

256 Gray's Inn Road A new centre for world-leading dementia and neurology research and academic excellence

Ground Contamination Interpretive Report May 2019

Revision History

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CONTENTS

1.	INTRODUCTION	4
2.	SITE SETTING	6
3.	GROUND INVESTIGATION	8
4.	GROUND CONDITIONS	. 11
5.	GROUND CONTAMINATION - GENERIC QUANTITATIVE RISK ASSESSMENT	. 16
6.	GROUND GAS RISK ASSESSMENT	. 21
7.	GROUND CONTAMINATION – RISK EVALUATION	. 22
8.	WASTE CLASSIFICATION	. 28
9.	CONCLUSIONS AND RECOMMENDATIONS	. 31
10.	REFERENCES	. 35

DRAWINGS

Figure 1:	SITE LOCATION PLAN AND RED LINE BOUNDARY
183113/01:	EXPLORATORY HOLE LOCATION PLAN

APPENDICES

- Appendix A: DRAWINGS AND FIGURES
- Appendix B: ENVIRONMENTAL LABORATORY ANALYTICAL REPORTS
- Appendix C: GROUND GAS AND GROUNDWATER MONITORING RECORDS
- Appendix D: UK LEGISLATIVE CONTEXT AND CONTAMINATION ASSESSMENT METHODOLOGY
- Appendix E: SCREENING SHEETS
- Appendix F: HAZARDOUS WASTE ASSESSMENT OUTPUT

1. INTRODUCTION

1.1. Brief

Ramboll have been appointed by the University College London to provide a Contaminated Land Interpretative Report for the proposed redevelopment of the Eastman Dental Hospital (EDH) site.

A Contaminated Land and Geotechnical Desk Study were completed by Ramboll with a subsequent ground investigation designed by Ramboll and undertaken by Concept Site Investigations (Concept) in May to July 2018.

This report discusses the findings of the ground investigation and includes a series of conclusions and recommendations relating to the potential risks and constraints on development at the site associated with contaminated land. It does not contain information relating to the geotechnical elements of the ground investigation, and interpretation of the geotechnical aspects of the ground investigation are discussed in the Ramboll Ground Investigation Report (October 2018).

The Eastman Dental Hospital site is split into three 'Plots'; Plot 1 in the north, Plot 2 in the south west and Plot 3 in the south east. The ground investigation was undertaken in Plot 1 only, and as such this report does not contain any site specific information with regards to Plot 2 and Plot 3. Plot 1 is therefore referred to as 'the site' from herein.

1.2. Previous Reports

The following reports have been prepared for the site which should be read in conjunction with this Interpretative Report:

- Ramboll (September 2018): Geotechnical and Geoenvironmental Desk Study (Report ref: BEMP-RAM-P1-XX-RP-CG-0001);
- Ramboll (September 2018): Ground Investigation Report (Report ref: BEMP-RAM-P1-XX-RP-CG-0002),; and
- Concept (September 2018): Site Investigation Report (Report ref: 18/3113 FR 00).

These reports are referenced as appropriate herein.

1.3. Proposed Development

The site has been identified as the potential new home for the Institute of Neurology (IoN) / Dementia Research Institute (DRI) Hub. The current proposals assume the retention of the Alexandra Wing which fronts onto Gray's Inn Road, and the full demolition of Sussex, Victoria and 'New' Wings that form the courtyard behind. The three demolished wings will be replaced with a new four or five-storey construction forming large and efficient floor plates suitable for high performance wet laboratories. At the time of writing a central collaboration space with house offices, break-out working spaces and circulation. Below ground, the proposed two-storey basement (approximately 12mbgl) will comprise large technical facilities and further out-patient spaces including MRI scanners. Several options were considered for the layout of the atrium. It should be noted that there is potential for a change in scope.

The building will cover the majority of the site, with proposed hardstanding on all external areas.



1.4. Objectives

The objective of this ground contamination interpretative report is to assess the potential liabilities and risks associated with potential contaminants in the ground and groundwater in accordance with current UK legislation and guidance.

1.5. Scope

The scope of works for this phase of works includes:

- To summarise the ground investigation and its findings;
- To assess the presence and extent of Made Ground at the site;
- To assess the presence, likely extent and nature of potential contaminants;
- To conduct a contaminated land risk assessment for the existing site and proposed development based on the results from the ground investigation; and
- To provide recommendations for future works, where appropriate.

1.6. Constraints and Limitations

This report is intended for the University College London (UCL) for the purpose of assisting them in evaluating the site in the context of the proposed development. This report should not be used in whole or in part by any third parties without the express permission of Ramboll in writing.

Ramboll has endeavoured to assess all information provided to them. The report includes summaries of information from external sources and cannot offer any guarantees or warranties for the completeness or accuracy of information relied upon. The recommendations summarised in this report relate to the feasibility of developing on the site are based on information gained at the time of writing the report. Any substantial changes to the use of the site may require a reassessment of the implications of the risks identified and a review of the recommendations.

The conclusions resulting from this study are not necessarily indicative of future conditions or operating practices at or adjacent to the site.

It should be noted that although every effort has been made to ensure the accuracy of the data obtained from the investigation, the possibility exists for variations in ground and groundwater conditions between and around the borehole locations. In addition, groundwater levels will vary seasonally and with changes in weather conditions.

References to possible asbestos containing material made within this report do not constitute an asbestos survey.

2. SITE SETTING

2.1. Site Location

The site is located within the London Borough of Camden, approximately 600m south to southeast of the King's Cross St. Pancras Underground Station. The site occupies approximately 0.39ha and the centre of the site is located at approximate National Grid reference TQ 530699, 182515.

A Site Location Plan is appended to this report within Appendix A.

2.2. Site Description

At present the site is currently occupied by the Eastman Dental Hospital operated by UCLH, and is divided into three distinct areas; Plot 1 in the north of the site, Plot 2 in the southwest of the site and Plot 3 in the southeast of the site. Plots are not distinct now but have been determined as part of the overall site redevelopment strategy. Plot 1 comprises the historic 'Royal Free Hospital', now part of the Eastman Dental Hospital, with four hospital wings surrounding a central courtyard. The Alexandra Wing, Sussex Wing, Victoria Wing and New Wing bound the courtyard to the west, north, east and south respectively. The central courtyard contains a large mature tree, with an archway leading to a car park along the east of Plot 1.

Plot 2 comprises the Eastman Dental Clinic facing onto Grays Inn Road, the whole of the EDC is listed as a Grade II Listed Building. A split level courtyard is also located in the east of Plot 2.

Plot 3 is occupied by the Levy Wing, which is used for offices and laboratories. A car park and waste storage area is located adjacent to the east of Plot 3, with a security gate and walkway leading to the car park in the east of Plot 1.

A number of below ground structures are present across the site, with basements used as plant rooms and laboratories underlying Plot 1. A number of underground services are known to be present; a utilities survey was undertaken prior to the ground investigation by RPS – Midland Survey, the results of which are appended to this report as Drawing JKK9984-1.

The ground investigation undertaken by Concept comprised Plot 1 only, and as such this Interpretative Report does not include site specific information with regards to Plot 2 and Plot 3.

2.3. Surrounding Land Use

The site lies within an area of mixed use including commercial, industrial, residential and open space.

The site is bound to the:

- North by the Calthorpe Project located on Metropolitan open land;
- East by a retaining wall, and residential properties east of this. The Levy Wing (Plot 3) is located to the south east of Plot 1;
- South by the Eastman Dental Clinic, a Grade II Listed Building, and St. Andrew's Gardens south of this; and
- West by Grays Inn Road with commercial/residential properties.



2.4. Anticipated Ground Conditions

A review of the geology of the site was undertaken as part of the Geotechnical and Geoenvironmental Desk Study (Ramboll, March 2018), assessed using the British Geological Survey Map, Sheet 256 – Solid and Drift Edition for North London, and publicly available historical borehole logs from BGS online.

The BGS maps indicate the geology surrounding the site to comprise superficial deposits of River Terrace Deposits (Hackney Gravels), underlain by London Clay. The Lambeth Group, Thanet Sands and Chalk Group are anticipated to be present at depth. This is confirmed by the local BGS borehole logs, which also note variable thickness of the overlying Made Ground.

Made Ground and fill material is likely to be present on site, associated with historical and current land use.

2.5. Preliminary Conceptual Site Model

A preliminary conceptual site model was developed within the Geotechnical and Geoenvironmental Desk Study (Ramboll, March 2018).

The following potential sources of ground contamination have been identified onsite (Plot 1):

- Made Ground and fill material of unknown thickness and chemical composition;
- Current and historical use of the site as a hospital with car parking in the east of Plot 1;
- Laboratories and plant rooms within the basement.

The following potential sources of ground contamination have been identified offsite, from Plot 2 and 3, and within the surrounding area:

- Potential fuel tanks identified within Plot 3, in the historical data report from Envirocheck;
- An electricity sub-station in the south west corner of Plot 2;
- Current industrial land use to the south east of the site, including a commercial printers and depot on Pakenham Street; and
- Historic industrial land use in the area surrounding the site, with garages, an engineering works, and a clothing factory previously occupying land north of the site (present on maps 1953-1971), and a timber yard and builders yard south east of the site (present on historical maps 1874-1896).

Ground investigation works were designed to provide additional information on the potential risks identified within the Desk Study including the potential contaminant sources above, and to further refine the preliminary conceptual site model.

3. GROUND INVESTIGATION

3.1. Design

The ground investigation was designed by Ramboll and undertaken by Concept to investigate the ground and groundwater conditions at the site. The scope of the site investigation was determined based on the Geotechnical and Contaminated Land Desk Study (Ramboll, March 2018) and included soil sampling, ground gas and groundwater monitoring, and laboratory analysis of soils for potential contaminants.

The Factual Report (Concept, August 2018) is referenced as appropriate herein.

3.2. Ground Investigation Activities

The ground investigation was completed by Concept. All works completed are detailed in their Factual Report which should be read in conjunction with this Interpretative Report.

The ground investigation was undertaken in general accordance with:

- BS 5930 (2015) Code of Practice for Ground Investigation;
- BS 1377 (1990) Methods of test for soils for civil engineering purposes;
- BS 10175: 2011+A2:2017 (2011) Investigation of potentially contaminated sites;
- BS EN 1997-2:2007 (2007) Eurocode 7 Geotechnical Design Part 2 Ground Investigation and Testing;
- BS EN ISO 22475-1 (2006) Geotechnical Investigation and Testing Sampling methods and groundwater measurements – Part 1 Technical principles for execution;

The ground investigation comprised the following items of fieldwork:

- Two cable percussive boreholes to a maximum depth of 60.00m;
- Two cable percussive boreholes with rotary follow on to 40.00m and 60.00m depth;
- Two trial pits undertaken at ground level to 1.50-4.00m depth;
- Five trial pits undertaken at basement level to 1.50m depth;
- Three window sample boreholes; two to a maximum of 15.00m depth and one to a maximum of 9.00m depth;
- Soil sampling for subsequent chemical and geotechnical laboratory analysis in accordance with BS 1377 (1990), UKAS ISO 17025 and MCERTS;
- In situ geotechnical testing (standard penetration testing and Pressuremeter testing);
- Installation of combined groundwater and ground gas monitoring standpipes within selected boreholes;
- Surveying of exploratory hole positions;
- Two rounds of groundwater monitoring and sampling;
- Six rounds of groundwater level dipping and ground gas monitoring; and
- Factual reporting.

The ground investigation was undertaken during May to July 2018. The investigation was supervised by Concept and exploratory holes were logged and sampled for subsequent laboratory chemical and/or geotechnical analyses by a qualified Concept engineer. The samples were scheduled for laboratory analysis by Ramboll.

Following completion, locations were installed with 50mm HDPE standpipes with targeted response zones within the Made Ground and London Clay formation as dictated by the ground conditions encountered. Targeted borehole locations were also installed with 19mm HDPE piezometers with tips at varying depths to build up a sub-surface pore water pressure profile. Two vibrating wire piezometer installations were installed within BH01, and one installed within BH03. Borehole installation details are summarised in Table 3.1 below.

Exploratory Hole	Diameter of Installation (mm)	Туре	Response Zone (m)	Response Zone Strata
WS03	50.00	SPG/GW	0.50 – 2.50	Made Ground
BH01	50.00	SPG/GW	0.50 – 1.50	Made Ground
	19.00	SPIE	9.50 – 12.00	London Clay
		VWP	18.50 (base)	London Clay
		VWP	46.00 (base)	Upper Chalk
BH02C	50.00	SPG/GW	14.00 – 15.10	London Clay
	19.00	SPIE	8.00 - 9.00	London Clay
BH03	50.00	SPG/GW	1.00 - 4.00	Made Ground
	19.00	SPIE	19.00 – 20.50	London Clay
		VWP	8.00 (base)	London Clay
BH04	50.00	SPGW	1.50 – 2.50	Made Ground
	19.00	SPIE	38.00 - 39.00	Lambeth Group

Table 3-1: Borehole Installation Details

Notes:

SPG/GW – Gas/groundwater monitor standpipe SPGW – Groundwater monitor standpipe SPIE – Standpipe piezometer VWP – Vibrating Wire Piezometer

3.3. Laboratory analysis - Environmental

Soil samples were scheduled by Ramboll for chemical analysis for a suite of potential contaminants based on the preliminary conceptual site model.

21 soil samples were analysed for a typical 'brownfield' suite of contaminants including heavy metals, pH, sulphate, polycyclic aromatic hydrocarbons (PAHs), cyanide, ammonium, phenols, total petroleum hydrocarbons (TPH) and asbestos (in all Made Ground samples).

4 soil samples were also analysed for semi-volatile organic compounds (SVOCs) and volatile organic compounds (VOCs).

The results of the environmental laboratory analysis are provided in Appendix B.



3.4. Laboratory analysis - Geotechnical

Details of soil samples collected and scheduled for geotechnical analysis are provided in the Ground Investigation Report (Ramboll, September 2018). Geotechnical laboratory results are appended to the Factual Report produced by Concept.

3.5. Groundwater and Ground Gas Monitoring

Two rounds of groundwater monitoring were undertaken by Concept following the completion of the ground investigation and groundwater samples were taken from one well (BH02C) in which groundwater was encountered, and scheduled for laboratory analysis.

Six rounds of ground gas monitoring were undertaken by Concept, on the 10th August, 16th August, 21st August, 3rd September, 10th September and 17th September 2018. The results of the ground gas monitoring are attached to this report within Appendix C.

4. **GROUND CONDITIONS**

4.1. General Stratigraphy

The typical succession of strata across the site identified during the ground investigation is summarised in Table 4.1 below.

Table 4-1: Sequence of Strata Encountered During the Investigation

Stratum	Typical description	Level at top of Stratum (mAOD)	Thickness Range (m)
Made Ground	 Hardstanding of asphalt and concrete paving. Orange brown and light grey sandy GRAVEL / gravelly SAND. Gravel is angular to subangular fine to coarse of flint, concrete, brick and occasional tile. Sand is fine to coarse. Loose to medium dense brown grey sandy occasionally clayey GRAVEL with low to medium brick and concrete cobble content. Gravel is angular to subangular fine to coarse of brick, concrete, clinker, slate and tile. Occasional pockets of brown sandy clay. Rare fragments of glass. Firm dark brown occasionally mottled grey and mottled yellow brown slightly gravelly slightly sandy CLAY. Gravel is angular to sub-rounded fine to coarse of brick, flint, tile, ceramic and rare 	(mAOD) 20.69 – 16.35	0.70 – 4.70
	slag. Occasional shell fragments. Brown gravelly CLAY with frequent pockets of silt and clayey sand. Gravel is subangular fine to coarse of brick, concrete and chert (underlying the lower level walkway and basement)		
Alluvium	Firm greenish grey and light brown occasionally mottled bluish grey slightly sandy slightly gravelly CLAY with occasional orange brown discolouration and pockets of firm reddish brown clay. Gravel is angular to rounded fine to coarse of flint.	17.94 – 16.87	0.25 – 0.50
River Terrace Deposits	Medium dense yellow brown and orange brown sandy clayey to very clayey subangular fine to coarse GRAVEL of flint with occasional pockets of grey silty clay. Sand is fine to coarse.	18.06 – 17.54	0.70 – 2.00
Weathered London Clay	Firm, extremely closely fissured brown occasionally mottled bluish grey slightly micaceous slightly gravelly slightly sandy silty CLAY with rare pockets of orangish brown fine sand.	18.14 – 15.81	1.90 – 4.80
London Clay	Firm to stiff extremely closely fissured dark grey and brownish grey slightly micaceous slightly sandy silty CLAY .	14.94 – 12.43	12.70 – 15.70



Stratum	Typical description	Level at top of Stratum (mAOD)	Thickness Range (m)
Lambeth Group	Stiff to very stiff brown grey and blue grey silty CLAY with rare pockets of light grey silt (<20mm) (Reading Formation: Upper Mottled Beds)	0.01 – -0.76	18.80 – 20.30
	Stiff to very stiff dark grey and black silty CLAY with laminations of light grey and brown silt and fine sand (Woolwich Formation: Laminated Beds)		
	Very stiff grey and light bluish grey occasionally mottled yellowish brown and locally purple silty CLAY (Reading Formation: Lower Mottled Beds)		
	Very stiff dark grey to black sandy silty CLAY with occasional pockets of light grey fine sand (<35mm) and rare shell fragments (Reading Formation: Lower Mottled Beds Kings Cross Unit)		
	Very stiff dark grey and green grey slight sandy slightly gravelly silty CLAY with pockets of light grey and light brown fine sand. Gravel is subrounded to well-rounded fine to coarse flint. (Upnor Formation)		
Thanet Sands	Very dense grey and brown fine SAND with occasional pockets of dark grey clay (Thanet Sand)	-19.56 – -20.57	3.00 - 4.90
	Very dense grey and brown clayey subangular to subrounded fine to coarse flint GRAVEL with low grey flint cobble content and rare pockets of green grey clay (<35mm) (Bullhead Beds)		
Chalk Formation	White CHALK recovered as gravelly SILT.	-22.99 – -24.46	Unproven

Notes:

mbgl = metres below ground level

mAOD = metres Above Ordnance Datum

* (Base of stratum not encountered)

4.2. Made Ground

Made Ground was encountered across the site with a thickness range of 0.70-4.70m, with a maximum thickness encountered at BH03 in the eastern car park. The type and thickness of Made Ground encountered varied across the site which is likely due to the current buildings being developed at different stages with a historic building in the east of the site (now the car park) being demolished prior to 1991, with any potential basement and underground structures backfilled.

WS01-WS03, BH03-BH04 and TP01/01A were undertaken in the eastern car par park where asphalt was encountered to depths of 0.05-0.20mbgl. Hardstanding was typically underlain by Made Ground described as orange brown and light grey sandy gravel / gravelly sand of flint, brick, concrete and occasional tile which was between 0.02-0.65m thick. This was underlain by loose to medium dense brown grey sandy occasionally clayey gravel with low to medium brick and concrete cobble content, and gravel of brick,



concrete, clinker, slate and tile. Made Ground in the car park was identified between 2.50-4.70m thick.

TP03, TP05 and TP07 were undertaken in the lower level walkway that surrounds the courtyard, and is located approximately 3.50m below ground level of the general area. TP07 was undertaken inside the basement of the New Wing, south of the courtyard. Made Ground was encountered to a maximum depth of 0.90m but was not proven. The ground surface was identified as concrete paving overlying a concrete slab, to 0.25mbgl which was underlain by Made Ground comprising brown gravelly clay with frequent pockets of silt and clayey sand, and gravel of brick, concrete and chert, between 0.35-0.60m thick. A concrete obstruction was also encountered in TP05 at a thickness of 0.1m.

4.3. Alluvium

Superficial deposits of Alluvium were identified in three locations directly underlying Made Ground, at WS02, WS03 and TP09, between 0.25-0.50m thick. The top of the Alluvium was encountered between 16.87-17.94mAOD. Alluvium was described in the logs as firm green grey and light brown occasionally mottled grey slightly sandy gravelly CLAY with occasional orange brown discolouration and pockets of firm red brown clay. Groundwater seepage was encountered at 1.40mbgl (16.57mAOD) within the Alluvium at TP09, east of the Levy Wing.

4.4. River Terrace Deposits – Hackney Gravels

Superficial River Terrace Deposits were identified at two locations at WS02 and BH02C, between 0.70-2.00m thick. The top of the River Terrace Deposits was encountered between 17.54-18.06mAOD. The River Terrace Deposits were described in the logs as medium dense yellow brown and orange brown sandy clayey to very clayey subangular fine to coarse GRAVEL of flint with occasional pockets of grey silty clay.

4.5. Solid Geology

London Clay was encountered underlying the Made Ground and superficial deposits as firm to stiff dark grey CLAY, with a thickness range of 15.80-18.90m. The Lambeth Group, comprising the Reading Formation, Woolwich Formation and Upnor Formation, was encountered underlying London Clay with a proven thickness of 18.80-20.30m at three locations.

4.6. Groundwater

Groundwater was not encountered during the ground investigation within the exploratory wells, however groundwater ingress was noted at the base of TP05 at 0.90mbgl (17.07mAOD) within Made Ground. Groundwater seepage was also encountered at TP09 at 1.40mbgl (16.57mAOD), within the superficial deposits of Alluvium.

Groundwater levels were measured during subsequent ground gas monitoring rounds; groundwater was only identified within BH02C, installed within the London Clay. Groundwater level monitoring records are presented in Appendix C. The results of the three rounds of groundwater level monitoring undertaken are summarised in Table 4.2 below. The groundwater in the standpipes was monitored using a dip meter, and the vibrating wires were monitored using a Geosense G200 Vibrating Wire Readout unit.

ID	Туре	Screened Strata	Standpipe Response Zone (mbgl)	Depth to Groundwater (mbgl)	Groundwater level (m AOD)
	SPG/GW	Made Ground	0.50 – 1.50	DRY	DRY
BH01	SPIE	London Clay	9.50 – 12.00	10.17 – 11.66	9.97 – 8.48

Table 4-2: Summary of Groundwater Depths

ID	Туре	Screened Strata	Standpipe Response Zone (mbgl)	Depth to Groundwater (mbgl)	Groundwater level (m AOD)
	VWP	London Clay	18.50 (base)	12.88 – 13.33	7.26 – 6.81
	VWP	Upper Chalk	46.00 (base)	45.91 – 45.95	-25.77 – -25.81
BH02C	SPIE	London Clay	8.00 - 9.00	DRY	DRY
BHUZC	SPG/GW	London Clay	14.00 – 15.10	11.15 – 11.35	9.41 – 9.21
	SPG/GW	Made Ground	1.00 – 4.00	DRY	DRY
BH03	SPIE	London Clay	19.00 – 20.50	12.42 – 12.62	8.09 – 7.89
	VWP	London Clay	8.00 (base)	5.92 - 6.02	14.59 – 14.49
	SPGW	Made Ground	1.50 – 2.50	2.48	17.95
BH04	SPIE	Lambeth Group	38.00 – 39.00	37.21 – 38.09	-17.66 – -16.78
	VWP	Chalk	58.50 (base)	51.06 – 51.13	-30.63 – -30.70
WS03	SPG/GW	Made Ground	0.50 – 2.50	DRY	DRY

The wells screened within the Made Ground were found to be dry across the subsequent monitoring rounds, with the exception of BH04, where groundwater was encountered at 2.48mbgl on one occasion. On all other occasions the installation within Made Ground at BH04 was found to be dry.

Groundwater was identified within the exploratory wells installed within the London Clay. Within the gas and groundwater standpipes (SPG/GW and SPGW) and standpipe piezometers (SPIE) installed within the London Clay, groundwater was identified between 7.89mAOD and 9.97mAOD. The standpipe piezometer installed within the London Clay between 8.00-9.00mbgl at BH02C was found to be dry during all monitoring rounds.

Groundwater was identified in the standpipe piezometer installed within the Lambeth Group at BH04, with the groundwater level between -16.78mAOD and -17.66mAOD.

4.7. Visual and Olfactory Observations of Potential Contamination

During the ground investigation Concept identified potential asbestos containing material (ACM) within the Made Ground underlying the car park. Visible fragments of potential ACM were not encountered in any other areas during the ground investigation. The observations recorded by Concept in the logs are summarised below:

- Fragment of suspected asbestos cement tile encountered in BH03 at 0.30mbgl;
- Fragment of suspected asbestos cement tile in TP01 at 0.10mbgl;
- Fragment of suspected asbestos cement tile in TP01A at 0.10mbgl; and
- Fragment of suspected asbestos cement tile encountered in WS01 at 0.20mbgl, and fragment of suspected fibrous material at 3.40mbgl (described as 'fibreglass').

In addition to the potential ACM noted above, the following visual and/or olfactory evidence of potential contamination was also recorded during site works:

- Gravel of slag in BH04 between 1.20-3.20mbgl, and TP09 between 0.20-0.50mbgl;
- Fragments of clinker in OP01 between 0.25-0.75mbgl, WS01 between 0.10-1.20mbgl and 1.60-4.20mbgl, and WS03 between 0.14-0.42mbgl; and
- Rare fragments of slag in TP08 between 0.05-0.55mbgl and 0.55-1.00mbgl.



4.8. Belowground Structures and Obstructions

Obstructions and historical structures were encountered during the ground investigation, as outlined below:

- A concrete obstruction in TP05 between 0.60-0.70mbgl;
- Reinforced concrete with 5mm metal rebar mesh at BH02C between 0.10-0.40mbgl; and
- A large boulder of grey cement in TP09 at 0.90mbgl.

4.9. Ground Gas

Dual purpose ground gas and groundwater monitoring standpipes were installed in four locations, in BH01, BH02C, BH03 and WS03.

Six rounds of ground gas monitoring were undertaken by Concept, on the 10th August, 16th August, 21st August, 3rd September, 10th September and 17th September 2018. Ground gas monitoring sheets and the ground gas risk assessment can be found in Appendix C.

5. GROUND CONTAMINATION - GENERIC QUANTITATIVE RISK ASSESSMENT

This ground contamination assessment has been undertaken in accordance with the current UK framework and comprises a generic quantitative risk assessment (GQRA) as defined in CLR 11 (EA 2004). Further details of the UK legislative context are provided in Appendix D.

In order to assess the significance of the chemical concentrations reported, generic assessment criteria (GAC) must be selected based on the critical receptors identified at the site. Receptors are considered in relation to Human Health (*e.g.*, people using the site) and Controlled Waters (*e.g.*, groundwater and surface water resources). Additional receptors may also require consideration, *e.g.*, water supply pipes, building materials and flora/fauna, as appropriate to the site.

5.1. Human Health Assessment

5.1.1. Methodology

Details of the UK framework for human health risk assessment and GAC are provided in Appendix D.

Contaminant concentrations below the adopted GAC are considered not to warrant further risk assessment. Where any concentrations are recorded above the GAC consideration of the contaminant distribution is undertaken.

Current UK guidance is provided in the DEFRA/EA CLR framework which sets out standard land uses for which GAC are derived for individual contaminants: Residential with (and without) Consumption of Home-grown Produce, Allotments, and Commercial/Industrial use. In addition, two new land uses were added during the development of the Category 4 Screening Levels (C4SLs) by CL:AIRE/DEFRA in 2013/2014: Public Open Space 1 (Green space close to housing) and Public Open Space 2 (Green space not close to housing).

The site is intended to be redeveloped as the Institute of Neurology (IoN) / Dementia Research Institute (DRI) Hub, with no residential development included within the design proposals, and as such a Commercial land use scenario has been assumed.

5.1.2. Soil Screening Analysis

The soil analysis results are presented in comparison to the GAC in Appendix E. Table 5.1 below summarises the contaminants of concern identified at concentrations above the GAC in one or more samples.

Determinand	GAC	Units	No. of Samples	No. of Exceedances	Maximum		
General Inorganics							
рН	<5, >9	-	21	12	12.10 (OP01 0.30m)		
Polycyclic Aromatic Hydrocarbons							
Benzo(a)pyrene	76	mg/kg	21	1	85.00 (OP01 0.30m)		
Benzo(b)fluoranthene	45	mg/kg	21	1	79.00 (OP01 0.30m)		
Dibenz(ah)anthracene	3.5	mg/kg	21	1	12.00 (OP01 0.30m)		

Table 5-1: Summary of Elevated Chemical Concentrations in Soil



Determinand	GAC	Units	No. of Samples	No. of Exceedances	Maximum
Asbestos in Soil					
Asbestos	-	%	21	9	0.30% w/w (WS01 0.20m)
NOTES					

• GAC – commercial/industrial land use

5.1.3. Soil Contaminant Distribution Assessment

Identified impacts are considered further in relation to vertical and lateral distribution across the site and through statistical analysis, if considered appropriate.

<u>pH</u>

Soils across the site were identified as generally alkaline, with a pH ranging between 7.6 (BH02C 1.00m) and 12.1 (OP01 0.30m). Twelve of the twenty-one soil samples were identified as having a pH greater than 9.00, with the greatest exceedance encountered in Made Ground at OP01 (0.30m).

Polycyclic Aromatic Hydrocarbons (PAHs)

Benzo(a)pyrene, benzo(b)fluoranthene and dibenz(ah)anthracene were identified in the soil sample from OP01 (0.30m) at concentrations greater than GAC. Made Ground soils at this location were described in the logs as grey slightly clayey slightly sandy gravel of flint, brick, concrete and clinker. OP01 was located east of the car park at a lower elevation, with concrete hardstanding 0.25m thick. The exceedances were lower than one order of magnitude greater than GAC.

<u>Asbestos</u>

Asbestos was identified in Made Ground soils within nine samples, which were subsequently scheduled for quantification analysis. Three samples contained asbestos lower than the laboratory limits of detection (<0.001 w/w), at WS01 (0.70m) within the car park area, at OP01 (0.30m) east of the car park along the reduced level walkway, and at BH01 (0.50m) north of Plot 1, within the Calthorpe Project. The other six samples submitted for quantification were all identified as containing quantities of asbestos greater than the laboratory limits of detection, ranging from 0.002% at WS01 (0.50m) to a maximum 0.30% at WS01 (0.20m). These six samples were taken from Made Ground soils underlying the car park in the east of the site; the soils were generally described in the logs as brown grey sandy occasionally clayey and silty gravel of flint, brick, concrete, slate, clinker, ceramic, tile and rare glass. Made Ground in this area of the site was identified at a maximum depth of 4.50mbgl, and was potentially used to backfill the basement of the former building along the east of Plot 1, present on historical OS maps from 1895 – 1979.

Visible fragments of ACM were identified at four locations underlying the car park in the east of Plot 1, at TP01, TP01A, BH03 and WS01. Visible fragments of ACM were not encountered at other ground investigation locations. The visible fragments of ACM were double bagged and sealed, before being sent to the lab for bulk analysis and identification. A summary of the asbestos bulk identification is summarised in Table 5.2 below.

-	
Sample	Asbestos Identification

Table 5-2: Summary of Asbestos Bulk Identification

Sample	Asbestos Identification
WS01 (0.20m)	Chrysotile – Hard/cement type material
WS01 (3.40m)	Chrysotile – Insulation lagging

Sample	Asbestos Identification
TP01 (0.10m)	Chrysotile – Hard/cement type material
TP01A (0.10m)	Chrysotile – Hard/cement type material
BH03 (0.30m)	Chrysotile – Hard/cement type material

5.1.4. Soil Summary

The generic screening assessment has identified the following impacts which may present a risk to human health and building materials which require further consideration:

- Alkaline pH (maximum pH 12.10 at OP01 0.30m);
- Marginal exceedances of benzo(a)pyrene, benzo(b)fluoranthene and dibenz(ah)anthracene in sample OP01 (0.30m);
- Asbestos fibres identified in Made Ground soils (maximum quantity 0.30% w/w identified at WS01 0.20m);
- Visible fragments of asbestos in the east of the site, underlying the car park.

5.2. Waters Assessment

5.2.1. Methodology

Generic assessment criteria (GAC) for waters must be selected to assess potential risks to identified human health and environmental receptors.

The site is underlain by superficial River Terrace Deposits - Hackney Gravels (Secondary A Aquifer), London Clay (unproductive strata), the Lambeth Group (Secondary A Aquifer), Thanet Sands and Upper Chalk Formation (Principal Aquifers). The nearest Source Protection Zone is located approx. 520m north east of the site, and is a Zone II (outer protection zone).

The nearest surface water feature is the Claremont Square Reservoir over 700m from the site boundary and the River Thames approximately 1.75km south of the site at its nearest point.

The GAC used to assess the leaching and groundwater data are therefore:

- Minimum Reporting Values (MRV) for hazardous substances to assess potential risks to the groundwater resources and human health; and
- General quality of groundwater body.

5.2.2. Leachate Screening Analysis

Three samples of Made Ground were scheduled for leachate analysis, from WS03 (0.70m), BH02C (1.00m) and BH04 (0.50m).

The chemical analysis screening summary tables are included in Appendix E. Measured concentrations above the recommended GAC in one or more sample are summarised in Table 5.2.

Table 5-3: Summary of Elevated Chemical Concentrations in Leachate

Determinand	GAC	Units	No. of Samples	No. of Exceedances	Maximum
General Inorganics					
Ammonium as NH₄	500	µg/l	3	1	720 (BH02C 1.00m)
Heavy Metals					

Determinand	GAC	Units	No. of Samples	No. of Exceedances	Maximum
Antimony	5	µg/l	3	1	5.70 (BH04 0.50m)
Arsenic	7.5	µg/l	3	1	9.90 (BH02C 1.00m)
Lead	7.5	µg/l	3	3	14.00 (BH04 0.50m)
Mercury	0.01 (MRV)	µg/l	3	3	0.054 (BH04 0.50m)

<u>Ammonium as NH₄</u>

Leachable ammonium (as NH₄) was identified at a concentration exceeding GAC in one samples of Made Ground, from BH02C at 1.00m. Soils at this depth and location were described in the logs as brown gravelly silty fine to coarse sand, with gravel of flint and brick.

<u>Heavy Metals</u>

A minor exceedance of arsenic was identified in the leachate sample from BH02C at 1.00m, and a minor exceedance of antimony was identified in the leachate sample from BH04 at 0.50m. Both exceedances were lower than one order of magnitude greater than the respective GAC, and considered marginal.

Lead was identified in all three leachate samples exceeding GAC, with a maximum concentration of 14.00 μ g/l identified in the sample from BH04 at 0.50m. All exceedances were lower than one order of magnitude greater than GAC, and considered marginal.

Mercury was identified at concentrations greater than the minimum reporting value for hazardous substances (MRV) in all three leachate samples. The exceedances were lower than one order of magnitude greater than the MRV, and did not exceed the threshold value for mercury for the general quality of a groundwater body.

All of the leachate samples were taken from Made Ground soils underlying hardstanding, with no water strikes encountered during drilling. As such the probability of water infiltration and subsequent leaching and migration of contaminants present in soils is considered to be low in these locations.

5.2.3. Groundwater Screening Analysis

Groundwater samples were taken during two rounds of groundwater monitoring from BH02C, screened within the London Clay from 14.00-15.10mbgl; the remaining groundwater monitoring wells were found to be dry or with a volume of groundwater too small to sample. Full analytical results are presented in Appendix B.

The chemical analysis screening summary tables are presented in Appendix E. Measured concentrations above the recommended GAC in one or more sample are summarised in Table 5.4.

Both samples were scheduled for the Ramboll Suite F and TPH CWG in groundwater.

Determinand	GAC	Units	No. of Samples	No. of Exceedances	Maximum	
General Inorgani	General Inorganics					
Sulphate as SO₄	188	mg/l	2	2	1160 (BH02C Round 2)	
Ammonium as NH₄	500	µg/l	2	2	860 (BH02C Round 1)	
Heavy Metals						

RAMBOLL

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Determinand	GAC	Units	No. of Samples	No. of Exceedances	Maximum
Boron	750	µg/l	2	2	1300 (BH02C Round 2)
Manganese	50	µg/l	2	2	80.00 (BH02C Round 2)
Selenium	7.5	µg/l	2	2	10.00 (BH02C Round 2)

<u>Sulphate</u>

Sulphate was identified at concentrations exceeding GAC in both groundwater samples from BH02C, with a maximum concentration of 1160mg/l recorded in the sample taken in Round 2.

The concentration of sulphate within the leachate sample taken from BH02C (1.00m) was below the GAC of 188mg/l, and elevated concentrations of sulphate were not identified in the leachate samples from WS03 (0.70m) and BH04 (0.50m). As sulphate was not identified at significantly elevated concentrations in any of the leachate samples, it is considered unlikely that the exceedance of sulphate in the groundwater sample represents an on-site source of contamination.

Ammonium was identified at concentrations exceeding GAC in both groundwater samples from BH02C, with a maximum concentration of 860mg/l recorded in the sample taken in Round 1. Ammonium was also identified in the leachate sample from Made Ground at BH02C (1.00m), at a concentration of 720 μ g/l, which exceeded GAC.

Heavy Metals

Boron, manganese and selenium were identified at concentrations exceeding their respective GAC in groundwater samples from BH02C across both rounds. The exceedances were lower than one order of magnitude greater than GAC and considered marginal in nature. No corresponding source of leachable boron, manganese and selenium was identified in the leachate analysis from the three samples of Made Ground, including the sample from BH02C (1.00m).

5.2.4. Controlled Waters Summary

The generic screening assessment has identified the following impacts which require further consideration:

- Leachable arsenic and lead within Made Ground soils;
- Leachable ammonium in Made Grounds at BH02C (1.00m), and exceedances of ammonium in groundwater samples from BH02C;
- Concentrations of sulphate in groundwater from BH02C that exceed GAC;
- Marginal exceedances of boron, manganese and selenium in groundwater from BH02C.

6. GROUND GAS RISK ASSESSMENT

6.1. Methodology

The gas regime at the site has been characterised using current UK guidance including BS 8485: 2015, CIRIA Report C665 (2007), and RSK/NHBC (2006).

Further details of the assessment methodology are provided in Appendix D.

6.2. Ground Gas Data

Six rounds of ground gas monitoring have been completed to date by Concept, on the 10th August, 16th August, 21st August, 3rd September, 10th September and 17th September 2018. The monitoring sheets are presented in Appendix C.

Carbon dioxide concentrations were all <5%, with a maximum concentration of 2.20% detected at BH01 on 16/08/18 and 10/09/18; methane was not detected in any of the six rounds. Flow rates of 0.00l/hr were identified during all six rounds. H₂S and CO were not detected. A maximum PID reading of 7ppm was detected at BH02C during Round 2 on 16/08/18.

6.3. Classification of Ground Gas Regime

The assessment presented in Table 6.1 below comprises a worst case assessment using maximum methane and carbon dioxide concentrations and maximum flow rates.

Borehole No.	Flow rate (l/hr)	CH₄ Peak Gas Concentration (% v/v)	CO ₂ Peak Gas Concentration (% v/v)	GSV Worst case (l/hr)	Characteristic Situation (CIRIA C665)
Worst Case	0.10	0.00	2.20	0.0022	1

Table 6-1: Worst Case Ground Gas Monitoring Record

Notes

- Peak flow and concentrations used for GSV calculation.
- Negative and zero flow rates are assumed to be at the detection limit of 0.1 l/hr for calculation of GSV, as per guidance in CIRIA C665.

Characteristic Situations refer to which gas protective measures are required so as to ensure that the risks posed by the presence of CH_4 and CO_2 increase the redundancy within the protection system to ensure that the building is never exposed to unacceptable risk (CIRIA C665).

Based on the data obtained from the six rounds of ground gas monitoring undertaken to date, a worst case gas screening value of 0.0022 l/hr has been calculated, which corresponds to Characteristic Situation 1 (CS1) very low risk.

As such, ground gas protection measures are unlikely to be required.

7. GROUND CONTAMINATION – RISK EVALUATION

7.1. Conceptual Site Model

The information presented in the previous sections of this report have been collated and evaluated to refine the initial conceptual site model for the site.

7.1.1. Sources

The potential contamination sources are summarised in Table 7.1 based on the site investigation results.

Table 7-1: Potential Sources

Source	Comments
Soil impacts	 Alkaline pH (maximum pH 12.10 at OP01 0.30m); Marginal exceedances of benzo(a)pyrene, benzo(b)fluoranthene and dibenz(ah)anthracene in sample OP01 (0.30m); Asbestos fibres identified in Made Ground soils (maximum quantity 0.30% w/w identified at WS01 0.20m); and Visible fragments of asbestos in the east of the site, underlying the car park.
Groundwater impacts	 Leachable arsenic and lead within Made Ground soils; Leachable ammonium in Made Grounds at BH02C (1.00m), and exceedances of ammonium in groundwater samples from BH02C; Concentrations of sulphate in groundwater from BH02C that exceed GAC; and Marginal exceedances of boron, manganese and selenium in groundwater from BH02C.

There is also a potential risk of additional impacts between borehole locations and in areas not investigated to date due to site restrictions.

7.1.2. Receptors

The site-specific receptors that could potentially be affected by the contamination hazards are summarised in Table 7.2.

Table 7-2: Potential Receptors

Feature	Details			
ON SITE				
Future site users	Proposed use: Institute of Neurology (IoN) / Dementia Research Institute (DRI) Hub for UCL.			
Construction workers	Any workers coming in direct contact with soils; any workers working in confined spaces and excavations where ground gases could build-up.			
Underlying aquifer	The site is underlain by superficial River Terrace Deposits (Hackney Gravels) which are classified as a Secondary A Aquifer, and a significant thickness of London Clay (15.80-18.90m) which is classified as unproductive strata. The Lambeth Group (Secondary A Aquifer), Thanet Sands and Upper Chalk Formation (Principal Aquifers) were encountered at depth.			
Construction materials	Building materials used below ground, for example foundations and services.			
Flora/fauna	The footprint of the proposed development will cover the majority of the site; however there is the potential for limited areas of soft landscaping			

Feature	Details
	within the final design.
OFF SITE	
Adjacent site users	The site is situated in an area of mixed residential, commercial and industrial use. The Calthorpe Project is located to the north of the site, residential housing and a hall of residence (Frances Gardner House) to the east and south east, the Eastman Dental Institute (Plots 2 and 3) to the south and Gray's Inn Road along the western boundary. The buildings on Gray's Inn Road are predominantly a mix of commercial and residential properties.
Surface watercourses	The nearest surface water feature is Claremont Square, a covered reservoir, located approx. 700m north east of the subject site.

7.1.3. Pathways

In order for the contaminants identified in this site investigation to reach potential receptors, there has to be a viable pathway for the contaminant. Potential pathways were identified within the preliminary conceptual model and are discussed further in Table 7.3 below in relation to the identified source impacts and receptors identified.

Table 7-3: Potential Pathways

Receptor	Pathway	Comments
Human Health	Direct contact / dermal contact with contaminated soils Ingestion / inhalation of soils / dusts	Site development workers have the potential to come in direct contact with soils during site enabling works and construction activities. The use of Personal Protection Equipment (PPE) would mitigate the exposure to potential contaminants. Construction activities also have the potential to generate dust particulates which therefore presents an inhalation risk to construction workers and adjacent site users. Direct contact with contaminated soils will be very limited following development as the proposed building footprint will cover the majority of the site, with large volumes of Made Ground excavated and removed from site for the proposed basement. Therefore the risk posed by potentially contaminated Made Ground soils to future site users will be low. If included within the final design, soft landscaping areas could present a potential pathway that could impact future site users, should impacted Made Ground remain in-situ. If soft landscaping areas are limited to above ground planters, the potential for future site users to be exposed to contamination in site soils would be limited.
	Inhalation of dusts / loose fibres	Site development workers could potentially come into contact with asbestos impacted soils identified in the east of Plot 1 during enabling and excavation works. Loose fibres could be generated if ACMs are broken up during excavation and if soils are allowed to dry out. Inhalation of dusts will be very limited following development as the proposed building footprint and hardstanding will cover the majority of the site.
	Inhalation of hazardous vapours and ground gases	Future site users and site development workers have the potential to be affected by elevated concentrations of hazardous ground gases ($CO_2/CH_4/CO/H_2S$) which can migrate and accumulate in confined spaces such as excavations and basements. Site development workers and future site users could also be impacted by depleted levels of O_2 .
Controlled	Leaching and	Potential for leaching will be limited after development, as the

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Receptor	Pathway	Comments
waters (Secondary A Aquifers and Principal Aquifers)	migration of soil impacts to groundwater	proposed building footprint will cover the majority of the site. A significant proportion of Made Ground soils will be excavated and removed from the site during construction of the basement and various other belowground structures. As such, the potential for leaching in these areas will be significantly reduced as the potential contaminant source will be removed and infiltration of surface water prevented. The potential for leaching remains in any open and soft landscaped areas.
	Vertical migration of soil impacts to the Superficial Secondary A Aquifer and Principal Aquifer	Superficial River Terrace Deposits (Hackney Gravels) and Alluvium were identified directly underlying Made Ground in four locations, and could potentially be impacted by the vertical migration of leachate from any Made Ground remaining in-situ. A significant thickness of London Clay was identified (15.80- 18.90m) during the ground investigation; as such it is considered unlikely that leachate within Made Ground would migrate vertically into the underlying Secondary A Aquifer (Lambeth Group) or Principal Aquifer (Thanet Sands and Upper Chalk Formation). However, piling could create preferential pathways for the downward migration of contaminants into underlying aquifers should the maximum depth of the pile penetrate the London Clay.
	Migration to surface water	The nearest surface watercourse is a reservoir approx. 700m north east of the site. Given the proximity of the surface water feature and the underlying geology of the site it is considered unlikely that surface waters would be at risk from contaminant migration.
Buildings and structures	Damage to building materials or services through direct contact with contaminants or through contaminant migration	Building materials and subsurface construction materials will come into direct contact with the underlying soils, from aggressive ground conditions, hydrocarbons and sulphates. Elevated pH values were identified in Made Ground soils across the site which has a potential impact on concrete.
Flora	Direct contact with impacted soils and root uptake	This will be very limited following development as the proposed development will cover the majority of the site, and large volumes of Made Ground will be excavated for the proposed basement. Limited areas of soft landscaping may be included within the development plans with hardstanding across the majority of the site. If soft landscaping areas are limited to above ground planters, flora will not come into contact with Made Ground soils.

7.2. Qualitative Risk Assessment

Potential pollutant linkages are identified using the source-pathway-receptor framework detailed above. An assessment of the potential significance of each linkage is then made by consideration of the likely magnitude and mobility of the source, the sensitivity of the receptor and nature of the migration/exposure pathways.

This qualitative hazard assessment has been undertaken in accordance with NHBC and Environment Agency, 2008. Further details of which are provided in Appendix D including definition of risk categories.

Table 7.4 summarises the pollutant linkages and risk ratings associated with the proposed development.

Table 7-4: Risk Assessment

Hazard / Pollutant	Pathway	Receptor	Potential Severity	Probability of Risk	Level of Risk
ACM in Made Ground soils	Dermal contact Inhalation / Ingestion of soils/dusts/free fibres	Site development workers	Severe	Likely	HIGH* - an Asbestos Management Plan (AMP) should be completed prior to site development work commences. Asbestos was identified as visible fragments in the east of Plot 1 and within Made Ground soils.
		Future site users	Severe	Unlikely	LOW
		Adjacent site users	Severe	Low	MODERATE / LOW
	Dermal contact Ingestion of soils/dusts	Site development workers	Medium	Low	LOW / MODERATE*
		Future site users	Medium	Unlikely	LOW
		Adjacent site users	Medium	Unlikely	LOW
	Direct contact Ingestion of soils/dusts	Site development workers	Medium	Unlikely	LOW
		Future site users	Medium	Unlikely	LOW
Leachable arsenic and lead in Made Ground soils.		Adjacent site users	Medium	Unlikely	LOW
	Leaching and migration	Superficial Secondary A Aquifer (River Terrace Deposits)	Medium	Low	LOW / MODERATE
		Secondary A Aquifer (Lambeth Group) and Principal Aquifer (Thanet Sands and Upper Chalk Formation)	Medium	Unlikely	LOW
		Surface Water	Medium	Unlikely	LOW
Alkaline pH in Made Ground soils across	Dermal contact Ingestion of soils/dusts	Site development workers	Medium	Likely	MODERATE*
		Future site users	Medium	Unlikely	LOW
the site		Adjacent site users	Medium	Unlikely	LOW
	Direct contact	Building Materials	Medium	Likely	MODERATE

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Hazard / Pollutant	Pathway	Receptor	Potential Severity	Probability of Risk	Level of Risk
Localised impact of sulphate, ammonium, boron, manganese and selenium at BH02C in groundwater.	Dermal contact Ingestion	Site development workers	Medium	Low	LOW / MODERATE*
		Future site users	Medium	Unlikely	LOW
		Adjacent site users	Medium	Unlikely	LOW
	Leaching and migration	Superficial Secondary A Aquifer (River Terrace Deposits)	Medium	Low	LOW / MODERATE
		Secondary A Aquifer (Lambeth Group) and Principal Aquifer (Thanet Sands and Upper Chalk Formation)	Medium	Low	LOW / MODERATE
		Surface Water	Medium	Unlikely	LOW
	Direct contact Ingestion/inhalation of soils/dusts	Site development workers	Medium	Likely	MODERATE*
		Future site users	Medium	Unlikely	LOW
		Adjacent site users	Medium	Unlikely	LOW
Potential additional impacts, <i>e.g.</i> , between borehole locations.	Direct contact	Building Materials	Medium	Likely	MODERATE
	Leaching and migration	Superficial Secondary A Aquifer (River Terrace Deposits)	Medium	Low	LOW / MODERATE
		Secondary A Aquifer (Lambeth Group) and Principal Aquifer (Thanet Sands and Upper Chalk Formation)	Medium	Unlikely	LOW
		Surface Water	Medium	Unlikely	LOW

Notes:

Assessment completed assuming site in current condition. Should site levels be altered during development, a reassessment would be required

Assessment completed assuming no remediation/mitigation in place



Should the development proposals alter significantly a review of this risk assessment may be required. In particular if wider or new areas of landscaping / open areas are planned.

* Given the use of appropriate PPE and on-site health and safety precautions, risk to site development workers would be reduced to low.

8. WASTE CLASSIFICATION

8.1. Methodology

The assessment has been undertaken using available soil chemical data and HazWasteOnline, a web-based tool for classifying waste. The software utilises Environment Agency guidance and European regulations to classify samples in line with current requirements. Further details of the waste classification methodology are provided in Appendix D.

8.2. Soils Assessment

Twenty-one soil samples were taken during the ground investigation and scheduled for chemical analysis; eighteen of these were from Made Ground and three were from natural ground (River Terrace Deposits and London Clay). The analytical results were entered into HazWasteOnline to provide a waste classification. The HazWasteOnline output sheets are provided in Appendix F.

Eighteen of the samples were classified as 'non-hazardous' and three were classified as 'hazardous'; all of the samples classified as hazardous were taken from Made Ground soils. The following samples were classified as hazardous:

- OP01 (0.30m): Grey slightly clayey sandy GRAVEL with medium brick and concrete cobble content. Gravel is angular to subangular fine to coarse flint, brick, concrete and clinker;
- BH02C (2.00m): Medium dense brownish grey sandy very clayey GRAVEL. Gravel is angular to subrounded fine to coarse flint, brick, concrete and asphalt fragments; and
- TP05 (0.30-0.60m): Brown gravelly CLAY with frequent pockets of silt and clayey sand. Gravel is subangular to subrounded fine to coarse brick, concrete and chert.

The samples classified as 'hazardous' were not confined to a particular area but identified across the site, within the lower level walkway, the central courtyard and the walkway leading to Frances Gardner House.

All of the samples classified as hazardous exceeded the threshold value for pH and were identified as HP8 – Corrosive; pH values of 11.6, 11.7 and 12.1 were identified at OP01 (0.30m), BH02C (2.00m) and TP05 (0.30-0.60m) respectively.

The sample from OP01 (0.30m) was also classified as hazardous due to the concentration of TPH (C6-C40), with the hazard properties HP7 – carcinogenic, and HP11 - mutagenic.

8.3. Asbestos

Asbestos fibres were detected in nine of the eighteen Made Ground samples; seven of the samples were taken from Made Ground underlying the car park, one was taken from BH01 (0.50m) on land north of the site, and one was taken from OP01 (0.30m) adjacent to the walkway leading to Frances Gardner House. Quantification analysis identified a concentration lower than laboratory detection limits (<0.001% w/w) in the two samples that tested positive for asbestos outside of the car park area, from BH01 (0.50m) and OP01 (0.30m). Quantification analysis on the samples taken from the car park identified a maximum of 0.30% w/w in the samples from WS01 (0.20m), described as chrysotile hard/cement type material & loose fibrous debris.

The Hazardous Waste (England and Wales) Regulations 2005 requires that any waste having an asbestos (ACM) content greater than 0.1% weight/weight (w/w) be classified

as Hazardous Waste. Any waste with an asbestos content of less than 0.1% w/w can be classified as non-hazardous waste, unless there are other contaminants present which would make the waste hazardous. Additionally, if the waste contains fibres that are free and dispersed then the waste will be hazardous if the waste as whole contains 0.1% or more asbestos. Out of the nine samples positively identified for asbestos, two of the samples exceeded the 0.1% w/w threshold, from sample BH04 (0.50m) and WS01 (0.20m), quantified as 0.106% w/w and 0.30% w/w respectively.

Where the waste contains identifiable pieces of asbestos (i.e. any particle of a size than can be identified as potentially being asbestos by a competent person by the naked eye), then the asbestos must be assessed separately. The waste is hazardous if the concentration of asbestos in the pieces alone is 0.1%. Visible fragments of potential ACM were identified by Concept in Made Ground underlying the car park at the locations WS01, TP01, TP01A and BH03. These fragments were described as predominantly hard/cement type material. Fragments were double bagged, sealed and sent to the laboratory for bulk analysis, to determine if the fragment was ACM. A summary of the findings is included as Table 8.1 below.

Sample	Asbestos Identification
WS01 (0.20m)	Chrysotile – Hard/cement type material
WS01 (3.40m)	Chrysotile – Insulation lagging
TP01 (0.10m)	Chrysotile – Hard/cement type material
TP01A (0.10m)	Chrysotile – Hard/cement type material
BH03 (0.30m)	Chrysotile – Hard/cement type material

Table 8-1: Summary of Bulk Analysis Undertaken on Visible Fragments of ACM

Where the asbestos is deemed to be of a fibrous nature the Health and Safety Executive (HSE) require that the handling of the material is undertaken by a suitably licensed company. The Carriage of Dangerous Goods (etc.) Regulations 2009 (CDG2009) applies in this instance. One sample, identified at WS01 (3.40m), was identified by the lab as Chrysotile – Insulation Lagging, and described during the ground investigation as resembling 'fibreglass'. As such, any ground works in this area during the enabling and development phase must be undertaken by a suitably licensed company, with appropriate Health & Safety procedures put in place to mitigate the potential risk to human health.

Visible fragments of ACM were not encountered during the ground investigation at any locations outside of the car park, and the most significant depths of Made Ground were encountered in this area (max. 4.70m at BH03). It is considered likely that the impacted material was used as backfill for the former building that was located in this area, present on historical OS maps from 1895 – 1979, and later demolished.

8.4. Summary

The three samples classified as 'hazardous' by HazWaste online were not confined to a particular area but identified across the site, within the lower level walkway (TP05), the central courtyard (BH02C) and adjacent to the walkway leading to Frances Gardner House (OP01). All the soil samples classified as hazardous did so due to high pH (11.6-12.1), with the sample from OP01 (0.30m) also classified as hazardous due to the concentration of TPH (C6-C40). The soils were described in the logs as generally grey, brown and brown grey sandy clayey gravel / gravelly clay, with gravel of brick, concrete, flint, clinker and asphalt fragments (BH02C only).

The natural soils underlying the Made Ground comprising River Terrace Deposits (Hackney Gravels) and London Clay were classified as non-hazardous based on the



outcome of the HazWasteOnline assessment, and are likely to be suitable for disposal at an inert waste facility.

Asbestos fibres were detected in nine of the eighteen Made Ground samples; seven of the samples were taken from Made Ground underlying the car park, one was taken from BH01 (0.50m) on land north of the site, and one was taken from OP01 (0.30m) adjacent to the walkway leading to Frances Gardner House. Quantification analysis was undertaken on all samples that tested positive for asbestos; two of the samples exceeded the 0.1% w/w threshold for hazardous waste, at BH04 (0.50m) and WS01 (0.20m), quantified as 0.106% w/w and 0.30% w/w respectively. In isolation, the two samples reporting concentrations of asbestos >0.1% w/w are classified as hazardous waste, albeit the remainder of the samples beneath the car park are classified as non-hazardous based on the contaminants. As such, it is recommended that further characterisation of this material is undertaken following excavation of this material, and prior to disposal to finalise an appropriate disposal route.

Visible fragments of ACM were also identified in Made Ground underlying the car park, at TP01, TP01A, BH03 and WS01; bulk analysis identified four of the samples as Chrysotile – hard/cement type material, and one sample from WS01 (3.40m) identified as Chrysotile – insulation lagging. As such, the Health and Safety Executive (HSE) will require that the handling of the material is undertaken by a suitably licensed company. Any ground works in this area during the enabling and development phase must be undertaken with appropriate Health & Safety procedures put in place to mitigate the potential risk to human health, and an Asbestos Management Plan (AMP) in place. No visible fragments of ACM were identified elsewhere during the ground investigation and it is considered likely that the impacted material was used as backfill for the former building that was located in this area, present on historical OS maps from 1895 – 1979, and later demolished.

The classification of waste reported above must be confirmed by the receiving landfill prior to disposal, under Duty of Care. Any material to be disposed of as hazardous or inert must have WAC analysis provided to confirm appropriate class of landfill.

9. CONCLUSIONS AND RECOMMENDATIONS

9.1. Ground Contamination Identified

Table 9.1 below summarises the pollutant linkages required further consideration and potential remedial action.

Table 9-1: Significant Pollutant Linkages

Pollutant linkage	Additional Actions Required
ACM in Made Ground soils.	Asbestos was identified in nine samples of Made Ground, with a maximum quantity of 0.30% w/w identified in the sample from WS01 (0.20m), described as Chrysotile hard/cement type material and loose fibrous debris. Seven of the samples were taken from Made Ground underlying the car park, one from north of the site boundary at BH01 (0.50m) and one from the area adjacent to the walkway leading to Frances Gardner House at OP01 (0.30m). Quantification analysis undertaken on the samples from outside of the car park area identified concentrations lower than the laboratory limits of detection (<0.001% w/w). Quantification analysis undertaken on samples from the car park identified a maximum quantity of 0.30% w/w in the sample from WS01 (0.20m). Visible fragments of ACM were identified in Made Ground soils underlying the car park in four locations; bulk analysis confirmed that the material contained asbestos. It is considered likely that the impacted material was used as backfill for the former building that was located in this area, present on historical OS maps from 1895 – 1979. The impacted Made Ground is currently located underlying hardstanding of asphalt, however during the ground works for the enabling and construction phase the release of free fibres could occur during excavation and stockpiling of soils.
	Any impacted material is undertaken by a suitably licensed company. Any impacted material that is excavated and removed from site should be disposed of as 'hazardous', if it comprises visible fragments of ACM, or quantities greater than 0.10% w/w in soil. No Made Ground material impacted with asbestos is suitable for reuse in open areas of soft landscaping as part of the final development.
Localised marginal exceedance of PAHs in Made Ground at OP01	Large volumes of Made Ground will be excavated for the construction of the basement, and areas of soft landscaping are likely to be limited to above ground planters. As such it is considered unlikely that future site users or adjacent site users will come into contact with contaminated soils in the proposed development, unless open areas of soft landscaping are included.
	Risk management measures will be required for the protection of site development workers who will come into contact with soils during the enabling/construction phase. No Made Ground material is suitable for reuse in open areas of soft landscaping as part of the final development.
Leachable arsenic and lead in Made Ground soils.	Potential for leaching will be limited following development, as the proposed building footprint will cover the majority of the site, reducing the potential for infiltration. A large quantity of Made Ground soils will be excavated and removed from the site for the development of the



Pollutant linkage	Additional Actions Required
	basement and various below ground structures; there is the potential for small volumes of Made Ground in the east of Plot 1 to remain in-situ, in areas which will not fall within the basement footprint. The potential for leachate from Made Ground soils impacting the underlying Aquifers is therefore considered to be unlikely, as the majority of the potential source will be removed, and any Made Ground remaining in-situ is likely to be overlain by hardstanding, reducing the likelihood of infiltration. The potential for leaching remains in any open and soft landscaped areas however these are likely to be limited to above ground planters. Risk management measures will be required for the protection of site development workers who will come into contact with soils during the enabling/construction phase.
Alkaline pH in Made Ground soils across the	The impact of aggressive ground conditions on building materials is to be addressed in the Geotechnical Ground Investigation Report (Ramboll, September 2018) due to the potential impact on concrete/building materials.
site.	Risk management measures will be required for the protection of site development workers who will come into contact with soils during the enabling/construction phase.
Localised impact of sulphate, ammonium, boron, manganese and selenium at BH02C in groundwater.	Localised exceedances of sulphate, ammonium, boron, manganese and selenium were identified in groundwater at BH02C, which was screened within the London Clay from 14.00-15.10mbgl. Due to the significant thickness of London Clay identified underlying Plot 1 (15.80-18.90m), it is considered unlikely that perched groundwater will migrate into the underlying Secondary A Aquifer (Lambeth Group) or Principal Aquifers (Thanet Sands and Upper Chalk Formation). Piling could potentially introduce pathways for the downward migration of contaminants into the underlying aquifer.
	piling design, to assess the risk to the Secondary A Aquifer and Principal Aquifers at depth.
Potential additional impacts where site investigation access was restricted	Contingency for unidentified impacts required in the Remedial Strategy.

9.2. Ground Gas

Six rounds of ground gas monitoring have been undertaken by Concept. Based on the data received to date, an assessment of the ground gas regime has characterised the site as CS1 in accordance with CIRIA C665, which corresponds to `very low risk'.

9.3. Waste Classification

Three samples were classified as 'hazardous' by HazWaste online, from TP05 (0.30-0.60m), BH02C (2.00m) and OP01 (0.30m). All the soil samples classified as hazardous did so due to high pH (11.6-12.1), with the sample from OP01 also classified as hazardous due to the concentration of TPH (C6-C40). The natural soils underlying the Made Ground comprising River Terrace Deposits (Hackney Gravels) and London Clay were classified as non-hazardous based on the outcome of the HazWasteOnline assessment, and are likely to be suitable for disposal at an inert waste facility. WAC analysis should be undertaken on soils prior to disposal, in order to determine the appropriate waste disposal facility for the arisings.



Asbestos fibres were detected in nine of the eighteen Made Ground samples; seven of the samples were taken from Made Ground underlying the car park, one was taken from BH01 (0.50m) on land north of the site, and one was taken from OP01 (0.30m) adjacent to the walkway leading to Frances Gardner House. Quantification analysis was undertaken on all samples that tested positive for asbestos; two of the samples exceeded the 0.1% w/w threshold for hazardous waste, at BH04 (0.50m) and WS01 (0.20m), quantified as 0.106% w/w and 0.30% w/w respectively. In isolation, the two samples reporting concentrations of asbestos >0.1% w/w are classified as hazardous waste, albeit the remainder of the samples beneath the car park are classified as non-hazardous based on the contaminants. As such, it is recommended that further characterisation of this material is undertaken following excavation of this material, and prior to disposal to finalise an appropriate disposal route.

Visible fragments of ACM were also identified in Made Ground underlying the car park, at TP01, TP01A, BH03 and WS01; bulk analysis identified four of the samples as Chrysotile – hard/cement type material, and one sample from WS01 (3.40m) identified as Chrysotile – insulation lagging. As such, the Health and Safety Executive (HSE) will require that the handling of the material is undertaken by a suitably licensed company. Any ground work in this area during the enabling and development phase must be undertaken with appropriate Health & Safety procedures put in place to mitigate the potential risk to human health, and an Asbestos Management Plan (AMP) in place. No visible fragments of ACM were identified elsewhere during the ground investigation, and it is considered likely that the impacted material was used as backfill for the former building that was located in this area, present on historical OS maps from 1895 – 1979, and later demolished.

The classification of waste reported above must be confirmed by the receiving landfill prior to disposal, under Duty of Care. Any material to be disposed of as hazardous or inert must have WAC analysis provided to confirm appropriate class of landfill.

9.4. Further Works

A Remedial Strategy document will be required to address all identified contamination and risk mitigation measures. An Environmental Management Plan (EMP) should be implemented in order to prevent construction work and future operations from giving rise to land contamination.

An Asbestos Management Plan (AMP) should be completed prior to the start of any enabling/development works, to address the risk posed by ACMs at the site.

A Piling Risk Assessment may be required following the finalisation of the piling design, to assess the risk to the Secondary A Aquifer and Principal Aquifers at depth.

Earthworks at the site are recommended to be undertaken in accordance with an appropriate Material Management Plan in accordance with the CL:AIRE, 2011 Waste Code of Practice.

Additional ground investigation, including soil sampling and subsequent chemical analysis, is likely to be required in order to identify the presence of any potential contamination in areas of the site not investigated to date due to obstructions and access restrictions.

The Remedial Strategy and material management plans will include details on, inter alia:

- Site specific details relating to contamination identified;
- A contingency for any additional impacts not yet identified which may be encountered during works including for consultation with an appropriately



qualified environmental consultant, stockpiling and additional chemical testing / assessment prior to re-use;

- Sampling and analysis requirements for waste classification of any materials to be disposed of off-site;
- Water supply pipe assessment using existing data; and
- Details of the information that will need to be collected and provided for the completion of the Environmental Verification Report, following completion of the project.

A part-time watching brief by an appropriately qualified Environmental Consultant is recommended throughout the development works. This will allow an independent verification report to be prepared which will be required after works are complete.

10. REFERENCES

BSI (2015) BS 5930:2015, Code of Practice for Ground Investigations.

BSI (2011) BS 10175:2011+A2:2017, Investigation of Potentially Contaminated Sites. Code of practice.

BSI (2007) BS EN 1997-2:2007 Eurocode 7. Geotechnical design. Ground investigation and testing.

BSI (2015) BS 8485:2015, Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings.

BSI (2013) BS 8576:2013, Guidance on Investigations for Ground Gas – Permanent Gases and Volatile Organic Compounds (VOCs)

CIRIA (2001) Contamination Land Risk Assessment: A Guide to Good Practice (C552).

CIRIA (2007) CIRIA Report C665 Assessing Risks Posed by Hazardous Ground Gases to Buildings.

Environment Agency (2004) Model Procedures for the Management of Land Contamination. Contaminated Land Report 11 (CLR 11).

Health and Safety Executive (2012) Control of Asbestos Regulations.

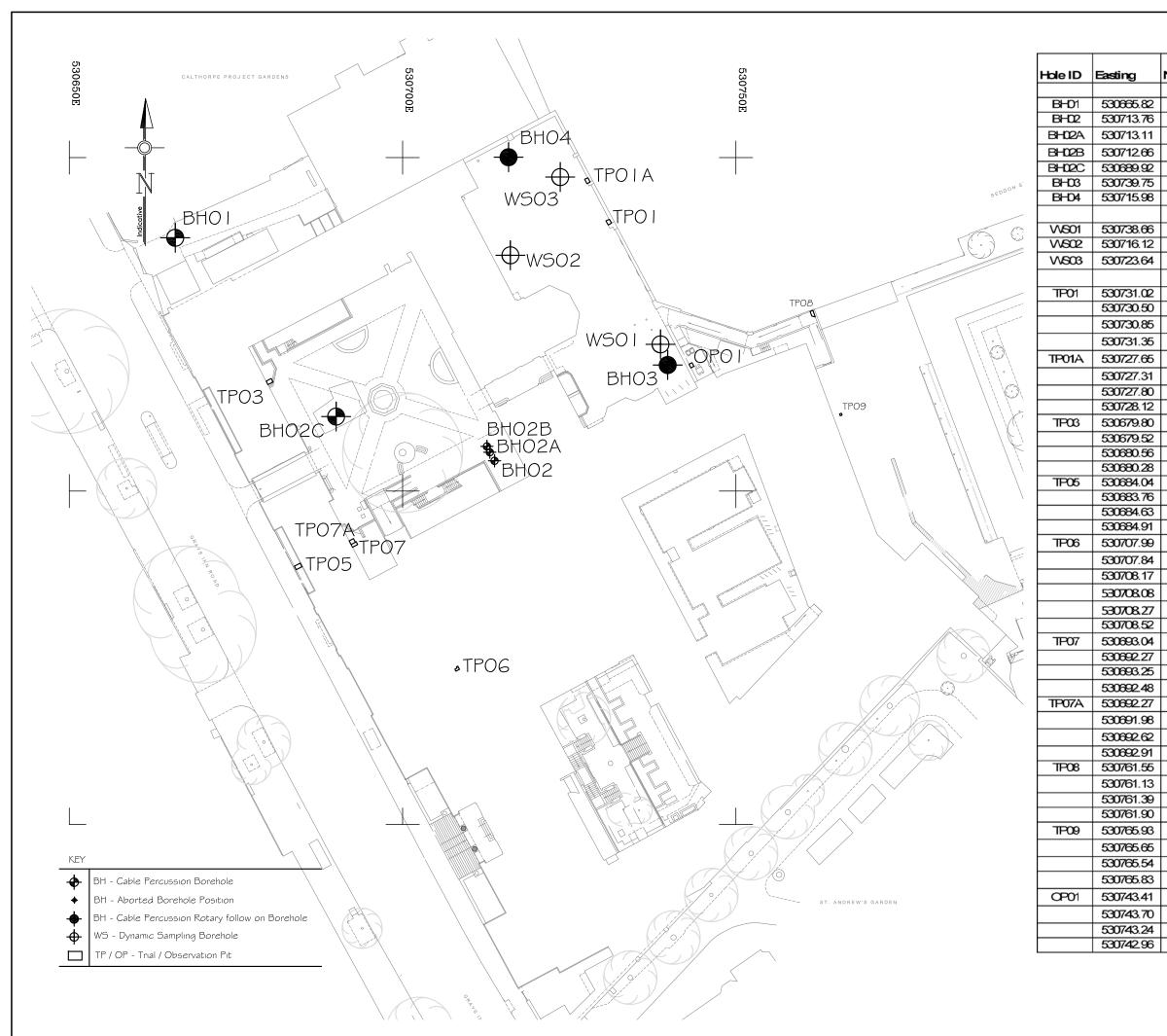
NHBC and Environment Agency (2008) Guidance for the Safe Development of Housing on Land Affected by Contamination. R&D Publication 66: 2008.

UCL /ION DRI – PLOT 1 CONTAMINATED LAND INTERPRETATIVE REPORT



Appendix A

Figures and Drawings



Northing	Level (mOD)	
182537.93	20.14	
182504.51	20.69	
182505.78	20.64	
182506.65 182511.26	20.62 20.56	
182518.84	20.55	
182550.00	20.43	
182521.99	20.44	
182535.35	20.44	
182546.98	20.45	
182540.75	20.55	
182540.51	20.54	
182539.90	20.53	
182540.19	20.53	
182546.09	20.52	
182546.75	20.50	
182546.97	20.52	
182546.33	20.52	
182515.95	17.27 17.27	
182516.48 182516.35	17.27	
182516.88	17.27	
182488.21	16.60	
182488.74	16.60	
182489.19	16.60	
182488.66	16.60	
182473.00	16.35	
182473.30	16.35	
182473.47	16.35	
182473.65	16.35	
182473.75	16.35	
182473.28	16.35	
182492.40	16.72	
182491.99 182491.99	16.72 16.72	
	16.72 16.72	
182491.58 182491.99	16.72	
182492.53	16.72	
	16.72	
182492.87	16.72	
182527.09	18.65	[
182526.98	18.66	
182526.24	18.66	
182526.11	18.65	
182511.39	17.97	
182511.29	17.97	
182511.57	17.97	
182511.67	17.97	
182519.25	18.24	ו
182518.70	18.24	
182518.46	18.24	
182519.01	18.24	
		$\ $

NOTES

 This drawing should not be scaled.
 OPO1, TPO3, TPO5, TPO6, TPO7, TPO8 \$ TPO9 are located at basement level.

C	ONCEPT SITE INVEST	IG	AT	0	ns
No	Revision	Drawn	Checked	Passed	Date

Unit 8, Warple Mews Warple Way London W3 0RF

Tel: 020 8811 2880 Fax: 020 8811 2881

e-mail: concept@conceptconsultants.co.uk

www.conceptconsultants.co.uk

Client: University College London							
Project: UCL ION / DRI							
Title: Exploratory Hole Location Plan							
Dwg. No	: 183113/0)1					
Status:	ssue						
Scale: NTS							
Drawn OS	Checked IP	Passed IP	Date September 18				



Appendix B

ENVIRONMENTAL LABORATORY ANALYTICAL DATA



Evangelos Kafantaris Concept Site Investigations

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t: 02087401553

e: Concept Group



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 18-96788

Project / Site name:	Eastman Dental Institute - 256 Grays Inn Road	Samples received on:	17/08/2018
Your job number:	18-3113	Samples instructed on:	17/08/2018
Your order number:	CL1536	Analysis completed by:	23/08/2018
Report Issue Number:	1	Report issued on:	23/08/2018
Samples Analysed:	1 water sample		

fat Signed:

Jordan Hill Reporting Manager For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Lab Sample Number				1025276		
Sample Reference				BH02C		
Sample Number				None Supplied		
Depth (m)	None Supplied					
Date Sampled	16/08/2018					
Time Taken				None Supplied		
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status			

General Inorganics

pH	pH Units	N/A	ISO 17025	7.7		
Total Cyanide	µg/l	10	ISO 17025	24		
Sulphate as SO₄	µg/l	45	ISO 17025	947000		
Sulphate as SO₄	mg/l	0.045	ISO 17025	947		
Sulphide	µg/l	5	NONE	< 5.0		
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	670		
Ammonia as NH ₃	µg/l	15	ISO 17025	810		
Ammonium as NH ₄	µg/l	15	ISO 17025	860		
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	4.32		
Hardness - Total	mgCaCO3/I	1	ISO 17025	749		

Phenols by HPLC

Catechol	µg/l	0.5	NONE	< 0.5		
Resorcinol	µg/l	0.5	NONE	< 0.5		
Ethylphenol & Dimethylphenol	µg/l	0.5	NONE	< 0.5		
Cresols	µg/l	0.5	NONE	< 0.5		
Naphthols	µg/l	0.5	NONE	< 0.5		
Isopropylphenol	µg/l	0.5	NONE	< 0.5		
Phenol	µg/l	0.5	NONE	< 0.5		
Trimethylphenol	µg/l	0.5	NONE	< 0.5		

Total Phenols

Total Phenols (HPLC)	µg/l	3.5	NONE	< 3.5			

Speciated PAHs Naphthalene 0.01 ISO 17025 < 0.01 µg/l 0.01 Acenaphthylene µg/l ISO 17025 < 0.01 Acenaphthene µg/l 0.01 ISO 17025 < 0.01 Fluorene µg/l 0.01 ISO 17025 < 0.01 Phenanthrene µg/l 0.01 ISO 17025 < 0.01 Anthracene µg/l 0.01 ISO 17025 < 0.01 0.01 < 0.01 Fluoranthene ISO 17025 µg/l 0.01 ISO 17025 < 0.01 Pyrene µg/l 0.01 Benzo(a)anthracene ISO 17025 < 0.01 µg/l Chrysene 0.01 ISO 17025 < 0.01 µg/l Benzo(b)fluoranthene µg/l 0.01 ISO 17025 < 0.01 Benzo(k)fluoranthene µg/l 0.01 ISO 17025 < 0.01 Benzo(a)pyrene µg/l 0.01 ISO 17025 < 0.01 Indeno(1,2,3-cd)pyrene 0.01 ISO 17025 < 0.01 µg/l Dibenz(a,h)anthracene µg/l 0.01 ISO 17025 < 0.01 0.01 ISO 17025 < 0.01 Benzo(ghi)perylene µg/l

Total PAH						
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16		





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Year Order Net OLITIC							
Your Order No: CL1536				1005076	1	-	-
Lab Sample Number				1025276 BH02C			
Sample Reference Sample Number				None Supplied			
Depth (m)		None Supplied					
Date Sampled		16/08/2018					
Time Taken				None Supplied			
	1	1	1	None Supplieu			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Magnesium (dissolved)	mg/l	0.005	ISO 17025	84			
Antimony (dissolved)	µg/l	0.005	ISO 17025	0.8			
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.34			
Barium (dissolved)	µg/l	0.06	ISO 17025	13			
Boron (dissolved)	µg/l	10	ISO 17025	940			
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.04	ł	1	1
Calcium (dissolved)	mg/l	0.012	ISO 17025	160	ł	1	1
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	 t	1	1
Chromium (dissolved)	µg/I µg/I	0.2	ISO 17025	0.2	ł	1	1
Copper (dissolved)	µg/l	0.2	ISO 17025 ISO 17025	1.6	ł	1	1
Lead (dissolved)	μg/l	0.2	ISO 17025 ISO 17025	0.3	ł	1	1
Magnesium (dissolved)	mg/l	0.005	ISO 17025	84			
Maganese (dissolved)	µg/l	0.005	ISO 17025 ISO 17025	68			
Mercury (dissolved) CV-AFS		0.005	ISO 17025	< 0.0050			
Molybdenum (dissolved)	ug/l	0.005	ISO 17025 ISO 17025	13			
Nickel (dissolved)	µg/l	0.05	ISO 17025 ISO 17025	4.4			
	µg/l	0.5	ISO 17025 ISO 17025	9.4		ł	ł
Selenium (dissolved) Vanadium (dissolved)	µg/l						
Zinc (dissolved)	µg/l µg/l	0.2	ISO 17025 ISO 17025	2.6 5.4			
Monoaromatics					-		
Benzene	µg/l	1	ISO 17025	< 1.0			
Toluene	µg/l	1	ISO 17025	< 1.0			
Ethylbenzene	µg/l	1	ISO 17025	< 1.0			
p & m-xylene	µg/l	1	ISO 17025	< 1.0			
o-xylene	µg/l	1	ISO 17025	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0			
Petroleum Hydrocarbons							
TPH1 (C10 - C40)	µg/l	10	NONE	< 10			
TPH2 (C6 - C10)	µg/l	10	ISO 17025	< 10			
TDH-CWG - Aliphatic > CE - CE		1	100 17025	~ 1.0		1	1
TPH-CWG - Aliphatic > C5 - C6	µg/l	1	ISO 17025 ISO 17025	< 1.0	ł	ł	ł
TPH-CWG - Aliphatic > C6 - C8	µg/l	1		< 1.0	 <u> </u>		
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025		 }	}	}
TPH-CWG - Aliphatic > C10 - C12	µg/l	10	NONE	< 10	ł	ł	ł
TPH-CWG - Aliphatic > C12 - C16	µg/l	10	NONE	< 10	 <u> </u>		
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	 <u> </u>		
TPH-CWG - Aliphatic >C21 - C35 TPH-CWG - Aliphatic (C5 - C35)	µg/l	10 10	NONE	< 10 < 10	 <u> </u>		
171-CWG - Alipilatic (C3 - C35)	µg/l	10	NONE	< 10	1		
TPH-CWG - Aromatic >C5 - C7	110/	1	ISO 17025	< 1.0	1	1	1
TPH-CWG - Aromatic >C5 - C7 TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025 ISO 17025	< 1.0	ł	ł	ł
TPH-CWG - Aromatic >C7 - C8 TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025 ISO 17025	< 1.0	ł	ł	ł
TPH-CWG - Aromatic >C10 - C12	µg/l	1 10	NONE	< 10	ł	ł	ł
TPH-CWG - Aromatic >C10 - C12 TPH-CWG - Aromatic >C12 - C16	µg/l	10		< 10	 <u> </u>		
TPH-CWG - Aromatic >C12 - C16 TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE		 <u> </u>		
TPH-CWG - Aromatic >C16 - C21 TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE NONE	< 10 < 10	 }	}	}
TPH-CWG - Aromatic (C5 - C35)	μg/l μg/l	10	NONE	< 10	 <u> </u>		

U/S = Unsuitable Sample I/S = Insufficient Sample

Iss No 18-96788-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonia as NH3 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	w	ISO 17025
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Ammonium as NH4 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	w	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	w	NONE
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	w	ISO 17025
Mercury Low Level (Dissolved) in Water	Dissolved mercury in water by CV-AFS, accredited matrices GW, SW, and PW.	In-house method based on USEPA method 1631	L085-PL	w	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	w	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	w	ISO 17025
Phenols, speciated, in water, by HPLC	Determination of speciated phenols by HPLC.	In house method based on Blue Book Method.	L030-PL	w	NONE
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	w	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	w	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	w	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	w	ISO 17025
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025

Iss No 18-96788-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
TPH C6 - C40 (water)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method	L070-PL	W	NONE
TPH1 (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS.	In-house method	L070-PL	W	NONE
TPH2 (Waters)	Determination of hydrocarbons C6-C10 by headspace GC-MS. Accredited Matrices SW, PW. GW.	In-house method based on USEPA8260	L088-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom. For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland. Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



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Analytical Report Number : 18-97498

Project / Site name:	Eastman Dental Institute - 256 Grays Inn Road	Samples received on:	22/08/2018
Your job number:	18-3113	Samples instructed on:	22/08/2018
Your order number:	CL1546	Analysis completed by:	30/08/2018
Report Issue Number:	1	Report issued on:	30/08/2018
Samples Analysed:	1 water sample		

TAL Signed:

Jordan Hill Reporting Manager For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

	Lab Sample Number							
Sample Reference				BH02C				
Sample Number			None Supplied					
Depth (m)				None Supplied				
Date Sampled				21/08/2018				
Time Taken				None Supplied				
		₽ -	. Ő					
Analytical Parameter	Units	Limit of detection	Sta					
(Water Analysis)	its i	ti i	ita					
		ă Ť	Accreditation Status					
General Inorganics								
рН	pH Units	N/A	ISO 17025	7.7				
Fotal Cyanide	µg/l	10	ISO 17025	< 10				
Sulphate as SO ₄	µg/l	45	ISO 17025	1160000				
Sulphate as SO ₄	mg/l	0.045	ISO 17025	1160		1		1
Sulphide	μq/l	5	NONE	< 5.0		İ		1
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	600		1	1	Ì
Ammonium as NH ₄	μg/l	15	ISO 17025	770		1	1	İ
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	5.00		1	1	t
Hardness - Total	mqCaCO3/I	1	ISO 17025	913	-			
	ingcac03/i	T	130 17025	515				
Phenols by HPLC								
Catechol	µg/l	0.5	NONE	< 0.5				
Resorcinol	µg/l	0.5	NONE	< 0.5				
Ethylphenol & Dimethylphenol	µg/l	0.5	NONE	< 0.5				
Cresols	µg/l	0.5	NONE	< 0.5				
Naphthols	µg/l	0.5	NONE	< 0.5				
Isopropylphenol	µq/l	0.5	NONE	< 0.5				
Phenol	μg/l	0.5	NONE	< 0.5				
Trimethylphenol	μg/l	0.5	NONE	< 0.5				
Thinediyiphenor	μ9/1	0.5	NONE	0.5				
Total Phenols								
Total Phenols (HPLC)	µg/l	3.5	NONE	< 3.5				
· · · ·	1.0,							•
Speciated PAHs						-	-	-
Naphthalene	µg/l	0.01	ISO 17025	< 0.01				
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01		Į		
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01				
	µg/l	0.01	ISO 17025	< 0.01				
luorene			ISO 17025	< 0.01				
	μg/l	0.01	130 17025					
Phenanthrene	μg/l μg/l	0.01	ISO 17025	< 0.01				
Phenanthrene Anthracene				< 0.01 < 0.01				
Phenanthrene Anthracene Fluoranthene	µg/l	0.01	ISO 17025					
Phenanthrene Anthracene Fluoranthene Pyrene	µg/l µg/l	0.01 0.01	ISO 17025 ISO 17025	< 0.01				
Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene	لورا بورا بورا بورا بورا	0.01 0.01 0.01 0.01	ISO 17025 ISO 17025 ISO 17025 ISO 17025	< 0.01 < 0.01				
Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene	µg/I µg/I µg/I µg/I	0.01 0.01 0.01 0.01 0.01	ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025	< 0.01 < 0.01 < 0.01 < 0.01				
Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene	нд/I рц I/рц I/рц I/рц I/рц	0.01 0.01 0.01 0.01 0.01 0.01	ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01				
Phenanthrene Anthracene Tuoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(k)fluoranthene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l	0.01 0.01 0.01 0.01 0.01 0.01 0.01	ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01				
Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01				
Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dihorarco	μg/l μq/l μg/l μg/l μq/l μg/l μg/l μg/l μg/l	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01		Image: Constraint of the second sec		
Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025 ISO 17025	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01				

Total PAH					 	
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16		

Iss No 18-97498-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Your Order No: CL1546							
Lab Sample Number				1029384			
Sample Reference			BH02C				
Sample Number				None Supplied			
Depth (m)				None Supplied			
Date Sampled				21/08/2018			
Time Taken				None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids						-	
Magnesium (dissolved)	mg/l	0.005	ISO 17025	100			
Antimony (dissolved)	µg/l	0.4	ISO 17025	1.0			
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.63			
Barium (dissolved)	µg/l	0.06	ISO 17025	12			
Boron (dissolved)	µg/l	10	ISO 17025	1300			
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02			
Calcium (dissolved)	mg/l	0.012	ISO 17025	200			
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0			
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2			
Copper (dissolved)	µg/l	0.5	ISO 17025	< 0.5			
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2			
Magnesium (dissolved)	mg/l	0.005	ISO 17025	100			
Manganese (dissolved)	µg/l	0.05	ISO 17025	80			
Mercury (dissolved) CV-AFS	ug/l	0.005	ISO 17025	< 0.0050			
Molybdenum (dissolved)	µg/l	0.05	ISO 17025	12			
Nickel (dissolved)	µg/l	0.5	ISO 17025	3.9			
Selenium (dissolved)	µg/l	0.6	ISO 17025	10			
Vanadium (dissolved)	µg/l	0.2	ISO 17025	2.7			
Zinc (dissolved)	µg/l	0.5	ISO 17025	2.9			
Monoaromatics		•					
Benzene	µg/l	1	ISO 17025	< 1.0			
Toluene	µg/l	1	ISO 17025	< 1.0			
Ethylbenzene	µg/l	1	ISO 17025	< 1.0			
p & m-xylene	µg/l	1	ISO 17025	< 1.0			
o-xylene	µg/l	1	ISO 17025	< 1.0		_	
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0			

Petroleum Hydrocarbons

					-	-	
TPH1 (C10 - C40)	µg/l	10	NONE	< 10			
TPH2 (C6 - C10)	µg/l	10	ISO 17025	< 10			
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0			
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0			
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0			
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10			
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0			
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0			
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0			
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10			
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10			

U/S = Unsuitable Sample I/S = Insufficient Sample

Iss No 18-97498-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	w	ISO 17025
Ammonium as NH4 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Mercury Low Level (Dissolved) in Water	Dissolved mercury in water by CV-AFS, accredited matrices GW, SW, and PW.	In-house method based on USEPA method 1631	L085-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, AI=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(AI, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	W	ISO 17025
Phenols, speciated, in water, by HPLC	Determination of speciated phenols by HPLC.	In house method based on Blue Book Method.	L030-PL	W	NONE
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	w	ISO 17025
TPH C6 - C40 (water)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method	L070-PL	W	NONE

Iss No 18-97498-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
TPH1 (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS.	In-house method	L070-PL	W	NONE
TPH2 (Waters)	Determination of hydrocarbons C6-C10 by headspace GC-MS. Accredited Matrices SW, PW. GW.	In-house method based on USEPA8260	L088-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



Evangelos Kafantaris Concept Site Investigations Unit 8 Warple Mews Warple Way London W3 0RF

t: 02087401553

e: Concept Group



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 18-86953

Project / Site name:	Eastman Dental Institute- 256 Grays Inn Road	Samples received on:	24/05/2018
Your job number:	18-3113	Samples instructed on:	29/05/2018
Your order number:	CL1451	Analysis completed by:	05/06/2018
Report Issue Number:	1	Report issued on:	05/06/2018
Samples Analysed:	1 leachate sample - 3 soil samples		

fat Signed:

Jordan Hill Reporting Manager For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Your Order No: CL1451

Lab Sample Number				969553	969554	969555		
Sample Reference		WS03	WS03	WS03				
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				0.20	0.70	3.15-3.50		
Date Sampled				23/05/2018	23/05/2018	23/05/2018		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	9.8	15	16		
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0		
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	Chrysotile	Chrysotile	-		
Asbestos in Soil	Туре	N/A	ISO 17025	Detected	Detected	Not-detected		
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.012	< 0.001	-		
Asbestos Quantification Total	%	0.001	ISO 17025	0.012	< 0.001	-		
Conoral Inorganica								
General Inorganics pH - Automated	pH Units	N/A	MCERTS	10.8	8.5	8.1	Ī	
Total Cyanide	mg/kg	1 N/A	MCERTS	< 1	< 1	< 1		
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1		
Water Soluble SO4 16hr extraction (2:1 Leachate								
Equivalent)	g/l	0.00125	MCERTS	0.097	0.13	0.11		
Sulphide	mg/kg	1	MCERTS	2.9	< 1.0	< 1.0		
Total Sulphur	%	0.005	MCERTS	0.104	0.057	0.010		
Ammonia as NH ₃	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5		
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5		
Organic Matter	%	0.1	MCERTS	0.9	1.7	0.3		
Phenols by HPLC								
Catechol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10	< 0.10		
Resorcinol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10	< 0.10		
Cresols (o-, m-, p-)	mg/kg	0.3	ISO 17025	< 0.30	< 0.30	< 0.30		
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	ISO 17025	< 0.20	< 0.20	< 0.20		
2-Isopropylphenol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10	< 0.10		
Phenol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10	< 0.10		
Trimethylphenol (2,3,5-)	mg/kg	0.1	ISO 17025	< 0.10	< 0.10	< 0.10		
Total Xylenols and Ethylphenols	mg/kg	0.3	ISO 17025	< 0.30	< 0.30	< 0.30		
Total Phenols								
Total Phenols (HPLC)	mg/kg	1.3	ISO 17025	< 1.3	< 1.3	< 1.3		
	iiig/itg	1.5	150 17025	(115	(115	< 1.5	8	I
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		ļ]
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Fluoranthene	mg/kg	0.05	MCERTS	1.0	< 0.05	< 0.05		
Pyrene Benzo(a)anthracene	mg/kg mg/kg	0.05	MCERTS MCERTS	1.0 0.63	< 0.05 < 0.05	< 0.05 < 0.05		
Benzo(a)anthracene Chrysene	mg/kg mg/kg	0.05	MCERTS	0.63	< 0.05	< 0.05		
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.43	< 0.05	< 0.05		
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.36	< 0.05	< 0.05		
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.58	< 0.05	< 0.05		
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.30	< 0.05	< 0.05		
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.39	< 0.05	< 0.05		
Total PAH	1			_			1	
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	5.49	< 0.80	< 0.80		





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Your Order No: CL1451

Lab Sample Number				969553	969554	969555	
Sample Reference				WS03	WS03	WS03	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				0.20	0.70	3.15-3.50	
Date Sampled				23/05/2018	23/05/2018	23/05/2018	
Time Taken				None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	9.7	3.5	1.8	
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	17	17	15	
Barium (aqua regia extractable)	mg/kg	1	MCERTS	570	140	78	
Boron (water soluble)	mg/kg	0.2	MCERTS	1.1	1.9	1.2	
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	30	23	41	
Copper (aqua regia extractable)	mg/kg	1	MCERTS	140	75	25	
Lead (aqua regia extractable)	mg/kg	1	MCERTS	900	570	14	
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	320	330	230	
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.7	2.1	< 0.3	
Mercury (aqua regia extractable)	mg/kg	0.001	NONE	-	-	0.030	
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.51	0.75	0.83	
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	20	21	56	
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	43	46	67	
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	340	93	57	

Monoaromatics

ug/kg	1	MCERTS	< 1.0	< 1.0	-		
µg/kg	1	MCERTS	< 1.0	< 1.0	-		
µg/kg	1	MCERTS	< 1.0	< 1.0	-		
µg/kg	1	MCERTS	< 1.0	< 1.0	-		
µg/kg	1	MCERTS	< 1.0	< 1.0	-		
µg/kg	1	MCERTS	< 1.0	< 1.0	-		
	μg/kg μg/kg μg/kg μg/kg	<u>µg/kg 1</u> µg/kg 1 µg/kg 1 µg/kg 1	μg/kg 1 MCERTS μg/kg 1 MCERTS μg/kg 1 MCERTS μg/kg 1 MCERTS μg/kg 1 MCERTS	μg/kg 1 MCERTS < 1.0 μg/kg 1 MCERTS < 1.0 μg/kg 1 MCERTS < 1.0 μg/kg 1 MCERTS < 1.0 μg/kg 1 MCERTS < 1.0 μg/kg 1 MCERTS < 1.0	μg/kg 1 MCERTS < 1.0 < 1.0 μg/kg 1 MCERTS < 1.0	μg/kg 1 MCERTS < 1.0 < 1.0 - μg/kg 1 MCERTS < 1.0	μg/kg 1 MCERTS < 1.0 < 1.0 - μg/kg 1 MCERTS < 1.0 < 1.0 - μg/kg 1 MCERTS < 1.0 < 1.0 - μg/kg 1 MCERTS < 1.0 < 1.0 - μg/kg 1 MCERTS < 1.0 < 1.0 - μg/kg 1 MCERTS < 1.0 < 1.0 -

Petroleum Hydrocarbons

I	-						1	
TPH C10 - C40	mg/kg	10	MCERTS	97	< 10	< 10		
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
TPH C6 - C40	mg/kg	10	NONE	97	< 10	< 10		
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	-		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	-		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	-		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	30	< 8.0	-		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	30	< 10	-		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	-		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	-		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	-		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	59	< 10	-		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	67	< 10	-		





Analytical Report Number:18-86953Project / Site name:Eastman Dental Institute- 256 Grays Inn RoadYour Order No:CL1451

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
969553	WS03	0.20	157	Loose Fibres & Loose Fibrous Debris & Bitumen	Chrysotile	0.012	0.012
969554	WS03	0.70	131	Loose Fibres	Chrysotile	< 0.001	< 0.001

Both Qualitative and Quantitative Analyses are UKAS accredited.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Your Order No: CL1451						-	•	
Lab Sample Number				969556			l	
Sample Reference				WS03			1	Į
Sample Number				None Supplied				
Depth (m)				0.70				
Date Sampled				23/05/2018				
Time Taken	ime Taken							
			A					
And the Development of the	-	Limit of detection	s S					
Analytical Parameter	Units	tec mit	tat					
(Leachate Analysis)	ស	i e	us					
		-	Accreditation Status					
	II							<u>.</u>
General Inorganics								
pН	pH Units	N/A	ISO 17025	7.7				
Total Cyanide	μg/l	10	ISO 17025	< 10				
Sulphate as SO₄	mg/l	0.1	ISO 17025	30.2				
Sulphide	µg/l	5	NONE	< 5.0				
Ammoniacal Nitrogen as N	µg/l	15	NONE	< 15				
Ammonium as NH ₄	μg/l	15	NONE	< 15				
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	4.89				
Hardness - Total	mgCaCO3/I	1	NONE	42.4				
Phenols by HPLC								
Catechol	µg/l	0.5	NONE	< 0.5				
Resorcinol	µg/l	0.5	NONE	< 0.5				
Ethylphenol & Dimethylphenol	µg/l	0.5	NONE	< 0.5				
Cresols	µg/l	0.5	NONE	< 0.5				
Naphthols	µg/l	0.5	NONE	< 0.5				
Isopropylphenol	µg/l	0.5	NONE	< 0.5				
Phenol	µg/l	0.5	NONE	< 0.5				
Trimethylphenol	µg/l	0.5	NONE	< 0.5				
Total Phenols								1
Total Phenols (HPLC)	µg/l	3.5	NONE	< 3.5				
Considerate DATEs								
Speciated PAHs		0.01	100 17005	. 0.01		1	1	1
Naphthalene	µg/l	0.01	ISO 17025	< 0.01				
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01			l	ł
Acenaphthene	µg/l	0.01	ISO 17025 ISO 17025	< 0.01		ł	1	1
Fluorene	µg/l	0.01					ł	ł
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01			ł	ł
Anthracene Fluoranthene	µg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01		ł	1	1
Pyrene	μg/l	0.01	ISO 17025 ISO 17025	< 0.01		ł	1	1
Benzo(a)anthracene	μg/l	0.01	ISO 17025 ISO 17025	< 0.01		1	1	ł
	μg/l	0.01	ISO 17025 ISO 17025	< 0.01		ł	1	1
Chrysene Benzo(b)fluoranthene	μg/l	0.01	ISO 17025 ISO 17025	< 0.01		ł	1	1
Benzo(b)fluoranthene Benzo(k)fluoranthene	µg/l	0.01	ISO 17025 ISO 17025	< 0.01		1		<u> </u>
	μg/l	0.01		< 0.01		ł	1	ł
Benzo(a)pyrene Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01		ł	1	1
Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01		ł	1	1
Benzo(ghi)perylene	μg/l	0.01	NONE NONE	< 0.01		ł	1	1
Denzo(gni)peryiene	µg/l	0.01	NUNE	< 0.01		1	I	1
Total PAH								
Total EPA-16 PAHs	µq/l	0.2	NONE	< 0.2			1	1
IULAI LEATU FAIIS	µg/i	0.2	INUINE	N U.Z		1	1	<u> </u>





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Your Order No: CL1451						
Lab Sample Number				969556		
Sample Reference				WS03		
Sample Number				None Supplied		
Depth (m)	0.70					
Date Sampled				23/05/2018		
Time Taken				None Supplied		
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status			
Heavy Metals / Metalloids						
Antimony (dissolved)	µg/l	1.7	ISO 17025	< 1.7		
Arsenic (dissolved)	µg/l	1.1	ISO 17025	< 1.1		
Barium (dissolved)	µg/l	0.05	ISO 17025	12		
Boron (dissolved)	µg/l	10	ISO 17025	43		
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08		
Calcium (dissolved)	mg/l	0.012	ISO 17025	16		
Chromium (hexavalent)	µg/l	5	NONE	< 5.0		
Chromium (dissolved)	µg/l	0.4	ISO 17025	1.3		
Copper (dissolved)	µg/l	0.7	ISO 17025	8.5		
Lead (dissolved)	µg/l	1	ISO 17025	9.4		
Manganese (dissolved)	µg/l	0.06	ISO 17025	5.5		
Magnesium (dissolved)	mg/l	0.005	ISO 17025	0.65		
Mercury - CV-AFS	ug/l	0.007	ISO 17025	0.0462		
Molybdenum (dissolved)	µg/l	0.4	ISO 17025	9.7		
Nickel (dissolved)	µg/l	0.3	ISO 17025	< 0.3		
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0		
Vanadium (dissolved)	µg/l	1.7	ISO 17025	6.3		
Zinc (dissolved)	µg/l	0.4	ISO 17025	7.0		

Petroleum Hydrocarbons

TPH1 (C10 - C40)	µg/l	10	NONE	< 10		
TPH2 (C6 - C10)	µg/l	10	NONE	< 10		
TPH C6 - C40	ug/l	10	NONE	< 10		





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
969553	WS03	None Supplied	0.20	Brown sand with rubble and clinker
969554	WS03	None Supplied	0.70	Brown loam and clay with rubble and brick.
969555	WS03	None Supplied	3.15-3.50	Brown clay.





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonia as NH3 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Ammoniacal Nitrogen as N in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	w	NONE
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Boron in leachate	Determination of boron in leachate. Sample acidified and followed by ICP-OES.	In-house method based on MEWAM	L039-PL	w	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC- MS.	In-house method based on USEPA8260	L073B-PL	w	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Dissolved Organic Carbon in leachate	Determination of dissolved organic carbon in leachate by the measurement on a non-dispersive infrared analyser of carbon dioxide released by acidification.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L023-PL	w	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	w	MCERTS
Hexavalent chromium in leachate	Determination of hexavalent chromium in leachate by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Mercury Low Level in leachate	Mercury in leachate by CV-AFS,	In-house method based on USEPA method 1631	L085-PL	w	ISO 17025
Mercury Low Level in Soil (aqua regia extractable)	a Mercury in soil by CV-AFS	In-house method based on USEPA method 1631	L085-PL	D	NONE
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	w	ISO 17025
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS

Iss No 18-86953-1 Eastman Dental Institute- 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	w	NONE
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
pH at 20oC in leachate	Determination of pH in leachate by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Phenols, speciated, in leachate, by HPLC	Determination of speciated phenols by HPLC.	In house method based on Blue Book Method.	L030-PL	W	NONE
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L102B-PL	w	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS
Sulphide in leachate	Determination of sulphide in leachate by ion selective electrode.	In-house method	L010-PL	W	NONE
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in leachate	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total Hardness of leachates	Determination of hardness in leachates by calculation from calcium and magnesium.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	w	NONE
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038	W	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding.	L076-PL	W	MCERTS

Iss No 18-86953-1 Eastman Dental Institute- 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
TPH C6 - C40 (leachate)	Determination of TPH in leachate by HS-GC-MS and GC-MS	In-house method	L070-PL	W	NONE
TPH C6 - C40 (soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method	L076-PL	W	NONE
TPH1 (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE
TPH2 (Leachates)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



Evangelos Kafantaris Concept Site Investigations Unit 8 Warple Mews Warple Way London W3 0RF

t: 02087401553

e: Concept Group



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 18-87020

Project / Site name:	Eastman Dental Institute - 256 Grays Inn Road	Samples received on:	25/05/2018
Your job number:	18-3113	Samples instructed on:	30/05/2018
Your order number:	CL1455	Analysis completed by:	05/06/2018
Report Issue Number:	1	Report issued on:	05/06/2018
Samples Analysed:	2 soil samples		

Signed:

Jordan Hill Reporting Manager For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Your Order No: CL1455

Lah Camala Number				060000	060001	1	
Lab Sample Number				969980	969981	 	╂─────┤
Sample Reference				WS02	WS02		
Sample Number				None Supplied	None Supplied		
Depth (m)				0.70	2.15		
Date Sampled		24/05/2018	24/05/2018				
Time Taken	-	1	1	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	11	13		
Total mass of sample received	kg	0.001	NONE	2.0	2.0		
	• •						•
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected		
		<u> </u>				•	• •
General Inorganics						 	
pH - Automated	pH Units	N/A	MCERTS	8.5	8.2		
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1		
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1		
Water Soluble SO4 16hr extraction (2:1 Leachate							
Equivalent)	g/l	0.00125	MCERTS	0.041	0.37	I	ļ]
Sulphide	mg/kg	1	MCERTS	2.1	86		
Total Sulphur	%	0.005	MCERTS	0.032	0.249		
Ammonia as NH ₃	mg/kg	0.5	MCERTS	< 0.5	6.0		
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	6.3		
Organic Matter	%	0.1	MCERTS	1.5	2.5		
Phenols by HPLC						T	
Catechol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10		
Resorcinol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10	-	
Cresols (o-, m-, p-)	mg/kg	0.3	ISO 17025	< 0.30	< 0.30		
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	ISO 17025	< 0.20	< 0.20		
2-Isopropylphenol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10		
Phenol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10		
Trimethylphenol (2,3,5-)	mg/kg	0.1	ISO 17025	< 0.10	< 0.10		
Total Xylenols and Ethylphenols	mg/kg	0.3	ISO 17025	< 0.30	< 0.30		
Total Phenois		1.2	100 17025	.12	.12		
Total Phenols (HPLC)	mg/kg	1.3	ISO 17025	< 1.3	< 1.3		
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1	
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	 1	
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	<u> </u>	
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	 1	
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1	
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1	
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	 t	<u> </u>
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	 t	<u> </u>
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	 1	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1	1
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	 1	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1	1 1
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	<u> </u>	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	 1	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1	† 1
	mg/ng	0.05	PICENTJ	× 0.03	< 0.0J	8	
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	1	
openated . etal E171 10 17110	i iiig/ikg	0.0	TOERTS	10100	1 0.00		

Iss No 18-87020-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Your Order No: CL1455

Lab Sample Number				969980	969981		
Sample Reference				WS02	WS02		
Sample Number				None Supplied	None Supplied		
Depth (m)				0.70	2.15		
Date Sampled				24/05/2018	24/05/2018		
Time Taken				None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	3.4	1.3		
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	8.2		
Barium (aqua regia extractable)	mg/kg	1	MCERTS	63	71		
Boron (water soluble)	mg/kg	0.2	MCERTS	0.9	2.1		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	13	15		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	83	36		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	480	84		
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	220	130		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	2.9	< 0.3		
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.81	0.75		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	15	11		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0		
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	33	33		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	52	35		

Monoaromatics

Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0		
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0		
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0		
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0		
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0		

Petroleum Hydrocarbons

TPH C10 - C40	mg/kg	10	MCERTS	< 10	42		
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH C6 - C40	mg/kg	10	NONE	< 10	42		
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	14		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	18		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	42		

Iss No 18-87020-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	e Sample Reference	Sample Number	Depth (m)	Sample Description *
969980	WS02	None Supplied	0.70	Brown sand with rubble and brick.
969981	WS02	None Supplied	2.15	Grey clay and sand with gravel.





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonia as NH3 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC- MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	w	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Phenols, speciated, in soil, by HPLC	Determination of speciated phenols by HPLC.	In house method based on Blue Book Method.	L030-PL	W	ISO 17025
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS

Iss No 18-87020-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038	W	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding.	L076-PL	W	MCERTS
TPH C6 - C40 (soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method	L076-PL	W	NONE
TPH2 (Soil)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



Evangelos Kafantaris Concept Site Investigations Unit 8 Warple Mews Warple Way London W3 0RF

t: 02087401553

e: Concept Group



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 18-87157

Project / Site name:	Eastman Dental Institute- 256 Grays Inn Road	Samples received on:	30/05/2018
Your job number:	18-3113	Samples instructed on:	31/05/2018
Your order number:	CL1456	Analysis completed by:	06/06/2018
Report Issue Number:	1	Report issued on:	06/06/2018
Samples Analysed:	2 bulk samples - 3 soil samples		

tte Signed:

Dr Claire Stone Quality Manager For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Your Order No: CL1456

Lab Sample Number				970902	970903	970904	
Sample Reference	WS01	WS01	WS01	<u> </u>			
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				0.20	0.50	3.10	
Date Sampled	25/05/2018	25/05/2018	25/05/2018				
Time Taken				None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	
Moisture Content	%	N/A	NONE	13	11	12	
Total mass of sample received	kg	0.001	NONE	2.0	2.0	1.4	
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	Chrysotile	Chrysotile	Chrysotile	
Asbestos in Soil	Туре	N/A	ISO 17025	Detected	Detected	Detected	
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.300	0.002	0.069	
Asbestos Quantification Total	%	0.001	ISO 17025	0.300	0.002	0.069	
General Inorganics pH - Automated Total Cyanide Free Cyanide Water Soluble SO4 16hr extraction (2:1 Leachate	pH Units mg/kg mg/kg	N/A 1 1	MCERTS MCERTS MCERTS	10.7 < 1 < 1	10.8 < 1 < 1	9.0 < 1 < 1	
Equivalent)	g/l	0.00125	MCERTS	0.29	0.71	1.7	
Sulphide	mg/kg	1	MCERTS	< 1.0	4.0	17	
Total Sulphur	%	0.005	MCERTS	0.144	0.191	0.812	
Ammonia as NH ₃	mg/kg	0.5	MCERTS	< 0.5	< 0.5	0.6	
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	< 0.5	0.6	
Organic Matter	%	0.1	MCERTS	1.8	0.5	2.3	
Phenols by HPLC Catechol		0.1	ISO 17025	< 0.10	< 0.10	< 0.10	
Resorcinol	mg/kg mg/kg	0.1	ISO 17025 ISO 17025	< 0.10	< 0.10	< 0.10	
Cresols (o-, m-, p-)	mg/kg	0.1	ISO 17025 ISO 17025	< 0.30	< 0.10	< 0.30	<u> </u>
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.3	ISO 17025	< 0.20	< 0.20	< 0.20	<u> </u>
2-Isopropylphenol	mg/kg	0.2	ISO 17025	< 0.10	< 0.10	< 0.10	<u> </u>
Phenol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10	< 0.10	<u> </u>
Trimethylphenol (2,3,5-)	mg/kg	0.1	ISO 17025	< 0.10	< 0.10	< 0.10	<u> </u>
Total Xylenols and Ethylphenols	mg/kg	0.1	ISO 17025	< 0.30	< 0.30	< 0.30	<u> </u>
Total Phenols			100 17025	- 5155	. 0.00		
Total Phenols (HPLC)	mg/kg	1.3	ISO 17025	< 1.3	< 1.3	< 1.3	





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Your Order No: CL1456

Lab Sample Number		970902	970903	970904				
Sample Reference		WS01	WS01	WS01				
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				0.20	0.50	3.10		
Date Sampled	25/05/2018	25/05/2018	25/05/2018					
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Speciated PAHs	-	_	-					
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Acenaphthene	mg/kg	0.05	MCERTS	0.91	< 0.05	< 0.05		
Fluorene	mg/kg	0.05	MCERTS	0.51	< 0.05	< 0.05		
Phenanthrene	mg/kg	0.05	MCERTS	1.9	0.23	< 0.05		
Anthracene	mg/kg	0.05	MCERTS	0.88	< 0.05	< 0.05		
Fluoranthene	mg/kg	0.05	MCERTS	5.2	0.69	< 0.05		
Pyrene	mg/kg	0.05	MCERTS	4.8	0.64	< 0.05		
Benzo(a)anthracene	mg/kg	0.05	MCERTS	2.8	0.31	< 0.05		
Chrysene	mg/kg	0.05	MCERTS	2.2	0.37	< 0.05		
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	3.1	0.53	< 0.05		
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.3	0.19	< 0.05		
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.3	0.33	< 0.05		
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.3	< 0.05	< 0.05		
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.34	< 0.05	< 0.05		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.6	< 0.05	< 0.05		
7-1-1-2411								
Total PAH Speciated Total EPA-16 PAHs		0.8	MCERTS	29.1	3.29	< 0.80	i	
Specialeu Tolai EPA-16 PARS	mg/kg	0.8	MCERTS	29.1	3.29	< 0.80		
Heavy Metals / Metalloids								
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	18	8.7	6.0		
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	10	15		
Barium (aqua regia extractable)	mg/kg	1	MCERTS	540	360	330		
Boron (water soluble)	mg/kg	0.2	MCERTS	2.4	2.4	1.2		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	32	21	32		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	61	25	25		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	590	240	230		
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	360	230	220		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	1.2	7.8		
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.80	0.40	0.92		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	19	14	20		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	40	32	53		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	560	330	460		





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Your Order No: CL1456

Lab Sample Number				970902	970903	970904	
Sample Reference				WS01	WS01	WS01	
Sample Number			None Supplied	None Supplied	None Supplied		
Depth (m)			0.20	0.50	3.10		
Date Sampled				25/05/2018	25/05/2018	25/05/2018	
Time Taken				None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)							
Monoaromatics	-		-				
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	

Petroleum Hydrocarbons

	-						
TPH C10 - C40	mg/kg	10	MCERTS	170	160	1100	
		1					
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH C6 - C40	mg/kg	10	NONE	170	160	1100	
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	4.0	8.3	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	17	65	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	50	79	360	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	56	100	440	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	3.2	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	26	14	67	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	74	48	540	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	100	62	610	





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road Your Order No: CL1456

Tour Order No: CE1450

Lab Sample Number		970902	970903	970904				
Sample Reference				970902 WS01	970903 WS01	WS01		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				0.20	0.50	3.10		
Date Sampled				25/05/2018	25/05/2018	25/05/2018		
Time Taken		None Supplied	None Supplied	None Supplied				
			A					
Analytical Parameter	ç	Limit of detection	Accreditation Status					
(Soil Analysis)	Units	Limit of letectior	creditat Status					
		on	s ti					
			-					
VOCs Chloromethana	us/ka	1	ISO 17025	-	.10			
Chloromethane Chloroethane	μg/kg μg/kg	1	NONE	-	< 1.0 < 1.0	-		
Bromomethane	µg/kg µg/kg	1	ISO 17025		< 1.0	-		
Vinyl Chloride	µg/kg	1	NONE	-	< 1.0	-		
Trichlorofluoromethane	µg/kg	1	NONE	-	< 1.0	-		
1,1-Dichloroethene	µg/kg	1	NONE	-	< 1.0	-		
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	< 1.0	-		
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	< 1.0	-		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	-	L	
1,1-Dichloroethane 2,2-Dichloropropane	µg/kg	1	MCERTS MCERTS	-	< 1.0	-		
	μg/kg μg/kg	1	MCERTS	-	< 1.0	-		
Trichloromethane 1,1,1-Trichloroethane	μg/kg μg/kg	1	MCERTS	-	< 1.0 < 1.0	-		
1,2-Dichloroethane	µg/kg µg/kg	1	MCERTS	-	< 1.0	-		
1,1-Dichloropropene	µg/kg	1	MCERTS	-	< 1.0	-		
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0	-		
Benzene	µg/kg	1	MCERTS	-	< 1.0	-		
Tetrachloromethane	µg/kg	1	MCERTS	-	< 1.0	-		
1,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	-		
Trichloroethene	µg/kg	1	MCERTS	-	< 1.0	-		
Dibromomethane	µg/kg	1	MCERTS	-	< 1.0	-		
Bromodichloromethane Cis-1,3-dichloropropene	μg/kg μg/kg	1	MCERTS ISO 17025	-	< 1.0 < 1.0	-		
Trans-1,3-dichloropropene	µg/kg µg/kg	1	ISO 17025		< 1.0			
Toluene	µg/kg	1	MCERTS	-	< 1.0	-		
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	-		
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	< 1.0	-		
Dibromochloromethane	µg/kg	1	ISO 17025	-	< 1.0	-		
Tetrachloroethene	µg/kg	1	NONE	-	< 1.0	-		
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	< 1.0	-		
Chlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-		
1,1,1,2-Tetrachloroethane Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0 < 1.0	-		
p & m-Xylene	µg/kg µg/kg	1	MCERTS MCERTS	-	< 1.0	-		
Styrene	µg/kg µg/kg	1	MCERTS	-	< 1.0			
Tribromomethane	µg/kg µg/kg	1	NONE	-	< 1.0	-		
o-Xylene	µg/kg	1	MCERTS	-	< 1.0	-		
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	-		
Isopropylbenzene	µg/kg	1	MCERTS	-	< 1.0	-		
Bromobenzene	µg/kg	1	MCERTS	-	< 1.0	-		
n-Propylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-	L	
2-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0	-		
4-Chlorotoluene 1,3,5-Trimethylbenzene	µg/kg	1	MCERTS ISO 17025	-	< 1.0 < 1.0	-		
tert-Butylbenzene	µg/kg µg/kg	1	MCERTS	-	< 1.0	-		
1,2,4-Trimethylbenzene	µg/kg µg/kg	1	ISO 17025	-	< 1.0	-		
sec-Butylbenzene	µg/kg µg/kg	1	MCERTS	-	< 1.0	-		
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	-		
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	< 1.0	-		
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-		
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-		
Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-		
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	< 1.0	-		
1,2,4-Trichlorobenzene Hexachlorobutadiene	µg/kg	1	MCERTS	-	< 1.0	-		
1,2,3-Trichlorobenzene	μg/kg μg/kg	1	MCERTS ISO 17025	-	< 1.0 < 1.0	-		
	µy/ky	1	130 17025	-	< 1.U	-		I

Iss No 18-87157-1 Eastman Dental Institute- 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road Your Order No: CL1456

Tour Order No: CE1430

Lab Sample Number				970902	970903	970904	
Sample Reference				WS01	WS01	WS01	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				0.20	0.50	3.10	
Date Sampled				25/05/2018	25/05/2018	25/05/2018	
Time Taken		None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs							
Aniline	mg/kg	0.1	NONE	-	< 0.1	-	
Phenol	mg/kg	0.2	ISO 17025	-	< 0.2	-	
2-Chlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	-	
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	< 0.2	-	
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	-	
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	< 0.1	-	
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	-	
Bis(2-chloroisopropyl)ether 2-Methylphenol	mg/kg	0.1	MCERTS MCERTS	-	< 0.1 < 0.3	-	
2-Metnyiphenoi Hexachloroethane	mg/kg mg/kg	0.3	MCERTS	-	< 0.3	-	
Nitrobenzene	mg/kg	0.03	MCERTS	-	< 0.3	-	
4-Methylphenol	mg/kg	0.2	NONE	-	< 0.2	_	
Isophorone	mg/kg	0.2	MCERTS	-	< 0.2	-	
2-Nitrophenol	mg/kg	0.3	MCERTS	-	< 0.3	-	
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	< 0.3	-	
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	< 0.3	-	
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	
Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05	-	
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	< 0.3	-	
4-Chloroaniline	mg/kg	0.1	NONE	-	< 0.1	-	
Hexachlorobutadiene	mg/kg	0.1	MCERTS NONE	-	< 0.1	-	
4-Chloro-3-methylphenol 2,4,6-Trichlorophenol	mg/kg mg/kg	0.1	MCERTS	-	< 0.1	-	
2,4,5-Trichlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	_	
2-Methylnaphthalene	mg/kg	0.1	NONE	-	< 0.1	-	
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	< 0.1	-	
Dimethylphthalate	mg/kg	0.1	MCERTS	-	< 0.1	-	
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	< 0.1	-	
Acenaphthylene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05	-	
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	< 0.2	-	
Dibenzofuran	mg/kg	0.2	MCERTS ISO 17025	-	< 0.2	-	
4-Chlorophenyl phenyl ether Diethyl phthalate	mg/kg mg/kg	0.3	MCERTS	-	< 0.3 < 0.2	-	
4-Nitroaniline	mg/kg	0.2	MCERTS	-	< 0.2	-	
Fluorene	mg/kg	0.2	MCERTS	-	< 0.05	-	
Azobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	< 0.2	-	
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	
Phenanthrene	mg/kg	0.05	MCERTS	-	0.23	-	
Anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Carbazole	mg/kg	0.3	MCERTS	-	< 0.3	-	
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	-	
Anthraquinone Fluoranthene	mg/kg	0.3	MCERTS	-	< 0.3	-	
Pyrene	mg/kg mg/kg	0.05	MCERTS MCERTS	-	0.69	-	
Butyl benzyl phthalate	mg/kg	0.05	ISO 17025	-	< 0.3	-	
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	0.31	-	
Chrysene	mg/kg	0.05	MCERTS	-	0.37	-	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	0.53	-	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	0.19	-	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	0.33	-	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	< 0.05	-	1

Iss No 18-87157-1 Eastman Dental Institute- 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road Your Order No: CL1456

four Order No: CL1456

Lab Sample Number		970902	970903	970904			
Sample Reference				WS01	WS01	WS01	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)	0.20	0.50	3.10				
Date Sampled						25/05/2018	
Time Taken				None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				





Analytical Report Number:18-87157Project / Site name:Eastman Dental Institute- 256 Grays Inn RoadYour Order No:CL1456

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
970902	WS01	0.20	146	Hard/Cement Type Material & Loose Fibrous Debris	Chrysotile	0.300	0.300
970903	WS01	0.50	167	Hard/Cement Type Material	Chrysotile	0.002	0.002
970904	WS01	3.10	160	Loose Fibrous Debris	Chrysotile	0.069	0.069

Both Qualitative and Quantitative Analyses are UKAS accredited.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

Iss No 18-87157-1 Eastman Dental Institute- 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Lab Sample Number				970905	970906		
Sample Reference				WS01	WS01		
Sample Number				None Supplied	None Supplied		
Depth (m)				0.20	3.40		
Date Sampled				25/05/2018	25/05/2018		
Time Taken				None Supplied	None Supplied		
Analytical Parameter (Bulk Analysis)	Units	Limit of detection	Accreditation Status				
Asbestos Identification Name	Туре	N/A	ISO 17025	Chrysotile- Hard/Cement Type Material	Chrysotile- Insulation Lagging		

Iss No 18-87157-1 Eastman Dental Institute- 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
970902	WS01	None Supplied	0.20	Brown loam and sand with rubble and gravel
970903	WS01	None Supplied	0.50	Light brown loam and sand with rubble and brick.
970904	WS01	None Supplied	3.10	Brown rubble.

Iss No 18-87157-1 Eastman Dental Institute- 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name Analytical Method Description		Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonia as NH3 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in Bulks	Asbestos Identification in bulk material with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	W	ISO 17025
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC- MS.	In-house method based on USEPA8260	L073B-PL	w	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	w	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	w	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Phenols, speciated, in soil, by HPLC	Determination of speciated phenols by HPLC.	In house method based on Blue Book Method.	L030-PL	w	ISO 17025
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE

Iss No 18-87157-1 Eastman Dental Institute- 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Ilytical Test Name Analytical Method Description		Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038	W	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding.	L076-PL	W	MCERTS
TPH C6 - C40 (soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method	L076-PL	W	NONE
TPH2 (Soil)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom. For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland. Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



Evangelos Kafantaris Concept Site Investigations Unit 8 Warple Mews Warple Way London W3 0RF

t: 02087401553

e: Concept Group



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 18-87323

Project / Site name:	Eastman Dental Institute, 256 Grays Inn Road	Samples received on:	31/05/2018
Your job number:	18-3113	Samples instructed on:	31/05/2018
Your order number:	CL1457	Analysis completed by:	07/06/2018
Report Issue Number:	1	Report issued on:	07/06/2018
Samples Analysed:	1 soil sample - 1 bulk sample		

tte Signed:

Dr Claire Stone Quality Manager For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Project / Site name: Eastman Dental Institute, 256 Grays Inn Road Your Order No: CL1457

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Lab Sample Number	971897		1	1				
Sample Reference		OP01						
Sample Number		None Supplied		1				
Depth (m)		0.30						
Date Sampled		30/05/2018						
Time Taken		None Supplied						
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	6.1				
Total mass of sample received	kg	0.001	NONE	1.6				
•								-
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	Chrysotile				
Asbestos in Soil	Туре	N/A	ISO 17025	Detected				
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001		ļ		
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001				
General Inorganics	_	_	_	_	_	_	_	_
pH - Automated	pH Units	N/A	MCERTS	12.1				
Total Cyanide	mg/kg	1	MCERTS	< 1				
Free Cyanide Water Soluble SO4 16hr extraction (2:1 Leachate	mg/kg	1	MCERTS	< 1				
Equivalent)	g/l	0.00125	MCERTS	0.013				
Sulphide	mg/kg	1	MCERTS	11				
Total Sulphur Ammonia as NH3	mg/kg	50 0.5	MCERTS MCERTS	1800 1.1				
Ammonium as NH_4	mg/kg mg/kg	0.5	MCERTS	1.1				
Organic Matter	//////////////////////////////////////	0.1	MCERTS	2.9				
	70	0.1	PICERTS	2.9				
Phenols by HPLC								
Catechol	mg/kg	0.1	ISO 17025	< 0.10				
Resorcinol	mg/kg	0.1	ISO 17025	< 0.10				
Cresols (o-, m-, p-)	mg/kg	0.3	ISO 17025	< 0.30				
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	ISO 17025	< 0.20				
2-Isopropylphenol	mg/kg	0.1	ISO 17025	< 0.10				
Phenol	mg/kg	0.1	ISO 17025	< 0.10				
Trimethylphenol (2,3,5-)	mg/kg	0.1	ISO 17025	< 0.10				
Total Xylenols and Ethylphenols	mg/kg	0.3	ISO 17025	< 0.30				
Total Phenols								
Total Phenols (HPLC)	mg/kg	1.3	ISO 17025	< 1.3				
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthylene	mg/kg	0.05	MCERTS	2.3				
Acenaphthene	mg/kg	0.05	MCERTS	8.1				
Fluorene	mg/kg	0.05	MCERTS	8.3				
Phenanthrene	mg/kg	0.05	MCERTS	160				
Anthracene	mg/kg	0.05	MCERTS	48		ļ	ļ	
Fluoranthene	mg/kg	0.05	MCERTS	260		 		
Pyrene	mg/kg	0.05	MCERTS	220				
Benzo(a)anthracene	mg/kg	0.05	MCERTS	110		 		
Chrysene Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	82 79		<u> </u>		
Benzo(b)fluoranthene Benzo(k)fluoranthene	mg/kg mg/kg	0.05	MCERTS MCERTS	60		1		
Benzo(a)pyrene	mg/kg mg/kg	0.05	MCERTS	85		1	1	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	45		ł	ł	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	12		1	1	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	46		1		
					-	-	•	
Total PAH		0.5		1000		1	T	
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	1220				1





Project / Site name: Eastman Dental Institute, 256 Grays Inn Road

i Uui	oruer	110.	CLI45/

Lab Sample Number				971897			
Sample Reference				OP01			
Sample Number				None Supplied			
Depth (m)				0.30			
Date Sampled				30/05/2018			
Time Taken				None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids		-	-		-	_	-
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	4.6			
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	11			
Barium (aqua regia extractable)	mg/kg	1	MCERTS	190			
Boron (water soluble)	mg/kg	0.2	MCERTS	1.3			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	1.1			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	18			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	43			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	130			
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	270			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.7			
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.85	 		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	14			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	26			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	240			

Monoaromatics

Benzene	ug/kg	1	MCERTS	< 1.0		
Toluene	µg/kg	1	MCERTS	< 1.0		
Ethylbenzene	µg/kg	1	MCERTS	< 1.0		
p & m-xylene	µg/kg	1	MCERTS	< 1.0		
o-xylene	µg/kg	1	MCERTS	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0		

Petroleum Hydrocarbons

TPH C10 - C40	mg/kg	10	MCERTS	4400		
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	< 0.1		
TPH C6 - C40	mg/kg	10	NONE	4400		
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	15		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	39		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	150		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	200		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	25		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	140		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	1300		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	2400		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	3900		

Iss No 18-87323-1 Eastman Dental Institute, 256 Grays Inn Road 18-3113





Analytical Report Number:18-87323Project / Site name:Eastman Dental Institute, 256 Grays Inn RoadYour Order No:CL1457

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
971897	OP01	0.30	150	Loose Fibres	Chrysotile	< 0.001	< 0.001

Both Qualitative and Quantitative Analyses are UKAS accredited.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.





Project / Site name: Eastman Dental Institute, 256 Grays Inn Road

Lab Sample Number	971896					
Sample Reference				TP01		
Sample Number				None Supplied		
Depth (m)				0.10		
Date Sampled				29/05/2018		
Time Taken				None Supplied		
Analytical Parameter (Bulk Analysis)	Units	Limit of detection	Accreditation Status			
Asbestos Identification Name	Туре	N/A	ISO 17025	Chrysotile- Hard/Cement Type Material		





Project / Site name: Eastman Dental Institute, 256 Grays Inn Road

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
971897	OP01	None Supplied	0.30	Brown sandy clay with rubble.





Project / Site name: Eastman Dental Institute, 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	w	MCERTS
Asbestos Identification in bulk material with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	W	ISO 17025
Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Determination of BTEX in soil by headspace GC- MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	w	MCERTS
Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Determination of speciated phenols by HPLC.	In house method based on Blue Book Method.	L030-PL	W	ISO 17025
Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS
	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction. Asbestos Identification in bulk material with the use of polarised light microscopy in conjunction with disperion staining techniques. Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques. Asbestos quantification by gravimetric method - in house method based on references. Determination of water soluble boron in soil by hot water extract followed by ICP-OES. Determination of BTEX in soil by headspace GC- MS. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry. Determination of metals in soil by aqua-regia digestion followed by ICP-OES. Moisture content, determined gravimetrically. Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with irron (II) sulphate. Determination of speciated phenols by HPLC. Determination of speciated phenols by HPLC.	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction. In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton Absetsos Identification in bulk material with the use of polarised light microscopy in conjunction with disperion staining techniques. In house method based on HSG 248 Absetsos guantification with the use of polarised light microscopy in conjunction with disperion staining techniques. In house method based on HSG 248, HSG 248, HSG 248, HSG 248, HSG 248, HSG 248, HSG 248, HSG 248, KSG Blue Book (draft). Absetsos guantification by gravimetric method - in bouse method based on references. In-house method based on Second Site Properties version 3 Determination of water soluble boron in soll by hot water extract followed by ICP-OES. In-house method based on USEPA8260 Determination of BTEX in soll by headspace GC- MS. In-house method based on USEPA8260 Determination of free cyanide by distillation followed by colorimetry. In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) Determination of netals in soil by aqua-regia digestion followed by ICP-OES. In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil. Determination of organic matter in soil by oxiding with potassium dichromate followed by titration with potassium dichr	Analytical Method Description Analytical Method Reference number Determination of Ammonium/Ammonia/ Ammonical Nitrogen by the colorinetic exity/date/intropasside method, 10:1 water exity/date/intropasside intropasside/in	Analysis Analysis Determination of Annonium/Annonia/ Annonical Network by the object part of the second of t

Iss No 18-87323-1 Eastman Dental Institute, 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute, 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038-PL	D	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding.	L076-PL	W	MCERTS
TPH C6 - C40 (soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method	L076-PL	W	NONE
TPH2 (Soil)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



Evangelos Kafantaris Concept Site Investigations Unit 8 Warple Mews Warple Way London W3 0RF

t: 02087401553

e: Concept Group



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 18-87658

Project / Site name:	Eastman Dental Institute- 256 Grays Inn Road	Samples received on:	31/05/2018
Your job number:	18-3113	Samples instructed on:	04/06/2018
Your order number:	CL1461	Analysis completed by:	11/06/2018
Report Issue Number:	1	Report issued on:	11/06/2018
Samples Analysed:	1 bulk sample - 1 leachate sample - 3 soil samples		

Signed:

Rexona Rahman Head of Customer Services For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Your Order No: CL1461

Lab Sample Number		973689	973690	973691				
Sample Reference				BH02C	BH02C	BH02C		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				1.00	2.00	2.50		
Date Sampled				30/05/2018	31/05/2018	31/05/2018		
Time Taken				None Supplied	None Supplied	None Supplied		
			Þ					
		융	Accreditation Status					
Analytical Parameter	Units	Limit of detection	creditat Status					
(Soil Analysis)	ts	tic	tat					
			ion i					
Stone Content		0.1		. 0.1	. 0.1	. 0.1		
	%	0.1	NONE	< 0.1	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	6.3	9.9	8.6		
Total mass of sample received	kg	0.001	NONE	1.4	1.4	1.4		
Ashestes in Call		N1/A	100 17005	No. Jaka at a	No.4 Jaka A.	Not dote to d	1	
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	LI	
Concerned Incompanying								
General Inorganics		N/A	MOTOTO	7.6	11.0	07	1	
pH - Automated	pH Units	N/A	MCERTS	7.6	11.6	8.7		
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1		
Free Cyanide Water Soluble SO4 16hr extraction (2:1 Leachate	mg/kg	1	MCERTS	< 1	< 1	< 1		
Equivalent)	g/l	0.00125	MCERTS	0.10	0.12	0.095		
Sulphide	g/i mg/kg	1	MCERTS	4.4	3.1	< 1.0	t t	
Total Sulphur	//////////////////////////////////////	0.005	MCERTS	0.043	0.093	0.016		
Ammonia as NH ₃	mg/kg	0.5	MCERTS	< 0.5	2.1	< 0.5		
Ammonium as NH_4	mg/kg	0.5	MCERTS	< 0.5	2.2	0.5		
Organic Matter	%	0.1	MCERTS	3.5	2.1	0.7		
Organic Platter	70	0.1	PICENTS	5.5	2.1	0.7	I I	
Phenols by HPLC								
Catechol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10	< 0.10		
Resorcinol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10	< 0.10		
Cresols (o-, m-, p-)	mg/kg	0.1	ISO 17025	< 0.30	< 0.30	< 0.30		
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	ISO 17025	< 0.20	< 0.20	< 0.20		
2-Isopropylphenol	mg/kg	0.2	ISO 17025	< 0.10	< 0.10	< 0.10		
Phenol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10	< 0.10		
Trimethylphenol (2,3,5-)	mg/kg	0.1	ISO 17025	< 0.10	< 0.10	< 0.10		
Total Xylenols and Ethylphenols	mg/kg	0.1	ISO 17025	< 0.30	< 0.30	< 0.30		
		0.0	100 17025	. 0100				
Total Phenols								
Total Phenols (HPLC)	mg/kg	1.3	ISO 17025	< 1.3	< 1.3	< 1.3		
		1.0	100 17025	1 210	1210	. 10		
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	t t	
Chrvsene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	<u> </u>	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	<u> </u>	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	† †	
	ilig/kg	0.05	PICENTJ	< 0.05	< 0.0J	< 0.05	aI	
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	<u>1</u>	
openated Total ELA TOTALIS	ilig/kg	0.0	INCENT3	< 0.00	× 0.00	× 0.00	L	





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Your Order No: CL1461

Lab Sample Number				973689	973690	973691	
Sample Reference				BH02C	BH02C	BH02C	
Sample Number	None Supplied	None Supplied	None Supplied				
Depth (m)				1.00	2.00	2.50	
Date Sampled				30/05/2018	31/05/2018	31/05/2018	
Time Taken				None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids		-				-	-
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	2.7	2.0	1.7	
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	17	17	13	
Barium (aqua regia extractable)	mg/kg	1	MCERTS	240	260	44	
Boron (water soluble)	mg/kg	0.2	MCERTS	1.4	0.5	0.8	
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	15	17	18	
Copper (aqua regia extractable)	mg/kg	1	MCERTS	80	59	20	
Lead (aqua regia extractable)	mg/kg	1	MCERTS	1300	550	150	
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	200	280	290	
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.8	1.3	0.5	
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1.6	1.8	2.3	
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	18	17	16	
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	37	32	27	
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	81	87	25	

Monoaromatics

Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	

Petroleum Hydrocarbons

TPH C10 - C40	mg/kg	10	MCERTS	< 10	440	170	
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH C6 - C40	mg/kg	10	NONE	< 10	440	170	
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	7.3	2.7	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	17	< 8.0	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	150	69	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	170	79	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	1.9	< 1.0	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	6.8	2.8	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	18	< 10	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	170	52	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	190	64	

Iss No 18-87658-1 Eastman Dental Institute- 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Your Order No: CL1461

Lab Sample Number				973689	072600	072601		
Sample Reference		BH02C	973690 BH02C	973691 BH02C				
Sample Number	None Supplied	None Supplied	None Supplied					
Depth (m)				1.00	2.00	2.50		
Date Sampled				30/05/2018	31/05/2018	31/05/2018		
Time Taken				None Supplied	None Supplied	None Supplied		
			A					
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
		-	on					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	< 1.0	-		
Chloroethane	µg/kg	1	NONE	-	< 1.0	-		
Bromomethane	µg/kg	1	ISO 17025	-	< 1.0	-		
Vinyl Chloride	µg/kg	1	NONE	-	< 1.0	-		
Trichlorofluoromethane 1,1-Dichloroethene	μg/kg μg/kg	1	NONE NONE	-	< 1.0 < 1.0	-		
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	< 1.0			
Cis-1,2-dichloroethene	µg/kg µg/kg	1	MCERTS	-	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	_		
1,1-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	-		
2,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	-		
Trichloromethane	µg/kg	1	MCERTS	-	< 1.0	-		
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	-		
1,2-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	-		
1,1-Dichloropropene	µg/kg	1	MCERTS	-	< 1.0	-		
Trans-1,2-dichloroethene	µg/kg	1	NONE MCERTS	-	< 1.0	-		
Benzene Tetrachloromethane	µg/kg µg/kg	1	MCERTS	-	< 1.0 < 1.0	-		
1,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	-		
Trichloroethene	µg/kg	1	MCERTS	-	< 1.0	-		
Dibromomethane	µg/kg	1	MCERTS	-	< 1.0	-		
Bromodichloromethane	µg/kg	1	MCERTS	-	< 1.0	-		
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	-		
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	-		
Toluene	µg/kg	1	MCERTS	-	< 1.0	-		
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	-		
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	< 1.0	-		
Dibromochloromethane Tetrachloroethene	μg/kg μg/kg	1	ISO 17025 NONE	-	< 1.0	-		
1,2-Dibromoethane	µg/kg	1	ISO 17025		< 1.0 < 1.0	-		
Chlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-		
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	-		
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0	-		
p & m-Xylene	µg/kg	1	MCERTS	-	< 1.0	-		
Styrene	µg/kg	1	MCERTS	-	< 1.0	-		
Tribromomethane	µg/kg	1	NONE	-	< 1.0	-		
o-Xylene	µg/kg	1	MCERTS	-	< 1.0	-		
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	-		
Isopropylbenzene Bromobenzene	µg/kg	1	MCERTS	-	< 1.0 < 1.0	-		
n-Propylbenzene	µg/kg µg/kg	1	MCERTS ISO 17025	-	< 1.0			
2-Chlorotoluene	µg/kg µg/kg	1	MCERTS	-	< 1.0	-		
4-Chlorotoluene	µg/kg µg/kg	1	MCERTS	-	< 1.0	_		
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-		
tert-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-		
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-		
sec-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-		
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	-		
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	< 1.0	-		
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-		
1,4-Dichlorobenzene Butylbenzene	µg/kg	1 1	MCERTS MCERTS		< 1.0 < 1.0	-		
Butyldenzene 1,2-Dibromo-3-chloropropane	μg/kg μg/kg	1	ISO 17025	-	< 1.0			
1,2-Dibioino-s-chioropiopane 1,2,4-Trichlorobenzene	µg/kg µg/kg	1	MCERTS	-	< 1.0	-		
Hexachlorobutadiene	µg/kg	1	MCERTS	-	< 1.0	-		
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	-		
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Iss No 18-87658-1 Eastman Dental Institute- 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Your Order No: CL1461

Lab Camala Number				072690	072600	072601	
Lab Sample Number Sample Reference				973689 BH02C	973690 BH02C	973691 BH02C	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				1.00	2.00	2.50	
Date Sampled				30/05/2018	31/05/2018	31/05/2018	
Time Taken				None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs							
Aniline	mg/kg	0.1	NONE	-	< 0.1	-	
Phenol	mg/kg	0.2	ISO 17025	-	< 0.2	-	
2-Chlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	-	
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	< 0.2	-	
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	-	
1,2-Dichlorobenzene 1,4-Dichlorobenzene	mg/kg mg/kg	0.1	MCERTS MCERTS	-	< 0.1	-	
Bis(2-chloroisopropyl)ether	mg/kg	0.2	MCERTS	-	< 0.2	-	
2-Methylphenol	mg/kg	0.3	MCERTS	-	< 0.3	-	
Hexachloroethane	mg/kg	0.05	MCERTS	-	< 0.05	-	
Nitrobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	
4-Methylphenol	mg/kg	0.2	NONE	-	< 0.2	-	
Isophorone	mg/kg	0.2	MCERTS	-	< 0.2	-	
2-Nitrophenol	mg/kg	0.3	MCERTS	-	< 0.3	-	
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	< 0.3	-	
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	< 0.3	-	
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	
Naphthalene 2,4-Dichlorophenol	mg/kg mg/kg	0.05	MCERTS MCERTS	-	< 0.05 < 0.3	-	
4-Chloroaniline	mg/kg	0.1	NONE	-	< 0.1	-	
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	< 0.1	-	
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	< 0.1	-	
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	-	
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	< 0.2	-	
2-Methylnaphthalene	mg/kg	0.1	NONE	-	< 0.1	-	
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	< 0.1	-	
Dimethylphthalate	mg/kg	0.1	MCERTS	-	< 0.1	-	
2,6-Dinitrotoluene Acenaphthylene	mg/kg mg/kg	0.1	MCERTS MCERTS	-	< 0.1 < 0.05	-	
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05	-	
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	< 0.2	-	
Dibenzofuran	mg/kg	0.2	MCERTS	-	< 0.2	-	
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	< 0.3	-	
Diethyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	-	
4-Nitroaniline	mg/kg	0.2	MCERTS	-	< 0.2	-	
Fluorene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Azobenzene Bromonbanul abanul other	mg/kg	0.3	MCERTS	-	< 0.3	-	
Bromophenyl phenyl ether Hexachlorobenzene	mg/kg mg/kg	0.2	MCERTS MCERTS	-	< 0.2 < 0.3	-	
Phenanthrene	mg/kg mg/kg	0.3	MCERTS	-	< 0.05	-	
Anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Carbazole	mg/kg	0.3	MCERTS	-	< 0.3	-	
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	-	
Anthraquinone	mg/kg	0.3	MCERTS	-	< 0.3	-	
Fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	< 0.3	-	
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Chrysene Benzo(b)fluoranthene	mg/kg mg/kg	0.05	MCERTS MCERTS	-	< 0.05 < 0.05	-	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	< 0.05	-	
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Iss No 18-87658-1 Eastman Dental Institute- 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Your Order No: CL1461

Lab Sample Number				973689	973690	973691	
Sample Reference				BH02C	BH02C	BH02C	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				1.00	2.00	2.50	
Date Sampled	Date Sampled			30/05/2018	31/05/2018	31/05/2018	
Time Taken				None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Your Order No: CL1461							
Lab Sample Number				973693			
Sample Reference				BH02C			
Sample Number				None Supplied			
Depth (m)				1.00			
Date Sampled				30/05/2018			
Time Taken				None Supplied			
		8 -	. 6				
Analytical Parameter	Units	Limit of detection	red Sta				
(Leachate Analysis)	its	cti č	tus				
		5 7	Accreditation Status				
General Inorganics							
pH	pH Units	N/A	ISO 17025	7.7			
Total Cyanide	μg/l	10	ISO 17025	< 10		ł	1
Sulphate as SO ₄	mg/l	0.1	ISO 17025	12.6	 1		
Sulphide	μg/l	5	NONE	< 5.0	 1	ł	ł
Ammoniacal Nitrogen as N	μg/i μg/l	15	NONE	560	 1	ł	ł
Ammonium as NH ₄	μg/I μg/I	15	NONE	720	 1		
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	7.10	 1		
Hardness - Total	mgCaCO3/I	1	NONE	31.2	 1	ł	ł
naraness rotai	iliycac03/i	I	NUNL	51.4	 8	8	8
Phenols by HPLC							
Catechol	µg/l	0.5	NONE	< 0.5			
Resorcinol	μg/l	0.5	NONE	< 0.5			
Ethylphenol & Dimethylphenol	μg/l	0.5	NONE	< 0.5			
Cresols	μg/l	0.5	NONE	< 0.5			
Naphthols	μg/l	0.5	NONE	< 0.5			
Isopropylphenol	μg/l	0.5	NONE	< 0.5			
Phenol	μg/l	0.5	NONE	< 0.5			
Trimethylphenol	µg/l	0.5	NONE	< 0.5			
					•	-	-
Total Phenols							
Total Phenols (HPLC)	µg/l	3.5	NONE	< 3.5			
Speciated PAHs							
Naphthalene	µg/l	0.01	ISO 17025	< 0.01			
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01			
Acenaphthene	µg/I	0.01	ISO 17025	< 0.01		ļ	ļ
Fluorene	µg/l	0.01	ISO 17025	< 0.01			
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01		ļ	ļ
Anthracene	µg/I	0.01	ISO 17025	< 0.01		ļ	ļ
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01		ļ	ļ
Pyrene	µg/l	0.01	ISO 17025	< 0.01		ļ	ļ
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01		ļ	ļ
Chrysene	µg/l	0.01	ISO 17025	< 0.01		ļ	ļ
Benzo(b)fluoranthene	µg/I	0.01	ISO 17025	< 0.01		ļ	ļ
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01			
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01		ļ	ļ
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01			
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01			
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01			
Total PAH				[1	1
Total EPA-16 PAHs	µg/l	0.2	NONE	< 0.2			



TPH C6 - C40



Analytical Report Number: 18-87658

Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Your Order No: CL1461								
Lab Sample Number				973693				
Sample Reference				BH02C				
Sample Number				None Supplied				
Depth (m)	Depth (m)			1.00				
Date Sampled				30/05/2018				
Time Taken				None Supplied				
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Antimony (dissolved)	µg/l	1.7	ISO 17025	< 1.7				
Arsenic (dissolved)	µg/l	1.1	ISO 17025	9.9				
Barium (dissolved)	µg/l	0.05	ISO 17025	5.4				
Boron (dissolved)	µg/l	10	ISO 17025	< 10				
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08				
Chromium (hexavalent)	µg/l	5	NONE	< 5.0				
Chromium (dissolved)	µg/l	0.4	ISO 17025	< 0.4				
Copper (dissolved)	µg/l	0.7	ISO 17025	12				
Lead (dissolved)	µg/l	1	ISO 17025	11				
Manganese (dissolved)	µg/l	0.06	ISO 17025	2.5				
Mercury - CV-AFS	ug/l	0.007	ISO 17025	0.0240				
Molybdenum (dissolved)	µg/l	0.4	ISO 17025	5.5				
Nickel (dissolved)	µg/l	0.3	ISO 17025	0.4				
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0				
Vanadium (dissolved)	µg/l	1.7	ISO 17025	11				
Zinc (dissolved)	µg/l	0.4	ISO 17025	3.8	l	I	I	I
Calcium (dissolved)	mg/l	0.012	ISO 17025	12	1	1	1	T
Magnesium (dissolved)	mg/l	0.012	ISO 17025	0.33	1		1	ł
Petroleum Hydrocarbons		•			•	•	•	•
TPH1 (C10 - C40)	µq/l	10	NONE	< 10			1	r
	P9/1	10	NONE	× 10	8		1	<u>.</u>
TPH2 (C6 - C10)	µg/l	10	NONE	< 10		1	1	1

ug/l

10 NONE

< 10





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Lab Sample Number	Lab Sample Number			973692		
Sample Reference	Sample Reference			TP01A		
Sample Number				None Supplied		
Depth (m)				0.10		
Date Sampled				31/05/2018		
Time Taken				None Supplied		
Analytical Parameter (Bulk Analysis)	Units	Limit of detection	Accreditation Status			
Asbestos Identification Name	Туре	N/A	ISO 17025	Chrysotile- Hard/Cement Type Material		





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
973689	BH02C	None Supplied	1.00	Brown sand with gravel.
973690	BH02C	None Supplied	2.00	Brown sand with gravel.
973691	BH02C	None Supplied	2.50	Brown clay and sand with gravel.





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name Analytical Method Description		Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonia as NH3 in soil	Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.		L082-PL	w	MCERTS
Ammoniacal Nitrogen as N in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Asbestos identification in Bulks	Asbestos Identification in bulk material with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	w	ISO 17025
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron in leachate	Determination of boron in leachate. Sample acidified and followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC- MS.	In-house method based on USEPA8260	L073B-PL	w	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Dissolved Organic Carbon in leachate	Determination of dissolved organic carbon in leachate by the measurement on a non-dispersive infrared analyser of carbon dioxide released by acidification.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L023-PL	w	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Hexavalent chromium in leachate	Determination of hexavalent chromium in leachate by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Mercury Low Level in leachate	Mercury in leachate by CV-AFS,	In-house method based on USEPA method 1631	L085-PL	W	ISO 17025
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE

Iss No 18-87658-1 Eastman Dental Institute- 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	w	NONE
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
pH at 20oC in leachate	Determination of pH in leachate by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Phenols, speciated, in leachate, by HPLC	Determination of speciated phenols by HPLC.	In house method based on Blue Book Method.	L030-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	w	ISO 17025
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS
Sulphide in leachate	Determination of sulphide in leachate by ion selective electrode.	In-house method	L010-PL	W	NONE
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in leachate	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total Hardness of leachates	Determination of hardness in leachates by calculation from calcium and magnesium.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	NONE
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038	w	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding.	L076-PL	w	MCERTS

Iss No 18-87658-1 Eastman Dental Institute- 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
TPH C6 - C40 (leachate)	Determination of TPH in leachate by HS-GC-MS and GC-MS	In-house method	L070-PL	W	NONE
TPH C6 - C40 (soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method	L076-PL	W	NONE
TPH1 (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE
TPH2 (Leachates)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	w	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



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Analytical Report Number : 18-89111

Project / Site name:	Eastman Dental Institute - 256 Grays Inn Road	Samples received on:	13/06/2018
Your job number:	18-3113	Samples instructed on:	14/06/2018
Your order number:	CL1475	Analysis completed by:	21/06/2018
Report Issue Number:	1	Report issued on:	21/06/2018
Samples Analysed:	1 soil sample		

fat Signed:

Jordan Hill Reporting Manager For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

TOUL	oruer	140.	CL14/3

Lab Sample Number				982312				
Sample Reference				TP05		1	1	
Sample Number				None Supplied				
Depth (m)				0.30-0.60				
Date Sampled				12/06/2018				
Time Taken				None Supplied				
				None Supplied				
		윤드	Accreditation Status					
Analytical Parameter	Units	Limit of detection	creditat Status					
(Soil Analysis)	its	tio	tus					
			ion					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content		0.1 N/A				ł	ł	
Total mass of sample received	%	0.001	NONE	13 1.7		ł	ł	
	kg	0.001	NONE	1./				
Asbestos in Soil	Turne	N/A	ISO 17025	Not-detected				
Aspestos III Soli	Туре	N/A	150 17025	Not-delected	ļ	I	<u>I</u>	ا ــــــــــــــــــــــــــــــــــــ
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	11.7				
Total Cyanide	mg/kg	N/A 1	MCERTS	< 1				
Free Cyanide	mg/kg	1	MCERTS	< 1		1	1	tl
Water Soluble SO4 16hr extraction (2:1 Leachate	mg/kg	-	PICERTS	~ 1		1	1	tl
Equivalent)	q/l	0.00125	MCERTS	0.063				
Sulphide	mg/kg	1	MCERTS	9.0				
Total Sulphur	%	0.005	MCERTS	0.710				
Ammonia as NH ₃	mg/kg	0.5	MCERTS	< 0.5				
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5				
Organic Matter	%	0.1	MCERTS	0.7				
Phenois by HPLC								
Catechol	mg/kg	0.1	ISO 17025	< 0.10				
Resorcinol	mg/kg	0.1	ISO 17025	< 0.10				
Cresols (o-, m-, p-)	mg/kg	0.3	ISO 17025	< 0.30				
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	ISO 17025	< 0.20				
2-Isopropylphenol	mg/kg	0.1	ISO 17025	< 0.10				
Phenol	mg/kg	0.1	ISO 17025	< 0.10				
Trimethylphenol (2,3,5-)	mg/kg	0.1	ISO 17025	< 0.10				
Total Xylenols and Ethylphenols	mg/kg	0.3	ISO 17025	< 0.30				
Total Phenois		-			1			
Total Phenols (HPLC)	mg/kg	1.3	ISO 17025	< 1.3				
Considered DAME								
Speciated PAHs		0.05	MORDER	. 0.05		-		
Naphthalene	mg/kg	0.05	MCERTS	< 0.05		l	l	
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05				
Fluorene	mg/kg	0.05	MCERTS	< 0.05		}	}	
Phenanthrene Apthracene	mg/kg	0.05	MCERTS	2.1		}	}	
Anthracene	mg/kg	0.05	MCERTS	0.26		}	}	
Fluoranthene	mg/kg	0.05	MCERTS	6.3		 	 	╂─────┤
Pyrene Benzo(a)anthracene	mg/kg	0.05	MCERTS	5.0 2.8		ł	ł	ł – – ł
Benzo(a)anthracene Chrysene	mg/kg	0.05	MCERTS			 	 	
Chrysene Benzo(b)fluoranthene	mg/kg	0.05	MCERTS MCERTS	2.8 3.2		1	1	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.2		1	1	
Benzo(k)huoranthene Benzo(a)pyrene	mg/kg					1	1	
	mg/kg	0.05	MCERTS	2.4		ł	ł	╂────┤
Indeno(1,2,3-cd)pyrene	mg/kg		MCERTS			ł	ł	╂────┤
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.43		1	1	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1./	1	1	1	
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	29.5	1	r	r	r 1
	шу/ку	0.0	PICERTS	د د ک		8	8	8





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road Your Order No: CL1475

Tour Order No: CE1475

Lab Sample Number				982312			
Sample Reference				TP05			
Sample Number				None Supplied			
Depth (m)				0.30-0.60			
Date Sampled	12/06/2018						
Time Taken	None Supplied						
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids		-	_		-	-	-
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0			
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	10			
Barium (aqua regia extractable)	mg/kg	1	MCERTS	130			
Boron (water soluble)	mg/kg	0.2	MCERTS	5.2			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	22			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	27			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	270			
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	300			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3			
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.42			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	18			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	43			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	51			

Monoaromatics

Benzene	ug/kg	1	MCERTS	< 1.0		
Toluene	µg/kg	1	MCERTS	< 1.0		
Ethylbenzene	µg/kg	1	MCERTS	< 1.0		
p & m-xylene	µg/kg	1	MCERTS	< 1.0		
o-xylene	µg/kg	1	MCERTS	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0		

Petroleum Hydrocarbons

TPH C10 - C40	mg/kg	10	MCERTS	70		
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	< 0.1		
TPH C6 - C40	mg/kg	10	NONE	70		
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	16		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	46		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	62		

Iss No 18-89111-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
982312	TP05	None Supplied	0.30-0.60	Light grey gravelly sand.





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonia as NH3 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC- MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	w	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Phenols, speciated, in soil, by HPLC	Determination of speciated phenols by HPLC.	In house method based on Blue Book Method.	L030-PL	W	ISO 17025
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS

Iss No 18-89111-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038	w	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding.	L076-PL	W	MCERTS
TPH C6 - C40 (soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method	L076-PL	W	NONE
TPH2 (Soil)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



Evangelos Kafantaris Concept Site Investigations Unit 8 Warple Mews Warple Way London W3 0RF

t: 02087401553

e: Concept Group



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 18-89114

Project / Site name:	Eastman Dental Institute - 256 Grays Inn Road	Samples received on:	12/06/2018
Your job number:	18-3113	Samples instructed on:	14/06/2018
Your order number:	CL1474	Analysis completed by:	21/06/2018
Report Issue Number:	1	Report issued on:	21/06/2018
Samples Analysed:	2 soil samples		

Signed:

Jordan Hill Reporting Manager For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Your Order No: CL1474

Lab Sample Number				002222	002224	r	,
Lab Sample Number				982323	982324	 	
Sample Reference				TP07	TP03		
Sample Number				None Supplied	None Supplied		
Depth (m)				0.20-0.50	0.30-0.60	 	
Date Sampled				11/06/2018	11/06/2018		
Time Taken		1	-	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	23	20		
Total mass of sample received	kg	0.001	NONE	2.0	2.0		
•							
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected		
General Inorganics						 -	
pH - Automated	pH Units	N/A	MCERTS	9.4	8.9		
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1		
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1		
Water Soluble SO4 16hr extraction (2:1 Leachate							
Equivalent)	g/l	0.00125	MCERTS	0.067	0.15	Į	
Sulphide	mg/kg	1	MCERTS	< 1.0	< 1.0		
Total Sulphur	%	0.005	MCERTS	0.077	0.032		
Ammonia as NH ₃	mg/kg	0.5	MCERTS	< 0.5	< 0.5		
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	< 0.5		
Organic Matter	%	0.1	MCERTS	0.7	0.6		
Phenols by HPLC	-					 -	
Catechol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10		
Resorcinol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10		
Cresols (o-, m-, p-)	mg/kg	0.3	ISO 17025	< 0.30	< 0.30		
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	ISO 17025	< 0.20	< 0.20		
2-Isopropylphenol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10		
Phenol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10		
Trimethylphenol (2,3,5-)	mg/kg	0.1	ISO 17025	< 0.10	< 0.10		
Total Xylenols and Ethylphenols	mg/kg	0.3	ISO 17025	< 0.30	< 0.30		
Total Phenols		-		-	-	 -	
Total Phenols (HPLC)	mg/kg	1.3	ISO 17025	< 1.3	< 1.3		
Speciated PAHs					1	1	
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	 ļ	ļ]
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	 ļ	ļ
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	l	
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	l	
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	ļ	
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	ļ	
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	ļ	
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1	
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1	
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	 I	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Total PAH	-				v		·
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80		

Iss No 18-89114-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Your Order No: CL1474

Lab Sample Number				982323	982324		
Sample Reference				TP07	TP03		
Sample Number				None Supplied	None Supplied		
Depth (m)				0.20-0.50	0.30-0.60		
Date Sampled	11/06/2018	11/06/2018					
Time Taken				None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids	-					-	
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	1.6	1.9		
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	16	11		
Barium (aqua regia extractable)	mg/kg	1	MCERTS	58	87		
Boron (water soluble)	mg/kg	0.2	MCERTS	2.4	1.3		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	37	46		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	34	32		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	49	24		
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	340	390		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.9	< 0.3		
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	< 0.25	< 0.25		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	38	37		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	1.7		
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	62	68		
Zinc (agua regia extractable)	mg/kg	1	MCERTS	75	79		

Monoaromatics

Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0		
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0		
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0		
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0		
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0		

Petroleum Hydrocarbons

TPH C10 - C40	mg/kg	10	MCERTS	< 10	< 10					
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	< 0.1	< 0.1					
TPH C6 - C40	mg/kg	10	NONE	< 10	< 10					
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001					
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001					
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001					
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0					
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0					
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0					
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0					
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10					
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001					
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001					
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001					
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0					
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0					
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10					
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10					
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10					

Iss No 18-89114-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Your Order No: CL1474

Sample Reference TFO TFO More Supplied Stangle Rumper None Supplied NoneS							1	
Sample Number Unore Supplet None Supplet None Supplet None Supplet None Supplet Data Samplef None Supplet None Supplet None Supplet None Supplet Analytical Parameter Sig Sig <t< th=""><th colspan="4">Lab Sample Number</th><th>982323</th><th>982324</th><th></th><th> </th></t<>	Lab Sample Number				982323	982324		
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AGG Automathene gada 1 NO A					None Supplieu	None Supplied		
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Jim Choide jacka I Note < 1.0 Image of the second secon	Chloroethane	µg/kg	1	NONE	< 1.0	-		
Index of the second s	Bromomethane	µg/kg	1	ISO 17025		-		
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Dis 1,2 dickinorethene µµ/n 1 MCRTS < 1.0								
THE (Methy Tertiony Bay) (Ether) 19/9 1 MCRTS < 10 . 1/10-biorechane 19/9 1 MCRTS < 10								
1.1.90:010000000000000000000000000000000					-			
2.2.Dichrosophane 1999 1 MCRTS < 1.0	1,1-Dichloroethane							
j.j.j.*indication y_0/y_0 1 MCRRS < 1.0 . Image: Second	2,2-Dichloropropane			MCERTS		-		
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Js-1,3-clichloropropene µg/kg 1 ISO 17025 < 1.0	Bromodichloromethane					-		
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Ditromochloromethane $\mu g/kg$ 1 ISO 17025 < 1.0 Cetrachloroethene $\mu g/kg$ 1 NONE < 1.0								
Tetrachloroethene $\mu g/kg$ 1 NONE < 1.0 Image: constraint of the state of	· · · · ·				-			
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sopropylbenzene $\mu g/kg$ 1 MCERTS < 1.0 - Image: Constraint of the state o	o-Xylene					-		
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h-Propylbenzene $\mu g/kg$ 1 ISO 17025 < 1.0 Image: Marcine Marcontextentetetetee Marcine Marcine Marcine Marcontextente Marcin								
$\mu g/kg$ 1 MCERTS < 1.0 - Image: constraint of the state of the s								
4-Chlorotoluene $\mu g/kg$ 1 MCERTS < 1.0 - Image: Constraint of the state of th	2-Chlorotoluene							
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yert-Butylbenzene yg/kg 1 MCERTS < 1.0 - Image: Constraint of the state of	1,3,5-Trimethylbenzene		1	ISO 17025	< 1.0			
wee-Butylbenzene $\mu g/kg$ 1 MCERTS < 1.0 - Image: Constraint of the state of t	tert-Butylbenzene					-		
1,3-Dichlorobenzene μg/kg 1 ISO 17025 < 1.0	1,2,4-Trimethylbenzene							
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μg/kg 1 MCERTS < 1.0								
μg/kg 1 MCERTS < 1.0 -								
μg/kg 1 MCERTS < 1.0 - L,2-Dibromo-3-chloropropane μg/kg 1 ISO 17025 < 1.0								
μg/kg 1 ISO 17025 < 1.0 - μg/kg 1 MCERTS < 1.0	Butylbenzene							
μg/kg 1 MCERTS < 1.0 - Hexachlorobutadiene μg/kg 1 MCERTS < 1.0								
Hexachlorobutadiene µg/kg 1 MCERTS < 1.0 -	1,2,4-Trichlorobenzene							
μ ₂ / ₃ -Trichlorobenzene μ _g /kg 1 ISO 17025 < 1.0 -	Hexachlorobutadiene		1		< 1.0			
	1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-		





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Your Order No: CL1474

Lab Sample Number				982323	982324		
Sample Reference				TP07	TP03		
Sample Number				None Supplied 0.20-0.50	None Supplied 0.30-0.60		
Depth (m)				11/06/2018	11/06/2018		
Date Sampled Time Taken				None Supplied	None Supplied		
				None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs							
Aniline	mg/kg	0.1	NONE	< 0.1	-		
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-		
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-		
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-		
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-		
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-		
1,4-Dichlorobenzene Bis(2-chloroisopropyl)ether	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.2 < 0.1	-		
2-Methylphenol	mg/kg	0.1	MCERTS	< 0.1	-		
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	-		
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-		
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	 	
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-		
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	-		
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-		
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-		
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-		
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-		
2,4-Dichlorophenol 4-Chloroaniline	mg/kg	0.3	MCERTS NONE	< 0.3 < 0.1	-		
Hexachlorobutadiene	mg/kg mg/kg	0.1	MCERTS	< 0.1	-		
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	_		
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	-		
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	-		
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	-		
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-		
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-		
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	-		
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-		
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-		
2,4-Dinitrotoluene Dibenzofuran	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.2 < 0.2			
4-Chlorophenyl phenyl ether	mg/kg	0.2	ISO 17025	< 0.2	-		
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-		
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	-		
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-		
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	-	 	
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-		
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-		
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	-		
Anthracene	mg/kg	0.05	MCERTS	< 0.05	-		
Carbazole	mg/kg	0.3	MCERTS	< 0.3	-		
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-		
Anthraquinone Fluoranthene	mg/kg mg/kg	0.3	MCERTS MCERTS	< 0.3 < 0.05	-		
Pyrene	mg/kg mg/kg	0.05	MCERTS	< 0.05	-		
Butyl benzyl phthalate	mg/kg	0.03	ISO 17025	< 0.3	-		
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	-		
Chrysene	mg/kg	0.05	MCERTS	< 0.05	-		
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	 	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-		
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	-		
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	-		
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	-		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	-]	

Iss No 18-89114-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
982323	TP07	None Supplied	0.20-0.50	Brown clay with gravel.
982324	TP03	None Supplied	0.30-0.60	Brown clay and sand.

Iss No 18-89114-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

		., .,		r	1
Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonia as NH3 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC- MS.	In-house method based on USEPA8260	L073B-PL	w	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Phenols, speciated, in soil, by HPLC	Determination of speciated phenols by HPLC.	In house method based on Blue Book Method.	L030-PL	W	ISO 17025
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS

Iss No 18-89114-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038	W	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding.	L076-PL	W	MCERTS
TPH C6 - C40 (soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method	L076-PL	W	NONE
TPH2 (Soil)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	w	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



Evangelos Kafantaris Concept Site Investigations Unit 8 Warple Mews Warple Way London W3 0RF

t: 02087401553

e: Concept Group



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 18-89730

Project / Site name:	Eastman Dental Institute - 256 Grays Inn Road	Samples received on:	18/06/2018
Your job number:	18-3113	Samples instructed on:	20/06/2018
Your order number:	CL1482	Analysis completed by:	27/06/2018
Report Issue Number:	1	Report issued on:	27/06/2018
Samples Analysed:	1 bulk sample - 1 leachate sample - 3 soil samples		

hat Signed:

Jordan Hill Reporting Manager For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Your Order No: CL1482

Lab Sample Number				986190	986191	986192	
Sample Reference				BH03	BH04	BH04	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				0.50	0.50	1.00	
Date Sampled				15/06/2018	15/06/2018	15/06/2018	
Time Taken	None Supplied	None Supplied	None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	
Moisture Content	%	N/A	NONE	8.7	14	17	
Total mass of sample received	kg	0.001	NONE	2.0	2.0	1.8	
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	-	Chrysotile	-	
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Detected	Not-detected	
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	0.106	-	
Asbestos Quantification Total	%	0.001	ISO 17025	-	0.106	-	
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	9.8	9.0	8.5	
Total Cyanide	mg/kg	1	MCERTS	1	< 1	< 1	
Free Cyanide Water Soluble SO4 16hr extraction (2:1 Leachate	mg/kg	1	MCERTS	< 1	< 1	< 1	
Equivalent)	g/l	0.00125	MCERTS	0.31	0.057	0.028	
Sulphide	mg/kg	1	MCERTS	3.5	1.2	< 1.0	
Total Sulphur Ammonia as NH ₃	% mg/kg	0.005	MCERTS MCERTS	0.134 < 0.5	0.056 < 0.5	0.018 < 0.5	
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5	
Organic Matter	111g/kg %	0.1	MCERTS	0.6	1.3	0.5	
	70	0.1	PICERTS	0.0	1.5	0.5	I
Phenols by HPLC							
Catechol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10	< 0.10	
Resorcinol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10	< 0.10	
Cresols (o-, m-, p-)	mg/kg	0.3	ISO 17025	< 0.30	< 0.30	< 0.30	
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	ISO 17025	< 0.20	< 0.20	< 0.20	
2-Isopropylphenol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10	< 0.10	
Phenol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10	< 0.10	
Trimethylphenol (2,3,5-) Total Xylenols and Ethylphenols	mg/kg	0.1	ISO 17025 ISO 17025	< 0.10 < 0.30	< 0.10 < 0.30	< 0.10 < 0.30	
Total Xylenois and Ethylphenois	mg/kg	0.3	150 17025	< 0.30	< 0.30	< 0.30	
Total Phenols							
Total Phenols (HPLC)	mg/kg	1.3	ISO 17025	< 1.3	< 1.3	< 1.3	
Speciated PAHs	• 4 4						
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	
Phenanthrene	mg/kg	0.05	MCERTS	0.70	0.22	< 0.05	
Anthracene	mg/kg	0.05	MCERTS	0.18	< 0.05	< 0.05	
Fluoranthene	mg/kg	0.05	MCERTS	2.2	0.82	< 0.05	
Pyrene Repre (a)anthracene	mg/kg	0.05	MCERTS	1.9	0.74	< 0.05	
Benzo(a)anthracene Chrysene	mg/kg mg/kg	0.05	MCERTS MCERTS	0.95	0.36	< 0.05 < 0.05	
Benzo(b)fluoranthene	mg/kg mg/kg	0.05	MCERTS	1.3	0.62	< 0.05	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.60	0.36	< 0.05	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.1	0.46	< 0.05	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.59	0.27	< 0.05	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.90	0.36	< 0.05	
Total PAH Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	11.8	4.70	< 0.80	





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Your Order No: CL1482

Lab Sample Number				986190	986191	986192					
Sample Reference				BH03	BH04	BH04					
Sample Number				None Supplied	None Supplied	None Supplied					
Depth (m)				0.50	0.50	1.00					
Date Sampled				15/06/2018	15/06/2018	15/06/2018					
Time Taken				None Supplied	None Supplied	None Supplied					
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status								
Heavy Metals / Metalloids	Heavy Metals / Metalloids										
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	12	4.9	2.7					
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	19	14	15					
Barium (aqua regia extractable)	mg/kg	1	MCERTS	340	160	130					
Boron (water soluble)	mg/kg	0.2	MCERTS	2.2	0.4	1.0					
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2					
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0					
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	29	15	35					
Copper (aqua regia extractable)	mg/kg	1	MCERTS	35	59	32					
Lead (aqua regia extractable)	mg/kg	1	MCERTS	270	500	320					
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	280	250	310					
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	2.4	1.3	< 0.3					
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.30	0.54	< 0.25					
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	17	16	35					
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0					
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	51	34	63					
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	300	120	86					

Monoaromatics

Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	

Petroleum Hydrocarbons

TPH C10 - C40	mg/kg	10	MCERTS	190	17	< 10		
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
TPH C6 - C40	mg/kg	10	NONE	190	17	< 10		
							1	1
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	9.8	< 8.0	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	54	< 8.0	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	65	< 10	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	4.7	< 2.0	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	19	< 10	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	72	12	< 10		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	96	16	< 10		





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Your Order No: CL1482

Lak Camula Number				000100	00(101	00(102		
Lab Sample Number Sample Reference				986190 BH03	986191 BH04	986192 BH04		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				0.50	0.50	1.00		
Date Sampled				15/06/2018	15/06/2018	15/06/2018		
Time Taken				None Supplied	None Supplied	None Supplied		
			A					
Analytical Parameter	c	Limit of detection	Accreditation Status					
(Soil Analysis)	Units	ect nit	creditat Status					
(Son Analysis)	s	igi of	atio					
			ă					
VOCs	-	-	-					
Chloromethane	µg/kg	1	ISO 17025	-	< 1.0	-		
Chloroethane	µg/kg	1	NONE	-	< 1.0	-		
Bromomethane	µg/kg	1	ISO 17025	-	< 1.0	-		
Vinyl Chloride	µg/kg	1	NONE NONE	-	< 1.0	-		
Trichlorofluoromethane 1,1-Dichloroethene	μg/kg μg/kg	1	NONE	-	< 1.0 < 1.0	-		
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg µg/kg	1	ISO 17025		< 1.0	-		
Cis-1,2-dichloroethene	µg/kg µg/kg	1	MCERTS	_	< 1.0	_		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	-		
1,1-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	-		
2,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	-		
Trichloromethane	µg/kg	1	MCERTS	-	< 1.0	-		
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	-		
1,2-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	-		
1,1-Dichloropropene	µg/kg	1	MCERTS	-	< 1.0	-		
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0	-		
Benzene	µg/kg	1	MCERTS	-	< 1.0	-		
Tetrachloromethane 1,2-Dichloropropane	μg/kg μg/kg	1	MCERTS MCERTS	-	< 1.0 < 1.0			
Trichloroethene	μg/kg μg/kg	1	MCERTS	-	< 1.0			
Dibromomethane	µg/kg µg/kg	1	MCERTS	-	< 1.0	-		
Bromodichloromethane	µg/kg	1	MCERTS	-	< 1.0	-		
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	-		
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	-		
Toluene	µg/kg	1	MCERTS	-	< 1.0	-		
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	-		
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	< 1.0	-		
Dibromochloromethane	µg/kg	1	ISO 17025	-	< 1.0	-		
Tetrachloroethene	µg/kg	1	NONE	-	< 1.0	-		
1,2-Dibromoethane Chlorobenzene	μg/kg μg/kg	1	ISO 17025 MCERTS	-	< 1.0 < 1.0	-		
1,1,1,2-Tetrachloroethane	μg/kg μg/kg	1	MCERTS	-	< 1.0	-		
Ethylbenzene	µg/kg µg/kg	1	MCERTS	-	< 1.0	-		
p & m-Xylene	µg/kg	1	MCERTS	-	< 1.0	-		
Styrene	µg/kg	1	MCERTS	-	< 1.0	-		
Tribromomethane	µg/kg	1	NONE	-	< 1.0	-		
o-Xylene	µg/kg	1	MCERTS	-	< 1.0	-		
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	-		
Isopropylbenzene	µg/kg	1	MCERTS	-	< 1.0	-		
Bromobenzene	µg/kg	1	MCERTS	-	< 1.0	-		
n-Propylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-		
2-Chlorotoluene 4-Chlorotoluene	μg/kg μg/kg	1 1	MCERTS MCERTS	-	< 1.0 < 1.0	-		
1,3,5-Trimethylbenzene	μg/kg μg/kg	1	ISO 17025	-	< 1.0	-		
tert-Butylbenzene	µg/kg µg/kg	1	MCERTS	-	< 1.0	_		
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-		
sec-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-		
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	-		
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	< 1.0	-		
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-		
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-		
Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-		
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	< 1.0	-		
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-		
Hexachlorobutadiene 1,2,3-Trichlorobenzene	μg/kg μg/kg	1	MCERTS ISO 17025	-	< 1.0 < 1.0	-		
	Pg/Ng	1	130 17023	-	< 1.U	-	1	I

Iss No 18-89730-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Your Order No: CL1482

Lab Sample Number				986190	986191	986192	
Sample Reference				BH03	BH04	BH04	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				0.50	0.50	1.00	
Date Sampled				15/06/2018	15/06/2018	15/06/2018	
Time Taken	-			None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs			•				
Aniline	mg/kg	0.1	NONE	-	< 0.1	-	
Phenol	mg/kg	0.2	ISO 17025	-	< 0.2	-	
2-Chlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	-	
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	< 0.2	-	
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	-	
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	< 0.1	-	
1,4-Dichlorobenzene Bis(2-chloroisopropyl)ether	mg/kg mg/kg	0.2	MCERTS MCERTS	-	< 0.2	-	
2-Methylphenol	mg/kg	0.1	MCERTS	-	< 0.1	-	
Hexachloroethane	mg/kg	0.05	MCERTS	-	< 0.05	-	
Nitrobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	
4-Methylphenol	mg/kg	0.2	NONE	-	< 0.2	-	
Isophorone	mg/kg	0.2	MCERTS	-	< 0.2	-	
2-Nitrophenol	mg/kg	0.3	MCERTS	-	< 0.3	-	
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	< 0.3	-	
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	< 0.3	-	
1,2,4-Trichlorobenzene Naphthalene	mg/kg	0.3	MCERTS MCERTS	-	< 0.3 < 0.05	-	
2,4-Dichlorophenol	mg/kg mg/kg	0.05	MCERTS	-	< 0.3	-	
4-Chloroaniline	mg/kg	0.1	NONE	-	< 0.1	-	
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	< 0.1	-	
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	< 0.1	-	
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	-	
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	< 0.2	-	
2-Methylnaphthalene	mg/kg	0.1	NONE	-	< 0.1	-	
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	< 0.1	-	
Dimethylphthalate 2,6-Dinitrotoluene	mg/kg mg/kg	0.1	MCERTS MCERTS	-	< 0.1	-	
Acenaphthylene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05	-	
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	< 0.2	-	
Dibenzofuran	mg/kg	0.2	MCERTS	-	< 0.2	-	
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	< 0.3	-	
Diethyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	-	
4-Nitroaniline	mg/kg	0.2	MCERTS	-	< 0.2	-	
Fluorene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Azobenzene Bromophenyl phenyl ether	mg/kg mg/kg	0.3	MCERTS MCERTS	-	< 0.3	-	
Hexachlorobenzene	mg/kg mg/kg	0.2	MCERTS	-	< 0.2	-	
Phenanthrene	mg/kg	0.05	MCERTS	-	0.22	-	
Anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Carbazole	mg/kg	0.3	MCERTS	-	< 0.3	-	
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	-	
Anthraquinone	mg/kg	0.3	MCERTS	-	< 0.3	-	
Fluoranthene	mg/kg	0.05	MCERTS	-	0.82	-	
Pyrene But d base d abthalata	mg/kg	0.05	MCERTS	-	0.74	-	
Butyl benzyl phthalate Benzo(a)anthracene	mg/kg	0.3	ISO 17025	-	< 0.3	-	
Benzo(a)anthracene Chrysene	mg/kg mg/kg	0.05	MCERTS MCERTS	-	0.36 0.62	-	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	0.62	-	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	0.36	-	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	0.46	-	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	0.27	-	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	0.36	-	

Iss No 18-89730-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Analytical Report Number:18-89730Project / Site name:Eastman Dental Institute - 256 Grays Inn RoadYour Order No:CL1482

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
986191	BH04	0.50	155	Hard/Cement Type Material & Loose Fibrous Debris	Chrysotile	0.106	0.106

Both Qualitative and Quantitative Analyses are UKAS accredited.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Your Order No: CL1482								
Lab Sample Number	986194							
Sample Reference				BH04				
Sample Number				None Supplied				
Depth (m)				0.50				
Date Sampled		15/06/2018						
Time Taken				None Supplied				
		9 –	Å					
Analytical Parameter	ç	Jim	Sta					
(Leachate Analysis)	Units	Limit of detection	it a					
		on	Accreditation Status					
			_					<u> </u>
General Inorganics								
pН	pH Units	N/A	ISO 17025	7.8				
Total Cyanide	µg/l	10	ISO 17025	< 10				
Sulphate as SO ₄	mg/l	0.1	ISO 17025	3.3		I		
Sulphide	µg/l	5	NONE	< 5.0	1	1		
Ammoniacal Nitrogen as N	μg/l	15	NONE	< 15	1	1		
Ammonium as NH ₄	μg/l	15	NONE	16	1	1	1	
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	3.96			1	1
Hardness - Total	mgCaCO3/I	1	NONE	30.1				
	ingeaco3/i	-		55.1	8	•		<u>a</u>
Phenols by HPLC								
Catechol	µg/l	0.5	NONE	< 0.5				
Resorcinol	μg/l	0.5	NONE	< 0.5				
Ethylphenol & Dimethylphenol	μg/l	0.5	NONE	< 0.5				
Cresols	μg/l	0.5	NONE	< 0.5				
Naphthols	μg/l	0.5	NONE	< 0.5				
Isopropylphenol	μg/l	0.5	NONE	< 0.5				
Phenol	μg/l	0.5	NONE	< 0.5				1
Trimethylphenol	μg/l	0.5	NONE	< 0.5				1
	μ9/.	0.0	HOLLE					<u>.</u>
Total Phenols								
Total Phenols (HPLC)	µg/l	3.5	NONE	< 3.5				
			· · · · ·				-	
Speciated PAHs							r	1
Naphthalene	µg/l	0.01	ISO 17025	< 0.01				
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01		I		l
Acenaphthene	µg/I	0.01	ISO 17025	< 0.01		I		l
Fluorene	µg/l	0.01	ISO 17025	< 0.01		Į		
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01				ļ
Anthracene	µg/l	0.01	ISO 17025	< 0.01				l
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01		ļ		I
Pyrene	µg/l	0.01	ISO 17025	< 0.01		l		Į
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01		l	ļ	Į
Chrysene	µg/l	0.01	ISO 17025	< 0.01		l	ļ	Į
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01		l	ļ	Į
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01				
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01				
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01				
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01				
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01				
Total PAH						-		
Total EPA-16 PAHs	µg/l	0.2	NONE	< 0.2				l





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Lab Sample Number				986194			
Sample Reference				BH04			
Sample Number				None Supplied			
Depth (m)				0.50			
Date Sampled				15/06/2018			
Time Taken				None Supplied			
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids						-	
Antimony (dissolved)	µg/l	1.7	ISO 17025	5.7			
Arsenic (dissolved)	µg/l	1.1	ISO 17025	2.0			
Barium (dissolved)	µg/l	0.05	ISO 17025	6.7			
Boron (dissolved)	µg/l	10	ISO 17025	< 10			
Cadmium (dissolved)	μg/l	0.08	ISO 17025	< 0.08			
Chromium (hexavalent)	µg/l	5	NONE	< 5.0			
Chromium (dissolved)	µg/l	0.4	ISO 17025	1.6			
Copper (dissolved)	μg/l	0.7	ISO 17025	7.8			
Lead (dissolved)	µg/l	1	ISO 17025	14			
Manganese (dissolved)	µg/l	0.06	ISO 17025	4.1			
Mercury - CV-AFS	ug/l	0.007	ISO 17025	0.0540			
Molybdenum (dissolved)	µg/l	0.4	ISO 17025	< 0.4			
Nickel (dissolved)	μg/l	0.3	ISO 17025	< 0.3			
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0			
/anadium (dissolved)	μg/l	1.7	ISO 17025	13]
Zinc (dissolved)	µg/I	0.4	ISO 17025	4.0	I I	I	
Calcium (dissolved)	mg/l	0.012	ISO 17025	12	<u>г</u>	 1	
	mg/l	0.005	ISO 17025	0.24	i i		

TPH1 (C10 - C40)	µg/l	10	NONE	< 10		
TPH2 (C6 - C10)	µg/l	10	NONE	< 10		
TPH C6 - C40	ug/l	10	NONE	< 10		





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Lab Sample Number				986193		
Sample Reference				BH03		
Sample Number				None Supplied		
Depth (m)				0.30		
Date Sampled				15/06/2018		
Time Taken				None Supplied		
Analytical Parameter (Bulk Analysis)	Units	Limit of detection	Accreditation Status			
Asbestos Identification Name	Туре	N/A	ISO 17025	Chrysotile- Hard/Cement Type Material		





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
986190	BH03	None Supplied	0.50	Light brown sand with rubble and brick.
986191	BH04	None Supplied	0.50	Brown loam and clay with brick and gravel
986192	BH04	None Supplied	1.00	Brown clay and sand with chalk and gravel

Iss No 18-89730-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonia as NH3 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Ammoniacal Nitrogen as N in eachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Asbestos identification in Bulks	Asbestos Identification in bulk material with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	W	ISO 17025
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Boron in leachate	Determination of boron in leachate. Sample acidified and followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC- MS.	In-house method based on USEPA8260	L073B-PL	w	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Dissolved Organic Carbon in leachate	Determination of dissolved organic carbon in leachate by the measurement on a non-dispersive infrared analyser of carbon dioxide released by acidification.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L023-PL	w	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Hexavalent chromium in leachate	Determination of hexavalent chromium in leachate by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Mercury Low Level in leachate	Mercury in leachate by CV-AFS,	In-house method based on USEPA method 1631	L085-PL	W	ISO 17025
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS

Iss No 18-89730-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	w	NONE
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
pH at 20oC in leachate	Determination of pH in leachate by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Phenols, speciated, in leachate, by HPLC	Determination of speciated phenols by HPLC.	In house method based on Blue Book Method.	L030-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS
Sulphide in leachate	Determination of sulphide in leachate by ion selective electrode.	In-house method	L010-PL	W	NONE
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in leachate	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total Hardness of leachates	Determination of hardness in leachates by calculation from calcium and magnesium.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	NONE
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038	W	MCERTS

Iss No 18-89730-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding.	L076-PL	W	MCERTS
TPH C6 - C40 (leachate)	Determination of TPH in leachate by HS-GC-MS and GC-MS	In-house method	L070-PL	W	NONE
TPH C6 - C40 (soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method	L076-PL	W	NONE
TPH1 (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE
TPH2 (Leachates)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



Evangelos Kafantaris Concept Site Investigations Unit 8 Warple Mews Warple Way London W3 0RF

t: 02087401553

e: Concept Group



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 18-90086

Project / Site name:	Eastman Dental Institute - 256 Grays Inn Road	Samples received on:	20/06/2018
Your job number:	18-3113	Samples instructed on:	22/06/2018
Your order number:	CL1486	Analysis completed by:	29/06/2018
Report Issue Number:	1	Report issued on:	29/06/2018
Samples Analysed:	2 soil samples		

LAL Signed:

Jordan Hill Reporting Manager For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Your Order No: CL1486

Lab Sample Number				987981	987982		1
Sample Reference				BH03	BH03		
Sample Number				None Supplied	None Supplied		
Depth (m)				2.50	4.70		
Date Sampled				19/06/2018	19/06/2018		
Time Taken				None Supplied	None Supplied		
				None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	9.6	22		
Total mass of sample received	kg	0.001	NONE	2.0	1.6		
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	Chrysotile	-		
Asbestos in Soil	Туре	N/A	ISO 17025	Detected	Not-detected		
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.045	-		
Asbestos Quantification Total	%	0.001	ISO 17025	0.045	-		
General Inorganics pH - Automated	pH Units	N/A	MCERTS	10.6	8.0		
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1		
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1		
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1.7	0.45		
Sulphide	mg/kg	1	MCERTS	17	< 1.0		
Total Sulphur	%	0.005	MCERTS	2.90	0.046		
Ammonia as NH ₃	mg/kg	0.5	MCERTS	< 0.5	< 0.5		
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	< 0.5		
Organic Matter	%	0.1	MCERTS	1.5	0.8		
Phenois by HPLC							
Catechol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10		
Resorcinol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10		
Cresols (o-, m-, p-)	mg/kg	0.3	ISO 17025	< 0.30	< 0.30	1	
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	ISO 17025	< 0.20	< 0.20		
2-Isopropylphenol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10		
Phenol	mg/kg	0.1	ISO 17025	< 0.10	< 0.10		
Trimethylphenol (2,3,5-)	mg/kg	0.1	ISO 17025	< 0.10	< 0.10		
Total Xylenols and Ethylphenols	mg/kg	0.3	ISO 17025	< 0.30	< 0.30		
Total Phenois							
Total Phenols (HPLC)	ma/ka	1.3	ISO 17025	< 1.3	< 1.3		
			100 1,020	. 1.0			





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Your Order No: CL1486

Lab Sample Number				987981	987982	1	
Sample Reference				BH03	BH03		
Sample Number				None Supplied	None Supplied 4.70	 	
Depth (m)				2.50		 	
Date Sampled	19/06/2018	19/06/2018					
Time Taken	1		1	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Phenanthrene	mg/kg	0.05	MCERTS	1.1	< 0.05		
Anthracene	mg/kg	0.05	MCERTS	0.24	< 0.05		
Fluoranthene	mg/kg	0.05	MCERTS	1.9	< 0.05		
Pyrene	mg/kg	0.05	MCERTS	1.7	< 0.05		
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.96	< 0.05		
Chrysene	mg/kg	0.05	MCERTS	0.79	< 0.05		
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	1.0	< 0.05		
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.59	< 0.05		
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.0	< 0.05		
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.46	< 0.05		
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.60	< 0.05		
Total PAH			<u>.</u>			 	
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	10.4	< 0.80		
Heavy Metals / Metalloids						1	· · · · · · · · · · · · · · · · · · ·
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	4.2	1.5	l	
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.8	11		
Barium (aqua regia extractable)	mg/kg	1	MCERTS	110	62	l	
Boron (water soluble)	mg/kg	0.2	MCERTS	0.9	1.5		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20	44		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	17	29	l	
Lead (aqua regia extractable)	mg/kg	1	MCERTS	110	14		
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	240	370		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.2	< 0.3		
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.33	< 0.25		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	14	39		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.8	< 1.0		
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	31	77		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	270	78	I	





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Your Order No: CL1486

Lab Sample Number				987981	987982		
Sample Reference				BH03	BH03		
Sample Number				None Supplied	None Supplied		
Depth (m)	Depth (m)			2.50	4.70		
Date Sampled				19/06/2018	19/06/2018		
Time Taken				None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Monoaromatics							
Benzene	ug/kg	1	MCERTS	< 1.0	-		
Toluene	µg/kg	1	MCERTS	< 1.0	-		
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-		
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-		
o-xylene	µg/kg	1	MCERTS	< 1.0	-		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-		

Petroleum Hydrocarbons

	<u> </u>					 <u>.</u>	
TPH C10 - C40	mg/kg	10	MCERTS	930	33		
						-	
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
		-					
TPH C6 - C40	mg/kg	10	NONE	930	33		
						-	
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	-		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	-		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	5.7	-		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	31	-		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	200	-		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	230	-		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	3.5	-		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	38	-		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	470	-		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	510	-		





Analytical Report Number:18-90086Project / Site name:Eastman Dental Institute - 256 Grays Inn RoadYour Order No:CL1486

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
987981	BH03	2.50	143	Loose Fibrous Debris	Chrysotile	0.045	0.045

Both Qualitative and Quantitative Analyses are UKAS accredited.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
987981	BH03	None Supplied	2.50	Brown sand with brick and rubble.
987982	BH03	None Supplied	4.70	Brown clay with gravel.





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

	T T				T	
Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status	
Ammonia as NH3 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	w	MCERTS	
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025	
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025	
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS	
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC- MS.	In-house method based on USEPA8260	L073B-PL	w	MCERTS	
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE	
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS	
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	w	MCERTS	
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS	
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	w	NONE	
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS	
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS	
Phenols, speciated, in soil, by HPLC	Determination of speciated phenols by HPLC.	In house method based on Blue Book Method.	L030-PL	w	ISO 17025	
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS	
Standards. Stones content of soil Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.		In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE	
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS	
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS	

Iss No 18-90086-1 Eastman Dental Institute - 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038	w	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding.	L076-PL	W	MCERTS
TPH C6 - C40 (soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method	L076-PL	W	NONE
TPH2 (Soil)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	w	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



Evangelos Kafantaris Concept Site Investigations Unit 8 Warple Mews Warple Way London W3 0RF

t: 02087401553

e: Concept Group



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 18-90251

Project / Site name:	Eastman Dental Institute- 256 Grays Inn Road	Samples received on:	25/06/2018
Your job number:	18-3113	Samples instructed on:	25/06/2018
Your order number:	CL1487	Analysis completed by:	02/07/2018
Report Issue Number:	1	Report issued on:	02/07/2018
Samples Analysed:	1 soil sample		

LAS Signed:

Jordan Hill Reporting Manager For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

i Uui	oruer	110.	CLITO/	

Lab Sample Number				988737			1	
Sample Reference				BH01				
Sample Number				None Supplied				
Depth (m)				0.50				
Date Sampled				20/06/2018				
Time Taken		None Supplied						
			A					
Analytical Parameter		Limit of detection	Accreditation Status					
(Soil Analysis)	Units	ect	creditati Status					
	s	igi qf	atic					
			ň					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	7.5				
Total mass of sample received	kg	0.001	NONE	1.9				
					1	1		1
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	Amosite				
Ashestes in Call		N1/A	100 17005	Datastad				
Asbestos in Soil	Туре	N/A 0.001	ISO 17025					
Asbestos Quantification (Stage 2) Asbestos Quantification Total	%	0.001	ISO 17025 ISO 17025	< 0.001				
Aspestos Qualitification Total	70	0.001	150 17025	< 0.001				
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	10.6				
Total Cyanide	mg/kg	1	MCERTS	< 1				
Free Cyanide	mg/kg	1	MCERTS	< 1			1	
Water Soluble SO4 16hr extraction (2:1 Leachate								
Equivalent)	g/l	0.00125	MCERTS	1.7				
Sulphide	mg/kg	1	MCERTS	6.8				
Total Sulphur	%	0.005	MCERTS	0.289 0.7				
Ammonia as NH₃ Ammonium as NH₄	mg/kg mg/kg	0.5	MCERTS MCERTS	0.7				
		0.3		1.2				
Organic Matter	%	0.1	MCERTS	1.2				
Phenols by HPLC								
Catechol	mg/kg	0.1	ISO 17025	< 0.10				
Resorcinol	mg/kg	0.1	ISO 17025	< 0.10				
Cresols (o-, m-, p-)	mg/kg	0.3	ISO 17025	< 0.30				
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	ISO 17025	< 0.20				
2-Isopropylphenol	mg/kg	0.1	ISO 17025	< 0.10				
Phenol	mg/kg	0.1	ISO 17025	< 0.10				
Trimethylphenol (2,3,5-)	mg/kg	0.1	ISO 17025	< 0.10				
Total Xylenols and Ethylphenols	mg/kg	0.3	ISO 17025	< 0.30				
Total Phenois		1.2	100 17005	. 1 0	1	1	1	1
Total Phenols (HPLC)	mg/kg	1.3	ISO 17025	< 1.3				
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05			İ	
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05			1	
Fluorene	mg/kg	0.05	MCERTS	< 0.05				
Phenanthrene	mg/kg	0.05	MCERTS	0.28				
Anthracene	mg/kg	0.05	MCERTS	0.10				
Fluoranthene	mg/kg	0.05	MCERTS	0.68				
Pyrene	mg/kg	0.05	MCERTS	0.56				
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.37			ļ	
Chrysene	mg/kg	0.05	MCERTS	0.32				
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.52				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.23			ļ	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.43			ļ	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.19				
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.25	1	1	1	I
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	3.93				
openated rotal El71 10 17815	1119/ Kg	0.0	I ICLIVIJ	5.55	1	1		1





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road Your Order No: CL1487

Lab Sample Number				988737				
Sample Reference				BH01				
Sample Number				None Supplied				
Depth (m)				0.50				
Date Sampled				20/06/2018				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids	-	-	-		-	-	-	
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	2.4				
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12				
Barium (aqua regia extractable)	mg/kg	1	MCERTS	150				
Boron (water soluble)	mg/kg	0.2	MCERTS	1.5				
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2				
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0				
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23				
Copper (aqua regia extractable)	mg/kg	1	MCERTS	47				
Lead (aqua regia extractable)	mg/kg	1	MCERTS	150				
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	230				
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3				
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.91				
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	19				
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0				
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	27				
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	62				

Petroleum Hydrocarbons

TPH C10 - C40	mg/kg	10	MCERTS	870		
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	< 0.1		
TPH C6 - C40	mg/kg	10	NONE	870		





Analytical Report Number:18-90251Project / Site name:Eastman Dental Institute- 256 Grays Inn RoadYour Order No:CL1487

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	Material Types PLM Results		Total % Asbestos in Sample
988737	BH01	0.50	138	Loose Fibres	Amosite	< 0.001	< 0.001

Both Qualitative and Quantitative Analyses are UKAS accredited.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Samp Number		Sample Number	Depth (m)	Sample Description *
988737	BH01	None Supplied	0.50	Brown sand with rubble and brick.





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonia as NH3 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	w	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	w	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Phenols, speciated, in soil, by HPLC	Determination of speciated phenols by HPLC.	In house method based on Blue Book Method.	L030-PL	W	ISO 17025
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS

Iss No 18-90251-1 Eastman Dental Institute- 256 Grays Inn Road 18-3113





Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038	W	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding.	L076-PL	W	MCERTS
TPH C6 - C40 (soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method	L076-PL	W	NONE
TPH2 (Soil)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	w	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom. For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland. Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



Appendix C

GROUND GAS AND GROUNDWATER MONITORING RECORDS

Borehole	Depth of Installation (mbgl)	Date of Installation	Туре	Top (mbgl)	Bottom (mbgl)	Date & Time	Water Level (mbgl)	Water Level (mOD)	Remarks
BH01	1.50	26/06/2018	SPG/GW	0.50	1.50	10/08/2018 09:00:00	No Access		Car parked
	1.50	26/06/2018	SPG/GW	0.50	1.50	16/08/2018 11:00:00	Dry		
	1.50	26/06/2018	SPG/GW	0.50	1.50	21/08/2018 12:00:00	No Access		Tractor parked
	1.50	26/06/2018	SPG/GW	0.50	1.50	03/09/2018 10:37:00	Dry		
	1.50	26/06/2018	SPG/GW	0.50	1.50	10/09/2018 11:00:00	Dry		
	1.50	26/06/2018	SPG/GW	0.50	1.50	17/09/2018 11:20:00	Dry		
	12.00	26/06/2018	SPIE	9.50	12.00	10/08/2018 09:00:00	No Access		Car parked
	12.00	26/06/2018	SPIE	9.50	12.00	16/08/2018 11:00:00	11.66	8.48	
	12.00	26/06/2018	SPIE	9.50	12.00	21/08/2018 12:00:00	No Access		Tractor parked
	12.00	26/06/2018	SPIE	9.50	12.00	03/09/2018 10:37:00	10.87	9.27	
	12.00	26/06/2018	SPIE	9.50	12.00	10/09/2018 11:00:00	10.85	9.29	
	12.00	26/06/2018	SPIE	9.50	12.00	17/09/2018 11:20:00	10.17	9.97	
	18.50	26/06/2018	VWP			10/08/2018 09:00:00	No Access		Car parked
	18.50	26/06/2018	VWP			16/08/2018 11:00:00	13.20	6.94	
	18.50	26/06/2018	VWP			21/08/2018 12:00:00	No Access		Tractor parked
	18.50	26/06/2018	VWP			03/09/2018 10:37:00	12.88	7.26	
	18.50	26/06/2018	VWP			10/09/2018 11:04:00	12.90	7.24	
	18.50	26/06/2018	VWP			17/09/2018 11:22:00	13.33	6.81	
	46.00	26/06/2018	VWP			10/08/2018 09:00:00	No Access		Car parked
	46.00	26/06/2018	VWP			16/08/2018 11:00:00	45.95	-25.81	
	46.00	26/06/2018	VWP			21/08/2018 12:00:00	No Access		Tractor parked
	46.00	26/06/2018	VWP			03/09/2018 10:37:00	45.91	-25.77	
	46.00	26/06/2018	VWP			10/09/2018 11:02:00	45.92	-25.78	
	46.00	26/06/2018	VWP			17/09/2018 11:20:00	45.91	-25.77	
BH02C	8.60	12/06/2018	SPIE	8.00	9.00	10/08/2018 11:20:00	Dry		
	8.60	12/06/2018	SPIE	8.00	9.00	16/08/2018 10:40:00	Dry		
	8.60	12/06/2018	SPIE	8.00	9.00	21/08/2018 12:45:00	Dry		
	8.60	12/06/2018	SPIE	8.00	9.00	03/09/2018 10:15:00	Dry		
	8.60	12/06/2018	SPIE	8.00	9.00	10/09/2018 10:50:00	Dry		
	8.60	12/06/2018	SPIE	8.00	9.00	17/09/2018 11:10:00	Dry		
	15.10	12/06/2018	SPG/GW	14.00	15.10	10/08/2018 11:20:00	11.15	9.41	
	15.10	12/06/2018	SPG/GW	14.00	15.10	16/08/2018 10:40:00	11.16	9.40	
	15.10	12/06/2018	SPG/GW	14.00	15.10	21/08/2018 12:44:00	11.35	9.21	
	15.10	12/06/2018	SPG/GW	14.00	15.10	03/09/2018 10:15:00	11.28	9.28	
	15.10	12/06/2018	SPG/GW	14.00	15.10	10/09/2018 10:50:00	11.30	9.26	
	15.10	12/06/2018	SPG/GW	14.00	15.10	17/09/2018 11:10:00	11.31	9.25	
BH03	4.00	09/07/2018	SPG/GW	1.00	4.00	10/08/2018 09:40:00	Dry		
	4.00	09/07/2018	SPG/GW	1.00	4.00	16/08/2018 10:00:00	Dry		

<u>KEY</u>

AGS

 SPIE
 - Standpipe Piezometer

 SPGW
 - Groundwater Monitor Standpipe

 SPG/GW
 - Gas / Groundwater Monitor Standpipe

 VWP
 - Vibrating Wire Piezometer



GROUNDWATER MONITORING

18/3113

UCL ION / DRI

Client: University College London

Borehole	Depth of Installation (mbgl)	Date of Installation	Туре	Top (mbgl)	Bottom (mbgl)	Date & Time	Water Level (mbgl)	Water Level (mOD)	Remarks
BH03	4.00	09/07/2018	SPG/GW	1.00	4.00	21/08/2018 12:32:00	Dry		
	4.00	09/07/2018	SPG/GW	1.00	4.00	03/09/2018 10:07:00	Dry		
	4.00	09/07/2018	SPG/GW	1.00	4.00	10/09/2018 10:35:00	Dry		
	4.00	09/07/2018	SPG/GW	1.00	4.00	17/09/2018 11:00:00	Dry		
	8.00	09/07/2018	VWP			10/08/2018 09:40:00	6.02	14.49	
	8.00	09/07/2018	VWP			16/08/2018 10:00:00	6.00	14.51	
	8.00	09/07/2018	VWP			21/08/2018 12:30:00	5.98	14.53	
	8.00	09/07/2018	VWP			03/09/2018 10:07:00	5.92	14.59	
	8.00	09/07/2018	VWP			10/09/2018 10:42:00	5.96	14.55	
	8.00	09/07/2018	VWP			17/09/2018 10:58:00	5.97	14.54	
	20.50	09/07/2018	SPIE	19.00	20.50	10/08/2018 09:40:00	12.42	8.09	
	20.50	09/07/2018	SPIE	19.00	20.50	16/08/2018 10:00:00	12.62	7.89	
	20.50	09/07/2018	SPIE	19.00	20.50	21/08/2018 12:33:00	12.49	8.02	
	20.50	09/07/2018	SPIE	19.00	20.50	03/09/2018 10:07:00	12.49	8.02	
	20.50	09/07/2018	SPIE	19.00	20.50	10/09/2018 10:35:00	12.49	8.02	
	20.50	09/07/2018	SPIE	19.00	20.50	17/09/2018 11:00:00	12.55	7.96	
BH04	2.50	18/07/2018	SPGW	1.50	2.50	10/08/2018 09:20:00	Dry		
	2.50	18/07/2018	SPGW	1.50	2.50	16/08/2018 10:30:00	2.48	17.95	
	2.50	18/07/2018	SPGW	1.50	2.50	21/08/2018 12:15:00	Dry		
	2.50	18/07/2018	SPGW	1.50	2.50	03/09/2018 10:15:00	Dry		
	2.50	18/07/2018	SPGW	1.50	2.50	10/09/2018 10:15:00	Dry		
	2.50	18/07/2018	SPGW	1.50	2.50	17/09/2018 10:58:00	Dry		
	39.00	18/07/2018	SPIE	38.00	39.00	10/08/2018 09:20:00	Dry		
	39.00	18/07/2018	SPIE	38.00	39.00	16/08/2018 10:30:00	38.09	-17.66	
	39.00	18/07/2018	SPIE	38.00	39.00	21/08/2018 12:15:00	37.21	-16.78	
	39.00	18/07/2018	SPIE	38.00	39.00	03/09/2018 10:15:00	Dry		
	39.00	18/07/2018	SPIE	38.00	39.00	10/09/2018 10:15:00	Dry		
	39.00	18/07/2018	SPIE	38.00	39.00	17/09/2018 11:00:00	Dry		
	58.50	18/07/2018	VWP			10/08/2018 09:20:00	51.06	-30.63	
	58.50	18/07/2018	VWP			16/08/2018 10:30:00	51.08	-30.65	
	58.50	18/07/2018	VWP			21/08/2018 12:18:00	51.09	-30.66	
	58.50	18/07/2018	VWP			03/09/2018 10:15:00	51.12	-30.69	
	58.50	18/07/2018	VWP			10/09/2018 10:32:00	51.13	-30.70	
	58.50	18/07/2018	VWP			17/09/2018 10:55:00	51.13	-30.70	
WS03	2.50	23/05/2018	SPG/GW	0.50	2.50	10/08/2018 09:30:00	Dry		
	2.50	23/05/2018	SPG/GW	0.50	2.50	16/08/2018 10:15:00	Dry		
	2.50	23/05/2018	SPG/GW	0.50	2.50	21/08/2018 12:02:00	Dry		
	2.50	23/05/2018	SPG/GW	0.50	2.50	03/09/2018 10:40:00	No Access		Car parked

<u>KEY</u>

AGS

 SPIE
 - Standpipe Piezometer

 SPGW
 - Groundwater Monitor Standpipe

 SPG/GW
 - Gas / Groundwater Monitor Standpipe

 VWP
 - Vibrating Wire Piezometer



GROUNDWATER MONITORING

Job No: 18/3113

UCL ION / DRI **Project:**

Client: University College London

orehole	Depth of Installation	Date of Installation	Туре	Top (mbgl)	Bottom (mbgl)	Date & Time	Water Level (mbgl)	Water Level (mOD)	Sheet : Remarks
VS03	(mbgl) 2.50	23/05/2018	SPG/GW	0.50	2.50	10/09/2018 10:25:00	Dry	</td <td></td>	
1005	2.50	23/03/2018	SPG/GW	0.50	2.50	17/09/2018 10:25:00	Dry		
		ometer Aonitor Standpip ater Monitor Sta e Piezometer	e indpipe			CDOUNI			FODINC
8, Warple	CEP Mews, Warple	Nay				GROUNI	JWAIE		IUKING
0RF		Fax: 020 88 122 8 s.co.uk	381			Job No: 18/3113			
iaii: si@co	nceptconsultant	S.CO.UK	UKAS MANMERMENT SYSTEMS		JKAS ANACEMINT SYSTEM	Project: UCL IO	N / DRI		
	AGS			K		Client: Universi	ity College L		

CONCEPT

Gas Monitoring Results

JOB DETAILS												
Location:	UCL						Engineer:	FG+RP				
Date:	10/08/2018			Job Nur	nber:	18/3113		Time:				
METEOROLOGI	CAL AND SI		ATION			1		1				
State of ground:		X Dry				Moist		Wet				Delete As Required
Wind:		Calm			Х	Light		Moderate			Strong	Ground Level
Cloud cover:		None			Х	Slight		Cloudy			Overcast	
Precipitation		X None				Slight		Moderate			Heavy	
Barometric pressure (mb)) Before:					, i	Temper	ature (°)	17			
							· I					
INSTRUMENTAT												
Gas concentration:	Gas Data LMSx	i G3.18, Accuracy	: CH ₄ ±0.2%	(0 to 5%), ±1.0	0% (at 30%), ±3.0% (at 10	0%); CO ₂ ±0.1%	(0 to 10%), ±3.0%	(at 40%); O ₂ ±0	.5%		Tick Instrument used
Gas concentration:	Gas Data GFM	436, Accuracy: CH	H4 ±0.3% (0	to 5%), ±3.0%	(at 30%), ±	3.0% (at 100%); CO2 ±0.3% (0 t	o 5%), ±3.0% (at -	40%); O2 ±0.2%	;	Х	fick instrument used
BH		aP After	dn (Pa)	Flow rate	Time	CH ₁ (%)	LEL (%)	$CO_2(\%)$	$O_2(\%)$	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)	up (1 a)	(l/h)	(s)	CII4 (70)	LEE (70)	$CO_2(70)$	$O_2(70)$	1120(ppiii)	CO (ppm)	comments
		(mo)		(1/11)								
BH01					0							
Depth to GW: (m)					30							Cars parked
					60							
					90							
					120							
					150							
					180							
	-				210							
					240 270							
					300							
						(ppm)						
					5	(ppm)						
					15							
					30							
					45							
					60							
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

dP: Differential Pressure

Gas Monitoring Results

JOB DETAILS												
Location:	UCL						Engineer:	FG+RP				
Date:	10/08/2018			Job Nur	nber:	18/3113		Time:	10:35			
METEOROLOGI	CAL AND SI		ATION		0	1		1				
State of ground:		X Dry				Moist		Wet			_	Delete As Required
Wind:		Calm			Х	Light		Moderate			Strong	Ground Level
Cloud cover:		None			Х	Slight		Cloudy			Overcast	
Precipitation		X None				Slight		Moderate			Heavy	
Barometric pressure (mb)) Before:	1015					Temper	ature (°)	17			
							. 1					
INSTRUMENTAT	TION USED											
Gas concentration:	Gas Data LMSx	i G3.18, Accuracy	: CH ₄ ±0.2%	(0 to 5%), ±1.0	0% (at 30%	o), ±3.0% (at 10	0%); CO ₂ ±0.1%	(0 to 10%), ±3.0%	(at 40%); O ₂ ±0	.5%		Tick Instrument used
Gas concentration.	Gas Data GFM	436, Accuracy: CH	H4 ±0.3% (0	to 5%), ±3.0%	(at 30%), ±	:3.0% (at 100%); CO2 ±0.3% (0 t	to 5%), ±3.0% (at -	40%); O2 ±0.2%	;	Х	fick instrument used
BH		aP After	dn (Pa)	Flow rate	Time	CH. (%)	LEL (%)	CO ₂ (%)	$O_2(\%)$	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)	up (1 a)	(l/h)	(s)	CII ₄ (70)	LEL (70)	$CO_2(70)$	$O_2(70)$	1125(ppiii)	CO (ppm)	Comments
		. ,		. ,								
BH02C		1015	0	0.0	0							
Depth to GW: (m)	11.15				30	0.0	0.0	0.0	20.6	0	0	
	11110				60	0.0	0.0	0.0	20.6	0	0	
					90	0.0	0.0	0.0	20.6	0	0	
					120	0.0	0.0	0.0	20.6	0	0	Constant Readings
					150							
					180							
					210							
					240							
					270							
					300							
					5 PIL) (ppm)						
					5 15	0.3 0.4						
					30	0.4						
					45	0.4						
	<u> </u>				-43 60	0.4						
					75	0.4						
	1		1		90	0.4						
					105	0.4						
					120	0.4						

KEY

aP: Atmospheric Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

Gas Monitoring Results

JOB DETAILS												
Location:	UCL						Engineer:	FG+RP				
Date:	10/08/2018			Job Nur	nber:	18/3113		Time:	09:45			
METEODOLOGI		TE DEODM	ATION									
METEOROLOGI	CAL AND SI		ATION			1						
State of ground:		X Dry				Moist		Wet			1 .	Delete As Required
Wind:		Calm			Х	Light		Moderate			Strong	Ground Level
Cloud cover:		None	:		Х	Slight		Cloudy			Overcast	
Precipitation		X None	:			Slight		Moderate			Heavy	
Barometric pressure (mb)) Before:	1017					Temper	ature (°)	17			
											-	
INSTRUMENTAT		. 62.10 . 4	CH O ON	(0 - 50) - 1 (201 1 2001	> - 2.00/ (+ 10		0 . 100() . 2.00(((100() 0) 0	50/		
Gas concentration:		i G3.18, Accuracy										Tick Instrument used
	Gas Data GFM	436, Accuracy: CH			(at 30%), ±	:3.0% (at 100%); CO2 ±0.3% (0 t	to 5%), $\pm 3.0\%$ (at	40%); O2 ±0.2%	•	Х	
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)		(l/h)	(s)							
BH03		1017	0	0.0	0							
Depth to GW: (m)	DRY				30	0.0	0.0	0.1	20.2	0	0	
Deptil to Gw. (iii)	DKI				60	0.0	0.0	0.1	20.2	0	0	
					90	0.0	0.0	0.1	20.2	0	0	
					120	0.0	0.0	0.1	20.2	0	0	Constant Readings
					150							
					180							
					210							
					240							
					270 300							
) (ppm)						
					5	1.6						
					15	1.6						
					30	1.7						
	1				45	1.8						
					60	1.8						
					75	1.8						
					90	1.8						
					105	1.8						
					120	1.8						
						ļ						
			1									1

KEY

aP: Atmospheric Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

Gas Monitoring Results

JOB DETAILS												
Location:	UCL						Engineer:	FG+RP				
Date:	10/08/2018			Job Nur	nber:	18/3113		Time:	09:30			
METEOROLOGI	CAL AND SI		ATION		-	-		1				
State of ground:		X Dry				Moist		Wet				Delete As Required
Wind:		Calm			Х	Light		Moderate			Strong	Ground Level
Cloud cover:		None			Х	Slight		Cloudy			Overcast	
Precipitation		X None				Slight		Moderate			Heavy	
Barometric pressure (mb	Deferrer	1017				Singin	Temper		17		1100.19	
Barometric pressure (mo) Belole.	1017					Temper	ature ()	17			
INSTRUMENTAT	TION USED											
		i G3.18, Accuracy	: CH ₄ ±0.2%	(0 to 5%), ±1.0	0% (at 30%), ±3.0% (at 10	00%); CO ₂ ±0.1% (0 to 10%), ±3.0%	(at 40%); O ₂ ±0	.5%		-
Gas concentration:	Gas Data GFM	436, Accuracy: CH	I4 ±0.3% (0	to 5%), ±3.0%	(at 30%), ±	3.0% (at 100%); CO2 ±0.3% (0 t	o 5%), ±3.0% (at -	40%); O2 ±0.2%	;	X	Tick Instrument used
BH		aP After			Time							Comments
			ap (Pa)	Flow rate		CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)		(l/h)	(s)							
WS03		1017	0	0.0	0							
Depth to GW: (m)	DRY				30	0.0	0.0	0.7	19.2	0	0	
Deptil to G W. (iii)	DRT				60	0.0	0.0	0.7	19.2	0	0	
					90	0.0	0.0	0.7	19.2	0	0	
					120	0.0	0.0	0.7	19.2	0	0	Constant Readings
					150							
					180							
					210							
					240							
					270							
					300							
) (ppm)						
					5	1.5						
					15	1.0						
					30	0.8						
					45	0.7						
					60	0.6						
			 		75 90	0.5						
					90 105	0.5						
						0.5						
					120	0.4						

KEY

aP: Atmospheric Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

Gas Monitoring Results

JOB DETAILS												
Location:	UCL						Engineer:	VC+RP				
Date:	16/08/2018			Job Nun	nber:	18/3113	-	Time:	11:00			
METEOROLOGI		TE NEODM	ATION									
	CAL AND SI		ATION			1		***				
State of ground:		Dry				Moist	Х	Wet				Delete As Required
Wind:		Calm	L		Х	Light		Moderate			Strong	Ground Level
Cloud cover:		None				Slight		Cloudy		Х	Overcast	
Precipitation		None	:			Slight	Х	Moderate			Heavy	
Barometric pressure (mb)) Before:	1011				-	Temper	ature (°)	18			
							Ĩ					
INSTRUMENTAT												
Gas concentration:		i G3.18, Accuracy			-							Tick Instrument used
Gus concentration.	Gas Data GFM	436, Accuracy: CH	H4 ±0.3% (0	to 5%), ±3.0%	(at 30%), ±	3.0% (at 100%); CO2 ±0.3% (0 t	to 5%), ±3.0% (at -	40%); O2 ±0.2%	;	Х	
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	$O_2(\%)$	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)	··•	(l/h)	(s)			2 (· · ·)	- 2 ()	2- (11)	(11)	
BH01		1011	0	0.0	0							
DIIVI			, v	0.0	30	0.0	0.0	2.2	17.6	0	0	
Depth to GW: (m)	DRY				<u> </u>	0.0	0.0	2.2	17.6	0	0	
					<u> </u>	0.0	0.0	2.2	17.6	0	0	
						0.0	0.0	2.2	17.6	0	0	Constant and in a
					120 150	0.0	0.0	2.2	17.0	0	0	Constant readings
					150							
	-				210							
					240							
					240							
					300							
) (ppm)						
					5	1.9			-			
					15	1.1						
					30	0.8						
					45	0.7						
					60	0.6						
					75	0.5						
					90	0.5						
					105	0.5						
					120	0.4						

<u>KEY</u> aP: Atmospheric Pressure NR: Not Recorded dP: Differential Pressure

Gas Monitoring Results

JOB DETAILS												
	UCL						Engineer:	VC+RP				
Date:	16/08/2018			Job Nun	nber:	18/3113	-	Time:	10:40			
METEOROLOGI		TE DEODM	ATION									
	CAL AND 51					1		***				
State of ground:		Dry				Moist	X	Wet			1	Delete As Required
Wind:		Calm	l		X	Light		Moderate			Strong	Ground Level
Cloud cover:		None	•			Slight		Cloudy		X	Overcast	
Precipitation		None	;			Slight		Moderate		Х	Heavy	
Barometric pressure (mb)) Before:	1009				-	Temper	ature (°)	18			
		••••••••••••••••••••••••••••••••••••••					_				•	
INSTRUMENTAT												
Gas concentration:		ti G3.18, Accuracy										Tick Instrument used
_	Gas Data GFM	436, Accuracy: CH	H4 ±0.3% (0	to 5%), ±3.0%	(at 30%), ±	:3.0% (at 100%); CO2 ±0.3% (0 t	to 5%), ±3.0% (at -	40%); O2 ±0.2%	;	Х	
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)		(l/h)	(s)							
BH02C		1009	0	0.0	0							
Depth to GW: (m)	11.16				30	0.0	0.0	0.6	19.0	0	0	
Deptil to GW. (iii)	11.10				60	0.0	0.0	0.6	18.9	0	0	
					90	0.0	0.0	0.6	18.9	0	0	
					120	0.0	0.0	0.6	18.9	0	0	Constant readings
					150							
					180							
					210							
					240							
					270							
					300							
						(ppm)						
					5	1.7						
					15	4.7						
					30	6.0						
					45 60	6.3 6.5						
					60 75	6.5 6.7						
					75 90	6.8	-					
					105	6.9						
					105	7.0						
					120	7.0	ļ					

<u>KEY</u> aP: Atmospheric Pressure NR: Not Recorded dP: Differential Pressure

Gas Monitoring Results

JOB DETAILS												
Location:	UCL						Engineer:	VC+RP				
Date:	16/08/2018			Job Nun	nber:	18/3113	-	Time:	10:00			
METEOROLOGI		TE DEODM	ATION									
	CAL AND 51		AHON			1		***				
State of ground:		Dry				Moist	X	Wet			-	Delete As Required
Wind:		Calm	L		X	Light		Moderate			Strong	Ground Level
Cloud cover:		None	:			Slight		Cloudy		Х	Overcast	
Precipitation		None	:			Slight	Х	Moderate			Heavy	
Barometric pressure (mb)) Before:	1010				_	Temper	ature (°)	18			
-							*					
INSTRUMENTAT												
Gas concentration:		ti G3.18, Accuracy										Tick Instrument used
	Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										Х	
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)		(l/h)	(s)							
BH03		1010	0	0.0	0							
Depth to GW: (m)	DRY				30	0.0	0.0	0.1	20.5	0	0	
Deptil to Gw: (iii)	DKI				60	0.0	0.0	0.1	20.4	0	0	
					90	0.0	0.0	0.1	20.4	0	0	
					120	0.0	0.0	0.1	20.4	0	0	
					150	0.0	0.0	0.1	20.4	0	0	Constant readings
					180							
					210							
					240							
					270							
					300							
) (ppm)						
					5	1.3						
					15	1.6						
					30	1.6						
					45	1.6						
					60	1.5						
					75	1.5						
					90 105	1.5 1.4						
					105	1.4 1.4						
					120	1.4						

<u>KEY</u> aP: Atmospheric Pressure NR: Not Recorded dP: Differential Pressure

Gas Monitoring Results

JOB DETAILS												
Location:	UCL						Engineer:	VC+RP				
Date:	16/08/2018			Job Nun	nber:	18/3113	-	Time:	10:15			
METEOROLOGI		TE NEODM	ATION									
	CAL AND SI	·	ATION			1						
State of ground:		Dry				Moist	Х	Wet				Delete As Required
Wind:		Calm			X	Light		Moderate			Strong	Ground Level
Cloud cover:		None				Slight		Cloudy		Х	Overcast	
Precipitation		None				Slight	Х	Moderate			Heavy	
Barometric pressure (mb)) Before:	1009				-	Temper	ature (°)	18			
							Ĩ					
INSTRUMENTAT												
Gas concentration:		i G3.18, Accuracy										Tick Instrument used
ous concentration.	Gas Data GFM	436, Accuracy: CH	H4 ±0.3% (0	to 5%), ±3.0%	(at 30%), ±	3.0% (at 100%); CO2 ±0.3% (0 t	o 5%), ±3.0% (at -	40%); O2 ±0.2%	;	Х	
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	$O_2(\%)$	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)	··•	(l/h)	(s)			2 ()	- 2 ()	2- (11)	(11)	
WS03		1009	0	0.0	0							
11500			, v	0.0	30	0.0	0.0	0.7	10.4	0	0	
Depth to GW: (m)	DRY				<u> </u>	0.0	0.0	0.7	19.4 19.3	0	0	
					<u> </u>	0.0	0.0	0.7	19.3	0	0	
						0.0	0.0	0.7	19.3	0	0	Constant and in a
					120 150	0.0	0.0	0.7	19.3	0	0	Constant readings
					150							
	-				210							
					240							
					240							
					300							
						(ppm)						
					5	0.8			-			
					15	0.5						
					30	0.4						
					45	0.3						
					60	0.2						
					75	0.2						
					90	0.1						
					105	0.1						
					120	0.1						

<u>KEY</u> aP: Atmospheric Pressure NR: Not Recorded dP: Differential Pressure

Gas Monitoring Results

JOB DETAILS												
	UCL						Engineer:	VC	-			
Date:	21/08/2018			Job Nur	nber:	18/3113		Time:	12:00			
METEOROLOGI	CAL AND SI	TE INFORM	ATION									
	CAL AND SI					Moist		Wet				D-1-4- A - D- minud
State of ground:		X Dry										Delete As Required
Wind:		X Calm				Light		Moderate			Strong	Ground Level
Cloud cover:		X None	;			Slight		Cloudy			Overcast	
Precipitation		X None				Slight		Moderate			Heavy	
Barometric pressure (mb)) Before:						Temper	ature (°)	24			
											-	
INSTRUMENTAT		ti G3.18, Accuracy	CH 0.00	((0), 50(), 1)	00/ / / 200/		00() 60 10	(0 + 100() - 2.00(((100() 0) (2.50/		
Gas concentration:												Tick Instrument used
	Gas Data GFM	436, Accuracy: CH						(at)	40%); O2 ±0.2%);		
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	$H_2S(ppm)$	CO (ppm)	Comments
(No.)		(mb)		(l/h)	(s)							
BH01					0							
Depth to GW: (m)					30							Tractor parked
Deptil to GW. (iii)					60							
					90							
					120							
					150							
					180							
					210							
					240							
					270							
					300							
						(ppm)						
					5							
					15							
					30							
					45							
					60							
					75							
					90 105							
					105							
					120							

<u>KEY</u> aP: Atmospheric Pressure NR: Not Recorded dP: Differential Pressure

Gas Monitoring Results

JOB DETAILS												
Location:	UCL			-			Engineer:	VC				
Date:	21/08/2018			Job Nun	nber:	18/3113		Time:	12:44			
METEOROLOGI		TE INFORM	ATION									
	CAL AND SI		ATION			1 1 1 1		XX 7 /				
State of ground:		X Dry				Moist		Wet			1	Delete As Required
Wind:		X Calm				Light		Moderate			Strong	Ground Level
Cloud cover:		X None				Slight		Cloudy			Overcast	
Precipitation		X None				Slight		Moderate			Heavy	
Barometric pressure (mb)) Before:	1018				-	Temper	ature (°)	24			
INSTRUMENTAT	Gas Data LMSxi G3.18, Accuracy: $CH_4 \pm 0.2\%$ (0 to 5%), $\pm 1.0\%$ (at 30%), $\pm 3.0\%$ (at 100%); $CO_2 \pm 0.1\%$ (0 to 10%), $\pm 3.0\%$ (at 40%); $O_2 \pm 0.5\%$									500		
Gas concentration:					-						v	Tick Instrument used
	Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%; X											
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)		(l/h)	(s)							
BH02C		1017	0	0.0	0							
Depth to GW: (m)	11.35				30	0.0	0.0	0.4	19.9	0	0	
Deptil to Gw. (iii)	11.55				60	0.0	0.0	0.3	20.0	0	0	
					90	0.0	0.0	0.3	20.1	0	0	
					120	0.0	0.0	0.3	20.1	0	0	
					150	0.0	0.0	0.3	20.2	0	0	Constant readings
					180							
					210							
					240							
					270							
					300							
						(ppm)						
					5	4.2						
					15	4.5						
					30	4.2						
	-				45	4.1						
					60	4.0						
					75 90	3.9						
					90 105	3.9 3.8						
					105	3.8 3.8						
					120	3.0	ļ					
			<u> </u>									

<u>KEY</u> aP: Atmospheric Pressure NR: Not Recorded dP: Differential Pressure

Gas Monitoring Results

JOB DETAILS												
Location:	UCL			-			Engineer:	VC				
Date:	21/08/2018			Job Nun	nber:	18/3113		Time:	12:21			
METEOROLOGI		TE INFORM	ATION									
	CAL AND SI		ATION			Moist		Wet				Dalata A a Da maina d
State of ground:		X Dry									-	Delete As Required
Wind:		X Calm				Light		Moderate			Strong	Ground Level
Cloud cover:		X None				Slight		Cloudy			Overcast	
Precipitation		X None				Slight		Moderate			Heavy	
Barometric pressure (mb)) Before:	1019				_	Temper	ature (°)	24		1	
		·					_					
INSTRUMENTAT												
Gas concentration:	Gas Data LMSxi G3.18, Accuracy: $CH_4 \pm 0.2\%$ (0 to 5%), $\pm 1.0\%$ (at 30%), $\pm 3.0\%$ (at 100%); $CO_2 \pm 0.1\%$ (0 to 10%), $\pm 3.0\%$ (at Gas Data GFM 436, Accuracy: $CH4 \pm 0.3\%$ (0 to 5%), $\pm 3.0\%$ (at 30%), $\pm 3.0\%$ (at 100%); $CO2 \pm 0.3\%$ (0 to 5%), $\pm 3.0\%$ (at 40%); $CO2 \pm 0.3\%$ (0 to 5%), $\pm 3.0\%$ (at 40%); $CO2 \pm 0.3\%$ (0 to 5%), $\pm 3.0\%$ (at 40%); $CO2 \pm 0.3\%$ (0 to 5%), $\pm 3.0\%$ (at 40%); $CO2 \pm 0.3\%$ (0 to 5%), $\pm 3.0\%$ (at 40%); $CO2 \pm 0.3\%$ (0 to 5%), $\pm 3.0\%$ (at 40%); $CO2 \pm 0.3\%$ (0 to 5%), $\pm 3.0\%$ (at 40%); $CO2 \pm 0.3\%$ (0 to 5%), $\pm 3.0\%$ (at 40%); $CO2 \pm 0.3\%$ (0 to 5%), $\pm 3.0\%$ (at 40%); $CO2 \pm 0.3\%$ (0 to 5%), $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5%), $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5%); $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5%); $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5%); $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5%); $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5%); $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5%); $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5%); $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5\%); $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5\%); $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5\%); $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5\%); $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5\%); $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5\%); $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5\%); $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5\%); $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5\%); $\pm 3.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5\%); $\pm 0.0\%$ (at 40\%); $CO2 \pm 0.3\%$ (0 to 5\%); $\pm 0.0\%$ (10\%); $CO2 \pm 0.3\%$ (1											Tick Instrument used
	Gas Data GFM	436, Accuracy: CH	H4 ±0.3% (0	to 5%), ±3.0%	(at 30%), ±	:3.0% (at 100%); CO2 ±0.3% (0 1	to 5%), ±3.0% (at	40%); O2 ±0.2%	;	Х	
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)		(l/h)	(s)							
BH03		1019	0	0.0	0							
Depth to GW: (m)	Dry				30	0.0	0.0	0.1	20.5	0	0	
Deptil to Gw: (iii)	Diy				60	0.0	0.0	0.1	20.5	0	0	
					90	0.0	0.0	0.1	20.5	0	0	
					120	0.0	0.0	0.1	20.5	0	0	Constant readings
					150							
					180							
					210							
					240							
					270							
					300							
) (ppm)						
					5	2.0						
					15	1.9						
					30	1.8						
					45	1.7						
					60	1.6						
					75	1.6						
					90 107	1.6						
					105	1.5						
					120	1.5						
			1									

<u>KEY</u> aP: Atmospheric Pressure NR: Not Recorded dP: Differential Pressure

Gas Monitoring Results

JOB DETAILS												
Location:	UCL						Engineer:	VC				
Date:	21/08/2018			Job Nun	nber:	18/3113	-	Time:	12:02			
METEOROLOGI		TE DEODM	ATION									
	CAL AND SI	<u> </u>	AHON			1		***				
State of ground:		X Dry				Moist		Wet				Delete As Required
Wind:		X Calm	L			Light		Moderate			Strong	Ground Level
Cloud cover:		X None	:			Slight		Cloudy			Overcast	
Precipitation		X None	:			Slight		Moderate			Heavy	
Barometric pressure (mb)) Before:	1017				-	Temper	ature (°)	24	-		
INSTRUMENTAT	TON LISED											
INGINUMENTAL		G3 18 Accuracy	° CH +0 2%	6(0 to 5%) + 10	0% (at 30%	+3.0% (at 10	0%)· CO ₂ +0 1%	(0 to 10%) + 3.0%	(at 40%): O- +6) 5%		
Gas concentration:	Gas Data LMSxi G3.18, Accuracy: $CH_4 \pm 0.2\%$ (0 to 5%), $\pm 1.0\%$ (at 30%), $\pm 3.0\%$ (at 100%); $CO_2 \pm 0.1\%$ (0 to 10%), $\pm 3.0\%$ (at 40%); $O_2 \pm 0.5\%$ Ticl Gas Data GFM 436, Accuracy: $CH4 \pm 0.3\%$ (0 to 5%), $\pm 3.0\%$ (at 30%), $\pm 3.0\%$ (at 100%); $CO2 \pm 0.3\%$ (0 to 5%), $\pm 3.0\%$ (at 40%); $O2 \pm 0.2\%$; X											Tick Instrument used
	Ous Duit Of M											
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)		(l/h)	(s)							
WS03		1017	0	0.0	0							
Depth to GW: (m)	Dry				30	0.0	0.0	0.7	19.3	0	0	
Deptil to G (1. (iii)	Diy				60	0.0	0.0	0.7	19.3	0	0	
					90	0.0	0.0	0.7	19.3	0	0	
					120	0.0	0.0	0.7	19.3	0	0	Constant readings
					150							
					180							
					210							
					240							
					270							
					300							
					5 PIL	(ppm) 1.0						
	-				5 15	0.7						
					30	0.7						
					45	0.6						
					60	0.6						
					75	0.6						
					90	0.6						
					105	0.5						
					120	0.5						
						l i						

<u>KEY</u> aP: Atmospheric Pressure NR: Not Recorded dP: Differential Pressure

Gas Monitoring Results

JOB DETAILS												
Location:	UCL						Engineer:	VC + RP				
Date:	03/09/2018			Job Nun	nber:	18/3113		Time:	10:37			
METEODOLOGI		TE DEODM	ATION									
METEOROLOGI	CAL AND SI		ATION			1						D 1 · · · D · · · ·
State of ground:		X Dry				Moist		Wet			1	Delete As Required
Wind:		X Calm				Light		Moderate			Strong	Ground Level
Cloud cover:		X None	:			Slight		Cloudy			Overcast	
Precipitation		X None	:			Slight		Moderate			Heavy	
Barometric pressure (mb) Before:	1019					Temper	ature (°)	20			
		· · · · · · · · · · · · · · · · · · ·										
INSTRUMENTAT		i G3.18, Accuracy	- CH +0.20	(0 to 50) + 1 ()0/ (at 200/) +2.00/ (at 10	00(), CO +0.10()	(0 to 10%) + 2.0%	(at 400/)+ O +0	50/		
Gas concentration:		436, Accuracy: CH									Х	Tick Instrument used
	Gas Data GFM											
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)		(l/h)	(s)							
BH01		1019	0	0.0	0							
Depth to GW: (m)	Dry				30	0.0	0.0	2.1	16.1	0	0	
Departo G ((m)	Diy				60	0.0	0.0	2.1	16.0	0	0	
					90	0.0	0.0	2.1	16.0	0	0	
					120	0.0	0.0	2.1	16.0	0	0	Constant readings
					150							
					180							
					210							
					240							
					270 300							
) (ppm)						
					5	1.0						
					15	0.7						
					30	0.5						
					45	0.3						
					60	0.2						
					75	0.1						
					90	0.0						
					105	0.0						
					120	0.0						
			1									

KEY

aP: Atmospheric Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:	UCL						Engineer:	VC + RP				
Date:	03/09/2018			Job Nun	nber:	18/3113		Time:	10:15			
METEOROLOGI		TE INFORM	ATION									
	CAL AND SI		ATION			Malat		Wet				Delete A - Descripted
State of ground:		X Dry				Moist					1	Delete As Required
Wind:		X Calm				Light		Moderate			Strong	Ground Level
Cloud cover:		X None				Slight		Cloudy			Overcast	
Precipitation		X None	•			Slight		Moderate			Heavy	
Barometric pressure (mb) Before:	1019					Temper	ature (°)	20			
INSTRUMENTAT	TON LISED											
INSTRUMENTAL		i G3.18, Accuracy	· CH. +0.2%	(0 to 5%) +1 ()% (at 30%) +3.0% (at 10	0%): CO +0.1%	(0 to 10%) + 3.0%	(at 40%): O ₂ +0	5%	<u>г г – – – – – – – – – – – – – – – – – –</u>	
Gas concentration:		436, Accuracy: CH			-						х	Tick Instrument used
	Gas Data OI W	•										
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	$\operatorname{CO}_2(\%)$	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)		(l/h)	(s)							
BH02C		1019	0	0.0	0							
Depth to GW: (m)	11.28				30	0.0	0.0	0.2	19.9	0	0	
Deptil to G W. (iii)	11.20				60	0.0	0.0	0.2	20.0	0	0	
					90	0.0	0.0	0.2	20.1	0	0	
					120	0.0	0.0	0.1	20.1	0	0	
					150	0.0	0.0	0.1	20.2	0	0	
					180	0.0	0.0	0.1	20.2	0	0	
					210	0.0	0.0	0.1	20.2	0	0	a
					240	0.0	0.0	0.1	20.2	0	0	Constant readings
					270 300							
) (ppm)						
					5	5.7						
					15	6.1						
					30	6.0						
					45	5.8						
					60	5.6						
					75	5.3						
					90	5.1						
					105	4.9						
					120	4.8						
	1		1						1			

KEY

aP: Atmospheric Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

Gas Monitoring Results

JOB DETAILS												
Location:	UCL						Engineer:	VC + RP				
Date:	03/09/2018			Job Nun	nber:	18/3113		Time:	10:07			
METEODOLOGI			ATION									
METEOROLOGI	CAL AND SI		ATION			1						D 1 · · · D · · · ·
State of ground:		X Dry				Moist		Wet			1	Delete As Required
Wind:		X Calm				Light		Moderate			Strong	Ground Level
Cloud cover:		X None	:			Slight		Cloudy			Overcast	
Precipitation		X None	:			Slight		Moderate			Heavy	
Barometric pressure (mb) Before:	1019					Temper	ature (°)	20			
INSTRUMENTAT											-	
INSIKUVIENIAI		ki G3.18, Accuracy	- CH. +0.2%	(0 to 5%) +1 ()% (at 30%) +3.0% (at 10	0%)· CO. +0.1%	(0 to 10%) + 3.0%	(at 40%): O. +0	5%		
Gas concentration:		436, Accuracy: CH									X	Tick Instrument used
	Gas Data GFW											
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	$CO_2(\%)$	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)		(l/h)	(s)							
BH03		1019	0	0.0	0							
Depth to GW: (m)	Dry				30	0.0	0.0	0.2	20.2	0	0	
Deptil to G W. (iii)	DIy				60	0.0	0.0	0.2	20.2	0	0	
					90	0.0	0.0	0.2	20.2	0	0	
					120	0.0	0.0	0.2	20.2	0	0	Constant readings
					150							
					180							
					210							
					240							
					270 300							
) (ppm)						
					5	1.8						
					15	1.8						
					30	1.6						
					45	1.5						
					60	1.4						
					75	1.3						
	ļ				90	1.2						
					105	1.2						
					120	1.1						
			1									

KEY

aP: Atmospheric Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

Gas Monitoring Results

JOB DETAILS												
Location:	UCL						Engineer:	VC + RP				
Date:	03/09/2018			Job Nur	nber:	18/3113		Time:				
METEOROLOGI	CAL AND SI		ATION		-	1		1				
State of ground:		X Dry				Moist		Wet				Delete As Required
Wind:		X Calm				Light		Moderate			Strong	Ground Level
Cloud cover:		X None				Slight		Cloudy			Overcast	
Precipitation		X None				Slight		Moderate			Heavy	
Barometric pressure (mb)	Deferrer					Singin	Temper		20		i iou i j	
Barometric pressure (mb)) Belore:						remper	ature ()	20			
INSTRUMENTAT	TION USED											
		i G3.18, Accuracy	: CH ₄ ±0.2%	(0 to 5%), ±1.0	0% (at 30%), ±3.0% (at 10	0%); CO ₂ ±0.1%	0 to 10%), ±3.0%	(at 40%); O ₂ ±0	.5%		
Gas concentration:	Gas Data GFM	436, Accuracy: CH	14 +0 3% (0	t_{0} 5%) +3.0%	(at 30%) +	3.0% (at 100%): CO2 +0 3% (01	(0.5%) +3.0% (at	40%): 02 +0 2%		X	Tick Instrument used
												~
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	$CO_2(\%)$	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)		(l/h)	(s)							
WS03					0							
Depth to GW: (m)					30							No access (Car parked)
Deptil to Gw: (iii)					60							
					90							
					120							
					150							
					180							
					210							
					240							
					270							
					300							
					PID	(ppm)						
					5							
					15							
					30							
					45							
					60							
					75							
			L		90							
			ļ		105							
			L		120							
			L									

KEY

aP: Atmospheric Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

Gas Monitoring Results

JOB DETAILS												
Location:	UCL						Engineer:	VC + RP				
Date:	10/09/2018			Job Nun	nber:	18/3113		Time:	11:00			
METEODOLOGI		TE DEODM	ATION									
METEOROLOGI	CAL AND SI		ATION			1						D 1 · · · D · · · ·
State of ground:		X Dry				Moist		Wet			н	Delete As Required
Wind:		Calm			Х	Light		Moderate			Strong	Ground Level
Cloud cover:		None				Slight	Х	Cloudy			Overcast	
Precipitation		X None				Slight		Moderate			Heavy	
Barometric pressure (mb)) Before:	1019					Temper	ature (°)	18			
INSTRUMENTAT		. 62.10	CH . 0.0%	(0 - 50) - 1 (201 1 2001	> - 2.00/ (+ 10		(0 + 100() + 2.00(((100() 0) 0	50/		
Gas concentration:		i G3.18, Accuracy										Tick Instrument used
	Gas Data GFM	436, Accuracy: CH			(at 30%), ±	:3.0% (at 100%); CO2 ±0.3% (0 t	to 5%), $\pm 3.0\%$ (at	40%); O2 ±0.2%	•	Х	
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)		(l/h)	(s)							
BH01		1019	0	0.0	0							
Depth to GW: (m)	Dry				30	0.0	0.0	2.1	17.5	0	0	
Deptil to Gw. (iii)	Diy				60	0.0	0.0	2.2	17.5	0	0	
					90	0.0	0.0	2.2	17.5	0	0	
					120	0.0	0.0	2.2	17.5	0	0	Constant readings
					150							
					180							
					210							
					240							
					270 300							
) (ppm)						
					5	1.1						
					15	1.0						
					30	1.0						
					45	0.9						
					60	0.9						
					75	0.8						
					90	0.8						
					105	0.7						
					120	0.7						

KEY

aP: Atmospheric Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

Gas Monitoring Results

JOB DETAILS												
Location:	UCL						Engineer:	VC + RP				
Date:	10/09/2018			Job Nun	nber:	18/3113		Time:	10:50			
METEOROLOGI	CAL AND C	TE NEODM	ATION									
	CAL AND 51		ATION			1		XX 7 /				
State of ground:		X Dry				Moist		Wet			1 _	Delete As Required
Wind:		Calm			Х	Light		Moderate			Strong	Ground Level
Cloud cover:		None				Slight	X	Cloudy			Overcast	
Precipitation		X None	:			Slight		Moderate			Heavy	
Barometric pressure (mb)) Before:	1019					Temper	ature (°)	18]	
INSTRUMENTAT	TON LICED											
INSIKUVIENIAI		i G3.18, Accuracy	· CU +0.2%	(0 to 5%) +1 (04 (at 2004	+2.0% (at 10	0%). CO +0.1%	(0 to 10%) + 3.0%	(at 40%): 0 ±0	504		
Gas concentration:		436, Accuracy: CF									Х	Tick Instrument used
	Gas Data GFM											
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)		(l/h)	(s)							
BH02C		1019	0	0.0	0							
Depth to GW: (m)	11.30				30	0.0	0.0	0.1	20.2	0	0	
Deptil to GW. (iii)	11.50				60	0.0	0.0	0.1	20.2	0	0	
					90	0.0	0.0	0.1	20.2	0	0	
					120	0.0	0.0	0.1	20.2	0	0	Constant readings
					150							
					180							
					210							
					240							
					270 300							
) (ppm)						
					5	4.6						
					15	5.3						
					30	5.5						
					45	5.5						
					60	5.4						
					75	5.1						
					90	4.9						
					105	4.7						
					120	4.5						

KEY

aP: Atmospheric Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

Gas Monitoring Results

JOB DETAILS												
Location:	UCL						Engineer:	VC + RP				
Date:	10/09/2018			Job Nun	nber:	18/3113		Time:	10:35			
METEODOLOGI		TE DEODM	ATION									
METEOROLOGI	CAL AND SI		ATION			1						
State of ground:		X Dry				Moist		Wet			н	Delete As Required
Wind:		Calm			Х	Light		Moderate			Strong	Ground Level
Cloud cover:		None				Slight	Х	Cloudy			Overcast	
Precipitation		X None				Slight		Moderate			Heavy	
Barometric pressure (mb)) Before:	1020					Temper	ature (°)	18			
		· · · · · · · · · · · · · · · · · · ·										
INSTRUMENTAT		i G3.18, Accuracy	CIL 10.20	(0 to 50) + 1 ()0/ (at 200/) +2.00/ (at 10	0%), CO +0.1%	(0 to 10%) + 2.0%	(at 400/)+ 0 +0	50/		
Gas concentration:		436, Accuracy: CH							· · ·		Х	Tick Instrument used
	Gas Data Grivi											
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)		(l/h)	(s)							
BH03		1020	0	0.0	0							
Depth to GW: (m)	Dry				30	0.0	0.0	0.1	20.4	0	0	
Deptil to G W. (iii)	DIy				60	0.0	0.0	0.1	20.3	0	0	
					90	0.0	0.0	0.1	20.3	0	0	
					120	0.0	0.0	0.1	20.3	0	0	Constant readings
					150							
					180							
					210							
					240							
					270 300							
) (ppm)						
					5	1.3						
					15	1.2						
					30	1.2						
					45	1.1						
					60	1.1						
					75	1.1						
					90	1.0						
					105	0.9						
	I		L		120	1.0	L					
						ļ						
												1

KEY

aP: Atmospheric Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

Gas Monitoring Results

JOB DETAILS												
Location:	UCL						Engineer:	VC + RP				
Date:	10/09/2018			Job Nun	nber:	18/3113		Time:	10:25			
METEODOLOGI		TE DEODM	ATION									
METEOROLOGI	CAL AND SI		ATION			1						
State of ground:		X Dry				Moist		Wet			н	Delete As Required
Wind:		Calm			Х	Light		Moderate			Strong	Ground Level
Cloud cover:		None	:			Slight	Х	Cloudy			Overcast	
Precipitation		X None	:			Slight		Moderate			Heavy	
Barometric pressure (mb) Before:	1020					Temper	ature (°)	18			
INSTRUMENTAT		i G3.18, Accuracy	CIL 10.20	(0 to 50) + 1 ()0/ (at 200/) +2.00/ (at 10	0%); CO +0.1%	(0 to 10%) + 2.0%	(at 400/)+ 0 +0	50/		
Gas concentration:		436, Accuracy: CF									Х	Tick Instrument used
	Gas Data GFM											
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)		(l/h)	(s)							
WS03		1020	0	0.0	0							
Depth to GW: (m)	Dry				30	0.0	0.0	0.7	19.4	0	0	
Deptil to G W. (iii)	Diy				60	0.0	0.0	0.7	19.3	0	0	
					90	0.0	0.0	0.7	19.3	0	0	
					120	0.0	0.0	0.7	19.3	0	0	Constant readings
					150							
					180							
					210							
					240							
					270 300							
) (ppm)						
					5	1.6						
					15	1.4						
					30	1.2						
					45	0.8						
					60	0.8						
					75	0.7						
					90	0.6						
					105	0.4						
					120	0.3						

KEY

aP: Atmospheric Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:	UCL						Engineer:	VC + RP				
Date:	17/09/2018			Job Nur	nber:	18/3113		Time:	11:20			
METEOROLOGI	ICAL AND S	ITE INFORM	IATION									
	ICAL AND 5	·	IATION		-	Moist		Wet				Delete A - De series d
State of ground:						1		4		r		Delete As Required
Wind:		X Calm				Light		Moderate			Strong	Ground Level
Cloud cover:		X None				Slight		Cloudy			Overcast	
Precipitation		X None				Slight		Moderate			Heavy	
Barometric pressure (mb) Before:	1014					Temper	rature (°)	21			
INSTRUMENTAT	FION LISED											
III (DIRCIVILI)		i G3.18, Accuracy	: CH4 ±0.2%	6 (0 to 5%), ±1.	0% (at 309	%), ±3.0% (at 1	00%); CO ₂ ±0.19	6 (0 to 10%), ±3.0	% (at 40%); O ₂	±0.5%		
Gas concentration:		436, Accuracy: CH									Х	Tick Instrument used
DII											$\mathbf{CO}(\mathbf{x})$	
BH (No.)		aP After (mb)	ap (Pa)	Flow rate (l/h)	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		. ,		. ,	(s)							
BH01		1014	0	0.0	0							
Depth to GW: (m)	Dry				30	0.0	0.0	2.1	18.1	0	0	
· · · · · · · · · · · · · · · · · · ·	219				60	0.0	0.0	2.1	18.0	0	0	
					90	0.0	0.0	2.1	18.0	0	0	
					120	0.0	0.0	2.1	18.0	0	0	Constant readings
					150							
					180							
					210							
					240 270							
					300							
) (ppm)						
					5	0.3						
	1		1		15	0.3						
					30	0.4						
					45	0.4						
					60	0.4						
					75	0.4						
					90	0.4						
L					105	0.4						
					120	0.3						
	1											

KEY

aP: Atmospheric Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:	UCL						Engineer:	VC + RP				
Date:	17/09/2018			Job Nur	nber:	18/3113		Time:	11:10			
METEOROLOGI	ICAL AND S	ITE INFORM	ATION									
State of ground:		X Dry			1	Moist		Wet				Delete As Required
Wind:		X Calm				Light		Moderate			Strong	Ground Level
Cloud cover:		X None				-						Glound Level
						Slight		Cloudy			Overcast	
Precipitation		X None 1013				Slight		Moderate			Heavy	
Barometric pressure (mb	b) Before:	1013					I empei	rature (°)	21			
INSTRUMENTAT	FION USED											
Cas concentration	Gas Data LMSx	i G3.18, Accuracy	: CH ₄ ±0.2%	5 (0 to 5%), ±1.	0% (at 309	%), ±3.0% (at 1	00%); CO ₂ ±0.19	6 (0 to 10%), ±3.0	% (at 40%); O ₂	±0.5%		Tiek Instrument used
Gas concentration:	Gas Data GFM	436, Accuracy: CH	I4 ±0.3% (0	to 5%), ±3.0%	(at 30%),	±3.0% (at 100%	%); CO2 ±0.3% (0 to 5%), ±3.0% (a	at 40%); O2 ±0.2	2%;	Х	Tick Instrument used
BH		aP After	dn (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	$O_2(\%)$	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)	up (1 u)	(l/h)	(s)	0114 (70)			02(70)	1120(ppiii)	co (ppiii)	Commenta
BH02C		1013	0	0.0	0							
			-		30	0.0	0.0	0.4	19.9	0	0	
Depth to GW: (m)	11.31				60	0.0	0.0	0.2	20.2	0	0	
					90	0.0	0.0	0.2	20.3	0	0	
					120	0.0	0.0	0.2	20.3	0	0	
					150	0.0	0.0	0.1	20.4	0	0	
					180	0.0	0.0	0.1	20.4	0	0	
					210	0.0	0.0	0.1	20.4	0	0	Constant readings
					240							
					270							
			ļ		300) (ppm)						
					5	1.8						
					15	2.0						
					30	2.0						
	1				45	2.1						
					60	2.1						
					75	2.1						
					90	2.1						
					105	2.1						
					120	2.2						
	1		1					1				

KEY

aP: Atmospheric Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	JOB DETAILS												
METEOROLOGICAL AND SITE INFORMATION State of ground: X Dry Moist Wet Delete As Required Wind: X Calm Light Moderate Strong Ground Level Cloud cover: X None Slight Cloudy Overcast Image: Cloud cover: X None Slight Moderate Heavy Precipitation X None Slight Moderate Heavy Image: Cloud cover: Image: Cloud cover: Image: Cloud cover: Temperature (°) 21 Image: Cloud cover: Image:								Engineer:					
State of ground: X Dry Moist Wet Delete As Required Wind: X Calm Light Moderate Strong Ground Level Cloud cover: X None Slight Cloudy Overcast Heavy Precipitation X None Slight Moderate Heavy Moderate Barometric pressure (mb) Before: 1015 Temperature (°) 21 Temperature (°) Temperature (°) Temperature (°) Tick Instrument used	Date:	17/09/2018			Job Nur	nber:	18/3113		Time:	11:00			
State of ground: X Dry Moist Wet Delete As Required Wind: X Calm Light Moderate Strong Ground Level Cloud cover: X None Slight Cloudy Overcast Heavy Precipitation X None Slight Moderate Heavy Moderate Barometric pressure (mb) Before: 1015 Temperature (°) 21 Temperature (°) Temperature (°) Temperature (°) Tick Instrument used	METEOPOLOC	ICAL AND S	ITE INFORM	IATION									
Wind: X Calm Light Moderate Strong Ground Level Cloud cover: X None Slight Cloudy Overcast Overcast Precipitation X None Slight Moderate Heavy Barometric pressure (mb) Before: 1015 Temperature (°) 21 Instrument used INSTRUMENTATION USED Gas concentration: Gas a Data LMSxi G3.18, Accuracy: CH4 ±0.2% (0 to 5%), ±1.0% (at 30%), ±3.0% (at 100%); CO2 ±0.1% (0 to 10%), ±3.0% (at 40%); O2 ±0.5% Tick Instrument used		ICAL AND 5		IATION		-	Moist		W /-4				Delete A - De suring d
Cloud cover: X None Slight Cloudy Overcast Precipitation X None Slight Moderate Heavy Barometric pressure (mb) Before: 1015 Temperature (°) 21 INSTRUMENTATION USED Gas concentration: Gas LMSxi G3.18, Accuracy: CH4 ±0.2% (0 to 5%), ±1.0% (at 30%), ±3.0% (at 100%); CO2 ±0.1% (0 to 10%), ±3.0% (at 40%); O2 ±0.5% Tick Instrument used	U						-				r		
Mone Slight Moderate Heavy Barometric pressure (mb) Before: 1015 Temperature (°) 21 INSTRUMENTATION USED Gas concentration: Gas Data LMSxi G3.18, Accuracy: CH4 ±0.2% (0 to 5%), ±1.0% (at 30%), ±3.0% (at 100%); CO2 ±0.1% (0 to 10%), ±3.0% (at 40%); O2 ±0.5% Tick Instrument used							-						Ground Level
Barometric pressure (mb) Before: 1015 Temperature (°) 21 INSTRUMENTATION USED Gas concentration: Gas concentration: Tick Instrument used							2		-			4	
INSTRUMENTATION USED Gas concentration: Gas Data LMSxi G3.18, Accuracy: CH ₄ ±0.2% (0 to 5%), ±1.0% (at 30%), ±3.0% (at 100%); CO ₂ ±0.1% (0 to 10%), ±3.0% (at 40%); O ₂ ±0.5% Tick Instrument used	Precipitation						Slight					Heavy	
Gas concentration: Gas Data LMSxi G3.18, Accuracy: $CH_4 \pm 0.2\%$ (0 to 5%), $\pm 1.0\%$ (at 30%), $\pm 3.0\%$ (at 100%); $CO_2 \pm 0.1\%$ (0 to 10%), $\pm 3.0\%$ (at 40%); $O_2 \pm 0.5\%$ Tick Instrument used	Barometric pressure (mł	b) Before:	1015					Temper	ature (°)	21			
Gas concentration: Gas Data LMSxi G3.18, Accuracy: $CH_4 \pm 0.2\%$ (0 to 5%), $\pm 1.0\%$ (at 30%), $\pm 3.0\%$ (at 100%); $CO_2 \pm 0.1\%$ (0 to 10%), $\pm 3.0\%$ (at 40%); $O_2 \pm 0.5\%$ Tick Instrument used	INSTRUMENTA'	TION USED											
Gas concentration:			i G3.18, Accuracy	: CH4 ±0.2%	6 (0 to 5%), ±1.	0% (at 30%	%), ±3.0% (at 1	00%); CO ₂ ±0.19	6 (0 to 10%), ±3.0	% (at 40%); O ₂	±0.5%		
	Gas concentration:	Gas Data GFM	436, Accuracy: CH	14 ±0.3% (0	to 5%), ±3.0%	(at 30%),	±3.0% (at 100%	%); CO2 ±0.3% () to 5%), ±3.0% (a	at 40%); O2 ±0.2	2%;	Х	Tick Instrument used
	DII											CO (mmm)	Community
BH (No.) aP After (mb) dp (Pa) Flow rate (l/h) Time (s) CH ₄ (%) LEL (%) CO ₂ (%) H ₂ S(ppm) CO (ppm) Comments				ар (Ра)			$CH_4(\%)$	LEL (%)	$CO_2(\%)$	$O_2(\%)$	$H_2S(ppm)$	CO (ppm)	Comments
					. ,								
BH03 1015 0 0.0 0	BH03		1015	0	0.0								
Depth to GW: (m) Dry 30 0.0 0.0 0.1 20.4 0 0	Depth to GW: (m)	Drv									-		
60 0.0 0.0 0.1 20.4 0 0		5									-	-	
90 0.0 0.0 0.1 20.4 0 0											-		a
120 0.0 0.1 20.4 0 0 Constant readings							0.0	0.0	0.1	20.4	0	0	Constant readings
		-						-					
270 270													
PID (ppm)				1) (ppm)						
5 0.7													
15 0.8						15	0.8						
30 0.8													
45 0.8													
60 0.8													
	l												
90 0.8													
105 0.8 120 0.8													
	l					120	0.8						

KEY

aP: Atmospheric Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

Gas Monitoring Results

JOB DETAILS												
Location:	UCL						Engineer:	VC + RP				
Date:	17/09/2018			Job Nur	nber:	18/3113		Time:	10:46			
METEOROLOGI	CAL AND S	ITE INFORM	IATION									
State of ground:		X Dry			1	Moist		Wet				Delete As Required
Wind:		X Calm				Light		Moderate			Strong	Ground Level
Cloud cover:		X None				Slight		Cloudy			Overcast	
Precipitation		X None				Slight		Moderate			Heavy	
-		1014 None	5			Slight	Temper		21		neavy	
Barometric pressure (mb	b) Before:	1014					Temper	ature ()	21			
INSTRUMENTAT	FION USED											
Gas concentration:	Gas Data LMSx	i G3.18, Accuracy	: CH ₄ ±0.2%	% (0 to 5%), ±1.	0% (at 30%	%), ±3.0% (at 1	00%); CO ₂ ±0.1%	0 (0 to 10%), ±3.0	% (at 40%); O ₂	±0.5%		Tick Instrument used
Gas concentration:	Gas Data GFM	436, Accuracy: CH	H4 ±0.3% (0	to 5%), ±3.0%	(at 30%),	±3.0% (at 100%	%); CO2 ±0.3% (0	to 5%), ±3.0% (a	at 40%); O2 ±0.2	2%;	Х	nck instrument used
BH		aP After	dp (Pa)	Flow rate	Time	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
(No.)		(mb)	- F (- 1)	(l/h)	(s)		(,*)	0.02(00)	02()0)		••• (F F)	
WS03		1014	0	0.0	0							
	_				30	0.0	0.0	0.7	19.6	0	0	
Depth to GW: (m)	Dry				60	0.0	0.0	0.7	19.5	0	0	
					90	0.0	0.0	0.7	19.5	0	0	
					120	0.0	0.0	0.7	19.5	0	0	
					150	0.0	0.0	0.7	19.5	0	0	Constant readings
					180							
					210							
					240							
					270 300							
						(ppm)						
					5	0.0						
					15	0.0						
					30	0.0						
					45	0.0						
					60	0.0						
					75	0.0						
	<u> </u>				90 105	0.0						
					105	0.0						
					120	0.0						

KEY

aP: Atmospheric Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

Vibrating Wire Piezometer: BH01 - 18.5m

Installed depth(Instrument Num		18.50 345691		Ground Level Range	(mOD) kPa			
k factor kPa		-0.199803995	per digit	Date Installed:	26/06/2018			
Date	Time	Microseconds	Digits (B units)	Pressure kPa	Reduced Level (mOD)	Head (m)	mbgl	Remarks
26/06/2018		3257	9426.8	0.00	-18.50	0.00	18.50	Base reading (Out of water)
16/08/2018	11:00	3303	9166.6	51.99	-13.20	5.30	13.20	Site visit 1
03/09/2018	10:37	3306	9151.1	55.09	-12.88	5.62	12.88	Site visit 2
10/09/2018	11:04	3306	9152.2	54.87	-12.90	5.60	12.90	Site visit 3
17/09/2018	11:22	3302	9173.3	50.65	-13.33	5.17	13.33	Site visit 4

Vibrating Wire Piezometer: BH01 - 46m

Installed depth(mbgl): Instrument Number		46.00 342539		Ground Level Range	(mOD) kPa			
k factor kPa		-0.127812226 per digit		Date Installed:	26/06/2018			
Date	Time	Microseconds	Digits (B units)	Pressure kPa	Reduced Level (mOD)	Head (m)	mbgl	Remarks
26/06/2018		3315	9102.6	0.00	-46.00	0.00	46.00	Base reading (Out of water)
16/08/2018	11:00	3315	9098.7	0.49	-45.95	0.05	45.95	Site visit 1
03/09/2018	10:37	3316	9095.4	0.91	-45.91	0.09	45.91	Site visit 2
10/09/2018	11:02	3316	9096.5	0.77	-45.92	0.08	45.92	Site visit 3
17/09/2018	11:20	3316	9096.0	0.84	-45.91	0.09	45.91	Site visit 4

Vibrating Wire Piezometer: BH03 - 8m

Installed depth(mbgl): Instrument Number k factor kPa		8.00 346346 -0.118494261 per digit		Ground Level Range Date Installed:	(mOD) kPa 09/07/2018			
Date	Time	Microseconds	Digits (B units)	Pressure kPa	Reduced Level (mOD)	Head (m)	mbgl	Remarks
09/07/2018		3267	9369.2	0.00	-8.00	0.00	8.00	Base reading (Out of water)
10/08/2018	09:40	3296	9205.0	19.45	-6.02	1.98	6.02	Site visit 1
16/08/2018	10:00	3296	9203.9	19.58	-6.00	2.00	6.00	Site visit 2
21/08/2018	12:30	3297	9201.7	19.85	-5.98	2.02	5.98	Site visit 3
03/09/2018	10:07	3297	9197.2	20.38	-5.92	2.08	5.92	Site visit 4
10/09/2018	10:42	3297	9200.0	20.05	-5.96	2.04	5.96	Site visit 5
17/09/2018	10:58	3297	9201.1	19.91	-5.97	2.03	5.97	Site visit 6

Vibrating Wire Piezometer: BH04 - 58.5m

Installed depth(mbgl): Instrument Number k factor kPa		58.50 346347 -0.119210725 per digit		Ground Level Range Date Installed:	(mOD) kPa 25/07/2018			
Date	Time	Microseconds	Digits (B units)	Pressure kPa	Reduced Level (mOD)	Head (m)	mbgl	Remarks
25/07/2018	TIME	3258	9424.0	0.00	-58.50	0.00	58.50	Base reading (Out of water)
10/08/2018	09:20	3369	8812.5	72.89	-51.06	7.44	51.06	Site visit 1
16/08/2018	10:30	3368	8814.1	72.71	-51.08	7.44	51.08	Site visit 2
21/08/2018	12:18	3368	8814.6	72.64	-51.09	7.42	51.08	Site visit 2
03/09/2018	12.16	3368	8816.7	72.39	-51.09	7.41	51.09	Site visit 3
10/09/2018	10:32	3368	8817.8	72.27	-51.13	7.37	51.13	Site visit 5
17/09/2018	10:55	3368	8817.8	72.27	-51.13	7.37	51.13	Site visit 6



Appendix D

UK LEGISLATIVE CONTEXT AND CONTAMINATION ASSESSMENT METHODOLOGY



Intended for

Project no.

Date 01 May 2016

LEGISLATIVE CONTEXT AND METHODOLOGIES GROUND CONTAMINATION

1. LEGISLATIVE CONTEXT

1.1.1. England

The regime for contaminated land was set out in Part 2A (ss.78A-78YC) of the Environmental Protection Act 1990 (EPA), as inserted by S.57 of The Environment Act 1995 and came into effect in England on 1st April 2000 as The Contaminated Land (England) Regulations 2000 (SI 2000/227). These regulations were subsequently revoked with the provision of The Contaminated Land (England) Regulations 2006 (SI 2006/1380) (as amended), which came into force in August 2006, and consolidated the previous regulations and amendments. Revised statutory guidance ("the Guidance") for local authorities on how to implement the regime, including the decision-making process on whether land is contaminated land in the legal sense, has been published by Defra and entered into force in April 2012.

Under Part 2A of the EPA Section 78A(2), "contaminated land" is defined as "land which appears... to be in such a condition, by reason of substances in, on or under the land, that –

a) significant harm is being caused or there is a significant possibility of such harm being caused; or

b) significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused".

1.1.2. Wales

The regime for contaminated land was set out in Part 2A (ss.78A-78YC) of the Environmental Protection Act 1990 (EPA), as inserted by S.57 of The Environment Act 1995 and came into effect in Wales on 1st July 2001 as The Contaminated Land (Wales) Regulations 2001 (WSI 2001/2197, W.157). These regulations were subsequently revoked with the provision of The Contaminated Land (Wales) Regulations 2006 (SI 2006/2989 W.278), which consolidated the previous regulations and amendments and added in provisions regarding radioactive contaminated land. These regulations came into force on 10th December 2006 and were accompanied by statutory guidance published by the Welsh Assembly Government in December 2006 ('the Guidance') for local authorities on how to implement the regime. The 2006 statutory guidance was replaced by the Contaminated Land Statutory Guidance - 2012 (WG19243), issued by the Welsh Government.

Under Part 2A of the EPA Section 78A(2), "contaminated land" is defined as "land which appears... to be in such a condition, by reason of substances in, on or under the land, that –

a) significant harm is being caused or there is a significant possibility of such harm being caused; or

b) pollution of controlled waters is being, or is likely to be caused" (Section 86 of the Water Act 2003 remains only partially implemented in Wales).

1.1.3. Scotland

The regime for contaminated land was set out in Part 2A (ss.78A-78YC) of the Environmental Protection Act 1990 (EPA), as inserted by S.57 of The Environment Act 1995 and came into effect in Scotland on 14th July 2000 as The Contaminated Land (Scotland) Regulations 2000 (SSI 2000/ 178). These regulations were subsequently revoked with the provision of The Contaminated Land (Scotland) Regulations 2005 (SSI 2005 /658), which came into force in April 2006 and consolidated the previous regulations and amendments and were accompanied by statutory guidance published by

the Scottish Government in May 2006 ('the Guidance') for local authorities on how to implement the regime.

Under Part 2A of the Environmental Protection Act 1990, "contaminated land" is defined in the Contaminated Land (Scotland) Regulations 2005 (as amended) as land which appears to the local authority to be in such a condition, by reason of substances in, on or under the land, that:

a) significant harm is being caused, or there is a significant possibility of such harm being caused; or

b) significant pollution of the water environment is being caused or there is a significant possibility of such pollution being caused.

1.1.4. Northern Ireland

The regime for Contaminated Land in Northern Ireland was set out in the Waste and Contaminated Land (Northern Ireland) Order 1997 (as amended). Part 3 of the Waste and Contaminated Land (Northern Ireland) Order 1997 contains the main legal provisions for the introduction of a contaminated land regime in Northern Ireland, but the regime is not yet in operation. It is noted that the Contaminated Land (Northern Ireland) Regulations 2006 and associated statutory guidance were published in draft for consultation in 2006, but have yet to be finalised. Under Part 3 of the 1997 Order, contaminated land is defined as,

"any land which appears to a district council in whose district it is situated to be in such a condition, by reason of substances in, on or under the land, that -

(a) significant harm is being caused or there is a significant possibility of such harm being caused; or

(b) pollution of waterways or underground strata is being, or is likely to be, caused.

"Significant harm" is defined in the draft guidance on risk based criteria and must be the result of a "pollutant linkage", which may be assessed using qualitative risk assessment models. The presence of a pollutant linkage relies on the Source-Pathway-Receptor concept, where all three factors must be present and potentially or actually linked for a potential risk to exist.

1.1.5. The Channel Islands

There is no formal contaminated land regime in the Channel Islands, as they are not part of the UK, and as such they usually adopt either the English or French legislation or create their own.

1.1.6. Isle of Man

There is no formal contaminated land regime in the Isle of Man, and they usually adopt a best 'practice approach' from a European country of choice on this basis.

1.1.7. Risk assessment Framework

"Significant harm" or "significant pollution of controlled waters" is defined in the Guidance on risk based criteria and must be the result of one or more relevant 'contaminant linkages' relating to the land.

The presence of a contaminant linkage relies on the Source-Pathway-Receptor concept, where all three factors must be present and potentially or actually linked for a potential risk to exist. For a risk of pollution or environmental harm to occur as a result of ground contamination, all of the following elements must be present:

- A source a substance that is capable of causing pollution or harm;
- A receptor something which could be adversely affected by the contaminant; and

• A pathway - a route by which the contaminant can reach the receptor.

If one of these elements is absent there can be no significant risk. If all are present then the magnitude of the risk is a function of the magnitude and mobility of the source, the sensitivity of the receptor and the nature of the migration pathway.

The Environment Agency Contaminated Land Report CLR 11 Model Procedures for the Management of Land Contamination provides the technical framework for structured decision making about land contamination. CLR 11 advocates a phased approach to risk assessment comprising:

- Preliminary Risk Assessment (PRA) desk study and qualitative assessment
- Generic Quantitative Risk Assessment (GQRA) assessment of contaminant concentrations against generic assessment criteria.
- Detailed Quantitative Risk Assessment (DQRA) detailed site specific risk assessment and development of site-specific assessment criteria.

Each of these phases follows the same basic steps buts adds site specific details and further certainty into the assessment as the stages progress. The basic steps are:

- Hazard identification and hazard assessment development or refinement of the source-pathway-receptor conceptual model, and identification of potential pollutant linkages.
- Risk Estimation qualitative risk estimation predicting magnitude and probability of potential consequences that may arise as a result of a hazard.
- Risk Evaluation deciding whether a risk is unacceptable.

2. **RISK ESTIMATION**

An assessment of environmental risks is made for each potential pollutant linkage identified.

Risk estimation has been completed in accordance with the guidance provided in:

• NHBC and Environment Agency 2008. Guidance for the Safe Development of Housing on Land Affected by Contamination. R&D Publication 66: 2008.

The following is taken directly from NHBC/EA 2008. The key to the classification is that the designation of risk is based upon the consideration of both:

a) the magnitude of the potential consequence (*i.e.*, severity) [takes into account both the potential severity of the hazard and the sensitivity of the receptor];

b) the magnitude of probability (*i.e.*, likelihood) [takes into account both the presence of the hazard and receptor and the integrity of the pathway].

Table 1: Classification of Consequence (after NHBC/EA 2008)

Category	Definition
	Highly elevated concentrations likely to result in "significant harm" to human health as defined by the EPA 1990, Part 2A, if exposure occurs.
Severe	Equivalent to EA Category 1 pollution incident including persistent and/or extensive effects on water quality; leading to closure of a potable abstraction point; major impact on amenity value or major damage to agriculture or commerce.
	Major damage to aquatic or other ecosystems, which is likely to result in a substantial adverse change in its functioning or harm to a species of special interest that endangers the long-term maintenance of the population.
	Catastrophic damage to crops, buildings or property.
	Elevated concentrations which could result in "significant harm" to human health as defined by the EPA 1990, Part 2A if exposure occurs.
Medium	Equivalent to EA Category 2 pollution incident including significant effect on water quality; notification required to abstractors; reduction in amenity value or significant damage to agriculture or commerce.
	Significant damage to aquatic or other ecosystems, which may result in a substantial adverse change in its functioning or harm to a species of special interest that may endanger the long-term maintenance of the population.
	Significant damage to crops, buildings or property.
	Exposure to human health unlikely to lead to "significant harm".
	Equivalent to EA Category 3 pollution incident including minimal or short lived effect on water quality; marginal effect on amenity value, agriculture or commerce.
Mild	Minor or short lived damage to aquatic or other ecosystems, which is unlikely to result in a substantial adverse change in its functioning or harm to a species of special interest that would endanger the long-term maintenance of the population.
	Minor damage to crops, buildings or property.
	No measurable effect on humans.
Minor	Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems.
	Repairable effects of damage to buildings, structures and services.

* For these purposes, disease is to be taken to mean an unhealthy condition of the body or a part of it and can include, for example, cancer, liver dysfunction or extensive skin ailments. Mental dysfunction is included only insofar as it is attributable to the effects of a pollutant on the body of the person concerned.

The likelihood of an event (probability) takes into account both the presence of the hazard and target and the integrity of the pathway and has been assessed based on the categories given below.

Category	Definition
High Likelihood	There is pollutant linkage and an event would appear very likely in the short-term and almost inevitable over the long-term, or there is evidence at the receptor of harm or pollution.
Likely	There is pollutant linkage and all the elements are present and in the right place which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short-term and likely over the long-term.
Low Likelihood	There is pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a long period such an event would take place, and is less likely in the shorter term.
Unlikely	There is pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long-term.

Table 2: Classification of Probability	(after NHBC/EA 2008)
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The potential severity of the risk and the probability of the risk occurring have been combined in accordance with the following matrix in order to give a level of risk for each potential hazard.

		Consequence						
		Severe	Medium	Mild	Minor			
Probability	High Likelihood	Very high	High	Moderate	Low			
	Likely	High	Moderate	Moderate/ Low	Low			
	Low Likelihood	Moderate	Moderate/ Low	Low	Very low			
Prol	Unlikely	Moderate/ Low	Low	Very low	Very low			

Very high risk

There is a high probability that severe harm could arise to a designated receptor from an identified hazard at the site without remediation action OR there is evidence that severe harm to a designated receptor is already occurring. Realisation of that risk is likely to present a substantial liability to be site owner/or occupier. Investigation is required as a matter of urgency and remediation works likely to follow in the short-term.

High risk

Harm is likely to arise to a designated receptor from an identified hazard at the site without remediation action. Realisation of the risk is likely to present a substantial liability to the site owner/or occupier. Investigation is required as a matter of urgency to clarify the risk. Remediation works may be necessary in the short-term and are likely over the longer term.

Moderate risk

It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, and if any harm were to occur it is more likely, that the harm would be relatively mild. Further investigative work is normally required to clarify the risk and to determine the potential liability to site owner/occupier. Some remediation works may be required in the longer term.

Low risk

It is possible that harm could arise to a designated receptor from identified hazard, but it is likely at worst, that this harm if realised would normally be mild. It is unlikely that the site owner/or occupier would face substantial liabilities from such a risk. Further investigative work (which is likely to be limited) to clarify the risk may be required. Any subsequent remediation works are likely to be relatively limited.

Very low risk

It is a low possibility that harm could arise to a designated receptor, but it is likely at worst, that this harm if realised would normally be mild or minor.

No potential risk

There is no potential risk if no pollution linkage has been established.

3. GQRA METHODOLOGIES

In order to assess the significance of the chemical concentrations recorded, generic assessment criteria (GAC) must be selected. The GAC are screening concentrations which are used initially for direct comparison to the measured site concentrations.

The GAC are defined based on the critical receptors identified at the site. Receptors are considered in relation to:

- Human health receptors (*e.g.*, site users);
- The water environment (*e.g.*, groundwater and surface water).

Potential risks to human health are considered primarily using measured concentrations of chemicals in soil. Potential risks to the water environment are considered primarily using soil leachate and groundwater concentrations as indicative of the potentially mobile fraction of any soil impact.

Additional receptors may be relevant dependent on the site *e.g.*, flora/fauna, water supply pipes, buried concrete.

3.1. Human Health Assessment

3.1.1. Initial Screening Assessment

In accordance with current UK guidance on legislation including Part 2A of the Environmental Protection Act 1990 and based on the principles of risk assessment, Ramboll Environ (REH) has derived generic assessment criteria (GAC) for interpretation of soil and groundwater chemical analysis. The Ramboll Environ GAC are considered to be threshold based screening concentrations, at which a significant risk is not considered to be present to the relevant receptors.

The Ramboll Environ REH GAC for soil assessment are based on the generic scenarios outlined in the Contaminated Land Exposure Assessment (CLEA) methodology and guidance documents (incorporating Science Reports SC050021/SR2 (January 2009), SR3 (January 2009), SR4 (September 2009) and the SGV reports (2009)). The generic scenarios include inhalation, ingestion, dermal contact of soil and dust as pathways for commercial and residential scenarios; as well as ingestion of homegrown produce for residential with gardens scenario. In addition, REH GAC have also been derived for the two Public Open Space land uses defined in C4SL guidance (outlined below).

The GAC have been calculated by use of two proprietary risk assessment models (CLEA Version 1.071 and the American Society for Testing Materials Risk Based Corrective Action RBCA Tool Kit Version 2.6 for Chemical Releases) which have been altered, where necessary, to reflect the current UK approach to human health risk assessment as set out in the Contaminated Land Report (CLR) 11 and the CLEA guidance documents. The physiochemical data has been taken from or derived using the methodology detailed in SR7 (November 2008) and SGV reports (2009), where feasible. The toxicology data has been taken from the current published EA toxicology documents. We have referred to all current publications and guidance issued up until 1st May 2016.

Reference has been made to the Defra-funded research project (SP1010), which developed a methodology to derive Category 4 Screening Levels (C4SLs) for six contaminants (benzo-a-pyrene, cadmium, arsenic, benzene, hexavalent chromium and lead). SP1010 provides technical tools and advice to be developed to help regulators and others to conform to the requirements of revised Part 2A Statutory Guidance. The C4SLs are therefore less conservative than GAC developed in accordance with published CLEA guidance as they describe a low risk as opposed to minimal risk scenario. However,

consistent with the developed GAC, sites below the C4SLs are within Category 4 (lowest risk category) and therefore considered suitable for use.

Defra's SP1010 Policy Companion document (DEFRA, Dec 2014) states that where a C4SL value has been derived for a contaminant where a Soil Guideline Value (as published by the EA 2009) exists, it is anticipated that risk assessors will use the C4SL value in line with Part 2A Statutory Guidance. In the absence of a suitable C4SL, risk assessors should identify and select appropriate GAC in accordance with established good practice. On this basis, Ramboll Environ has adopted the use of C4SLs however minimal risk assumptions have been applied in-house REH GAC for other contaminants of concern within our screening assessments.

The C4SLs for the six compounds published, are based on a sandy loam soil with 6% soil organic matter (SOM). The 6% SOM and sandy loam soil type is not considered by Ramboll Environ to be realistic of 'typical' UK soil conditions, and EA guidance ('Using Soil Guideline Values' EA, 2009) states that at 6% SOM, GAC may not be sufficiently protective (i.e. the values are too high to be sufficiently certain that they describe land where there is no risk to human health or the risk is negligible). For the Ramboll Environ GAC, all the C4SL inputs have been used apart from the SOM and soil type, which were amended to 1% and sand; thereby ensuring a suitably conservative Ramboll Environ GAC appropriate for most soils and Made Ground encountered in the UK. It is noted that none of the screening criteria used in the UK, including the C4SLs, have a statutory basis.

Ramboll Environ also attended the Land Quality Management and Chartered Institute of Environmental Health workshop for the collaborative development of 'Suitable 4 Use Levels' (S4ULs) and reference has been made to their publication 'The LQM/CIEH S4ULs for Human Health Risk Assessment, 2015'.

Review of additional UK organisation guidance including Contaminated Land: Applications in Real Environments (CL:AIRE) and partners GAC, including addendums up until 10 April 2012 has also been made. Soil Guideline Values (EA/DEFRA, 2009) may also be referred to if relevant. Finally, where necessary, other published sources of (non-UK) information, such as the RBCA V2.6 database has also been reviewed.

Contaminant concentrations below the adopted GAC are not considered to present a significant risk to identified receptors and therefore are not considered to warrant further study. Contaminants which are recorded at concentrations above their respective GAC are considered to present a potential risk to identified receptors and resultantly these determinants are subject to further assessment.

3.1.2. Contaminant Distribution Assessment

Concentrations above the GAC are considered further in relation to vertical and lateral distribution across the site and through statistical analysis, where appropriate. This analysis is used to define 'averaging areas' within which contamination concentrations and distribution are considered likely to be similar.

For each averaging area, where appropriate, statistical analysis is then used to calculate a 'representative' concentration for each contaminant within that area and identify possible outliers of the underlying distribution of contaminant concentrations. This analysis is completed in accordance with CIEH 2008 guidance.

The initial statistical tests are used to calculate the 95% probability that the true population mean falls below the critical concentration (GAC). In practise, this involves comparing the 95th Upper Confidence Limit of the true population mean with the GAC. The Maximum Value test is then used to identify whether the maximum concentration is likely to lie outside of the assumed distribution trend and as such would represent an outlier of the general population of data across the site. Outliers above the GAC may represent localised contaminant hotspots and require further consideration.

Constituent non-detects are conservatively assigned a value equal to the reported analytical laboratory limit of detection. Any identified true outliers are excluded from the datasets used in calculation of the 95%UCL value.

3.2. Assessment for the Water Environment

Assessment of risks to water resources is completed in general accordance with guidance provided in the Environment Agency 2013, Groundwater Protection Principles and Practice (GP3) for England and Wales and with reference to SEPA guidance WAT-PS-10-01 in Scotland.

Generic assessment criteria for waters must be selected to assess potential risks to the identified environmental receptors.

In the absence of relevant published water assessment criteria, the potential risk to human health from contaminated surface and groundwater and the potential risk to the aquatic environment from entry of pollutants (either directly or via a groundwater pathway) has been assessed using commonly accepted UK guidelines including the Water Supply (Water Quality) (England) Regulations 2000 (known as the Drinking Water Standards, or DWS) and the Environmental Quality Standards (EQS) defined in European legislation such as the Water Framework Directive (WFD) (2000/60/EC).

Minimum reporting values are also considered for hazardous substances for assessment of risks to groundwater resources in order to comply with the requirements of the guidance to 'prevent' input of hazardous substances to groundwater.

4. GROUND GAS RISK ASSESSMENT

Ground gas risk is characterised using guidance provided in the following:

- CIRIA C665, 2007. Assessing risks posed by hazardous ground gases to buildings. (Supersedes CIRIA 659).
- NHBC / RSK, 2007. Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present. Report Ed 4.
- BS8485: 2015 Code of practice for the characterization and remediation from ground gas in affected developments.
- BS8576:2013. Guidance on investigations for ground gas Permanent gases and Volatile Organic Compounds (VOCs)

The risk posed by a gas regime is assessed initially by calculating a Gas Screening Value using a combination of the gas flow rate and recorded concentrations of carbon dioxide and methane. This Gas Screening Value is then used in combination with the maximum recorded gas concentrations to determine the site's Characteristic Situation (CIRIA 665 – all site uses except low rise residential) or Traffic Light Classification (NHBC/RSK 2007 low rise residential sites only). Table A below outlines the method for defining the Characteristic Situation as detailed in CIRIA 665 and Table B outlines the method for defining the Traffic Light classification as detailed in NHBC/RSK 2007.

Characteristic Situation	Risk classification	Gas screening value of CH_4 or CO_2 (I/hr) ^a	Additional limiting factors	Typical source of generation		
1	Very low risk	<0.07	Typically methane $\leq 1\%$ and/or carbon dioxide $\leq 5\%$. Otherwise consider increase to Situation 2	Natural soils with low organic content. "Typical" Made Ground		
2	Low risk	<0.7	Borehole air flow rate not to exceed 70l/hr. Otherwise consider increase to Characteristic Situation 3	Natural soil, high peat/organic content. "Typical" Made Ground		
3	Moderate risk	<3.5	-	Old landfill, inert waste, mineworking flooded		
4	Moderate to high risk	<15	Quantitative risk assessment required to evaluate scope of protective measures	Mineworking -susceptible to flooding, completed landfill, inert waste (WMP 26B criteria)		
5	High risk	<70	-	Mineworking unflooded inactive with shallow workings near surface		
6	Very high risk	>70	-	Recent landfill site		

^a Gas screening value = gas concentration (%) x measured borehole flow rate (l/hr)

Table B: Proposed method for classifying gassing sites (after NHBC/RSK 2007)

	Methane1	Carbon Dioxide1			
Traffic Light	Typical Maximum Concentration5 (%v/v)	Gas Screening Value (GSV)2,4,6 litres per hour	Typical Maximum Concentration5	Gas Screening Value (GSV)2,3,4,5	

			(%v/v)	litres per hour
Crean				
Green	1	0.16	5	0.78
Amber 1				
Amber 1	-	0.62	10	1.50
Amber 2	5	0.63	10	1.56
Amber 2	20	1.56	30	3.13
Red	20	1.50	50	5.15

The CIRIA, NHBC and BS8485 guidance documents are then used to determine requirements for gas protection measures based on the site classification.

5. WATER SUPPLY PIPES

The assessment has been completed in accordance with the current UK guidance:

- Water UK. Jan 2014. Contaminated Land Assessment Guidance.
- UKWIR UK Water Industry Research Ltd, 2010. Guidance for Selection of Water Supply Pipes to be used in Brownfield Sites.

This guidance provides threshold concentrations for different pipe material for various chemical groups.

The pipeline materials considered by the guidance are PE, PVC, wrapped steel, wrapped ductile iron or copper pipe and barrier pipe. PE and PVC are assessed using threshold concentrations for various chemical groups including volatile organic compounds (VOC) with tentatively identified compounds (TICs), semi-volatile organic compounds (SVOC) with TICs, and mineral oils. Wrapped steel, wrapped ductile iron and copper pipe are assessed using corrosive properties.

Regional water companies may have adopted additional more stringent thresholds which they apply locally, thus consultation with the water authority must always be completed prior to final determination of water supply pipe materials.

6. WASTE CLASSIFICATION

The main steps in classifying waste are:

- 1. Is it really a waste or can it be reused, recycled or recovered?
- If the material is not to be utilised in some way and it is waste then classify to ascertain if hazardous or non-hazardous. In order to do this, guidance regarding the definition and classification of hazardous waste is utilised, the two main documents being EA, 2015 'Technical Guidance WM3: Waste Classification -Guidance on the classification and assessment of waste' and the European Waste Catalogue (EWC 2002).
- 3. Use the results of this initial waste classification to follow one of the following routes:

Hazardous			Non-Hazardous					
Pre-treat the waste		-	ely to be inert: soluble and n nature)	Thought unlikely to be inert: (e.g. may contain peat or other high organic content material)				
Complete WAC (Waste Acceptance Criteria) testing to determine class of landfill it can go to or any requirement for further pre-treatment if WAC fails.			•	WAC test to class of landfill sposed to	-			
	reactive Pass hazardous Fail: further hazardous WAC: WAC: dispose remedial dispose of at of at hazardous action		Pass: dispose of at inert landfill		Dispose to non- hazardous landfill (no WAC testing required by WM3).			

The landfill regulations (Environment Agency, 2011 Treatment of Waste for Landfill) prescribe that hazardous waste requires pre-treatment prior to disposal to landfill. This may include physical sorting at the point of production on site, by sorting of waste soils into separate stockpiles of eg topsoil, made ground and natural gravels.

6.1. Methodology

In terms of the EWC, the soil to be excavated from this site for disposal is classed as 'Soil and Stones containing Dangerous Substances' (EWC Code 170503) or 'Soil and Stones other than those mentioned in EWC Code 170503' (EWC Code 170504). As such it is what is known as a 'Mirror Entry waste' and needs to be assessed against Threshold Levels for certain dangerous substances in order to confirm whether it needs to be classified as hazardous (170503) or non-hazardous (170504).

Data from site soil chemical testing have been assessed to classify the site soils. The assessment has been undertaken using HazWasteOnline [™], a web-based tool for classifying waste. The software utilises Environment Agency guidance and European regulations to classify samples in line with current requirements.

The assessment provided in this report fulfils the requirement of step 2 above, and allows classification of the site soils and hazardous or non-hazardous.

Asbestos: The Hazardous Waste (England and Wales) Regulations 2005 requires that any waste having an asbestos content greater than 0.1% weight/weight (w/w) be classified as Hazardous Waste. Any waste with an asbestos content of less than 0.1% w/w can be classified as non-hazardous waste, unless there are other contaminants present which would make the waste hazardous.

Where fibrous asbestos is present at concentrations greater than 0.001%, these can be considered to pose a risk to human health and must be dealt with as hazardous soils for disposal purposes.

Where the asbestos is deemed to be of a fibrous nature the Health and Safety Executive (HSE) require that the handling of the material is undertaken by a suitably licensed company. The Carriage of Dangerous Goods (etc.) Regulations 2009 (CDG2009) applies in this instance.



Appendix E

SCREENING SUMMARY TABLES AND STATISTICAL ANALYSIS

					MG	MG	MG	RTD	MG	MG	LC	MG	MG	MG	MG	MG			MG	MG	MG	MG	MG	MG	LC
Lab Certificate Lab Sample Number Sample Reference					18-90251-1 988737	18-87658-1 973689	18-87658-1 973690	18-87658-1 973691	18-89730-1 986190	18-90086-1 987981	18-90086-1 987982	18-89730-1 986191	986192	18-87323-1 971897	18-89114-1 982324	18-89111-1 982312	18-89114-1 982323	18-87157-1 970902	18-87157-1 970903	18-87157-1 970904	960980	96/9981	18-86953-1 969553	18-86953-1 969554	18-86953 969555
Sample Reference Depth (m) Strata				Tier 2 Screening	0.50	BH02C	8H02C	8H02C 2.50	0.50	8H03 2.50	6H03 4.70	0.50	1.00	OP01 0.30	0.30	TP05 0.30	0.20	W501 0.20	W501 0.50	W501 3.10	0.70	W\$02 2.15	WS03 0.20	W503 0.70	W\$03 3.15
Statu Date Sampled	1			Screening Value	20/06/2018	30/05/2018	31/05/2018	31/05/2018	15/06/2018	19/06/2018	19/05/2018	15/06/2018	15/06/2018	30/05/2018	11/06/2018	12/06/2018	11/06/2018	25/05/2018	25/05/2018	25/05/2018	24/05/2018	24/05/2018	23/05/2018	23/05/2018	23/05/20
Analytical Parameter		, uq	tation	wdal			'																		
	sano	Limit of Detection	Accreditation Status	GAC - Commerdal																					
Asbestos Asbestos Screen	Type	N/A	ADD1-PL		Detected	Not-detected	Not-detected	Not-detected	Not-detected	Detected	Not-detected	Detected	Not-detected	Detected	Not-detected	Not-detected	Not-detected	Detected	Detected	Detected	Not-detected	Not-detected	Detected	Detected	Not-dete
BTEX, MTBE Benzene (TPH Aromatic CS-7)	48/k8	1	L0738-PL	15,000			a			4		a		4		4	4		<1		a	41	<1	<1	
Ethylbenzerie Methyl tert-butyl ether	मह/बह मह/बह	1	L0735-PL L0735-PL	3,200,000			4			4		a a		d d		d d	4		<1 <1		d d	d d	4	<1 <1	
Toluene (TPH Aromatic C7-8) Xylene, m & p -	मा/मा मा/मा	1	L0738-PL L0738-PL L0738-PL	3,300,000			d d			4		d d		d d		a a	4		4		d d	d d	4	4	
kysena-o Inorganics	ve/ke me/ke		L082-PL	3,700,000			< <u>.</u>			<1		G		<.		et			<1 		a	4	4	<a< td=""><td></td></a<>	
Cyanide	mg/kg mg/kg mg/kg	1	L080-PL L080-PL	49	d d	d d	d d	d d	1	4	4	a.5 a	4	a	90.5 d	a. a	4	<1 <1	41. 41.	<1	4 4	a. a	41	4	60.5 61
Moisture Content	N IIIII	N/A	L019-UK/PL		7.5	6.3	9.9	8.6	8.7	9.6	22	34	17	6.1	20	13	23	13	11	12	11	13	9.8	15	16
Soil Organic Matter Sulphate (SO4)	%	0.1	L009-PL L038-PL		1.2	15	2.1	0.7	0.6	1.5	0.5	1.3	0.5	2.9	0.5	0.7	0.7	1.8	0.5	2.3	1.5	2.5	0.9	1.7	0.3
Sulphide	me/ke me/ke	1	L010-PL L082-PL		6.8 0.7	4.4	3.1	<1	15	17	<1 40.5	12	<1 40.5	11	a 63	9	<1	<1	4	17	2.1	\$6 5	2.9	<1	<1 <0.5
Metals		1		7,400	2.4	2.7	2	1.7	12	4.2	15	4.9	2.7	4.6	1.9	d	1.6	18	8.7	6	14	1.3	9.7	3.5	1.8
	mg/kg mg/kg mg/kg	1	L038-PL L038-PL L038-PL	640 22,000	12 150	17 240	17 260	13 44	19 340	7.8 110	11 62	34 360	15 130	11 190	11	10 130	16 58	13 540	10 360	15 330	13 63	8.2 71	17 570	17 140	15 78
Boron Cadmium	mg/kg mg/kg	0.2	L038-PL L038-PL	240,000 410	1.5	1.4 <0.2	0.5 <0.2	0.8 <0.2	2.2 <0.2	0.9 <0.2	1.5 -0.2	0.4 <0.2	1	13	1.3	5.2 <0.2	2.4 <0.2	2.4 <0.2	2.4 <0.2	1.2	0.9 <0.2	2.1 <0.2	1.1	1.9 <0.2	1.2
	mg/kg mg/kg mg/kg	4	L038-PL L080-PL	8,600 49	23 64	15 64	17	18 <4	29 64	20 44	44 64	25 64	12 2	18 44	46 44	22 <4	37 64	32 64	21 <4	32 <4	13 04	15 64	30 <4	23 <4	41 64
Lead	mg/kg	1	L038-PL L038-PL	68,000 2,300	47 150	80 1,300	59 550	20 150	35 270	17 110	29 14	59 500	32 320	43 130	32 24	27 270	14 49	61 590	25 240	25 230	83 480	16 84	140	75 570	8 14
Mercury	mg/kg mg/kg	0.3	L038-PL L085-PL	1,100	<0.3	1.8	13	0.5	2.4	1.2	-0.3	13	40.3	0.7	40.3	<0.3	0.9	<0.3	1.2	7.8	2.9	<0.3	0.7	2.1	<0.3 0.03
Molybdenum Nickel	mg/kg mg/kg mg/kg	0.25	L038-PL	18,000 980	0.91 19	1.6 18	1.8 17	2.3	0.3	0.33	<0.25 39	0.54 36	<0.25 35	0.85	+0.25 37	0.42 18	<0.25 38	0.8	0.4 14	0.92 20	0.81 15	0.75 11	0.51 20	0.75 21	0.83 56
Vanadium	mg/kg	1	L038-PL L038-PL	9,000	41 27	<1 37	<1 12	<1 27	<1 51	1.8	<1 77	41 34	<1 63	4	1.7	43	<1 62	<1 40	<1 32	<1 53	а 11	<1 13	<1 43	<1 46	41 67
Misc	ns/ke		L038-PL	730,000	62	81	87	25	300	270	78	120	86	240	79	51	75	560	330	450	52	35	340	93	57
Arthraquinore, 9,30- Trichloro-1,2,2-trifluoroethane, 1,1,2-	™ह/kg मह/kg		L054-PL L0738-PL				<0.3 <1					40.3 41					<0.3		<0.3 <1						
Others	mg/kg	0.1	L064-PL				<0.1					-0.1					<0.1		<0.1						
					Arnosite loose fibres					Chrysotile loose fibrous		Chrysotile hard/cement type material & loose Shows debris		Chrysoffie loose fibres				Chrysotile hard/cement type material & loose fibrous debris	Chrysotile hard/cement	Chrysotile loose fibrous			Chrysotile loose fibres & loose	Chrysotile loose fibres	
Asbestos in Soil Screen / Identification Name	Type	0.001	AD01-PL AD05-PL		(0.022			⊢	<u> </u>	allons .		statenial & loose Sbrous debris		<0.001				fibrous debris	ope material	0.052		\vdash	fbrous debris & bitumes 0.012	(0.022	1
Aubestos Quantification Aubestos Quantification (Stage 2) Bergene	n N Innfer	0.001	AD05-PL AD05-PL L0738-PL		<0.001		4	-		0.045		0.106	a	(0.001	4			0.3	0.002	0.069			0.012	<0.001	
Benzene Catechol	va/ka ma/ka ma/ka	0.1	L0738-PL L030-PL L030-PL		-0.1	<0.1	<0.1	<0.1	40.1	-0.1	<0.1	40.1	40.1	(0.1	40.1	<0.1	<0.1	<0.1	40.1	<0.1	-0.1	<0.1	<0.1	<0.1	60.1
Ethylbenzene	HE/48	1	L0735-PL		-0.7	41 1		e1	e1	-0.7	-0.3	-92-3 Cl	-31-3 <1	6.0	41		41 41	(1)	-1	41 41	-0.1	- 41.0	-0.3	-01	100.3
Ethylphenol & Dimethylphenol Isopropylphenol	mg/kg mg/kg mg/kg	0.1	L030-PL		<0.3 <0.1	<0.1	cu.3 <0.1	40.1	40.1	<0.1	40.1	<pre><0.3</pre>	<0.1 40.1	40.1	40.1	<0.1	<0.1	cul3 <0.1	40.1	<0.1 <0.1	co.3	<0.1	ed.1	<0.3 <0.1	<0.3 <0.1
		1	L038-PL L0735-PL		- 30	41	4U <1	<1	40	-90	-72	41	420	-70	d a	aU	<1	<1	<1	<1	-20	adu Ala		010	410
naprdtols o-xylene	ng/ag pg/kg	0.2	L030-PL L0738-PL		<0.2	<0.2 <1	ed-2 <1	ed.2 e1	ed.2 <1	<0.2	-0.2	<0.2 <1	<0.2 <1	e0.2	ed.2 e1	ei.2	<0.2 <1	<0.2	<1 <1	<0.2 <1	e0.2	ed 2	×0.2	<0.2	:0.2
p & m-sylene Resorcinol	ra/ka ma/ka	0.1	L0738-PL L030-PL		<0.1	<0.1	<4	e1 e0.1	el 40.1	<0.1	-0.1	<1 40.1	<0.1	<0.1	<1 40.1	<0.1	<0.1	<1 40.1	<1	<1	-0.1	-0.1	<0.1	<0.1	:0.1
Stone Content Toluene	5. F8/98	1	L019-UK/PL L0730-PL		<0.1	<0.1 <1	ed:1 <1	ed.1 <1	ed.1 <1	<0.1	-0.1	<0.1 <1	<0.1 <1	e0.1	ed.1 <1	ei.1	<0.1 <1	<1	<1.1	<0.1 <1	e0.1	ed.1	<0.1	<0.1	<0.1
Total mass of sample received Total Sulphur	98 5	0.001	L019-UK/PL L038		1.9 0.289	1.4 0.043	1.4	1.4 0.016	2 0.134	2.9	0.046	0.056	1.5 0.015	1.5	2 0.032	0.71	4 0.077	4 0.144	2	1.4 0.812	0.032	0.249	2 0.104	2 0.057	2
Total Sulphur TPH C10 - C40	mg/kg mg/kg	50 30	L038-PL L076-PL		870	×10	440	170	190	930	33	17	<10	1,800 4,400	×10	70	<10	170	160	1,100	<10	42	97	<10	<10
TPH2 (C6 - C10)	mg/kg mg/kg	10 0.1	LO76-PL LOBB-PL		870 <0.1	<10	440 <0.1	170 <0.1	190 <0.1	930 <0.1	13 <0.1	40.1	<10 <0.1	4,400	<10 <0.1	70 <0.1	<10	170	160 <0.1	1,100	<10	42	97 <0.1	<10 <0.1	<10 <0.1
TPH-CWG - Aliphatic (ECS - EC35) TPH-CWG - Aromatic (ECS - EC35)	me/ke me/ke	10 10	L088/76-PL L088/76-PL			<10	170 190	79 64	65 96	230 510		<10 35	<10	200 3,900	<10 <10	<10 62	<10	56 100	100 62	440 610	<10	<10 42	30 67	<10	E
Polyaromatic Hydrocarbons (PAHs)	mg/kg	0.05	L064-PL		<0.05	<0.05	<0.05	<0.05	40.05	-0.05	<0.05	40.05	-0.05	8.1	40.05	<0.05	-0.05	0.91	<0.05	<0.05	-0.05	<0.05	40.05	<0.05	-0.05
Acenaphthylene Acthracene	mg/kg mg/kg	0.05	L064-PL L064-PL	76,000 520,000	<0.05 0.1	0.05 0.05	<0.05		<0.05 0.18	<0.05 0.24	<0.05 <0.05	40.05	+0.05 +0.05	2.3 46		<0.05 0.26	9.65 9.65		<0.05 <0.05	<0.05 <0.05	40.05 40.05	<0.05 <0.05	<0.05	<0.05	0.05 (0.05
Bera(a)anthracene [use BaP surrogate] Berao(a)pyrene	mg/kg mg/kg mg/kg	0.05	L064-PL L064-PL	170	0.37	0.05	<0.05 <0.05	<0.05 <0.05	0.95	0.95 1	<0.05	0.35 0.45	+0.05 +0.05	110 85	40.05 40.05	2.8	0.05			<0.05		<0.05 <0.05	0.63 0.58	<0.05	<0.05 <0.05
		0.05	L054-PL L054-PL	45	0.52	0.05	<0.05	<0.05 <0.05	1.4	1 0.6	<0.05 <0.05	0.49	+0.05	79 46	40.05 40.05	3.2 1.7	-0.05	3.1 1.6	0.53 <0.05	<0.05 <0.05	-0.05 -0.05	<0.05	0.71	<0.05 <0.05	<0.05 <0.05
Benzo(k)fluoranthene (use BaP surrogate) Chrysene (use BaP surrogate)	mg/kg mg/kg	0.05	L064-PL L064-PL	1,200 350	0.23	<0.05	<0.05	<0.05	0.6	0.59	<0.05 <0.05	0.35	+0.05 +0.05	60 82	40.05 40.05	1.2	9.B	1.3	0.19	<0.05 <0.05	40.05 40.05	<0.05 <0.05	0.36	×0.05 ×0.05	-0.05
	mg/kg mg/kg mg/kg	0.05	L064-PL	3.5 23,000	<0.05 0.68	<0.05	<0.05 <0.05	<0.05 <0.05	<0.05 2.2	40.05 1.9	<0.05 <0.05	40.05	+0.05 +0.05	12 260	0.05 0.05	0.43	<0.05	0.34 5.2	<0.05 0.69	<0.05 <0.05	40.05 40.05	<0.05 <0.05	<0.05 1	<0.05 <0.05	<0.05 <0.05
		0.05	L064-PL L064-PL	60,000 510	<0.05 0.19	0.05	<0.05	<0.05 <0.05	<0.05 0.59	<0.05 0.46	<0.05 <0.05	40.05 0.27	<0.05 <0.05	13 45	40.05 40.05	<0.05 1.3	40.05	0.51	<0.05 <0.05	<0.05 <0.05	40.05 40.05	<0.05 <0.05	<0.05 0.3	<0.05 <0.05	<0.05
Naphthalene Phenanthrene	mg/kg mg/kg	0.05	L054-PL L054-PL	110 22,000	<0.05 0.28	88	<0.05 <0.05	<0.05 <0.05	<0.05 0.7	40.05	<0.05 <0.05	0.05	<0.05 <0.05	40.05 160	40.05 (0.05	<0.05 2.1	0.05	<0.05 1.9	<0.05 0.23	<0.05 <0.05	40.05 40.05	<0.05 <0.05	<0.05	<0.05	0.05 (0.05
	mg/kg mg/kg	0.05	L064-PL L064-PL	54,000	0.56	<0.05 <0.5	<0.05 <0.8	<0.05 <0.8	1.9	1.7	+0.05 +0.8	0.74 4.7	<0.05	220 1,220	40.05 40.8	5 29.5	<0.05 <0.5	4.8	0.64 1.29	<0.05 <0.8	<0.05	<0.05 <0.8	1	<0.05 <0.8	<0.05 <0.8
Total PAHs EPAI6 Phenols Methylphenol-2	mg/kg	0.3	L064-PL	160,000			<0.3					-0.3					<0.3		<0.3						_
Methylphenol-4 Phenol	mg/kg mg/kg	0.2	1064-PL 1030-PL	160,000 380	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.2 <0.1	<0.1	0.1	40.1	<0.1	<0.2	<0.1	<0.2 <0.1	<0.1	-0.1	<0.1	<0.1	<0.1	<0.1
Phenol Semi Volatile Organic Compounds (SVOCs)	ns/ke	0.2	L064-PL	380			<0.2					<0.2					<0.2		<0.2						
Azobenzene Bis (2-chloroethowy) methane	ma/ka ma/ka	0.3	L064-PL L064-PL				<03 <03					<0.3 <0.3					<0.3		403			\square			
Bis (2-chloro-ethyl) ether Bis (2-chloroisopropyl) ether	mg/kg mg/kg	0.2	L064-PL L064-PL				<0.2	-	-			<0.2 <0.1					<0.2		<0.2 <0.1						
Bromophenyl phenylether, 4- Butyl benzyl phthalate	mg/kg mg/kg mg/kg	0.2	L064-PL L064-PL	940,000			<0.2		-			<0.2 <0.3					<0.2		<0.2 <0.3			⊢ −−−			
Chloro-3-methylphenol, 4-	mg/kg	0.3	L064-PL L064-PL				<0.3 <0.1					40.3 40.1					<0.3 <0.1		<0.1						
Chloroanline, p- Chloronaphthalene-2	mg/kg mg/kg mg/kg	0.1	L064-PL L064-PL	210			<0.1 <0.1					40.1 40.1					<01 <01		<0.1 <0.1						
		0.1	L064-PL L064-PL	3,600			<0.1 <0.3					<0.1 <0.3					<0.1 <0.3		<0.1 <0.3						
Dibenzofuran Dichlorophenol-2,4	mg/kg mg/kg	0.2	L064-PL L064-PL	3,500			<0.2 <0.3					<0.2 <0.3					<0.2 <0.3		<0.2 <0.3						
	mg/kg mg/kg mg/kg	0.2	L064-PL L064-PL	120,000			<0.2					<0.2 <0.3					<0.2 <0.3		<0.2 <0.3						
		0.1	L064-PL L064-PL	15,000			<0.1 <0.2					40.1 40.2					<0.1		<0.1 <0.2						
Dinitrotoluene-2,6 Dinitrotoluene-2,6	mg/kg mg/kg	0.2	L064-PL L064-PL	3,700 1,900			<0.2 <0.1					<0.2 <0.1					<0.2 <0.1		<0.2 <0.1						
Hexachlorobenzene	mg/kg mg/kg	0.3	L064-PL L064-PL	91 11			<0.3 <0.05					40.3 40.05					<0.3		<0.3 <0.05						
Isophorone Methylnaohthalene, 2-	mg/kg mg/kg	0.2					<0.2 <0.1										<0.2 <0.1		<0.2			<u> </u>			
Nitroanilise, 4- Nitroberzene	mg/kg mg/kg		L064-PL				<0.2					<0.2 <0.1													
	mg/kg	0.2	L064-PL L064-PL L064-PL				<0.3					<0.2 <0.3					<0.2 <0.3		<0.2 <0.3						
		0.2 0.3 0.3 1.3	L064-PL L064-PL L030-PL	380	<13	d3	<03 <03 <13	4.1	4.1	4.3		<0.2	43	d.3	GJ	d.1	<02 <03 <03 <13			<1.3	43	a.1	43	43	<13
	mg/kg mg/kg mg/kg	0.3 0.3 1.3 0.2 0.1	L064-PL L064-PL L010-PL L064-PL L064-PL	380	d1	43	40.3 40.3 41.3 40.2 40.1	d.)	4.3	413	43	<0.2 <0.3 <0.3 <1.3 <0.2 <0.1	d.3	d.3	d.3	d.1	<02 <03 <03 <13 <02 <01	<1.3	40.2 40.3 40.3 40.2 40.2 40.1	<13	413	e13	d.1	4.3	<1.3
Trimethylphenols Total Petroleum Hydrocarbons (TPH)	mg/kg mg/kg mg/kg mg/kg mg/kg	0.3 0.3 0.2 0.1 0.1	1064-91 1064-91 1064-91 1064-91 1064-91 1064-91			<0.1	<0.1	d.3 d0.1		<1.3 <0.1	<1.3 <0.1	0.2 0.3 0.3 0.2 0.1 0.1	<1.3	613		<1.3	02 03 03 03 02 02 02 01 02	(13	402 403 403 413 402 401 401	413 601	<1.3 <0.1		4.3	<1.3 <0.1	<1.3 <0.1
Trimethylphenols Total Petroleum Hydrocarbons (TPH) TPH Aliphatic COS-OS TPH Aliphatic COS-OS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	0.3 0.3 0.2 0.1 0.1 0.1 0.001 0.001	L064-PL L064-PL L030-PL L064-PL L054-PL L050-PL L058/76-PL L058/76-PL	2,400		<0.1 <0.001 <0.001	<0.1 <0.001 <0.001	<0.001	<0.001	<0.001 <0.001	<1.3 <0.1	0.2 0.3 0.3 0.2 0.1 0.1 0.1 0.001 0.001	<0.001	<0.001	+0.001	<1.3 <0.1 <0.001 <0.001	<pre>402 403 403 413 402 401 4001 40001 40001 40001 </pre>	<1.3 (0.1 (0.001 (0.001	40.2 40.3 40.3 40.3 40.2 40.1 40.0 40.0 50 40.0 51 51 51 51 51 51 51 51 51 51 51 51 51	<0.001	<0.001	<0.001	<0.001 <0.001	<1.3 <0.1 <0.001 <0.001	<1.3 <0.1
Trimethylphenols Total Petroleum Hydrocarbons (TPH) TPH Allphatic C05-06 TPH Allphatic C06-08 TPH Allphatic C06-10 TPH Allphatic C06-10	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	0.3 0.3 0.2 0.1 0.001 0.001 0.001 1	L084-PL L084-PL L084-PL L084-PL L084-PL L088/76-PL L088/76-PL L088/76-PL L088/76-PL	2,400 5,300 1,300 6,100		<0.0	<0.1	e1.3 40.01 40.001 40.001 40.001 e1	<0.001	<0.001	<1.3 <0.1	<pre>c0.2 c0.3 c0.3 c0.3 c0.1 c0.1 c0.1 c0.001</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <0.001 <1	<1.3 (0.1 (0.001 (0.001 (0.001 (1	+0.001	<1.3 <0.1 <0.001	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<1.3 <0.1	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.00140 40.001 40.0000000000	<0.001 <0.001 <0.001 <1	<1.3 (0.1 (0.001 (0.001 (0.001 (1	<0.001	<0.001	<1.3 <0.1 <0.001 <0.001 <0.001 <0.001 <1	d3 d01
Trinsthylphenols Total Petroleum Nydrocarbons (TPH) TPH Aliphatic C05-06 TPH Aliphatic C06-08 TPH Aliphatic C06-10 TPH Aliphatic C06-10 TPH Aliphatic C10-12	mpha mpha mpha mpha mpha mpha mpha mpha	0.3 0.3 0.2 0.1 0.001 0.001 0.001 1	L084-FL L054-FL L054-FL L054-FL L054-FL L053/76-FL L053/76-FL L053/76-FL L053/76-FL L053/76-FL	2,400 5,300 1,300 6,100 43,000		<0.1 <0.001 <0.001	<0.1 <0.001 <0.001	<0.001	<0.001	<0.001 <0.001	<1.3 <0.1	0.2 0.3 0.3 0.2 0.1 0.1 0.1 0.001 0.001	<0.001	<0.001	+0.001	<1.3 <0.1 <0.001 <0.001	<pre>402 403 403 413 402 401 4001 40001 40001 40001 </pre>	<1.3 (0.1 (0.001 (0.001	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.00140 40.001 40.0000000000	<0.001	<0.001	<0.001	<0.001 <0.001	<0.001	d13 d0.1
Trimethylphonols Total Petrolaum Hydrocarbans (TPH) TPH Alphanis: C05-00 TPH Alphanis: C06-00 TPH Alphanis: C06-01 TPH Alphanis: C06-02 TPH Alphanis	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	0.3 0.3 0.2 0.1 0.001 0.001 0.001 1	L084-FL L084-FL L084-FL L084-FL L084-FL L084-FL L084/F6-FL L088/F6-FL L088/F6-FL L088/F6-FL L088/F6-FL L088/F6-FL L088/F6-FL	2,400 5,300 1,300 6,100 43,000 1,000,000 1,000,000 15		<0.1 <0.001 <0.001	<0.1 <0.001 <0.001	<0.001	<0.001	<0.001 <0.001	41.3	0.2 0.3 0.3 0.2 0.1 0.1 0.1 0.001 0.001	<0.001	<0.001	40.001 40.001 40.001 41 42 45 45	<1.3 <0.1 <0.001 <0.001	<pre>402 403 403 413 402 401 4001 40001 40001 40001 </pre>	<1.3 (0.1 (0.001 (0.001	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1	<0.001 <0.001 <1 <2 <8 <8	<0.001	<0.001 <0.001	<0.001	d.3 60.1
Transhrippikanola Tomi Highipatonia (THM) THM Alighinta COS-06 THM Alighinta COS-06 THM Alighinta COS-10 THM Alighinta COS-12 THM Alighinta COS-10 THM Annualist COS-07 THM Annualist COS-07 THM Annualist COS-07	nghg nghg nghg nghg nghg nghg nghg nghg	0.3 0.3 0.2 0.1 0.1 0.001 0.001 0.001 1 2 8 8	1054-91 1054-91 1054-91 1054-91 1054-91 1058/76-91 1058/76-91 1058/76-91 1058/76-91 1058/76-91 1058/76-91 1058/76-91 1058/76-91	2,400 5,300 6,100 41,000 1,000,000 1,000,000 15 33,000 2,200		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	<0.1
Transkriptighenols Transkriptighenolski (TMI) Triti Aliphetic (CSO-03 Triti Aliphetic (CSO-03 Triti Aliphetic (CSO-03 Triti Aliphetic (CSO-13) Triti Annalisi (CSO-13)	nghg nghg nghg nghg nghg nghg nghg nghg	0.3 0.3 1.3 0.2 0.1 0.001 0.001 1 2 8 8 0.001 0.001 0.001 1 2 1 0.001 1 2 1 0.001 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	1054-91 1054-91 1050-91 1054-91 1054-91 1054-91 1054-91 1058/76-91 1058/76-91 1058/76-91 1058/76-91 1058/76-91 1058/76-91 1058/76-91 1058/76-91	2,400 5,300 1,300 6,100 41,000 1,000,000 1,000,000 15 13,000 2,200 11,000		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	(1.3
Threadh-planning Thri Algebrack (2014) Thri Algebrack (2014)	nghg nghg nghg nghg nghg nghg nghg nghg	0.3 0.3 1.3 0.2 0.1 0.001 0.001 1 2 8 8 0.001 0.001 0.001 1 2 1 0.001 1 2 1 0.001 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	1054-91 1054-91 1054-91 1054-91 1054-91 1058/76-91 1058/76-91 1058/76-91 1058/76-91 1058/76-91 1058/76-91 1058/76-91 1058/76-91	2,400 5,300 6,100 41,000 1,000,000 1,000,000 15 33,000 2,200 11,000 2,200 23,000 29,000		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	613
Thready Bylancial Thready Bylancial (TPN) TPM Algoritude COS 40 TPM	methe methe	0.3 0.3 1.3 0.2 0.1 0.001 0.001 1 2 8 8 0.001 0.001 0.001 1 2 1 0.001 1 2 1 0.001 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	1054-FL 1054-FL 1050-FL 1050-FL 1050-FL 1050-FL 1050-FL 1050-FC 1050-FC 1050-FC 1050-FC 1050-FC 1050-FC 1050-FC 1050-FC 1050-FC 1050-FL 105	2,400 5,300 1,300 6,100 1,000,000 1,000,000 1,000,000 15 11,000 20,000 20,000 20,000 20,000 51,000		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	<1.3 <0.1
Transfrightendi Transformation Applications (TPR) Third Freducts and patients (TPR) Third Appliest GB=0 Third Appliest GB=0 Th	mghg mghg mghg mghg mghg mghg mghg mghg	0.3 0.3 1.3 0.2 0.1 0.0 0.001 0.001 1 2 8 8 0.001 0.001 1 2 1 0.001 1 2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	1054-91 1050-91 1050-91 1050-91 1050-91 1050-91 1050-91 1050-91 1050/76-91 1050/7	2,400 5,300 1,300 6,100 41,000,000 1,000,000 15 33,000 22,000 11,000 29,000 29,000 29,000 51,000		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	(0.1
Transfrighten fill Selection (TM) The Selection of Medical Conference on the Selection of Medic	nghg nghg nghg nghg nghg nghg nghg nghg	0.3 0.3 1.3 0.2 0.1 0.0 0.001 0.001 1 2 8 8 0.001 0.001 1 2 1 0.001 1 2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	1054-91. 1050-91. 1050-91. 1050-91. 1050-91. 1050-91. 1050-91. 1050-91. 1050/76-91. 105	2,400 5,300 1,300 6,100 41,000,000 1,000,000 15 33,000 22,000 11,000 29,000 29,000 29,000 51,000		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	<pre>c1.3 c0.1 c0.1 c0.1 c0.1 c0.1 c0.1 c0.1 c0.1</pre>
Transfrighten fill Selection (Selection) The Selection of Selection (Selection) The Selection (Selec	nghg nghg nghg nghg nghg nghg nghg nghg	0.3 0.3 1.3 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	1054-91. 1054-91. 1054-91. 1054-91. 1054-91. 1054-91. 1054-91. 1058/76-91. 1058/76-91. 1058/76-91. 1058/76-91. 1058/76-91. 1058/76-91. 1058/76-91. 1058/76-91. 1058/76-91. 1058/76-91. 1058/76-91. 1058/76-91. 1058/76-91. 1058/76-91. 105738-92. 105758-92. 105758-92. 105788-92. 105788-92. 10578-	2,400 5,100 6,100 41,000 1,000,000 15 1,000,000 15 11,000 15,000 15,000 51,000 51,000 51,000 1,000		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	<pre> (1.3</pre>
There in your in the Product of My Constraints o	methe methemethe	0.3 0.3 1.3 0.2 0.3 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	1054-91. 1054-91. 1054-91. 1054-91. 1054-91. 1058-91. 1059-9	2,400 5,100 6,100 41,000,000 1,000,000 13,000,000 13,000 29,000 29,000 29,000 29,000 31,000 31,000 31,000 31,000		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	<pre></pre>
The Angelow Constraints of the Angelow Constrain	matha matha	0.3 0.3 1.3 0.2 0.1 0.1 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	1054-71. 1054-71. 1054-71. 1054-71. 1054-71. 1054-71. 1058-75. 1058-75. 1058/75-71. 105	2,400 5,300 1,300,6,100 4,300 1,000,000 1,000,000 13,000,000 29,000 29,000 29,000 29,000 29,000 29,000 310,0000 310,000 310,000 310,000 310,000 310,0000 310,000 310,0		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	<pre></pre>
Therefylands Theref	10,074 10,074	0.3 0.3 0.3 0.3 0.2 0.1 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	1264-91. 1264-91. 1264-91. 1264-91. 1264-91. 1264-91. 1268-76-91. 1268/76-91. 1278/76-91	2,400 5,100 6,100 1,000,000 1,000,000 1,000,000 13,000 23,000 23,000 23,000 23,000 23,000 23,000 23,000 31,000 31,000 33,000 33,000 33,000		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	<pre>41.3 40.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1</pre>
honorhyboxis honor	ուցնել ուց ուց ուց ուց ուց ուց ուց ուց ուց ուց	0.3 0.3 1.3 0.2 0.1 0.601 0.601 0.601 0.601 0.601 1 2 6 6 0.001 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	200437. 200437. 200437. 200437. 200437. 200437. 200476	2,400 5,300 1,300,6,100 4,300 1,000,000 1,000,000 13,000,000 29,000 29,000 29,000 29,000 29,000 29,000 310,0000 310,000 310,000 310,000 310,000 310,0000 310,000 310,0		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	<pre></pre>
hone hybrid has been approximately a second	maha maha maha maha maha maha maha maha	0.3 0.3 1.3 0.2 0.1 0.601 0.601 0.601 0.601 0.601 1 2 6 6 0.001 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	2004 R. 2004	2,409 2,409 1,100 41,000 41,000,000 11,000,000 11,000,000 22,000 22,000 22,000 51,000 51,000 51,000 51,000 51,000 51,000 51,000 51,000 51,000 50,00		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	
honorhybensk honor	maha maha maha maha maha maha maha maha	0.3 0.3 1.3 0.2 0.1 0.601 0.601 0.601 0.601 0.601 1 2 6 6 0.001 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	2004年 2004 20	2,480 5,380 1,380 6,180 41,000,000 1,000,000 1,000,000 1,000,000 1,000 1,000 22,000 22,000 22,000 22,000 22,000 33,000 33,000 33,000 33,000 33,000 33,000 33,000 33,000		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	+1.3 +0.1
The Angel Section 2014 Control of		0.3 0.3 0.3 0.2 0.3 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	2004A 2004A	2,400 2,400 1,100 4,100 41,000 41,000 41,000 1,000,000 13,000 29,000 29,000 29,000 29,000 310,		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	+13.3 +0.1
hondrightenih hondrightenih hondrightenih hondrighteni ho		0.3 0.3 0.3 0.2 0.3 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	2004A 2004A	2.400 3.300 1.300 4.100 4.100 1.00,000 1.00,000 1.00,000 1.00,000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	
bronchybank bronchybank Bronchybank (CS 4) Bronchybank (CS 4) Bronchyb		0.3 0.3 0.3 0.2 0.3 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	20日本 20	2.400 2.400		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	
bronchybank bronchybank Websker (1998) Websker (199		0.3 0.3 0.3 0.3 0.3 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	00445, 00047, 00	2,400 2,400 1,300 1,300 1,000		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	
Vereinformation Vereinformation (Vereinformation) Vereinformation br>Vereinformation) Vereinformation	endra endra	0.3 0.3 0.3 0.3 0.3 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	00445, 00047, 00	2,400 2,400 1,300 1,300 1,000		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	
brondy down in the space (15 % of the space (15 % o	104/14 104/14	0.3 0.3 0.3 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	00445, 00047, 00057, 00	2,400 2,400 1,300 1,300 1,000		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	
Vorderformin Vorderformin Workshop (1) Workshop (2) Workshop (2) Wo	2014 2014 2014 2014 2014 2014 2014 2014	0.3 0.3 0.3 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	00445, 00047, 00057, 00	2,000 2,000 1,000		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	
bronchystemio bronchystemio Wardson (CS - Barray Barray CS - Barray CS - Barray Barray CS - Barray CS - Barray CS - Barray Barray CS - Barray CS - Barray Barray CS - Barray CS - Barray Barray CS - Barray C	2014 2014 2014 2014 2014 2014 2014 2014	0.3 0.3 1.3 0.3 0.3 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	0044, 0044, 0047, 0006, 0006, 0006, 0006, 0007,0	2.000 3.300 4.000 4.000 1.		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	
Vorderfacture Vorderfacture Workshown (Coll Coll Coll Coll Coll Coll Coll Col		0.3 0.3 1.3 0.3 0.3 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	0044, 0044, 0044, 0044, 0044, 0044, 0044, 0044, 0044, 0044, 0044, 0044, 0044, 0044, 0044, 0047,0	2.455 3.585 4.587 4.587 4.598 1.000,000 1.000,000 1.000,000 1.000,000 1.000,000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.00		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	
bronchysonia bronc		0.1 0.1 1.1 0.1 0.1 0.1 0.1 0.1		2.400 3.500 4.500 4.500 4.500 5.5000 5.5000 5.5000 5.5000 5.5000 5.5000 5.5000 5.5000 5.5000		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	
bronchysons bronchysons (************************************		0.1 0.2 1.1 1.2 0.3 0.1 0.3 0.3 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	0044A, 00	2.400 2.400 3.500 4.5000 4.5000 4.5000 4.5000 4.5000 4.5000 4.50000 4.500000		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	Image: state
bronchysons bronchysons (Marken Charles) (Marken Charles)		0.1 0.2 1.1 1.2 0.3 0.1 0.3 0.3 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4		2.400 3.500 4.500 4.500 1.000,000 1.000,000 1.000,000 1.000,000 1.000,000 1.000,000 1.0000 1.000 1.000 1.0000 1.00		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	> - > -
bronchybank bronchybank Bronch		0.1 0.2 1.1 1.2 0.3 0.1 0.3 0.3 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4		2.800 3.800 4.8000 4.8000 4.8000 4.8000 4.8000 4.80000 4.800000000000000000000		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	Image: state
bookparters bookp		0-3 0-3 1-3 1-3 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2		2.460 2.500 2.500 2.500 2.500 2.500 2.500 2.200 2.		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	
brachybers brachybers (b. acjess 05.5 of 20.5		0-3 0-3 1-3 1-3 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2		2.400 2.500 2.		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	
Yanch Jones Yanchi Aleka Yangan KS		0-3 0-3 1-3 1-3 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2		2.460 2.500 2.500 2.500 2.500 2.500 2.500 2.200 2.		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	
Yanch Jones Yanchi Aleka Yangan Kilo Yangan Xilo Yangan		0.1 0.1 1.2 1.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1		2.000 3.000 3.000 1.		<0.1 <0.001 <0.001 <0.001 <1 <2 <3 <3	<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200	41.3	40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45	<1.3 <0.01 <0.001 <0.001 <1 <2 <3 <6 <3	<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50	40.2 40.3 40.3 40.3 40.3 40.1 40.11 40.001 40.001 40.001 40.001 41 41 79	<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8	
Sundaparton Sundaparton (Salpart 104 Salpart	0.1 0.1 1.2 1.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1		2.885, 3.580, 3.590,			<0.1 <0.001 <0.001 <0.001 <1 7.3 17 150	<0.001 <0.001 <1 2.7 <8 69	<0.001 <0.001 <0.001 <1 <2 9.8 54	<0.001 <0.001 <0.001 <1 5.7 31 200		40.2 40.3 40.3 40.3 40.2 40.1 40.1 40.001 40.0001 41 42 48	40.001 40.001 41 42 43 43	<0.001 <0.001 <1 15 39 150	40.001 40.001 40.001 41 42 45 45		<pre>e02 e0.3 e0.3 e0.3 e0.1 e0.001 e0.001 e0.001 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1 e1</pre>	<1.3 <0.1 <0.001 <0.001 <0.001 <1 <1 <2 <4 50		<0.001 <0.001 <0.001 <1 8.3 65 360	<0.001 <0.001 <1 <2 <8 <8	<pre>c0.001 c0.001 c0.001 c1 c2 c8 c8</pre>	<0.001 <0.001 <0.001 <1 <2 <3 10	<0.001 <0.001 <1 <2 <8 <8		

MG Made Ground RTD River Terrace Deposits LC London Clay

Analytical Report Number: 18-96788

Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Your Order No: CL1536						Round 1	Round 2
Lab Sample Number						1025276	1029384
Sample Reference						BH02C	BH02C
Sample Number						None Supplied	None Supplied
Depth (m)						None Supplied	None Supplied
Date Sampled						16/08/2018	21/08/2018
Time Taken						None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status	Minimum Reporting Values	General Quality of GW Body		
General Inorganics							

pH	pH Units	N/A	ISO 17025		7.7	7.7
Total Cyanide	µg/l	10	ISO 17025	50	24	< 10
Sulphate as SO₄	µg/l	45	ISO 17025	188,000	947000	1160000
Sulphate as SO ₄	mg/l	0.045	ISO 17025	188	947	1160
Sulphide	µg/l	5	NONE		< 5.0	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025		670	600
Ammonia as NH ₃	µg/l	15	ISO 17025		810	
Ammonium as NH ₄	µg/l	15	ISO 17025	500	860	770
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE		4.32	5.00
Hardness - Total	mgCaCO3/I	1	ISO 17025		749	913

Phenois by HPLC

Catechol	µg/l	0.5	NONE		< 0.5	< 0.5
Resorcinol	µg/l	0.5	NONE		< 0.5	< 0.5
Ethylphenol & Dimethylphenol	µg/l	0.5	NONE		< 0.5	< 0.5
Cresols	µg/l	0.5	NONE		< 0.5	< 0.5
Naphthols	µg/l	0.5	NONE		< 0.5	< 0.5
Isopropylphenol	µg/l	0.5	NONE		< 0.5	< 0.5
Phenol	µg/l	0.5	NONE		< 0.5	< 0.5
Trimethylphenol	µg/l	0.5	NONE		< 0.5	< 0.5

Total	Phenols	

Total Phenols (HPLC)	µg/l	3.5	NONE		< 3.5	< 3.5
Speciated PAHs						

	µg/l	0.01	ISO 17025	0.075	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025		< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025		< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025		< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025		< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025		< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	0.075	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025		< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025		< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025		< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	0.075	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025		< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	0.0075	< 0.01	< 0.01
indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025		< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025		< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025		< 0.01	< 0.01

Total PAH						
Total EPA-16 PAHs	µg/l	0.16	ISO 17025		< 0.16	< 0.16
	-		-			

Analytical Report Number: 18-96788

Project / Site name: Eastman Dental Institute - 256 Grays Inn Road

Project / Site name: Eastman Dental Institu	ite - 256 Grays	inn Road					
Your Order No: CL1536						Round 1	Round 2
Lab Sample Number						1025276	1029384
Sample Reference						BH02C	BH02C
Sample Number						None Supplied	None Supplied
Depth (m)						None Supplied	None Supplied
Date Sampled						16/08/2018	21/08/2018
Time Taken		1				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status	Minimum Reporting Values	General Quality of GW Body		
Heavy Metals / Metalloids							
Magnesium (dissolved)	mg/l	0.005	ISO 17025			84	100
Antimony (dissolved)	µg/l	0.4	ISO 17025		5	0.8	1.0
Arsenic (dissolved)	µg/l	0.15	ISO 17025		7.5	1.34	1.63
Barium (dissolved)	µg/l	0.06	ISO 17025			13	12
Boron (dissolved)	µg/l	10	ISO 17025		750	940	1300
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.1	3.75	0.04	< 0.02
Calcium (dissolved)	mg/l	0.012	ISO 17025			160	200
Chromium (hexavalent)	µg/l	5	ISO 17025		27.5	< 5.0	< 5.0
Chromium (dissolved) Copper (dissolved)	μg/l μq/l	0.2	ISO 17025 ISO 17025		37.5 1500	0.2	< 0.2 < 0.5
Lead (dissolved)	μg/i μg/l	0.5	ISO 17025 ISO 17025		7.5	0.3	< 0.5
Magnesium (dissolved)	mg/l	0.005	ISO 17025		7.5	84	100
Magnesium (dissolved) Manganese (dissolved)	µg/l	0.005	ISO 17025		50	68	80
Mercury (dissolved) CV-AFS	uq/l	0.005	ISO 17025	0.01	0.75	< 0.0050	< 0.0050
Molybdenum (dissolved)	µg/l	0.05	ISO 17025	0.01	0.75	13	12
Nickel (dissolved)	µg/l	0.5	ISO 17025		15	4.4	3.9
Selenium (dissolved)	µg/l	0.6	ISO 17025		7.5	9.4	10
Vanadium (dissolved)	µg/l	0.2	ISO 17025			2.6	2.7
Zinc (dissolved)	µg/l	0.5	ISO 17025			5.4	2.9
Monoaromatics							
Benzene	µg/l	1	ISO 17025			< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	4		< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025			< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	3		< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	3		< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025			< 1.0	< 1.0
Petroleum Hydrocarbons							
TPH1 (C10 - C40)	µg/l	10	NONE			< 10	< 10
TPH2 (C6 - C10)	µg/l	10	ISO 17025			< 10	< 10
	P9/1	10	150 17025				
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025			< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025			< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025			< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE			< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE			< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE			< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE			< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/I	10	NONE			< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025			< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025			< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025			< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE			< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE			< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE			< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE			< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE			< 10	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 18-86953

Project / Site name: Eastman Dental Institute- 256 Grays Inn Road

Your Order No: CL1451						Made Ground	Made Ground	Made Grour
ab Sample Number						969556	973693	986194
Sample Reference						WS03	BH02C	BH04
Sample Number						None Supplied	None Supplied	None Supplie
Depth (m)						0.70	1.00	0.50
Date Sampled						23/05/2018	30/05/2018	15/06/2018
Time Taken			-		0	None Supplied	None Supplied	None Supplie
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	Minimum Reporting Values	General Quality of GW Body			
General Inorganics						-		
DH	pH Units	N/A	ISO 17025			7.7	7.7	7.8
otal Cyanide	µg/l	10	ISO 17025		50	< 10	< 10	< 10
ulphate as SO₄	mg/l	0.1	ISO 17025		188	30.2	12.6	3.3
ulphide	µq/l	5	NONE			< 5.0	< 5.0	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	NONE			< 15	560	< 15
Ammonium as NH ₄	µg/l	15	NONE		500	< 15	720	16
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE			4.89	7.10	3.96
lardness - Total	mgCaCO3/I	1	NONE			42.4	31.2	30.1
henols by HPLC								
Catechol	ug/l	0.5	NONE			< 0.5	< 0.5	< 0.5
tesorcinol	рд/I µg/I	0.5	NONE			< 0.5	< 0.5	< 0.5
thylphenol & Dimethylphenol	рд/1 µg/I	0.5	NONE			< 0.5	< 0.5	< 0.5
resols	рд/. µg/l	0.5	NONE			< 0.5	< 0.5	< 0.5
laphthols	р <u>у</u> , µg/l	0.5	NONE			< 0.5	< 0.5	< 0.5
sopropylphenol	µg/l	0.5	NONE			< 0.5	< 0.5	< 0.5
Phenol	µg/l	0.5	NONE			< 0.5	< 0.5	< 0.5
rimethylphenol	µg/l	0.5	NONE			< 0.5	< 0.5	< 0.5
otal Phenols otal Phenols (HPLC)		3.5				< 3.5		< 3.5
peciated PAHs	µq/l	3.5	NONE			< 3.5	< 3.5	< 3.5
Naphthalene	µg/l	0.01	ISO 17025		0.075	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025			< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025			< 0.01	< 0.01	< 0.01
luorene	µg/l	0.01	ISO 17025			< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025			< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025			< 0.01	< 0.01	< 0.01
luoranthene	µg/l	0.01	ISO 17025		0.075	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025			< 0.01	< 0.01	< 0.01
lenzo(a)anthracene	µg/l	0.01	ISO 17025			< 0.01	< 0.01	< 0.01
hrysene	µg/l	0.01	ISO 17025			< 0.01	< 0.01	< 0.01
enzo(b)fluoranthene	µg/l	0.01	ISO 17025		0.075	< 0.01	< 0.01	< 0.01
enzo(k)fluoranthene	µq/l	0.01	ISO 17025			< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025		0.0075	< 0.01	< 0.01	< 0.01
ndeno(1,2,3-cd)pyrene	µg/l	0.01	NONE			< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE			< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE			< 0.01	< 0.01	< 0.01
Fotal PAH Fotal EPA-16 PAHs	µg/l	0.2	NONE			< 0.2	< 0.2	< 0.2
leavy Metals / Metalloids								
Intimony (dissolved)	µg/l	1.7	ISO 17025		5	< 1.7	< 1.7	5.7
rsenic (dissolved)	рд/. µg/l	1.1	ISO 17025		7.5	< 1.1	9.9	2.0
arium (dissolved)	µg/l	0.05	ISO 17025			12	5.4	6.7
oron (dissolved)	µg/l	10	ISO 17025		750	43	< 10	< 10
admium (dissolved)	рц/I	0.08	ISO 17025	0.1	3.75	< 0.08	< 0.08	< 0.08
alcium (dissolved)	mg/l	0.012	ISO 17025			16	12	12
hromium (hexavalent)	µg/l	5	NONE			< 5.0	< 5.0	< 5.0
hromium (dissolved)	µq/l	0.4	ISO 17025		37.5	1.3	< 0.4	1.6
opper (dissolved)	µg/l	0.7	ISO 17025		1500	8.5	12	7.8
ead (dissolved)	µg/l	1	ISO 17025		7.5	9.4	11	14
langanese (dissolved)	µg/l	0.06	ISO 17025		50	5.5	2.5	4.1
lagnesium (dissolved)	mg/l	0.005	ISO 17025			0.65	0.33	0.24
1ercury - CV-AFS	ug/l	0.007	ISO 17025	0.01	0.75	0.0462	0.0240	0.0540
	µg/l	0.4	ISO 17025			9.7	5.5	< 0.4
		0.3	ISO 17025		15	< 0.3	0.4	< 0.3
lickel (dissolved)	µg/l							
lickel (dissolved) ielenium (dissolved)	µg/l	4	ISO 17025		7.5	< 4.0	< 4.0	< 4.0
Aolybdenum (dissolved) lickel (dissolved) selenium (dissolved) /anadium (dissolved) Inc (dissolved)					7.5	< 4.0 6.3 7.0	< 4.0 11 3.8	< 4.0 13 4.0

Petroleum Hydrocarbons

T0111 (C10 - C40)		10	NONE	- 10	. 10	. 10
TPH1 (C10 - C40)	µg/l	10	NONE	< 10	< 10	< 10
TPH2 (C6 - C10)	µg/l	10	NONE	< 10	< 10	< 10
		10		- 10	. 10	. 10
TPH C6 - C40	ug/l	10	NONE	< 10	< 10	< 10



Appendix F

HAZARDOUS WASTE ASSESSMENT OUTPUT



Waste Classification Report



Job name			
1620004664			
Description/Comments			
Project			
Site	 	 	

Waste Stream Template

Ramboll Generic Waste Stream

Classified by

Name: Hazel Comyn Date: 19 Jul 2018 11:01 GMT Telephone: 07870 809 789 Company: Ramboll UK Ltd 1 Broad Gate The Headrow Leeds LS1 8EQ

Report

Created by: Hazel Comyn Created date: 19 Jul 2018 11:01 GMT

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	WS03	0.2	Non Hazardous		3
2	WS03[1]	0.7	Non Hazardous		6
3	WS03[2]	3.15-3.50	Non Hazardous		9
4	WS02	0.7	Non Hazardous		11
5	WS02[1]	2.15	Non Hazardous		14
6	WS01	0.2	Non Hazardous		17
7	WS01[1]	0.5	Non Hazardous		20
8	WS01[2]	3.1	Non Hazardous		23
9	OP01	0.3	Hazardous	HP 7, HP 8, HP 11	26
10	BH02C	1	Non Hazardous		29
11	BH02C[1]	2	Hazardous	HP 8	32
12	BH02C[2]	2.5	Non Hazardous		35
13	TP05	0.30-0.60	Hazardous	HP 8	38
14	TP07	0.20-0.50	Non Hazardous		41
15	TP03	0.30-0.60	Non Hazardous		44
16	BH03	0.5	Non Hazardous		47

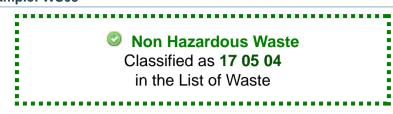


#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
17	BH04	0.5	Non Hazardous		50
18	BH04[1]	1	Non Hazardous		53
19	BH03[1]	2.5	Non Hazardous		56
20	BH03[2]	4.7	Non Hazardous		59
21	BH01	0.5	Non Hazardous		62
		0.0			

Appendices	Page
Appendix A: Classifier defined and non CLP determinands	65
Appendix B: Rationale for selection of metal species	67
Appendix C: Version	67



Classification of sample: WS03



Sample details

Sample Name:	LoW Code:	
WS03	Chapter:	17: Construction and Demolition Wastes (including excavated soi
Sample Depth:		from contaminated sites)
0.2 m	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
Moisture content:		03)
9.8%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 9.8% Dry Weight Moisture Correction applied (MC)

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound c	onc.	Classification value	MC Applied	Conc. Not Used
1	0	acenaphthene				<0.05	mg/kg		<0.05	ma/ka	<0.000005 %	2	<lod< th=""></lod<>
			201-469-6	83-32-9									
2	0	acenaphthylene	005 047 4		_	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
_	-		205-917-1	208-96-8	+								
3	۲	anthracene	204-371-1	120-12-7	_	<0.05	mg/kg		<0.05 m	mg/kg	/kg <0.000005 %		<lod< td=""></lod<>
		arsenic { arsenic tri		120-12-7	+							H	
4	4		215-481-4	1327-53-3		17	mg/kg	1.32	20.442	mg/kg	0.00204 %	\checkmark	
-		benzene		1027 00 0									
5			200-753-7	71-43-2		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< td=""></lod<>
6		benzo[a]anthracene	e			0.63	mg/kg		0.574	mg/kg	0.0000574 %	\checkmark	
Ľ		601-033-00-9	200-280-6	56-55-3		0.00				iiig/itg		Ň	
7		benzo[a]pyrene; be				0.58	mg/kg		0.528	mg/kg	0.0000528 %	\checkmark	
			200-028-5	50-32-8								+	
8		benzo[b]fluoranther				0.71	mg/kg		0.647	mg/kg	0.0000647 %	\checkmark	
			205-911-9	205-99-2									
9	۲	benzo[ghi]perylene			_	0.39	mg/kg		0.355	mg/kg	0.0000355 %	\checkmark	
	-		205-883-8	191-24-2	_								
10		benzo[k]fluoranther		007.00.0	_	0.36	mg/kg		0.328	mg/kg	0.0000328 %	\checkmark	
_	-		205-916-6	207-08-9									
	4	boron { • boron tril	bromide/trichloride/	trifluoride									
11		(combined) }		10294-33-4, 10294-34-5, 7637-07-2		1.1	mg/kg	13.43	13.454	mg/kg	0.00135 %	~	
12	cadmium { cadmium sulfide }		1	<0.2	mg/kg	1 285	<0.257	ma/ka	<0.00002 %		<lod< td=""></lod<>		
12		048-010-00-4	215-147-8	1306-23-6	'	<0.2	iiig/kg	1.200	<0.237	шу/ку	<0.00002 /0		
13	4	chromium { 🤎 chro				30	mg/kg	1.462	39.933	mg/kg	0.00399 %	\checkmark	
	215-160-9 1308-38-9												
14		chrysene				0.45	mg/kg		0.41	mg/kg	0.000041 %	\checkmark	
		601-048-00-0	205-923-4	218-01-9						2 0			

CAB Index number EC Number CAS Number CA	Conc. No	Applied	Classification	Compound conc.	Conv.	ed data	User entere	Note	Determinand		#
Is contrm TPH has NOT arisen from disel or patrol Display are also and second arise or patrol <td>순 Used</td> <th>CAF</th> <td>value</td> <td></td> <td>Factor</td> <td></td> <td></td> <td>LP N</td> <td>LP index number EC Number CAS Number</td> <td></td> <td></td>	순 Used	CAF	value		Factor			LP N	LP index number EC Number CAS Number		
dest comper (dicopper oxide; comper ()) oxide) sociation of complex oxide; comper () oxide) sociation of complex oxide; comper () oxide) sociation of complex oxides such as ferrocyanides, terrocyanides and mecacic oxyonable and those sociation of complex oxides is both as ferrocyanides, terrocyanides and mecacic oxyonable and those sociation of complex oxides is both as ferrocyanides, terrocyanides and mecacic oxyonable and those sociation of complex oxides is both as ferrocyanides, terrocyanide and mecacic oxyonable and those sociation of complex oxides is both as for oxide Sociation of sociation oxides is both as for oxide is both as for oxide Sociation oxide is both as for oxide is	2	Σ					R	Ū	onfirm TPH has NOT arisen from diesel or petrol	0	15
Image: Note of the section of the sectin the sectin section of the sectin the section of the section of		+									
& cyanides (* sails of hydrogen cyanide such as terroganides, terroganides, cyanide such as terroganides, terroganides, and mecuric conjointie and those 006-007-00-5	1	\checkmark	0.0144 %	143.556 mg/kg	1.126	mg/kg	140			44	16
17 Introjenties and measure covogande and those specified deswhere in the Annex } 006 007:00-5 -1 mg/kg 1.84 -1.884 mg/kg -0.00018 % 18 deberg/hybrithrone 501-02-00-2 200-181-8 53-70-3 0 -0.001 mg/kg -0.0001 mg/kg -0.00001 % 0 01 effytherazene 501-022-00-1 202-849-4 [100-411-4] 0 -0.001 mg/kg -0.00001 mg/kg -0.00001 % 0 01 futurene 201-951-24 206-44-0 1 mg/kg 0.0011 mg/kg 0.000007.% 0 22 indeno[123-ud]pyrene 201-955-3 36-73-7 0 -0.03 mg/kg 0.273 mg/kg 0.0000273 % V 23 indeno[123-ud]pyrene peolide deswhere in the Annex / 302-001-00-6 1 900 mg/kg 2.749 801.039 mg/kg 0.000067 % V 24 manganese (manganese subpate) 302-001-00-2 1275-87-7 1352 0.861 mg/kg 0.000067 % V 25 mecarry (mecary deniofde 302-001-00-2 1275									vanides { • salts of hydrogen cyanide with the	4	
Image: constraint of the section of the sectin the section of the section of the section of the section	<lod< td=""><th></th><td><0.000188 %</td><td><1.884 mg/kg</td><td>1.884</td><td>mg/kg</td><td><1</td><td></td><td>rricyanides and mercuric oxycyanide and those becified elsewhere in this Annex }</td><td></td><td>17</td></lod<>		<0.000188 %	<1.884 mg/kg	1.884	mg/kg	<1		rricyanides and mercuric oxycyanide and those becified elsewhere in this Annex }		17
10 ehylbanzene motocol 0000001 mg/kg p05-912-4 -0.001 mg/kg p05-912-4 -0.001 mg/kg p05-912-4 -0.000 mg/kg p05-912-4 -0.000 mg/kg p05-912-4 -0.000 mg/kg p05-912-4 0.000001 % ✓ 21 e futorene p01-688-5 p6-73-7 -0.005 mg/kg -0.05 mg/kg 0.000005 % 0.000005 % ✓ 22 e futorene p01-688-5 p6-73-7 -0.05 mg/kg 0.273 mg/kg 0.0000273 % ✓ 23 futorene p01-688-5 p67-73-7 1 900 mg/kg 0.273 mg/kg 0.000273 % ✓ 24 futorene in this Armex / p02-001-00-6 1 900 mg/kg 2.749 801.039 mg/kg 0.0801 % ✓ 25 d moreney dichoride / p02-001-00-8 p1785-87-7 320 mg/kg 1.55 0.687 mg/kg 0.000067 % ✓ 26 d moreney dichoride / p02-001-00-8 p15-20-3 0.51 mg/kg 0.000067 % ✓ 27 page.168 p12-20-3 0.51 mg/kg 0.000067 % ✓ ✓ 28 dickel (nicked difydroxide / p01-652-00-2 <td><lod< td=""><th></th><td><0.000005 %</td><td><0.05 mg/kg</td><td></td><td>mg/kg</td><td><0.05</td><td></td><td></td><td></td><td>18</td></lod<></td>	<lod< td=""><th></th><td><0.000005 %</td><td><0.05 mg/kg</td><td></td><td>mg/kg</td><td><0.05</td><td></td><td></td><td></td><td>18</td></lod<>		<0.000005 %	<0.05 mg/kg		mg/kg	<0.05				18
Bit 1-023-00-4 D02-849-4 [100-41-4 Image 1 Image 1 <thimage 1<="" th=""> Image 1 <thimage 1<="" th=""> Image 1 Image 1</thimage></thimage>	<lod< td=""><th>F</th><td>-0.000001.8/</td><td>-0.001 mg/kg</td><td></td><td>malka</td><td>-0.001</td><td></td><td></td><td>8</td><td>10</td></lod<>	F	-0.000001.8/	-0.001 mg/kg		malka	-0.001			8	10
20 200 2000000000000000000000000000000000000			<0.000001 %	<0.001 Hig/kg		шу/ку	<0.001		1-023-00-4 202-849-4 100-41-4		19
21		\checkmark	0.0000911 %	0.911 mg/kg		mg/kg	1			8	20
21 21<										-	
2 a inden(123-cd]symme [193-39-5] 1 0.3 mg/kg 0.273 mg/kg 0.0000273 % ✓ 23 Sector1-06 1 1 900 mg/kg 819.672 mg/kg 0.082 % ✓ 24 Sector1-06 1 1 900 mg/kg 2.749 801.039 mg/kg 0.082 % ✓ 24 Sector1-06-X 123-089-9 [785-87-7] 1 320 mg/kg 1.53 0.863 mg/kg 0.000083 % ✓ 26 Managanese subplate) 131-27-5 1 0.51 mg/kg 1.5 0.697 mg/kg 0.000087 % ✓ 27 aphtheline molybdenum (molybdenum(VI) oxide) - - - 0.51 mg/kg 1.57 0.697 mg/kg 0.000087 % ✓ 28 molkel (nickel dilydroxide) - - - - - 0.05 mg/kg 0.000087 % ✓ 28 phenel - 120-54-5 pi-20-3 - - 10.8 pH 10.8 pH <td><lod< td=""><th></th><td><0.000005 %</td><td><0.05 mg/kg</td><td></td><td>mg/kg</td><td><0.05</td><td></td><td></td><td>۲</td><td>21</td></lod<></td>	<lod< td=""><th></th><td><0.000005 %</td><td><0.05 mg/kg</td><td></td><td>mg/kg</td><td><0.05</td><td></td><td></td><td>۲</td><td>21</td></lod<>		<0.000005 %	<0.05 mg/kg		mg/kg	<0.05			۲	21
28 isad (* lead compounds with the exception of those specified disewhere in this Annex) 	/	\checkmark	0.0000273 %	0.273 mg/kg		mg/kg	0.3		deno[123-cd]pyrene	8	22
23 3 3 0000 mg/kg 819.672 mg/kg 0.082 % 4 24 4 3 320 mg/kg 2.749 801.039 mg/kg 0.080 % 4 25 320 mg/kg 1.320 mg/kg 1.53 0.663 mg/kg 0.000663 % 4 26 3000000-X 231-299-8 7487-94-7 1 0.77 mg/kg 1.53 0.663 mg/kg 0.0000697 % 4 26 3000000-X 231-299-8 7487-94-7 1 1.57 0.697 mg/kg 0.0000697 % 4 27 1052-00-2 202-049-5 1720-3 1 200 mg/kg 1.579 28.77 mg/kg 0.0000697 % 4 28 1058 11113-74-121 11113-74-121 11113-74-121 1.579 28.77 mg/kg 0.000085 % 4 4 29 10 101-88 PH 10.8 PH 10.8 PH 10.8 PH 10.8 PH 10.8 10.8 10.8 10.9 10.9 10.		+								æ	
24 22-003-00-4 23-089-9 1785-87-7 320 mg/kg 2.749 801.039 mg/kg 0.0801 % ✓ 25 080-010-00-X 231-299-8 1785-87-7 1.353 0.863 mg/kg 0.0000663 % ✓ 26 mercury (mercury dichloride) 0.010-X 231-299-8 1785-87-7 1.353 0.863 mg/kg 0.0000697 % ✓ 28 maphthalene	/	\checkmark	0.082 %	819.672 mg/kg		mg/kg	900	1	pecified elsewhere in this Annex }	~	23
20 B80-010-00-X P31-299-8 7487-94-7 0.0.7 mg/kg 1.333 0.0803 mg/kg 0.000083% ✓ 26 molybdenum (molybdenum(V) oxide) 042-001-00-9 P15-204-7 1313-27-5 0.51 mg/kg 1.5 0.697 mg/kg 0.0000697 % ✓ 27 naphthalene 601-052-00-2 P20-049-5 P1-20-3 <0.05	/	\checkmark	0.0801 %	801.039 mg/kg	2.749	mg/kg	320			4	24
26 27 molybdenum (molybdenum(VI) oxide) 042-001-00-9 215-204-7 [1313-27-5] 0.51 mg/kg 1.5 0.697 mg/kg 0.0000697 % 27 naphthalene 601-052-00-2 [202-049-5] [91-20-3] <0.05 mg/kg 0.00005 % 28 nickel (nickel dihydroxide) 028-008-00-X [235-008-5 [1]] [12054-48-7 [1]] 20 mg/kg 1.579 28.77 mg/kg 0.00288 % 29 pH [201-581-5] [35-01-8] 10.8 pH 10.8 pH 10.8 pH 0.00005 % 30 phenanthrene [201-581-5] [35-01-8] 10.8 pH 10.8 pH 0.8 pH 31 phenol [201-581-5] [35-01-8] 1 mg/kg 0.00013 % 32 pPrene [204-927.3] [129-00-0] 1 mg/kg 2.554 mg/kg 0.000011 % 33 selenium (selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex) [034-002-00-8] [034-002-00-8] [034-002-00-8] [034-002-00-8] [034-002-00-8] <th< td=""><td>/</td><th>\checkmark</th><td>0.0000863 %</td><td>0.863 mg/kg</td><td>1.353</td><td>mg/kg</td><td>0.7</td><td></td><td></td><td>4</td><td>25</td></th<>	/	\checkmark	0.0000863 %	0.863 mg/kg	1.353	mg/kg	0.7			4	25
27 01-052-00-2 202-049-5 91-20-3 20.05 mg/kg 20.05 mg/kg 20.000005 % 28 nickel { nickel dihydroxide } 235-008-5 [1] [12054-48-7 [1]] 20 mg/kg 1.579 28.77 mg/kg 0.00288 % ✓ 29 pH 10.8 pH 10.8 pH 10.8 pH 10.8 pH 0.00288 % ✓ 30 phenanthrene 201-581-5 85-01-8 <0.05	/	\checkmark	0.0000697 %	0.697 mg/kg	1.5	mg/kg	0.51			4	26
28 028-008-00-X 235-008-5 [1] 12054-48-7 [1] 10.8 pH 10.0011160	<lod< td=""><th></th><td><0.000005 %</td><td><0.05 mg/kg</td><td></td><td>mg/kg</td><td><0.05</td><td></td><td>•</td><td></td><td>27</td></lod<>		<0.000005 %	<0.05 mg/kg		mg/kg	<0.05		•		27
29 image: selective of the s	/	\checkmark	0.00288 %	28.77 mg/kg	1.579	mg/kg	20		8-008-00-X 235-008-5 [1] 12054-48-7 [1]	4	28
30 201-581-5 85-01-8 <0.005			10.8 pH	10.8 pH		pН	10.8			۵	29
31 04-001-00-2 203-632-7 108-95-2 1 mg/kg <1.3	<lod< td=""><th></th><td><0.000005 %</td><td><0.05 mg/kg</td><td></td><td>mg/kg</td><td><0.05</td><td></td><td></td><td>8</td><td>30</td></lod<>		<0.000005 %	<0.05 mg/kg		mg/kg	<0.05			8	30
32 1 mg/kg 0.911 mg/kg 0.0000911% ✓ 33 2 204-927-3 129-00-0 1 mg/kg 0.911 mg/kg 0.0000911% ✓ 33 2 selenium (selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex) - <	<lod< td=""><th></th><td><0.00013 %</td><td><1.3 mg/kg</td><td></td><td>mg/kg</td><td><1.3</td><td></td><td></td><td></td><td>31</td></lod<>		<0.00013 %	<1.3 mg/kg		mg/kg	<1.3				31
33 204-927-3 129-00-0 1000000000000000000000000000000000000	/	./	0.0000911 %	0.911 ma/ka		ma/ka	1			8	32
34 034-002-00-8 0 <	<lod< td=""><th></th><td></td><td></td><td></td><td></td><td></td><td></td><td>elenium { selenium compounds with the exception of admium sulphoselenide and those specified elsewhere</td><td>4</td><td></td></lod<>								elenium { selenium compounds with the exception of admium sulphoselenide and those specified elsewhere	4	
34 Image: Section of the sectin of the section of the section of the section of the section of								Ц	4-002-00-8		
33 Image: Section of the sectin of the section of the section of the section of the section of	<lod< td=""><th></th><td><0.000001 %</td><td><0.001 mg/kg</td><td></td><td>mg/kg</td><td><0.001</td><td>Ц</td><td></td><td></td><td>34</td></lod<>		<0.000001 %	<0.001 mg/kg		mg/kg	<0.001	Ц			34
36 023-001-00-8 215-239-8 1314-62-1 43 mg/kg 1.785 69.912 mg/kg 0.00699 % V 37 xylene 601-022-00-9 202-422-2 [1] 95-47-6 [1] 203-396-5 [2] 106-42-3 [2] 203-396-5 [2] 106-42-3 [2] 203-576-3 [3] 108-38-3 [3] 215-535-7 [4] 1330-20-7 [4] xylene <0.001	/	\checkmark	0.00883 %	88.342 mg/kg		mg/kg	97			8	35
37 ⁶⁰¹⁻⁰²²⁻⁰⁰⁻⁹ ²⁰²⁻⁴²²⁻² [1] ⁹⁵⁻⁴⁷⁻⁶ [1] ²⁰³⁻³⁹⁶⁻⁵ [2] ¹⁰⁶⁻⁴²⁻³ [2] ²⁰³⁻⁵⁷⁶⁻³ [3] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ¹⁰⁸⁻³⁸⁻³ [3] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹⁰⁸⁻³⁸⁻³ [3] ¹⁰⁸⁻³⁸⁻³ [3] ¹⁰⁸⁻⁴²⁻³ [3] ^{108-42-3}[3] ^{108-42-3}[3] ¹⁰⁸}}	/	\checkmark	0.00699 %	69.912 mg/kg	1.785	mg/kg	43			4	36
38 030-006-00-9 231-793-3 [1] 7446-19-7 [1] 340 mg/kg 2.469 764.627 mg/kg 0.0765 % √	<lod< td=""><th></th><td><0.0000001 %</td><td><0.001 mg/kg</td><td></td><td>mg/kg</td><td><0.001</td><td></td><td>1-022-00-9 202-422-2 [1] 95-47-6 [1] 203-396-5 [2] 106-42-3 [2] 203-576-3 [3] 108-38-3 [3]</td><td></td><td>37</td></lod<>		<0.0000001 %	<0.001 mg/kg		mg/kg	<0.001		1-022-00-9 202-422-2 [1] 95-47-6 [1] 203-396-5 [2] 106-42-3 [2] 203-576-3 [3] 108-38-3 [3]		37
2317/3373121 1/73370270121	/	\checkmark	0.0765 %	764.627 mg/kg	2.469	mg/kg	340				38
Total: 0.28 %		\top	0.28 %	Total:	ı l			<u> </u>	· · · · · · · · · · · · · · · · · · ·		

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely to be realised given TPH composition, concentration and site setting.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00883%)



Classification of sample: WS03[1]

.

..... Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS03[1]	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Sample Depth:		from contaminated sites)
0.7 m	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
Moisture content:		03)
15%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 15% Dry Weight Moisture Correction applied (MC)

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound conc		Classification value	MC Applied	Conc. Not Used
1	8	acenaphthene	004 400 0			<0.05	mg/kg		<0.05 mg	/kg	<0.000005 %		<lod< td=""></lod<>
-		acenaphthylene	201-469-6	83-32-9	+	0.05			0.05		0.000005.0/	H	
2			205-917-1	208-96-8		<0.05	mg/kg		<0.05 mg	/кg	<0.000005 %		<lod< td=""></lod<>
3	8	anthracene	204-371-1	120-12-7		<0.05	mg/kg		<0.05 mg	ı/kg	<0.000005 %		<lod< td=""></lod<>
	•			120-12-7	-							-	
4	4		215-481-4	1327-53-3	-	17	mg/kg	1.32	19.518 mg	/kg	0.00195 %	\checkmark	
5		benzene		1027 00 0		<0.001	mg/kg		<0.001 mg	/ka	<0.0000001 %	F	<lod< td=""></lod<>
Ľ		601-020-00-8	200-753-7	71-43-2		<0.001	iiig/kg		<0.001 mg	, Ng	<0.0000001 /0		
6		benzo[a]anthracen				<0.05	mg/kg		<0.05 mg	ı/kg	<0.000005 %		<lod< td=""></lod<>
			200-280-6	56-55-3	_							-	
7		benzo[a]pyrene; be 601-032-00-3	enzo[def]chrysene	50-32-8		<0.05	mg/kg		<0.05 mg	/kg	<0.000005 %		<lod< td=""></lod<>
		benzo[b]fluoranther		00 02 0	-							t	
8			205-911-9	205-99-2		<0.05	mg/kg		<0.05 mg	/kg	<0.000005 %		<lod< td=""></lod<>
9		benzo[ghi]perylene	•			<0.05	mg/kg		<0.05 mg	ı/kg	<0.000005 %	Ì	<lod< td=""></lod<>
Ľ			205-883-8	191-24-2						,			
10		benzo[k]fluoranther				<0.05	mg/kg		<0.05 mc	ı/kg	<0.000005 %		<lod< td=""></lod<>
		601-036-00-5	205-916-6	207-08-9									
11	4	boron { [●] boron tri (combined) }	bromide/trichloride			1.9	mg/kg	13 43	22.189 mg	/kg	0.00222 %		
				10294-33-4, 10294-34-5, 7637-07-2		1.0	iiig/iig	10.10	22.100	, ng	0.00222 /0	ľ	
12	4	cadmium { cadmiur			1	<0.2	ma/ka	1.285	<0.257 mg	ı/ka	<0.00002 %		<lod< td=""></lod<>
		048-010-00-4	215-147-8	1306-23-6	1.				101201	,			
13	4		<mark>mium(III) oxide</mark>	1308-38-9		23	mg/kg	1.462	29.231 mg	/kg	0.00292 %	\checkmark	
		chrysene	-10 100 0	1000 00 0	+							F	
14			205-923-4	218-01-9	-	<0.05	mg/kg		<0.05 mg	/kg	<0.000005 %		<lod< td=""></lod<>

#			Determinand		CLP Note	User entered	d data	Conv. Factor	Compound conc	:	Classification value	Apl	Conc. Not Used
		CLP index number	EC Number	CAS Number	CLF							MC	
15		confirm TPH has NO	OT arisen from dies	sel or petrol									
					_								
16	4	copper { dicopper ox			_	75	mg/kg	1.126	73.427 mg	g/kg	0.00734 %	\checkmark	
	_			1317-39-1	-					_		\vdash	
17	4	cyanides { salts o exception of comple ferricyanides and mo specified elsewhere 006-007-00-5	x cyanides such as ercuric oxycyanide	s ferrocyanides,		<1	mg/kg	1.884	<1.884 mg	g/kg	<0.000188 %		<lod< td=""></lod<>
	_	dibenz[a,h]anthrace	ne									\vdash	
18				53-70-3	-	<0.05	mg/kg		<0.05 mg	g/kg	<0.000005 %		<lod< td=""></lod<>
40	_	ethylbenzene				0.004			0.001				1.00
19		601-023-00-4 2	202-849-4	100-41-4	-	<0.001	mg/kg		<0.001 mg	g/kg	<0.000001 %		<lod< td=""></lod<>
20		fluoranthene				-0.0E	~~~//ca		.0.05 mg	-//	-0.00000E %/		
20		2	205-912-4	206-44-0		<0.05	mg/kg		<0.05 mg	g/kg	<0.000005 %		<lod< td=""></lod<>
21		fluorene				40.0F	mc//		10.05	1/100	-0.00005.0/		
21		2	201-695-5	86-73-7	1	<0.05	mg/kg		<0.05 mg	g/kg	<0.000005 %		<lod< td=""></lod<>
22		indeno[123-cd]pyrer	ne			<0.05	malka		<0.05 mc	1/40	<0.000005 %		<lod< td=""></lod<>
22		2	205-893-2	193-39-5	1	<0.05	mg/kg		<0.05 mg	g/kg	<0.000005 %		<lod< td=""></lod<>
23	4	lead { • lead composite compo		eption of those	1	570	mg/kg		495.652 mg	g/kg	0.0496 %	~	
	_	082-001-00-6			-							$\left \right $	
24	-	manganese { manga 025-003-00-4 2				330	mg/kg	2.749	788.718 mg	g/kg	0.0789 %	\checkmark	
	_			7785-87-7	-					_		$\left \right $	
25		mercury { mercury c				2.1	mg/kg	1.353	2.472 mg	g/kg	0.000247 %	\checkmark	
	-			7487-94-7	-							$\left \right $	
26	4	molybdenum { molyb	. ,	1313-27-5		0.75	mg/kg	1.5	0.978 mg	g/kg	0.0000978 %	\checkmark	
27		naphthalene		91-20-3		<0.05	mg/kg		<0.05 mg	g/kg	<0.000005 %	Ħ	<lod< td=""></lod<>
28	-		235-008-5 [1]	12054-48-7 [1]	-	21	mg/kg	1.579	28.843 mg	g/kg	0.00288 %	~	
	0	pH	234-348-1 [2]	11113-74-9 [2]									
29		P		PH		8.5	рН		8.5 pH		8.5 pH		
30	۲	phenanthrene				<0.05	mg/kg		<0.05 mg	g/kg	<0.000005 %		<lod< td=""></lod<>
			201-581-5	85-01-8								\vdash	
31		phenol				<1.3	mg/kg		<1.3 mg	g/kg	<0.00013 %		<lod< td=""></lod<>
			203-632-7	108-95-2	-							\vdash	
32	8	pyrene	204-927-3	129-00-0	-	<0.05	mg/kg		<0.05 mg	g/kg	<0.000005 %		<lod< td=""></lod<>
33	4	selenium { selenium cadmium sulphosele in this Annex 034-002-00-8				<1	mg/kg	2.554	<2.554 mg	g/kg	<0.000255 %		<lod< th=""></lod<>
	_	toluene			-							⊢┼	
34			002 625 0	108-88-3	-	<0.001	mg/kg		<0.001 mg	g/kg	<0.000001 %		<lod< td=""></lod<>
		601-021-00-3 2 TPH (C6 to C40) pe		100-00-3	\vdash							\vdash	
35	۲	11 11 (CO to C40) pe	0 1	ТРН	-	<10	mg/kg		<10 mg	g/kg	<0.001 %		<lod< td=""></lod<>
	ھ	vanadium { divanadi			\vdash							\vdash	
36	*			1314-62-1	-	46	mg/kg	1.785	71.407 mg	g/kg	0.00714 %	\checkmark	
+		xylene	· _ · · · · ·		┢								
37		601-022-00-9 2 2 2	203-396-5 [2] 203-576-3 [3]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20 7 [4]		<0.001	mg/kg		<0.001 mg	g/kg	<0.0000001 %		<lod< td=""></lod<>
\rightarrow			15-535-7 [4] ו	1330-20-7 [4]	\vdash							\vdash	
38	4		231-793-3 [1]	7446-19-7 [1] 7733-02-0 [2]		93	mg/kg	2.469	199.691 mg	g/kg	0.02 %	\checkmark	
								·	Т	otal:	0.175 %	<u> </u>	

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
Θ	Determinand defined or amended by HazWasteOnline (see Appendix A)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Page 8 of 68



Classification of sample: WS03[2]



Sample details

Sample Name:	LoW Code:	
WS03[2]	Chapter:	17: Construction and Demolition Wastes (including excavated soi
Sample Depth:		from contaminated sites)
3.15-3.50 m	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
Moisture content:		03)
16%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 16% Dry Weight Moisture Correction applied (MC)

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound c	onc.	Classification value	MC Applied	Conc. Not Used
1		acenaphthene				<0.05	mg/kg		<0.05	malka	<0.000005 %	≥	<lod< th=""></lod<>
'			201-469-6	83-32-9		<0.05	тту/ку		<0.05	тту/ку	<0.000005 %		<lod< td=""></lod<>
2		acenaphthylene		·		<0.05	mg/kg		<0.05	ma/ka	<0.000005 %		<lod< td=""></lod<>
Ĺ			205-917-1	208-96-8						iiig/itg			200
3	۰	anthracene				<0.05	mg/kg		<0.05	ma/ka	<0.000005 %		<lod< td=""></lod<>
			204-371-1	120-12-7									
4	4		•			15	mg/kg	1.32	17.073	mg/kg	0.00171 %	\checkmark	
			215-481-4	1327-53-3				_		5.5		•	
5		benzo[a]anthracene 601-033-00-9	e 200-280-6	56-55-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
6		benzo[a]pyrene; be		00 00 0		<0.05	mg/kg		<0.05	ma/ka	<0.000005 %		<lod< td=""></lod<>
Ŭ		601-032-00-3	200-028-5	50-32-8		<0.00	ing/kg		<0.00	iiig/kg	<0.000000 /0		LOD
7		benzo[b]fluoranther	ne			<0.05	mg/kg		<0.05	ma/ka	<0.000005 %		<lod< td=""></lod<>
		601-034-00-4	205-911-9	205-99-2									
8	۰	benzo[ghi]perylene				<0.05	mg/kg		<0.05	ma/ka	<0.000005 %		<lod< td=""></lod<>
			205-883-8	191-24-2						<u> </u>			
9		benzo[k]fluoranther				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		601-036-00-5	205-916-6	207-08-9	-								
10	4	boron { [●] boron tril (combined) }	bromide/trichloride,			1.2	ma/ka	13.43	13.893	mg/kg	0.00139 %	~	
				10294-33-4, 10294-34-5, 7637-07-2		1.2	iiig/kg	10.40	10.000	mg/kg	0.00103 //	~	
11	4	cadmium { cadmiur	<mark>n sulfide</mark> }		1	<0.2	ma/ka	1.285	<0.257	ma/ka	<0.00002 %		<lod< td=""></lod<>
		048-010-00-4	215-147-8	1306-23-6	1.			1.200		iiig/itg			
12	4	chromium { 📍 chro		4000.00.0		41	mg/kg	1.462	51.658	mg/kg	0.00517 %	\checkmark	
			215-160-9	1308-38-9									
13		chrysene	bor 000 4	040.04.0	_	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
			205-923-4	218-01-9	+								
14	۲	confirm TPH has N	ion arisen from die	sei or petroi	4	\checkmark							

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			eterminand		e						0	ied	
#					Note	User entere	d data	Conv. Factor	Compound o	conc.	Classification value	Ap	Conc. Not Used
		CLP index number E	C Number	CAS Number	CLP							MC	
15	4	copper {	copper (I) oxid	de }		25	ma/ka	1.126	24.265	mg/kg	0.00243 %	\checkmark	
		029-002-00-X 215-2	270-7	1317-39-1								ľ	
16	4	cyanides { salts of hydes exception of complex cya ferricyanides and mercu specified elsewhere in th	anides such as ric oxycyanide	s ferrocyanides,		<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<lod< td=""></lod<>
		006-007-00-5			1								
17		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		601-041-00-2 200-1	181-8	53-70-3		<0.00	ing/kg		<0.00	iiig/itg	<0.000000 /0		LOD
18	0	fluoranthene				<0.05	mg/kg		<0.05	ma/ka	<0.000005 %		<lod< td=""></lod<>
10		205-9	912-4	206-44-0		<0.05	iiig/kg		<0.05	iiig/kg	<0.000000 78		
19	0	fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
13		201-6	695-5	86-73-7		<0.05	iiig/kg		<0.05	iiig/kg	<0.000000 78		LOD
20		indeno[123-cd]pyrene				<0.05	ma/ka		<0.05	ma/ka	<0.000005 %		<lod< td=""></lod<>
20		205-8	393-2	193-39-5		<0.05	mg/kg		<0.05	mg/kg	<0.000003 /8		LOD
21	4	lead { lead compound specified elsewhere in th 082-001-00-6		eption of those	1	14	mg/kg		12.069	mg/kg	0.00121 %	~	
		manganese { manganes	o culphata)		-								
22		025-003-00-4 232-0		7785-87-7	-	230	mg/kg	2.749	544.974	mg/kg	0.0545 %	\checkmark	
	4			1103-01-1	+								
23		080-010-00-X 231-2		7487-94-7	-	<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<lod< td=""></lod<>
	æ	molybdenum { molybder											
24		042-001-00-9 215-2	. ,	1313-27-5	{	0.83	mg/kg	1.5	1.073	mg/kg	0.000107 %	\checkmark	
		naphthalene											
25		· ·)49-5	91-20-3	1	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
	æ	nickel { nickel dihydroxid	e}	1									
26		028-008-00-X 235-0	008-5 [1] 348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		56	mg/kg	1.579	76.252	mg/kg	0.00763 %	~	
27	۲	pH		PH		8.1	pН		8.1	pН	8.1 pH		1
		phenanthrene											
28	Ŭ	201-5	581-5	85-01-8		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		phenol										H	
29		604-001-00-2 203-6	632-7	108-95-2		<1.3	mg/kg		<1.3	mg/kg	<0.00013 %		<lod< td=""></lod<>
		pyrene										H	
30	Ŭ	204-9	927-3	129-00-0		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
	æ	selenium { selenium con										H	
31	•••	cadmium sulphoselenide				<1	ma/ka	2.554	<2.554	malka	<0.000255 %		<lod< td=""></lod<>
51		in this Annex }				<1	тту/ку	2.004	<2.004	шу/ку	<0.000255 %		<lod< td=""></lod<>
		034-002-00-8											
32	0	TPH (C6 to C40) petrole	um group			<10	mg/kg		<10	ma/ka	<0.001 %		<lod< td=""></lod<>
				ТРН	1		<u> </u>			59			
33	4	vanadium { <mark>divanadium </mark>				67	ma/ka	1.785	103.11	mg/kg	0.0103 %	\checkmark	
			239-8	1314-62-1	1		39			J9		Ľ	
	4	zinc { <mark>zinc sulphate</mark> }							404 000				
34			793-3 [1] 793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		57	mg/kg	2.469	121.336	mg/kg	0.0121 %	\checkmark	
	_				_					Total:	0.0983 %		

Key

0

User supplied data

Determinand values ignored for classification, see column 'Conc. Not Used' for reason

Determinand defined or amended by HazWasteOnline (see Appendix A)

4

Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration

<LOD Below limit of detection

CLP: Note 1 $\,$ Only the metal concentration has been used for classification



Classification of sample: WS02



Sample details

LoW Code	
Chapter:	17: Construction and Demolition Wastes (including excavated soi
	from contaminated sites)
Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
	03)

Hazard properties

None identified

Determinands

Moisture content: 11% Dry Weight Moisture Correction applied (MC)

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound con	c.	Classification value	MC Applied	Conc. Not Used
1	0	acenaphthene				<0.05	mg/kg		<0.05 m	ig/kg	<0.000005 %	2	<lod< th=""></lod<>
			201-469-6	83-32-9	-								
2		acenaphthylene	205-917-1	208-96-8	-	<0.05	mg/kg		<0.05 m	ig/kg	<0.000005 %		<lod< th=""></lod<>
		anthracene				0.05			0.05		0.000005.0/		1.05
3			204-371-1	120-12-7	-	<0.05	mg/kg		<0.05 m	ig/kg	<0.000005 %		<lod< td=""></lod<>
4	8	arsenic { arsenic tri	<mark>oxide</mark> }	·		13	mg/kg	1.32	15.463 m	ig/kg	0.00155 %	\checkmark	
4		033-003-00-0	215-481-4	1327-53-3		15	шу/ку	1.52	15.405	ig/kg	0.00133 /8	~	
5		benzene 601-020-00-8	200-753-7	71-43-2		<0.001	mg/kg		<0.001 m	ıg/kg	<0.0000001 %		<lod< th=""></lod<>
6		benzo[a]anthracene		11-43-2		<0.05	mg/kg		<0.05 m	a/ka	<0.000005 %		<lod< th=""></lod<>
Ŭ		601-033-00-9	200-280-6	56-55-3			ing/ng			9/119			
7		benzo[a]pyrene; be	,			<0.05	mg/kg		<0.05 m	ig/kg	<0.000005 %		<lod< td=""></lod<>
				50-32-8	-								
8		benzo[b]fluoranther				<0.05	mg/kg		<0.05 m	ig/kg	<0.000005 %		<lod< th=""></lod<>
			205-911-9	205-99-2	_								
9	8	benzo[ghi]perylene		404.04.0	_	<0.05	mg/kg		<0.05 m	ig/kg	<0.000005 %		<lod< td=""></lod<>
		benzo[k]fluoranther	205-883-8	191-24-2	-								
10		• •		207-08-9	_	<0.05	mg/kg		<0.05 m	ig/kg	<0.000005 %		<lod< td=""></lod<>
	4	boron {		1									
		(combined) }							40.000				
11				10294-33-4, 10294-34-5, 7637-07-2		0.9	mg/kg	13.43	10.889 m	ıg/kg	0.00109 %	\checkmark	
12	4	cadmium { cadmiur	<mark>n sulfide</mark> }		1	<0.2	ma/ka	1.285	<0.257 m	a/ka	<0.00002 %		<lod< th=""></lod<>
12		048-010-00-4	215-147-8	1306-23-6		<0.2	iiig/kg	1.200	<0.237	ig/kg	<0.00002 /8		
13	4	chromium { 🤎 chro				13	mg/kg	1.462	17.117 m	ıg/kg	0.00171 %	\checkmark	
			215-160-9	1308-38-9	-								
14		chrysene				<0.05	mg/kg		<0.05 m	ig/kg	<0.000005 %		<lod< th=""></lod<>
		601-048-00-0	205-923-4	218-01-9			0						

#			Determinand		CLP Note	User entered	d data	Conv. Factor	Compound co	onc.	Classification value	Ap	Conc. Not Used
		CLP index number	EC Number	CAS Number	CLP							MC	
15	8	confirm TPH has N	OT arisen from die	sel or petrol		Ø							
16	4	copper {	<mark>xide; copper (I) oxi</mark> 215-270-7	de } 1317-39-1		83	mg/kg	1.126	84.188	mg/kg	0.00842 %	\checkmark	
	æ			1	+								
17		cyanides { salts exception of complete ferricyanides and m specified elsewhere 006-007-00-5	ex cyanides such a nercuric oxycyanide	s ferrocyanides,		<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<lod< td=""></lod<>
18		dibenz[a,h]anthrace	ene 200-181-8	53-70-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		ethylbenzene	200-161-6	55-70-3									
19		-	202-849-4	100-41-4		<0.001	mg/kg		<0.001	mg/kg	<0.000001 %		<lod< td=""></lod<>
20	۰	fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
			205-912-4	206-44-0	1								
21	٥		201-695-5	86-73-7		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
22	۲	indeno[123-cd]pyre	ne 205-893-2	193-39-5		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
	<u>~</u>			1	-								
23		lead { lead comp specified elsewhere 082-001-00-6		eption of those	1	480	mg/kg		432.432	mg/kg	0.0432 %	~	
24	æ	manganese { mang	anese sulphate }			220		2 7 4 0	E 4 4 7 C		0.0545.9/	,	
24		025-003-00-4	232-089-9	7785-87-7		220	тід/кд	2.749	544.76	mg/kg	0.0545 %	\checkmark	
25	4	mercury { mercury 080-010-00-X	<mark>dichloride</mark> } 231-299-8	7487-94-7		2.9	mg/kg	1.353	3.536	mg/kg	0.000354 %	\checkmark	
26	4	molybdenum { moly				0.81	mg/kg	1.5	1.095	mg/kg	0.000109 %	\checkmark	
27		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		601-052-00-2 nickel { nickel dihyd	202-049-5	91-20-3	+								
28	-	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		15	mg/kg	1.579	21.345	mg/kg	0.00213 %	~	
29	0	рН		PH		8.5	pН		8.5	pН	8.5 pH		
30		phenanthrene				<0.05	mg/kg		<0.05	ma/ka	<0.000005 %		<lod< td=""></lod<>
00			201-581-5	85-01-8	1					ing/kg	<0.000000 /0		LOD
31		phenol 604-001-00-2	203-632-7	108-95-2		<1.3	mg/kg		<1.3	mg/kg	<0.00013 %		<lod< td=""></lod<>
32		pyrene	200 002 .			-0.0E	malka		-0.05	malka	<0.00000E %		<lod< td=""></lod<>
32			204-927-3	129-00-0		<0.05	mg/kg		<0.05	під/ку	<0.000005 %		<lod< td=""></lod<>
33	4	selenium { selenium cadmium sulphose in this Annex) 034-002-00-8				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<lod< td=""></lod<>
		toluene		1	+	0.004			0.001		0.0000004.0/	\vdash	1.00
34		601-021-00-3	203-625-9	108-88-3		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< td=""></lod<>
35	8	TPH (C6 to C40) pe	etroleum group	ТРН		<10	mg/kg		<10	mg/kg	<0.001 %		<lod< td=""></lod<>
-	æ	vanadium { divanac	lium pentaoxide: va	IPH Inadium pentoxide }	+				_			⊢	
36		•	215-239-8	1314-62-1		33	mg/kg	1.785	53.073	mg/kg	0.00531 %	\checkmark	
37			202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< td=""></lod<>
38	4	zinc { zinc sulphate 030-006-00-9	} 231-793-3 [1]	7446-19-7 [1]		52	mg/kg	2.469	115.679	mg/kg	0.0116 %	~	
			231-793-3 [2]	7733-02-0 [2]						Tak	0.400.01	\square	
										Total:	0.132 %		

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: WS02[1]

.

..... Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS02[1]	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Sample Depth:		from contaminated sites)
2.15 m	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
Moisture content:		03)
13%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 13% Dry Weight Moisture Correction applied (MC)

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound conc	Classification value	MC Applied	Conc. Not Used
1	8	acenaphthene	004 400 0			<0.05	mg/kg		<0.05 mg	/kg <0.000005 %		<lod< th=""></lod<>
2	8	acenaphthylene	201-469-6 205-917-1	83-32-9 208-96-8	_	<0.05	mg/kg		<0.05 mg	/kg <0.000005 %		<lod< td=""></lod<>
3	8	anthracene	204-371-1	120-12-7		<0.05	mg/kg		<0.05 mg	′kg <0.000005 %	,	<lod< td=""></lod<>
4	4		<mark>ioxide</mark> } 215-481-4	1327-53-3	-	8.2	mg/kg	1.32	9.581 mg	′kg 0.000958 %	, <i>_</i>	
5		benzene 601-020-00-8	200-753-7	71-43-2		<0.001	mg/kg		<0.001 mg	/kg <0.0000001 s	%	<lod< td=""></lod<>
6		benzo[a]anthracen 601-033-00-9	e 200-280-6	56-55-3		<0.05	mg/kg		<0.05 mg	′kg <0.000005 %	,	<lod< td=""></lod<>
7		benzo[a]pyrene; be 601-032-00-3	enzo[def]chrysene 200-028-5	50-32-8		<0.05	mg/kg		<0.05 mg	′kg <0.000005 %	,	<lod< td=""></lod<>
8		benzo[b]fluoranthe 601-034-00-4	ne 205-911-9	205-99-2		<0.05	mg/kg		<0.05 mg	′kg <0.000005 %	,	<lod< td=""></lod<>
9	8	benzo[ghi]perylene		191-24-2		<0.05	mg/kg		<0.05 mg	′kg <0.000005 %	,	<lod< td=""></lod<>
10		benzo[k]fluoranthei 601-036-00-5	ne 205-916-6	207-08-9		<0.05	mg/kg		<0.05 mg	′kg <0.000005 %		<lod< td=""></lod<>
11	4	(combined) }		trifluoride 10294-33-4, 10294-34-5, 7637-07-2		2.1	mg/kg	13.43	24.958 mg	/kg 0.0025 %	~	,
12	4	cadmium { <mark>cadmiur</mark> 048-010-00-4	<mark>m sulfide</mark> } 215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257 mg	/kg <0.00002 %		<lod< td=""></lod<>
13	4	chromium { • chro		1308-38-9		15	mg/kg	1.462	19.401 mg	/kg 0.00194 %	~	
14		chrysene 601-048-00-0	205-923-4	218-01-9		<0.05	mg/kg		<0.05 mg	′kg <0.000005 %		<lod< td=""></lod<>

IDE CLP Index number CAS Number CAS Number CAS Number CAS Number Cas Num	#			Determinand		CLP Note	User entered	l data	Conv. Factor	Compound co	onc.	Classification value	Applied	Conc. Not Used						
Image: section of the base of t			CLP index number	EC Number	CAS Number	ГЪ			1 00101			Value	1C ⊳	0300						
Image: constraint of the	15		confirm TPH has N	IOT arisen from die:	sel or petrol		R													
Description Description <thdescription< th=""> <thdescription< th=""></thdescription<></thdescription<>	_					_														
4 condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (*sate of hydrogen cyanice such as temporandes, second adsorber in this Annes) condice (16	4				_	36	mg/kg	1.126	35.869	mg/kg	0.00359 %	\checkmark							
11 xiccaption of complex spandies such as through with the exponence of the experiment with	-	_				_							\vdash							
18 Stordation 0 0.000 mgkq 0.00000% 0.000000% 0.000000% <td></td> <td></td> <td>exception of compl ferricyanides and n specified elsewher</td> <td>lex cyanides such as nercuric oxycyanide</td> <td>s ferrocyanides,</td> <td></td> <td><1</td> <td>mg/kg</td> <td>1.884</td> <td><1.884</td> <td>mg/kg</td> <td><0.000188 %</td> <td></td> <td><lod< td=""></lod<></td>			exception of compl ferricyanides and n specified elsewher	lex cyanides such as nercuric oxycyanide	s ferrocyanides,		<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<lod< td=""></lod<>						
B B C	_	_				_							\square							
10 10<	18				F0 70 0	_	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>						
10 201-023-00-4 202-849-4 100-41-4 2000000000000000000000000000000000000	_	_		200-181-8	53-70-3	_							\vdash							
20 a toroanthene 206-912-4 206-44-0 mg/kg 200,05 mg/kg 200,00005,% 1 clock 20 a floorene 201-905-5 B6-73-7 3-0.05 mg/kg <0.05	19	۲		002 040 4	100 41 4	-	<0.001	mg/kg		<0.001	mg/kg	<0.000001 %		<lod< td=""></lod<>						
20 p059124 20644-0 clubs mgkg mgkg clubs mgkg				202-049-4	100-41-4	-							\vdash							
21 	20	•	Indorantinene	205 012 4	206 44 0	_	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>						
21 201-695-5 86-73-7 200.5 mg/mg 200.05 mg/mg 200.00005 % 2 2 2 2 2 2 2 2 2 2 200.00000 % 2<	-		fluoropo	205-912-4	206-44-0	-							\vdash							
22 indenc(123-cd)pyrere <0.05 mg/kg <0.05 mg/kg <0.00005% I <0.000005% I <0.000005% I <0.000005% I <0.000005% I <0.000005% I <0.000005% I <0.00000000% I <0.0000005%	21	۲		001 COF F	00 70 7	-	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>						
22 1 205 mg/kg clobs mg	+				00-13-1	-							\vdash							
23	22	•	1 1 1		102 20 5	-	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>						
23 3 specified elsewhere in this Annex (mark) 1 84 mg/mg 74.336 mg/mg 0.00743 % \$ 24 4 manual sector (mark) 232.089.09 7785-97.7 2 130 mg/mg 1.353 -0.006 mg/mg 0.00166% \$ \$ -0.0000006% \$ -0.000006% \$ -0.000006% \$ \$	-+	0			1								\vdash							
BP2:001-00-8 Imagenese (mangenese subplate) Imagenese (mangenese (mangenese subplate) Imagenese (mangenese mangenese (mangenese (mangenes (mangenese (mangenese		4			eption of those	1	84	ma/ka		74 226	malka	0 00743 %								
24 24 2703 00.4 232.039.04 232.039.9 7765.87.7 130 mg/kg 2.749 316.206 mg/kg 0.0316 % ✓ 25 025003-00.4 232.089.9 7765.87.7 0.03 mg/kg 1.363 4.04.06 mg/kg 0.00006% 0 4.05 26 00100-00-X 231-299.8 7487.94.7 0.075 mg/kg 1.55 0.996 mg/kg 0.000096% ✓ 0.000096% ✓ 26 molybdenum (molydenum(V) oxide) 215-204.7 1313-27.5 0.75 mg/kg 1.57 0.996 mg/kg 0.000096% ✓ 0.00005% 0 0.00005% 0 0.00154 % ✓ 28 01-052-00-2 D20-64-55 D1-20-3 111 mg/kg 1.579 15.376 mg/kg 0.00154 % ✓ 0.00154 % ✓ 0.00154 % ✓ 0.00154 % ✓ 0.00154 % ✓ 0.0013 % 0.0013 % 0.0013 % 0.00013 % 0.00005 % 0.00005 % 0.00005 % 0.00005 % 0.00005 % 0.000001 % 0.000005 % <th< td=""><td>23</td><td></td><td>•</td><td>e in this Annex }</td><td>1</td><td></td><td>04</td><td>шу/ку</td><td></td><td>74.550</td><td>шу/ку</td><td>0.00743 /8</td><td>× </td><td></td></th<>	23		•	e in this Annex }	1		04	шу/ку		74.550	шу/ку	0.00743 /8	×							
24 25<003-00-4	-	_				-							$\left \right $							
28 mercury (mercury dichloride) B00-01-00-X 231-299-8 [7487-94-7] 2 <0.3 mg/kg 1.353 <0.406 mg/kg c.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.0000406 % <.00000406 %	24	-	• , ,	, , ,	7705 07 7		130	mg/kg	2.749	316.206	mg/kg	0.0316 %	\checkmark							
20 30-010-00-X 231-299-8 7487-94-7 24.03 1933 21406 1976 2000000 % 24.00 24.00 24.00 1333 21406 1333 21406 1333 21406 1333 21406 1333 21406 1333 21406 1343 24.00 1343 24.00 1343 24.00 1343 24.00 1343 24.00 1343 24.00 1343 24.00 1343 24.00 1343 24.00 1343 24.00 1343 24.00 1343 24.00 1343 24.00 1343 24.00 1400 1343 24.00 14000 14000 14000 14000<	_	-			//85-8/-/	-							\vdash							
28 28 20 20 0.0000996 % (200000000000000000000000000000000000	25	-		•	7407.04.7	_	<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<lod< td=""></lod<>						
042-001-00-9 215-204-7 1313-27-5 0.00005 mg/kg 0.00005 mg/kg 0.00005 mg/kg 0.00005 mg/kg 0.00005 mg/kg 0.00005 mg/kg 0.00154 % 0.00156 % 0.00156 % 0.00156 % 0.00156 % 0.00156 % 0.00156 % 0.0011 % 0.00156 % 0.0011 % 0.00005 % 0.0000 % 0.00005 % 0.0000 % 0.00005 % 0.0011 % 0.000005 % 0.00000 % 0.00000 % 0.00000 % 0.00000 % 0.00000 % 0.00000 % 0.00000 % 0.00000 % 0.00000 % 0.00000 % 0.00000 % 0.00000 % 0.00000 % 0.00000 % 0.00000 %	_					-							\vdash							
27 naphthalene 601-052-00-2 202-049-5 91-20-3 <0.05	26		, ,				0.75	mg/kg	1.5	0.996	mg/kg	0.0000996 %	\checkmark							
21 01-052-00-2 202-049-5 91-20-3 0 20.05 mg/kg 20.005 mg/kg 20.00000% 2000000% 2000000% 2000000% 2000000% 2000000% 2000000% 2000000% 2000000% 2000000% 2000000% 2000000% 2000000% 2000000% 2000000% 2000000% 2000000% 2000000% 20000000% 20000000% 20000000% 2	_			215-204-7	1313-27-5	_							\vdash							
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	27		•	boo 040 F	04.00.0	_	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>						
28 23-008-00-X 235-008-5 [1] 12054-48-7 [1] 11 mg/kg 1.579 15.376 mg/kg 0.00154 % ✓ 29 PH 8.2 9H 8.0000155	\rightarrow	_		1	91-20-3	+							\vdash							
29 image: selentiane (selentiane selentiane		-	028-008-00-X	235-008-5 [1]		-	11	mg/kg	1.579	15.376	mg/kg	0.00154 %	\checkmark							
30 2 phenanthrene 201-581-5 85-01-8 <0.05 mg/kg <0.05 mg/kg <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.0000005 % <0.0000005 % <0.0000005 % <0.0000005 % <0.0000005 % <0.0000005 % <0.0000005 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <th< td=""><td>29</td><td>0</td><td>pН</td><td>1</td><td>DU</td><td></td><td>8.2</td><td>pН</td><td></td><td>8.2</td><td>pН</td><td>8.2 pH</td><td></td><td></td></th<>	29	0	pН	1	D U		8.2	pН		8.2	pН	8.2 pH								
30 201-581-5 B5-01-8 <0.05		_			РН	-							\vdash							
31 phenol 604-001-00-2 203-632-7 108-95-2 <1.3	30	•	pnenantnrene	004 504 5	05.04.0	-	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>						
31 0.00010002 203.632.7 108.95.2 1.3 mg/kg 1.00013 % 1.000005 % 1.000005 % 1.0000005 % 1.0000005 % 1.0000005 % 1.000000000000000000000000000000000000	_	_	ab a sal	201-581-5	85-01-8								\vdash							
32 pyrene 204-927-3 129-00-0 <0.05 mg/kg <0.05 mg/kg <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.00005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.000005 % <0.0000005 % <0.0000005 % <0.0000005 % <0.0000005 % <0.0000005 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 % <0.0000000 %	31		•	002 622 7	108 05 0	-	<1.3	mg/kg		<1.3	mg/kg	<0.00013 %		<lod< td=""></lod<>						
32 1 204-927-3 129-00-0 20.05 mg/kg 20.05 mg/kg 20.00005 % 20.00005 % 20.00005 % 20.00005 % 20.00005 % 20.00005 % 20.00005 % 20.00005 % 20.00005 % 20.000005 % 20.000005 % 20.000005 % 20.000005 % 20.000005 % 20.000005 % 20.000005 % 20.000005 % 20.000005 % 20.000005 % 20.000005 % 20.000005 % 20.0000005 % 20.0000005 % 20.0000005 % 20.0000005 % 20.0000005 % 20.0000005 % 20.0000005 % 20.0000005 % 20.00000000 %		_		203-032-1	100-99-2	-							\vdash							
33 ³ selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex } 034-002-00-8 -1 mg/kg 2.554 -2.554 mg/kg -0.000255 % -1 -1 mg/kg -2.554 mg/kg -0.0000001 % -1 -1 mg/kg -2.554 mg/kg -0.001 mg/kg -2.554 mg/kg -0.0000001 % -1 -1 -1 mg/kg -2.554 mg/kg -0.0000001 % -1 -1 -1 mg/kg -2.554 mg/kg -0.0000001 % -1 -1 -1 -2.554 -2.557 -2.52 -2.557 -2.52	32	•	ругене	201 027 2	120.00.0	-	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>						
33 ^{cadmium sulphoselenide and those specified elsewhere in this Annex } ⁰³⁴⁻⁰⁰²⁻⁰⁰⁻⁸}	+	•		1	1								\vdash							
34 toluene 601-021-00-3 203-625-9 108-88-3 <0.001			cadmium sulphose in this Annex }			_	<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<lod< td=""></lod<>						
34 0 001-021-00-3 203-625-9 108-88-3 0 0001 mg/kg 0 0000001 % < <td><<td><<td><<td><<td><<td></td><td>+</td><td></td><td></td><td>1</td><td></td><td>+</td><td></td><td></td><td></td><td></td><td></td><td></td><td>\vdash</td><td></td></td></td></td></td></td>	< <td><<td><<td><<td><<td></td><td>+</td><td></td><td></td><td>1</td><td></td><td>+</td><td></td><td></td><td></td><td></td><td></td><td></td><td>\vdash</td><td></td></td></td></td></td>	< <td><<td><<td><<td></td><td>+</td><td></td><td></td><td>1</td><td></td><td>+</td><td></td><td></td><td></td><td></td><td></td><td></td><td>\vdash</td><td></td></td></td></td>	< <td><<td><<td></td><td>+</td><td></td><td></td><td>1</td><td></td><td>+</td><td></td><td></td><td></td><td></td><td></td><td></td><td>\vdash</td><td></td></td></td>	< <td><<td></td><td>+</td><td></td><td></td><td>1</td><td></td><td>+</td><td></td><td></td><td></td><td></td><td></td><td></td><td>\vdash</td><td></td></td>	< <td></td> <td>+</td> <td></td> <td></td> <td>1</td> <td></td> <td>+</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>\vdash</td> <td></td>		+			1		+							\vdash	
35 TPH (C6 to C40) petroleum group 42 mg/kg 37.168 mg/kg 0.00372 % ✓ 36 Vanadium { divanadium pentaoxide; vanadium pentoxide } 023-001-00-8 215-239-8 1314-62-1 33 mg/kg 1.785 52.134 mg/kg 0.00521 % ✓ 37 Xylene 501-022-00-9 202-422-2 [1] 95-47-6 [1] 203-396-5 [2] 106-42-3 [2] 203-396-5 [2] 106-42-3 [2] 203-396-5 [2] 106-42-3 [2] 203-576-3 [3] 108-38-3 [3] 215-535-7 [4] 1330-20-7 [4] <0.001	34			203-625-0	108-88-3	-	<0.001	mg/kg		<0.001	mg/kg	<0.000001 %		<lod< td=""></lod<>						
33 Image: Sector of the se	-			1	100-00-3	+							\vdash							
36 ^{vanadium { divanadium pentaoxide; vanadium pentoxide } 023-001-00-8 215-239-8 1314-62-1 33 mg/kg 1.785 52.134 mg/kg 0.00521 % ✓ 37 ^{xylene} ⁶⁰¹⁻⁰²²⁻⁰⁰⁻⁹ ²⁰²⁻⁴²²⁻²[1] ⁹⁵⁻⁴⁷⁻⁶[1] ²⁰³⁻³⁹⁶⁻⁵[2] ¹⁰⁶⁻⁴²⁻³[2] ²⁰³⁻⁵⁷⁶⁻³[3] ¹⁰⁸⁻³⁸⁻³[3] ²¹⁵⁻⁵³⁵⁻⁷[4] ¹³⁰⁻²⁰⁻⁷[4] ³³ ²¹⁵ ²¹⁶ ²¹⁶ ²¹⁶⁻⁴²⁻³[2] ²⁰³⁻³⁹⁶⁻⁵[2] ¹⁰⁶⁻⁴²⁻³[2] ²⁰³⁻³⁹⁶⁻⁵[2] ¹⁰⁶⁻⁴²⁻³[2] ²⁰³⁻³⁹⁶⁻⁵[2] ¹⁰⁶⁻⁴²⁻³[2] ²⁰³⁻³⁹⁶⁻⁵[2] ¹⁰⁶⁻⁴²⁻³[2] ²⁰³⁻³⁹⁶⁻⁵[2] ¹⁰⁶⁻⁴²⁻³[2] ²⁰³⁻¹⁰⁶⁻⁴²⁻³[2] ²⁰³⁻⁵⁷⁶⁻³[3] ¹⁰⁸⁻³⁸⁻³[3] ²¹⁵⁻⁵³⁵⁻⁷[4] ¹³⁰⁰⁻²⁰⁻⁷[4] ³³⁵ ^{mg/kg} ^{2.469} ^{76.483} ^{mg/kg} ^{0.00765 % ^v}}	35	•			ТРН	-	42	mg/kg		37.168	mg/kg	0.00372 %	\checkmark							
36 233 mg/kg 1.785 52.134 mg/kg 0.00521 % V 37 xylene 601-022-00-9 202-422-2 [1] 95-47-6 [1] 203-396-5 [2] 106-42-3 [2] 203-396-5 [2] 106-42-3 [2] 203-576-3 [3] 108-38-3 [3] 215-535-7 [4] 1330-20-7 [4] <0.001	<loe< td=""> 38 2inc { zinc sulphate } 335 mg/kg 2.469 76.483 mg/kg 0.00765 % ✓</loe<>		ø	vanadium { divana	dium pentaoxide: va									\vdash						
37 xylene 601-022-00-9 202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4] 95-47-6 [1] 106-42-3 [2] 106-42-3 [2] 108-38-3 [3] 108-38-3 [3] 108-38-3 [3] 108-38-3 [3] 215-535-7 [4] <0.001	36		•			-	33	mg/kg	1.785	52.134	mg/kg	0.00521 %	\checkmark							
37 ⁶⁰¹⁻⁰²²⁻⁰⁰⁻⁹ ²⁰²⁻⁴²²⁻² [1 ⁹⁵⁻⁴⁷⁻⁶ [1] ²⁰³⁻³⁹⁶⁻⁵ [2] ¹⁰⁶⁻⁴²⁻³ [2] ²⁰³⁻³⁹⁶⁻⁵ [2] ¹⁰⁶⁻⁴²⁻³ [2] ²⁰³⁻⁵⁷⁶⁻³ [3] ¹⁰⁸⁻³⁸⁻³ [3] ¹³³⁰⁻²⁰⁻⁷ [4] ¹³³⁰⁻²⁰⁻⁷ [4] ¹³³⁰⁻²⁰⁻⁷ [4] ³⁵⁵ ^{mg/kg} ²⁰⁶⁹ ^{76.483} ^{mg/kg} ^{0.00765 %} ⁴ ⁴⁰⁰⁰ ⁴⁰⁰⁰ ⁴⁰⁰⁰ ⁴⁰⁰⁰⁰ ⁴⁰⁰⁰⁰⁰⁰¹ ⁴⁰⁰⁰⁰⁰⁰¹ ⁴⁰⁰⁰⁰⁰⁰¹ ⁴⁰⁰⁰⁰⁰⁰⁰¹ ⁴⁰⁰⁰⁰⁰⁰⁰¹ ⁴⁰⁰⁰⁰⁰⁰⁰¹ ⁴⁰⁰⁰⁰⁰⁰⁰¹ ⁴⁰⁰⁰⁰⁰⁰⁰¹ ⁴⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰⁰	+					+						· · · · · · · · · · · · · · · · · · ·	\vdash							
37 203-396-5 [2] 106-42-3 [2] -<0.001			•	202-422-2 [1]	95-47-6 [1]	-														
38 ²¹⁵⁻⁵³⁵⁻⁷ [4] ¹³³⁰⁻²⁰⁻⁷ [4] ¹³³⁰⁻²⁰⁻⁷ [4] ¹³³⁰⁻²⁰⁻⁷ [4] ³⁵⁵ mg/kg ²³¹⁻⁷⁹³⁻³ [1] ⁷⁴⁴⁶⁻¹⁹⁻⁷ [1] ⁷⁴⁴⁶⁻¹⁹⁻⁷ [1] ⁷⁴³⁻⁰²⁻⁰ [2] ²³¹⁻⁷⁹³⁻³ [2] ⁷⁷³³⁻⁰²⁻⁰ [2] ²³¹⁻⁷⁹³⁻³ [2]	37						<0.001	mg/kg		<0.001	mg/kg	<0.000001 %		<lod< td=""></lod<>						
38 2inc { zinc sulphate } 030-006-00-9 231-793-3 [1] 231-793-3 [2] 7446-19-7 [1] 7733-02-0 [2] 35 mg/kg 2.469 76.483 mg/kg 0.00765 % ✓																				
38 030-006-00-9 231-793-3 [1] 7446-19-7 [1] 35 mg/kg 2.469 76.483 mg/kg 0.00765 % ✓		_			1330-20-7 [4]								\vdash							
231-793-3 [2] 7733-02-0 [2]							35	ma/ka	2 160	76 / 92	ma/ka	0 00765 %								
	50							шу/ку	2.409	10.405	y/⊼y	0.00700 /0								
				201-190-0 [2]	1133-02-0 [2]						Total:	0.067 %	\vdash							

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
Θ	Determinand defined or amended by HazWasteOnline (see Appendix A)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely to be realised given TPH composition, concentration and site setting.

Hazard Statements hit:

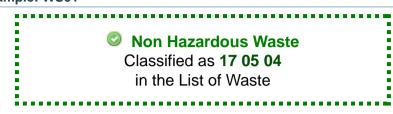
Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00372%)



Classification of sample: WS01



Sample details

Sample Name:	LoW Code:	
WS01	Chapter:	17: Construction and Demolition Wastes (including excavated soi
Sample Depth:		from contaminated sites)
0.2 m	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
Moisture content:		03)
13%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 13% Dry Weight Moisture Correction applied (MC)

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound o	conc.	Classification value	MC Applied	Conc. Not Used
1	۲	acenaphthene	201-469-6	83-32-9		0.91	mg/kg		0.805	mg/kg	0.0000805 %	∠	
2	8	acenaphthylene	205-917-1	208-96-8	-	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %	Γ	<lod< th=""></lod<>
3	8	anthracene	204-371-1	120-12-7		0.88	mg/kg		0.779	mg/kg	0.0000779 %	\checkmark	
4	4	arsenic { arsenic tri 033-003-00-0	<mark>oxide</mark>	1327-53-3		13	mg/kg	1.32	15.19	mg/kg	0.00152 %	\checkmark	
5		benzene 601-020-00-8	200-753-7	71-43-2		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< th=""></lod<>
6		benzo[a]anthracene 601-033-00-9	e 200-280-6	56-55-3		2.8	mg/kg		2.478	mg/kg	0.000248 %	\checkmark	
7		benzo[a]pyrene; be 601-032-00-3	nzo[def]chrysene 200-028-5	50-32-8		2.3	mg/kg		2.035	mg/kg	0.000204 %	\checkmark	
8		benzo[b]fluoranther 601-034-00-4	ne 205-911-9	205-99-2		3.1	mg/kg		2.743	mg/kg	0.000274 %	\checkmark	
9	0	benzo[ghi]perylene	205-883-8	191-24-2	-	1.6	mg/kg		1.416	mg/kg	0.000142 %	\checkmark	
10		benzo[k]fluoranther 601-036-00-5	ne 205-916-6	207-08-9		1.3	mg/kg		1.15	mg/kg	0.000115 %	\checkmark	
11	4	boron { ^a boron tril (combined) }	bromide/trichloride,	trifluoride 10294-33-4, 10294-34-5, 7637-07-2		2.4	mg/kg	13.43	28.524	mg/kg	0.00285 %	~	
12	4	cadmium {	<mark>n sulfide</mark> } 215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		<lod< th=""></lod<>
13	4	chromium { ^e chro	mium(III) oxide } 215-160-9	1308-38-9		32	mg/kg	1.462	41.389	mg/kg	0.00414 %	~	
14		chrysene 601-048-00-0	205-923-4	218-01-9		2.2	mg/kg		1.947	mg/kg	0.000195 %	\checkmark	

#			Determinand		CLP Note	User entered	d data	Conv. Factor	Compound c	onc.	Classification value	App	Conc. Not Used
		CLP index number	EC Number	CAS Number	CLP							МС	
15	٥	confirm TPH has NO	DT arisen from dies	sel or petrol	-	Ø							
16	4	copper { dicopper ov	<mark>kide; copper (I) oxi</mark> o 215-270-7	<mark>de</mark> } 1317-39-1		61	mg/kg	1.126	60.778	mg/kg	0.00608 %	\checkmark	
	4	cyanides { salts o	f hydrogen cyanide	e with the									
17		ferricyanides and mospecified elsewhere	ercuric oxycyanide			<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<lod< td=""></lod<>
18		dibenz[a,h]anthrace	ne 200-181-8	53-70-3		0.34	mg/kg		0.301	mg/kg	0.0000301 %	\checkmark	
19	9	ethylbenzene 601-023-00-4 2	202-849-4	100-41-4		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< td=""></lod<>
20	8	fluoranthene	205-912-4	206-44-0		5.2	mg/kg		4.602	mg/kg	0.00046 %	\checkmark	
21	۵	fluorene	201-695-5	86-73-7		0.51	mg/kg		0.451	mg/kg	0.0000451 %	\checkmark	
22	۵	indeno[123-cd]pyrer 2	ne 205-893-2	193-39-5		1.3	mg/kg		1.15	mg/kg	0.000115 %	\checkmark	
23	4	lead { • lead composite compo		eption of those	1	590	mg/kg		522.124	mg/kg	0.0522 %	\checkmark	
24	4	manganese { manga	anese sulphate }	7785-87-7		360	mg/kg	2.749	875.649	mg/kg	0.0876 %	\checkmark	
25	4	mercury { mercury c		7487-94-7		<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<lod< td=""></lod<>
26	4	molybdenum { moly				0.8	mg/kg	1.5	1.062	mg/kg	0.000106 %	\checkmark	
27		naphthalene	202-049-5	91-20-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
28			<mark>oxide</mark> } 235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		19	mg/kg	1.579	26.558	mg/kg	0.00266 %	\checkmark	
29	0	рН		PH		10.7	pН		10.7	pН	10.7 pH		
30	۲	phenanthrene	201-581-5	85-01-8		1.9	mg/kg		1.681	mg/kg	0.000168 %	\checkmark	
31		phenol 604-001-00-2 2	203-632-7	108-95-2		<1.3	mg/kg		<1.3	mg/kg	<0.00013 %		<lod< td=""></lod<>
32	0	pyrene 2	204-927-3	129-00-0		4.8	mg/kg		4.248	mg/kg	0.000425 %	\checkmark	
33	~	selenium { selenium cadmium sulphosele in this Annex 034-002-00-8				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<lod< td=""></lod<>
34		toluene	203-625-9	108-88-3		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< td=""></lod<>
35	8	TPH (C6 to C40) pe		ТРН		170	mg/kg		150.442	mg/kg	0.015 %	~	
36	4	vanadium { <mark>divanadi</mark> 023-001-00-8 2	i <mark>um pentaoxide; va</mark> 215-239-8	1		40	mg/kg	1.785	63.192	mg/kg	0.00632 %	\checkmark	
37		xylene 601-022-00-9 2 2	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< td=""></lod<>
38	4	zinc { <mark>zinc sulphate</mark> 030-006-00-9 2	} 231-793-3 [1]	7446-19-7 [1]		560	mg/kg	2.469	1223.722	mg/kg	0.122 %	~	
		2	231-793-3 [2]	7733-02-0 [2]						Total:	0.304 %	\square	

Key	
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Force this Hazardous property to non hazardous because Hazard unlikely to be realised given TPH composition, concentration and site setting.

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Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.015%)



Classification of sample: WS01[1]

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..... Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS01[1]	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Sample Depth:		from contaminated sites)
0.5 m	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
Moisture content:		03)
11%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 11% Dry Weight Moisture Correction applied (MC)

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	0	acenaphthene				<0.05	mg/kg		<0.05 mg/ł	g <0.000005 %		<lod< th=""></lod<>
		acenaphthylene	201-469-6	83-32-9	_						-	
2	۲		205-917-1	208-96-8	_	<0.05	mg/kg		<0.05 mg/ł	g <0.000005 %		<lod< td=""></lod<>
		anthracene	200 017 1	200 30 0	+							
3			204-371-1	120-12-7		<0.05	mg/kg		<0.05 mg/ł	g <0.000005 %		<lod< td=""></lod<>
4	æ	arsenic { arsenic tri	ioxide }			10		1.00	11.005 ma/	~ 0.00110.0/		
4			215-481-4	1327-53-3		10	mg/kg	1.32	11.895 mg/ł	g 0.00119 %	\checkmark	
5		benzene				<0.001	mg/kg		<0.001 mg/ł	g <0.0000001 %		<lod< td=""></lod<>
			200-753-7	71-43-2	_						-	
6		benzo[a]anthracene 601-033-00-9	e 200-280-6	56-55-3		0.31	mg/kg		0.279 mg/ł	g 0.0000279 %	\checkmark	
-		benzo[a]pyrene; be		00-00-3								
7			200-028-5	50-32-8	-	0.33	mg/kg		0.297 mg/ł	g 0.0000297 %	\checkmark	
8		benzo[b]fluoranthe	ne			0.53	ma/ka		0.477 mg/ł	a 0.0000477 %	,	
°		601-034-00-4	205-911-9	205-99-2		0.55	mg/kg		0.477 mg/r	g 0.0000477 %	\checkmark	
9		benzo[ghi]perylene	•			<0.05	mg/kg		<0.05 mg/ł	g <0.000005 %		<lod< td=""></lod<>
Ľ			205-883-8	191-24-2						9 101000000 70		
10		benzo[k]fluoranther				0.19	mg/kg		0.171 mg/ł	a 0.0000171 %	1	
		601-036-00-5	205-916-6	207-08-9							-	
11	4	boron { [●] boron tri (combined) }	bromide/trichloride	/trifluoride		0.4		40.40	29.038 ma/ł	a 0.0029 %		
11				10294-33-4, 10294-34-5, 7637-07-2		2.4	mg/kg	13.43	29.038 mg/ł	g 0.0029 %		
12	4	cadmium { cadmiur	m sulfide }		1	<0.2	ma/ka	1.285	<0.257 mg/ł	g <0.00002 %		<lod< td=""></lod<>
		048-010-00-4	215-147-8	1306-23-6						3		
13	4					21	mg/kg	1.462	27.651 mg/ł	g 0.00277 %	\checkmark	
			215-160-9	1308-38-9								
14		chrysene				0.37	mg/kg		0.333 mg/ł	g 0.0000333 %	\checkmark	
		601-048-00-0	205-923-4	218-01-9								

Page 20 of 68

#		Determinand		CLP Note	User entered	d data	Conv. Factor	Compound con	c.	Classification value	Applied	Conc. Not Used
		CLP index number EC Number	CAS Number	ĽP_			1 00101			Value	MC A	USEU
		confirm TPH has NOT arisen from die	sel or petrol		_						2	
15	[-								
16	2	copper { dicopper oxide; copper (I) ox	ide }		25	malka	1 1 2 6	25.358 m	a/ka	0.00254 %	,	
10		029-002-00-X 215-270-7	1317-39-1		20	тід/кд	1.126	25.356 11	ıg/kg	0.00254 %	\checkmark	
17	4	cyanides { salts of hydrogen cyanic exception of complex cyanides such a ferricyanides and mercuric oxycyanide specified elsewhere in this Annex } 006-007-00-5	is ferrocyanides,		<1	mg/kg	1.884	<1.884 m	ıg/kg	<0.000188 %		<lod< td=""></lod<>
18		dibenz[a,h]anthracene			<0.05	mg/kg		<0.05 m	ig/kg	<0.000005 %		<lod< td=""></lod<>
		601-041-00-2 200-181-8	53-70-3	+							\vdash	
19	•	ethylbenzene	400 44 4	_	<0.001	mg/kg		<0.001 m	ig/kg	<0.0000001 %		<lod< td=""></lod<>
		601-023-00-4 202-849-4	100-41-4	-							\vdash	
20		fluoranthene 205-912-4	206-44-0		0.69	mg/kg		0.622 m	ig/kg	0.0000622 %	√	
21	۲	fluorene 201-695-5	86-73-7		<0.05	mg/kg		<0.05 m	ig/kg	<0.000005 %		<lod< td=""></lod<>
22	0	indeno[123-cd]pyrene 205-893-2	193-39-5		<0.05	mg/kg		<0.05 m	ig/kg	<0.000005 %	Π	<lod< td=""></lod<>
23	4	lead { lead compounds with the exc specified elsewhere in this Annex } 082-001-00-6	ception of those	1	240	mg/kg		216.216 m	ıg/kg	0.0216 %	~	
24	4	manganese { manganese sulphate }			230	mg/kg	2.749	569.522 m	ig/kg	0.057 %	~	
		025-003-00-4 232-089-9	7785-87-7								$\left \right $	
25	4	mercury { mercury dichloride } 080-010-00-X 231-299-8	7487-94-7		1.2	mg/kg	1.353	1.463 m	ig/kg	0.000146 %	\checkmark	
26	4	molybdenum { molybdenum(VI) oxide 042-001-00-9 215-204-7	} 1313-27-5		0.4	mg/kg	1.5	0.541 m	ig/kg	0.0000541 %	\checkmark	
27		naphthalene 601-052-00-2 202-049-5	91-20-3	_	<0.05	mg/kg		<0.05 m	ig/kg	<0.000005 %		<lod< td=""></lod<>
28	4	nickel { nickel dihydroxide } 028-008-00-X	12054-48-7 [1] 11113-74-9 [2]	-	14	mg/kg	1.579	19.922 m	ıg/kg	0.00199 %	~	
29	0	pH	PH		10.8	pН		10.8 pl	н	10.8 pH		
30	۲	phenanthrene 201-581-5	85-01-8		0.23	mg/kg		0.207 m	ig/kg	0.0000207 %	\checkmark	
31		phenol 604-001-00-2 203-632-7	108-95-2		<1.3	mg/kg		<1.3 m	ig/kg	<0.00013 %	h	<lod< td=""></lod<>
	_	pyrene	100 00-2	+				_			┝┤	
32		204-927-3	129-00-0	_	0.64	mg/kg		0.577 m	ig/kg	0.0000577 %	~	
33	4	selenium { selenium compounds with cadmium sulphoselenide and those sp in this Annex } 034-002-00-8			<1	mg/kg	2.554	<2.554 m	ıg/kg	<0.000255 %		<lod< td=""></lod<>
		toluene		+	<u> </u>			0.001	"	0.0000001.00	\square	1.65
34		601-021-00-3 203-625-9	108-88-3		<0.001	mg/kg		<0.001 m	ig/kg	<0.0000001 %		<lod< td=""></lod<>
35	8	TPH (C6 to C40) petroleum group	ТРН	_	160	mg/kg		144.144 m	ig/kg	0.0144 %	\checkmark	
36	4	vanadium { divanadium pentaoxide; va	anadium pentoxide		32	mg/kg	1.785	51.465 m	ig/kg	0.00515 %	1	
	-	023-001-00-8 215-239-8	1314-62-1	+							\vdash	
37		xylene 601-022-00-9 202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001	mg/kg		<0.001 m	ıg/kg	<0.0000001 %		<lod< td=""></lod<>
38	4	zinc { <mark>zinc sulphate</mark> } 030-006-00-9 [231-793-3 [1]	7446-19-7 [1]		330	mg/kg	2.469	734.115 m	ıg/kg	0.0734 %	~	
		231-793-3 [2]	7733-02-0 [2]								\square	
								1	Fotal:	0.184 %	1	

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
Θ	Determinand defined or amended by HazWasteOnline (see Appendix A)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely to be realised given TPH composition, concentration and site setting.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0144%)



Classification of sample: WS01[2]



Sample details

Sample Name:	LoW Code:	
WS01[2]	Chapter:	17: Construction and Demolition Wastes (including excavated so
Sample Depth:		from contaminated sites)
3.1 m	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
Moisture content:		03)
12%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 12% Dry Weight Moisture Correction applied (MC)

#		Determinand CLP index number EC Number CAS Number			CLP Note	User entere	d data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	0	acenaphthene 201-469-6 83-32-9			<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %	2	<lod< th=""></lod<>	
2	0	acenaphthylene	201-469-6	208-96-8	_	<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< th=""></lod<>
3	0	anthracene 204-371-1 120-12-7			<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< th=""></lod<>	
4		arsenic { arsenic trioxide } 033-003-00-0 215-481-4 1327-53-3				15	mg/kg	1.32	17.683 m	g/kg	0.00177 %	\checkmark	
5		benzene	200-753-7	71-43-2		<0.001	mg/kg		<0.001 m	g/kg	<0.0000001 %		<lod< td=""></lod<>
6		benzo[a]anthracene 601-033-00-9	e 200-280-6	56-55-3		<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< th=""></lod<>
7		benzo[a]pyrene; benzo[def]chrysene 601-032-00-3 200-028-5 5		50-32-8		<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< td=""></lod<>
8		benzo[b]fluoranther 601-034-00-4	ne 205-911-9	205-99-2		<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< td=""></lod<>
9	0	benzo[ghi]perylene			_	<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< td=""></lod<>
10		benzo[k]fluoranthene 601-036-00-5 205-916-6 207-08-9			_	<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< td=""></lod<>
11	\$	boron { [•] boron tri (combined) }	bromide/trichloride/	trifluoride 10294-33-4, 10294-34-5, 7637-07-2	_	1.2	mg/kg	13.43	14.389 m	g/kg	0.00144 %	~	
12		cadmium { cadmium sulfide } 048-010-00-4 215-147-8 1306-23-6			_ 1	<0.2	mg/kg	1.285	<0.257 m	g/kg	<0.00002 %		<lod< th=""></lod<>
13	4	chromium { [•] chromium(III) oxide } 215-160-9 1308-38-9				32	mg/kg	1.462	41.759 m	g/kg	0.00418 %	~	
14		chrysene 601-048-00-0	205-923-4	218-01-9		<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< td=""></lod<>

#			Determinand		Note	User entered	d data	Conv. Factor	Compound co	onc.	Classification value	Apr	Conc. Not Used
		CLP index number	EC Number	CAS Number	CLP							MC	
15	8	confirm TPH has N	IOT arisen from die	sel or petrol									
	æ	copper { dicopper of	oxide: copper (I) oxi	de }	+								
16			215-270-7	1317-39-1		25	mg/kg	1.126	25.131	mg/kg	0.00251 %	\checkmark	
17	¥	exception of compl ferricyanides and n	of hydrogen cyanid ex cyanides such a nercuric oxycyanide	s ferrocyanides,		<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<lod< td=""></lod<>
		specified elsewhere	<mark>e in this Annex</mark> }										
18		dibenz[a,h]anthrac		1-0		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		601-041-00-2 ethylbenzene	200-181-8	53-70-3	-							$ \rightarrow $	
19	8	601-023-00-4	202-849-4	100-41-4		<0.001	mg/kg		<0.001	mg/kg	<0.000001 %		<lod< td=""></lod<>
		fluoranthene	202 010 1										
20	Ŭ		205-912-4	206-44-0		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
21		fluorene	201-695-5	86-73-7		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
22	۲	indeno[123-cd]pyre	ene	1	Γ	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
			205-893-2	193-39-5								\square	
23	4	lead { <pre>lead comp specified elsewhere 082-001-00-6</pre>	pounds with the exc e in this Annex }	eption of those	1	230	mg/kg		205.357	mg/kg	0.0205 %	~	
24	4	manganese { mang	<pre>ganese sulphate }</pre>	1		220	ma/ka	2.749	539.896	mg/kg	0.054 %	\checkmark	
24		025-003-00-4	232-089-9	7785-87-7			ing/kg	2.143	559.690	iiig/kg	0.034 78	~	
25	4	mercury { mercury 080-010-00-X	dichloride } 231-299-8	7487-94-7		7.8	mg/kg	1.353	9.426	mg/kg	0.000943 %	\checkmark	
26	æ	molybdenum { moly				0.02	malka	15	1 222	malka	0.000122.8/	,	
20		042-001-00-9 naphthalene	215-204-7	1313-27-5	-	0.92	mg/kg	1.5	1.232	mg/kg	0.000123 %	√	
27		•	202-049-5	91-20-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
28		nickel { nickel dihyc 028-008-00-X	<mark>lroxide</mark> } 235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		20	mg/kg	1.579	28.205	mg/kg	0.00282 %	\checkmark	
29		pН		PH		9	pН		9	рН	9pH		
30	0	phenanthrene				<0.05	mg/kg		<0.05	ma/ka	<0.000005 %	H	<lod< td=""></lod<>
00			201-581-5	85-01-8	1	~0.00				ing/kg		H	<lud< td=""></lud<>
31		phenol 604-001-00-2	203-632-7	108-95-2		<1.3	mg/kg		<1.3	mg/kg	<0.00013 %		<lod< td=""></lod<>
32	8	pyrene				<0.05	mg/kg		<0.05	ma/ka	<0.000005 %		<lod< td=""></lod<>
-	<u> </u>	selenium { <mark>seleniur</mark>	204-927-3 n compounds with t	129-00-0	$\left \right $							\vdash	_
33	-		lenide and those sp			<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<lod< td=""></lod<>
	_	toluene			+								
34		601-021-00-3	203-625-9	108-88-3	1	<0.001	mg/kg		<0.001	mg/kg	<0.000001 %		<lod< td=""></lod<>
35	8	TPH (C6 to C40) p		ТРН		1100	mg/kg		982.143	mg/kg	0.0982 %	\checkmark	
20	æ	vanadium { divanad	dium pentaoxide; va	anadium pentoxide)	+	50	m c // .	4 705	04 470		0.00045.0/		
36		023-001-00-8	215-239-8	1314-62-1		53	mg/kg	1.785	84.478	mg/kg	0.00845 %	\checkmark	
37		xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< td=""></lod<>
38	4			7446-19-7 [1] 7733-02-0 [2]		460	mg/kg	2.469	1014.175	mg/kg	0.101 %	~	
-		l	LJ1-130-J [Z]	pr 1 33-02-0 [2]	1					Total:	0.297 %	┟┤	
												1	

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely to be realised given TPH composition, concentration and site setting.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0982%)

Classification of sample: OP01



Sample details

Sample Name:	LoW Code:	
OP01 Sample Depth:	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.3 m	Entry:	17 05 03 * (Soil and stones containing hazardous substances)
Moisture content:		
6.1%		
(dry weight correction)		

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.415%)

HP 8: Corrosive "waste which on application can cause skin corrosion"

pH; pH "Assumed to be irritant/corrosive because of pH value"

Because of determinand:

pH: (conc.: 12.1 pH)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.415%)

Determinands

Moisture content: 6.1% Dry Weight Moisture Correction applied (MC)

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	ed data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	8	acenaphthene	201-469-6	83-32-9		8.1	mg/kg		7.634 mg/l	g 0.000763 %	\checkmark	
2	۵	acenaphthylene	205-917-1	208-96-8		2.3	mg/kg		2.168 mg/l	g 0.000217 %	\checkmark	
3	۵	anthracene	204-371-1	120-12-7		48	mg/kg		45.24 mg/l	g 0.00452 %	\checkmark	
4	~	arsenic { arsenic tri 033-003-00-0	<mark>oxide</mark> } 215-481-4	1327-53-3		11	mg/kg	1.32	13.689 mg/l	g 0.00137 %	\checkmark	

#		Determinand		CLP Note	User entere	d data	Conv. Factor	Compound c	onc.	Classification value	Applied	Conc. Not Used
		CLP index number EC Number	CAS Number	CLP							MC	
5		benzene 601-020-00-8 200-753-7	71-43-2		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< td=""></lod<>
6		benzo[a]anthracene 601-033-00-9 200-280-6	56-55-3		110	mg/kg		103.676	mg/kg	0.0104 %	\checkmark	
7		benzo[a]pyrene; benzo[def]chrysene			85	mg/kg		80.113	mg/kg	0.00801 %	\checkmark	
			50-32-8									
8		benzo[b]fluoranthene 601-034-00-4 205-911-9	205-99-2		79	mg/kg		74.458	mg/kg	0.00745 %	\checkmark	
9	8	benzo[ghi]perylene 205-883-8	191-24-2		46	mg/kg		43.355	mg/kg	0.00434 %	\checkmark	
4.0	\vdash	benzo[k]fluoranthene	101 24 2					50.55		0.00500.0/		
10		601-036-00-5 205-916-6	207-08-9		60	mg/kg		56.55	mg/kg	0.00566 %	\checkmark	
	~	boron {	rifluoride					10.155	a			
11			10294-33-4, 10294-34-5, 7637-07-2		1.3	mg/kg	13.43	16.455	mg/kg	0.00165 %	√	
12	4	cadmium {	1306-23-6	1	1.1	mg/kg	1.285	1.332	mg/kg	0.000104 %	\checkmark	
13	~	chromium { <pre> chromium(III) oxide }</pre>			18	mg/kg	1.462	24.795	mg/kg	0.00248 %	~	
14	-	215-160-9 chrysene	1308-38-9		82	ma/ka		77.286	ma/ka	0.00773 %	,	
14		601-048-00-0 205-923-4 confirm TPH has NOT arisen from dies	218-01-9	-	82	mg/kg		//.280	mg/kg	0.00773 %	√	
15												
16	\$	copper {	<mark>e</mark> } 1317-39-1	_	43	mg/kg	1.126	45.63	mg/kg	0.00456 %	\checkmark	
17	Å	cyanides { salts of hydrogen cyanide exception of complex cyanides such as ferricyanides and mercuric oxycyanide specified elsewhere in this Annex }	ferrocyanides,	_	<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<lod< td=""></lod<>
		006-007-00-5 dibenz[a,h]anthracene									\square	
18			53-70-3		12	mg/kg		11.31	mg/kg	0.00113 %	\checkmark	
19		ethylbenzene 601-023-00-4 202-849-4	100-41-4		<0.001	mg/kg		<0.001	mg/kg	<0.000001 %		<lod< td=""></lod<>
		fluoranthene	100-41-4									
20		205-912-4	206-44-0		260	mg/kg		245.052	mg/kg	0.0245 %	\checkmark	
21		fluorene 201-695-5	36-73-7		8.3	mg/kg		7.823	mg/kg	0.000782 %	\checkmark	
22	0	indeno[123-cd]pyrene			45	mg/kg		42.413	mg/kg	0.00424 %	\checkmark	
23	4	205-893-2 lead { lead compounds with the exce specified elsewhere in this Annex }	193-39-5 ption of those	1	130	mg/kg		122.526	mg/kg	0.0123 %	~	
		082-001-00-6										
24	4	manganese { manganese sulphate } 025-003-00-4 232-089-9	7785-87-7		270	mg/kg	2.749	699.446	mg/kg	0.0699 %	\checkmark	
25	4	mercury { mercury dichloride }	7487-94-7		0.7	mg/kg	1.353	0.893	mg/kg	0.0000893 %	\checkmark	
26	4	molybdenum { molybdenum(VI) oxide }			0.85	mg/kg	1.5	1.202	mg/kg	0.00012 %	\checkmark	
27		naphthalene	1313-27-5		<0.05	 mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
			91-20-3	1	NO.00	iiig/kg		<u> </u>	iiig/kg		\square	~200
28	4		12054-48-7 [1] 11113-74-9 [2]		14	mg/kg	1.579	20.842	mg/kg	0.00208 %	~	
29	0	pH			12.1	pН		12.1	pН	12.1 pH		
30	0	phenanthrene	РН	\vdash	160	maller		150 004	maller	0.0151.0/	,	
30		201-581-5	35-01-8		160	mg/kg		150.801	mg/kg	0.0151 %	\checkmark	

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entered	d data	Conv. Factor	Compound	conc.	Classification value	MC Applied	Conc. Not Used
31		phenol 604-001-00-2	203-632-7	108-95-2		<1.3	mg/kg		<1.3	mg/kg	<0.00013 %		<lod< th=""></lod<>
32	۲	pyrene	204-927-3	129-00-0		220	mg/kg		207.352	mg/kg	0.0207 %	\checkmark	
33		selenium { <mark>seleniun</mark> cadmium sulphosel in this Annex }				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<lod< th=""></lod<>
		034-002-00-8											
34		toluene 601-021-00-3	203-625-9	108-88-3		<0.001	mg/kg		<0.001	mg/kg	<0.000001 %		<lod< th=""></lod<>
		TPH (C6 to C40) pe		100-00-3	-								
35			gioup	TPH		4400	mg/kg		4147.031	mg/kg	0.415 %	✓	
36	æ	vanadium { divanad	lium pentaoxide; va	anadium pentoxide }		26	malka	1.785	43.746	malka	0.00437 %	,	
30		023-001-00-8	215-239-8	1314-62-1		20	тд/кд	1.765	43.740	mg/kg	0.00437 %	\checkmark	
37			202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< th=""></lod<>
38	~		} 231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		240	mg/kg	2.469	558.559	mg/kg	0.0559 %	~	
										Total:	0.686 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
0	Determinand defined or amended by HazWasteOnline (see Appendix A)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection

CLP: Note 1 Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely to be realised given TPH composition, concentration and site setting.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.415%)



Classification of sample: BH02C



Sample details

LoW Code: Chapter:	17: Construction and Demolition Wastes (including excavated soi
	from contaminated sites)
Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
	03)

Hazard properties

None identified

Determinands

Moisture content: 6.3% Dry Weight Moisture Correction applied (MC)

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound co	onc.	Classification value	MC Applied	Conc. Not Used
1		acenaphthene	001 400 0			<0.05	mg/kg		<0.05	mg/kg	<0.000005 %	2	<lod< th=""></lod<>
2	0	acenaphthylene	201-469-6 205-917-1	83-32-9 208-96-8	_	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< th=""></lod<>
3		anthracene	204-371-1	120-12-7		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< th=""></lod<>
4	4	arsenic { arsenic tri		1327-53-3		17	mg/kg	1.32	21.115	mg/kg	0.00211 %	\checkmark	
5		benzene	200-753-7	71-43-2		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< th=""></lod<>
6		benzo[a]anthracene		56-55-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< th=""></lod<>
7		benzo[a]pyrene; be 601-032-00-3	nzo[def]chrysene 200-028-5	50-32-8		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
8		benzo[b]fluoranther 601-034-00-4	ne 205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< th=""></lod<>
9	0	benzo[ghi]perylene	205-883-8	191-24-2	-	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< th=""></lod<>
10		benzo[k]fluoranther		207-08-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
11	4	boron { • boron tril (combined) }				1.4	mg/kg	13.43	17.688	mg/kg	0.00177 %	~	
12	4	cadmium {	<mark>n sulfide</mark> } 215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		<lod< th=""></lod<>
13	4	chromium { [●] chro	<mark>mium(III) oxide</mark> } 215-160-9	1308-38-9		15	mg/kg	1.462	20.624	mg/kg	0.00206 %	~	
14		chrysene 601-048-00-0	205-923-4	218-01-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< th=""></lod<>

CAP index number CAN index of partial is from discal or partial is from discal dis from dis dis from dis discal dis from discal discal	#		Determi	inand	Note	User entere	d data	Conv. Factor	Compound conc	.	Classification value	Applied	Conc. Not Used
by cpc cpc <td></td> <td></td> <td>CLP index number EC Nur</td> <td>mber CAS Number</td> <td>ĽР</td> <td></td> <td></td> <td>laotor</td> <td></td> <td></td> <td>Value</td> <td>1C ₽</td> <td>0000</td>			CLP index number EC Nur	mber CAS Number	ĽР			laotor			Value	1C ₽	0000
No. No. <td>15</td> <td></td> <td>confirm TPH has NOT arisen f</td> <td>from diesel or petrol</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><</td> <td></td>	15		confirm TPH has NOT arisen f	from diesel or petrol								<	
No. No. <td></td> <td>æ</td> <td>copper { dicopper oxide: copper</td> <td>er (I) oxide }</td> <td>+</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		æ	copper { dicopper oxide: copper	er (I) oxide }	+								
17 second of a complex sources used as such as there expandes expandes	16				-	80	mg/kg	1.126	84.733 mg	/kg	0.00847 %	\checkmark	
17 second of a complex sources used as such as there expandes expandes		æ											
demonds. Numerican series col.05 mgkg col.05 mgkg col.000 % col.00000% % col.000000% % col.00000%			exception of complex cyanides ferricyanides and mercuric oxy specified elsewhere in this An	s such as ferrocyanides, /cyanide and those		<1	mg/kg	1.884	<1.884 mg	/kg	<0.000188 %		<lod< td=""></lod<>
Bit 1041-002 Dot 131 Bit 70-3 Difference Differenc<	18					<0.05	ma/ka		<0.05 mg	/ka	<0.00005 %		<lod< td=""></lod<>
19 501-023-00-4 202-849-4 100-41-4 <0.0001 mgkq 0.00001 mgkq 0.000000% 0 0 0 0.00000% 0			601-041-00-2 200-181-8	53-70-3									
Bit 1-023-0.04 D024494 [1004114] Image: constraint of the section of those specified december in the Annex y D05-912-4 po6-44-0 Color make with the section of those specified december in the Annex y D01-695-5 pe-73-7 Color make with the section of those specified december in the Annex y D01-695-5 pe-73-7 Color make with the section of those specified december in the Annex y D01-695-5 pe-73-7 Color make with the section of those specified december in the Annex y D05-917-7 Provide the section of those specified december in the Annex y D05-917-7 Provide the section of those specified december in the Annex y D05-917-7 Provide the section of those specified december in the Annex y D05-917-7 Provide the section of those specified december in the Annex y D05-917-7 Provide the section of those specified december in the Annex y D05-917-7 Provide the section of those specified december in the Annex y D05-917-7 Provide the section of those specified december in the Annex y D05-917-7 Provide the section of those specified december in the Annex y D05-917-7 Provide the section of those specified december in the Annex y D05-917-7 Provide the section of those specified december in the Annex y D05-917-7 Provide the section of those specified december in the Annex y D05-917-7 Provide the section of those specified december in the Annex y D05-917-7 Provide the section of those specified december in the Annex y D05-917-7 Provide the section of those specified december in the Annex y D05-917-7 Provide the section of the section of those specified december in the Annex y D05-917-7 Provide the section of those specified decembe	19		,			<0.001	mg/kg		<0.001 mg	/kg	<0.0000001 %		<lod< td=""></lod<>
20 p05-912-4 p05-9				100-41-4									
21 Interementation Q01-695-5 Be-73-7 Q01-695-5 Be-73-7 Q05-893-2 Iga-39-5 Q00-50 mgkg Q00-50 Q00-50<td>20</td><td>0</td><td></td><td>000.000</td><td></td><td>< 0.05</td><td>mg/kg</td><td></td><td><0.05 mg</td><td>/kg</td><td><0.000005 %</td><td></td><td><lod< td=""></lod<></td>	20	0		000.000		< 0.05	mg/kg		<0.05 mg	/kg	<0.000005 %		<lod< td=""></lod<>
21 201-695-5 96-73-7 20.05 mg/kg 2000 mg/kg 200000 % 200000 % 200000 % 200000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000000 % 20000000 % 2		_		206-44-0	_								
22 inden(123-cd)pyrene (193-39-5) (-0.05) mg/kg (-0.05)	21	•		86-73-7	_	<0.05	mg/kg		<0.05 mg	/kg	<0.000005 %		<lod< td=""></lod<>
22 1000 mg/s clubs clubs mg/s clubs		-		00-73-7	+							H	
28 1 1	22		,	193-39-5	-	<0.05	mg/kg		<0.05 mg	/kg	<0.000005 %		<lod< td=""></lod<>
biological condition of many model in mark many	23	~	lead { • lead compounds with	the exception of those	1	1300	ma/ka		1222 954 mg	/ka	0 122 %		
2 2 maganese (manganese subhate) D25003-00-4 232-089-9 [7785-87-7 2 200 mg/kg 2.749 517.133 mg/kg 0.0517% \$			•		-		00						
28 mercury (mercury dichloride) 020-010-00-X [231-299-8 [7487-94-7] 020-010-00-X [231-299-8 [7487-94-7] 04000000000000000000000000	24	4	manganese { manganese sulp			200	mg/kg	2.749	517.133 mg	/kg	0.0517 %	\checkmark	
20 380-010-00-X 231-299-8 7487-94-7 1.8 mg/ng 1.33 2.292 mg/ng 0.000229 % ✓ 28 Molybdenum (molybdenum(v) skide) 131-27-5 1.8 mg/ng 1.5 2.258 mg/ng 0.000226 % ✓ 28 molybdenum (molybdenum(v) skide) 1.16 mg/ng 1.5 2.258 mg/ng 0.00025 % ✓		-			+								
20 0 042-001-00-9 215-204-77 1313-27-5 1.5 mgrkg 1.5 2.258 mgrkg 0.00025 % V 27 naphthalene	25				-	1.8	mg/kg	1.353	2.292 mg	/kg	0.000229 %	\checkmark	
20 pd2:001-00-9 p15:204-7 [133:27-5] [130] 100 100 100 100 1000000 10000000 000000	26	æ	molybdenum { molybdenum(V	I) oxide }		1.6		4.5	2.050 mm	///	0.000226.0/		
21 01-052-00-2 202-049-5 91-20-3 0 200000 mg/kg 2000000 % 2 3 2 2 2 2 2 2 2 2 2 2 2 3 2 2 3 2 2 2 2 2 2 2 2 3 3 2 2 3 3 2 2 3 <td< td=""><td>20</td><td></td><td></td><td>1313-27-5</td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td>✓</td><td></td></td<>	20			1313-27-5						-		✓	
28 28 28 235-008-0X 235-008-5 [1] 12054-48-7 [1] 1111.774-9 [2] 18 mg/kg 1.579 26.746 mg/kg 0.00267 % ✓ 29 PH PH PH 7.6 PH 7.6 PH <td>27</td> <td></td> <td>•</td> <td>91-20-3</td> <td></td> <td><0.05</td> <td>mg/kg</td> <td></td> <td><0.05 mg</td> <td>/kg</td> <td><0.000005 %</td> <td></td> <td><lod< td=""></lod<></td>	27		•	91-20-3		<0.05	mg/kg		<0.05 mg	/kg	<0.000005 %		<lod< td=""></lod<>
29 image: phenember = phenember	28		028-008-00-X 235-008-5			18	mg/kg	1.579	26.746 mg	/kg	0.00267 %	\checkmark	
30 201-581-5 B5-01-8 200.05 mg/kg 200.05 mg/kg 200.0000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000000 % 2000	29	۲	pH	PH		7.6	рН		7.6 pH		7.6 pH		
$ \begin{bmatrix} 1 & 201-581-5 & 85-01-8 & 5 \\ \frac{1}{604-001-00-2} & 203-632-7 & 108-95-2 & 1 \\ \frac{1}{604-001-00-2} & 203-632-7 & 108-95-2 & 1 \\ \frac{1}{604-001-00-2} & 203-632-7 & 108-95-2 & 1 \\ \frac{1}{204-927-3} & 129-00-0 & 20.005 & mg/kg & -0.0005 & mg/kg & -0.00005 & 0 \\ \frac{1}{204-927-3} & 129-00-0 & -0.05 & mg/kg & -0.005 & mg/kg & -0.0005 & 0 \\ \frac{1}{204-927-3} & 129-00-0 & -0.05 & mg/kg & -0.005 & mg/kg & -0.0005 & 0 \\ \frac{1}{204-021-00-8} & -1 & -0.05 & mg/kg & -0.0005 & 0 \\ \frac{1}{204-021-00-8} & 203-625-9 & 108-88-3 & -0.001 & mg/kg & -0.001 & mg/kg & -0.000001 & 0 \\ \frac{1}{204-002-00-8} & -1 & -0.001 & mg/kg & -0.000001 & & -0.001 & mg/kg & -0.000001 & & -0.001 & mg/kg & -0.001 & mg/kg & -0.000001 & & -0.001 & mg/kg & -0.000001 & & -0.001 & mg/kg & -0.0000001 & & -0.001 & mg/kg & -0.0000001 & & -0.001 & mg/kg & -0.0000001 & & -0.0000001 & & -0.000000000 & & -0.000000000000000$	20		phenanthrene			-0.0E			.0.05	///	-0.000005.8/		
31 0 00-001-00-2 203-632-7 108-95-2 0	30		201-581-5	85-01-8		<0.05	тід/кд		<0.05 mg	/ĸg	<0.000005 %		<lod< td=""></lod<>
\$604-001-00-2 \$203-632-7 \$108-95-2 \$1 \$100-0000000000000000000000000000000000	31		phenol			<13	ma/ka		<1.3 mg	/ka	<0.00013 %		
32 204-927-3 129-00-0 20.003 119/kg 20.000003 % 20.000003 % 20.000003 % 20.000003 % 20.000003 % 20.000003 % 20.000003 % 20.000003 % 20.000003 % 20.000003 % 20.000003 % 20.000003 % 20.000003 % 20.000003 % 20.000003 % 20.0000000 % 20.000000 % 20.0000000 % 20.0000000 % 20.0000000 % 20.0000000 % 20.0000000 % 20.0000000 % 20.0000000 % 20.0000000 % 20.0000000 % 20.0000000 % 20.0000000 % 20.0000000 % 20.0000000 % 20.0000000 % 20.0000000 % <t< td=""><td></td><td></td><td>604-001-00-2 203-632-7</td><td>108-95-2</td><td></td><td>\$1.0</td><td></td><td></td><td></td><td>, ng</td><td></td><td></td><td>200</td></t<>			604-001-00-2 203-632-7	108-95-2		\$1.0				, ng			200
33 204-927-3 129-00-0 129-	32	Θ				<0.05	mg/kg		<0.05 mg	/kg	<0.000005 %		<lod< td=""></lod<>
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	33		selenium { <mark>selenium compoun cadmium sulphoselenide and in this Annex</mark> }	ds with the exception of		<1	mg/kg	2.554	<2.554 mg	/kg	<0.000255 %		<lod< td=""></lod<>
34 34 34 34 34 34 35 35 35 35 35 35 35 35 36 37 36 37 36 37 36 37 36 37 36 37 36 37 36 37 <td< td=""><td></td><td></td><td></td><td></td><td>_</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>					_								
35 TPH (C6 to C40) petroleum group (-10) mg/kg (-10) <	34			100.00.0		<0.001	mg/kg		<0.001 mg	/kg	<0.000001 %		<lod< td=""></lod<>
36 Image: Constraint of the constraint	35	0			+	c10	ma/ka		<10 mg	/ka	<0.001 %	$\left \right $	
36 37 mg/kg 1.785 62.137 mg/kg 0.00621 % V 37 xylene	55			TPH			ing/kg			, ng			.200
37 ⁶⁰¹⁻⁰²²⁻⁰⁰⁻⁹ ²⁰²⁻⁴²²⁻² [1] ¹⁰⁶⁻⁴²⁻³ [2] ¹⁰⁶⁻⁴²⁻³ [2] ¹⁰⁶⁻⁴²⁻³ [2] ¹⁰⁶⁻⁴²⁻³ [2] ¹⁰⁸⁻³⁸⁻³ [3] ¹⁰⁸⁻³⁸⁻³⁸⁻³ [3] ¹⁰⁸⁻³⁸⁻³⁸⁻³ [3] ¹⁰⁸⁻³⁸⁻³⁸⁻³⁸⁻³⁸⁻³⁸⁻³⁸⁻³⁸⁻³⁸⁻³⁸⁻³⁸⁻³⁸⁻³⁸⁻³⁸	36		•		}	37	mg/kg	1.785	62.137 mg	/kg	0.00621 %	\checkmark	
38 030-006-00-9 231-793-3 [1] 7446-19-7 [1] 81 mg/kg 2.469 188.159 mg/kg 0.0188 % ✓	37		601-022-00-9 202-422-2 203-396-5 203-576-3	[2] 106-42-3 [2] [3] 108-38-3 [3]		<0.001	mg/kg		<0.001 mg	/kg	<0.0000001 %		<lod< td=""></lod<>
	38		030-006-00-9 231-793-3	[1] 7446-19-7 [1] [2] 7733-02-0 [2]		81	mg/kg	2.469	188.159 mg	/kg	0.0188 %	\checkmark	
			201-130-0	[=] ['' 00-02"0 [2]						tal	0.218 %	┼─┘	

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: BH02C[1]



Sample details

BH02C[1]	Chapter:	
Sample Depth:	Chapter.	17: Construction and Demolition Wastes (including excavated so
Sample Depth:	E a tau u	from contaminated sites)
2 m Moisture content:	Entry:	17 05 03 * (Soil and stones containing hazardous substances)
9.9%		
(dry weight correction)		

Hazard properties

HP 8: Corrosive "waste which on application can cause skin corrosion"

pH; pH "Assumed to be irritant/corrosive because of pH value"

Because of determinand:

pH: (conc.: 11.6 pH)

Determinands

Moisture content: 9.9% Dry Weight Moisture Correction applied (MC)

#		Determinand CLP index number EC Number CA	S Number	CLP Note	User entered data		Conv. ⁼actor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1		acenaphthene			<0.05 mg/l	٢g		<0.05 mg/kg	<0.000005 %		<lod< th=""></lod<>
	_	201-469-6 83-32-	9	_							
2	8	acenaphthylene			<0.05 mg/l	<mark><g< mark=""></g<></mark>		<0.05 mg/kg	<0.000005 %		<lod< td=""></lod<>
<u> </u>	-	205-917-1 208-96	6-8	_							
3	8	anthracene 204-371-1 120-12	. 7		<0.05 mg/l	<g< td=""><td></td><td><0.05 mg/kg</td><td><0.000005 %</td><td></td><td><lod< td=""></lod<></td></g<>		<0.05 mg/kg	<0.000005 %		<lod< td=""></lod<>
_			2-7	_							
4	4	arsenic { arsenic trioxide } 033-003-00-0 215-481-4 1327-5	2.2		17 mg/l	<mark>kg</mark>	1.32	20.424 mg/kg	0.00204 %	\checkmark	
		benzene	00-0	-							
5		601-020-00-8 200-753-7 71-43-	2		<0.001 mg/l	<g< td=""><td></td><td><0.001 mg/kg</td><td><0.000001 %</td><td></td><td><lod< td=""></lod<></td></g<>		<0.001 mg/kg	<0.000001 %		<lod< td=""></lod<>
		benzo[a]anthracene	2	-							
6		601-033-00-9 200-280-6 56-55-	3		<0.05 mg/l	<g< td=""><td></td><td><0.05 mg/kg</td><td><0.000005 %</td><td></td><td><lod< td=""></lod<></td></g<>		<0.05 mg/kg	<0.000005 %		<lod< td=""></lod<>
		benzo[a]pyrene; benzo[def]chrysene	-								
7		601-032-00-3 200-028-5 50-32-	8		<0.05 mg/l	٢g		<0.05 mg/kg	<0.000005 %		<lod< td=""></lod<>
		benzo[b]fluoranthene			0.05			0.05 //	0.00005.0/		1.00
8		601-034-00-4 205-911-9 205-99)-2		<0.05 mg/l	٢g		<0.05 mg/kg	<0.000005 %		<lod< td=""></lod<>
9		benzo[ghi]perylene			<0.05 mg/l		ĺ	<0.05 mg/kg	<0.00005 %		<lod< td=""></lod<>
9		205-883-8 191-24	-2		<0.05 mg/l	(g		<0.05 mg/kg	<0.000005 %		<lod< td=""></lod<>
10		benzo[k]fluoranthene			<0.05 mg/l		Î	<0.05 mg/kg	<0.00005 %		<lod< td=""></lod<>
10		601-036-00-5 205-916-6 207-08	3-9		<0.05 mg/i	vy l		<0.05 mg/kg	0.000003 /8		LOD
11	4	boron { boron tribromide/trichloride/trifluori (combined) }	-33-4,		0.5 mg/l	<mark><g< mark=""> 1</g<></mark>	13.43	6.11 mg/kç	0.000611 %	~	
		7637-0)7-2								
12	4	cadmium { cadmium sulfide }		1	<0.2 mg/l	ر sg	1.285	<0.257 mg/kg	<0.00002 %		<lod< td=""></lod<>
		048-010-00-4 215-147-8 1306-2	23-6								

Page 32 of 68

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#	Determinand 2		CLP Note			Conv. Factor	Compound conc.	Classification value	Applied	Conc. Not Used	
		CLP index number EC Nun	nber CAS Number	G						MC	
13	4	chromium { ^e chromium(III) ox 215-160-9	<mark>iide</mark> }		17	mg/kg	1.462	22.608 mg/	kg 0.00226 %	\checkmark	
		chrysene									
14		601-048-00-0 205-923-4	218-01-9	_	<0.05	mg/kg		<0.05 mg/	(g <0.000005 %		<lod< td=""></lod<>
		confirm TPH has NOT arisen f									
15											
16	4	copper { dicopper oxide; copper			59	mg/kg	1.126	60.444 mg/	(g 0.00604 %	\checkmark	
		029-002-00-X 215-270-7	1317-39-1							Ľ	
17	4	cyanides { salts of hydrogen exception of complex cyanides ferricyanides and mercuric oxy specified elsewhere in this Anr 006-007-00-5	such as ferrocyanides, cyanide and those		<1	mg/kg	1.884	<1.884 mg/	kg <0.000188 %		<lod< td=""></lod<>
		dibenz[a,h]anthracene		_							
18		601-041-00-2 200-181-8	53-70-3	_	<0.05	mg/kg		<0.05 mg/	kg <0.000005 %		<lod< td=""></lod<>
				_							
19	4	dichloroethane { 1,1-dichloro 1,2-dichloroethane (combined) 203-458-1,		3	<0.002	mg/kg		<0.002 mg/	<g %<="" <0.000002="" td=""><td></td><td><lod< td=""></lod<></td></g>		<lod< td=""></lod<>
		200-863-5	,								
20		ethylbenzene			<0.001	ma/ka		<0.001 mg/	<q %<="" <0.000001="" p=""></q>		<lod< td=""></lod<>
20		601-023-00-4 202-849-4	100-41-4		20.001	mg/kg		<0.001 mg/	g <0.000001 %		< LUD
04	8	fluoranthene			-0.05			.0.05 mm	(a .0.00000E 0/		1.00
21		205-912-4	206-44-0	_	<0.05	mg/kg		<0.05 mg/	(g <0.000005 %		<lod< td=""></lod<>
		fluorene	4		0.05			0.05			1.00
22		201-695-5	86-73-7		<0.05	mg/kg		<0.05 mg/	<g %<="" <0.000005="" td=""><td></td><td><lod< td=""></lod<></td></g>		<lod< td=""></lod<>
23		indeno[123-cd]pyrene			<0.05	mg/kg		<0.05 mg/	(g <0.000005 %		<lod< td=""></lod<>
		205-893-2	193-39-5	_							
24	4	lead { <pre>lead compounds with specified elsewhere in this Anr 082-001-00-6</pre>		1	550	mg/kg		500.455 mg/	(g 0.05 %	~	
25	4	manganese { manganese sulp 025-003-00-4 232-089-9	hate }		280	mg/kg	2.749	700.271 mg/	(g 0.07 %	√	
		mercury { mercury dichloride }	1103-01-1								
26	4	080-010-00-X 231-299-8	7487-94-7	_	1.3	mg/kg	1.353	1.601 mg/	kg 0.00016 %	\checkmark	
		molybdenum { molybdenum(VI		_							
27	4	042-001-00-9 215-204-7		_	1.8	mg/kg	1.5	2.457 mg/	(g 0.000246 %	\checkmark	
	-		1313-27-5	_							
28		naphthalene	01 20 2		<0.05	mg/kg		<0.05 mg/	kg <0.000005 %		<lod< td=""></lod<>
		601-052-00-2 202-049-5	91-20-3	_						+	
29	4	nickel { nickel dihydroxide } 028-008-00-X 235-008-5 [234-348-1 [17	mg/kg	1.579	24.433 mg/	kg 0.00244 %	~	
30	۲	pH	PH		11.6	pН		11.6 pH	11.6 pH		
	-	phenanthrene	μι	-							
31		·	85 01 9		<0.05	mg/kg		<0.05 mg/	kg <0.000005 %		<lod< td=""></lod<>
	-	201-581-5	85-01-8	-							
32		phenol	400.05.0		<1.3	mg/kg		<1.3 mg/	kg <0.00013 %		<lod< td=""></lod<>
00		604-001-00-2 203-632-7 pyrene	108-95-2	_	0.05			0.05		\vdash	
33		204-927-3	129-00-0	_	<0.05	mg/kg		<0.05 mg/	<g %<="" <0.000005="" p=""></g>		<lod< td=""></lod<>
34	4	selenium { selenium compound cadmium sulphoselenide and t in this Annex }			<1	mg/kg	2.554	<2.554 mg/	<g %<="" <0.000255="" p=""></g>		<lod< td=""></lod<>
		034-002-00-8 tetrachloroethylene		_						+	
35		tetrachloroethylene 602-028-00-4 204-825-9 127-18-4			<0.001	mg/kg		<0.001 mg/	kg <0.0000001 %		<lod< td=""></lod<>
	-		_						+		
36		tetrachloromethane (carbon tetrachloride) 602-008-00-5 200-262-8 56-23-5			<0.001	mg/kg		<0.001 mg/	kg <0.000001 %		<lod< td=""></lod<>
37		toluene 601-021-00-3 203-625-9	108-88-3		<0.001	mg/kg		<0.001 mg/	<g %<="" <0.0000001="" td=""><td></td><td><lod< td=""></lod<></td></g>		<lod< td=""></lod<>
	1		1							- U U	

	M	D a	LL
RA		DU	

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound	conc.	Classification value	MC Applied	Conc. Not Used
38	0	TPH (C6 to C40) pe	etroleum group	ТРН		440	mg/kg		400.364	mg/kg	0.04 %	\checkmark	
39		trichloroethylene; tr 602-027-00-9	ichloroethene 201-167-4	79-01-6		<0.001	mg/kg		<0.001	mg/kg	<0.000001 %		<lod< th=""></lod<>
40	4	· · · · · · · · · · · · · · · · · · ·	<mark>lium pentaoxide; v</mark> 215-239-8	anadium pentoxide }		32	mg/kg	1.785	51.98	mg/kg	0.0052 %	\checkmark	
41		vinyl chloride 602-023-00-7	200-831-0	75-01-4		<0.001	mg/kg		<0.001	mg/kg	<0.000001 %		<lod< th=""></lod<>
42			202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< th=""></lod<>
43			} 231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		87	mg/kg	2.469	195.477	mg/kg	0.0195 %	\checkmark	
										Total:	0.199 %		

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
0	Determinand defined or amended by HazWasteOnline (see Appendix A)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< td=""><td>Below limit of detection</td></lod<>	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely to be realised given TPH composition, concentration and site setting.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.04%)



Classification of sample: BH02C[2]



Sample details

Sample Name:	LoW Code:	
BH02C[2]	Chapter:	17: Construction and Demolition Wastes (including excavated so
Sample Depth:		from contaminated sites)
2.5 m	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
Moisture content:		03)
8.6%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 8.6% Dry Weight Moisture Correction applied (MC)

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound cor	nc.	Classification value	MC Applied	Conc. Not Used
1	8	acenaphthene				<0.05	mg/kg		<0.05 n	ng/kg	<0.000005 %	2	<lod< th=""></lod<>
2	8	acenaphthylene	1	83-32-9		<0.05	mg/kg		<0.05 n	ng/kg	<0.000005 %		<lod< th=""></lod<>
\square	_	anthracene	205-917-1	208-96-8	-								
3	۲		204-371-1	120-12-7	-	<0.05	mg/kg		<0.05 n	ng/kg	<0.000005 %		<lod< td=""></lod<>
4	8	arsenic { arsenic tri				13	mg/kg	1.32	15.805 n	ng/kg	0.00158 %	,	
4		033-003-00-0	215-481-4	1327-53-3		13	шу/ку	1.32	15.605	пу/ку	0.00156 %	\checkmark	
5		benzene 601-020-00-8	200-753-7	71-43-2		<0.001	mg/kg		<0.001 n	ng/kg	<0.0000001 %		<lod< th=""></lod<>
6		benzo[a]anthracene 601-033-00-9		56-55-3		<0.05	mg/kg		<0.05 n	ng/kg	<0.000005 %		<lod< th=""></lod<>
7		benzo[a]pyrene; be	enzo[def]chrysene			<0.05	mg/kg		<0.05 n	ng/kg	<0.000005 %		<lod< td=""></lod<>
		601-032-00-3 benzo[b]fluoranthei		50-32-8	-							H	
8			205-911-9	205-99-2	-	<0.05	mg/kg		<0.05 n	ng/kg	<0.000005 %		<lod< td=""></lod<>
9	8	benzo[ghi]perylene				<0.05	mg/kg		<0.05 n	ng/kg	<0.000005 %	T	<lod< th=""></lod<>
			205-883-8	191-24-2									
10		benzo[k]fluoranther		007.00.0	_	<0.05	mg/kg		<0.05 n	ng/kg	<0.000005 %		<lod< td=""></lod<>
	\$	601-036-00-5 boron { [®] boron tri	1	207-08-9 trifluoride								-	
11		(combined) }		10294-33-4, 10294-34-5, 7637-07-2	_	0.8	mg/kg	13.43	9.893 n	ng/kg	0.000989 %	~	
12	-	cadmium {	•	1306-23-6	1	<0.2	mg/kg	1.285	<0.257 n	ng/kg	<0.00002 %		<lod< th=""></lod<>
13	-	chromium { • chro	mium(III) oxide }			18	mg/kg	1.462	24.225 n	ng/kg	0.00242 %	~	
			215-160-9	1308-38-9				, 1.702			kg 0.00242 %		
14		chrysene 601-048-00-0	205-923-4	218-01-9		<0.05	mg/kg		<0.05 n	ng/kg	<0.000005 %		<lod< th=""></lod<>

#			Determinand		Note	User entered	d data	Conv. Factor	Compound c	onc.	Classification value	Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number	CLP							МС	
15	8	confirm TPH has N	IOT arisen from die	sel or petrol									
16	4		<mark>oxide; copper (I) oxi</mark> 215-270-7	de } 1317-39-1		20	mg/kg	1.126	20.735	mg/kg	0.00207 %	\checkmark	
	<u>a</u>												
17		exception of compl	of hydrogen cyanid ex cyanides such a nercuric oxycyanide e in this Annex }	s ferrocyanides,		<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<lod< td=""></lod<>
18		dibenz[a,h]anthrac	ene 200-181-8	53-70-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
	8	ethylbenzene	200-101-0	53-70-3	+								
19		601-023-00-4	202-849-4	100-41-4		<0.001	mg/kg		<0.001	mg/kg	<0.000001 %		<lod< td=""></lod<>
20		fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
20			205-912-4	206-44-0	1								200
21	۲		201-695-5	86-73-7		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
22	0	indeno[123-cd]pyre		193-39-5		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
			205-893-2										
23	4	lead { lead comp specified elsewhere 082-001-00-6	pounds with the exc e in this Annex I	eption of those	1	150	mg/kg		138.122	mg/kg	0.0138 %	\checkmark	
	æ	manganese { mang	ganese sulphate }		-	000		0.740	700.000		0.0704.0/		
24		025-003-00-4	232-089-9	7785-87-7		290	mg/kg	2.749	733.963	mg/kg	0.0734 %	\checkmark	
25	-	mercury { mercury 080-010-00-X	<mark>dichloride</mark> } 231-299-8	7487-94-7		0.5	mg/kg	1.353	0.623	mg/kg	0.0000623 %	\checkmark	
26	4		ybdenum(VI) oxide 215-204-7	}		2.3	mg/kg	1.5	3.177	mg/kg	0.000318 %	\checkmark	
27		naphthalene 601-052-00-2	202-049-5	91-20-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
28		nickel { nickel dihyc 028-008-00-X	<mark>froxide</mark> } 235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]	-	16	mg/kg	1.579	23.271	mg/kg	0.00233 %	~	
29	0	рН		PH		8.7	pН		8.7	рН	8.7 pH		
		phenanthrene		FII									
30		•	201-581-5	85-01-8	1	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
31		phenol 604-001-00-2	203-632-7	108-95-2		<1.3	mg/kg		<1.3	mg/kg	<0.00013 %		<lod< td=""></lod<>
32	8	pyrene		1		<0.05	mg/kg		<0.05	ma/ka	<0.000005 %		<lod< td=""></lod<>
			204-927-3	129-00-0	-								200
33	*		n compounds with t lenide and those sp			<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<lod< td=""></lod<>
<u>.</u> .		toluene	1	l	+	0.001			0.001		0.0000001.01		1.07
34		601-021-00-3	203-625-9	108-88-3		<0.001	mg/kg		<0.001	mg/kg	<0.000001 %		<lod< td=""></lod<>
35		TPH (C6 to C40) p	etroleum group	TPH		170	mg/kg		156.538	mg/kg	0.0157 %	\checkmark	
	æ	vanadium { divanad	dium pentaoxide; va	anadium pentoxide }		07		4 705	44.000	//	0.00444.0/		
36		•	215-239-8	1314-62-1		27	тд/кд	1.785	44.383	mg/kg	0.00444 %	\checkmark	
37		xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< th=""></lod<>
38	4	zinc { zinc sulphate		7446-19-7 [1]		25	ma/ka	2.469	56.844	mg/kg	0.00568 %	~	
			231-793-3 [1] 231-793-3 [2]	7733-02-0 [2]			39			J3			
										Total:	0.123 %		

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely to be realised given TPH composition, concentration and site setting.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0157%)



Classification of sample: TP05



Sample details

17: Construction and Demolition Wastes (including excavated soil from contaminated sites) 17 05 03 * (Soil and stones containing hazardous substances)
17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 8: Corrosive "waste which on application can cause skin corrosion"

pH; pH "Assumed to be irritant/corrosive because of pH value"

Because of determinand:

pH: (conc.: 11.7 pH)

Determinands

Moisture content: 13% Dry Weight Moisture Correction applied (MC)

#		Determinand CLP index number EC Number CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	۵	acenaphthene 201-469-6 83-32-9		<0.05	mg/kg		<0.05 mg/kg	<0.000005 %		<lod< th=""></lod<>
-		acenaphthylene							H	
2		205-917-1 208-96-8		<0.05	mg/kg		<0.05 mg/kg	<0.000005 %		<lod< td=""></lod<>
3		anthracene		0.26	mg/kg		0.23 mg/kg	0.000023 %	1	
		204-371-1 120-12-7								
4	4	arsenic { arsenic trioxide }		10	mg/kg	1.32	11.684 mg/kg	0.00117 %	\checkmark	
		033-003-00-0 215-481-4 1327-53-3	_						-	
5		benzene 601-020-00-8 200-753-7 71-43-2		<0.001	mg/kg		<0.001 mg/kg	<0.000001 %		<lod< td=""></lod<>
			_						-	
6		benzo[a]anthracene 601-033-00-9 200-280-6 56-55-3	_	2.8	mg/kg		2.478 mg/kg	0.000248 %	\checkmark	
		benzo[a]pyrene; benzo[def]chrysene					0.404	0.000040.0/		
7		601-032-00-3 200-028-5 50-32-8	-	2.4	mg/kg		2.124 mg/kg	0.000212 %	\checkmark	
8		benzo[b]fluoranthene		3.2	mg/kg		2.832 mg/kg	0.000283 %	1	
		601-034-00-4 205-911-9 205-99-2		0.2	iiig/kg		2.032 mg/kg	0.000203 /8	~	
9	۵	benzo[ghi]perylene		1.7	mg/kg		1.504 mg/kg	0.00015 %	1	
		205-883-8 191-24-2								
10		benzo[k]fluoranthene		1.2	mg/kg		1.062 mg/kg	0.000106 %	\checkmark	
		601-036-00-5 205-916-6 207-08-9	_							
11	4	boron { [®] boron tribromide/trichloride/trifluoride (combined) }		5.2	mg/kg	13.43	61.802 mg/kg	g 0.00618 %	~	
12	4	cadmium {	_ 1	<0.2	mg/kg	1.285	<0.257 mg/kg	g <0.00002 %		<lod< th=""></lod<>

#			Determinand		CLP Note	User entered	l data	Conv. Factor	Compound	conc.	Classification value	Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number	CLP			, actor			10100	MC	0000
13	4	chromium { [•] chrom	()	1308-38-9		22	mg/kg	1.462	28.455	mg/kg	0.00285 %	~	
14		chrysene 601-048-00-0 20	05-923-4	218-01-9		2.8	mg/kg		2.478	mg/kg	0.000248 %	\checkmark	
15		confirm TPH has NO	T arisen from dies	el or petrol									
16	*	copper { dicopper oxi		l <mark>e</mark> } 1317-39-1		27	mg/kg	1.126	26.902	mg/kg	0.00269 %	~	
17	*	cyanides { salts of exception of complex ferricyanides and me specified elsewhere i	c cyanides such as rcuric oxycyanide	ferrocyanides,		<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<lod< td=""></lod<>
		006-007-00-5											
18		dibenz[a,h]anthracen		53-70-3		0.43	mg/kg		0.381	mg/kg	0.0000381 %	\checkmark	
19	8	ethylbenzene 601-023-00-4 20		100-41-4		<0.001	mg/kg		<0.001	mg/kg	<0.000001 %		<lod< td=""></lod<>
20		fluoranthene	05-912-4	206-44-0		6.3	mg/kg		5.575	mg/kg	0.000558 %	\checkmark	
21	8	fluorene		86-73-7		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
22	8	indeno[123-cd]pyrene	e			1.3	mg/kg		1.15	mg/kg	0.000115 %	~	
23	4	lead { [•] lead compo specified elsewhere i	unds with the exce	193-39-5 ption of those	1	270	mg/kg		238.938	mg/kg	0.0239 %	~	
		082-001-00-6 manganese { mangar	nese sulphate }										
24		025-003-00-4 23	32-089-9	7785-87-7		300	mg/kg	2.749	729.707	mg/kg	0.073 %	\checkmark	
25		mercury { mercury di 080-010-00-X 23		7487-94-7		<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<lod< td=""></lod<>
26	4	molybdenum { molyb 042-001-00-9 21		1313-27-5		0.42	mg/kg	1.5	0.558	mg/kg	0.0000558 %	\checkmark	
27		naphthalene 601-052-00-2 20	02-049-5	91-20-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
	8	nickel { nickel dihydro										Ħ	
28	-	028-008-00-X 23	35-008-5 [1]	12054-48-7 [1] 11113-74-9 [2]		18	mg/kg	1.579	25.16	mg/kg	0.00252 %	~	
29	8	pH		PH		11.7	pН		11.7	pН	11.7 pH		
30	8	phenanthrene				2.1	mg/kg		1.858	mg/kg	0.000186 %	√	
	\vdash	phenol 20	01-581-5	85-01-8	$\left \right $							⊢́	
31			03-632-7	108-95-2		<1.3	mg/kg		<1.3	mg/kg	<0.00013 %		<lod< td=""></lod<>
32	8	pyrene	04-927-3	129-00-0		5	mg/kg		4.425	mg/kg	0.000442 %	\checkmark	
-	2	selenium { selenium										\vdash	
33		cadmium sulphoseler in this Annex 034-002-00-8				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<lod< td=""></lod<>
34		toluene	03-625-9	108-88-3		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< td=""></lod<>
35		TPH (C6 to C40) peti	roleum group	ТРН		70	mg/kg		61.947	mg/kg	0.00619 %	~	
36	*	vanadium { divanadiu	um pentaoxide; var	nadium pentoxide }		43	mg/kg	1.785	67.932	mg/kg	0.00679 %	~	
┣		023-001-00-8 21 xylene	15-239-8	1314-62-1	+							\vdash	
37		601-022-00-9 20 20 20	03-396-5 [2] 03-576-3 [3]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< td=""></lod<>
37		20	03-576-3 [3]			<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		

#	:		Determinand		Note	User entered data	Conv. Factor	Compound conc.	Classification value	Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number	CLP					В	
	4	zinc { zinc sulphate	}								
38	3		231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		51 mg/kg	2.469	111.446 mg/kg	0.0111 %	\checkmark	
								Total:	0.14 %		

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
0	Determinand defined or amended by HazWasteOnline (see Appendix A)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< td=""><td>Below limit of detection</td></lod<>	Below limit of detection
CLD: Note 1	

CLP: Note 1 Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely to be realised given TPH composition, concentration and site setting.

Hazard Statements hit:

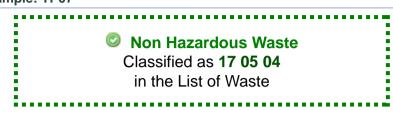
Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00619%)



Classification of sample: TP07



Sample details

LoW Code	
Chapter:	17: Construction and Demolition Wastes (including excavated so
	from contaminated sites)
Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
	03)

Hazard properties

None identified

Determinands

Moisture content: 23% Dry Weight Moisture Correction applied (MC)

#		CLP index number	Determinand CLP index number EC Number CAS Number			User entere	d data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	8	acenaphthene	201-469-6	83-32-9	CLP Note	<0.05	mg/kg		<0.05 mg/k	g <0.000005 %		<lod< th=""></lod<>
2	0	acenaphthylene		208-96-8		<0.05	mg/kg		<0.05 mg/k	g <0.000005 %		<lod< th=""></lod<>
3	0	anthracene		120-12-7		<0.05	mg/kg		<0.05 mg/k	g <0.000005 %		<lod< th=""></lod<>
4	4	arsenic { arsenic tri	<mark>oxide</mark> }	1327-53-3		16	mg/kg	1.32	17.175 mg/k	g 0.00172 %	\checkmark	
5		benzene		71-43-2		<0.001	mg/kg		<0.001 mg/k	g <0.0000001 %		<lod< th=""></lod<>
6		benzo[a]anthracene	9	56-55-3		<0.05	mg/kg		<0.05 mg/k	g <0.000005 %		<lod< th=""></lod<>
7		benzo[a]pyrene; be 601-032-00-3	. , ,	50-32-8		<0.05	mg/kg		<0.05 mg/k	g <0.000005 %		<lod< td=""></lod<>
8		benzo[b]fluoranther 601-034-00-4	ne 205-911-9	205-99-2		<0.05	mg/kg		<0.05 mg/k	g <0.000005 %		<lod< th=""></lod<>
9	8	benzo[ghi]perylene		191-24-2		<0.05	mg/kg		<0.05 mg/k	g <0.000005 %		<lod< th=""></lod<>
10		benzo[k]fluoranther	ie	207-08-9		<0.05	mg/kg		<0.05 mg/k	g <0.000005 %		<lod< td=""></lod<>
11	4	boron { ^a boron trit (combined) }		1		2.4	mg/kg	13.43	26.205 mg/k	g 0.00262 %	~	
12	4	cadmium { cadmiun 048-010-00-4	<mark>n sulfide</mark> } 215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257 mg/k	g <0.00002 %		<lod< th=""></lod<>
13	4	chromium { [®] chron	<mark>mium(III) oxide</mark> } 215-160-9	1308-38-9		37	mg/kg	1.462	43.965 mg/k	g 0.0044 %	\checkmark	
14		chrysene 601-048-00-0	205-923-4	218-01-9		<0.05	mg/kg		<0.05 mg/k	g <0.000005 %		<lod< th=""></lod<>

#			Determinand		Note	User entered	d data	Conv. Factor	Compound conc	Classification value	Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number	CLP						MC /	
15	8	confirm TPH has N	OT arisen from dies	sel or petrol								
					1							
16	4		oxide; copper (I) oxid			34	mg/kg	1.126	31.122 mg	kg 0.00311 %	\checkmark	
-			1	1317-39-1								
17	4	exception of compl ferricyanides and n specified elsewher	of hydrogen cyanide ex cyanides such as nercuric oxycyanide e in this Annex }	s ferrocyanides,		<1	mg/kg	1.884	<1.884 mg	kg <0.000188 %		<lod< td=""></lod<>
		006-007-00-5										
18		dibenz[a,h]anthrac 601-041-00-2		53-70-3		<0.05	mg/kg		<0.05 mg	kg <0.000005 %		<lod< td=""></lod<>
				1					· · · · ·			
	4	dichloroethane {	1,1-dichloroethane	and								
19			203-458-1,	107-06-2. 75-34-3		<0.002	mg/kg		<0.002 mg	kg <0.000002 %		<lod< td=""></lod<>
			200-863-5	,								
20		ethylbenzene				<0.001	mg/kg		<0.001 mg	kg <0.0000001 %		<lod< td=""></lod<>
Ē			202-849-4	100-41-4								
21	۲	fluoranthene	0.05.045	000 11 -		<0.05	mg/kg		<0.05 mg	kg <0.000005 %		<lod< td=""></lod<>
		0	205-912-4	206-44-0								
22	۲	fluorene	201-695-5	86-73-7		<0.05	mg/kg		<0.05 mg	kg <0.000005 %		<lod< td=""></lod<>
-		indeno[123-cd]pyre		00-73-7							t i	
23	9			193-39-5		<0.05	mg/kg		<0.05 mg	kg <0.000005 %		<lod< td=""></lod<>
	4		ounds with the exc								T	
24	~	specified elsewhere		ephon of those	1	49	mg/kg		39.837 mg	kg 0.00398 %	\checkmark	
		082-001-00-6										
25	æ	manganese { mang	ganese sulphate }			340	ma/ka	2.749	759.766 mg	kg 0.076 %	\checkmark	
25		025-003-00-4	232-089-9	7785-87-7		340	iiig/kg	2.743		Ng 0.070 /8	×	
26	4	mercury { mercury				0.9	ma/ka	1.353	0.99 mg	kg 0.000099 %	\checkmark	
_				7487-94-7							ľ	
27	4		ybdenum(VI) oxide			<0.25	mg/kg	1.5	<0.375 mg	kg <0.0000375 %		<lod< td=""></lod<>
-			215-204-7	1313-27-5	-							
28		naphthalene 601-052-00-2	202-049-5	91-20-3		<0.05	mg/kg		<0.05 mg	kg <0.000005 %		<lod< td=""></lod<>
	æ	nickel { nickel dihyd		01200								
29			235-008-5 [1]	12054-48-7 [1]		38	mg/kg	1.579	48.798 mg	kg 0.00488 %	\checkmark	
			234-348-1 [2]	11113-74-9 [2]								
30	۲	рН				9.4	pН		9.4 pH	9.4 pH		
				PH								
31	۲	phenanthrene	004 504 5	05.04.0		<0.05	mg/kg		<0.05 mg	kg <0.000005 %		<lod< td=""></lod<>
-		phenol	201-581-5	85-01-8								
32		•	203-632-7	108-95-2		<1.3	mg/kg		<1.3 mg	kg <0.00013 %		<lod< td=""></lod<>
		pyrene	200 002 1	100 00 2								
33			204-927-3	129-00-0	1	<0.05	mg/kg		<0.05 mg	kg <0.000005 %		<lod< td=""></lod<>
	4		n compounds with t									
34	-		lenide and those sp	ecified elsewhere		<1	mg/kg	2.554	<2.554 mg	kg <0.000255 %		<lod< td=""></lod<>
		in this Annex } 034-002-00-8		1			5 5					
\vdash	\vdash	tetrachloroethylene	j 	<u> </u>	-						\square	
35				127-18-4	1	<0.001	mg/kg		<0.001 mg	'kg <0.0000001 %		<lod< td=""></lod<>
20			e (carbon tetrachlori		\square	-0.004	m m //.		10.001	ka -0.000001.0		1.00
36		602-008-00-5	200-262-8	56-23-5		<0.001	mg/kg		<0.001 mg	kg <0.0000001 %		<lod< td=""></lod<>
37		toluene				<0.001	mg/kg		<0.001 mg	kg <0.0000001 %		<lod< td=""></lod<>
Ľ		601-021-00-3	203-625-9	108-88-3	1	10.001	ing/kg		ing			
38	۲	TPH (C6 to C40) p	• •			<10	mg/kg		<10 mg	kg <0.001 %		<lod< td=""></lod<>
				ТРН								
39		trichloroethylene; t		70.04.0		<0.001	mg/kg		<0.001 mg	kg <0.0000001 %		<lod< td=""></lod<>
\vdash				79-01-6	┝							
40	4	-	dium pentaoxide; va 215-239-8	hadium pentoxide }	-	62	mg/kg	1.785	89.985 mg	kg 0.009 %	\checkmark	
					<u> </u>							

Page 42 of 68

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#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound c	onc.	Classification value	MC Applied	Conc. Not Used
41		vinyl chloride 602-023-00-7	200-831-0	75-01-4	_	<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< th=""></lod<>
42			202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]	_	<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< th=""></lod<>
43	4		} 231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		75	mg/kg	2.469	150.567	mg/kg	0.0151 %	~	
										Total:	0.123 %		

Key

User supplied data

Determinand values ignored for classification, see column 'Conc. Not Used' for reason

Determinand defined or amended by HazWasteOnline (see Appendix A) 0

4 Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration

<LOD Below limit of detection

CLP: Note 1 Only the metal concentration has been used for classification



Classification of sample: TP03

Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:	LoW Code:	
TP03	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Sample Depth:		from contaminated sites)
0.30-0.60 m	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
Moisture content:		03)
20%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 20% Dry Weight Moisture Correction applied (MC)

#		Determinand CLP index number EC Number CAS Number			CLP Note	User entere	d data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	0		224 422 2			<0.05	mg/kg		<0.05 mg/kg	g <0.000005 %		<lod< td=""></lod<>
2	0	acenaphthylene	201-469-6 205-917-1	83-32-9 208-96-8	-	<0.05	mg/kg		<0.05 mg/kg	g <0.000005 %		<lod< td=""></lod<>
3	0	anthracene	204-371-1	120-12-7		<0.05	mg/kg		<0.05 mg/kg	g <0.000005 %		<lod< td=""></lod<>
4	4	arsenic { arsenic tri 033-003-00-0	<mark>ioxide</mark> } 215-481-4	1327-53-3		11	mg/kg	1.32	12.103 mg/kg	0.00121 %	\checkmark	
5		benzene 601-020-00-8	200-753-7	71-43-2		<0.001	mg/kg		<0.001 mg/kg	g <0.000001 %		<lod< td=""></lod<>
6		benzo[a]anthracene		56-55-3		<0.05	mg/kg		<0.05 mg/kg	g <0.000005 %		<lod< td=""></lod<>
7		benzo[a]pyrene; be 601-032-00-3	enzo[def]chrysene 200-028-5	50-32-8		<0.05	mg/kg		<0.05 mg/kg	g <0.000005 %		<lod< td=""></lod<>
8		benzo[b]fluoranthe		205-99-2		<0.05	mg/kg		<0.05 mg/kg	g <0.000005 %		<lod< td=""></lod<>
9	Θ	benzo[ghi]perylene		191-24-2	-	<0.05	mg/kg		<0.05 mg/kg	g <0.000005 %	Ľ	<lod< td=""></lod<>
10		benzo[k]fluoranther 601-036-00-5	ne 205-916-6	207-08-9		<0.05	mg/kg		<0.05 mg/kg	g <0.000005 %	1	<lod< td=""></lod<>
11	~	boron { ^a boron tri (combined) }	bromide/trichloride,	trifluoride 10294-33-4, 10294-34-5, 7637-07-2		1.3	mg/kg	13.43	14.549 mg/kg	g 0.00145 %	~	
12	4	cadmium { cadmium sulfide }			1	<0.2	mg/kg	1.285	<0.257 mg/kg	g <0.00002 %		<lod< td=""></lod<>
13	4	chromium { • chro		1308-38-9		46	mg/kg	1.462	56.026 mg/kg	g 0.0056 %	~	
14		chrysene 601-048-00-0	205-923-4	218-01-9		<0.05	mg/kg		<0.05 mg/kg	<0.000005 %		<lod< td=""></lod<>

Page 44 of 68

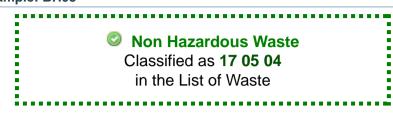
		Determinan	d	te			Conv.		Classification	Applied	Conc. Not
#		CLP index number EC Numbe	r CAS Number	CLP Note	User entere	d data	Factor	Compound conc.	value	C App	Used
		confirm TPH has NOT arisen from		<u>ರ</u>						MC	
15	•			-							
16	2	copper { dicopper oxide; copper (I)) oxide }		32	ma/ka	1.126	30.024 mg/kg	0.003 %	\checkmark	
10		029-002-00-X 215-270-7	1317-39-1		52	шу/ку	1.120		0.003 /8	~	
17	4	cyanides { salts of hydrogen cya exception of complex cyanides su ferricyanides and mercuric oxycya specified elsewhere in this Annex 006-007-00-5	ch as ferrocyanides, nide and those		<1	mg/kg	1.884	<1.884 mg/kg	g <0.000188 %		<lod< td=""></lod<>
18		dibenz[a,h]anthracene 601-041-00-2 200-181-8	53-70-3	_	<0.05	mg/kg		<0.05 mg/kg	g <0.000005 %		<lod< td=""></lod<>
		ethylbenzene	53-70-3	+							
19		601-023-00-4 202-849-4	100-41-4	_	<0.001	mg/kg		<0.001 mg/kg	<0.000001 %		<lod< td=""></lod<>
20		fluoranthene			-0.0F			-0.0E ma///	-0.000005.8/		
20		205-912-4	206-44-0		<0.05	mg/kg		<0.05 mg/kg	<0.000005 %		<lod< td=""></lod<>
21	0	fluorene 201-695-5	86-73-7		<0.05	mg/kg		<0.05 mg/kg	g <0.000005 %		<lod< td=""></lod<>
22		indeno[123-cd]pyrene	<u>1</u>	\uparrow	<0.05	mg/kg		<0.05 mg/kg	<0.000005 %	Π	<lod< td=""></lod<>
~~		205-893-2	193-39-5		<0.05	шу/ку		<0.03 mg/kg	, <0.000003 /8		LOD
23	4	lead { ^e lead compounds with the specified elsewhere in this Annex 082-001-00-6		1	24	mg/kg		20 mg/kg	g 0.002 %	\checkmark	
	2	manganese { manganese sulphate	 ۱	+						+	
24	*	025-003-00-4 232-089-9	7785-87-7	_	390	mg/kg	2.749	893.283 mg/kg	0.0893 %	\checkmark	
25	4	mercury { mercury dichloride } 080-010-00-X 231-299-8	7487-94-7		<0.3	mg/kg	1.353	<0.406 mg/kg	g <0.0000406 %		<lod< td=""></lod<>
26	4	molybdenum {	<mark>kide</mark> }		<0.25	mg/kg	1.5	<0.375 mg/kg	o <0.0000375 %	H	<lod< td=""></lod<>
27		042-001-00-9 215-204-7 naphthalene	1313-27-5		<0.05	mg/kg		<0.05 mg/kg	g <0.000005 %	H	<lod< td=""></lod<>
		601-052-00-2 202-049-5 nickel { nickel dihydroxide }	91-20-3	_						$\left \right $	
28	4	028-008-00-X 235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]	_	37	mg/kg	1.579	48.701 mg/kg	0.00487 %	\checkmark	
29	8	pH	PH		8.9	рН		8.9 pH	8.9 pH		
30	•	phenanthrene 201-581-5	85-01-8		<0.05	mg/kg		<0.05 mg/kg	<0.000005 %		<lod< td=""></lod<>
31		phenol 604-001-00-2 203-632-7	108.05.2		<1.3	mg/kg		<1.3 mg/kg	g <0.00013 %		<lod< td=""></lod<>
	-	604-001-00-2 203-632-7 pyrene	108-95-2	+						\vdash	
32	۲	204-927-3	129-00-0	-	<0.05	mg/kg		<0.05 mg/kg	<0.000005 %		<lod< td=""></lod<>
33	~	selenium { selenium compounds v cadmium sulphoselenide and thos in this Annex } 034-002-00-8			1.7	mg/kg	2.554	3.618 mg/kg	g 0.000362 %	~	
	-	toluene		+						\vdash	
34		601-021-00-3 203-625-9	108-88-3	-	<0.001	mg/kg		<0.001 mg/kg	<0.000001 %		<lod< td=""></lod<>
35	9	TPH (C6 to C40) petroleum group		_	<10	mg/kg		<10 mg/kg	g <0.001 %	Π	<lod< td=""></lod<>
36	4	vanadium { divanadium pentaoxide		}	68	ma/ka	1.785	101.16 mg/kg	0.0101 %	~	
		023-001-00-8 215-239-8	1314-62-1	1_					,	ľ	
37		xylene 601-022-00-9 202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001	mg/kg		<0.001 mg/kg	g <0.000001 %		<lod< td=""></lod<>
38	4	[215-535-7 [4] zinc { zinc sulphate } 030-006-00-9 [231-793-3 [1]	7446-19-7 [1]		79	mg/kg	2.469	162.562 mg/kg	0.0163 %	~	
		231-793-3 [1]	7733-02-0 [2]								
			·					Tota	: 0.136 %		

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
Θ	Determinand defined or amended by HazWasteOnline (see Appendix A)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Page 46 of 68



Classification of sample: BH03



Sample details

Sample Name:	LoW Code:	
BH03	Chapter:	17: Construction and Demolition Wastes (including excavated soi
Sample Depth:		from contaminated sites)
0.5 m	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
Moisture content:		03)
8.7%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 8.7% Dry Weight Moisture Correction applied (MC)

#		Determinand CLP index number EC Number CAS Number		CLP Note	User entere	d data	Conv. Factor	Compound	conc.	Classification value	MC Applied	Conc. Not Used	
1	0	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %	Σ	<lod< th=""></lod<>
			201-469-6	83-32-9	<u> </u>							-	
2	8	acenaphthylene	205-917-1	208-96-8	-	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		anthracene	200 011 1	200 00 0									
3	ľ		204-371-1	120-12-7	-	0.18	mg/kg		0.166	mg/kg	0.0000166 %	\checkmark	
<u> </u>	2	arsenic { arsenic tri											
4			215-481-4	1327-53-3	-	19	mg/kg	1.32	23.078	mg/kg	0.00231 %	\checkmark	
5		benzene	1			<0.001	mg/kg		<0.001	malka	<0.0000001 %		<lod< th=""></lod<>
5		601-020-00-8	200-753-7	71-43-2	1	<0.001	тту/ку		<0.001	тту/ку	<0.0000001 %		<lod< td=""></lod<>
6		benzo[a]anthracene				0.95	mg/kg		0.874	mg/kg	0.0000874 %	\checkmark	
			200-280-6	56-55-3						5.5		Ľ	
7		benzo[a]pyrene; be				1.1	mg/kg		1.012	mg/kg	0.000101 %	\checkmark	
				50-32-8								-	
8		benzo[b]fluoranther				1.4	mg/kg		1.288	mg/kg	0.000129 %	\checkmark	
			205-911-9	205-99-2	-							_	
9	۲	benzo[ghi]perylene		404.04.0	_	0.9	mg/kg		0.828	mg/kg	0.0000828 %	\checkmark	
-			205-883-8	191-24-2								-	
10		benzo[k]fluoranther		007.00.0	_	0.6	mg/kg		0.552	mg/kg	0.0000552 %	\checkmark	
-	-		I	207-08-9	-							-	
	4	boron {	bromide/trichloride/	trifluoride									
11		(combined) }		10294-33-4, 10294-34-5, 7637-07-2	_	2.2	mg/kg	13.43	27.181	mg/kg	0.00272 %	~	
12	æ	cadmium {	<mark>n sulfide</mark> }		1	<0.2	ma/ka	1.285	<0.257	ma/ka	<0.00002 %		<lod< td=""></lod<>
12		048-010-00-4	215-147-8	1306-23-6	1'	<0.2	my/ky	1.200	<0.237	пуку	<0.00002 //		
13	4	chromium { 📍 chro		1000 00 0		29	mg/kg	1.462	38.993	mg/kg	0.0039 %	\checkmark	
-	_		215-160-9	1308-38-9	+							-	
14		chrysene	205 022 4	040.04.0		1.3	mg/kg		1.196	mg/kg	0.00012 %	\checkmark	
		601-048-00-0 205-923-4 218-01-9											

#		Determinand		User entered data		Conv.			Classification value		Conc. Not Used		
"		CLP index number	EC Number	CAS Number	CLP N		uutu	Factor	Compound		value	MC Applied	Used
15		confirm TPH has NC	OT arisen from dies	el or petrol								2	
					1								
16	4	copper { dicopper ox 029-002-00-X 2		<mark>e</mark> } 1317-39-1		35	mg/kg	1.126	36.252	mg/kg	0.00363 %	\checkmark	
	æ												
17		cyanides { salts o exception of complet ferricyanides and me specified elsewhere 006-007-00-5	x cyanides such as ercuric oxycyanide	ferrocyanides,		1	mg/kg	1.884	1.733	mg/kg	0.000173 %	~	
18		dibenz[a,h]anthrace			T	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
	_		00-181-8	53-70-3								$\left \right $	
19	•	ethylbenzene 601-023-00-4 2	02 840 4	100-41-4		<0.001	mg/kg		<0.001	mg/kg	<0.000001 %		<lod< td=""></lod<>
	-	fluoranthene	02-849-4	100-41-4	+								
20	•		05-912-4	206-44-0		2.2	mg/kg		2.024	mg/kg	0.000202 %	\checkmark	
24		fluorene				0.05			0.05		0.000005.0/		1.00
21			01-695-5	86-73-7		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
22	•	indeno[123-cd]pyren		193-39-5		0.59	mg/kg		0.543	mg/kg	0.0000543 %	\checkmark	
	æ												
23		lead {			1	270	mg/kg		248.39	mg/kg	0.0248 %	~	
24	-	manganese { manga 025-003-00-4 2		7785-87-7		280	mg/kg	2.749	708.002	mg/kg	0.0708 %	\checkmark	
25	-	mercury { mercury d	lichloride }	7487-94-7		2.4	mg/kg	1.353	2.988	mg/kg	0.000299 %	\checkmark	
	-	molybdenum { molyb		1401-94-1									
26	-	042-001-00-9 2	. , ,	1313-27-5		0.3	mg/kg	1.5	0.414	mg/kg	0.0000414 %	√	
27		naphthalene 601-052-00-2 2	02-049-5	91-20-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
28			35-008-5 [1]	12054-48-7 [1] 11113-74-9 [2]		17	mg/kg	1.579	24.702	mg/kg	0.00247 %	\checkmark	
29	•	pН		PH		9.8	рН		9.8	рН	9.8 pH		
30	9	phenanthrene	01-581-5	85-01-8		0.7	mg/kg		0.644	mg/kg	0.0000644 %	\checkmark	
31		phenol		108-95-2	Ţ	<1.3	mg/kg		<1.3	mg/kg	<0.00013 %		<lod< td=""></lod<>
		pyrene	00 002 1	100 30 2	+								
32	_		04-927-3	129-00-0		1.9	mg/kg		1.748	mg/kg	0.000175 %	\checkmark	
33	~	selenium { selenium cadmium sulphosele in this Annex) 034-002-00-8				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<lod< td=""></lod<>
34		toluene			T	<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< td=""></lod<>
-	_			108-88-3	-		59			59		$\left \right $	
35	8	TPH (C6 to C40) pe	0 1	TPH		190	mg/kg		174.793	mg/kg	0.0175 %	\checkmark	
36	4	vanadium { divanadi 023-001-00-8 2		nadium pentoxide } 1314-62-1		51	mg/kg	1.785	83.758	mg/kg	0.00838 %	\checkmark	
37		2	03-396-5 [2] 03-576-3 [3]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< td=""></lod<>
38	-		31-793-3 [1]	7446-19-7 [1] 7733-02-0 [2]		300	mg/kg	2.469	681.499	mg/kg	0.0681 %	~	
			· · · · · · · · · · · · · · · · · · ·	· · · · = · [=]						Total:	0.207 %	+	

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely to be realised given TPH composition, concentration and site setting.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0175%)



Classification of sample: BH04

Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:	LoW Code:	
BH04	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Sample Depth:		from contaminated sites)
0.5 m	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
Moisture content:		03)
14%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 14% Dry Weight Moisture Correction applied (MC)

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound conc		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		1		<0.05	mg/kg		<0.05 mg	j/kg	<0.000005 %		<lod< th=""></lod<>
		}	201-469-6	83-32-9	+							-	
2	۲	acenaphthylene				<0.05	mg/kg		<0.05 mg	j/kg	<0.000005 %		<lod< td=""></lod<>
			205-917-1	208-96-8	+					\rightarrow		-	
3	۲	anthracene		400.40 -		<0.05	mg/kg		<0.05 mg	j/kg	<0.000005 %		<lod< td=""></lod<>
			204-371-1	120-12-7	+							-	
4	4			4007 50 0		14	mg/kg	1.32	16.215 mg	j/kg	0.00162 %	\checkmark	
		1	215-481-4	1327-53-3						_		-	
5		benzene		74.40.0		<0.001	mg/kg		<0.001 mg	j/kg	<0.000001 %		<lod< td=""></lod<>
			200-753-7	71-43-2	-							-	
6		benzo[a]anthracene			4	0.36	mg/kg		0.316 mg	j/kg	0.0000316 %	\checkmark	
			200-280-6	56-55-3	-					_			
7		benzo[a]pyrene; be		50.00.0	4	0.46	mg/kg		0.404 mg	j/kg	0.0000404 %	\checkmark	
_			200-028-5	50-32-8	-					_			
8		benzo[b]fluoranther 601-034-00-4	205-911-9	205-99-2	-	0.49	mg/kg		0.43 mg	j/kg	0.000043 %	\checkmark	
-				202-33-2	-					_			
9	۲	benzo[ghi]perylene		404.04.0	_	0.36	mg/kg		0.316 mg	j/kg	0.0000316 %	\checkmark	
			205-883-8	191-24-2	+								
10		benzo[k]fluoranther		007.00.0	_	0.36	mg/kg		0.316 mg	j/kg	0.0000316 %	\checkmark	
-	-		205-916-6	207-08-9	-					_		-	
	4		bromide/trichloride	/trifluoride									
11		(combined) }		10294-33-4, 10294-34-5, 7637-07-2		0.4	mg/kg	13.43	4.712 mg	j/kg	0.000471 %	~	
		cadmium { cadmium sulfide }	+							1			
12	~	048-010-00-4 215-147-8 1306-23-6	1	<0.2	mg/kg	1.285	<0.257 mg	g/kg	<0.00002 %		<lod< td=""></lod<>		
13	4			1		15	mg/ka	1.462	19.231 mg	į/kg	0.00192 %	7	
			215-160-9	1308-38-9			0.0		`				
14	chrysene		0.62	mg/kg		0.544 m	į/kg	0.0000544 %	\checkmark				
Ľ		601-048-00-0	205-923-4	218-01-9		0.02	iiig/kg			, '''9	0.000001170	ľ	

Page 50 of 68

$ \begin{array}{c} 15 \\ 16 \\ 16 \\ 16 \\ 17 \\ 17 \\ 17 \\ 17 \\ 17 \\ 10$	yanides { salts o xception of comple erricyanides and mo pecified elsewhere 06-007-00-5 ibenz[a,h]anthrace 01-041-00-2 thylbenzene	kide; copper (I) oxic 115-270-7 If hydrogen cyanide x cyanides such as ercuric oxycyanide in this Annex } ne	de } 1317-39-1 with the ferrocyanides,	CLP Note	⊘ 59 <1	mg/kg	1.126	58.27	mg/kg	0.00583 %	MC	
15 - 16 - co 17 - cy 17 - cy 18 - dit 19 - ett 20 - flue	opper { dicopper ox 29-002-00-X 2 yanides { salts o xception of comple erricyanides and mo pecified elsewhere 06-007-00-5 i ibenz[a,h]anthrace 01-041-00-2 2 thylbenzene 01-023-00-4 2	kide; copper (I) oxic 115-270-7 If hydrogen cyanide x cyanides such as ercuric oxycyanide in this Annex } ne	de } 1317-39-1 with the ferrocyanides,	-	59	mg/kg	1.126	58.27	mg/kg	0.00583 %	1	
$16 \bigcirc \underbrace{029}{029}$ $17 \underbrace{48}_{\text{fer}} \text{cy}$ $\frac{48}_{\text{fer}} \text{cy}$ $\frac{17}{100} \underbrace{100}_{000} \text{c}$ $18 \underbrace{100}_{000} \text{c}$ $19 \underbrace{000}_{000} \text{c}$ $19 \underbrace{000}_{000} \text{c}$ $100 \underbrace{000}_{000}$	29-002-00-X 2 yanides { salts of salts of scenario scenari scenari scenari s	f hydrogen cyanide x cyanides such as ercuric oxycyanide in this Annex }	1317-39-1 with the ferrocyanides,	m.		mg/kg	1.126	58.27	mg/kg	0.00583 %	~	
$16 \bigcirc \underbrace{029}{029}$ $17 \underbrace{48}_{\text{fer}} \text{cy}$ $\frac{48}_{\text{fer}} \text{cy}$ $\frac{17}{100} \underbrace{100}_{000} \text{c}$ $18 \underbrace{100}_{000} \text{c}$ $19 \underbrace{000}_{000} \text{c}$ $19 \underbrace{000}_{000} \text{c}$ $100 \underbrace{000}_{000}$	29-002-00-X 2 yanides { salts of salts of scenario scenari scenari scenari s	f hydrogen cyanide x cyanides such as ercuric oxycyanide in this Annex }	1317-39-1 with the ferrocyanides,	-		mg/kg	1.126	58.27	mg/kg	0.00583 %	\checkmark	
$17 \begin{array}{c} 43 \\ ex \\ fer \\ sp \\ 000 \\ 000 \\ 18 \\ 60^{-1} \\ 19 \\ 19 \\ 20 \\ 20 \\ 0 \\ 0 \\ 10 \\ 10 \\ 10 \\ 10 \\$	yanides { salts o xception of comple erricyanides and mo pecified elsewhere 06-007-00-5 i ibenz[a,h]anthrace 01-041-00-2 2 thylbenzene 01-023-00-4 2	f hydrogen cyanide x cyanides such as ercuric oxycyanide in this Annex } ne	e with the s ferrocyanides,								1 1	
$18 \frac{\text{dit}}{60^{\circ}}$ $19 \frac{\text{ett}}{60^{\circ}}$ $20 \frac{\text{flu}}{60^{\circ}}$	06-007-00-5 ibenz[a,h]anthrace 01-041-00-2 thylbenzene 01-023-00-4 2	ne				mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<lod< td=""></lod<>
$18 \qquad \frac{\text{dit}}{60^{\circ}}$ $19 \qquad \stackrel{\text{ett}}{=} \frac{\text{ett}}{60^{\circ}}$ $20 \qquad \stackrel{\text{ett}}{=} \frac{1}{10^{\circ}}$	ibenz[a,h]anthrace 01-041-00-2 2 thylbenzene 01-023-00-4 2			-								
$\frac{18}{19} = \frac{60}{60}$ $\frac{19}{20} = \frac{10}{10}$	01-041-00-2 2 thylbenzene 01-023-00-4 2										\vdash	
$\begin{array}{c c} 19 \\ \hline 0 \\ \hline 0 \\ \hline 0 \\ \hline \end{array} \\ \hline \end{array} \\ \begin{array}{c} \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet $	thylbenzene		53-70-3	-	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
19 60 [°] 20 • flu	01-023-00-4 2		00.00									
20 • flu		202-849-4	100-41-4		<0.001	mg/kg		<0.001	mg/kg	<0.000001 %		<lod< td=""></lod<>
20				Ħ								
,₁ ₀ flu		205-912-4	206-44-0		0.82	mg/kg		0.719	mg/kg	0.0000719 %	\checkmark	
21 I - I - I	uorene				0.05			0.05		.0.00005.0/		.1.02
-' -	2	201-695-5	86-73-7		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
22 a inc	ndeno[123-cd]pyrer		A		0.27	mc/le		0.007	maller	0.0000237 %		
	2	205-893-2	193-39-5		0.27	mg/kg		0.237	mg/kg	0.0000237 %	\checkmark	
23 sp	ead { <pre>lead composed pecified elsewhere 32-001-00-6</pre>		eption of those	1	500	mg/kg		438.596	mg/kg	0.0439 %	~	
											$\left \right $	
24 🛰	nanganese {		7785-87-7		250	mg/kg	2.749	602.755	mg/kg	0.0603 %	\checkmark	
e me	nercury { mercury c		1103-01-1									
25			7487-94-7		1.3	mg/kg	1.353	1.543	mg/kg	0.000154 %	\checkmark	
e m	nolybdenum { molyl										\vdash	
26 🖜	· · ·	.,	1313-27-5	-	0.54	mg/kg	1.5	0.711	mg/kg	0.0000711 %	\checkmark	
27 na	aphthalene		91-20-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
	ickel { nickel dihydr		51-20-5								\vdash	
	28-008-00-X 2	235-008-5 [1]	12054-48-7 [1] 11113-74-9 [2]	-	16	mg/kg	1.579	22.168	mg/kg	0.00222 %	~	
29 <mark>• pH</mark>	H		PH		9	pН		9	pН	9pH		
ph	henanthrene											
30		201-581-5	85-01-8		0.22	mg/kg		0.193	mg/kg	0.0000193 %	\checkmark	
pr	henol									0.00010.01	\square	
31 .		203-632-7	108-95-2	$\left\{ \right. \right\}$	<1.3	mg/kg		<1.3	mg/kg	<0.00013 %		<lod< td=""></lod<>
32 [©] Py	yrene	204-927-3	129-00-0		0.74	mg/kg		0.649	mg/kg	0.0000649 %	\checkmark	
	۲ elenium { <mark>selenium</mark>			$\left \cdot \right $							\vdash	
33 ca	admium sulphosele this Annex } 34-002-00-8				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<lod< td=""></lod<>
tol	bluene		l	$\left \right $							\vdash	
34		203-625-9	108-88-3		<0.001	mg/kg		<0.001	mg/kg	<0.000001 %		<lod< td=""></lod<>
Т	PH (C6 to C40) pe		100 00 0	\vdash							\vdash	
35	(11 13 0 13) po	• •	ТРН		17	mg/kg		14.912	mg/kg	0.00149 %	\checkmark	
36 🥰 va	anadium { divanadi		nadium pentoxide }		~ .		4	F O O :-		0.00700.00		
36 🖜	•		1314-62-1	$\left \right $	34	mg/kg	1.785	53.242	mg/kg	0.00532 %	\checkmark	
xy	ylene											
37	2	203-396-5 [2] 203-576-3 [3]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3]		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< td=""></lod<>
\square			1330-20-7 [4]								\square	
~		231-793-3 [1]	7446-19-7 [1] 7733-02-0 [2]		120	mg/kg	2.469	259.926	mg/kg	0.026 %	\checkmark	
	4	.01-100-0 [2]	1 1 JJ-UZ-U [Z]						Total:	0.15 %		

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
Θ	Determinand defined or amended by HazWasteOnline (see Appendix A)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely to be realised given TPH composition, concentration and site setting.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00149%)



Classification of sample: BH04[1]



Sample details

Sample Name:	LoW Code:	
BH04[1]	Chapter:	17: Construction and Demolition Wastes (including excavated so
Sample Depth:		from contaminated sites)
1 m	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
Moisture content:		03)
17%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 17% Dry Weight Moisture Correction applied (MC)

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound co	nc.	Classification value	MC Applied	Conc. Not Used
1	0	acenaphthene				<0.05	mg/kg		<0.05 r	ng/kg	<0.000005 %	2	<lod< th=""></lod<>
			201-469-6	83-32-9	-								
2		acenaphthylene	205-917-1	208-96-8	-	<0.05	mg/kg		<0.05 r	ng/kg	<0.000005 %		<lod< th=""></lod<>
		anthracene				0.05			0.05		0.00005.0/		1.05
3			204-371-1	120-12-7	-	<0.05	mg/kg		<0.05 r	ng/кg	<0.000005 %		<lod< td=""></lod<>
4	8	arsenic { arsenic tri	<mark>ioxide</mark> }	·		15	mg/kg	1.32	16.927 r	ng/kg	0.00169 %	\checkmark	
4		033-003-00-0	215-481-4	1327-53-3		15	шу/ку	1.52	10.927	пу/ку	0.00109 78	~	
5		benzene 601-020-00-8	200-753-7	71-43-2		<0.001	mg/kg		<0.001 r	ng/kg	<0.0000001 %		<lod< th=""></lod<>
6		benzo[a]anthracene	e			<0.05	mg/kg		<0.05 r	na/ka	<0.000005 %		<lod< th=""></lod<>
				56-55-3									
7		benzo[a]pyrene; benzo[def]chrysene 601-032-00-3 200-028-5 50-32-8			<0.05	mg/kg		<0.05 r	ng/kg	<0.000005 %		<lod< td=""></lod<>	
				50-32-8	-							H	
8		benzo[b]fluoranthei 601-034-00-4	205-911-9	205-99-2	-	<0.05	mg/kg		<0.05 r	ng/kg	<0.000005 %		<lod< td=""></lod<>
		benzo[ghi]perylene	1	203-33-2								H	
9	۲	10 1. 7	205-883-8	191-24-2	-	<0.05	mg/kg		<0.05 r	ng/kg	<0.000005 %		<lod< td=""></lod<>
		benzo[k]fluoranther		101 21 2									
10				207-08-9	-	<0.05	mg/kg		<0.05 r	ng/kg	<0.000005 %		<lod< td=""></lod<>
	4	boron { [●] boron tri (combined) }	bromide/trichloride/	trifluoride				10.10	44.470		0.00445.0/		
11				10294-33-4, 10294-34-5, 7637-07-2		1	тg/кg	13.43	11.479 r	ng/kg	0.00115 %	~	
12	4		1	<0.2	ma/ka	1.285	<0.257 r	ng/kg	<0.00002 %		<lod< th=""></lod<>		
		048-010-00-4	215-147-8	1306-23-6	1'	×0.2	iiig/kg	1.205	<u></u>	iig/kg	<0.00002 /0		~LOD
13	4	chromium { 📍 chro				35	mg/kg	1.462	43.722 r	ng/kg	0.00437 %	\checkmark	
			215-160-9	1308-38-9									
14		chrysene	005 000 4	040.04.0		<0.05	mg/kg		<0.05 r	ng/kg	<0.000005 %		<lod< th=""></lod<>
		601-048-00-0	205-923-4	218-01-9									

#		Determinand CLP index number EC Number CAS Number			Note	User entered	d data	Conv. Factor	Compound conc.		Classification value	Apt	Conc. Not Used
		CLP index number	EC Number	CAS Number	CLP							MC	
15	8	confirm TPH has N	OT arisen from dies	sel or petrol									
16	4		oxide; copper (I) oxio 215-270-7	<mark>1e</mark> } 1317-39-1		32	mg/kg	1.126	30.794 m	g/kg	0.00308 %	\checkmark	
17	4	cyanides {	of hydrogen cyanide ex cyanides such as nercuric oxycyanide	e with the s ferrocyanides,		<1	mg/kg	1.884	<1.884 m	g/kg	<0.000188 %		<lod< td=""></lod<>
		006-007-00-5			1							\square	
18		dibenz[a,h]anthrac		53-70-3		<0.05	mg/kg		<0.05 mg	g/kg	<0.000005 %		<lod< td=""></lod<>
			1	1	-							\vdash	
10	4	dichloroethane { " 1,2-dichloroethane	1,1-dichloroethane (combined) }	and		0.000			0.000		0.000000.00		
19			203-458-1, 200-863-5	107-06-2, 75-34-3		<0.002	mg/kg		<0.002 m	g/ĸg	<0.000002 %		<lod< td=""></lod<>
20	8	ethylbenzene	1	1		<0.001	mg/kg		<0.001 m	g/kg	<0.0000001 %		<lod< td=""></lod<>
L			202-849-4	100-41-4									
21	۲	fluoranthene	205-912-4	206-44-0		<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< td=""></lod<>
		fluorene		200 110		0.05			0.05		0.000005.0/		1.00
22				86-73-7		<0.05	mg/kg		<0.05 mg	у/кд	<0.000005 %		<lod< td=""></lod<>
23	8	indeno[123-cd]pyre		193-39-5		<0.05	mg/kg		<0.05 mg	g/kg	<0.000005 %		<lod< td=""></lod<>
24	4	specified elsewhere	oounds with the exce e in this Annex }	eption of those	1	320	mg/kg		273.504 m	g/kg	0.0274 %	\checkmark	
		082-001-00-6											
25	4	manganese { mang 025-003-00-4		7785-87-7		310	mg/kg	2.749	728.252 mg	g/kg	0.0728 %	\checkmark	
	æ	mercury { mercury		1105-01-1	-							\vdash	
26	~			7487-94-7		<0.3	mg/kg	1.353	<0.406 m	g/kg	<0.0000406 %		<lod< td=""></lod<>
27	4	molybdenum { moly	ybdenum(VI) oxide	ł		<0.25	mg/kg	1.5	<0.375 m	g/kg	<0.0000375 %		<lod< td=""></lod<>
_			215-204-7	1313-27-5	1								
28		naphthalene 601-052-00-2	202-049-5	91-20-3		<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< td=""></lod<>
	æ	nickel { nickel dihyc		51200									
29		028-008-00-X	235-008-5 [1]	12054-48-7 [1] 11113-74-9 [2]		35	mg/kg	1.579	47.25 m	g/kg	0.00472 %	\checkmark	
30	۲	рН		PH		8.5	pН		8.5 pH	ł	8.5 pH		
31	8	phenanthrene		05.04.0		<0.05	mg/kg		<0.05 mg	g/kg	<0.000005 %		<lod< td=""></lod<>
-	\square	phenol	201-581-5	85-01-8	-							$\left \right $	
32		•	203-632-7	108-95-2		<1.3	mg/kg		<1.3 m	g/kg	<0.00013 %		<lod< td=""></lod<>
33	8	pyrene		129-00-0		<0.05	mg/kg		<0.05 mg	g/kg	<0.000005 %		<lod< td=""></lod<>
34	4	selenium { seleniur	n compounds with t lenide and those sp	he exception of		<1	mg/kg	2.554	<2.554 m	g/kg	<0.000255 %		<lod< td=""></lod<>
35		tetrachloroethylene		127-18-4	ŀ	<0.001	mg/kg		<0.001 mg	g/kg	<0.000001 %		<lod< td=""></lod<>
20			e (carbon tetrachlori	1	\vdash	.0.004	m c // -		-0.004	~/l	.0.000004.0/	\square	.1.00
36		602-008-00-5	200-262-8	56-23-5		<0.001	mg/kg		<0.001 m	у/кд	<0.0000001 %	Ц	<lod< td=""></lod<>
37		toluene 601-021-00-3	203-625-9	108-88-3		<0.001	mg/kg		<0.001 m	g/kg	<0.0000001 %		<lod< td=""></lod<>
38	۲	TPH (C6 to C40) p	• •	TPH		<10	mg/kg		<10 m	g/kg	<0.001 %		<lod< td=""></lod<>
39		trichloroethylene; tr 602-027-00-9		79-01-6		<0.001	mg/kg		<0.001 m	g/kg	<0.0000001 %		<lod< td=""></lod<>
40	\$		<mark>dium pentaoxide; va</mark> 215-239-8	nadium pentoxide } 1314-62-1		63	mg/kg	1.785	96.125 m	g/kg	0.00961 %	\checkmark	

Page 54 of 68

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#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	User entered data		Compound conc.		und conc. Classification value		Conc. Not Used
4		vinyl chloride 602-023-00-7	200-831-0	75-01-4		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< th=""></lod<>
42		xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< th=""></lod<>
4:	3		} 231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		86	mg/kg	2.469	181.504	mg/kg		~	
									Total:	0.145 %			

Key

User supplied data

Determinand values ignored for classification, see column 'Conc. Not Used' for reason

Determinand defined or amended by HazWasteOnline (see Appendix A) 0

4 Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound

concentration <LOD

Below limit of detection

CLP: Note 1 Only the metal concentration has been used for classification



Classification of sample: BH03[1]

🔊 Nen Herendeus Weste	
🥝 Non Hazardous Waste	
Classified as 17 05 04	
in the List of Waste	

Sample details

Sample Name:	LoW Code:	
BH03[1]	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Sample Depth:		from contaminated sites)
2.5 m	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
Moisture content:		03)
9.6%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 9.6% Dry Weight Moisture Correction applied (MC)

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound co	onc.	Classification value	MC Applied	Conc. Not Used
1	0	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< th=""></lod<>
		acenaphthylene	201-469-6	83-32-9	-								
2	8		205-917-1	208-96-8	-	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		anthracene	200 517 1	200 30 0	+								
3			204-371-1	120-12-7		0.24	mg/kg		0.219	mg/kg	0.0000219 %	\checkmark	
4	æ	arsenic { arsenic tri	ioxide }			7.0		1 22	0.206		0.00004.9/	,	
4			215-481-4	1327-53-3		7.8	mg/kg	1.32	9.396	mg/kg	0.00094 %	\checkmark	
5		benzene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< td=""></lod<>
			200-753-7	71-43-2									
6		benzo[a]anthracen		50.55.0		0.96	mg/kg		0.876	mg/kg	0.0000876 %	\checkmark	
			200-280-6	56-55-3									
7		benzo[a]pyrene; be 601-032-00-3	200-028-5	50-32-8	-	1	mg/kg		0.912	mg/kg	0.0000912 %	\checkmark	
		benzo[b]fluoranthe		00 02 0									
8		601-034-00-4	205-911-9	205-99-2		1	mg/kg		0.912	mg/kg	0.0000912 %	\checkmark	
9		benzo[ghi]perylene	•	3		0.6	mg/kg		0.547	mg/kg	0.0000547 %	\checkmark	
			205-883-8	191-24-2		0.0	iiig/kg		0.547	iiig/kg	0.0000347 /8	~	
10		benzo[k]fluoranther	ne			0.59	mg/kg		0.538	mg/kg	0.0000538 %	\checkmark	
		601-036-00-5	205-916-6	207-08-9								•	
11	4	boron { [●] boron tri (combined) }	bromide/trichloride	/trifluoride		0.9	mg/kg	13.43	11.028	mg/kg	0.0011 %	~	
				10294-34-5, 7637-07-2									
12	4	cadmium { cadmiur			1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		<lod< td=""></lod<>
		048-010-00-4	215-147-8	1306-23-6									
13	4					20	mg/kg	1.462	26.671	mg/kg	0.00267 %	\checkmark	
			215-160-9	1308-38-9	_								
14		chrysene	005 000 4	640.04.0		0.79	mg/kg		0.721	mg/kg	0.0000721 %	\checkmark	
		601-048-00-0	205-923-4	218-01-9									

Page 56 of 68

#			Determinand		CLP Note	User entered	d data	Conv. Factor	Compound co	inc.	Classification value	Api	Conc. Not Used
		CLP index number	EC Number	CAS Number	CLF							MC	
15	8	confirm TPH has N	IOT arisen from die	sel or petrol									
\rightarrow	-	<i>.</i>			-								
16 🗳	4		oxide; copper (I) oxi		_	17	mg/kg	1.126	17.464 ।	mg/kg	0.00175 %	\checkmark	
\rightarrow	-		215-270-7	1317-39-1	_								
17	4	exception of compl ferricyanides and n specified elsewhere	of hydrogen cyanid ex cyanides such a nercuric oxycyanide e in this Annex }	s ferrocyanides,	_	<1	mg/kg	1.884	<1.884 1	mg/kg	<0.000188 %		<lod< td=""></lod<>
		006-007-00-5			_							\vdash	
18		dibenz[a,h]anthrace		E2 70 2	_	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
	-	601-041-00-2 ethylbenzene	200-181-8	53-70-3	+							\vdash	
19		-	202-849-4	100-41-4	-	<0.001	mg/kg		<0.001 1	mg/kg	<0.0000001 %		<lod< td=""></lod<>
	-	fluoranthene	202-049-4	100-41-4	+							⊢	
20	•		205-912-4	206-44-0	-	1.9	mg/kg		1.734 ।	mg/kg	0.000173 %	\checkmark	
-	0	fluorene	LUU U 12-7		+							\vdash	
21			201-695-5	86-73-7		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
	0	indeno[123-cd]pyre		00101									
22		1 17	205-893-2	193-39-5		0.46	mg/kg		0.42 1	mg/kg	0.000042 %	\checkmark	
-	2				-						·		
23	•	<pre>lead { lead comp specified elsewhere</pre>	ounds with the exc e in this Annex }	eption of those	1	110	mg/kg		100.365	mg/kg	0.01 %	\checkmark	
		082-001-00-6			-	-	5.5			5. 5		 	
_	-	manganese { mang	nanese sulphate }										
24	•	• •	232-089-9	7785-87-7	-	240	mg/kg	2.749	601.875 i	mg/kg	0.0602 %	\checkmark	
	_	mercury { mercury		1100 01 1									
25	-		231-299-8	7487-94-7	-	1.2	mg/kg	1.353	1.482 1	mg/kg	0.000148 %	\checkmark	
	2		ybdenum(VI) oxide										
26			215-204-7	1313-27-5	-	0.33	mg/kg	1.5	0.452 1	mg/kg	0.0000452 %	\checkmark	
27		naphthalene	2017	1010210		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %	H	<lod< td=""></lod<>
21	Ì	601-052-00-2	202-049-5	91-20-3	_	<0.00	ing/kg		<0.00	ing/itg	<0.000000 /0		LOD
28	•	nickel { nickel dihyc 028-008-00-X	<mark>froxide</mark> } 235-008-5 [1]	12054-48-7 [1]	_	14	mg/kg	1.579	20.176	mg/kg	0.00202 %	\checkmark	
			234-348-1 [2]	11113-74-9 [2]									
29	•	pН		PH		10.6	pН		10.6	pН	10.6 pH		
\rightarrow		nhananthrana		РП	-							$\left \right $	
30	•	phenanthrene	b01 591 5	05 01 0	_	1.1	mg/kg		1.004	mg/kg	0.0001 %	\checkmark	
\rightarrow			201-581-5	85-01-8								\vdash	
31		phenol 604-001-00-2	203-632-7	108-95-2	-	<1.3	mg/kg		<1.3 I	mg/kg	<0.00013 %		<lod< td=""></lod<>
+	_	pyrene	200-002-1	100-30-2	+							\vdash	
32	•		204-927-3	129-00-0		1.7	mg/kg		1.551 (mg/kg	0.000155 %	\checkmark	
33	4	cadmium sulphose in this Annex }	n compounds with t lenide and those sp			1.8	mg/kg	2.554	4.194	mg/kg	0.000419 %	~	
-+		034-002-00-8										$\left \right $	
34	ļ	toluene	000 00	1.00.00		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<lod< td=""></lod<>
+			203-625-9	108-88-3	-							\vdash	
35	8	TPH (C6 to C40) p	etroleum group	ТРН	_	930	mg/kg		848.54 1	mg/kg	0.0849 %	\checkmark	
	2	vanadium { divanad	dium pentaoxide: va	nadium pentoxide }		<u>.</u>		4 707	FO 100		0.00505.01		
36	•	•	215-239-8	1314-62-1	-	31	mg/kg	1.785	50.493 ו	mg/kg	0.00505 %	\checkmark	
	Ì	xylene											
	Ì		202-422-2 [1]	95-47-6 [1]	1						0.000000		
37			203-396-5 [2]	106-42-3 [2]		<0.001	mg/kg		<0.001 1	mg/kg	<0.0000001 %		<lod< td=""></lod<>
			203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]									
+	e	zinc { zinc sulphate		1000-20-1 [4]	-							\vdash	
38	4		231-793-3 [1]	7446-19-7 [1]	-	270	mg/ka	2.469	608.312	mg/kg	0.0608 %	\checkmark	
- 1			231-793-3 [1]	7733-02-0 [2]			59			59		·	

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
Θ	Determinand defined or amended by HazWasteOnline (see Appendix A)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely to be realised given TPH composition, concentration and site setting.

Hazard Statements hit:

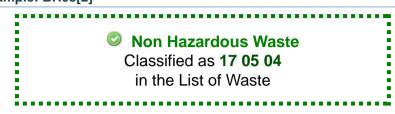
Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0849%)



Classification of sample: BH03[2]



Sample details

Sample Name:	LoW Code:	
BH03[2]	Chapter:	17: Construction and Demolition Wastes (including excavated soi
Sample Depth:		from contaminated sites)
4.7 m	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
Moisture content:		03)
22%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 22% Dry Weight Moisture Correction applied (MC)

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound con	c.	Classification value	MC Applied	Conc. Not Used
1	8	acenaphthene				<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %	2	<lod< td=""></lod<>
2	8	acenaphthylene	201-469-6	83-32-9		<0.05	malka		<0.05 m	a/ka	<0.000005 %		<lod< td=""></lod<>
2		2	205-917-1	208-96-8	-	<0.05	mg/kg		<0.05 11	g/kg	<0.000005 %		<lod< td=""></lod<>
3		anthracene				<0.05	mg/kg		<0.05 m	a/ka	<0.000005 %		<lod< td=""></lod<>
		2	204-371-1	120-12-7		<0.05	iiig/kg		<0.05 m	y/ry	<0.0000003 78		
4	4	arsenic { arsenic tric	oxide }			11	mg/kg	1 32	11.905 m	g/kg	0.00119 %	\checkmark	
		033-003-00-0 2	215-481-4	1327-53-3				1.02		'g/ Ng		~	
5		benzo[a]anthracene	200-280-6	56-55-3		<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< td=""></lod<>
6		benzo[a]pyrene; ber 601-032-00-3	nzo[def]chrysene 200-028-5	50-32-8		<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< td=""></lod<>
				00-32-8	_								
7		benzo[b]fluoranthen	205-911-9	205-99-2		<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< td=""></lod<>
8		benzo[ghi]perylene		F • • • •		-0.05			.0.05 m	~//.a	-0.000005.8/	F	<lod< td=""></lod<>
°		2	205-883-8	191-24-2	-	<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< td=""></lod<>
9		benzo[k]fluoranthen	e			<0.05	mg/kg		<0.05 m	a/ka	<0.000005 %		<lod< td=""></lod<>
5		601-036-00-5 2	205-916-6	207-08-9	_	<0.05	iiig/kg		<0.05 m	y/ry	<0.000003 78		LOD
10		boron { ^e boron trib (combined) }		trifluoride 10294-33-4, 10294-34-5, 7637-07-2	_	1.5	mg/kg	13.43	16.512 m	ıg/kg	0.00165 %	~	
11	4	cadmium { cadmium	n sulfide } 215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257 m	g/kg	<0.00002 %		<lod< td=""></lod<>
12		chromium {	<mark>mium(III) oxide</mark> }			44	mg/kg	1.462	52.712 m	g/kg	0.00527 %	~	
			215-160-9	1308-38-9	-								
13		chrysene				<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< td=""></lod<>
			205-923-4	218-01-9								\square	
14	0	confirm TPH has NO	OT arisen from die	sel or petrol									

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HazWasteOnline[™] Report created by Hazel Comyn on 19 Jul 2018

#		Determinand		CLP Note	User entered	data	Conv. Factor	Compound co	onc.	Classification value	Apr	Conc. Not Used
		CLP index number EC Number	CAS Number	CLP							ВC	
15	-	copper { dicopper oxide; copper (I) oxid			29	mg/kg	1.126	26.763	mg/kg	0.00268 %	\checkmark	
\vdash	-	029-002-00-X 215-270-7	1317-39-1	-								
16	~	cyanides { salts of hydrogen cyanide exception of complex cyanides such as ferricyanides and mercuric oxycyanide specified elsewhere in this Annex } 006-007-00-5	ferrocyanides,		<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<lod< td=""></lod<>
17		dibenz[a,h]anthracene			<0.05	mg/kg		< 0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		601-041-00-2 200-181-8	53-70-3	1	<0.05	шу/ку		<0.05	шу/ку	<0.000003 /8		LOD
18		fluoranthene			<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		205-912-4	206-44-0									
19	Θ	fluorene			<0.05	mg/kg		<0.05	ma/ka	<0.000005 %		<lod< td=""></lod<>
		201-695-5	86-73-7									
20	۲	indeno[123-cd]pyrene			<0.05	mg/kg		<0.05	ma/ka	<0.000005 %		<lod< td=""></lod<>
		205-893-2	193-39-5									
21		lead { • lead compounds with the exce specified elsewhere in this Annex } 082-001-00-6	eption of those	1	14	mg/kg		11.475	mg/kg	0.00115 %	~	
00	-	manganese { manganese sulphate }					0.740	000 504		0.0004.0/	,	
22		025-003-00-4 232-089-9	7785-87-7		370	тід/кд	2.749	833.581	mg/kg	0.0834 %	\checkmark	
23		mercury { mercury dichloride }			<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<lod< td=""></lod<>
		080-010-00-X 231-299-8	7487-94-7									
24		molybdenum { molybdenum(VI) oxide }			<0.25	mg/kg	1.5	<0.375	mg/kg	<0.0000375 %		<lod< td=""></lod<>
		042-001-00-9 215-204-7	1313-27-5									
25		naphthalene			<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
	_		91-20-3									
26			12054-48-7 [1] 11113-74-9 [2]		39	mg/kg	1.579	50.492	mg/kg	0.00505 %	~	
27	•	рН	PH		8	pН		8	pН	8pH		
		phenanthrene		-							\vdash	
28	9		85-01-8	1	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
29		phenol		1	<1.3	ma/ka		-1.2	malle	<0.00012.9/		<lod< td=""></lod<>
29		604-001-00-2 203-632-7	108-95-2	1	<1.3	mg/kg		<1.3	пу/ку	<0.00013 %		<lod< td=""></lod<>
30	0	pyrene			<0.05	mg/kg		<0.05	mg/ka	<0.000005 %		<lod< td=""></lod<>
			129-00-0			J9			53			
31	-	selenium { selenium compounds with th cadmium sulphoselenide and those sp in this Annex }			<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<lod< td=""></lod<>
\vdash	_	034-002-00-8		-								
32	۲	TPH (C6 to C40) petroleum group	TPH	-	33	mg/kg		27.049	mg/kg	0.0027 %	\checkmark	
33	4	vanadium { divanadium pentaoxide; va		\square	77	ma/ka	1.785	112.672	mg/kg	0.0113 %	~	
	-	023-001-00-8 215-239-8	1314-62-1								*	
	4	zinc { zinc sulphate }										
34	-		7446-19-7 [1] 7733-02-0 [2]	1	78	mg/kg	2.469	157.873	mg/kg	0.0158 %	\checkmark	
⊢			···· · · · - 1						Total:	0.131 %	H	

Key

0

User supplied data

Determinand values ignored for classification, see column 'Conc. Not Used' for reason

Determinand defined or amended by HazWasteOnline (see Appendix A)

4

Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration

<LOD Below limit of detection

CLP: Note 1 $\,$ Only the metal concentration has been used for classification



Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely to be realised given TPH composition, concentration and site setting.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0027%)



Classification of sample: BH01

Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:	LoW Code:	
BH01	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Sample Depth:		from contaminated sites)
0.5 m	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
Moisture content:		03)
7.5%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 7.5% Dry Weight Moisture Correction applied (MC)

#		CLP index number	Determinand EC Number	CAS Number	CLP Note	User entere	d data	Conv. Factor	Compound cor	nc.	Classification value	MC Applied	Conc. Not Used
1	8	acenaphthene				<0.05	mg/kg		<0.05 n	ng/kg	<0.000005 %		<lod< th=""></lod<>
2	8	acenaphthylene	201-469-6	83-32-9	+	<0.05	mg/kg		<0.05 n	na/ka	<0.000005 %		<lod< td=""></lod<>
_			205-917-1	208-96-8			ing/itg			ig/itg			
3	Θ	anthracene				0.1	mg/kg		0.093 n	ng/kg	0.0000093 %	1	
Ľ			204-371-1	120-12-7						.9/9		ľ	
4	4	arsenic { arsenic tr	<mark>ioxide</mark> }			12	mg/kg	1.32	14.739 n	na/ka	0.00147 %	\checkmark	
		033-003-00-0	215-481-4	1327-53-3						.9/9		ľ	
5		benzo[a]anthracen 601-033-00-9	e 200-280-6	56-55-3		0.37	mg/kg		0.344 n	ng/kg	0.0000344 %	\checkmark	
6		benzo[a]pyrene; be				0.43	mg/kg		0.4 n	ng/kg	0.00004 %	1	
Ŭ		601-032-00-3	200-028-5	50-32-8		0.45	iiig/kg		0.4 11	ig/kg	0.00004 /8	~	
7		benzo[b]fluoranthe	ne			0.52	mg/kg		0.484 m	ng/kg	0.0000484 %	1	
		601-034-00-4	205-911-9	205-99-2	1					.9/9		ľ	
8	0	benzo[ghi]perylene				0.25	mg/kg		0.233 n	ng/kg	0.0000233 %	1	
			205-883-8	191-24-2						5 5		ľ	
9		benzo[k]fluoranthe				0.23	mg/kg		0.214 n	ng/kg	0.0000214 %	\checkmark	
		601-036-00-5	205-916-6	207-08-9						0 0		-	
	4	boron { 🏾 boron tri	bromide/trichloride	/trifluoride									
10		(combined) }				1.5	ma/ka	13.43	18.74 n	ng/kg	0.00187 %		
				10294-33-4, 10294-34-5, 7637-07-2		1.5	iiig/kg	13.45	10.74	iy/ky	0.00107 /0		
11		cadmium {			1	<0.2	mg/kg	1.285	<0.257 n	ng/kg	<0.00002 %		<lod< td=""></lod<>
		048-010-00-4	215-147-8	1306-23-6	_								
12	4					23	mg/kg	1.462	31.27 n	ng/kg	0.00313 %	\checkmark	
			215-160-9	1308-38-9	_							<u> </u>	
13		chrysene				0.32	mg/kg		0.298 n	ng/kg	0.0000298 %	\checkmark	
			205-923-4	218-01-9	_								
14	۲	confirm TPH has N	IOT arisen from die	esel or petrol		\checkmark							

Page 62 of 68

#		Determinand		CLP Note	User entered d	lata	Conv. Factor	Compound c	onc.	Classification value	Applied	Conc. Not Used
			CAS Number	3							MC	
15	4	copper { dicopper oxide; copper (I) oxide }			47 n	ng/kg	1.126	49.225	mg/kg	0.00492 %	\checkmark	
16	4	029-002-00-X 215-270-7 131 cyanides { salts of hydrogen cyanide wit exception of complex cyanides such as fer ferricyanides and mercuric oxycyanide and specified elsewhere in this Annex }	rocyanides,		<1 n	ng/kg	1.884	<1.884	mg/kg	<0.000188 %		<lod< td=""></lod<>
		006-007-00-5										
17		dibenz[a,h]anthracene			<0.05 n	ng/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		601-041-00-2 200-181-8 53-7	70-3									
18	۰	fluoranthene			0.68 n	ng/kg		0.633	mg/kg	0.0000633 %	\checkmark	
		205-912-4 206	-44-0								Ŷ	
19		fluorene			<0.05 n	ng/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
13		201-695-5 86-7	73-7		<0.05	пу/ку		<0.00	mg/kg	<0.000003 /8		LOD
20		indeno[123-cd]pyrene			0.19 n	na/ka		0.177	ma/ka	0.0000177 %		
20		205-893-2 193	-39-5		0.19	ng/kg		0.177	mg/kg	0.0000177 %	\checkmark	
21	4	lead { • lead compounds with the exception specified elsewhere in this Annex }		1	150 n	ng/kg		139.535	mg/kg	0.014 %	~	
	2	manganese { manganese sulphate }										
22	-		5-87-7		230 n	ng/kg	2.749	588.065	mg/kg	0.0588 %	\checkmark	
23	æ	mercury { mercury dichloride }			<0.3 n	na/ka	1.353	<0.406	mg/kg	<0.0000406 %		<lod< td=""></lod<>
23	ľ	080-010-00-X 231-299-8 748	7-94-7		<0.5 II	пу/ку	1.555	<0.400	mg/kg	<0.0000400 /8		LOD
24	4	molybdenum {		Ì	0.91 n	ng/kg	1.5	1.27	mg/kg	0.000127 %	\checkmark	
24		042-001-00-9 215-204-7 131	3-27-5		0.31	iig/kg	1.5	1.27	iiig/kg	0.000127 /0	~	
25		naphthalene			<0.05 n	ng/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
25		601-052-00-2 202-049-5 91-2	20-3		<0.05 II	iig/kg		<0.00	iiig/kg	<0.000003 /8		LOD
	æ	nickel { <mark>nickel dihydroxide</mark> }										
26		234-348-1 [2] 111	54-48-7 [1] 13-74-9 [2]		19 n	ng/kg	1.579	27.917	mg/kg	0.00279 %	~	
27	۲	PH			10.6 p	ын		10.6	pН	10.6 pH		
		phenanthrene									\square	
28		•)1-8		0.28 n	ng/kg		0.26	mg/kg	0.000026 %	\checkmark	
29		phenol 604-001-00-2 203-632-7 108	-95-2		<1.3 r	ng/kg		<1.3	mg/kg	<0.00013 %		<lod< td=""></lod<>
30	8	pyrene 204-927-3 129	-00-0		0.56 n	ng/kg		0.521	mg/kg	0.0000521 %	\checkmark	
31	4	selenium { selenium compounds with the e cadmium sulphoselenide and those specifi in this Annex } 034-002-00-8			<1 n	ng/kg	2.554	<2.554	mg/kg	<0.000255 %		<lod< td=""></lod<>
32	۵	TPH (C6 to C40) petroleum group	4		870 n	ng/kg		809.302	mg/kg	0.0809 %	√	
33	4	vanadium { divanadium pentaoxide; vanadi	um pentoxide }		27 n	ng/kg	1.785	44.837	mg/kg	0.00448 %	~	
			4-62-1	_							\vdash	
34	4		6-19-7 [1] 3-02-0 [2]		62 n	ng/kg	2.469	142.415	mg/kg	0.0142 %	~	
		,	1						Total:	0.188 %	1	

Key

User supplied data	
ooor ouppriou uutu	

Determinand values ignored for classification, see column 'Conc. Not Used' for reason

Determinand defined or amended by HazWasteOnline (see Appendix A)

Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound

concentration

<LOD Below limit of detection

 $\label{eq:CLP:Note 1} \ \ \ Only \ the \ metal \ concentration \ has \ been \ used \ for \ classification$



Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely to be realised given TPH composition, concentration and site setting.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0809%)



Appendix A: Classifier defined and non CLP determinands

acenaphthene (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database Data source date: 17 Jul 2015 Hazard Statements: Aquatic Chronic 2 H411, Aquatic Chronic 1 H410, Aquatic Acute 1 H400, Skin Irrit. 2 H315, STOT SE 3 H335, Eye Irrit. 2 H319

acenaphthylene (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database Data source date: 17 Jul 2015 Hazard Statements: Skin Irrit. 2 H315, STOT SE 3 H335, Eye Irrit. 2 H319, Acute Tox. 1 H310, Acute Tox. 1 H330, Acute Tox. 4 H302

• anthracene (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database

Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database Data source date: 17 Jul 2015 Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Sens. 1 H317 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319

• benzo[ghi]perylene (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015 Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database Data source date: 23 Jul 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400

• boron tribromide/trichloride/trifluoride (combined) (CAS Number: 10294-33-4, 10294-34-5, 7637-07-2)

Conversion factor: 13.43 Description/Comments: Combines the hazard statements and the average of the conversion factors for boron tribromide, boron trichloride and boron trifluoride Data source: N/A Data source date: 06 Aug 2015 Hazard Statements: Skin Corr. 1B H314, Skin Corr. 1A H314, Acute Tox. 2 H300, Acute Tox. 2 H330, EUH014

• chromium(III) oxide (EC Number: 215-160-9, CAS Number: 1308-38-9)

Conversion factor: 1.462 Description/Comments: Data from C&L Inventory Database Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database Data source date: 17 Jul 2015 Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Repr. 1B H360FD , Skin Sens. 1 H317 , Resp. Sens. 1 H334 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 4 H302 , Acute Tox. 4 H332

confirm TPH has NOT arisen from diesel or petrol

Description/Comments: Chapter 3, section 4b requires a positive confirmation for benzo[a]pyrene to be used as a marker in evaluating Carc. 1B; H350 (HP 7) and Muta. 1B; H340 (HP 11) Data source: WM3 1st Edition 2015 Data source date: 25 May 2015 Hazard Statements: None.

• salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex

CLP index number: 006-007-00-5 Description/Comments: Conversion factor based on a worst case compound: sodium cyanide Data source: Commission Regulation (EC) No 790/2009 - 1st Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP1) Additional Hazard Statement(s): EUH032 >= 0.2 % Reason for additional Hazards Statement(s)/Risk Phrase(s): 14 Dec 2015 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

^e fluoranthene (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database Data source date: 21 Aug 2015 Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Acute Tox. 4 H302



[•] fluorene (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database Data source date: 06 Aug 2015 Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400

• indeno[123-cd]pyrene (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database Data source date: 06 Aug 2015 Hazard Statements: Carc. 2 H351

[•] lead compounds with the exception of those specified elsewhere in this Annex

CLP index number: 082-001-00-6 Description/Comments: Least-worst case: Lead REACH Consortium considers some lead compounds Carcinogenic category 2B Data source: Regulation 1272/2008/EC - Classification, labelling and packaging of substances and mixtures. (CLP) Additional Hazard Statement(s): Carc. 2 H351 Reason for additional Hazards Statement(s)/Risk Phrase(s): 03 Jun 2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html. Review date 29/09/2015

PH (CAS Number: PH)
 Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015 Data source date: 25 May 2015 Hazard Statements: None.

• phenanthrene (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database Data source date: 06 Aug 2015 Hazard Statements: Skin Irrit. 2 H315, Aquatic Chronic 1 H410, Aquatic Acute 1 H400, Skin Sens. 1 H317, Carc. 2 H351, STOT SE 3 H335, Eye Irrit. 2 H319, Acute Tox. 4 H302

• pyrene (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014 Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database Data source date: 21 Aug 2015 Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Skin Irrit. 2 H315

• TPH (C6 to C40) petroleum group (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013 Data source: WM3 1st Edition 2015 Data source date: 25 May 2015 Hazard Statements: Aquatic Chronic 2 H411, Repr. 2 H361d, Carc. 1B H350, Muta. 1B H340, STOT RE 2 H373, Asp. Tox. 1 H304, Flam. Liq. 3 H226

• ethylbenzene (EC Number: 202-849-4, CAS Number: 100-41-4)

CLP index number: 601-023-00-4 Description/Comments: Data source: Commission Regulation (EU) No 605/2014 – 6th Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP6) Additional Hazard Statement(s): Carc. 2 H351 Reason for additional Hazards Statement(s//Risk Phrase(s): 03 Jun 2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2B (77) 2000

• 1,1-dichloroethane and 1,2-dichloroethane (combined) (EC Number: 203-458-1, 200-863-5, CAS Number: 107-06-2, 75-34-3)

Description/Comments: Combines the hazard statements and risk phrases for 1,1-dichloroethane and 1,2-dichloroethane Data source: N/a

Data source date: 14 Oct 2016

Hazard Statements: Aquatic Chronic 3 H412 , Carc. 1B H350 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Skin Irrit. 2 H315 , Acute Tox. 4 H302 , Flam. Liq. 2 H225

Appendix B: Rationale for selection of metal species

Appendix B. Rationale for Selection	n or metal species
arsenic {arsenic trioxide}	
Worst case species based on risk phrases	
boron {boron tribromide/trichloride/trifluori	de (combined)}
Worst case species based on risk phrases	
cadmium {cadmium sulfide}	
Worst case species based on risk phrases	
chromium {chromium(III) oxide}	
Worst case species based on risk phrases	
copper {dicopper oxide; copper (I) oxide}	
Most likely common species	
cyanides {salts of hydrogen cyanide with th mercuric oxycyanide and those specified el	ne exception of complex cyanides such as ferrocyanides, ferricyanides and Isewhere in this Annex}
Worst case species	
lead {lead compounds with the exception o	f those specified elsewhere in this Annex}
Worst case species based on risk phrases	
manganese {manganese sulphate}	
Worst case species based on risk phrases	
mercury {mercury dichloride}	
Worst case species based on risk phrases	
molybdenum {molybdenum(VI) oxide}	
Worst case species based on risk phrases	
nickel {nickel dihydroxide}	
Worst case species based on risk phrases	
selenium {selenium compounds with the ex	cception of cadmium sulphoselenide and those specified elsewhere in this Annex}
Worst case species based on risk phrases	
vanadium {divanadium pentaoxide; vanadiu	um pentoxide}
vanadium {divanadium pentaoxide; vanadiu Only harmonised substance	um pentoxide}
Only harmonised substance	um pentoxide}
	um pentoxide}
Only harmonised substance zinc {zinc sulphate}	

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.1, May 2018 HazWasteOnline Classification Engine Version: 2018.190.3583.7349 (09 Jul 2018) HazWasteOnline Database: 2018.190.3583.7349 (09 Jul 2018) This classification utilises the following guidance and legislation: WM3 v1.1 - Waste Classification - 1st Edition v1.1 - May 2018 CLP Regulation - Regulation 1272/2008/EC of 16 December 2008 1st ATP - Regulation 790/2009/EC of 10 August 2009 2nd ATP - Regulation 286/2011/EC of 10 March 2011 3rd ATP - Regulation 618/2012/EU of 10 July 2012 4th ATP - Regulation 487/2013/EU of 8 May 2013 Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013 5th ATP - Regulation 944/2013/EU of 2 October 2013 6th ATP - Regulation 605/2014/EU of 5 June 2014 WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014 Revised List of Wastes 2014 - Decision 2014/955/EU of 18 December 2014 7th ATP - Regulation 2015/1221/EU of 24 July 2015 8th ATP - Regulation (EU) 2016/918 of 19 May 2016 9th ATP - Regulation (EU) 2016/1179 of 19 July 2016 10th ATP - Regulation (EU) 2017/776 of 4 May 2017 HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017 POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004 1st ATP to POPs Regulation - Regulation 756/2010/EU of 24 August 2010 2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010

UCL /ION DRI – PLOT 1 CONTAMINATED LAND INTERPRETATIVE REPORT

