7	0.1	%	92.7	92.4	94.2	----	----
EP070HK_SR: Toluene-D8	2037-26-5	0.1	%	91.5	91.0	91.3	----	----
EP070HK_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	109	109	105	----	----
EP-074_SR-S: VOC Surrogates								
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	92.7	92.4	94.2	----	----
EP074_SR: Toluene-D8	2037-26-5	0.1	%	91.5	91.0	91.3	----	----
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	109	109	105	----	----

Sub-Matrix: WATER			Sample ID	Trip Blank	Equipment Blank	Field Blank	---	---
			Sampling date / time	31-Jul-2021 10:00	31-Jul-2021 10:00	31-Jul-2021 10:00	---	---
Compound	CAS Number	LOR	Unit	HK2130864-004	HK2130864-005	HK2130864-006	------	------
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	<1	---	---
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	Trip Blank	Equipment Blank	Field Blank	----	----
			Sampling date / time	31-Jul-2021 10:00	31-Jul-2021 10:00	31-Jul-2021 10:00	----	----
Compound	CAS Number	LOR	Unit	HK2130864-004	HK2130864-005	HK2130864-006	-------	-------
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			Sample ID	Trip Blank	Equipment Blank	Field Blank	----	----
			Sampling date / time	31-Jul-2021 10:00	31-Jul-2021 10:00	31-Jul-2021 10:00	----	----
Compound	CAS Number	LOR	Unit	HK2130864-004	HK2130864-005	HK2130864-006	-------	------
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	%	----	72.0	54.2	----	----
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	----	90.2	67.8	----	----
EP-080_SRS: TPH(Volatile)/BTEX Surrogate								
EP070HK_SR: Dibromofluoromethane	1868-53-7	0.1	%	----	99.5	98.0	----	----
EP070HK_SR: Toluene-D8	2037-26-5	0.1	%	----	91.7	92.0	----	----
EP070HK_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	----	109	107	----	----
EP-074_SR-S: VOC Surrogates								
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	97.3	99.5	98.0	----	----
EP074_SR: Toluene-D8	2037-26-5	0.1	%	92.3	91.7	92.0	----	----
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	110	109	107	----	----

Laboratory Duplicate (DUP) Report

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 3825152)								
HK2130729-001	Anonymous	**EA055: Moisture Content (dried @ 103°C)**	----	0.1	%	58.3	58.3	0.0
HK2130801-005	Anonymous	**EA055: Moisture Content (dried @ 103°C)**	----	0.1	%	17.9	17.6	1.9
EG: Metals and Major Cations (QC Lot: 3825238)								
HK2130864-002	ENV-BH31-3.0m	**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	74.8	76.7	2.6
		EG020: Cobalt	7440-48-4	0.5	mg/kg	18.5	15.8	15.5
		EG020: Manganese	7439-96-5	0.5	mg/kg	383	433	12.3
		EG020: Tin	7440-31-5	0.5	mg/kg	4.8	6.1	23.0
		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	7	7	0.0
		EG020: Lead	7439-92-1	1	mg/kg	24	27	9.5
		EG020: Molybdenum	7439-98-7	1	mg/kg	<1	<1	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	27	32	17.5
		EG020: Zinc	7440-66-6	1	mg/kg	82	83	0.0
EG: Metals and Major Cations (QC Lot: 3827533)								
HK2130864-002	ENV-BH31-3.0m	**EG3060: Hexavalent Chromium**	18540-29-9	0.5	mg/kg	<1.0	<1.0	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3823599)								
HK2130859-001	Anonymous	**Naphthalene**	91-20-3	50	µg/kg	<50	<50	0.0
		Acenaphthylene	208-96-8	50	µg/kg	<50	<50	0.0
		Acenaphthene	83-32-9	50	µg/kg	<50	<50	0.0
		Fluorene	86-73-7	50	µg/kg	<50	<50	0.0
		Phenanthrene	85-01-8	50	µg/kg	<50	<50	0.0
		Anthracene	120-12-7	50	µg/kg	<50	<50	0.0
		Fluoranthene	206-44-0	50	µg/kg	<150	<150	0.0
		Pyrene	129-00-0	50	µg/kg	<150	<150	0.0
		Benz(a)anthracene	56-55-3	50	µg/kg	<150	<150	0.0
		Chrysene	218-01-9	50	µg/kg	<150	<150	0.0
		Benzo(b)fluoranthene	205-99-2	50	µg/kg	<150	<150	0.0

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3823599) - Continued								
HK2130859-001	Anonymous	Benzo(k)fluoranthene	207-08-9	50	µg/kg	<150	<150	0.0
		Benzo(a)pyrene	50-32-8	50	µg/kg	<150	<150	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	50	µg/kg	<150	<150	0.0
		Dibenz(a.h)anthracene	53-70-3	50	µg/kg	<150	<150	0.0
		Benzo(g.h.i)perylene	191-24-2	50	µg/kg	<150	<150	0.0
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3823599)								
HK2130859-001	Anonymous	Bis(2-ethylhexyl)phthalate	117-81-7	1000	µg/kg	<1000	<1000	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: 3823601)								
HK2130755-001	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: 3824142)								
HK2130410-001	Anonymous	C6 - C8 Fraction	---	5	mg/kg	<5	<5	0.0
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3824143)								
HK2130410-001	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	108-38-3 106-42-3	0.4	mg/kg	<1.0	<1.0	0.0
		Xylenes (Total)	---	1	mg/kg	<2.0	<2.0	0.0
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3824143)								
HK2130410-001	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: 3824143)								
HK2130410-001	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: 3824143)								

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report: LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3824143) - Continued								
HK2130410-001	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: 3824143)								
HK2130410-001	Anonymous	**Methyl tert-Butyl Ether (MTBE)**	1634-04-4	0.2	mg/kg	<0.5	<0.5	0.0

Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report: LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 3825246)								
HK2130864-006	Field Blank	**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
		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: 3836334)								
HK2130259-001	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: Compound	CAS Number	Method Blank (MB) Report: LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%): LCS	DCS	Recovery Limits(%): Low	High	RPD (%): Value	Control Limit
EG: Metals and Major Cations (QC Lot: 3825238)											
EG020: Antimony	7440-36-0	1	mg/kg	<1	5 mg/kg	103	---	85.0	108	---	---

Matrix: **SOIL**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations (QC Lot: 3825238) - Continued											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	108	---	87.2	110	---	---
EG020: Barium	7440-39-3	0.5	mg/kg	<0.5	5 mg/kg	102	---	85.0	110	---	---
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	0.5 mg/kg	110	---	85.0	113	---	---
EG020: Cobalt	7440-48-4	0.5	mg/kg	<0.5	5 mg/kg	99.0	---	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	97.6	---	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	113	---	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	100	---	90.6	111	---	---
EG020: Tin	7440-31-5	0.5	mg/kg	<0.5	5 mg/kg	100	---	85.0	109	---	---
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	105	---	90.9	115	---	---
EG: Metals and Major Cations (QC Lot: 3827533)											
EG3060: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	2.5 mg/kg	95.7	---	85.0	1120000	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3823599)											
Naphthalene	91-20-3	50	µg/kg	<50	250 µg/kg	94.2	---	84.0	112	---	---
Acenaphthylene	208-96-8	50	µg/kg	<50	250 µg/kg	91.6	---	84.0	110	---	---
Acenaphthene	83-32-9	50	µg/kg	<50	250 µg/kg	92.8	---	84.0	109	---	---
Fluorene	86-73-7	50	µg/kg	<50	250 µg/kg	90.7	---	79.0	110	---	---
Phenanthrene	85-01-8	50	µg/kg	<50	250 µg/kg	93.5	---	78.0	112	---	---
Anthracene	120-12-7	50	µg/kg	<50	250 µg/kg	88.8	---	80.0	113	---	---
Fluoranthene	206-44-0	50	µg/kg	<50	250 µg/kg	91.6	---	80.0	112	---	---
Pyrene	129-00-0	50	µg/kg	<50	250 µg/kg	90.2	---	79.0	113	---	---
Benz(a)anthracene	56-55-3	50	µg/kg	<50	250 µg/kg	88.6	---	74.0	110	---	---
Chrysene	218-01-9	50	µg/kg	<50	250 µg/kg	98.2	---	86.0	112	---	---
Benzo(b)fluoranthene	205-99-2	50	µg/kg	<50	250 µg/kg	88.5	---	53.0	119	---	---
Benzo(k)fluoranthene	207-08-9	50	µg/kg	<50	250 µg/kg	97.8	---	67.0	121	---	---
Benzo(a)pyrene	50-32-8	50	µg/kg	<50	250 µg/kg	90.4	---	53.0	117	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	50	µg/kg	<50	250 µg/kg	84.1	---	45.0	109	---	---
Dibenz(a.h)anthracene	53-70-3	50	µg/kg	<50	250 µg/kg	87.1	---	38.0	112	---	---

Matrix: **SOIL**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3823599) - Continued											
Benzo(g.h.i)perylene	191-24-2	50	µg/kg	<50	250 µg/kg	90.4	---	31.0	117	---	---
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3823599)											
Phenol	108-95-2	500	µg/kg	<500	250 µg/kg	89.8	---	61.0	126	---	---
Hexachlorobenzene (HCB)	118-74-1	50	µg/kg	<50	250 µg/kg	91.2	---	81.0	111	---	---
Bis(2-ethylhexyl)phthalate	117-81-7	1000	µg/kg	<1000	250 µg/kg	102	---	89.0	120	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3823601)											
C9 - C16 Fraction	---	200	mg/kg	<200	31.5 mg/kg	77.3	---	76.0	104	---	---
C17 - C35 Fraction	---	500	mg/kg	<500	67.5 mg/kg	81.4	---	56.0	103	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3824142)											
C6 - C8 Fraction	---	5	mg/kg	<5	4.5 mg/kg	108	---	80.0	118	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3824143)											
Benzene	71-43-2	0.1	mg/kg	<0.1	0.25 mg/kg	106	---	77.0	121	---	---
Toluene	108-88-3	0.2	mg/kg	<0.2	0.25 mg/kg	108	---	78.0	121	---	---
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.25 mg/kg	110	---	79.0	122	---	---
meta- & para-Xylene	108-38-3 106-42-3	0.4	mg/kg	<0.4	0.5 mg/kg	107	---	78.0	123	---	---
Styrene	100-42-5	0.2	mg/kg	<0.2	0.25 mg/kg	107	---	79.0	120	---	---
ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	0.25 mg/kg	110	---	80.0	120	---	---
Xylenes (Total)	---	1	mg/kg	<1.0	0.75 mg/kg	108	---	79.0	121	---	---
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3824143)											
2-Propanone (Acetone)	67-64-1	2	mg/kg	<2	2.5 mg/kg	103	---	77.0	121	---	---
2-Butanone (MEK)	78-93-3	2	mg/kg	<2	2.5 mg/kg	107	---	77.0	121	---	---
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3824143)											
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	0.25 mg/kg	107	---	76.0	124	---	---
Trichloroethene	79-01-6	0.1	mg/kg	<0.1	0.25 mg/kg	107	---	80.0	122	---	---
Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	0.25 mg/kg	108	---	79.0	122	---	---
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3824143)											
Chloroform	67-66-3	0.04	mg/kg	<0.04	0.25 mg/kg	108	---	77.0	121	---	---
Bromodichloromethane	75-27-4	0.1	mg/kg	<0.1	0.25 mg/kg	110	---	79.0	122	---	---

Matrix: **SOIL**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3824143)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.2	mg/kg	<0.2	0.25 mg/kg	106	---	77.0	120	---	---

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 3825246)											
EG020: Antimony	7440-36-0	1	µg/L	<1	50 µg/L	96.7	---	87.4	106	---	---
EG020: Arsenic	7440-38-2	1	µg/L	<1	50 µg/L	99.4	---	88.1	110	---	---
EG020: Barium	7440-39-3	1	µg/L	<1	50 µg/L	97.4	---	87.4	106	---	---
EG020: Cadmium	7440-43-9	0.2	µg/L	<0.2	5 µg/L	102	---	85.0	113	---	---
EG020: Cobalt	7440-48-4	1	µg/L	<1	50 µg/L	99.3	---	86.1	110	---	---
EG020: Copper	7440-50-8	1	µg/L	<1	50 µg/L	99.5	---	89.2	111	---	---
EG020: Lead	7439-92-1	1	µg/L	<1	50 µg/L	96.3	---	86.9	110	---	---
EG020: Manganese	7439-96-5	1	µg/L	<1	50 µg/L	94.9	---	86.9	110	---	---
EG020: Mercury	7439-97-6	0.5	µg/L	<0.5	2 µg/L	85.2	---	85.0	115	---	---
EG020: Molybdenum	7439-98-7	1	µg/L	<1	50 µg/L	99.0	---	85.8	105	---	---
EG020: Nickel	7440-02-0	1	µg/L	<1	50 µg/L	97.3	---	88.4	109	---	---
EG020: Tin	7440-31-5	1	µg/L	<1	50 µg/L	95.9	---	89.3	103	---	---
EG020: Zinc	7440-66-6	10	µg/L	<10	50 µg/L	103	---	89.1	113	---	---
EG: Metals and Major Cations - Filtered (QC Lot: 3836334)											
EG050: Hexavalent Chromium	18540-29-9	20	µg/L	<20	100 µg/L	98.8	---	80.0	106	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3823552)											
Naphthalene	91-20-3	0.1	µg/L	<0.1	0.5 µg/L	77.7	---	50.0	116	---	---
Acenaphthylene	208-96-8	0.1	µg/L	<0.1	0.5 µg/L	75.3	---	50.0	110	---	---
Acenaphthene	83-32-9	0.1	µg/L	<0.1	0.5 µg/L	72.4	---	46.0	112	---	---
Fluorene	86-73-7	0.1	µg/L	<0.1	0.5 µg/L	75.7	---	51.0	110	---	---
Phenanthrene	85-01-8	0.1	µg/L	<0.1	0.5 µg/L	89.6	---	51.0	119	---	---
Anthracene	120-12-7	0.1	µg/L	<0.1	0.5 µg/L	87.0	---	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	101	---	62.0	133	---	---

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3823552) - Continued											
Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	0.5 µg/L	103	---	65.0	132	---	---
Chrysene	218-01-9	0.1	µg/L	<0.1	0.5 µg/L	102	---	77.0	125	---	---
Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	0.5 µg/L	102	---	46.0	124	---	---
Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	0.5 µg/L	94.4	---	59.0	125	---	---
Benzo(a)pyrene	50-32-8	0.1	µg/L	<0.1	0.5 µg/L	102	---	46.0	120	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	0.5 µg/L	87.7	---	54.0	89.0	---	---
Dibenz(a.h)anthracene	53-70-3	0.1	µg/L	<0.1	0.5 µg/L	93.4	---	40.0	102	---	---
Benzo(g.h.i)perylene	191-24-2	0.1	µg/L	<0.1	0.5 µg/L	91.8	---	43.0	97.0	---	---
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3823552)											
Phenol	108-95-2	5	µg/L	<5.0	0.5 µg/L	75.4	---	50.0	106	---	---
Hexachlorobenzene (HCB)	118-74-1	4	µg/L	<4.0	0.5 µg/L	75.8	---	49.0	112	---	---
Bis(2-ethylhexyl)phthalate	117-81-7	10	µg/L	<10.0	0.5 µg/L	105	---	84.0	124	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3823551)											
C9 - C16 Fraction	---	0.5	mg/L	<0.5	0.21 mg/L	72.2	---	63.0	99.0	---	---
C17 - C35 Fraction	---	0.5	mg/L	<0.5	0.45 mg/L	86.6	---	54.0	118	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3825465)											
C6 - C8 Fraction	---	0.02	mg/L	<0.02	0.03 mg/L	106	---	80.0	118	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3825466)											
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	109	---	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	109	---	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	108	---	78.0	121	---	---
Xylenes (Total)	---	2	µg/L	<2	6 µg/L	109	---	79.0	121	---	---
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3825466)											
2-Propanone (Acetone)	67-64-1	5	µg/L	<5	20 µg/L	108	---	79.0	124	---	---
2-Butanone (MEK)	78-93-3	5	µg/L	<5	20 µg/L	95.2	---	80.0	121	---	---
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3825466)											

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3825466) - Continued											
Methylene chloride	75-09-2	5	µg/L	<5	2 µg/L	96.9	---	78.0	120	---	---
Trichloroethene	79-01-6	0.5	µg/L	<0.5	2 µg/L	91.0	---	78.0	127	---	---
Tetrachloroethene	127-18-4	0.5	µg/L	<0.5	2 µg/L	92.0	---	81.0	121	---	---
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3825466)											
Chloroform	67-66-3	0.5	µg/L	<0.5	2 µg/L	109	---	76.0	124	---	---
Bromodichloromethane	75-27-4	0.5	µg/L	<0.5	2 µg/L	108	---	78.0	119	---	---
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3825466)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	µg/L	<0.5	2 µg/L	103	---	78.0	123	---	---

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

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations (QC Lot: 3825238)										
HK2130864-001	ENV-BH31-1.5m	**EG020: Antimony**	7440-36-0	5 mg/kg	103	---	75.0	125	---	---
		EG020: Arsenic	7440-38-2	5 mg/kg	80.8	---	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	---	---
		EG020: Cobalt	7440-48-4	5 mg/kg	82.8	---	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	106	---	75.0	125	---	---
		EG020: Molybdenum	7439-98-7	5 mg/kg	99.8	---	75.0	125	---	---
		EG020: Nickel	7440-02-0	5 mg/kg	81.3	---	75.0	125	---	---
		EG020: Tin	7440-31-5	5 mg/kg	86.3	---	75.0	125	---	---
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	---	75.0	125	---	---
EG: Metals and Major Cations (QC Lot: 3827533)										
HK2130864-001	ENV-BH31-1.5m	**EG3060: Hexavalent Chromium**	18540-29-9	2.5 mg/kg	89.6	---	75.0	125	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3823599)										
HK2130861-001	Anonymous	**Naphthalene**	91-20-3	250 µg/kg	88.4	---	50.0	130	---	---
		Acenaphthylene	208-96-8	250 µg/kg	90.2	---	50.0	130	---	---
		Acenaphthene	83-32-9	250 µg/kg	87.5	---	50.0	130	---	---
		Fluorene	86-73-7	250 µg/kg	92.5	---	50.0	130	---	---
		Phenanthrene	85-01-8	250 µg/kg	91.5	---	50.0	130	---	---
		Anthracene	120-12-7	250 µg/kg	89.4	---	50.0	130	---	---
		Fluoranthene	206-44-0	250 µg/kg	88.3	---	50.0	130	---	---

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3823599) - Continued										
HK2130861-001	Anonymous	**Pyrene**	129-00-0	250 µg/kg	83.3	---	50.0	130	---	---
		Benz(a)anthracene	56-55-3	250 µg/kg	89.6	---	50.0	130	---	---
		Chrysene	218-01-9	250 µg/kg	93.3	---	50.0	130	---	---
		Benzo(b)fluoranthene	205-99-2	250 µg/kg	88.3	---	50.0	130	---	---
		Benzo(k)fluoranthene	207-08-9	250 µg/kg	89.5	---	50.0	130	---	---
		Benzo(a)pyrene	50-32-8	250 µg/kg	85.8	---	50.0	130	---	---
		Indeno(1.2.3.cd)pyrene	193-39-5	250 µg/kg	81.9	---	50.0	130	---	---
		Dibenz(a.h)anthracene	53-70-3	250 µg/kg	79.0	---	50.0	130	---	---
		Benzo(g.h.i)perylene	191-24-2	250 µg/kg	86.0	---	50.0	130	---	---
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3823599)										
HK2130861-001	Anonymous	**Phenol**	108-95-2	250 µg/kg	84.9	---	50.0	130	---	---
		Hexachlorobenzene (HCB)	118-74-1	250 µg/kg	86.6	---	50.0	130	---	---
		Bis(2-ethylhexyl)phthalate	117-81-7	250 µg/kg	114	---	50.0	130	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3823601)										
HK2130759-001	Anonymous	**C9 - C16 Fraction**	---	31.5 mg/kg	72.4	---	50.0	130	---	---
		C17 - C35 Fraction	---	67.5 mg/kg	64.8	---	50.0	130	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3824142)										
HK2130413-001	Anonymous	**C6 - C8 Fraction**	---	4.5 mg/kg	97.0	---	50.0	130	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3824143)										
HK2130415-001	Anonymous	**Benzene**	71-43-2	0.25 mg/kg	106	---	50.0	130	---	---
		Toluene	108-88-3	0.25 mg/kg	108	---	50.0	130	---	---
		Ethylbenzene	100-41-4	0.25 mg/kg	102	---	50.0	130	---	---
		meta- & para-Xylene	108-38-3 106-42-3	0.5 mg/kg	103	---	50.0	130	---	---
		Styrene	100-42-5	0.25 mg/kg	108	---	50.0	130	---	---
		ortho-Xylene	95-47-6	0.25 mg/kg	109	---	50.0	130	---	---
		Xylenes (Total)	---	0.75 mg/kg	105	---	50.0	130	---	---
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3824143)										
HK2130415-001	Anonymous	**2-Propanone (Acetone)**	67-64-1	2.5 mg/kg	88.5	---	50.0	130	---	---

Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3824143) - Continued										
HK2130415-001	Anonymous	**2-Butanone (MEK)**	78-93-3	2.5 mg/kg	99.1	---	50.0	130	---	---
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3824143)										
HK2130415-001	Anonymous	**Methylene chloride**	75-09-2	0.25 mg/kg	103	---	50.0	130	---	---
		Trichloroethene	79-01-6	0.25 mg/kg	109	---	50.0	130	---	---
		Tetrachloroethene	127-18-4	0.25 mg/kg	108	---	50.0	130	---	---
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3824143)										
HK2130415-001	Anonymous	**Chloroform**	67-66-3	0.25 mg/kg	97.4	---	50.0	130	---	---
		Bromodichloromethane	75-27-4	0.25 mg/kg	103	---	50.0	130	---	---
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3824143)										
HK2130415-001	Anonymous	**Methyl tert-Butyl Ether (MTBE)**	1634-04-4	0.25 mg/kg	101	---	50.0	130	---	---

Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 3825246)										
HK2130864-005	Equipment Blank	**EG020: Antimony**	7440-36-0	50 µg/L	95.9	---	75.0	125	---	---
		EG020: Arsenic	7440-38-2	50 µg/L	102	---	75.0	125	---	---
		EG020: Barium	7440-39-3	50 µg/L	97.9	---	75.0	125	---	---
		EG020: Cadmium	7440-43-9	5 µg/L	103	---	75.0	125	---	---
		EG020: Cobalt	7440-48-4	50 µg/L	101	---	75.0	125	---	---
		EG020: Copper	7440-50-8	50 µg/L	102	---	75.0	125	---	---
		EG020: Lead	7439-92-1	50 µg/L	95.6	---	75.0	125	---	---
		EG020: Manganese	7439-96-5	50 µg/L	96.9	---	75.0	125	---	---
		EG020: Mercury	7439-97-6	2 µg/L	101	---	75.0	125	---	---
		EG020: Molybdenum	7439-98-7	50 µg/L	97.8	---	75.0	125	---	---
		EG020: Nickel	7440-02-0	50 µg/L	101	---	75.0	125	---	---
		EG020: Tin	7440-31-5	50 µg/L	98.2	---	75.0	125	---	---
		EG020: Zinc	7440-66-6	50 µg/L	105	---	75.0	125	---	---
EG: Metals and Major Cations - Filtered (QC Lot: 3836334)										

Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Concentration	Spike Recovery (%): MS	Spike Recovery (%): MSD	Recovery Limits (%): Low	Recovery Limits (%): High	RPD (%): Value	RPD (%): Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 3836334) - Continued										
HK2130114-011	Anonymous	**EG050: Hexavalent Chromium**	18540-29-9	100 µg/L	97.7	---	75.0	125	---	---

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%): Low	Recovery Limits (%): 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**

Compound	CAS Number	Recovery Limits (%): Low	Recovery Limits (%): 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

Sub-Matrix: **WATER**

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

CHAIN OF CUSTODY DOCUMENTATION

H 044455

ALS Laboratory Group

CLIENT: PY-CREC JV	SAMPLER: Justin Yu
ADDRESS / OFFICE:	MOBILE: 9515 7259
PROJECT MANAGER (PM):	PHONE
PROJECT ID:	EMAIL REPORT TO: Refer to FSS
SITE: P.O. NO.:	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		Metals - Mercury	PCBs	VOCs	SVOCs								
ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles												
1	GWV-BH31	GW	4/8/21	14:30	PLG	5	✓	✓	✓	✓								
2	GWV-BH32	GW	4/8/21	14:45	PLG	5	✓	✓	✓	✓								
3	GWV-BH33	GW	4/8/21	15:00	PLG	5	✓	✓	✓	✓								
4	Duplicate-GWV-BH33	GW	4/8/21	15:15	PLG	5	✓	✓	✓	✓								
5	Equipment Blank	GW	4/8/21	15:20	PLG	5	✓	✓	✓	✓								
6	Field Blank	GW	4/8/21	15:25	PLG	5	✓	✓	✓	✓								
7	Trip Blank	GW	4/8/21	15:30	PLG	2			✓									

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: Karina Chan	Date: 04-08-2021	Name: Wong Ling Chin	Date:	Con' Note No:
Of: Envirotech	Time: 15:50	Of: ALS	Time:	
Name:	Date:	Name: Kelvin Lam	Date: 4-Aug-2021	Transport Co:
Of:	Time:	Of: ALS HK	Time: 17:00	

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.

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYICAL CHEMISTRY & TESTING SERVICES

HOKLAS 066 TEST

CERTIFICATE OF ANALYSIS

Client	: PAUL Y - CREC JOINT VENTURE	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 10
Contact	: TEDDY ORR	Contact	: Richard Fung	Work Order	: HK2131638
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	: 04-Aug-2021
Order number	: P5120-001R2	Quote number	: HKE/1853/2021_V4	Issue Date	: 09-Aug-2021
C-O-C number	: H044455			No. of samples received	: 7
Site	:			No. of samples analysed	: 7

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
Wong Wing , Kenneth	Assistant Manager - Environmental	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 04-Aug-2021 to 09-Aug-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: HK2131638

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**

Compound	CAS Number	LOR	Unit	Sample ID	ENV-BH31	ENV-BH32	ENV-BH33	Duplicate-ENV-BH 33	Equipment Blank
				Sampling date / time	04-Aug-2021 14:30	04-Aug-2021 14:25	04-Aug-2021 15:00	04-Aug-2021 15:15	04-Aug-2021 15:20
					HK2131638-001	HK2131638-002	HK2131638-003	HK2131638-004	HK2131638-005
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		<500	**900**	<500	<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-BH31	ENV-BH32	ENV-BH33	Duplicate-ENV-BH 33	Equipment Blank
				Sampling date / time	04-Aug-2021 14:30	04-Aug-2021 14:25	04-Aug-2021 15:00	04-Aug-2021 15:15	04-Aug-2021 15:20
Compound	CAS Number	LOR	Unit		HK2131638-001	HK2131638-002	HK2131638-003	HK2131638-004	HK2131638-005
EP-074_SR-B: Oxygenated Compounds - Continued									
EP074_SR: 2-Propanone (Acetone)	67-64-1	500	µg/L		<500	<500	<500	<500	<500
EP074_SR: 2-Butanone (MEK)	78-93-3	50	µg/L		728	751	78	85	<50
EP-074_SR-E: Halogenated Aliphatics									
EP074_SR: Methylene chloride	75-09-2	50	µg/L		<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
EP074_SR: Tetrachloroethene	127-18-4	5.0	µg/L		<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		<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
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
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%		56.3	52.1	70.6	68.2	76.2
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%		75.2	71.1	80.9	88.1	93.3
EP-080_SRS: TPH(Volatile)/BTEX Surrogate									
EP070HK_SR: Dibromofluoromethane	1868-53-7	0.1	%		90.6	91.4	91.7	91.9	90.1
EP070HK_SR: Toluene-D8	2037-26-5	0.1	%		98.9	97.0	98.8	99.4	99.5
EP070HK_SR: 4-Bromofluorobenzene	460-00-4	0.1	%		108	107	107	107	105
EP-074_SR-S: VOC Surrogates									
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%		90.6	91.4	91.7	91.9	90.1
EP074_SR: Toluene-D8	2037-26-5	0.1	%		98.9	97.0	98.8	99.4	99.5
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%		108	107	107	107	105

Sub-Matrix: GROUNDWATER			Sample ID	Field Blank	---	---	---	---
			Sampling date / time	04-Aug-2021 15:25	---	---	---	---
Compound	CAS Number	LOR	Unit	HK2131638-006	------	------	------	------
EG: Metals and Major Cations - Filtered								
EG020: Mercury	7439-97-6	0.5	µg/L	<0.5	---	---	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
EP076HK: Naphthalene	91-20-3	2.0	µg/L	<2.0	---	---	---	---
EP076HK: Acenaphthylene	208-96-8	2.0	µg/L	<2.0	---	---	---	---
EP076HK: Acenaphthene	83-32-9	2.0	µg/L	<2.0	---	---	---	---
EP076HK: Fluorene	86-73-7	2.0	µg/L	<2.0	---	---	---	---
EP076HK: Phenanthrene	85-01-8	2.0	µg/L	<2.0	---	---	---	---
EP076HK: Anthracene	120-12-7	2.0	µg/L	<2.0	---	---	---	---
EP076HK: Fluoranthene	206-44-0	2.0	µg/L	<2.0	---	---	---	---
EP076HK: Pyrene	129-00-0	2.0	µg/L	<2.0	---	---	---	---
EP076HK: Chrysene	218-01-9	1.0	µg/L	<1.0	---	---	---	---
EP076HK: Benzo(b)fluoranthene	205-99-2	1.0	µg/L	<1.0	---	---	---	---
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate								
EP076HK: Hexachlorobenzene (HCB)	118-74-1	4.0	µg/L	<4.0	---	---	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH)								
EP070HK_SR: C6 - C8 Fraction	---	20	µg/L	<20	---	---	---	---
EP071HK_SR: C9 - C16 Fraction	---	500	µg/L	<500	---	---	---	---
EP071HK_SR: C17 - C35 Fraction	---	500	µg/L	<500	---	---	---	---
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	---	---	---	---

Sub-Matrix: GROUNDWATER			Sample ID	Field Blank	---	---	---	---
			Sampling date / time	04-Aug-2021 15:25	---	---	---	---
Compound	CAS Number	LOR	Unit	HK2131638-006	------	------	------	------
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-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
EP076HK: 2-Fluorobiphenyl	321-60-8	0.1	%	**74.5**	---	---	---	---
EP076HK: 4-Terphenyl-d14	1718-51-0	0.1	%	**93.9**	---	---	---	---
EP-080_SRS: TPH(Volatile)/BTEX Surrogate								
EP070HK_SR: Dibromofluoromethane	1868-53-7	0.1	%	**91.4**	---	---	---	---
EP070HK_SR: Toluene-D8	2037-26-5	0.1	%	**100**	---	---	---	---
EP070HK_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	**106**	---	---	---	---
EP-074_SR-S: VOC Surrogates								
EP074_SR: Dibromofluoromethane	1868-53-7	0.1	%	**91.4**	---	---	---	---
EP074_SR: Toluene-D8	2037-26-5	0.1	%	**100**	---	---	---	---
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	**106**	---	---	---	---

Sub-Matrix: WATER			Sample ID	Trip Blank	----	----	----	----
			Sampling date / time	04-Aug-2021 15:30	----	----	----	----
Compound	CAS Number	LOR	Unit	HK2131638-007	------	------	------	------
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	%	**90.9**	----	----	----	----
EP074_SR: Toluene-D8	2037-26-5	0.1	%	**101**	----	----	----	----
EP074_SR: 4-Bromofluorobenzene	460-00-4	0.1	%	**106**	----	----	----	----

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 3829998)								
HK2131638-002	ENV-BH32	**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: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 3829998)											
EG020: Mercury	7439-97-6	0.5	µg/L	<0.5	2 µg/L	98.1	---	85.0	115	---	---
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 3829912)											
Naphthalene	91-20-3	0.1	µg/L	<0.1	0.5 µg/L	88.6	---	50.0	116	---	---
Acenaphthylene	208-96-8	0.1	µg/L	<0.1	0.5 µg/L	87.2	---	50.0	110	---	---
Acenaphthene	83-32-9	0.1	µg/L	<0.1	0.5 µg/L	82.8	---	46.0	112	---	---
Fluorene	86-73-7	0.1	µg/L	<0.1	0.5 µg/L	86.7	---	51.0	110	---	---
Phenanthrene	85-01-8	0.1	µg/L	<0.1	0.5 µg/L	94.2	---	51.0	119	---	---
Anthracene	120-12-7	0.1	µg/L	<0.1	0.5 µg/L	92.8	---	48.0	121	---	---
Fluoranthene	206-44-0	0.1	µg/L	<0.1	0.5 µg/L	98.9	---	61.0	130	---	---
Pyrene	129-00-0	0.1	µg/L	<0.1	0.5 µg/L	99.0	---	62.0	133	---	---
Chrysene	218-01-9	0.1	µg/L	<0.1	0.5 µg/L	102	---	77.0	125	---	---
Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	0.5 µg/L	96.3	---	46.0	124	---	---
EP-076HK: Phenol, Hexachlorobenzene and Bis(2-ethylhexyl) Phthalate (QC Lot: 3829912)											
Hexachlorobenzene (HCB)	118-74-1	4	µg/L	<4.0	0.5 µg/L	81.9	---	49.0	112	---	---
EP-071HK_SR: Total Petroleum Hydrocarbons (TPH) (QC Lot: 3829913)											
C9 - C16 Fraction	---	0.5	mg/L	<0.5	0.21 mg/L	70.2	---	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: 3831173)											
C6 - C8 Fraction	---	0.02	mg/L	<0.02	0.03 mg/L	92.6	---	80.0	118	---	---
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3831172)											
Benzene	71-43-2	0.5	µg/L	<0.5	2 µg/L	92.2	---	80.0	121	---	---

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP-074_SR-A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 3831172) - Continued											
Toluene	108-88-3	0.5	µg/L	<0.5	2 µg/L	94.9	---	76.0	121	---	---
Ethylbenzene	100-41-4	0.5	µg/L	<0.5	2 µg/L	93.7	---	79.0	123	---	---
meta- & para-Xylene	108-38-3 106-42-3	1	µg/L	<1	4 µg/L	94.4	---	78.0	121	---	---
Styrene	100-42-5	0.5	µg/L	<0.5	2 µg/L	93.9	---	78.0	122	---	---
ortho-Xylene	95-47-6	0.5	µg/L	<0.5	2 µg/L	93.0	---	78.0	121	---	---
Xylenes (Total)	---	2	µg/L	<2	6 µg/L	94.0	---	79.0	121	---	---
EP-074_SR-B: Oxygenated Compounds (QC Lot: 3831172)											
2-Propanone (Acetone)	67-64-1	5	µg/L	<5	20 µg/L	91.4	---	79.0	124	---	---
2-Butanone (MEK)	78-93-3	5	µg/L	<5	20 µg/L	91.0	---	80.0	121	---	---
EP-074_SR-E: Halogenated Aliphatics (QC Lot: 3831172)											
Methylene chloride	75-09-2	5	µg/L	<5	2 µg/L	107	---	78.0	120	---	---
Trichloroethene	79-01-6	0.5	µg/L	<0.5	2 µg/L	90.7	---	78.0	127	---	---
Tetrachloroethene	127-18-4	0.5	µg/L	<0.5	2 µg/L	90.7	---	81.0	121	---	---
EP-074_SR-G: Trihalomethanes (THM) (QC Lot: 3831172)											
Chloroform	67-66-3	0.5	µg/L	<0.5	2 µg/L	93.3	---	76.0	124	---	---
Bromodichloromethane	75-27-4	0.5	µg/L	<0.5	2 µg/L	94.0	---	78.0	119	---	---
EP-074_SR-I: Methyl-tert-butyl Ether (QC Lot: 3831172)											
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	µg/L	<0.5	2 µg/L	91.9	---	78.0	123	---	---

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

Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QC Lot: 3829998)										
HK2131638-001	ENV-BH31	**EG020: Mercury**	7439-97-6	2 µg/L	101	---	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-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