

Future Defence Storage and Redistribution Programme, Redevelopment of MOD Bicester

C Site: Land Quality Assessments -Phase 1 and Phase 2

> BIC/OPA/DOC/22 September 2011



# **Defence Estates**

# Site A and Site C, DSDC Bicester

Phase Two Land Quality Assessment Report

23 September 2010

Prepared by Entec UK Limited for the Ministry of Defence under commission FTS3/PTSELM/46



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1	Draft Phase Two LQA Report	01/09/10
2	Final Phase Two LQA Report	23/09/10

# Land Quality Statement for Site A and Site C, DSDC Bicester

#### **Introduction and Terms of Reference**

The Ministry of Defence (MOD) required an assessment of land quality of Site A and Site C, DSDC Bicester, Oxfordshire ('the site'). The purpose of the assessment is to provide land quality information on the site and assess possible health and environmental risks that any contamination may present to the site and its users in its current use and for potential future users. Entec UK Ltd (Entec) was commissioned by Defence Estates (DE) to undertake a Phase Two Land Quality Assessment (LQA) of the site on 28 June 2010.

#### **Site Location and Description**

The site is located approximately 4.5 km south-east of Bicester town centre, Oxfordshire. Site A is located 0.5 km north-west of Piddington village at National Grid Reference (NGR) 463300, 217750 with access (via a secured gated entrance) from the B4011. Site C is located to the immediate north-west of Upper Arncott village at NGR 460700, 217500 and is accessed through a manned security point located on a road junction off Ploughley Road.

The site consists of two distinct and separate areas of the larger DSDC Bicester with Site A to the east and Site C to the west of Arncott Hill. Site A is roughly triangular (pointing to the east) with a smaller triangle taken out of the base on the western side and covers a total area of approximately 13 ha with a generally level topography. Site C is rectangular orientated in a northeast to southwest direction. A strip of land connecting Site C and DSDC Bicester Site D is also included as part of Site C. Site C covers a total area of approximately 24 ha and slopes downwards from the east side of the site to the west. Both sites lie at an elevation of between 65 and 75 m AOD.

#### **Site History**

As of June 1943 Site A and Site C were part of what was called 'COD (Central Ordnance Depot) Bicester'. Arncott A Site (as it was called) was indicated to be a 'Signals and Wireless Sub-Depot' whereas Arncott Site C was an 'MT Sub-Depot'. The site was used for the processing of return stores from the Second World War and for stores issue in 1949 for the Korean War. The entire DSDC Bicester site was redesignated as a Base Ordnance Depot (BOD) in the 1950. By 1961 the whole site had been reorganised, with technical stores and Motor Transport (MT) units to other depots including BOD Donnington in Shropshire. BOD Bicester was established as the main UK depot for military clothing and general stores. By 1992, the whole site became known as the Defence Storage and Distribution Centre, Bicester.

#### **Environmental Setting and Site Sensitivity**

The site (Site A and Site C) is mainly underlain by an Unproductive Strata (Non Aquifer, Oxford Clay Formation) which would be considered to present a low sensitivity with a moderate sensitivity assessed for the Secondary (Minor) Aquifer (Alluvium) situated in the north part of Site A. The site is not within a SPZ.



Groundwater Sensitivity: Moderate / Low

#### **Hydrology**

The River Ray traverses the extreme north of the Site C and is of a generally poor water quality. There is potential for the River Ray to be affected by direct run-off and discharges from the site. However, the site itself is large and as such the sensitivity will decrease with respect to distance for the identified surface water receptors.

Surface Water Sensitivity: Moderate

#### **Ecology**

A SSSI is located close to the strip of land connecting Site C to other areas of DSDC Bicester. Both A Site and Site C have a record of one ESA being located on-site with a third record being positioned approximately 130 m west of Site C. Both sites are surrounded predominantly by agricultural land which forms the ESA, namely the Upper Thames Tributaries ESA. However, both sites are large and as such the sensitivity will decrease with respect to distance for the identified ecological receptors with Site C being the most sensitive due to the proximity of the SSSI.

Ecological Sensitivity: Moderate

#### **Potential Site Contamination**

Following the Entec Phase One LQA assessment of historical and current activities, there are several potentially contaminative activities which have been identified both on and off site.

On site sources relate to former and current areas of fuel storage and handling, including POL stores and points (fuel tanks and refuelling areas), along with the former burning grounds, landfilling and Made Ground, railway infrastructure and the site-wide railway network, fire service building and contaminants associated with former (demolished buildings) and current building fabric (ACM). The location of and significance (given the nature of the geology) is such that no off site sources have been considered within the risk assessment.

Most of the above identified sources are generally likely to be limited in their extent, with the exception of the site-wide railway network.

## **Site Works**

To target the above identified sources of contamination, a detailed programme of site appraisal and intrusive investigation was undertaken. This included a radiological survey of targeted parts of the site along with boreholes, trial pits and hand dug pits.

#### **Contamination Findings**

Site A: North-western Boundary

- Soils No exceedences of GAC with regards to human health were recorded; and
- Waters Exceedences of the WQT screening criteria for zinc, sulphate and ammonium were observed in groundwater samples from the site. Exceedences of ammonium were also recorded in surface waters. Organics elevated above the MDL, but for which no applicable WQT exist were present (notably TPH), however, it is considered that the concentrations observed are unlikely to be significant.



#### Site C: All Areas

- Soils Only one sample exceeded any of the prescribed GAC with regard to human health, which comprised TPC09 (0.20 m), which recorded a concentration of lead at 4,080 mg/kg. Sulphate was elevated and exceeded BRE guideline concentration levels where consideration of the use of special specification concrete would be necessary for in-ground structures in both the C32 Burning Ground and C61 POL Area. However, it should be noted that sulphate concentrations will be elevated in this area anyway (as evidenced by gypsum crystals). Occasional pieces of cement-bonded asbestos sheeting were also observed however no fibres were identified during laboratory testing; and
- Waters Exceedences for vinyl chloride, cis 1,2-dichloroethene, trichloroethene and benzo(a)pyrene were identified within BHC03 and WSC04 (both located in the C33 FFO Tank Area) with exceedences of (DWS) for several PAHs (including benzo(a)pyrene) in surface waters (SWC01 and SWC05 both on the second round) and WSC08 (C61 POL Point). Marginal exceedences of WQT for selenium (DWS) and ammonium (EQS) are considered to be localised and unlikely to be indicative of significant contamination, especially considering the absence of similar impact in nearby surface waters.

## Radiological Survey

- At Site A there were no recorded readings significantly in excess of the natural background levels;
- A hand-held scintillation detector (Ludlum model 2241-3) was used to survey arisings excavated from the trial pits and hand dug pits during the intrusive ground works around the C32 burning ground area;
- Three small areas of elevated radiological readings were identified (using the RadSurvey equipment), two located near the north west corner of building C32 and one near to the emergency water supply tank to the north of building C32. One of the areas was a 'point source' and the other two were more diffuse areas. Maximum count readings at the three points ranged from 754 cps to 1,062 cps;
- Further intrusive investigation in the C32 burning ground area identified maximum arisings rates (using a Ludlum model 2241-3) in counts per second (cps) ranged between 425 cps and 1,000 cps. These levels are not considered to represent a significant radiological risk or a matter for regulatory concern within the areas surveyed.

#### Gas Monitoring

 Calculated Gas Screening Values (GSV) using the methodology of the Modified Wilson and Card classification detailed in CIRIA C665, indicate that all of the installations are characterised as Situation 1 which relates to a very low risk (negligible gas regime identified).

# **Environmental Risk Assessment**

• The risks to current site users from contamination with all of the areas investigated are generally assessed as **low** although a **moderate/low** classification was given for



the C33 Landfill Area due to the exceedance of the GAC with respect to lead and the potential presence of landfill gas within the C33 Landfill Area and C32 Burning Grounds. A **moderate/low** risk is also associated for future commercial/industrial site users with respect to the radiological contamination identified in the former burning grounds and landfill;

- Overall risks to construction workers from the contamination identified in all of the
  zones investigated have however been assessed as low or moderate/low based on
  the general absence of contaminants found. A moderate risk has been applied in
  the C33 Landfill Area discussed above with respect to lead;
- There was no consistent linkage between soil contamination and the minor groundwater exceedances. Therefore, risks to groundwater from contamination present within the zones investigated have been assessed as negligible due to the concentrations of contamination identified;
- The risks to surface water from the contamination identified in the zones investigated have therefore been assessed as low, with the exception of the site A TPH which is assessed as moderate/low;
- No significant ecological receptors have been identified in the site vicinity.
  Therefore, the risks to ecological receptors have been identified as **negligible**, due mainly to the likelihood that the sensitivity will decrease with respect to distance from the identified contamination to this receptor;
- The eastern and northern parts of Site A and the western side of Site C border land that is used for agricultural (arable) purposes, which could potentially be impacted by localised contamination impacting these areas. However, the potential contamination areas of concern investigated as part of this LQA are generally located away from these areas and impact is unlikely. The risks to agricultural receptors have been identified as **negligible**;
- There may be potential risks to current and future in-ground concrete structures via direct contact with ground contamination (in particular sulphate). However, given the 'mild' potential consequence of the relevant pollutant linkages, the risks to buildings and buried services are assessed as **negligible**.

#### Overall Land Quality and Suitability for Current and Future Use

The future use of the site is likely to be similar to its present use and the timeframe for disposal by DE is currently not certain. Based on the results of this risk-based targeted investigation, the site is considered suitable for current use and for redevelopment to a commercial/industrial end use.

However, laboratory analysis of soil samples indicated the presence of organic and inorganic contaminants in particular hydrocarbons in the location of the C33 FFO Tank Area, and trace concentrations of chlorinated solvents. The majority of the site was not found to have exceedences of relevant industrial/commercial assessment criteria, with the exception of lead in the C33 Landfill Area. Only isolated and minor exceedences of prescribed WQT were recorded in surface and groundwaters. In general, the contaminants encountered at the observed levels are not likely to be significant.



Widespread occurrences of sulphate are at concentrations which suggest that the use of higher specification concrete should be considered for future in-ground concrete structures. The radiological levels detected are not considered to represent a significant radiological risk or a matter for regulatory concern.

However, due to the limited nature and extent of the intrusive investigation and the potential for residual contamination to be present in and around existing (and in most cases still operational) infrastructure, it is possible that additional investigation will be required as part of the development process. Such investigation will be dependant upon the development design. Ground gas/ vapours may also need to be considered if new developments are built on areas of localised hydrocarbon contamination but will again be dependant upon the development design.





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Annex A Intrusive Logs
Annex B Gas and Water Monitoring Tables
Annex C Screened Laboratory Data
Annex D Laboratory Analysis Certificates
Annex E Radiological Trial Pits
Annex F Environmental Risk Assessment Tables



# **Glossary of Terms**

ACM - Asbestos Containing Material

AOD - Above Ordnance Datum

AONB - Area of Outstanding Natural Beauty

AST - Above ground Storage Tanks

BFI - Bulk Fuel Installation

bgl - below ground level

BGS - British Geological Survey

BOD - Base Ordnance Depot

BRE - Building Research Establishment (up to 1997)

BTEX - Benzene, Toluene, Ethyl Benzene and Xylene

CLEA - Contaminated Land Exposure Assessment

COD - Central Ordnance Depot

DE - Defence Estates

Dstl - Defence Science and Technology Laboratory

Dstl ESD- Dstl Environmental Service Department

DEFRA- Department for Food and Rural Affairs

DSDC - Defence Storage and Distribution Centre

EA - Environment Agency

EOTA - Explosive Ordnance Threat Assessment

EPA - Environmental Protection Act 1990

EPH - Extractable petroleum hydrocarbons

ESA - Environmentally Sensitive Areas

FFO - Furnace Fuel Oil

GAC - Generic Assessment Criteria

GIS - Geographical Information System

GPS - Global Positioning System

GQA - General Quality Assessment (Surface Water)

GQRA - Generic Quantitative Risk Assessment



HPA - Health Protection Survey

LA - Local Authority

LQA - Land Quality Assessment

MOD - Ministry of Defence

MT - Motor Transport

NGR - National Grid Reference

NNR - National Nature Reserves

NRPB - National Radiological Protection Board

NGR - National Grid Reference

OS - Ordnance Survey

OWI - Oil Water Interceptor

PAH - Polycyclic Aromatic Hydrocarbons

POL - Petrol, Oil and Lubricants

Part 2A - Part 2A of the Environmental Protection Act (1990)

PCB - Polychlorinated Biphenyls

PPE - Personal Protective Equipment

RPC - Regional Prime Contractor

QRA - Quantitative Risk Assessment

SAC - Special Areas of Conservation

SEAT - Site Estate Authority Team

SPA - Special Protected Areas

SPZ - Source Protection Zone (groundwater)

SSSI - Site of Special Scientific Interest

SVOC - Semi-Volatile Organic Compounds

TPH - Total Petroleum Hydrocarbons

TPHCWG Total Petroleum Hydrocarbons Criteria Working Group

UST - Underground Storage Tank

VOC - Volatile Organic Compounds

UXO - Unexploded Ordnance

WWII - The Second World War



# 1. Introduction

# 1.1 Terms of Reference

Entec UK Ltd (Entec) was commissioned by Defence Estates (DE) to undertake a Phase Two Land Quality Assessment (LQA) of Site A and Site C, Defence Storage and Distribution Centre (DSDC) Bicester, Oxfordshire ('the site') on 28 June 2010. This commission was carried out under the interim contracting arrangement and FATS/3 framework between Entec and Defence Estates.

The purpose of the assessment is to provide information on the site as well as any health and environmental risks that any potential contamination may present to existing site users and in changing the use of the land.

# 1.1.1 Aims and Methodology

It is understood that the LQA is required to support continued military (i.e. commercial/industrial) use of the site with the potential for some redevelopment of existing facilities and potential new builds, although there is no confirmed development plan. This investigation is designed to provide sufficient information to allow an initial estimate of the magnitude of potential issues.

The information obtained allows the site conceptual model to be refined and the environmental risk assessment to be reappraised based on the findings of this Phase Two investigation. This information is used to refine future potential management options and to identify where further investigation is required, if necessary.

To achieve this, the following methodology was adopted:

- Review of the (May 2010) Entec Phase One LQA including risk appraisal;
- · Obtaining and reviewing buried service plans;
- Undertaking a buried service clearance exercise, including identification of site drainage routes and fuel infrastructure;
- Non-intrusive investigation, consisting of radiological survey of targeted areas of the site to assess the potential presence of detectable radiological residues;
- Targeted intrusive investigation, consisting of progression of cable percussive and window sampler boreholes, excavation of machine dug trial pits and hand dug pits;
- Gas and groundwater monitoring of installed boreholes;
- Surface water monitoring of the site-wide drainage ditch network; and
- Interpretation and reporting of analytical laboratory data.

The findings of this study are based on the information made available to Entec by MOD



personnel at the time, together with information obtained from the intrusive investigation.

#### 1.1.2 Future Site Use

It is understood that the LQA is required to support either continued military (i.e. commercial/industrial) use of the site or disposal of the site for continued use in its current form with the potential for some redevelopment of existing facilities and potential new builds, although there is no confirmed development plan. For the purposes of the risk assessment, this report considers continued use of the site for commercial/industrial purposes.

# 1.2 Site Location

The site is located approximately 4.5 km south-east of Bicester town centre, Oxfordshire. Site A is located 0.5 km north-west of Piddington village at National Grid Reference (NGR) 463300, 217750 with access (via a secured gated entrance) from the B4011. Site C is located to the immediate north-west of Upper Arncott village at NGR 460700, 217500 and is accessed through a manned security point located on a road junction off Ploughley Road. The location of the site is shown in Figure 1.

# 1.3 Site Information

#### 1.3.1 General

The site consists of two distinct and separate areas of the larger DSDC Bicester with Site A to the east and Site C to the west of Arncott Hill. Site A is roughly triangular (pointing to the east) with a smaller triangle taken out of the 'base' on the western side. Site A covers a total area of approximately 13 ha and its topography is generally level. Site C is rectangular orientated in a northeast to southwest direction. A strip of land connecting Site C and DSDC Bicester Site D is also included as part of Site C. Site C covers a total area of approximately 24 ha and slopes downwards from the east side of the site to the west. Both sites lie at an elevation of between 65 and 75 m AOD. Site layout plans are included as Figures 2a and 2b.

#### 1.3.2 Site History

A detailed site history has been presented in the previous Phase One LQA. This is summarised below.

As of June 1943 Site A and Site C were part of what was called 'COD (Central Ordnance Depot) Bicester'. Arncott Site A (as it was called) was indicated to be a 'Signals and Wireless Sub-Depot' whereas Arncott Site C was an 'MT Sub-Depot'. The site was used for the processing of return stores from the Second World War and for stores issue in 1949 for the Korean War. The entire DSDC Bicester site was redesignated as a Base Ordnance Depot (BOD) in the 1950. By 1961 the whole site had been reorganised, with technical stores and Motor Transport (MT) units to other depots including BOD Donnington in Shropshire. BOD Bicester was established as the main UK depot for military clothing and general stores. By 1992, the whole site became known as the Defence Storage and Distribution Centre, Bicester.



#### 1.3.3 Land Use

The site is understood to be a storage and distribution hub for a variety of military equipment, including clothes, rations, tents, packaging materials as well as general stores. According to available information (refer to Section 1.3.9 of this report), it is understood that the site has never been used to store explosive ordnance.

There is an extensive private railway network across the site which is connected to the national rail network via a spur off the Oxford-Bletchley main line. Rail traffic has to pass through Site D and Site E in order to join the spur that connects to the Oxford-Bletchley main line.

# 1.3.4 Site Buildings and Activities

With reference to Figure 2a and 2b, Table 1.1 summarises the buildings/activities within each area of the site.

Table 1.1 Site Buildings and Activities

Building No.	Description and Activities	
Site A		
A1	Large, brick built storage building. Unable to access. Building annex used for Mechanical Handling Equipment (MHE)	
A3	Large, brick built storage building used for dark storage. Unable to access. Not inhabited.	
A4	Large, brick built storage building used for dark storage. Unable to access. Not inhabited.	
A5	Large, brick built storage building used for dark storage. Unable to access. Not inhabited.	
A6	Demolished. Hardstanding remains.	
A7	Defence fire service building.	
Building adjacent to A7	A small structure marked 'Oil and Lubricant Store'	
A9	Small brick building used as a guardhouse.	
A10	A roofed open-framed structure used for storage of boxes and equipment protective casings.	
A31	6 No. Romney Sheds (Bolero style). Generally used for storage of boxes and equipment protective casings.	
A33	6 No. Romney Sheds (Bolero style). Generally used for storage of boxes and equipment protective casings.	
A35	Small shed sized building. Activity not known.	
A81	1 No. Romney Sheds (Bolero style) used for storage of aircraft equipment protective casings and boxes.	
A85	Small, asbestos roofed brick building adjacent to weighbridge.	
Site C		
C1	Large brick built storage building for dry storage of tyres and other rubber based stores. 3 No. Air Raid Shelters (ARS) to south, 6 No. ARS to east and 3 No. ARS to north west of main building.	



Table 1.1 (continued) Site Buildings and Activities

Building No.	Description and Activities	
C2	An income generation building leased by Multi-Part Defence Ltd. Building provides storage of spare parts (generally small items such as nuts/bolts) for mechanical handling equipment (MHE) such as excavators and fork lifts.	
C3	Large brick built storage building for dry storage of tentage and electrical utilities for tentage. Store contains a radiation store for gun sights.	
C4	Large brick built storage building for dry storage of clothing, body armour, boots and component parts. Historically, was used by Thames Valley Police (TVP) and previously used to store ration packs.	
C5	An income generation building leased by Barrus Ltd, leased from MoD. Large brick built storage warehouse for storage of mowers, trailers, marine outboards, engine blocks. Historically (prior to present lease), the building stored coffins and scrim/camouflage nets.	
C6A (formerly C32)	Large brick built storage building for canoes, canoe trailers and textile repair. Management of facility is via C3/C32. Field hospital gear/sewage pumps. Ski gear, generators, and tent heating systems. Historically it was thought to have stored hazardous materials requiring vents in the roof.	
C6B	Empty.	
C6N (formerly C33)	Large brick built storage building storing tentage and small amounts of detergent, generators and new fridges. Some stored for reconditioning. Large number of refrigeration units and ablution units (Isofreight type) stored on hardstanding to north of the building.	
C7	A more modern/modernised brick built income generation building leased by Thames Valley Police. Occupant s did not allow access but indicated that building housed mainly clothing and paper.	
C8	Modern storage warehouse leased for income generation to KBR. Building used for the storage of tentage and tented accommodation together with the tent utilities (power /refrigeration units. Staff believed the building used to be a former chemical store of some kind.	
C8A	C8A comprises 3 bays for the handling and storage of chemicals.	
C8B	A boiler house fed from a 21,000 litre tank. Fuel tanker point accessible with tank located within.	
C9	Large brick built storage building for dry storage. Storage contents not known.	
C10	Small/medium building used as a stationary store and accounts storage.	
C11	Small building, empty and not inhabited.	
C12	Small/medium building used as vehicle maintenance workshop by Thames Valley Police (income generation)	
C14	Nissen hut indicated as former cleaners' store (contractors). No entry allowed due to asbestos within the building.	
C16	Large, modernised Head Quarters (HQ) office building comprising open plan office and meeting rooms.	
C16A	Store building adjacent to C16. Was indicated to also store fuel 3/50 FFO.	
C21	Pumphouse and adjacent to Emergency Water Supply (EWS) tank.	
C22	A small building adjoined to C23. Wood/Carpenters workshop for construction of coffin frames/pallets. Historically it was a REME training workshop.	
C23	A small building adjoined to C22. Printers/graphics workshop.	
C24	A medium sized building used as workshops for maintenance of loan pools equipment e.g. climbing gear, cookers, skis, heaters.	



Table 1.1 (continued) Site Buildings and Activities

Building No.	Description and Activities	
Site C		
C30	Comprises 6 No. Romney Sheds (Bolero style) buildings. Locked and unable to access on the day. Some (if not all) are still used. Some noted to store chemical agents. The remainder (where views into the building were possible) generally held inert items including empty storage cages.	
C30A	Small building no longer used. Empty.	
C31	Comprises 6 No. Romney Sheds (Bolero style) buildings. Locked and unable to access on the day. Some (if not all) are still used.	
C32 (formerly C6)	Large brick built building for the storage of Loan pool equipment. Stock includes compasses (locked and signed), tables/chairs/tentage/heaters, equipment for watersports /climbing /skiing/camping, ski clothing, fire extinguishers/heaters.	
C32A	Medium sized annex to C32 used as MoD Police offices.	
C33	Test houses for engines, gearbox/transmission systems, antennae and suspension units. Repairs to tracks Challenger & Warrior Hardstanding store to east side. Cooling towers cool water from hydraulic testing of gearboxes located externally to south west.	
C33A	Large, workshop annex to C33.	
C49	Bolero Hut. No entry due to asbestos.	
C52	Small, income generation building leased to ALC. Building comprises office accommodation only.	
C60	Medium to large, former MT section building for site. Used infrequently.	
C61	Petrol, Oil, Lubricant dispensers. Current Petrol, Oil, Lubricant (POL) point for the site.	
C85	Small, brick built former rest room. No longer used due to asbestos.	

# 1.3.5 Evidence of Former Structures, Fill Material and/or Disturbed Ground

Evidence of several former structures, fill material and/or disturbed ground was noted during the Phase One LQA site walkover, and, with reference to historic maps and plans is summarised in Table 1.2.

Table 1.2 Site Former Structures, Fill Material and/or Disturbed Ground

Building No.	Description
Site A	
Former location of Building A6	10 m x 10 m tiled, concrete floor
Between former buildings of A6 and A7	Roughly circular area of gravel (possibly used by vehicles) with infilled/Made Ground central area.



Table 1.2 (continued) Site Former Structures, Fill Material and/or Disturbed Ground

Building No.	Description	
Site C		
North-east of C2	A thin strip of land was observed to have been raised in this area by several metres (2-5 m). Surface cover is smooth comprises mainly of grass.	
North of C5	A large, roughly rectangular area of land was observed to have been raised in this area by several metres (3-6 m). Surface cover comprises mainly of grass with a flat plateau.	
North-east of C7	The land was observed to have been raised in this area by several metres (3-6 m). Surface cover is smooth comprises mainly of grass.	
South-west of C8	A small, roughly rectangular area of land was observed to have been raised in this area by several metres (2-5 m). Surface cover comprises mainly of grass.	
Area to north of C32 Burning Ground	A large , roughly rectangular area of land was observed to have been raised in this area by up to 1 m.	

# 1.3.6 Site Boundaries

Land uses surrounding the site are summarised in the tables (Table 1.3 and Table 1.4) below:

Table 1.3 Site A Boundaries and Adjacent Land Uses

Boundary	Adjacent Land Use	Nearby Land Use
North	Agricultural	Agricultural
East	Agricultural	Predominantly agricultural with some residential
South	Widnell Lane (minor road)	Predominantly agricultural with Piddington Training Area (military)
West	B4011 (minor road)	DSDC Bicester G Site and G Site Sports Ground (military)



Table 1.4 Site C Boundaries and Adjacent Land Uses

Boundary	Adjacent Land Use	Nearby Land Use
North	Lower Arncott village and Ploughley Road (minor road)	Predominantly agricultural with some residential
East	DSDC Bicester H Site, Upper Arncott village, agricultural land.	Predominantly residential with some military and agricultural
South	Agricultural	Predominantly agricultural with M40 motorway
West	Agricultural	Predominantly agricultural with some residential

#### 1.3.7 Tenant, Lodgers and Enclaves

A number of buildings at Site C are leased to businesses and individuals for a variety of uses and is generally referred to as an 'income generation use' by DSDC. On the basis of the walkover and information collected anecdotally during the walkover, these areas/buildings include Thames Valley Police (Buildings C7 and C12), Multipart (Building C2), Barrus (Building C5), KBR (Building C8) and the Defence Support Group (DSG) (Buildings C33 and C33A).

#### 1.3.8 Buried Services

Information on buried services on and in the vicinity of the site was obtained via site records held by the following:

- The Site Estate Authority Team (SEAT);
- The MOD site estate management contractor (PriDE) via SEAT; and
- The MOD site water service (Project Aquatrine) contractor, Kelda Water Services (Kelda).

Buried service plans were obtained as part of the intrusive works. Water mains, surface and foul drainage, electricity mains, mains gas and telecommunications plans were made available to Entec.

#### 1.3.9 Ordnance

As part of the Phase One LQA, an Explosive Ordnance Threat Assessment (EOTA) was commissioned. The EOTA concluded as follows:

- DSDC Bicester has been a military depot for over 65 years. No evidence could be found to indicate that the purpose of the depot was ever for the storage of explosive ordnance. Nevertheless, as with all historic military facilities, there is always a residual risk of explosive ordnance contamination;
- During the war years, the facility would have been defended, and weaponry in the



form of small arms and land service ammunition would have been stored and available for use. Furthermore, as a result of the military association with the area, it is likely that the land on and around the depot would have been utilised for ground training exercises historically;

- The 'house-keeping' of WWII facilities is known to have often been poor with unwanted and unused items of explosive ordnance frequently buried, burnt, lost or otherwise discarded within a facility perimeter. Given the available history of the site, the likelihood of this having occurred within the perimeter of DSDC Bicester is not considered high, but cannot be entirely discounted. It should be noted that several search and clear operations have been undertaken at several locations on the site by 33 Engineer Regiment (EOD) in the post-war period. Although nothing was found, the requirement for and completion of such operations at the cost of the MoD indicates that there was a credible perceived threat/possibility of explosive ordnance contamination being present. It should also be noted that only small sections of DSDC Bicester have been subject to such searches, those searches only providing 12.5% clearance;
- Research indicates that bombing density over the Bicester area was low. Very few references could be found to raids over the region despite there being a number of high profile RAF targets present. Air Raid Precaution (ARP) records for COD Bicester could not be located (reports of bombing on military land were generally made by military personnel and kept separate from civilian records). It has therefore not been possible to confirm that the facility was not attacked. However, work on the construction of the depot did not commence until after the main period of bombing in this part of the UK; and
- The depot employed thousands of people and for the latter part of WWII at least, would have been manned twenty-four hours a day. It is considered very unlikely that evidence of unexploded ordnance would have been overlooked across the site subsequent to construction work beginning in June 1941. Prior to this date, the site comprised open, agricultural land on which it is conceivable that unexploded bombs could have been overlooked had they been dropped. However, given the low bombing density in this part of the county and lack of viable targets within the site area in 1940/early 1941, the likelihood of unexploded bombs having been dropped is considered minimal.

BACTEC recommended a number of risk mitigation measures to support intrusive investigation, including:

- Explosive Ordnance Safety and Awareness Briefings to all personnel conducting intrusive works; and
- The Provision of Unexploded Ordnance Site Safety Instructions.

These measures were adopted by Entec through provision and presentation of the Construction Phase Health & Safety Plan (Entec ref: 26999Q066i1).

#### 1.3.10 Dstl Radiological Assessment

As part of the Phase One LQA, a desk study was commissioned through the Dstl Environmental Services Department (Dstl ESD). Dstl ESD conducted a search of records relating to any



radiological contamination issues at the whole DSDC Bicester site.

Dstl ESD records show that a very large number of items of standard military equipment containing radioactive material have been stored at the DSDC Bicester site from at least 1994 to the present day; the site being a major distribution centre for the main storage facility at DSDC Donnington. These include various pieces of instrumentation and check sources containing the following radionuclides: tritium (H-3), nickel-63 (Ni-63), thorium-232 (Th-232), strontium-90 (Sr-90) chlorine-36 (Cl-36) and cobalt-57 (Co-57). In addition, an instrumentation dial from a Canberra (jet aircraft) cockpit containing radium-226 (Ra-226) has been stored on site since at least 1999.

The desk study concluded that the likelihood of contamination being present on other parts DSDC Bicester is deemed to be **moderate**. In particular, if any additional burning grounds, disposal areas or workshops are identified on the site, these should be subject to a radiological survey.

It should be noted that this Phase Two LQA included radiological survey of areas of the site suspected as having the potential for contamination by radiological materials.

# 1.4 Environmental Setting and Site Sensitivity

A full description of the site environmental setting is presented within the Phase One LQA. This is briefly summarised below, with reference to the assessed site sensitivity.

# 1.4.1 Geology and Hydrogeology

The anticipated geological sequence consists of alluvium deposits (clay, silt, sand and gravel) over the northern part of Site A and over the strip of land connecting Site C and D directly overlying solid geology consisting of the Stewartby Member (mudstone) and Peterborough Member (mudstone) of the Oxford Clay Formation. The Kellaways Clay Member and Kellaways Sand Members of the Kellaways Formation outcrop in the north of the strip of land connecting Site C and D Site.

The northern half of Site A is underlain by a Secondary (Minor) Aquifer (comprising soils of Low Leaching Potential). This is considered to be the Alluvium. The land in the southern half of Site A is underlain by Unproductive Strata (Non-Aquifer - Negligibly Permeable).

The majority of Site C is underlain by Unproductive Strata (Negligibly Permeable). The strip of land connecting D Site and Site C is also underlain in places by a Secondary Aquifer (including soils of both High and Low Leaching Potential).

As the site is mainly underlain by an Unproductive Strata (Oxford Clay Formation) which would be considered to present a low sensitivity with a moderate sensitivity assessed for the Secondary (Minor) Aquifer (Alluvium) situated in the north part of Site A. The site is not within a SPZ.

#### **Groundwater Sensitivity: Moderate/Low**

#### 1.4.2 Surface Water

The River Ray traverses the extreme north of the Site C and is of a generally poor water quality.



There is potential for the River Ray to be affected by direct run-off and discharges from the site. However, the site itself is large and as such the sensitivity will decrease with respect to distance for the identified surface water receptors.

## **Surface Water Sensitivity: Moderate**

## 1.4.3 Ecology

A Site of Special Scientific Interest (SSSI) is located close to the strip of land connecting Site C to other areas of DSDC Bicester. Both Site A and Site C have a record of one Environmentally Sensitive Area (ESA) being located on-site with a third record being positioned approximately 130 m west of Site C. Both sites are surrounded predominantly by agricultural land which forms the ESA, namely the Upper Thames Tributaries ESA. However, both sites are large and as such the sensitivity will decrease with respect to distance for the identified ecological receptors with Site C being the most sensitive due to the proximity of the SSSI.

#### **Ecological Sensitivity: Moderate**

# 1.5 Previous Entec Phase One LQA Assessment

Several investigations, clearances and Phase One and Phase Two LQAs have historically been performed at the site and are reported within Section 1.8 of the Entec Report Reference: 26999RR030i2. The summary of potential sources of contamination identified within the Entec Phase One LQA is presented below.

## 1.5.1 Summary of Potential On-site Sources of Contamination

Following the assessment of historical and current activities, there were several potentially contaminative activities which were identified on the site, namely:

#### **Historical On-Site Issues**

- A13 Vehicle Filling Area;
- POL Facility to south west of building C3;
- C19 and C19A Vehicle Filling Area;
- Former Demolished Buildings A6, C8 and C26 (A13 is a former demolished building but is not included within this source area due to its operation as a filling station);
- Building C33 Landfill;
- A33 Former Burning Ground Area (including former incinerator); and
- C32 Burning Ground.

# **Current and Recent On-site Operations**

- Railway Lines and Associated Infrastructure;
- POL Point (namely C61 fuel tanks and dispensing pumps);



- C33 Fuel Storage and Engine Test Facility;
- Site C Heating Oil Storage Tanks (Buildings C1, C2, C3, C4/C11, C5, C6A, C6N, C7, C8, C9, C16, C16A, C32 and C33);
- A7 Defence Fire Service Building;
- Oil Water Interceptors;
- Disturbed Ground around buildings C2, C5, C33, C7, C8 and C32 Burning Ground;
- ACM around building structures and in spoil from former buildings (including ARS); and
- Radiation Sources in areas around C32 burning ground, C33 landfill and A33 burning ground.

The locations of the above listed potential sources are shown on Figure 3a and 3b.

#### 1.5.2 Summary of Potential Off-Site Sources of Contamination

Following the assessment of historical and current activities, no potentially contaminative activities have been identified off-site, that are considered within the risk assessment.





# 2. Sources of Information

#### 2.1.1 General and Other Information Sources

Information for this study has been gained from previous investigation reports and general mapping sources as summarised below.

#### **Public Domain and Non-MOD Sources**

- General mapping/plans: recent and historical;
- BGS Digital Geological mapping;
- Hydrogeology mapping and Groundwater Vulnerability mapping;
- emapsite<sup>TM</sup> GroundSure data search (GeoInsight and EnviroInsight reports);
- Local Authority (Cherwell District Council) environmental data search;
- English Heritage (National Monuments Record) Aerial Photographs;
- The Bicester Military Railway and the Army's Central Railway Workshops by E.R. Lawton & Major M.W. Sackett, Oxford Publishing Company, 1992 ISBN 0-86093-467-4-5;
- Archaeology and Cultural Heritage References; and
- Multi-Agency Geographic Information for the Countryside (MAGIC) website <u>www.magic.gov.uk</u>.

#### **Specialist Data Searches:**

- A search of records relating to any radiological contamination issues was requested from Dstl ESD as part of the site Phase One LQA; and
- An Explosive Ordnance Threat Assessment (EOTA) was commissioned through BACTEC as part of the Phase One LQA.

#### **MOD Information Sources**

- Plans provided by Defence Estates;
- Estate Development Plan (v1.1, 15 August 2008) provided by Defence Estates;
- Phase One and Phase Two LQA Reports undertaken by Aspinwall & Company (1998 and 2001);
- Draft Phase One LQA Report undertaken by DE&S ESG (February 2010);
- Anecdotal information from Estates Management Personnel; and
- OS Tiles provided by DE Geographical Information Unit.



# Site Visit by Entec on 9 July 2010

- · Observations, notes and documents reviewed; and
- Visual assessment of the site and surrounding area.

# **Initial Non-Intrusive Site Surveys commissioned by Entec**

- Service clearance exercise undertaken by on 9 and 12 July 2010; and
- Radiological walkover survey of the waste disposal areas/burning grounds near buildings A33, C32 and C33 undertaken between 8 and 16 July 2010.

# **Main Intrusive Site Investigation Works and Monitoring**

• Undertaken by Entec between 12 July and 19 August 2010.



#### **Assessment Approach** 3.

#### 3.1 Introduction

The potential health and environmental risks associated with contaminants at the site have been assessed using a risk based framework established to support the implementation of the contaminated land regime in the UK.

The contaminated land regime is based on the 'suitable for use' approach to the assessment and remediation of contaminated land, which recognises that the risks presented by contamination vary according to the use of the land and other circumstances. In accordance with the DE LQA Directive, the assessment considers continued current use of the site.

#### **Definition of Contaminated Land** 3.2

The contaminated land regime is set out within Part 2A of the Environmental Protection Act (EPA), 1990. It was introduced in England in April 2000 by the Contaminated Land (England) Regulations 2000, updated in 2006. The regulations are in turn supported by Statutory Guidance issued by the Department for the Environment Food and Rural Affairs (Defra) in September 2006, Defra Circular 01/2006<sup>1</sup>.

Part 2A provides a statutory definition of 'Contaminated Land' and sets out the nature of liabilities that can be incurred by owners of contaminated land. According to the Act, as amended by the Water Act 2003, contaminated land is defined as:

"land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on, or under that land:

- that significant harm is being caused, or there is significant possibility of such harm being caused; or
- that pollution of controlled waters is being or is likely to be caused."

Central to the regulatory system is a rigorous procedure of risk assessment which is used to determine the existence of 'contaminated land' according to the definition. Under the risk assessment procedure, for such harm to the non-aquatic environment or pollution of controlled waters to be possible, there must be a 'significant pollutant linkage'.

In February 2010, Defra announced its decision to review the Statutory Guidance which underpins the contaminated land regime under Part 2A of the Environmental Protection Act 1990 and consider where it could be amended to reflect experience in delivering the regime and developments in scientific understanding.

It is anticipated that formal consultations on proposals to amend the Statutory Guidance will be



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Department for Environment Food and Rural Affairs. Environmental Protection Act 1990: Part 2A Contaminated Land. Defra Circular 01/2006. September 2006.

undertaken in mid to late 2010. Defra has stated that while this work proceeds, Local Authorities should continue to fulfil their legal duty to identify and deal with contaminated land.

For the purpose of assessment within this report the legislation as it currently stands has been considered. However, this appraisal may need to be re-assessed should there be changes in the Statutory Guidance.

# 3.3 Assessment Framework – Chemical Contaminants

There is a range of technical approaches to risk assessment of chemical contaminants, all of which broadly fit within a tiered approach. The tiered approach to assessing risks from land contamination is set out in the Defra and Environment Agency publication "Model Procedures for the Management of Land Contamination" CLR11.

Entec's approach to undertaking risk assessments is based on a tiered framework in accordance with CLR11, as outlined in Table 3.1.

Table 3.1 Tiered Framework

Tier 1: Preliminary Risk Assessment	<ul> <li>Development of a conceptual model.</li> <li>Preliminary Risk Assessment examining potential contaminants, pathways and receptors to identify the potential 'pollutant linkages'.</li> </ul>
	Identification of further risk assessment requirements.
Tier 2: Generic Quantitative Risk Assessment (GQRA)  Tier 3: Detailed Quantitative Risk Assessment (DQRA)	<ul> <li>Screening of analytical results against generic assessment criteria (GAC) for soils and groundwater including Soil Guideline Values, Environmental Quality Standards, etc., to identify issues that require more detailed consideration.</li> </ul>
	<ul> <li>Identification of further risk assessment or risk management requirements.</li> </ul>
	<ul> <li>Refinement of site conceptual model which may require the collection of additional data.</li> <li>Application of detailed quantitative risk assessment procedures in accordance with CLR Guidance to further assess potential pollutant linkages.</li> <li>With respect to human receptors this may involve assessment of site specific exposure scenarios taking into account toxicological properties of substances to derive site specific assessment criteria (SSAC).</li> <li>With respect to controlled water receptors this may involve simple analytical calculations of groundwater and/or surface water flow and contaminant attenuation to derive remedial target concentrations.</li> <li>To undertake the assessment proprietary software such as RISC4, RBCA or RAM may be used.</li> </ul>
	Identification of further risk assessment or risk management requirements.

The conceptual model is developed at the preliminary risk assessment tier and reviewed and refined during subsequent risk assessment tiers. The conceptual model represents the characteristics of this site and indicates the possible relations between **contaminants**, **pathways** and **receptors**, where:

• A **contaminant** is a substance which is present in, on, or under the land and has the



potential to cause harm;

- A **receptor** is something which could be adversely affected by the contaminant, including human beings; and
- A **pathway** is a route or means by which a receptor could be exposed to, or affected by, a contaminant.

For a potential risk to exist with respect to a site, all three of the above elements must be present, and linked together so that a contaminant has been identified, a receptor is located on the site and there is an exposure pathway that links the contaminant to the receptor. The term **pollutant linkage** is thus used to describe a particular combination of contaminant-pathway-receptor relationship.

In general, the application of increased tiers of risk assessment should result in less conservative assessment criteria which in turn should reduce the need for costly remediation action.

This report presents a **Tier 2 Generic Quantitative Risk Assessment** in accordance with the DE Contaminated Land Management LQA Management Guide (PG01/07).

In accordance with DE Phase Two LQA Directive, the potential environmental risks associated with the following land uses have been evaluated:

• Continued current land use (i.e. commercial/industrial use).

# 3.4 Assessment Framework – Radioactive Contaminants

# 3.4.1 Background

Since August 2006, Part 2A has been extended to include radioactive contamination (Defra Circular 01/2006, superseding 02/2000). Local Authorities now have a duty to identify sites that are potentially contaminated with radioactive material by virtue of past operational activities. Former military sites that were operational during the first half of the 20<sup>th</sup> century are likely to be considered as possible candidates for inspection under Part 2A, because of the historic use of radioactive materials on these sites.

This extension of Part 2A applies only in respect to harm to human health, and not in respect of other receptors or pollution of controlled waters. Under Part 2A, land is determined as contaminated land by virtue of radioactivity if 'harm' is being caused, or there is a significant possibility of 'harm' being caused to existing site users, by ionising radiation.

The criteria for harm are based on 'intervention' scenarios; i.e. situations in which site users are currently being exposed, and the decision must be made whether an 'intervention' (i.e. remedial action) is necessary to reduce exposure levels. Lower dose thresholds apply for 'practices', which generally refer to consented radioactive discharges but also include redevelopment projects that result in a different exposure scenario, i.e. a change of land use. The dose received can be related to the activity concentration of contaminated soil using software published by Defra (CLR15). Radioactive soil guideline values (RSGVs) can be established for different exposure scenarios using this software.





# 4. Initial Conceptual Site Model and Preliminary Risk Assessment

# 4.1 Introduction

The findings of the previous Entec Phase One LQA form the basis of the initial conceptual model and risk assessment. The subsequent Phase Two intrusive ground investigation was designed on the basis of this initial conceptual model. The data obtained from the investigation have been used to refine and update this conceptual model. The updated conceptual model for the site is presented in Section 7.4.

# 4.2 Initial Conceptual Site Model

The following sections summarise the initial conceptual model, consisting of the preliminary identified sources, pathways and receptors relevant to the site.

The potential sources of contamination are summarised previously within Section 1.5.

# 4.2.1 Receptors and Pathways

Potential receptors and pathways from identified sources to receptors are detailed in Table 4.1.

Table 4.1 Receptors and Pathways

Receptor	Pathway	
Site Visitors/Users (Commercial/Industrial)	Dermal contact, direct contact, ingestion, inhalation	
Construction and Maintenance Workers	Dermal contact, direct contact, ingestion, inhalation	
Future Site Users (Commercial/Industrial)	Dermal contact, direct contact, ingestion, inhalation	
Neighbouring Site Users	Dermal contact, direct contact, ingestion, inhalation	
Groundwater (Secondary Aquifer and Unproductive Strata)	Leaching from soils, transport in groundwater, groundwater contamination	
Surface Water (site drainage ditches, unnamed onsite ponds, River Ray, brook to east of Site A)	Leaching from soils, transport in groundwater, groundwater contamination, run-off	
Ecological Receptors	Uptake, direct contact	
Agricultural Receptors	Uptake, direct contact	
Buildings and Buried Services (current and future)	Degradation (chemical attack), direct contact, vapour migration, explosion	



# 4.3 Preliminary Risk Assessment Findings

The environmental risk assessment undertaken as part of the Phase One LQA comprised an analysis of potential pollutant linkages (contaminant-pathway-receptor) on the site. The risk assessment is presented in full in the Phase One LQA report.

The potential risks were evaluated using the following criteria:

- i) Potential consequence of pollutant linkage;
- ii) Likelihood of pollutant linkage; and
- iii) Risk classification.

The 'Risk Classification' is an overall assessment of the potential risk, which considers the likely effect on a given receptor, taking account the potential consequence of the pollutant linkage and the likelihood. The definition of the risk classifications is outlined in Table 4.2.

Table 4.2 Definition of Risk Classification

Potential Sign	ificance
Very High Risk	Severe harm to a receptor may already be occurring OR a high likelihood that severe harm will arise to a receptor, unless immediate remedial works/mitigation measures are undertaken.
High Risk	Harm is likely to arise to a receptor, and is likely to be severe, unless appropriate remedial actions/mitigation measures are undertaken. Remedial works may be required in the short term, but likely to be required over the long term.
Moderate Risk	Possible that harm could arise to a receptor, but low likelihood that such harm would be severe. Harm is likely to be medium. Some remedial works may be required in the long term.
Low Risk	Possible that harm could arise to a receptor. Such harm would at worse normally be mild.
Negligible	Low likelihood that harm could arise to a receptor. Such harm unlikely to be any worse than mild.

The following summarises the findings of the risk assessment undertaken in the Phase One LQA. The implications of continued commercial/industrial end use have been briefly considered.

#### 4.3.1 Current Site Users

Site A and Site C are part of DSDC Bicester which is currently an operational facility which is fenced and guarded. Access to both sites is restricted to MOD staff, cleared income generation employees and visitors. The majority of the site is suitable for use by the current users. Review of previous LQA reports, updated information and site walkover have highlighted the history and the nature of activities undertaken at the site, several potential areas that could act as contaminant sources have been identified. The risks identified for these sources are assessed to be **moderate/low**.

### 4.3.2 Construction and Maintenance Workers

A pollutant linkage is created during redevelopment activities as extensive ground disturbance



or entry into confined spaces may take place. However, exposures may be controlled by working methods and suitable personal protective equipment (PPE). The exposure pathways include dermal contact, ingestion and inhalation.

It is assumed that ground work would be the subject of a site specific health and safety assessment and appropriate measures would be taken for any redevelopment work at the site. The risks to ground workers during redevelopment are therefore considered to be **moderate** on the basis of both potential contamination and intrusive investigation results. The incorporation of appropriate Health and Safety protocols can reduce these risks to **low**.

The risks during demolition or intrusive work could be greater than this, depending on the potential extent and condition of localised radiological contamination, asbestos and work close to fuel leaks.

# 4.3.3 Future Site Users (Commercial and Industrial)

The risk to future site commercial/industrial end users considers the probable placement of hard surfaces and the consequential reduced contact with soil, which would reduce/negate potential pathways for contaminant migration to identified, less sensitive receptors. The exposure frequency and duration to contaminants from outdoor air is also reduced for commercial/industrial workers. The risks presented to future commercial/ industrial end users have generally been assessed as **moderate/low** and are covered by the range **moderate** to **moderate/low**. **Moderate** risks are located in the former burning grounds and landfilled areas around close to buildings C32, C33 and A33 where radiological contamination is potentially present and areas of bulk fuel storage.

### 4.3.4 Neighbouring Site Users

Site A and Site C are bounded in the main by agricultural areas with some residential properties adjacent to the eastern side of Site C. Whilst there is some proven and potential contaminants present on site, a number of factors including the location, localised and limited volume of identified potential contamination, surface cover and underlying geology results means that it is considered less likely to migrate from the site. Consequently, the risks assessed for this receptor are all **moderate/low**.

### 4.3.5 Groundwater

The majority of both Site A and Site C overlies unproductive strata with a small strip of land in Site C and approximately 50% of Site A sited upon a Secondary Aquifer, overlain by soil which is assessed to be of classification Low Leaching Potential. Consequently, risks are assessed to be in the range **moderate/low** to **negligible** risk for contaminant migration and impact to groundwater.

# 4.3.6 Surface Water (Drainage Ditches, Unnamed Onsite Ponds, River Ray and Brook to the East of Site A)

Precipitation from roofs and hardstanding areas drains to a network of surface water drainage ditches that drain the low-lying, poorly draining parts of the site. The closest major surface water feature to the site is the River Ray that passes through a thin strip of Site C. Two ponds are located to the north of Site C and brook follows the eastern most boundary of Site A. Based on the nature of the drainage and outfalls present at the site, the risks to surface water have been



assessed as generally **moderate** to **negligible** risks, with the highest risk associated with the former burning grounds and landfills close to buildings C32, C33 and A33 and the fuel storage facilities adjacent to buildings C61 and C33.

# 4.3.7 Ecological Systems

On the basis of the surface cover on the depot sites, the geology and distance to potential receptor areas from the potential sources of contamination the assessed risks are consider to be in the range **low** to **negligible**.

# 4.3.8 Agriculture (Arable and Livestock)

Site A and Site C are bounded in the main by agricultural land. The land is used for the grazing of livestock and arable (observed generally not to be crops for human consumption). Given the surface cover on the depot sites, the geology and distance of these receptor areas from the potential sources of contamination the assessed risks are consider to be in the range **low** to **negligible**.

# 4.3.9 Buildings and Buried Services

Risks to buildings and buried services may occur via direct contact or vapour migration from contaminants in soils. The potential presence of fuel contamination at the site generally gives rise to a **moderate/low** risk with risks for all sources assessed in the range of **moderate/low** to **negligible**.

# 4.4 Summary of Potential Contamination

The findings of the previous Phase One LQA and the further desk study information obtained as part of the Phase One LQA assessment were used to inform the scope of the Phase Two LQA. The full list of sources of potential contamination is presented within Section 1.5.

The principal health and environmental risks identified based on the initial conceptual model are summarised in the bulleted list below. The list includes all potential sources which were assessed as giving rise to a risk of **moderate** or higher. Where the only risk of greater than moderate for a source related to Humans (Construction and Maintenance Workers), these sources have not been investigated, as risks to this receptor may be mitigated by appropriate working methods and personal protective equipment (PPE). The sources that were identified for further investigation are as follows:

- Area close to building A33 used as a burning ground;
- Former burning grounds/waste disposal areas close to buildings C32 and C33 Landfill Area; and
- Current and former fuel storage areas, including building C60 Petrol, Oil, Lubricant (POL) Point (C61) and building C33 FFO Tank Area.

Surface water sampling to investigate the extensive surface water drainage system across Sites A and C was also performed to give a general indication of the surface water and land quality. Three additional boreholes were drilled at Site A in order to fulfil a request for basic investigation of the Secondary Aquifer by the Environment Agency.



# 5. Site Investigation

# 5.1 Objectives

The Phase Two investigation was commissioned by DE based on the findings of the previous Phase One LQA. The investigation design was based on targeted characterisation of the potential contamination sources summarised in Section Error! Reference source not found. of this report.

The objectives were satisfied by both non-intrusive and intrusive investigation along with sampling to obtain representative samples of soil, surface water and groundwater to characterise potential contaminants within targeted areas and to assess the associated risks to human health and the environment.

# 5.2 Scope of Works

The scope of works comprised some initial surface surveys, to inform and direct the subsequent intrusive works in the targeted areas. An outline of the works undertaken and their general order is summarised in Table 5.1.

Table 5.1 Outline of Works Undertaken

	Stage	Description
1	Confirmation of target areas	The general location and extent of identified target areas outlined by Entec based on the aerial extent identified in the previous Phase One LQA.
2	Radiological walkover survey	Walkover survey of targeted areas of the site with a radiation scintillation probe to review any detectable surface radiation. The survey data was used to manage potential health and safety issues, and to locate investigation positions to field anomalies.
3	Specify ground investigation locations	On the basis of the Phase One LQA data and the radiological survey data, the investigation scope and locations were identified in the target areas; each located to investigate identified anomalies/buried objects/provide general ground coverage.
4	Locate positions in the field	Exploratory locations in the field were located either by reference to existing buildings / structure or using a Global Positioning System (GPS) unit.
5	Service clearance	Copies of available service utility plans were obtained from the Regional Prime Contractor (PriDE/Interserve) prior to undertaking the works. Prior to any excavation, the May Gurney engineer undertook service scanning and clearance of each location. Due to the absence of complete service plans, a specialist service clearance engineer (SVS Ltd) was utilised to clear services in all investigation areas of the site prior to the commencement of intrusive works.
6a	Intrusive site works	Up to three ground investigation teams were present on site progressing a combination of boreholes, trial pits and window samples.



Table 5.1 (continued) Outline of Works Undertaken

	Stage	Description
6b	Radiological screening	Field scanning of exploratory locations and arising soils for elevated radiation readings was undertaken on areas identified as having a potential for containing buried radiological residues.
7	Laboratory analysis	Soil, groundwater and surface water samples were submitted for analysis for chemical contaminants.

# 5.2.1 Variations to Original Scope

Some variation to the original scope of works was undertaken, as a result of consultation with the Local Authority (LA) and the Environment Agency (EA) on the proposed scope of the intrusive investigation works and conditions encountered/identified in the field. These are outlined below:

#### Site A: Investigation of the North Western Boundary Area

The north western area of Site, north east of building A33 was identified as a former burning ground. The potential for contamination from site activities to have impacted on the ground in this area was intended to be investigated by the collection of surface water samples from the drainage ditches travelling across the site. Following a review of the site investigation scope by the LA and the EA, the EA requested that intrusive investigation works should be undertaken within the northern area of Site A to assess the potential for contamination in the underlying ground and shallow groundwater and for potential migration of contamination into the surrounding agricultural land.

### Site A: Investigation of the Former A33 Burning Ground

An area of woodland close to A33 was found to be too dense to achieve sufficient Global Positioning System (GPS) signal. Surveying of this are was conducted using a Ludlum 2" detector.

#### Site C: C61 POL Area

The scope of the investigation of the POL area was originally intended to be a combination of three window samples and two cable percussion boreholes encircling the underground storage tanks (USTs) associated with the POL fuel filling point. The fuel filling point is still in active use and at the time of the investigation concern was raised by the C61 POL site manager about access restrictions to this area during the drilling of the cable percussion boreholes. Due to the nature of the ground conditions encountered in this area in the excavation of the window sample holes, it was deemed that the boreholes could be replaced with window samples and the required excavation depths still achieved. Replacing the borehole with window samples would allow the terrier window sample rig to be mobilised and removed from the area at short notice if large vehicles required access to the filling point. As such boreholes BHC01 and BHC02 were replaced with window samples WSC08 and WSC07 respectively.

#### Site C: C33 Landfill

The extent and nature of the landfill material in this area of the site was due to be investigated



with the excavation of six trial pits across the landfill area. An initial walkover of this area of the site identified that the western area of the landfill was very overgrown with vegetation and a large volume of concrete railway sleepers has been deposited. Due to these restrictions to the access of the western area the scope of the investigation was reduced to target the accessible central and eastern areas. A total of four trial pits were excavated.

# Site C: Investigation of C32 Burning Ground

On discovery of elevated radioactivity readings around the C32 burning ground, the walkover RadSurvey was extended to comprise all grassed areas surrounding building C32.

# 5.3 Non Intrusive Surveys

A radiological surface survey was undertaken ahead of the main intrusive works in a number of areas across Sites A and C where information from the Phase One LQA identified the potential for radiological contamination to be present. The non-intrusive surveys were undertaken to review the potential presence of detectable radiological residues at the near surface. These are detailed below.

# 5.3.1 Radiological Walkover Survey

The radiological walkover survey (RadSurvey) covered three separate areas of land across Sites A and C. The survey area on Site A targeted an area close to Building A33 that was historically used as a burning ground. The surveying of land at Site C targeted land adjacent to the Building C32 burning ground and land to the rear of Building C33 which was historically used as a waste disposal landfill area. Radiological surveying was undertaken based on a 100% coverage survey of approximately 3 hectares of the site by Entec staff using RadSurvey equipment.

# RadSurvey 3" Probe

The RadSurvey instrument is a 3" x 3" sodium iodide probe coupled with a Trimble GPS receiver and datalogger. Radioactivity measurements in 'counts per second' (cps) and GPS coordinates are recorded simultaneously every second. The instrument was operated in 'hand held' mode.

A 100% walkover survey was conducted across the targeted areas of the site. Each area was surveyed in 2 m strips with the probe detectors held approximately 100 mm above the ground surface. The surveyor walked at speeds of no more than 1 m/s and given that readings are taken every second, a measurement of radioactivity is recorded at one metre intervals on the ground. The RadSurvey instrument also has a spectrographic capability for identification of contaminating radioisotopes.

#### Ludlum 2" Probe

The Ludlum 2241 digital ratemeter and 44-10 sodium iodide 2"x 2" probe is a hand-held instrument providing measurements of radioactivity in cps where GPS satellite signals were obscured. In areas surveyed using the Ludlum probe, the locations of measurements above background levels were recorded manually.

Both instruments are calibrated to respond to radium-226 (the suspected contaminant) as shown in Table 5.2. The radiological monitoring instruments used have valid Health Protection Agency



calibration certificates. Radium-226 contaminated soil in the range >0.37 Bq/g to <4.9 Bq/g is currently exempt from the provisions of the Radioactive Substances Act 1993 (RSA93) and the Environmental Permitting Regulations 2010 (EPR10) by virtue of its compliance with 'The Radioactive Substances (Phosphatic Substances Rare Earths etc.) Exemption Order 1962'. This is currently referred to as "Exempt" material with material above 4.9 Bq/g regarded as Low Level Radioactive Waste (LLW). As part of the Environmental Permitting Regulations (EPR) programme which included incorporation of Radioactive Substances Regulation, the Exemption Orders which exempt activities meeting specified criteria from the need to hold a permit under RSA93 and EPR10 are being reviewed. Consideration will be given once the review has been completed as to whether a new schedule or schedules may be inserted into the EPRs, especially in relation to any revised exemptions. The main risks emanating from the review of the Exemption Orders is expected to originate from the possibility that, unlike the current circumstances, future exemption limits could be radionuclide-specific. The potential impacts could include changes in waste volumes (and the corresponding cost for disposal) together with additional complexities to record keeping and monitoring.

Table 5.2 Summary of Radiological Instrument Calibration Factors and Indicative Count Rates

Instrument	Calibration Factor (cps / Bqg <sup>-1</sup> )	Uncontaminated Background Count Rates (cps)	Indicative Probe Measurements for Exempt Waste Threshold: 0.37 Bq/g (cps)	Indicative Probe Measurements for Low Level Waste Threshold: 4.9 Bq/g (cps)
RadSurvey Probe	1000	400	770	5300
Ludlum 2"	500	200	385	2650

Note: Calibration factor and count rates are for radium-226

Natural background radioactivity is ubiquitous, and needs to be considered separately from 'contaminating' radioactivity arising from human actions. At the site, the average background measurement was 400 cps using the RadSurvey probe and 200 cps using the Ludlum 2" probe. The field results of the survey are presented in Section 7.3.6. The survey areas are shown on Figure 4a and 4b.

#### **Survey Area Restrictions**

Tarmac and concrete hardstanding will attenuate radioactivity present in the ground beneath and may itself also contain relatively high concentrations of naturally occurring radioactive material (NORM). For these reasons, monitoring of hard surfaced areas is unlikely to yield a reliable indication of the presence or absence of radioactive contamination. Therefore, the radiological survey focused on the unsurfaced areas of the site.

# 5.4 Intrusive Site Investigation

The intrusive ground works were carried out over a two week period from 12 to 23 July 2010. Entec designed and supervised the intrusive works. May Gurney was appointed as the subcontractor to undertake the intrusive ground investigation works.



The investigation undertaken was a risk based assessment of selected sources of potential contamination in areas of Site A and Site C, as highlighted in the Phase One LQA and Section 4.4, as posing a **moderate** (or higher) risk to identified receptors. The following areas of greatest concern were targeted:

- A33 Burning Ground (RadSurvey only);
- C61 POL;
- C33 FFO Tank Area;
- C33 Landfill;
- C32 Burning Area; and
- Selected surface water sampling across Sites A and C.

At the request of the Environment Agency, three windowless sampler boreholes were installed on the north-western boundary of Site A to target potential migration of contaminants within groundwater.

Entec and May Gurney engineers supervised the fieldwork, logged ground conditions in all exploratory locations and obtained environmental samples as required. The target areas of concern outlined in the table below are identified on Figure 3a and 3b along with the locations of all exploratory locations. The excavation logs are presented in Annex A.

Table 5.3 provides details of the intrusive investigation locations.



Table 5.3 Intrusive Investigation Locations

Area/ Building	Objective	Contaminants of Concern	Exploratory Locations	SI Specification		
Site A: North	Investigate former A33	Hydrocarbons	WSA01	Hand-pit to max 1.2m		
western area	burning ground area and potential impact to shallow Secondary Aquifer on	Metals and other inorganics	WSA02	Hand-pit to max 1.2m		
	north western boundary of site	Solvents	WSA03	Hand-pit to max 1.2m		
Site C: C61 POL Area	Investigate potential leaks	Hydrocarbons	WSC01	Hand-pit to max 1.2m		
POL Alea	or spills from existing fuel storage tanks and/or associated pipework	Metals and other inorganics	WSC02	Hand-pit to max 1.2m		
	associated pipework	Solvents	WSC03	Hand-pit to max 1.2m		
		Convents	WSC07	Hand-pit to max 1.2m		
			WSC08	Hand pit to max 1.2m		
Site C: C32	Investigate the nature of known Made Ground material deposited in this area	Hydrocarbons	TPC01	Trial pit to max 4.5 m		
Burning Ground		Metals and other	TPC02	Trial pit to max 4.5 m		
		inorganics Solvents	TPC03	Trial pit to max 4.5 m		
		Asbestos	TPC04	Trial pit to max 4.5 m		
		Aspesios	TPC05	Trial pit to max 4.5 m		
			TPC06	Trial pit to max 4.5 m		
Site C: C33	Investigate potential leaks	Hydrocarbons	WSC04	Hand-pit to max 1.2m		
FFO Tank Area	or spills from existing fuel storage tanks and/or	storage tanks and/or	storage tanks and/or	Metals and other	WSC05	Hand-pit to max 1.2m
	associated pipework	inorganics	WSC06	Hand-pit to max 1.2m		
		Solvents	BHC03	Max 10m borehole with well pipe		
			BHC05	Max 10m borehole with well pipe		
Site C: C33	Investigate the nature of known Made Ground	Hydrocarbons	TPC07	Trial pit to max 4.5 m		
Landfill	material deposited in this	Metals and other	TPC08	Trial pit to max 4.5 m		
	area	inorganics Solvents	TPC09	Trial pit to max 4.5 m		
		Asbestos	TPC10	Trial pit to max 4.5 m		

 $\label{eq:BH-Cable} BH-Cable\ Percussion\ Borehole; \ HP-Hand-Pit; \ TP-Trial\ Pit; \ WS-Window\ Sampler\ borehole \\ ^*Exploratory\ position\ progressed\ in\ reaction\ to\ conditions\ encountered\ in\ the\ field$ 



# 5.5 Chemical Sampling and Analysis

# 5.5.1 Soil Sampling

Soil samples were collected from excavations at changes in strata and/or 1m depth intervals or less where appropriate.

For much of the site, the potential for contamination was likely to be attributable to surface residues from previous activities or buried materials / Made Ground. Consequently, for most exploratory locations, a shallow sample was taken, typically from between 0.10 to 0.50 m bgl. Additional deeper samples were also taken to review the contamination profile with depth, particularly where any significant depth of Made Ground or infill material was identified.

Soil samples were taken using either a stainless steel trowel, which was cleaned between each use to avoid cross contamination, or by hand with a change of gloves between sampling. The samples were placed directly into containers provided by the laboratory.

# 5.5.2 Soil Analysis

Soil samples were scheduled and subsequently analysed in the laboratory for some or all of the following determinands depending on historical use and visual and olfactory observations:

- Metals: arsenic, barium, boron, cadmium, chromium, hexavalent chromium, copper, lead, mercury, nickel, selenium and zinc;
- Organics: Total Petroleum Hydrocarbons Criteria Working Group (TPH-CWG), extractable petroleum hydrocarbons (EPH) or Total Petroleum Hydrocarbons (TPH) screen, polycyclic aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCBs) benzene, toluene, ethylbenzene and xylene (BTEX) and semi-volatile and volatile organic compounds (SVOC) and (VOC); and
- Asbestos and other soil parameters including pH, ammoniacal nitrogen, soluble sulphate and soil organic matter.

Where hydrocarbons were identified as a target potential contaminant of concern in the Entec Phase One LQA, selected samples of soil and groundwater were analysed using the TPH-CWG approach which divides the petroleum mixtures into fractions using the Equivalent Carbon (EC) number convention. EC numbers are used to normalise petroleum constituents by reference to their boiling point and the boiling point of equivalent n-alkanes where the number of carbon atoms is known. This allows EC numbers to be determined for constituents where only the boiling point is known. This convention is described fully in the TPH-CWG documents (*TPH-CWG 1997*).

In addition to dividing the petroleum mixtures by EC number, the TPH-CWG method also considers aliphatic and aromatic hydrocarbon fractions separately due to their differing behaviour in the environment and variation in toxicity. Thus, for the purposes of laboratory analysis and risk assessment, the TPH-CWG recommend that petroleum mixtures are considered in fourteen fractions which includes aliphatic and aromatic compounds with equivalent carbon numbers of up to 35. The UK approach considers a further three fractions to take account of aliphatic and aromatic compounds with equivalent carbon numbers of up to 70, although given the contaminants likely to be encountered during this investigation (petrol and diesels), samples were submitted for speciated analysis of aromatic/aliphatic TPH-CWG bands



with equivalent carbon numbers of up to 35.

# 5.5.3 Groundwater Analysis

Groundwater was sampled on two occasions (04/08/10 and 18/08/10) and subsequently analysed in the laboratory for some or all of the following determinands depending on historical use and visual and olfactory observations:

- Metals: arsenic, boron, cadmium, calcium, chromium, copper, lead, mercury, selenium and zinc;
- Organics: TPH-CWG or EPH, PAHs, BTEX, VOCs, SVOCs; and
- Chloride, sulphate, ammonia as NH<sub>4</sub> and pH.

# 5.5.4 Surface Water Analysis

Surface water was sampled on three occasions (21/07/10, 29/07/10 and 04/08/10) and subsequently analysed in the laboratory for some or all of the following determinands depending on historical use and visual and olfactory observations:

- Metals: arsenic, boron, cadmium, calcium, chromium, copper, lead, mercury, selenium and zinc;
- · Organics: TPH-CWG or EPH, PAHs, BTEX, VOCs, SVOCs; and
- Chloride, sulphate, ammonia as NH<sub>4</sub> and pH.

# 5.6 Gas and Vapour Screening

Headspace monitoring was undertaken on soil samples using a PID to inform sample scheduling. The PID instrument was calibrated at the beginning of each day using isobutylene (100 ppm with 10.2eV lamp, span 9.8). Headspace results are presented in Section 6.3.

# 5.7 Standpipe Monitoring

An infra-red gas detector (GA2000 analox) was used on all six occasions (21/07/10, 23/07/10, 29/07/10, 04/08/10, 13/08/10 and 18/08/10) to monitor levels of methane, carbon dioxide and oxygen from completed standpipes on six occasions following completion of the site works. In addition to the gas detector, a PID (photo ionisation detector) was also used to qualitatively measure the concentration of VOCs. Measurements were also taken of the resting groundwater depth and the depth to the base of each installation. The monitoring data is included in Section 6.6.

# 5.8 Quality Assurance and Control

The following section summarises the overall quality assurance and control applied during the intrusive investigation undertaken at the site. As demonstrated below, a quality chain exists from Entec through the various sub-contractors employed to complete the intrusive



investigation and analytical work.

Entec operates a quality system registered under BS EN ISO 9001 (Certificate Registration No FS34171). Entec only employs contractors and other key suppliers from its 'approved supplier list', which is managed under Entec's Quality System. Subcontractors are managed following guidance under Entec's Quality System Procedure 'Management of Site Works Contractors'.

The works were supervised on a full time basis by Entec. During the fieldwork the following procedures were followed to ensure the accuracy of the sampling and minimise cross contamination:

- i) Samples were only handled using clean latex or nitrile rubber gloves;
- ii) Soil samples were collected in a manner to minimise disturbance; and
- iii) Samples were maintained at a low temperature and conveyed to the testing laboratory at the earliest opportunity.

Samples were sent to ALcontrol Laboratories (ALcontrol), a specialist subcontractor to Entec. ALcontrol is an MCERTS and UKAS accredited laboratory. All samples were sent by courier accompanied by full Chain of Custody documentation and unique identifiable labels. Samples on site were stored in cool boxes with refrigerant blocks and were located out of direct sunlight. Samples were couriered on a same day basis.

# 5.9 Health and Safety

# 5.9.1 CDM Regulations

Entec undertook the role of CDM Designer, however the construction works were not anticipated to be > 30 days in duration, nor > 500 person days and therefore not considered 'notifiable' in accordance with the Construction (Design and Management) Regulations 2007. CDM Coordinator and Principal Contractor roles were not required.

# 5.9.2 Health and Safety Planning

Given the potential risks to the health and safety of site workers, a detailed Health and Safety (H&S) risk assessment and review was undertaken. The findings of this review were presented within a detailed H&S Plan prepared by Entec (Entec ref: 26999Q066i1, dated July 2010) in advance of the site investigation works and sent to all contractors and DE.

Work instructions were compiled and presented to Entec site personnel and toolbox talks provided to all site personnel to ensure that the objectives, potential risks, and works protocol was communicated and fully understood.

The final Health and Safety file arising from this project will comprise this Phase Two LQA Report.





# 6. Ground Conditions

# 6.1 Strata Encountered

In general, the geological sequence encountered across the site can be summarised in Table 6.1.

Table 6.1 Geological Sequence Encountered During Investigation

Strata Constituents	Typical Thickness	Typical Depth		
		Тор	Base	
Topsoil (where present), typically comprising of stiff brown sandy slightly gravely clay with rootlets and occasional brick and ash.	0.10 m to 0.30 m	0.00 m bgl	0.30 m bgl	
Made Ground (where present) varied in nature across the site areas and in relation to the areas targeted.	0.40 to 1.50 m	0.00 m bgl	1.50 m bgl	
In general Made Ground encountered consisted of sand and gravel layers with some clay. A small amount of ash material was encountered in the C61 POL Area and C33 Landfill Area. The landfill area also contained a large amount of inert waste materials. Abundant ash and clinker was encountered in the Made Ground within the C33 FFO Tank Area and localised areas of the C32 Landfill Area.				
Firm brown orange mottled and / or grey orange mottled sandy slightly gravely clay with occasional sand and fine gypsum crystal bands.	1.10 m to 2.15 m	0.20 m bgl	2.10 m bgl	
Firm brown sandy clay with highly weathered yellow chalk and/or organic laminations and gypsum crystal bands.	1.40 m to 1.80 m	1.30 m bgl	3.10 m bgl	
Stiff green-grey clay with occasional gypsum crystals.	0.70 m to 1.20 m	1.30 m bgl	2.50 m bgl	
Stiff grey laminated clay with shell fragments.	Unknown	2.20 m bgl	Unproven	

Exploratory excavation logs are presented as Annex A to this report. Ground conditions in each of the target areas are outlined in detail below:

# 6.1.1 Site A: North-western Boundary Area

A total of three window samples were progressed in this area as shown on Figure 3a. The encountered conditions are summarised below:

### **Topsoil**

Topsoil was encountered in all of the locations and comprised stiff brown slightly sandy slightly silty clay with sandstone gravel. The topsoil was a thickness of 0.30 m at each of the exploratory hole locations.



#### **General Made Ground**

No Made Ground was encountered in the exploratory hole locations across Site A.

#### **Natural Ground**

Natural Ground was encountered in all three exploratory locations and was consistent across the area.

This generally comprised a series of clay layers with a sand gravel band at approximately 1.00 m and 1.30 m bgl. The upper clay layer comprised firm brown orange / grey mottled sandy clay typically from 0.30 m to a maximum depth of 1.60 m bgl. The sand and gravel layer was generally encountered at the base or within this layer. A further layer of firm brown grey laminated clay with organic laminations was found underlying the clay from approximately 1.00 to 3.00 m bgl. A layer of stiff grey slightly sandy laminated clay with occasional shell fossils was encountered from approximately 3.00 m bgl extending to the base of the window sample hole in all three locations.

#### 6.1.2 Site C: C61 POL Area

A total of five window samples were progressed in this area as shown on Figure 3b. The encountered conditions are summarised below:

### **Topsoil**

Topsoil was encountered in approximately half of the locations. The topsoil was generally stiff light brown gravely clay with small amounts of ash and brick and was a thickness of 0.20 m in thickness.

#### **General Made Ground**

Made Ground was encountered in all exploratory hole locations to a varying degree. Typically the Made Ground was present in the top 0.50 m of the exploratory holes and comprised either tarmacadam, concrete and dolomite fill, in the hardstanding areas investigated, or stiff brown sandy slightly gravely clay with brick, and occasional suspected asbestos containing material (ACM) and ash. Made Ground within WSC02 extended to a depth of 0.80 m bgl but contained only inert brick material.

### **Natural Ground**

Made Ground material in all exploratory hole locations was underlain by a series of clay layers. Generally these clay layers were consistent throughout the investigation area. In WSC02 and WSC08 a firm grey blue sandy clay layer was encountered underlying the Made Ground material. This layer was particular to these two exploratory hole locations and extended from approximately 0.40 to 1.40 m bgl. Made Ground in the other investigation locations was typically underlain by a layer of firm grey orange mottled slightly sandy slightly gravely clay with gypsum crystals, coal and chalk gravel. A further layer of firm brown grey laminated clay with chalk veins and fine gypsum crystals was found underlying the clay which was in turn underlain by a layer of stiff brown grey slightly sandy laminated clay with frequent shell fossils. This base clay layer was typically encountered from 3.00 to 4.00 m bgl and extended to the termination point of each exploratory hole.



# 6.1.3 Site C: C32 Burning Ground

A total of six trial pits were progressed in this area as shown on Figure 3b. The area is known to contain Made Ground materials from the previous activities in this area of the site. The encountered conditions are summarised below:

#### **Topsoil**

No topsoil was encountered in this area of the site.

#### **Made Ground**

Due to the nature of this area of the site the Made Ground material varied between the exploratory hole locations. Generally the Made Ground consisted of layers of sand, gravel of clay and largely contained inert materials (concrete, brick, plastic and limestone). Exceptions to this were identified in TPC01 where slag material was encountered in the Made Ground layer from 0.00 to 0.30 m bgl, TPC04 where a layer of black silty fine to course sand with metal fragments was encountered between 0.80 m and 1.00 m bgl and TPC05 where a layer of black silty gravely fine to coarse sand with abundant ash was encountered between 0.15 and 0.30 m bgl. The Made Ground layers in this area of the site extended to a maximum depth of 1.50 m bgl.

#### **Natural Ground**

Made Ground was underlain by layers of clay material in all areas of the burning ground. The clay layers typically comprised stiff green-grey clay with occasional fine roots and a slight organic odour. This layer was underlain by stiff mottled grey and yellow-grey clay. From approximately 2.00 m bgl the clay typically became stiff brown grey lay with fossil shell debris.

# 6.1.4 Site C: C33 FFO

A total of two cable percussion boreholes and three window samples were progressed in this area as shown on Figure 3b. The encountered conditions are summarised below.

# **Topsoil**

A thin layer (0.10 m) of topsoil was encountered in BHC03 located on a grassed area. The topsoil consisted brown slightly sandy clay with rootlets. All other exploratory hole locations were located on areas of disturbed ground.

#### **Made Ground**

Made Ground was encountered in all of the exploratory holes in this area extending to a maximum depth of 1.20 m bgl. The Made Ground typically consisted of black ashy sand and clay with concrete and limestone cobbles, clinker and slag. Excavations of window samples WSC05 and WSC06 were terminated due to large concrete obstructions at 0.65 m bgl and 0.80 m bgl respectively.

#### **Natural Ground**

Deeper strata comprised layers of clay. A soft green-grey-brown slightly sandy clay with black staining and strong hydrocarbon odour was observed underlying the Made Ground in BHC03 from 0.65 to 1.70 m bgl. Occasional staining was also encountered in the underlying firm brown grey clay layer with coarse sand bands which extended to 2.30 m bgl. No staining was encountered in the underlying firm brown laminated clay from 2.30 to 3.00 m bgl of the stiff



grey blue laminated clay extending to the base of the hole at 7.00 m bgl.

Black staining and a slight hydrocarbon odour was noted in the firm brown grey mottled sandy clay underlying the Made Ground in BHC05 from 1.20 to 2.00 m bgl. This clay layer was underlain by clay bands typical to that encountered within BHC03 with firm brown grey laminated clay from 2.00 to 3.50 m bgl and stiff grey laminated clay with shells from 3.50 m bgl to the base of the hole at 5.00 m bgl. No staining was noted within the clay from these two layers.

Made Ground material in WSC04 extended to 0.60 m bgl. This material was underlain by a series of clay and sand / gravel bands to 2.20 m bgl. These bands were underlain by firm grey brown laminated clay with weathered chalk bands and becoming stiffer with depth. No evidence of contamination was observed in the natural materials underlying the Made Ground at this location.

#### 6.1.5 Site C: C33 Landfill

A total of four trial pits were progressed in the eastern area of the former C33 landfill, as shown on Figure 3b. The encountered conditions are summarised below:

#### **General Made Ground**

Made Ground was encountered in each of the trial pit locations across this area of the site. The Made Ground varied in thickness from 0.45 to 0.90 m bgl and typically consisted of brown silty gravely fine to coarse sand and clay. A large variety of waste materials were contained within the Made Ground including brick, concrete, wood, limestone, metal, plastic, pottery, glass, clinker and occasional suspected ACM. Abundant ash was also identified in TPC09. Organic and hydrocarbon odours were also noted in TPC07 and TPC08 respectively.

#### **Natural Ground**

Clay layers were encountered underlying the Made Ground in all areas of the investigation. Stiff mottled grey-green clay was typically present underlying the Made Ground materials. No evidence of staining or contamination was noted in this layer with the exception of TPC10 where a possible hydrocarbon odour was noted from 1.40 m bgl. The clay typically became stiff brown grey clay from approximately 2.00 m bgl to the based of the excavations at 3.20 to 3.30 m bgl.

# 6.2 Visual and Olfactory Evidence of Contamination

No evidence of contamination was identified in the investigation undertaken across Site A. In the majority of areas across Site C evidence of man-made disturbance and the presence of Made Ground have identified the potential for contamination to be present. However no evidence of gross contamination was noted in the investigation areas. The most notable evidence of contamination was observed in the C33 POL. Visual and olfactory evidence of contamination for Site C is presented within Figure 5.

In summary, the following key areas of potential contamination were identified in the field:

 Site C: C61 POL. A thin layer (0.40 m bgl) of Made Ground material was identified in this area. A small quantity of ash and possible ACM was identified within the Made Ground. No evidence of hydrocarbon staining or leakage from the



fuel tanks in this investigation area was noted in the underlying natural ground materials;

- Site C: C32 Burning Ground. Made Ground in this area generally comprised sand, gravel and clay layers. Little evidence of contamination was observed in this area with largely inert materials contained within the Made Ground. Exceptions to this were a presence of a small quantity of slag material in a thin layer of Made Ground in TPC01 (0.00 0.30 m bgl) and thin layers of black sand and ash materials in TPC04 and TPC05 at depths of 0.80 to 1.00 m bgl and 0.15 to 0.30 m bgl respectively. Slight organic odours were noted in the underlying natural materials but no visual signs of contamination were noted;
- Site C: C33 FFO Tank Area. Black ashy sand with occasional clinker was encountered in the Made Ground in all locations throughout the area, with the exception of WSC06. The Made Ground in this area was present to a maximum depth of 1.20 m bgl. A hydrocarbon odour and black staining was also noted in the underlying clay layers in BHC03 and BHC05 to a maximum depth of 2.00 m bgl. No further evidence of contamination was noted in the natural strata below this depth or underlying the Made Ground in WSC04;
- Site C: C33 Landfill Area. Made Ground in the landfill was mainly brown silty gravely fine to coarse sand and clay with a large variety of waste materials including brick, concrete, wood, limestone, metal, plastic, pottery, glass, clinker and occasional suspected ACM. Ash material was also identified within the Made Ground in TPC09. Organic and hydrocarbon odours were also noted in TPC07 and TPC08 respectively.

# 6.3 In-Situ Vapour Monitoring

Soil samples were screened for volatile organic compounds (VOCs) using a photo-ionisation detector (PID). It should be noted that measuring VOCs using a PID is only a qualitative screen; it is not uncommon for a PID to produce erroneous results so a degree of caution should be made in not to over-interpret results. A summary of headspace PID results is presented in Table 6.2.

Table 6.2 Summary of Headspace Analysis Results above Detection Limit

Exploratory Hole	Depth (m bgl)	VOC (ppm) Peak	VOC (ppm) Steady
BHC03	1.00	166	48.3
BHC03	2.00	9	40.8
TPC10	1.00	6.4	2.5
TPC10	1.60	240	240
TPC10	2.20	450	450

Note: Only headspace results exceeding 0.1 ppm are presented.



When the results of the headspace monitoring are compared to the results of the soil laboratory analysis, it is notable that concentrations of VOCs and semi-volatile organic compounds (SVOCs), along with lighter (<C10) fraction hydrocarbons were identified. Assessment of these findings is detailed in Section 7.3 below.

# 6.4 Radiological Monitoring

A hand-held scintillation detector (Ludlum model 2241-3) was used to survey arisings excavated from the trial pits and window samples and hand dug pit during the intrusive ground works in Site A, the C32 Burning Ground and the C33 Landfill. Arisings rates in counts per second (cps) in the trial pits and window samples ranged between 90 cps and 200 cps across the site. These levels are not considered to represent a significant radiological risk or a matter for regulatory concern within the areas surveyed.

# 6.5 Groundwater

Groundwater was sampled on two occasions and dipped on six occasions between 21 July 2010 and 18 August 2010. A summary of groundwater depth monitoring data is provided within Table 6.3.



Table 6.3 Groundwater Monitoring Summary

	21/07/10	21/07/10	23/07/10	23/07/10	29/07/10	29/07/10	04/08/10	04/08/10	13/08/10	13/08/10	18/08/10	18/08/10
Borehole	m bgl	m AOD										
WSA01	ND	ND	Dry	Dry	3.83	59.73	3.06	60.50	2.18	61.38	1.82	61.74
WSA02	ND	ND	1.28	62.79	1.31	62.76	1.31	62.76	1.31	62.76	1.33	62.74
WSA03	ND	ND	4.17	60.44	1.75	62.86	1.62	62.99	1.46	63.15	1.43	63.18
BHC03	1.09	63.32	1.1	63.31	1.15	63.26	1.14	63.27	1.05	63.36	1.02	63.39
BHC05	2.82	61.97	2.76	62.03	2.7	62.09	2.6	62.19	2.03	62.76	1.88	62.91
WSC02	2.23	59.47	1.81	59.89	1.2	60.50	0.83	60.87	0.99	60.71	0.99	60.71
WSC03	1.62	60.17	1.3	60.49	1.2	60.59	1.14	60.65	1.17	60.62	1.13	60.66
WSC04	0.88	63.36	0.88	63.36	0.94	63.30	0.92	63.32	0.83	63.41	0.8	63.44
WSC05	Dry											
WSC07	0.37	61.56	0.43	61.50	0.47	61.46	0.46	61.47	0.5	61.43	0.46	61.47
WSC08	0.69	61.38	0.83	61.24	0.62	61.45	0.53	61.54	0.62	61.45	0.64	61.43

ND - Not drilled at this time therefore no data available



Groundwater samples were taken from WSA01, WSA03, WSC04, WSC08 and BHC03 between 4 and 13 August 2010. A follow up groundwater monitoring round was carried out on WSC04 and WSC08 on 18 August 2010. Monitoring records are presented within Annex B.

Visual or olfactory evidence of contamination encountered within groundwater samples is presented on Table 6.4.

Table 6.4 Groundwater Visual & Olfactory Evidence of Contamination

Location	Visual or olfactory evidence of contamination
BHC03	Very slight hydrocarbon odour
WSC07	Water foamy

# 6.6 Gas and Vapour Monitoring

Gas and vapour monitoring was undertaken following drilling works on six occasions between 21 July 2010 and 18 August 2010. All of the boreholes and window samples installed (three on Site A and 8 on Site C) during the site investigation were monitored for the following:

- VOCs:
- Borehole flow rate;
- Methane:
- Carbon dioxide;
- · Oxygen; and
- Atmospheric Pressure.

The VOC results of greater than 1.0 ppm are presented in Table 6.5. The results represent the peak levels recorded at each monitoring installation. The atmospheric pressure recorded during the monitoring rounds varied between 995 and 1012 millibars (mb). The monitoring rounds on the 21 July, 29 July and 13 August 2010 were undertaken during periods of generally falling atmospheric pressure. The full monitoring results and the Gas Screening Values (GSV) are provided as Annex B to this report. Further commentary on ground gas is provided in Section 7.3.



Table 6.5 Vapour Monitoring Summary

Location	Date	VOC (ppm)	Location	Date	VOC (ppm)	Location	Date	VOC (ppm)
WSA01	21/07/2010	-	WSA02	21/07/2010	-	WSA03	21/07/2010	-
WSA01	23/07/2010	0.0	WSA02	23/07/2010	0.0	WSA03	23/07/2010	0.0
WSA01	29/07/2010	0.0	WSA02	29/07/2010	0.0	WSA03	29/07/2010	0.0
WSA01	04/08/2010	2.2	WSA02	04/08/2010	11.5	WSA03	04/08/2010	4.6
WSA01	13/08/2010	0.3	WSA02	13/08/2010	1.2	WSA03	13/08/2010	0.6
WSA01	18/08/2010	0.3	WSA02	18/08/2010	0.5	WSA03	18/08/2010	1.1
BHC03	21/07/2010	60.3	WSC03	21/07/2010	0.6	WSC07	21/07/2010	0.0
BHC03	23/07/2010	61.2	WSC03	23/07/2010	0.0	WSC07	23/07/2010	0.0
BHC03	29/07/2010	75.3	WSC03	29/07/2010	0.0	WSC07	29/07/2010	0.0
BHC03	04/08/2010	17.4	WSC03	04/08/2010	4.2	WSC07	04/08/2010	4.4
BHC03	13/08/2010	18.0	WSC03	13/08/2010	1.6	WSC07	13/08/2010	2.8
BHC03	18/08/2010	9.4	WSC03	18/08/2010	0.0	WSC07	18/08/2010	0.8
BHC05	21/07/2010	12.3	WSC04	21/07/2010	20.1	WSC08	21/07/2010	0.0
BHC05	23/07/2010	0.0	WSC04	23/07/2010	2.6	WSC08	23/07/2010	0.0
BHC05	29/07/2010	0.0	WSC04	29/07/2010	0.0	WSC08	29/07/2010	0.0
BHC05	04/08/2010	9.4	WSC04	04/08/2010	17.1	WSC08	04/08/2010	7.8
BHC05	13/08/2010	3.5	WSC04	13/08/2010	7.7	WSC08	13/08/2010	1.0
BHC05	18/08/2010	1.2	WSC04	18/08/2010	3.9	WSC08	18/08/2010	0.5
WSC02	21/07/2010	0.0	WSC05	21/07/2010	0.0			
WSC02	23/07/2010	0.0	WSC05	23/07/2010	0.0			
WSC02	29/07/2010	0.0	WSC05	29/07/2010	0.0			
WSC02	04/08/2010	2.2	WSC05	04/08/2010	8.1			
WSC02	13/08/2010	3.4	WSC05	13/08/2010	0.3			
WSC02	18/08/2010	0.0	WSC05	18/08/2010	0.0			

# 6.7 Summary of Ground Conditions

# **General Ground Conditions**

In summary, general ground conditions comprised Made Ground (where present) and/or topsoil, overlying several clay layers believed to be part of the Oxford Clay Formations.

Clay layers encountered across the site were highly consistent with firm brown orange mottled and brown grey mottled clay layers with occasional sand and gravel bands of fine gypsum



crystals encountered at shallow depth. These layers were underlain by a firm brown laminated clay layer typically with highly weathered yellow chalk veins and fine gypsum crystals. The underlying clay layer in all areas of the site was stiff grey laminated clay with shell fragments and occasional gypsum crystals.

#### **Made Ground and Evidence of Contamination**

No Made Ground or evidence of contamination was noted within Site A. Variable Made Ground is present within almost all of the areas investigated across Site C. A thin layer of Made Ground was identified in the C61 POL area which contained small quantities of ash and possible ACM. Little evidence of contamination was present within the Made Ground in the C32 burning ground with only a small about of slag and ash noted in TPC01, TPC04 and TPC05. The strongest signs of potential contamination across the site were identified in the C33 FFO Tank Area where black stained sand and ash Made Ground was encountered. Some hydrocarbon staining of the underlying clay was also noted to a depth of 2.00 m bgl. A wide variety of waste materials was identified within the C33 Landfill Area but not evidence of gross contamination was noted. Ash and possible ACM was identified within the Made Ground in TPC09 and organic and hydrocarbon odours were also noted in TPC07 and TPC08 respectively.



# 7. Generic Quantitative Risk Assessment

# 7.1 Assessment Guidelines

As part of a Tier 2 risk assessment, chemical analysis data for soils and groundwater are compared with generic assessment criteria (GAC), for determinands where values are available, in order to identify contaminants of concern and determine whether further assessment of risks is required. The assessment criteria used depends upon the source media (soil, groundwater or other measure) and the receptor under consideration.

#### 7.1.1 Human Health Guidelines

In order to provide an assessment of risks to humans presented by any contaminants identified within the surface soils and vapours at the site a human health Generic Quantitative Risk Assessment (GQRA) has been undertaken. The GQRA involves comparing contaminant concentrations observed at the site with appropriate GAC. As noted above, a GQRA forms Tier 2 of the tiered approach to assessing risks from land contamination as set out in the Defra and Environment Agency publication "Model Procedures for the Management of Land Contamination" (*Defra/EA 2004a*) CLR11.

To perform a GQRA, contaminant concentrations in soil have been compared with relevant GAC. These GAC consist of:

- EA/Defra Soil Guideline Values (SGVs);
- Entec-derived GAC;
- Chartered Institute of Environmental Health/LQM (CIEH/LQM) GAC; or
- The Environmental Industries Commission/Association of Geotechnical and Geoenvironmental Specialists/CL:AIRE (EIC/AGS/CL:AIRE) GAC for the assessment of risks to human health.

These GAC have been derived by Entec, Defra and the Environment Agency, the Chartered Institute of Environmental Health/LQM and EIC/AGS/CL:AIRE for selected substances in soils using the 'Contaminated Land Exposure Assessment' (CLEA) model.

SGVs were first published by Defra/Environment Agency in 2002. In 2008 these were withdrawn and a revised methodology for SGV derivation published (EA, 2009c). To date updated SGVs have been published for eleven contaminants (benzene, toluene, ethylbenzene and xylene, selenium, mercury, arsenic, nickel, phenol, cadmium and dioxins, furans and dioxin-like PCBs). Where published we have used revised SGVs, in absence of updated SGVs we have used previously published SGVs.

SGVs are generic values for specific land-uses derived by Defra and the Environment Agency and calculated using the CLEA model.

The SGVs are presently published for the following land use:



- Residential with consumption of home-grown produce;
- Allotments; and
- Commercial (formerly commercial/industrial).

For the purposes of this assessment, GAC have been selected based on commercial (also described as commercial/industrial) land use.

The SGVs are derived for particular soil conditions, and therefore the specific values used have been selected based on soil organic matter content of the soil where appropriate. It should be noted that the updated SGVs have been derived using a sandy loam soil with 6% soil organic matter (SOM). For Made Ground materials such as those often encountered at contaminated land sites the soil organic matter content is generally lower than 6%. Entec has therefore derived GAC for soil containing 1% and 3% SOM, which can be used as an alternative to the Environment Agency updated SGVs.

Soil Organic Matter (SOM) was analysed as part of the site investigation. Data reviewed for each of the four sites in Site C and the single area assessed within Site A, have utilised GAC bands relative to the % SOM recorded within that particular data set. A variety of SOM was observed from between 1.42% and 11.3%. As such bands relative to SOM of 1%, 3% and 6% have been utilised where appropriate.

In summary, the GQRA has been undertaken using the following assessment criteria, in order of availability:

- Defra/EA SGVs (2009);
- Entec derived GAC for 1% Soil Organic Matter based on SGVs for a commercial/industrial land use (BTEX only);
- CIEH/LQM GAC for 1% Soil Organic Matter for a commercial/industrial land use;
- EIC/AGS/CL:AIRE GAC for 1% Soil Organic Matter for a commercial/ industrial land use; and
- Previously published CLEA SGV for a commercial/industrial land use (lead only).

# **Contaminants within Gas**

The gas monitoring data has been assessed using CIRIA document C665 'Assessing risks posed by hazardous ground gases to buildings'. This method uses both gas concentrations and borehole flow rates to define a Gas Screening Value and Characteristic Situation.

#### **Contaminants within Groundwater**

Volatile compounds present within groundwater may potentially present a risk to site users via volatilisation of vapours from groundwater and subsequent inhalation. Therefore, any potentially volatile contaminants noted as being present within groundwater at elevated concentrations, i.e. above MDL, have been considered as presenting a potential risk to human health and have been considered further.



#### 7.1.2 Controlled Waters Guidelines

There are currently no published UK guideline values for soils derived to be protective of controlled waters. However, identified contaminant concentrations in groundwater, leachate or surface water have been assessed using the following Water Quality Targets (WQTs).

### **Environmental Quality Standards**

Environmental Quality Standards (EQS) have been derived by the Environment Agency for the protection of surface water quality in England and Wales. These values have been used for assessment of groundwater. Where an EQS value does not exist the appropriate Drinking Water Standard (DWS) value has been used.

Some EQS values are dependent on water hardness. Given that the water hardness measured in water samples from the site is generally in between of 150-250 mgCaCO<sub>3</sub>/l, the appropriately banded EQS values for hardness have been used, where applicable.

The absence of an applicable EQS or DWS for TPH is covered by Section 7.1.3 below.

#### **Drinking Water Standards**

UK DWS are set out in the Water Quality (Water Supply) Regulations, 2000. These values have been used for assessment of groundwater where an EQS value does not exist.

Where there are no applicable EQS or DWS, the MDL has been used for comment.

# 7.1.3 Absence of Guidelines

The site investigation employed a targeted approach and scheduled analysis of determinands based on the contaminants likely to be associated with each particular source area. For a number of the determinands scheduled, in particular chlorinated solvents and other volatile and semi volatile compounds, there are no authoritative generic assessment criteria with which to assess potential risks to human health or the environment. Therefore, where these contaminants have been detected, they have been considered further at the risk evaluation stage. Where VOCs or SVOCs have been detected, consideration has also been given to associated compounds that may also be present at concentrations below the detection limit but which may be sufficient to present a risk to receptors.

TPH no longer has an EQS or drinking water standard following the replacement of the Private Water Supply Regulations 1991 with the Private Water Supply Regulations 2009, which came into force in January 2010. In the absence of any threshold value with a statutory basis it is more appropriate to evaluate the risk on the basis of marker and indicative compounds, such as BTEX compounds and PAHs.

# 7.1.4 Radiological Assessment Guidelines

The extension of Part 2A to include radioactivity applies only in respect to harm of human health, and not in respect of other receptors or pollution of controlled waters.

The criteria for harm are when long-term exposure gives rise to doses that exceed one or more of the following:

• An effective dose of 3 millisieverts per annum (mSv/a);



- An equivalent dose to the lens of the eye of 15 mSv/a; or
- An equivalent dose to the skin of 50 mSv/a.

These doses are based on so-called 'intervention' scenarios; i.e. situations in which site users are currently being exposed, and the decision must be made whether an 'intervention' (i.e. remedial action) is necessary to reduce exposure levels. Lower dose thresholds apply for 'practices', which generally refer to consented radioactive discharges but also include redevelopment projects that result in a different exposure scenario, i.e. a change of land use.

The results of the radiological survey undertaken on this site can offer more certainty as to whether or not it is likely to be considered by the local authority in respect of Part 2A inspection, and ultimately the likelihood of it being determined as radioactively contaminated land. However, the final decision rests with the local authority.

- In the case of DSDC Bicester, where radium-226 is expected to be the predominant contaminating isotope, the Radioactive Soil Guideline Value (RSGV) applicable to commercial use, and therefore the most appropriate for current use, would be 5 Bq/g, assuming a uniform distribution of radioactivity. For comparison, the RSGV for radium-226 applicable to the most sensitive end-use scenario (residential with gardens) would be 1 Bq/g;
- If a change of use were proposed, the planning regime would take precedence over Part 2A and RSGVs would not apply. The introduction of new exposure pathways would require risk assessment, and if remediation were deemed necessary the clean-up threshold provided by the Health Protection Agency would be applied. For the purposes of this report, the end use for the majority of the site (similar commercial/industrial use) identified in the Defence Estate Phase Two LQA Directive has been assessed. Furthermore, the radiological contamination has been assessed under EPR10 and the remaining relevant provisions of RSA 93 with respect to 'practices' situations.

### Radioactively Contaminated Land Exposure Assessment (RCLEA) Model

The Radioactively Contaminated Land Exposure Assessment (RCLEA) model is Defra's recommended approach for the assessment of a site under the Part 2A regime for managing contaminated land. It complements the Contaminated Land Exposure Assessment (CLEA) approach for assessing non-radioactive contamination and is designed to support decision making under the extended regime. The methodology is based on a set of mathematical models and data that calculate radiation doses from radionuclides in soil. These have been implemented as a software application in Microsoft Excel®, published by Defra as CLR 15, which is accompanied by a summary methodology (CLR 13) and a detailed technical report (CLR 14).

Using measured concentrations of radionuclides, RCLEA calculates potential doses for comparison with regulatory criteria. It can also be used to calculate 'Guideline Values' in terms of radionuclide concentrations if reliable measurements are not yet available. In addition to specifying radionuclides present (and concentrations, if known), initial generic calculations provide the user with four basic options to select from:

- Reference land uses (consistent with CLEA), including residential (with or without home-grown vegetables), allotments and commercial/industrial use;
- Building type (timber framed or brick);



- Age (adult, infant or child); and
- Sex (male or female).

The RCLEA model is based on a probability of significant harm arising from ionising radiation, in relation to dose rate thresholds measured in millisieverts per year. The lowest threshold for 'intervention' embodied in the model is an effective dose rate of 3 mSv/a. An intervention is defined as an activity intended to reduce the exposure of an individual who is at risk from existing radioactivity. It is assumed that no remedial action would be justified if the effective dose rate were lower than this. Lower dose limits (lower by a factor of 10) are applicable to 'practices', e.g. radioactive discharges. Remediation of a site prior to a change of use would be classed as a 'practice'.

Dose rate is related to activity concentration but is dependent on a number of contingent factors such as the distribution of sources in the ground. RCLEA assumes a homogeneous source over a depth of 1 m and a surface spread of at least 10 m. RCLEA is not intended to apply to sites containing discrete point sources, but can be adapted to 'patchy' contamination by application of an averaging factor.

RCLEA can be used to generate generic guideline values for individual radionuclides. CLR 13 includes a table of generic guideline values, which for radium-226, are as follows:

- For residential land-use scenarios 1 Bq/g; and
- For commercial or industrial land-use scenarios 5 Bq/g.

On the majority of former MOD sites, radium-226 is the sole contaminating isotope. It is noted that the activity of its stable decay products are included in the guideline values.

It is important to note that when a change of use is implemented via the planning regime, the assessment of contamination from radioactivity is based upon the waste categorisation levels presented within the remaining provisions of RSA93 and the Radioactive Substances Regulations of EPR10. The levels of activity at which contamination falls under regulatory control are lower under this legislation compared to the levels of intervention (which are risk-based) under Part2A of the EPA (N.B it is intended that the planning legislation will move to a risk-based approach in the future).

### **Health Protection Agency Recommendation**

• The Health Protection Agency recommends a maximum annual dose to members of the general public of 300  $\mu Sv$ . For sites contaminated with radium-226, this is equivalent to a maximum activity concentration of 0.34 Bq/g in soils. This is the most stringent activity concentration and has therefore been used to assess radioactive materials at the site.

# Waste Disposal of Radioactive Waste

The primary legislative instrument regulating the disposal of radioactively contaminated waste are the Radioactive Substances Regulations of EPR10 and the remaining provisions of RSA93. The disposal criteria for radium-226 contaminated soils based on RSA93 are shown in Table 7.1.



Table 7.1 Ra-226 Disposal Criteria

Activity Concentration	Description	Classification
<0.37 Bq/g	Under 'The Radioactive Substances Act 1993' such material is not regarded as radioactive for the purposes of statutory control and is considered to pose no risk. This material can be left in situ.	Free Release
>0.37 <4.9 Bq/g	Contaminated soil in this range is exempt from the controls in 'The Radioactive Substances Act 1993' by virtue of its compliance with 'The Radioactive Substances (Phosphatic Substances Rare Earths etc) Exemption Order 1962'. Such material is generally disposed of to landfill under normal duty of care arrangements. (Note: whilst some volume averaging may be acceptable in this category disposal of discrete sources would generally have to be isolated and removed)*.	'Exempt Waste'
>4.9 Bq/g	Material above this concentration is regarded as Low Level Radioactive Waste (LLW). Some landfills are currently going through the permit process in order that they can accept solid low and very low level radioactive waste. The average activity (specific) concentration of waste to be disposed to permitted landfill is likely to be limited to a total of 200Bq/g for all radionuclides with half lives greater than 3 months.  Higher activity waste would be dispatched to Low Level Waste Repository	LLW
	(LLWR) at Drigg in Cumbria for disposal under a permit issued by the Environment Agency. The upper activity concentrations for such disposals is 4,000 Bq/g for alpha activity and 12,000 Bq/g for beta/gamma activity. For radium and daughters in equilibrium this would equate to a radium 226 concentration of 2,000 Bq/g.	

<sup>\*</sup> Exemption Orders which exempt activities meeting specified criteria from the need to hold a permit under RSA93 and EPR10 are being reviewed. The review may result in future exemption limit being radionuclide-specific. The potential impacts could include changes in waste volumes and additional complexities to record keeping and monitoring.

For a 3"x 3" probe, a reading of 1,000 cps (above background levels) equates to an average activity concentration of 1 Bq/g. An activity concentration of 0.37 Bq/g (Exempt waste threshold) therefore equates to a RadSurvey probe reading of 370 cps above background levels. An activity concentration of 4.9 Bq/g (LLW threshold) therefore equates to a RadSurvey probe reading of 4,900 cps above background levels. Table 7.2 provides the RadSurvey instrument calibration data.

Table 7.2 RadSurvey Calibration Data

Classification	Average Site Background Level (cps)	Equivalent RadSurvey Probe Reading Above Background Levels for Classification	Total Probe Reading for Classification (Equivalent+Background)
Exempt Waste	400	370	770
LLW	400	4,900	5,300

For a 2"x 2" probe, a reading of 500 cps (above background levels) equates to an average activity concentration of 1 Bq/g. An activity concentration of 0.37 Bq/g (Exempt waste threshold) therefore equates to a Ludlum 2" probe reading of 185 cps above background levels. An activity concentration of 4.9 Bq/g (LLW threshold) therefore equates to a Ludlum 2" probe



reading of 2,450 cps above background levels. Table 7.3 provides the Ludlum 2" instrument calibration data.

Table 7.3 Ludlum 2" Calibration Data

Classification	Average Site Background Level (cps)	Equivalent Ludlum 2" Probe Reading Above Background Levels for Classification	Total Probe Reading for Classification (Equivalent+Background)	
Exempt Waste	200	185	385	
LLW	200	2,450	2,650	

In accordance with the Radioactive Substances Regulations of EPR10 and the remaining provisions of RSA93, the results of the radiological investigation have been considered against a threshold guidance level of 0.37 Bq/g radium-226 for exempt waste and 4.9 Bq/g radium-226 for Low Level Waste.

# 7.1.5 Entec's Approach to Risk Assessment from Radioactivity

Entec's approach to assessing risks to human health from radioactive contamination is as follows:

#### **RCLEA** and Part 2A

To assess the risks to current site users in the context of EPA Part 2A, using the RCLEA model and the generic guideline values for radium-226 provided in CLR 13, as follows:

- For commercial or industrial land-use scenario 5 Bq/g;
- For residential land-use scenarios 1 Bq/g.

This will allow an assessment of whether the land could potentially be regarded as 'radioactively contaminated land' (under Part 2A), in the current use and circumstances of the land.

It should be noted that continued commercial/industrial use has been assumed for the purpose of this assessment (where appropriate application of this guidance is required).

# **Dose Exposure Scenarios**

#### Current Site Users

To further assess the risks to current site users by considering a number of viable exposure scenarios relevant to the current use of the site, the dose rate that site users could conceivably receive (under each of the scenarios considered) compared with the Health Protection Agency recommended maximum annual dose of  $300 \, \mu Sv$ .

#### Future Site Users

To assess the risks to future site users (residential and commercial) considering the following:

• A threshold level of 0.34 Bq/g radium-226 in soils, derived for a residential end



use, being the activity concentration equivalent to the Health Protection Agency recommended maximum dose to members of the general public of 300 µSv/annum.

#### Radioactive Substances Regulations of EPR10 and the remaining provisions of RSA93

The statutory requirement for the control of radioactive material under these regulations is assessed, where the threshold for radium-contaminated material to be considered radioactive is 0.37 Bq/g above background. This legislative tool is used to regulate the accumulation and disposal of radioactive material but would also be used to regulate any change of use.

# 7.2 Definition of Zones

# 7.2.1 Zones and Averaging Areas (Chemical Analysis)

The CLR guidance promotes the concept of considering a site in terms of zones and averaging areas, when assessing site investigation data. In the first instance, the site should be zoned into areas of similar historical activity and material type. The objective of this is to divide the site and its materials into data sets with similar physical and contamination characteristics that can be represented by a single representative concentration. When assessing the data, consideration must also be given to the areas to which a receptor may be exposed, termed an averaging area. Averaging areas are determined based on current or proposed land use.

#### 7.2.2 Assessment Zones

The discussion of the site investigation at both Sites A and C has focussed on areas of similar land use as follows:

- Site A: North-western Boundary Area;
- Site C Zone 1: C61 POL Area;
- Site C: Zone 2: C32 Burning Ground;
- Site C: Zone 3: C33 FFO; and
- Site C: Zone 4: C33 Landfill.

# 7.2.3 Statistical Assessment

The site investigation works undertaken provided a relatively targeted dataset for all of the zones set out in Table 7.4 below. Therefore, a full statistical assessment of the data set has not been undertaken.

A summary of the zones and associated sampling is presented in Table 7.4.



Table 7.4 Assessment Zones

Zone Number	Description	Number of Samples			
		Soil		Groundwater	Surface Water
Site A					
1	North Western Boundary	4x natural		2 location x 1 round	1 location x 3 rounds
Site C					
1	C61 POL Point	2x Made Ground natural	6x	1 location x 2 rounds	1 location x 3 rounds
2	C32 Burning Ground	7x Made Ground natural	1x	-	3 location x 3 rounds
3	C33 FFO Tank Area	5x Made Ground natural	5x	2 location x 2 rounds	1 location x 3 rounds
4	C33 Landfill Area	3x Made Ground natural	3x	-	-

# 7.3 Comparison with Generic Assessment Criteria

Observed soil concentrations have been compared to the GAC discussed above for industrial / commercial end use, based on the current and likely future use of the investigated areas of the site. The comparison is presented below. Laboratory results for all areas have been compared with relevant screening criteria. The comparisons are provided within the screening spreadsheets presented within Annex C. The laboratory certificates for the analysis is presented as Annex D. All soil/ leachate/ water exceedences of the GAC used are shown on Figures 6a and 6b.

The results of the comparison of the site investigation data have been used to refine the conceptual model which is set out in Section 7.4. The risks associated with each of the pollutant linkages identified in the previous Phase One LQA reports have been assessed, updated and presented in Section 7.5.



# 7.3.1 Site A: North western Boundary Area

Three window sample locations were included in order to assess the underlying ground and water conditions in the north western area of the site which was anticipated (from the geological mapping) to consist of alluvium deposits (clay, silt, sand and gravel) over the northern part of Site A which represents a Secondary Aquifer. These boreholes were not located to target the A33 burning ground. The associated RadSurvey of the A33 burning ground and the surface water sampling proposed for SWA02, SWA04 and SWA05 were designed to investigate this target area. Surface water samples SWA01 and SWA03 were taken to investigate and give a general indication of the condition of land adjacent to the surface water ditches.

#### **Soils Analysis**

A total of four soil samples were taken from natural strata (as Made Ground deposits were negligible) in the north western boundary area of the site. All samples were analysed for metals, ammoniacal nitrogen and sulphate. Selected samples were submitted for PAHs and banded TPH.

### Metal and Inorganic Contaminants

Although the majority of metals were marginally elevated above the MDL, none were in excess of their respective GAC.

#### Organic Contaminants

All PAHs (analysed in WSA01 1.00-1.30 m), were below limits of detection. One of the two samples analysed for TPH was marginally elevated above limits of detection for carbon band >C21 - C40, with a concentration of 19.7 mg/kg, although this was well below the most conservative GAC (for >C21-40 aliphatic) of 45,000 mg/kg.

#### **Ground Gas and Vapours**

Gas and vapour monitoring of the three installations present in this area (WSA01, WSA02 and WSA03) was carried out on five occasions. Carbon dioxide was recorded marginally above limits of detection in the majority of locations with concentrations up to 0.9% v/v. Methane was recorded at below limits of detection on all monitoring rounds Oxygen levels were generally indicative of normal atmospheric conditions of between 19.5% v/v to 20.5% v/v. Flow levels were all recorded at 0.0 l/h.

All monitoring rounds were undertaken in low pressure (<1013 mb) atmospheric conditions.

Calculated Gas Screening Values (GSV) using the methodology of the Modified Wilson and Card classification detailed in CIRIA C665, indicate that all of the installations are characterised as Situation 1 which relates to a very low risk (negligible gas regime identified).

# **Groundwater Analysis**

Groundwater was sampled from two of the three of the boreholes in this area (WSA01 and WSA03).

#### Metal and Inorganic Contaminants

Water was analysed for metals and inorganic determinands. Both locations recorded concentrations of sulphate and zinc up to 1,730 mg/l and 0.441 mg/l respectively, which were



around an order of magnitude greater than their EQS screening criteria. WSA01 also recorded a concentration levels for ammoniacal nitrogen of 1.12 mg/l, which was marginally elevated above the EQS of 0.5 mg/l.

### Organic Contaminants

No samples were scheduled for analysis of organic contaminants in any of the samples obtained.

# **Surface Water Analysis**

Surface water samples were collected from the same location (SWA01) on three separate occasions.

### Metal and Inorganic Contaminants

All samples were analysed for metals and inorganics. There were no exceedences of the WQTs used for metals in the samples obtained from this zone. Ammonical nitrogen was found to exceed the conservative DWS WQT of 0.5 mg/l at concentrations of 2.16 mg/l and 0.753 mg/l on the first and third rounds respectively.

#### Organic Contaminants

The latter two rounds were also analysed for BTEX compounds and TPH as both a GRO (C12 or lighter) and EPH (>C10-C40) type analysis. Heavier end TPH contamination was observed in all surface sampling rounds to be elevated above limits of detection with a maximum concentration of 4.44 mg/l (total) EPH in the third round. In the absence of an applicable EQS or DWS marker compounds for fuels (such as BTEX) or compounds indicative of a particular fraction (naphthalene for aromatic >EC10-EC12), may be used for comment. Comparison to naphthalene EQS is highly conservative as this would assume that the total show for aliphatic and aromatic fractions is firstly all aromatic and secondly that all of that fraction is accounted for by naphthalene which is unlikely. As such it is noted that there are no BTEX compounds present above the MDL and concentrations of TPH band C10-12 are only marginally elevated above the EQS for naphthalene.

#### 7.3.2 Site C: C61 POL Point

# **Soils Analysis**

A total of eight soil samples were taken from five windowless sampler locations, comprising two samples from Made Ground deposits and six from natural strata. All samples were analysed for metals, ammoniacal nitrogen and sulphate. Selected samples were submitted for VOCs, PAHs and banded TPH.

# Metal and Inorganic Contaminants

Although the majority of metals were marginally elevated above the MDL, none were in excess of their respective GAC. No asbestos fibres were found.

Screening of sulphate against Building Research Establishment (BRE) limits for concrete indicated that samples, taken from all locations (with the exception of WSC07) may require further consideration with concentrations up to  $2.39~\rm g/l$ . The widespread occurrence of sulphate at these concentrations within the natural strata however is likely to be indicative of a natural occurrence rather than contaminative impact from site use.



# Organic Contaminants

TPH was elevated above limits of detection in the majority of the four samples analysed, with the bulk of the compounds present being >C12. None exceeded their respective GAC.

The one sample analysed for VOCs (WSC03 - 2.40-2.60 m), recorded trichloroethene (TCE) at a concentration of 4.14 mg/kg along with associated daughter breakdown product cis 1,2-dichloroethene (DCE) at a concentration of 0.0954 mg/kg. Carbon disulphide was also recorded above limits of detection with a concentration of 0.0283 mg/kg. All were below their respective GAC.

#### **Ground Gas and Vapours**

Gas and vapour monitoring of four installations present in this area was carried out on six occasions. Carbon dioxide was recorded marginally above limits of detection in the majority of locations with concentrations up to 3.3% v/v (WSC02). Methane was recorded at below limits of detection on all monitoring rounds. Oxygen levels were generally indicative of normal atmospheric conditions of between 16.8% v/v (WSC08) to 20.8% v/v. Flow levels were all recorded at 0.0 l/h.

All monitoring rounds were undertaken in atmospheric pressures of between 995 mb and 1012 mb i.e. generally low atmospheric pressure conditions <1013 mb. At least two of the rounds were taken during falling pressure conditions.

Calculated Gas Screening Values (GSV) using the methodology of the Modified Wilson and Card classification detailed in CIRIA C665, indicate that all of the installations are characterised as Situation 1 which relates to a very low risk (negligible gas regime identified).

#### **Groundwater Analysis**

One groundwater sample was obtained from the zone (WSC08). The sample was analysed for the suite of analysis detailed above including VOCs and SVOCs (WSC08).

#### Metal and Inorganic Contaminants

The majority of determinands were recorded below the MDL and respective WQTs. Ammoniacal nitrogen was marginally elevated above the DWS of 0.5 mg/l with a concentration of 1.56 mg/l in the first round and 1.66 mg/l in the second monitoring round. Sulphate was also marginally in excess of the EQS, set at 400 mg/l with a concentration of 1,410 mg/l in the first round and 1660 mg/l in the second monitoring round, although it should be noted that the sulphate is likely to be naturally occurring. Chloride was also identified in the water sample from the second monitoring round at a concentration level of 367 mg/l.

# Organic Contaminants

The samples taken from WSC08 were scheduled for PAH analysis on both monitoring rounds. Positive identification of PAHs was reported for the water sample taken during the first monitoring round only. Results identified that fluoranthene, phenanthrene, chrysene, pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, benzo(g,h,i)perylene and indeno(1,2,3-cd)pyrene were all present at concentrations slightly above their DWSs of 0.1  $\mu$ g/l and 0.01  $\mu$ g/l for benzo(a)pyrene. The highest concentration was 1.0  $\mu$ g/l for fluoranthene. The concentration levels for PAHs in the sample from the second monitoring round were generally below their respective MDLs.



# **Surface Water Analysis**

One surface water sample was obtained from the zone (SWC08).

#### Metal and Inorganic Contaminants

All the metal and inorganic determinands tested were recorded at concentration levels below either the MDL or respective EQS.

# Organic Contaminants

Extractable Petroleum Hydrocarbon analysis was scheduled for all three monitoring rounds for the one sample location in the zone (SWC08). Hydrocarbon contamination was observed in results from the first and third rounds to be slightly elevated above limits of detection with a maximum concentration of 0.137 mg/l (total) EPH. Comparison to naphthalene EQS of 0.01 mg/l shows that the concentrations of TPH band C10-12 are below the MDL of 0.01 mg/l.

# 7.3.3 Site C: C32 Burning Ground

### Soils Analysis

A total of eight soil samples were taken from six trial pit locations, comprising seven samples from Made Ground deposits and one from natural strata. All samples were analysed for metals, ammoniacal nitrogen and sulphate. Selected samples were submitted for PAHs and banded TPH.

# Metal and Inorganic Contaminants

Although the majority of metals were marginally elevated above the MDL, none were in excess of their respective GAC.

No asbestos fibres were found.

# Organic Contaminants

TPH was elevated above limits of detection in the three of the four samples analysed, with the bulk of the compounds present being >C16. None exceeded their respective GAC. Similarly no PAHs were recorded in excess of GAC.

#### **Ground Gas and Vapours**

No boreholes were drilled in this zone and so no installations for gas sampling are present to enable monitoring. Therefore there is no analysis to report.

#### **Groundwater Analysis**

No boreholes were drilled in this zone and so no installations for water sampling are present to enable monitoring. As such there is no groundwater analysis to report for this zone.

# **Surface Water Analysis**

Surface water samples were collected from three locations (SWC02, SWC04 and SWC05) situated adjacent and downstream from the C32 Burning Ground Area. Each location was sampled on three separate occasions.



### Metal and Inorganic Contaminants

All samples were analysed for metals, sulphate, chloride, alkalinity, pH, ammoniacal nitrogen. No determinands were found in excess of their respective EQS, with the majority recorded at concentrations below their MDLs.

### Organic Contaminants

Extractable Petroleum Hydrocarbon analysis was scheduled for the first monitoring round for each sample location. Hydrocarbon contamination was observed in results from SWC02 and SWC04 to be elevated above limits of detection with a maximum concentration of 0.096 mg/l (total) EPH. Comparison to naphthalene EQS of 0.01 mg/l shows that the concentrations of TPH band C10-12 are only marginally elevated above the EQS for naphthalene at 0.0145 mg/l.

The second and third round of water samples from SWC05 were also scheduled for PAH analysis. Results identified that fluoranthene, chrysene, pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, benzo(g,h,i)perylene and indeno(1,2,3-cd)pyrene were all present at concentrations slightly above their DWSs of  $0.1\,\mu\text{g/l}$  and  $0.01\,\mu\text{g/l}$  for benzo(a)pyrene. Analysis results from the third monitoring round were all below laboratory MDLs.

### 7.3.4 Site C: C33 FFO Tank Area

### **Soils Analysis**

A total of ten soil samples were taken from three windowless sampler locations and three boreholes. Sampling comprised five samples from Made Ground deposits and five from natural strata. All samples were analysed for metals, ammoniacal nitrogen and sulphate. Selected samples were submitted for VOCs, PAHs and banded TPH.

### Metal and Inorganic Contaminants

Although the majority of metals were marginally elevated above the MDL, none were in excess of their respective GAC.

No asbestos fibres were found.

Screening of sulphate against BRE limits for concrete, suggests that two of the five Made Ground samples (WSC05 and BHC05) would exceed guideline levels.

### Organic Contaminants

Heavier end TPH compounds (>C12) and PAHs were recorded above limits of detection where analysed although none were in excess of their respective GAC.

Of the three samples analysed for VOCs Made Ground deposits from WSC05 (0.40-0.60 m) and natural strata from BHC03 (1.00 m bgl) and BHC05 (2.00 m bgl) recorded trichloroethene (TCE) at a concentration of up to 0.307 mg/kg. TCE daughter product cis 1,2-dichloroethene (DCE) was recorded in up to 0.107 mg/kg in the same samples from WSC05 and BHC03. Other occurrences of carbon disulphide, butylbenzene isomers, propylbenzene, 1.2.4-trimethylbenzene and BTEX compounds were also recorded in BHC03, although all were below their respective GAC.



### **Ground Gas and Vapours**

Gas and vapour monitoring of four installations present in this area was carried out on six occasions. Carbon dioxide was recorded marginally above limits of detection in the majority of locations with concentrations up to 1.6% v/v (BHC03). Methane was recorded at below limits of detection on all monitoring rounds. Oxygen levels were generally indicative of normal atmospheric conditions of between 17.2% v/v (BHC03) to 20.7% v/v. Flow levels were all recorded at 0.0 l/h.

All monitoring rounds were undertaken in atmospheric pressures of between 996 mb and 1012 mb i.e. generally low atmospheric pressure conditions <1013 mb. At least two of the rounds were taken during falling pressure conditions.

Calculated Gas Screening Values (GSV) using the methodology of the Modified Wilson and Card classification detailed in CIRIA C665, indicate that all of the installations are characterised as Situation 1 which relates to a very low risk (negligible gas regime identified).

### **Groundwater Analysis**

Two groundwater samples were obtained from BHC03 and WSC04. Due to the history and nature of the area both samples were analysed for the suite of analysis detailed above including VOCs and SVOCs.

### Metal and Inorganic Contaminants

The majority of determinands were recorded below the MDL and respective EQS, with the following exception. One marginal exceedance for selenium of the conservative DWS (applied in the absence of an EQS), with a concentration of 0.013 mg/l was identified within window sample WSC04.

### Organic Contaminants

Extractable Petroleum Hydrocarbon analysis was scheduled for the first monitoring rounds for the one sample location in the zone (WSC04). Hydrocarbon contamination was observed to be slightly elevated above the MDL with a maximum concentration of 0.242 mg/l (total) EPH. Comparison to naphthalene EQS of 0.01 mg/l shows that the concentrations of TPH band C10-12 are below the MDL of 0.01 mg/l.

Total aliphatics >C5-C35 for borehole location BHC03 were recorded at 0.134 mg/l (total) with the results for total aromatics >C6-C35 below the MDL of 0.01 mg/l. All speciated EPH-CWG bands were also below the MDL of 0.01 mg/l.

The sample analysed for VOCs in the first groundwater monitoring round from BHC03 recorded vinyl chloride, methyl tertiary butyl ether (MTBE), trans-1,2-dichloroethene, cis-1,2-dichloroethene and trichloroethene above their MDL. Vinyl chloride (0.028 mg/l) and cis 1,2-DCE (0.523 mg/l) were identified at concentration levels above their respective DWS and WHO quality standard concentrations of 0.0005 mg/l and 0.05 mg/l. No other VOCs were detected above their MDLs. These results would suggest that spillages of both TCE and unleaded fuel (MTBE) have occurred in the past.

The water sample taken from WSC04 on the second monitoring round was scheduled for VOC analysis. The results, like borehole BHC03 recorded vinyl chloride, methyl tertiary butyl ether (MTBE), trans-1,2-dichloroethene, cis-1,2-dichloroethene, 1,1-dichloroethene and trichloroethene above their MDL. Analysis showed that the concentration levels for Vinyl



chloride (0.126 mg/l), cis 1,2- DCE (2.36 mg/l) and trichloroethene (0.682 mg/l) were identified at concentration levels above their respective DWS, WHO and EQS quality standard concentrations of 0.0005 mg/l, 0.05 mg/l and 0.01 mg/l.

The sample taken from BHC03 was also scheduled for PAH analysis. Results identified that benzo(a)pyrene was present at a concentration level  $(0.014 \,\mu\text{g/l})$  slightly above the DWS of  $0.010 \,\mu\text{g/l}$ .

### **Surface Water Analysis**

Surface water samples were collected from the same location (SWC01) on three separate occasions.

### Metal and Inorganic Contaminants

No determinands were found in excess of their respective EQS, with the majority recorded at concentrations below their MDLs.

### Organic Contaminants

Extractable Petroleum Hydrocarbon analysis was scheduled for the first and second monitoring rounds. Hydrocarbon contamination was observed in the second round to be slightly elevated above the MDL with a maximum concentration of 0.278 mg/l (total) EPH. Comparison to naphthalene EQS of 0.0100 mg/l shows that the concentrations of TPH band C10-12 are only marginally elevated above the EQS for naphthalene at 0.0113 mg/l. Speciated results from the second round identify that the TPH comprises aromatic compounds.

The second and third round of water samples from SWC01 were also scheduled for SVOCs, VOCs and PAH analysis. Results only identified PAHs above their respective MDLs. The PAHs included fluoranthene, phenanthrene, chrysene, pyrene, benzo(b)fluoranthene, benzo(a)pyrene, benzo(g,h,i)perylene and indeno(1,2,3-cd)pyrene were all present at concentrations slightly above their DWSs of  $0.1\,\mu\text{g/l}$  and  $0.01\,\mu\text{g/l}$  for benzo(a)pyrene. Analysis results from the third monitoring round were all below laboratory MDLs.

### 7.3.5 Site C: C33 Landfill Area

### **Soils Analysis**

A total of six soil samples were taken from four trial pit locations comprising three samples from Made Ground deposits and three from natural strata. All samples were analysed for metals, ammoniacal nitrogen and sulphate. Selected samples were submitted for VOCs, PAHs and banded TPH.

### Metal and Inorganic Contaminants

The majority of metals were marginally elevated above the MDL. All, with the exception of lead (TPC09 – 0.20 m bgl) recorded at a concentration of 4,080 mg/kg, were below their respective GAC. Metal fragments were noted within the material excavated from TPC09. The sampling aimed to take a representative sample from the material and would have avoided the inclusion of larger fragments a metal. However, the presence and processing of smaller metal fragments that may have been present following crushing and drying of the 1 gramme sample cannot be discounted by the laboratory.



Suspected cement-bonded asbestos sheeting was observed in the Made Ground of trial pits TPC09 and TPC10. In the samples sent for laboratory analysis from the Made Ground, no asbestos fibres were identified. The conclusion from this is that it is likely that asbestos is present in the form of cement-bonded sheeting but that any asbestos fibres resulting from the degradation or fracture of the asbestos were not present in the sample collected.

### Organic Contaminants

As with other samples from Site C heavier end TPH compounds (>C12) and PAHs were recorded above limits of detection where analysed although none were in excess of their respective GAC.

The one sample analysed for VOCs in the natural strata of TPC10 (1.60 m bgl) recorded TCE at a concentration of 2.54 mg/kg, tetrachloroethene (PCE) at 0.159 mg/kg, DCE at 0.0723 mg/kg and a number of benzene isomers above method detection limits. None exceeded their respective GAC.

### **Ground Gas and Vapours**

No boreholes were drilled in this zone and so no installations for gas sampling are present to enable monitoring. Therefore there is no analysis to report.

### **Surface Water and Groundwater Analysis**

No boreholes were drilled in this zone and so no installations for water sampling are present to enable monitoring. Additionally, the adjacent surface water ditches were found to be dry during monitoring visits. As such there is no water analysis to report for this zone.

### 7.3.6 Radiological Survey Results

### Site A

The radiological walkover survey of the site was undertaken by Entec between 12 and 20 July 2010. The majority of the survey was successfully completed using RadSurvey equipment. Where GPS coverage was impeded due to woodland Ludlum 2" equipment was used.

The recorded data were downloaded on a daily basis and plotted to show the daily coverage, allowing any omissions to be rectified during the survey period and preliminary findings to be reported.

The total area of survey coverage (based on actual recorded data) is shown on Figure 4a with the total surveyed area estimated at 1.7 ha. Of which 1.4 ha was surveyed using RadSurvey equipment and 0.3 ha surveyed using Ludlum 2" equipment.

At Site A there were no recorded readings significantly in excess of the natural background levels.

### Site C

The radiological walkover survey of the site was undertaken by Entec between 12 and 20 July 2010. The survey was successfully completed, using RadSurvey equipment with GPS coverage being available throughout.

The recorded data were downloaded on a daily basis and plotted to show the daily coverage,



allowing any omissions to be rectified during the survey period and preliminary findings to be reported. Where elevated readings were identified, areas were locally re-surveyed to confirm the findings.

The total area of survey coverage (based on actual recorded data) is shown on Figure 5b with the total surveyed area estimated at 1 ha.

The vast majority of the areas investigated displayed surface radioactivity readings at natural background activity levels of around 400 cps. Three small areas of elevated radiological readings were identified, two located near the north west corner of building C32 and one near to the emergency water supply tank to the north of building C32. One of the areas was a 'point source' and the other two were more diffuse areas. Maximum count readings at the three points ranged from 754 cps to 1,062 cps. Two of the elevated areas are indicative of exempt waste. The remaining area falls just below the exempt waste threshold for the attained surface readings.

### **Data Presentation**

The data has been graphically represented using Geographical Information System (GIS) software. The grid co-ordinates are overlaid onto the site base plan and each data point is colour coded according to the recorded probe measurement.

Probe readings ranging from background radioactivity levels to maximum probe reading encountered are colour coded in suitable increments to enable identification of variations in radioactivity. The output is used to assist in identification of any areas surveyed which merit further investigation.

Figures 4a (Site A) and 4b (Site C) show the coverage of the non-intrusive radiological walkover survey and Figures 7a and 7b show the results of the radiological walkover survey. Figures 8a and 8b show the distribution of indicative exempt waste and LLW identified during the surveys. Areas of indicative exempt waste were defined by RadSurvey probe readings in the range 771-5,300 cps. Areas of indicative LLW are defined by RadSurvey probe readings above 5,300 cps. Table 7.5 summarises probe readings in each of the point source locations.

Table 7.5 Radiological Survey: Probe Readings in Point Source Locations

Point Source	Maximum Probe Reading (cps)*	Location (Easting, Northing Grid Reference)	Comment	Indicative Ra- 226 Activity Concentration (Bq/g)**	Indicative Waste Classification
C1	865	460437, 217349	Diffuse area approximately 3 m x 1 m in grass to west of building C32	0.47	Exempt Waste
C2	1,062	460371, 217196	Point source located in grass under tree to west of building C32	0.66	Exempt Waste
C3	754	460364, 217193	Diffuse area 13 m x 3 m near emergency water supply tank. Brick work of a culverted drainage ditch visible at points	0.35	Free Release



### Table 7.5 (continued) Radiological Survey: Probe Readings in Point Source Locations

Notes:

### 7.3.7 Radiological Intrusive Investigation

Based on the results of the radiological survey, two of the three areas (C1 and C2) of elevated activity were targeted for either machine or hand excavated exploratory holes. Point C3 was not investigated further as a brick culvert could be seen to be present; this brickwork is the most likely source of the elevated readings.

The purpose of the exploratory holes was to assess the source of the elevated readings, the nature of the radioactive contamination present and identify whether it could be attributable to a specific type of source. The findings of the radiological intrusive investigation are summarised in Table 7.6. Exploratory hole logs covering radiological intrusive investigation are included within Annex A (TPC06) and Annex E (HDPCR01).

Table 7.6 Intrusive Radiological Summary

Point Source	Exploratory Hole reference	Maximum Probe Reading (cps)#	Source of Elevated Count	Indicative Ra- 226 Activity Concentration (Bq/g)**	Indicative Waste Classification
C1	TPC06	425	Layer of granite cobbles	Not applicable – source of elevated counts is of natural origin	Free Release
C2	HDPCR01	1,000	Localised layer of ashy material between 0.2 and 0.3 m bgl	1.6	Exempt Waste

### Notes

### 7.4 Conceptual Model

The conceptual model developed during the previous Phase One LQA has been refined to account for the results of this Phase Two Site Investigation. Figure 9 illustrates the revised conceptual model.

### 7.4.1 Summary of Ground Conditions

In summary, general ground conditions comprised Made Ground (where present) and/or topsoil,



<sup>\*</sup> Maximum Recorded Value; cps = counts per second

<sup>\*\*</sup> Calculated as [observed reading (cps) - background activity (cps)]/1000. Threshold = 0.37 Bq/g for Ra-226 to be classified as radioactive material (under Radioactive Substances Act 1993). Background = 400 cps

<sup>#</sup> Intrusive investigation count readings are taken using Ludlum 2" detector

<sup>\*\*</sup> Calculated as [observed reading (cps) - background activity (cps)]/500. Threshold = 0.37 Bq/g for Ra-226 to be classified as radioactive material (under Radioactive Substances Act 1993). Background = 200 cps

overlying several clay layers believed to be part of the Oxford Clay Formations.

Groundwater at the site was encountered in all locations installed within the clay deposits present across both sites.

### 7.4.2 Summary of Contaminants

The following areas of potential contamination were investigated, and the presence of the listed contamination groups was confirmed. The following sections focus on contaminants that exceeded relevant GAC or WQT only.

### Site A: North-western Boundary

- Soils No exceedences of GAC with regards to human health were recorded; and
- Waters Exceedences of the WQT screening criteria for zinc, sulphate and ammonium were observed in groundwater samples from the site. Exceedences of ammonium were also recorded in surface waters. Organics elevated above the MDL, but for which no applicable WQT exist were present (notably TPH), however, it is considered that the concentrations observed are unlikely to be significant.

### Site C: All Areas

- Soils Only one sample exceeded any of the prescribed GAC with regard to human health, which comprised TPC09 (0.20 m), which recorded a concentration of lead at 4,080 mg/kg. Sulphate was elevated and exceeded BRE guideline concentration levels where consideration of the use of special specification concrete would be necessary for in-ground structures in both the C32 Burning Ground and C61 POL Area. However, it should be noted that sulphate concentrations will be elevated in this area anyway (as evidenced by gypsum crystals). Occasional pieces of cement-bonded asbestos sheeting were also observed however no fibres were identified during laboratory testing; and
- Waters Exceedences for vinyl chloride, cis 1,2-dichloroethene, trichloroethene and benzo(a)pyrene were identified within BHC03 and WSC04 (both located in the C33 FFO Tank Area) with exceedences of (DWS) for several PAHs (including benzo(a)pyrene) in surface waters (SWC01 and SWC05 both on the second round) and WSC08 (C61 POL Point). Marginal exceedences of WQT for selenium (DWS) and ammonium (EQS) are considered to be localised and unlikely to be indicative of significant contamination, especially considering the absence of similar impact in nearby surface waters.

### **Summary of Radiological Survey**

At Site A there were no recorded readings significantly in excess of the natural background levels.

A hand-held scintillation detector (Ludlum model 2241-3) was used to survey arisings excavated from the trial pits and hand dug pits during the intrusive ground works around the C32 burning ground area.

Three small areas of elevated radiological readings were identified (using the RadSurvey



equipment), two located near the north west corner of building C32 and one near to the emergency water supply tank to the north of building C32. One of the areas was a 'point source' and the other two were more diffuse areas. Maximum count readings at the three points ranged from 754 cps to 1,062 cps.

Further intrusive investigation in the C32 burning ground area identified maximum arisings rates (using a Ludlum model 2241-3) in counts per second (cps) ranged between 425 cps and 1,000 cps. These levels are not considered to represent a significant radiological risk or a matter for regulatory concern within the areas surveyed.

### 7.4.3 Receptors and Pathways

The updated receptors and pathways identified are included in Table 7.7.

Table 7.7 Updated Receptors and Pathways

Receptor	Pathway
Site Visitors/Users (Commercial/Industrial)	Dermal contact, direct contact, ingestion, inhalation
Construction and Maintenance Workers	Dermal contact, direct contact, ingestion, inhalation
Future Site Users (Commercial/Industrial)	Dermal contact, direct contact, ingestion, inhalation
Neighbouring Site Users	Dermal contact, direct contact, ingestion, inhalation
Groundwater (Secondary Aquifer and Unproductive Strata)	Leaching from soils, transport in groundwater, groundwater contamination
Surface Water (site drainage ditches, unnamed on- site ponds, River Ray, brook to east of Site A)	Leaching from soils, transport in groundwater, groundwater contamination, run-off
Ecological Receptors	Uptake, direct contact
Agricultural Receptors	Uptake, direct contact
Buildings and Buried Services (current and future)	Degradation (chemical attack), direct contact, vapour migration, explosion

### 7.5 Risk Assessment

The generic quantitative risk assessment and refined conceptual model have identified a number of potential pollutant linkages (contaminant-pathway-receptor) on the site which are tabulated in Annex F. Each linkage is qualitatively assessed by the following criteria:

- i) Potential consequence of pollutant linkage;
- ii) Likelihood of pollutant linkage; and
- iii) Risk classification.

'Potential Consequence of Pollutant Linkage' gives an indication of the sensitivity of a given receptor to a particular source or contaminant of concern under consideration. It is a worst case classification and is based on full exposure via the particular linkage being examined.



'Likelihood of Pollutant Linkage' is an assessment of the probability of the selected contaminant and receptor being linked by the identified pathway. This assessment is ranked based on site-specific conditions.

The 'Risk Classification' column is an overall assessment of the actual risk, which considers the likely effect on a given receptor, taking account of both of the previous rankings. The risk assessment criteria and Consequence Matrix are included as Table 7.8 and Table 7.9.

Table 7.8 Risk Assessment Criteria

Classification of Consequence					
Severe	- Acute risks to human health				
	- Short term risk of pollution of sensitive water resource (e.g. major spillage into controlled waters)				
	- Impact on controlled waters e.g. large scale pollution or very high levels of contamination				
	- Catastrophic damage to buildings or property (e.g. explosion causing building collapse)				
	- Ecological system effects – irreversible adverse changes to a protected location. Immediate risks				
Medium	- Chronic risks to human health.				
	- Pollution of sensitive water resources (e.g. leaching of contaminants into controlled waters).				
	- Ecological system effects – substantial adverse changes to a protected location.				
	- Significant damage to buildings, structures and services (e.g. damage rendering a building unsafe to occupy, such as foundation damage).				
Mild	- Non-permanent health effects to human health.				
	- Pollution of non-sensitive water resources (e.g. pollution of non-classified groundwater).				
	- Damage to buildings, structures and services (e.g. damage rendering a building unsafe to occupy, such as foundation damage).				
	- Substantial damage to non-sensitive environments (unprotected ecosystems e.g. crops).				
Minor/Negligible	- Non-permanent health effects to human health (easily prevented by appropriate use of PPE).				
	- Minor pollution to non-sensitive water resources.				
	- Minor damage to non-sensitive environments (unprotected ecosystems e.g. crops).				
	- Easily repairable effects of damage to buildings, structures, services or the environment (e.g. discoloration of concrete, loss of plants in a landscaping scheme).				

### **Classification of Probability**

High Likelihood	An event is very likely to occur in the short term, and is almost inevitable over the long term OR there is evidence at the receptor of harm or pollution.
Likely	It is probable than an event will occur. It is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood	Circumstances are possible under which an event could occur. It is by no means certain that even over a longer period such an event would take place, and less likely in the short term.
Unlikely	It is improbable that an event would occur even in the very long term.



Table 7.9 Consequence Matrix

Consequence	Probability				
Consequence	High Likelihood	Likely	Low Likelihood	Unlikely	
Severe	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk	
Medium	High Risk	Moderate Risk	Moderate/Low Risk	Low Risk	
Mild	Moderate Risk	Moderate/Low Risk	Low Risk	Negligible	
Minor/ Negligible	Moderate/Low Risk	Low Risk	Negligible	Negligible	

The basis of the assessment is detailed in Annex F and the outcome with respect to each receptor is discussed below. It should be noted that the assessment below is based on the areas targeted as part of the risk based Phase Two investigation only. A number of areas, not highlighted as a priority, have not been investigated further (see Annex F), and as such the risk rating for these remain as previously assessed in the Phase One LQA.

### 7.5.1 Current / Future Site Users (Commercial/ Industrial)

The risks to current site users from contamination with all of the areas investigated are generally assessed as **low** although a **moderate/low** classification was given for the C33 landfill area due to the exceedance of the GAC with respect to lead and the potential presence of landfill gas within the landfill and burning grounds. A **moderate/low** risk is also associated for future commercial/industrial site users with respect to the radiological contamination identified in the former burning grounds and landfill.

It should be noted that this investigation targeted moderate and above risk linkage onlys and assessment cannot be made of the areas of the site not targeted as part of this investigation. The evidence of impact on both soils and groundwater, particularly within the main operations area targeted at Site C, increases the likelihood of further contamination being present within these areas.

### 7.5.2 Construction and Maintenance Workers

Increased potential for exposure is created during maintenance or redevelopment activities, as extensive ground disturbance or entry into confined spaces may take place. Risks to site workers may arise as a result of exposure to contaminants through direct contact, ingestion or inhalation exposure pathways. Overall risks to construction workers from the contamination identified in all of the zones investigated have however been assessed as **low** or **moderate/low** based on the general absence of contaminants found. A **moderate** risk has been applied in the C33 landfill discussed above with respect to lead. However, exposure times are likely to be short and exposure can be controlled by design considerations, environmental management during construction and suitable personal protective equipment. The risk to this receptor will be mitigated through use of appropriate PPE and control measures.

### 7.5.3 Groundwater

The majority of both Site A and Site C overlies unproductive strata with a small strip of land in



Site C and approximately 50% of Site A sited upon a Secondary Aquifer, overlain by soil which is assessed to be of classification Low Leaching Potential. Groundwater flows are likely to be towards the surface water features noted throughout the site. Exceedances of the WQT used can be summarised as follows:

- Site A (WSA01 and WSA03). Water was analysed for metals and inorganic determinands. Both locations recorded concentrations of sulphate and zinc up to 1,730 mg/l and 0.441 mg/l respectively, which were around an order of magnitude greater than their EQS screening criteria. WSA1 also recorded a concentration ammoniacal nitrogen of 1.12 mg/l, which was marginally elevated above the EQS of 0.5 mg/l;
- Site C: WSC04 (FFO) One marginal exceedance of the conservative DWS (applied in the absence of an EQS), with a concentration of 0.013 mg/l; and
- Site C: WSC08 (POL) Ammoniacal nitrogen marginally elevated above the EQS of 0.5 mg/l with a concentration of 1.56 mg/l. Sulphate was also marginally in excess of the EQS, set at 400 mg/l with a concentration of 1,410 mg/l.
- However, there was no consistent linkage between soil contamination and the
  minor groundwater exceedances. Therefore, risks to groundwater from
  contamination present within the zones investigated have been assessed as
  negligible due to the concentrations of contamination identified.

### 7.5.4 Surface Water

Precipitation from roofs and hardstanding areas drains to a network of surface water drainage ditches that drain the low-lying, poorly draining parts of the site. The closest major surface water feature to the site is the River Ray that passes through a thin strip of Site C. Two ponds are located to the north of Site C and brook follows the eastern most boundary of Site A.

Assessment of surface waters against EQS demonstrated little if any impact above prescribed EQS, with only marginal exceedences of ammonium in Site A. Concentrations of TPH, recorded as above the MDL do not have an applicable screening criteria, but may be indicative of site derived contamination entering the water feature.

The risks to surface water from the contamination identified in the zones investigated have therefore been assessed as **low**, with the exception of the site A TPH which is assessed as **moderate/low**.

### 7.5.5 Ecological Receptors

No significant ecological receptors have been identified in the site vicinity. Therefore, the risks to ecological receptors have been identified as **negligible**, due mainly to the likelihood that the sensitivity will decrease with respect to distance from the identified contamination to this receptor.

### 7.5.6 Agricultural Receptors

The eastern and northern parts of the site are used in part for agricultural (arable) uses, which could potentially be impacted by localised contamination impacting these areas. However, the potential contamination areas of concern investigated as part of this LQA are generally located



away from these areas. The risks to agricultural receptors have been identified as negligible.

### 7.5.7 Buildings and Buried Services

There may be potential risks to current and future in-ground concrete structures via direct contact with ground contamination (in particular sulphate). Elevated concentrations, which may suggest potential BRE specification DS-2 and DS-3 concrete would be required were recorded in Site A as well as the FFO and POL areas. However, given the 'mild' potential consequence of the relevant pollutant linkages, the risks to buildings and buried services are assessed as **negligible**.





# 8. Overall Land Quality and Suitability for Continued Use

### 8.1 Site Sensitivity

Sites A and C cover areas of around 13 ha and 24 ha respectively. The sites have underlying geological sequences that consist of alluvium deposits (clay, silt, sand and gravel) over the northern part of Site A and over the strip of land connecting Site C and Site D directly overlying solid geology consisting of the Stewartby Member (mudstone) and Peterborough Member (mudstone) of the Oxford Clay Formation.

The northern half of Site A is underlain by a Secondary Aquifer (comprising soils of Low Leaching Potential). This is considered to be the Alluvium. The land in the southern half of Site A is underlain by Unproductive Strata (Negligibly Permeable).

The majority of Site C is underlain by Unproductive Strata (Negligibly Permeable). The strip of land connecting Site D and Site C is also underlain in places by a Secondary Aquifer (including soils of both High and Low Leaching Potential).

As the site is mainly underlain by an Unproductive Strata (Oxford Clay Formation), groundwater sensitivity is assessed as generally **low**, with a **moderate** sensitivity assessed for the Secondary Aquifer (Alluvium) situated in the north part of Site A.

The River Ray traverses the extreme north of the Site C and is of a generally poor water quality. There is potential for the River Ray to be affected by direct run-off and discharges from the site. However, the site itself is large and as such the sensitivity will decrease with respect to distance for the identified surface water receptors. Surface water sensitivity has been assessed as **moderate**.

A Site of Special Scientific Interest (SSSI) is located close to the strip of land connecting Site C to other areas of DSDC Bicester. Both Site A and Site C have a record of one Environmentally Sensitive Area (ESA) being located on-site with a third record being positioned approximately 130 m west of Site C. Both sites are surrounded predominantly by agricultural land which forms the ESA, namely the Upper Thames Tributaries ESA. However, both sites are large and as such the sensitivity will decrease with respect to distance for the identified ecological receptors with Site C being the most sensitive due to the proximity of the SSSI. Ecological sensitivity has been assessed as **moderate**.

### 8.2 Overall Land Quality

The findings of the Entec Phase One LQA were used to inform the scope of this Phase Two LQA. Based on this information, a number of areas of potentially significant contamination risk were prioritised for further investigation. Assessment of the site was based on the current or future potential commercial/industrial site use.

Laboratory analysis of soil samples indicated the presence of organic and inorganic



contaminants in particular hydrocarbons in the location of the C33 FFO, and trace concentrations of chlorinated solvents. However, the majority of the site was not found to have exceedences of relevant industrial/commercial assessment criteria. The one exception to this comprised one occurrence of lead in the C33 Landfill. This isolated exceedance at the observed concentration is not likely to present a significant risk to current or future site users.

Only isolated and minor exceedences of prescribed WQT were recorded in surface and groundwaters. Levels of TPH (for which there is no applicable screening criteria), were marginally elevated above limits of detection in surface waters from Site A, possibly indicating some effect from site derived contamination. Again, the contaminants at the levels observed are not considered likely to be significant. As such, it is not considered likely that the site poses a significant risk to controlled waters.

Widespread occurrences of sulphate are at concentrations which (in line with the BRE guidelines) suggest that the use of higher specification concrete should be considered for future in-ground concrete structures;

Monitoring of soil gas recorded no concentrations or flows which are of concern.

No recorded readings significantly in excess of the natural background levels were identified at Site A. Three small areas of elevated radiological readings were identified (using the RadSurvey equipment) at Site C with maximum count readings at the three points ranged from 754 cps to 1,062 cps. The levels detected are not considered to represent a significant radiological risk or a matter for regulatory concern.

### 8.3 Environmental Risks

The risks to current statutory receptors including site users, controlled waters and ecological receptors have been assessed in selected areas of the C61 POL, C33 FFO Tank Area, C32 Burning Ground and C33 landfill. Potential risks, relating to migration of contaminants within groundwater, have also been assessed, by request of the Environment Agency, on the north-western boundary of Site A. A summary of the assessment is as follows:

- The risks to current site users from contamination with all of the areas investigated are generally assessed as low although a moderate/low classification was given for the C33 landfill area due to the exceedance of the GAC with respect to lead and the potential presence of landfill gas within the landfill and burning grounds. A moderate/low risk is also associated for future commercial/industrial site users with respect to the radiological contamination identified in the former burning grounds and landfill;
- Overall risks to construction workers from the contamination identified in all of the
  zones investigated have however been assessed as low or moderate/low based on
  the general absence of contaminants found. A moderate risk has been applied in
  the C33 landfill discussed above with respect to lead. However, exposure times are
  likely to be short and exposure can be controlled by design considerations,
  environmental management during construction and suitable personal protective
  equipment. The risk to this receptor will be mitigated through use of appropriate
  PPE and control measures;
- · There was no consistent linkage between soil contamination and the minor



groundwater exceedances. Therefore, risks to groundwater from contamination present within the zones investigated have been assessed as **negligible** due to the concentrations of contamination identified:

- The risks to surface water from the contamination identified in the zones investigated have therefore been assessed as low, with the exception of the site A TPH which is assessed as moderate/low;
- No significant ecological receptors have been identified in the site vicinity.
   Therefore, the risks to ecological receptors have been identified as **negligible**, due mainly to the likelihood that the sensitivity will decrease with respect to distance from the identified contamination to this receptor;
- The eastern and northern parts of the site are used in part for agricultural (arable) uses, which could potentially be impacted by localised contamination impacting these areas. However, the potential contamination areas of concern investigated as part of this LQA are generally located away from these areas. The risks to agricultural receptors have been identified as **negligible**;
- There may be potential risks to current and future in-ground concrete structures via direct contact with ground contamination (in particular sulphate). Elevated concentrations, which may suggest potential BRE specification DS-2 and DS-3 concrete would be required were recorded in Site A as well as the FFO and POL areas. However, given the 'mild' potential consequence of the relevant pollutant linkages, the risks to buildings and buried services are assessed as **negligible**.

### 8.4 Suitability of the Site for Continued Use

Based on findings of this risk-based Phase Two LQA, which targeted areas of potential contamination identified from the Entec Phase One LQA, the areas of the site investigated are considered suitable for continued current use, without the need for significant mitigation or remedial measures to protect the current site users.

Although little ACM was identified within the Phase Two investigation, some of the existing buildings contain suspected ACMs as part of external building fabric which could degrade and fall onto the adjacent ground. Continued suitability for use is dependent on the management of ACM and the effectiveness of the actions will impact this status.

# 8.5 Suitability of the Site for Future Development and Commercial/Industrial Use

The future use of the site is likely to be similar to its present use and the timeframe for disposal by DE is currently not certain. Based on the results of this risk-based, targeted investigation, the site is considered to be suitable for redevelopment to a commercial/industrial end use.

However, due to the limited nature and extent of the intrusive investigation and the potential for residual contamination to be present in and around existing (and in most cases still operational) infrastructure, it is possible that additional investigation will be required as part of the development process. Such investigation will be dependent upon the development design.



Ground gas/ vapours may also need to be considered if new developments are built on areas of localised hydrocarbon contamination but will again be dependant upon the development design.

The one exceedance of lead in the C33 Landfill Area may require consideration in any future development of the site in the C33 Landfill Area. It is usual for commercial/industrial developments to comprise significant areas of hardstanding (effectively entailing a cover systems in the area) and this is likely to be sufficient to negate the risk from the non-volatile contaminant.

Development may involve the removal of the subsurface fuel storage tanks and pipework and remediation may be required following the removal of these tanks if the soils and waters are found to have been impacted by any contamination. Development may also require the removal or alteration of building/ tank foundations, building fabric, underground pipework and underground voids, which will have a cost implication. It is considered likely that construction/redevelopment workers will come into direct contact with areas of potential contamination and all workers should be made aware of potential risks that exist at the site and take suitable measure to avoid or mitigate potential risk. Appropriate personal protective equipment (PPE) should be used and good working practices adhered to during any future redevelopment work at the site.

Development of the land is also likely to involve the removal of buildings present on site, some of which potentially contain asbestos within the building fabric. Disposal of all asbestos containing material would need to be carried out by a specialist contractor.



## **Figures**

Figure 1 Site Location Plan;

Figure 2a & b Site Layout Plan (Site A and Site C);

Figure 3a & b Exploratory Hole Location Plan & On-site Sources of Potential

Contamination (Site A and Site C);

Figure 4a & b Radiological Survey Coverage (Site A and Site C);

Figure 5 Visual and Olfactory Evidence of Contamination (Site C Only);

Figure 6a and 6b Soils Exceeding Human Health Industrial/Commercial Assessment

Criteria and Ground/Surface Waters Exceeding WQT (Site A&Site C);

Figure 7a & b Radiological Survey Activity Levels (Site A and Site C);

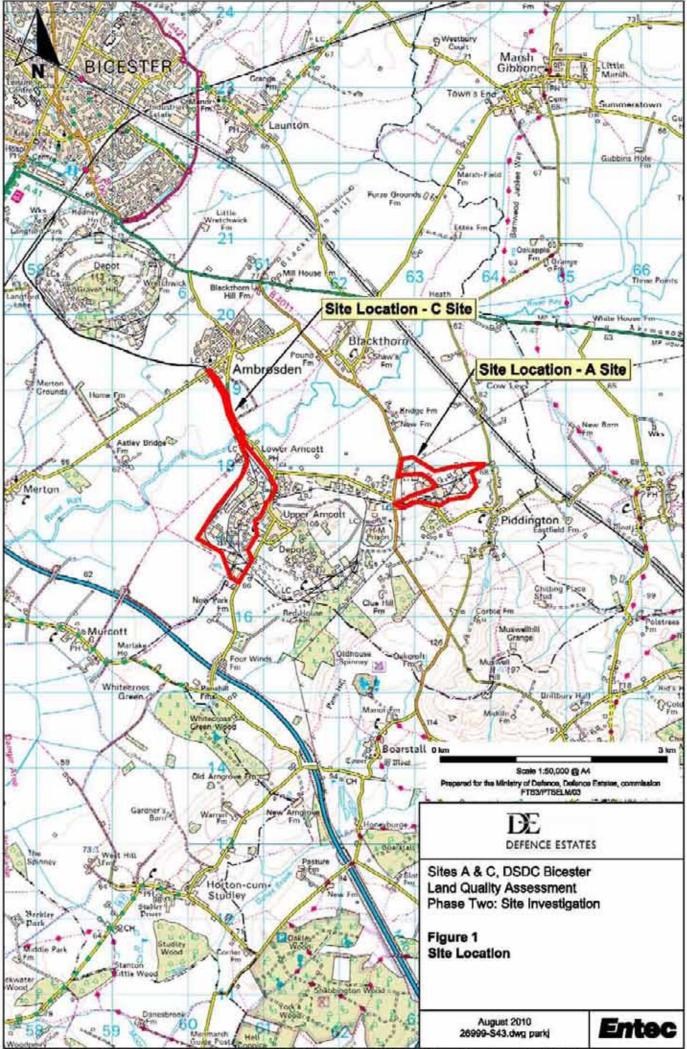
Figure 8a & b Radiological Survey Indicative Exempt and Low Level Waste (Site A

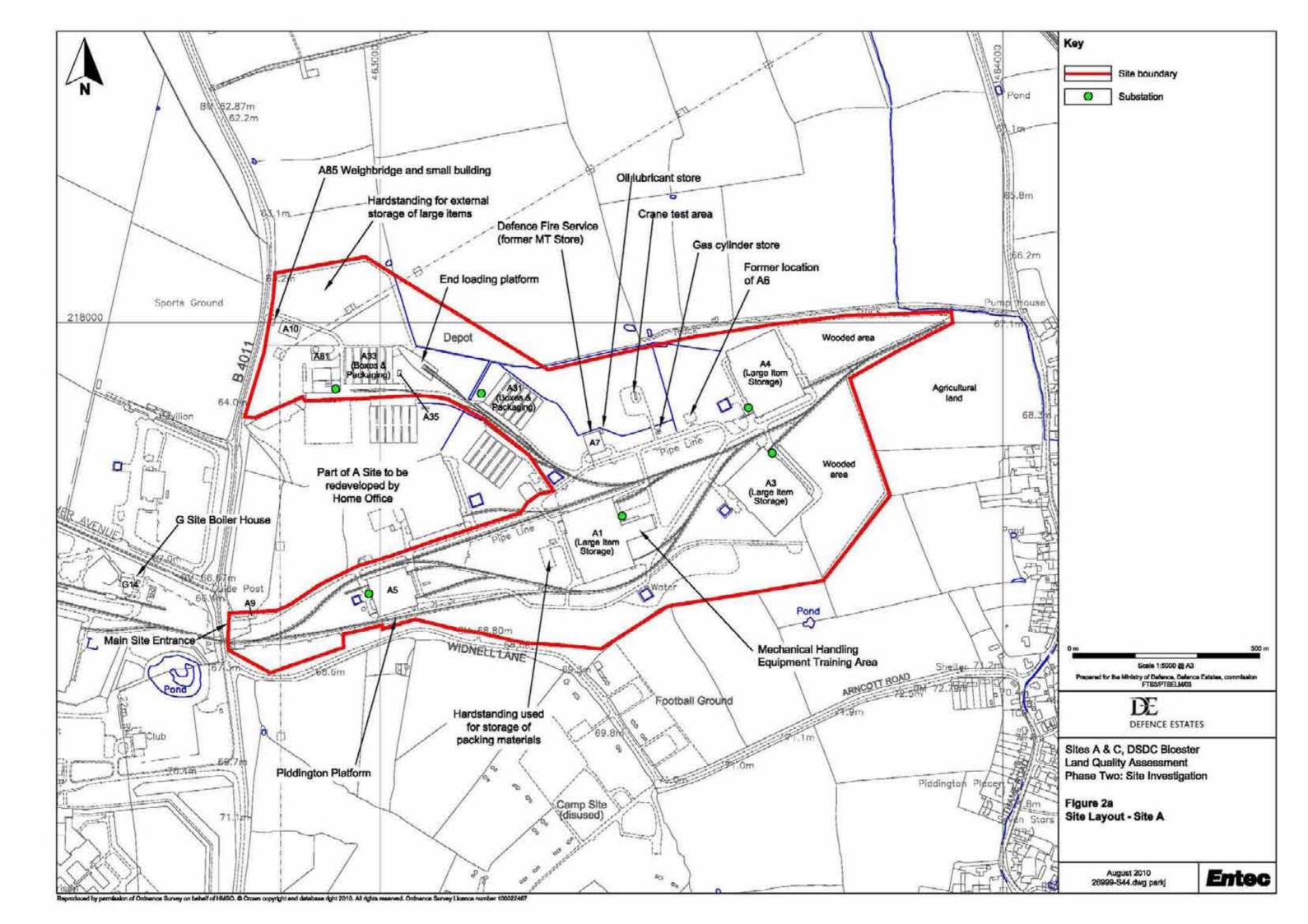
and Site C); and

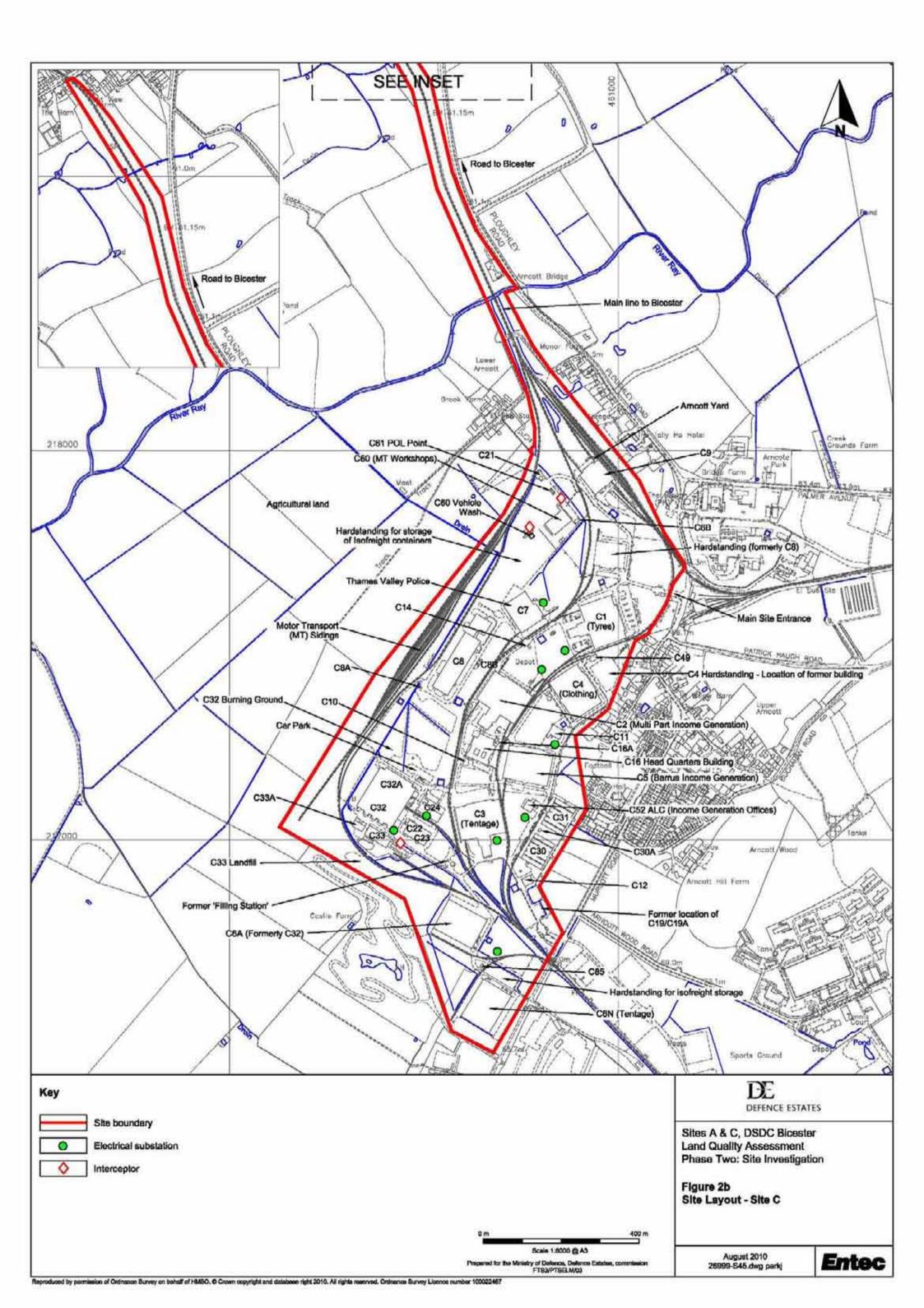
Figure 9 Conceptual Site Model.

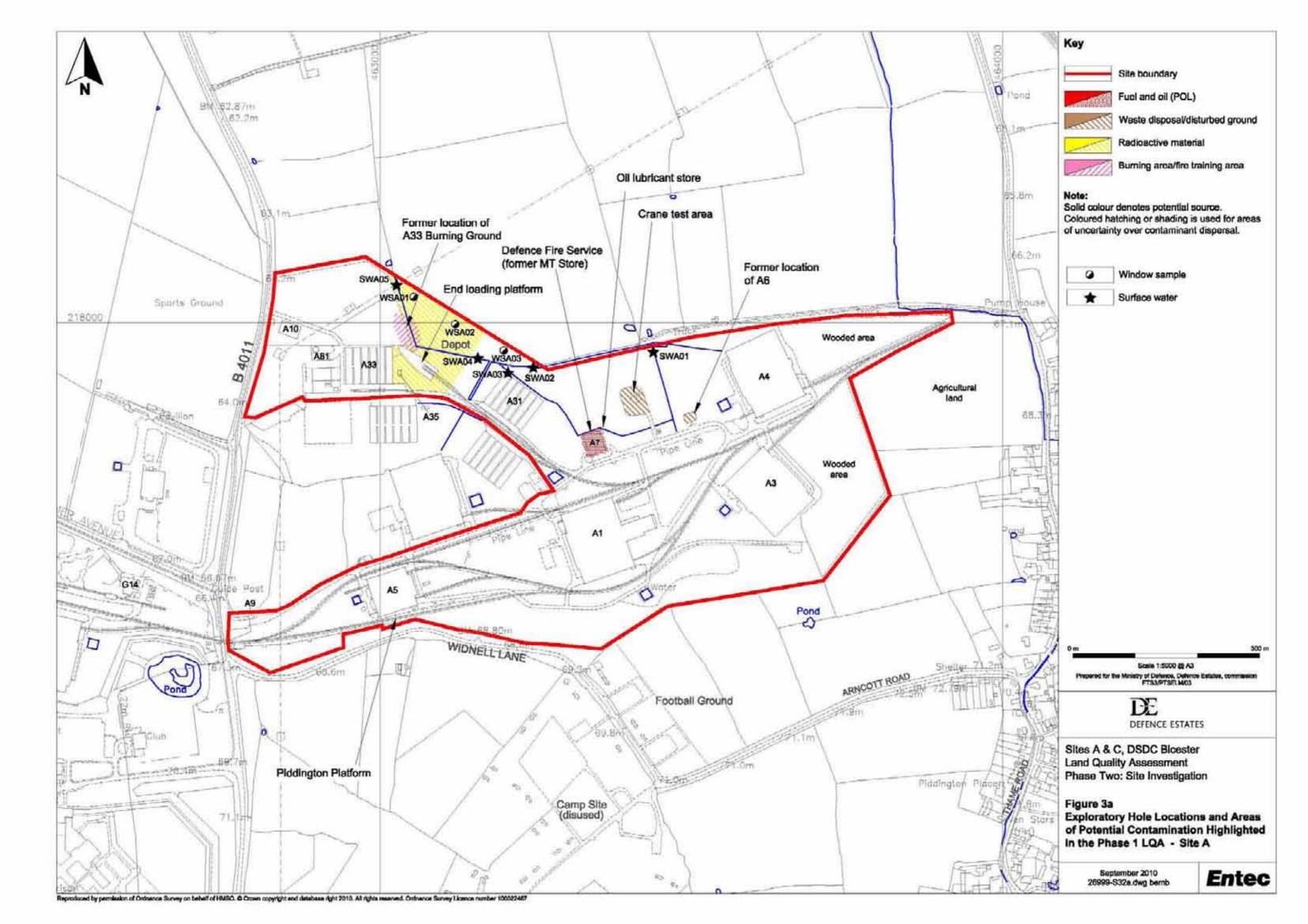


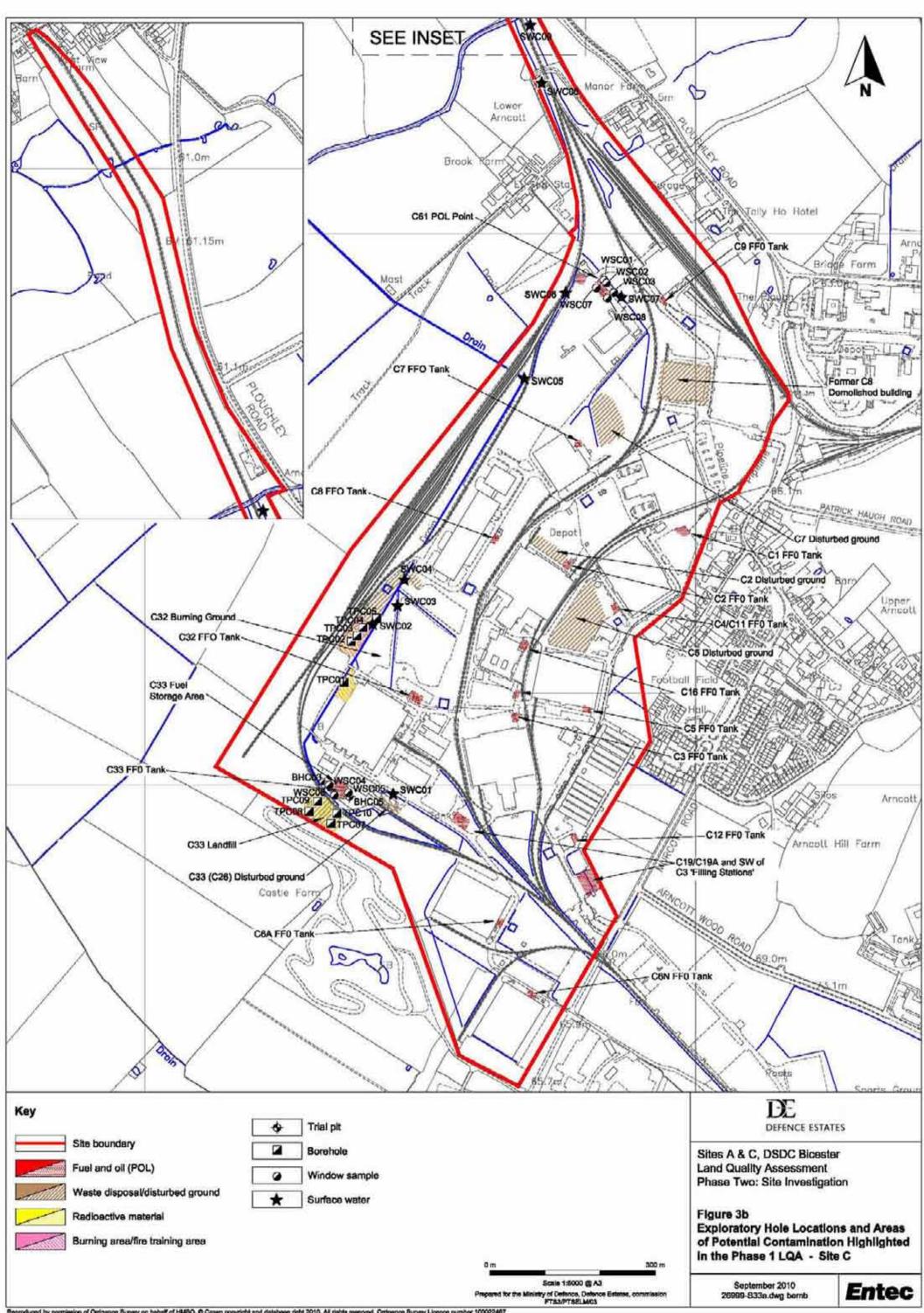
# © Entec UK Limited **Entec**

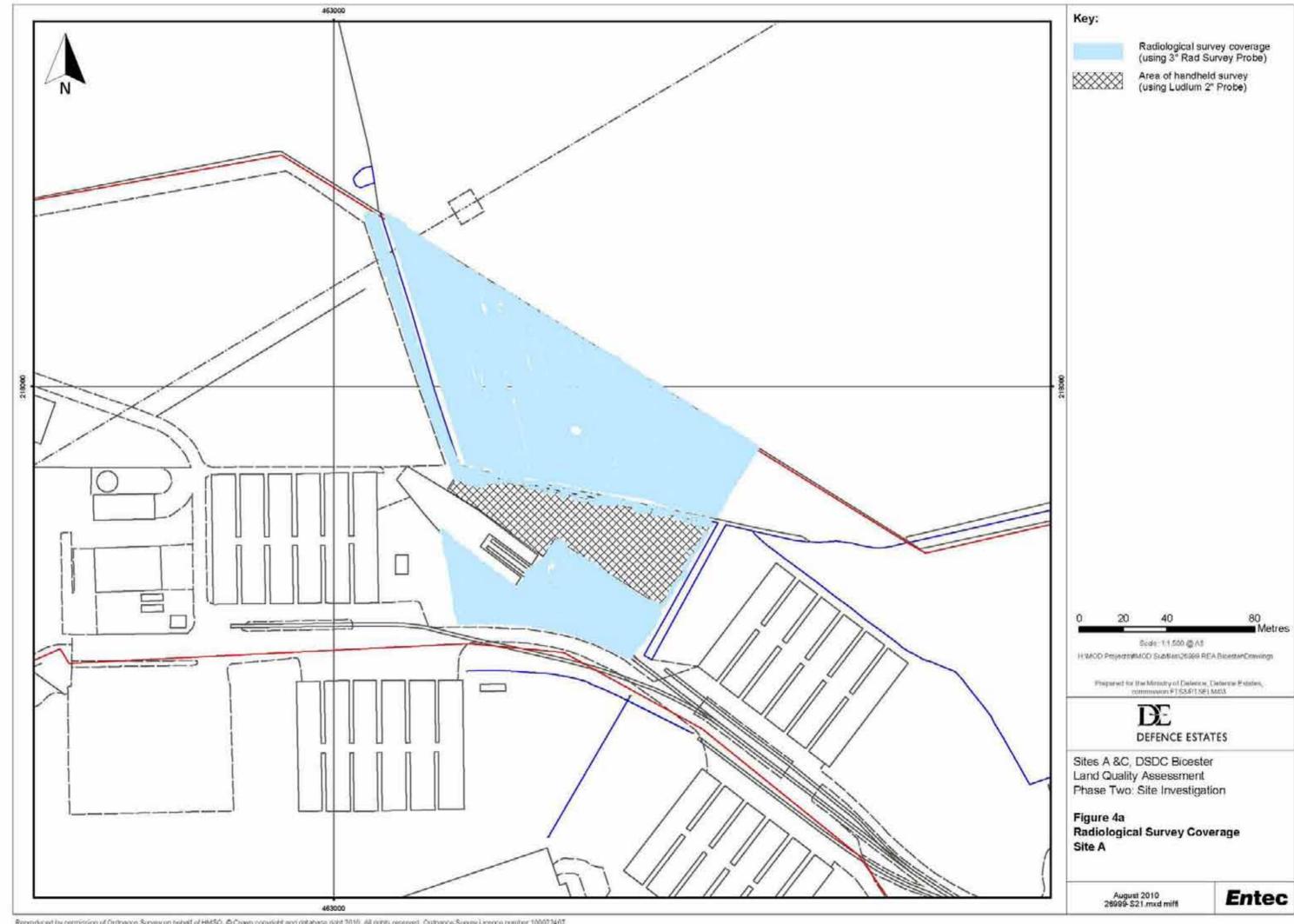


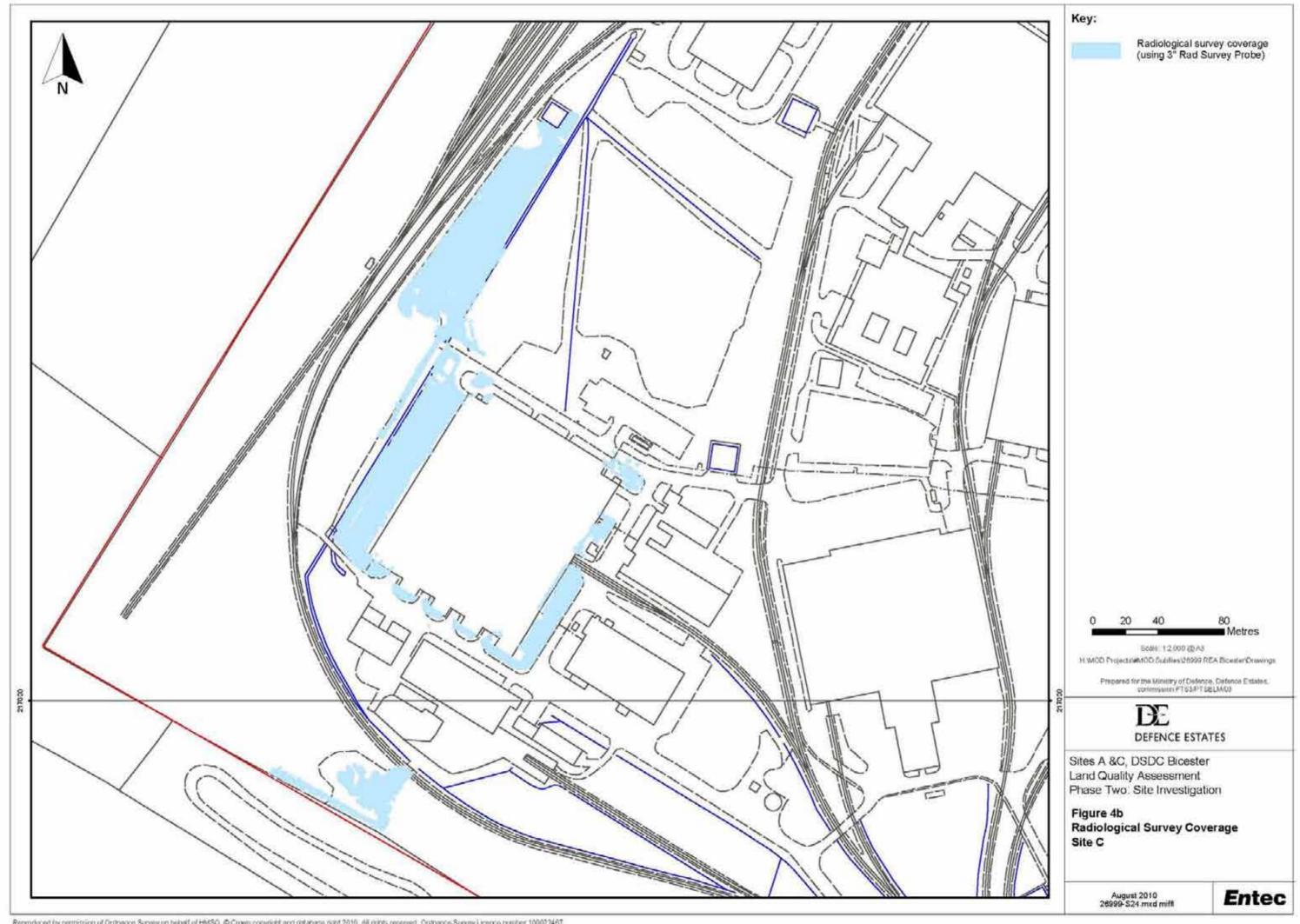


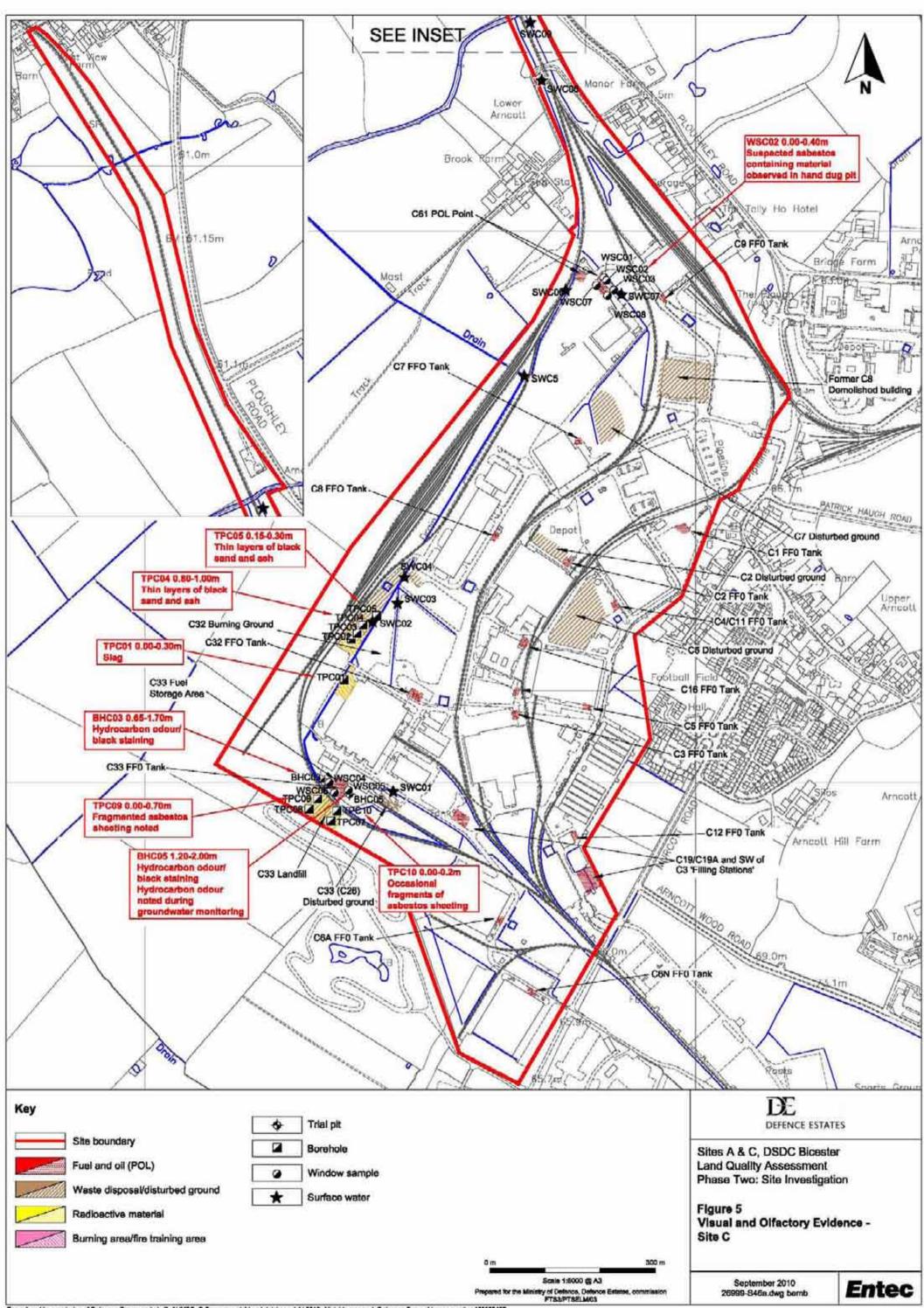


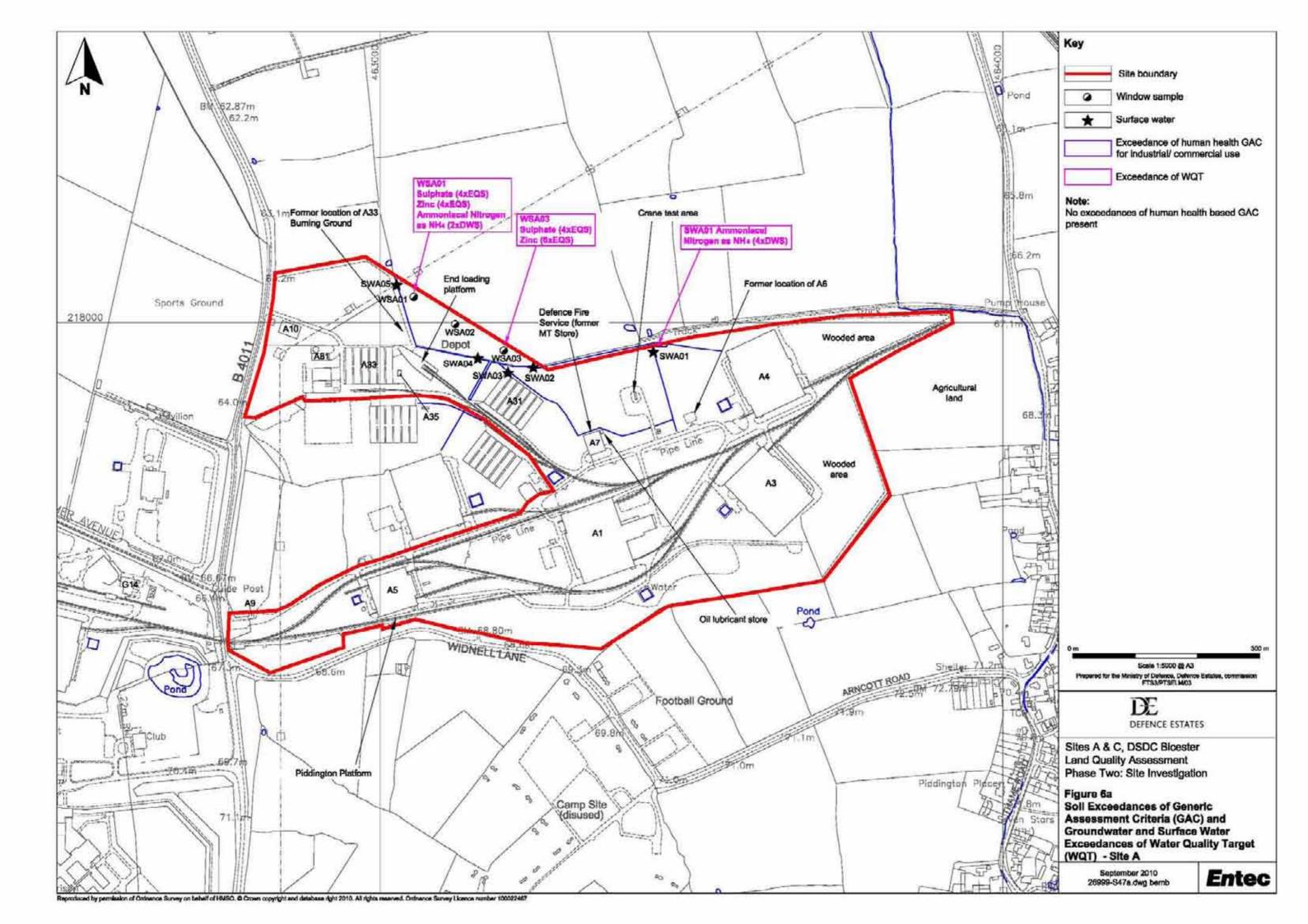


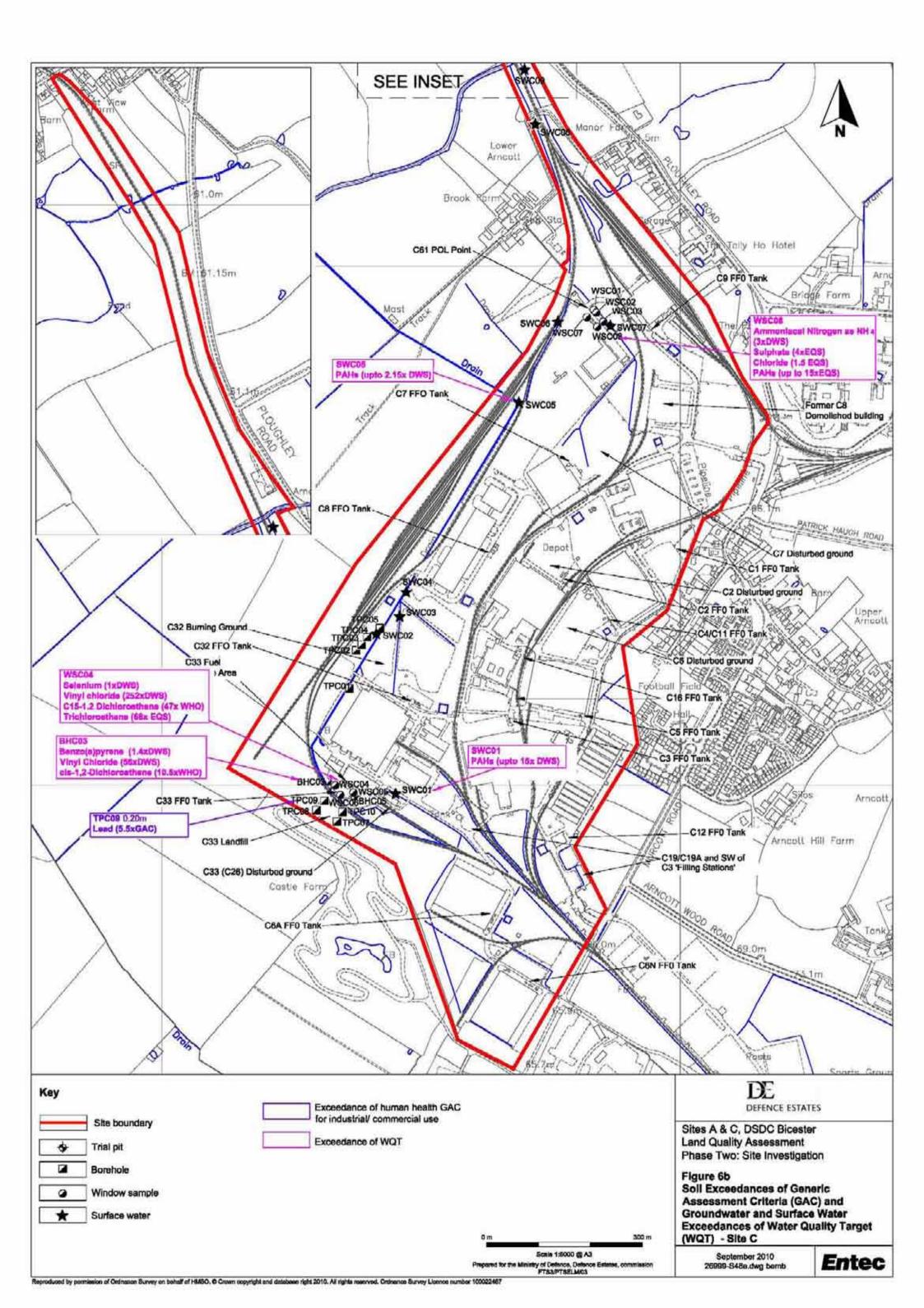


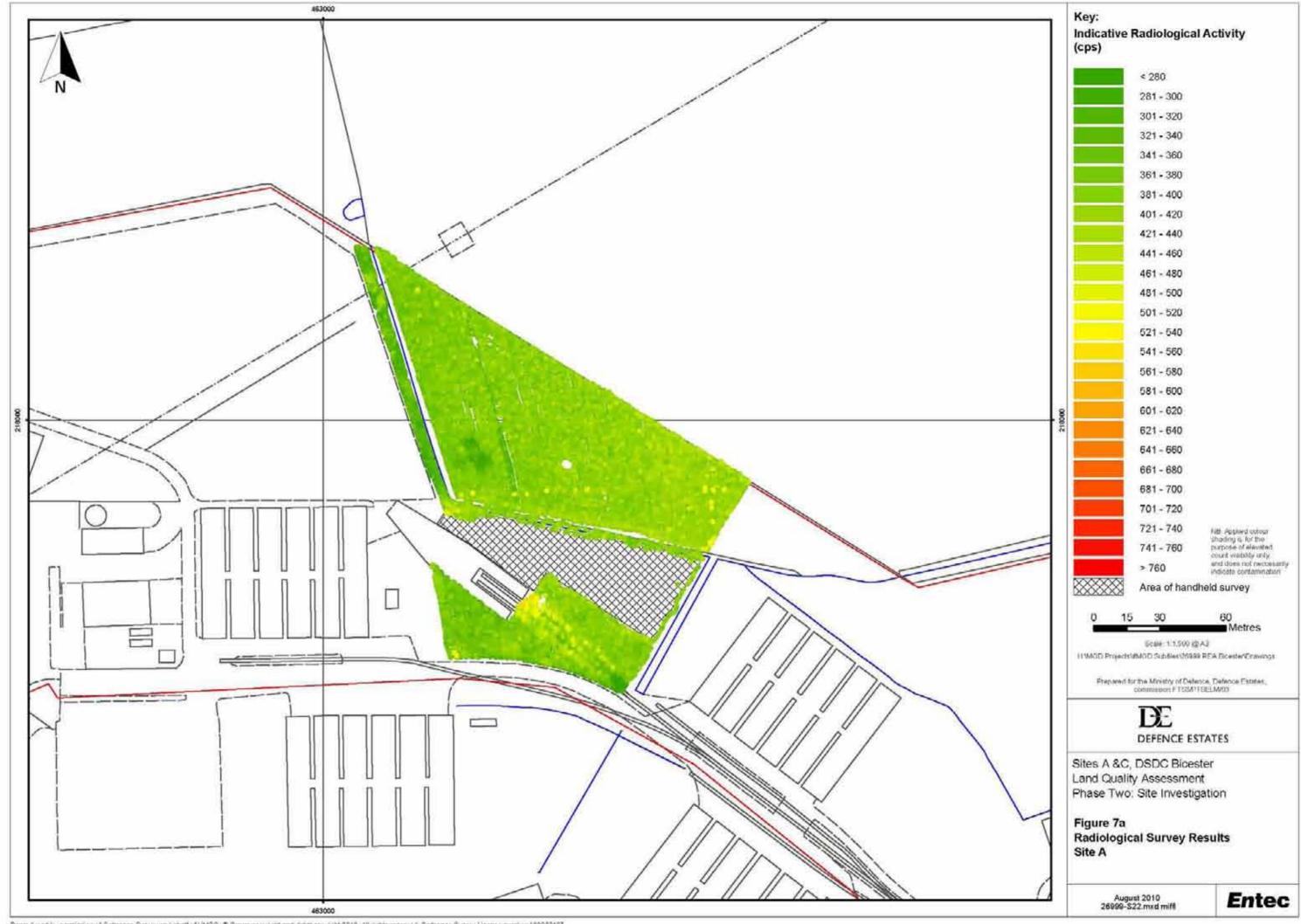


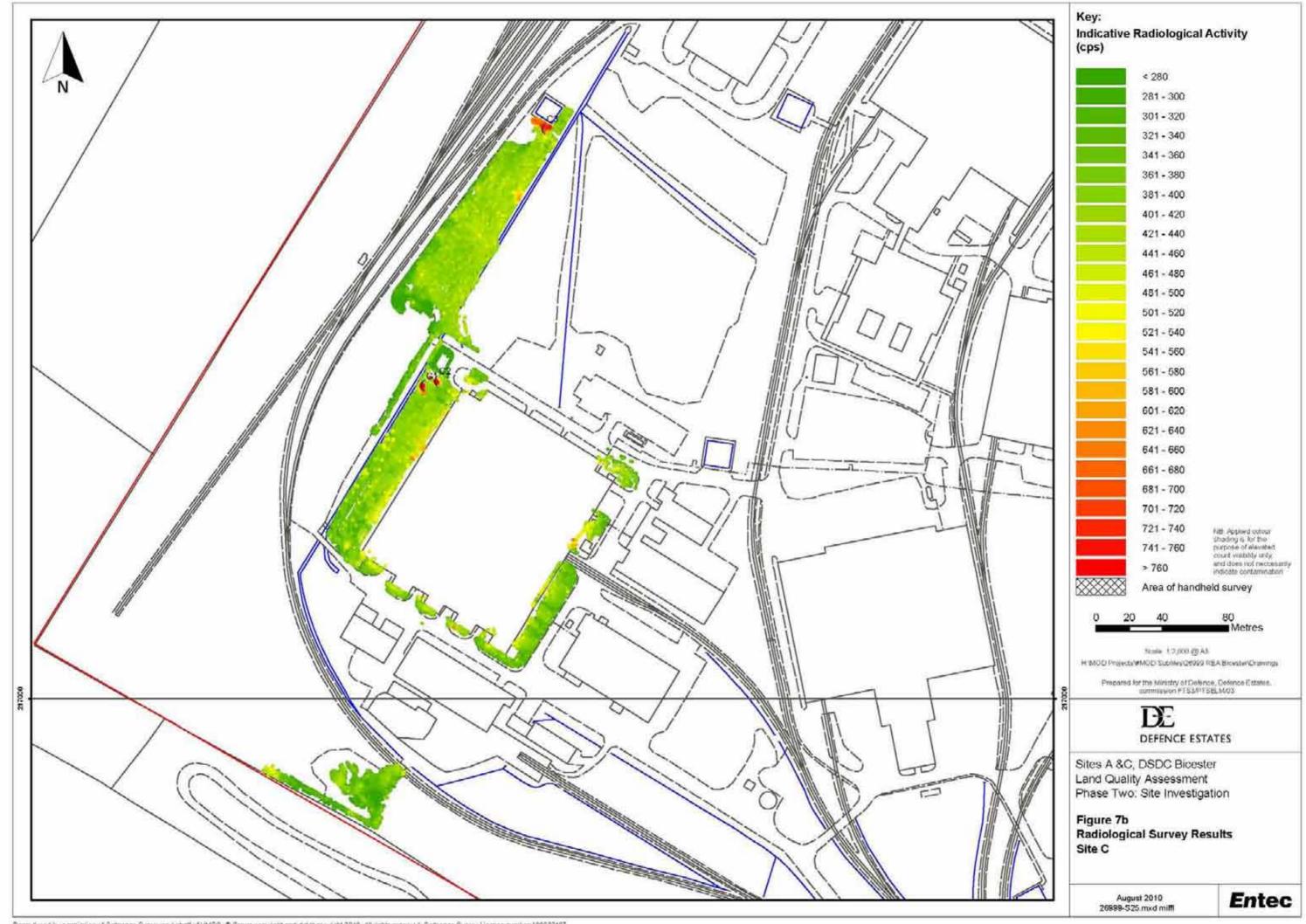


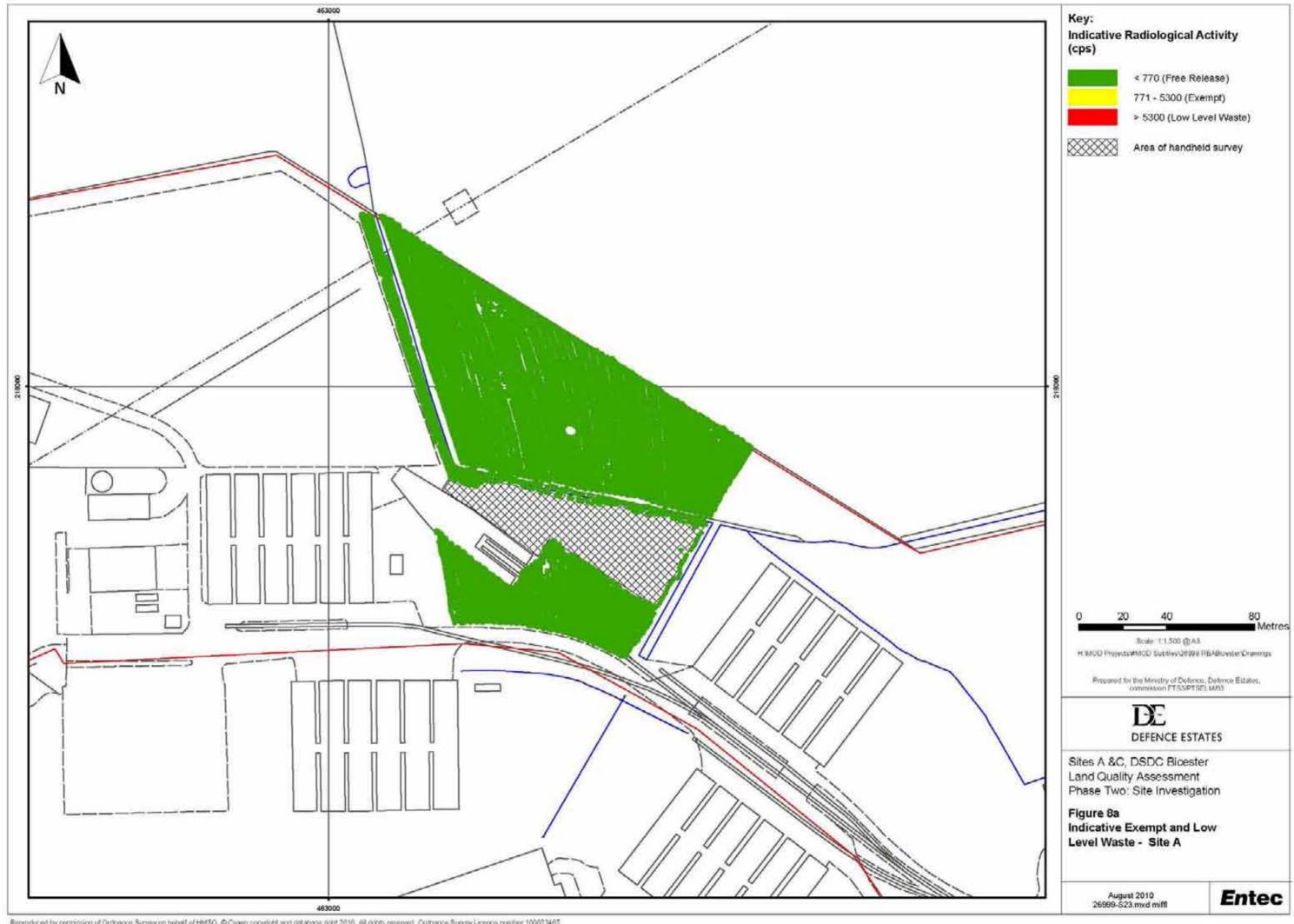


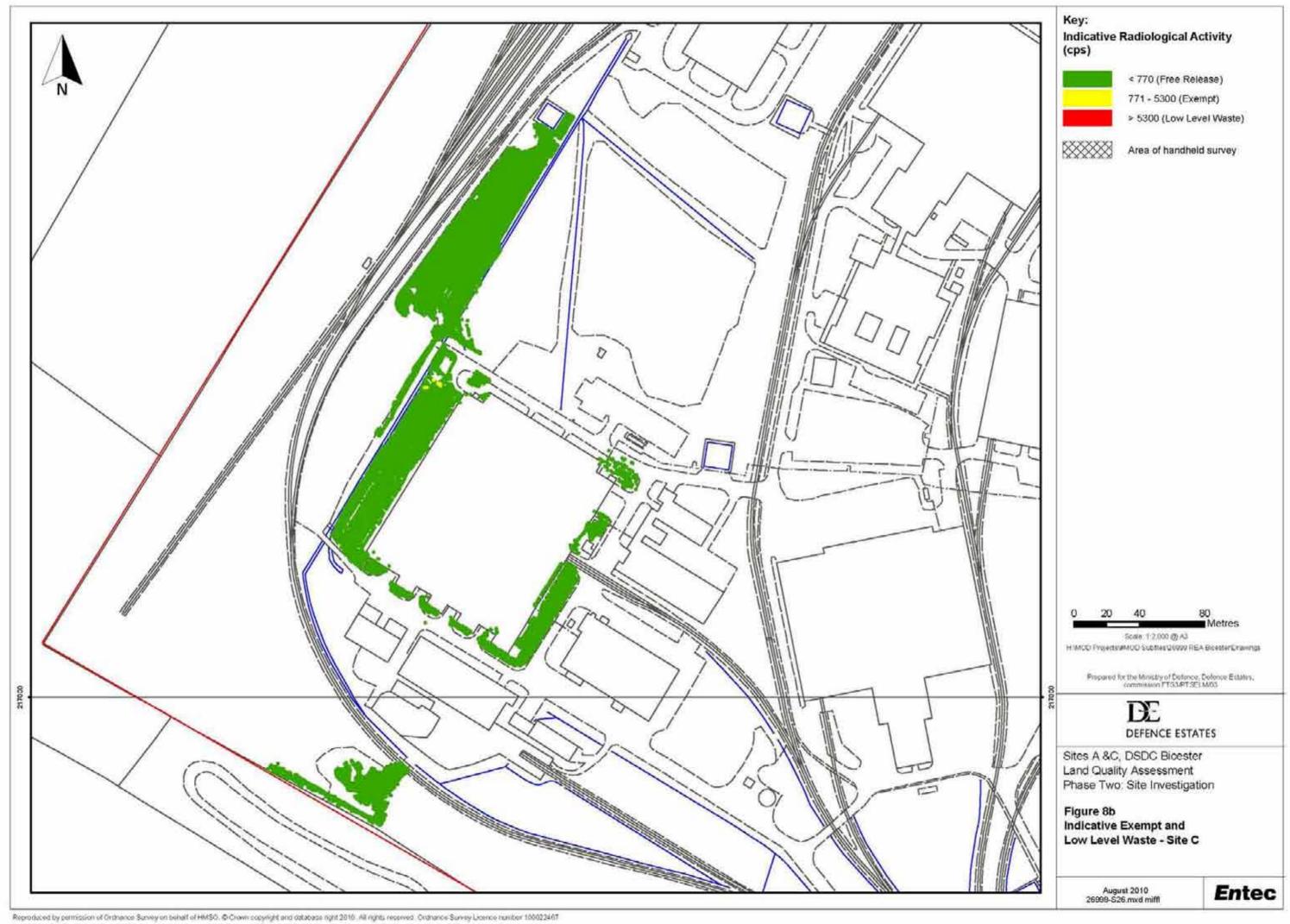


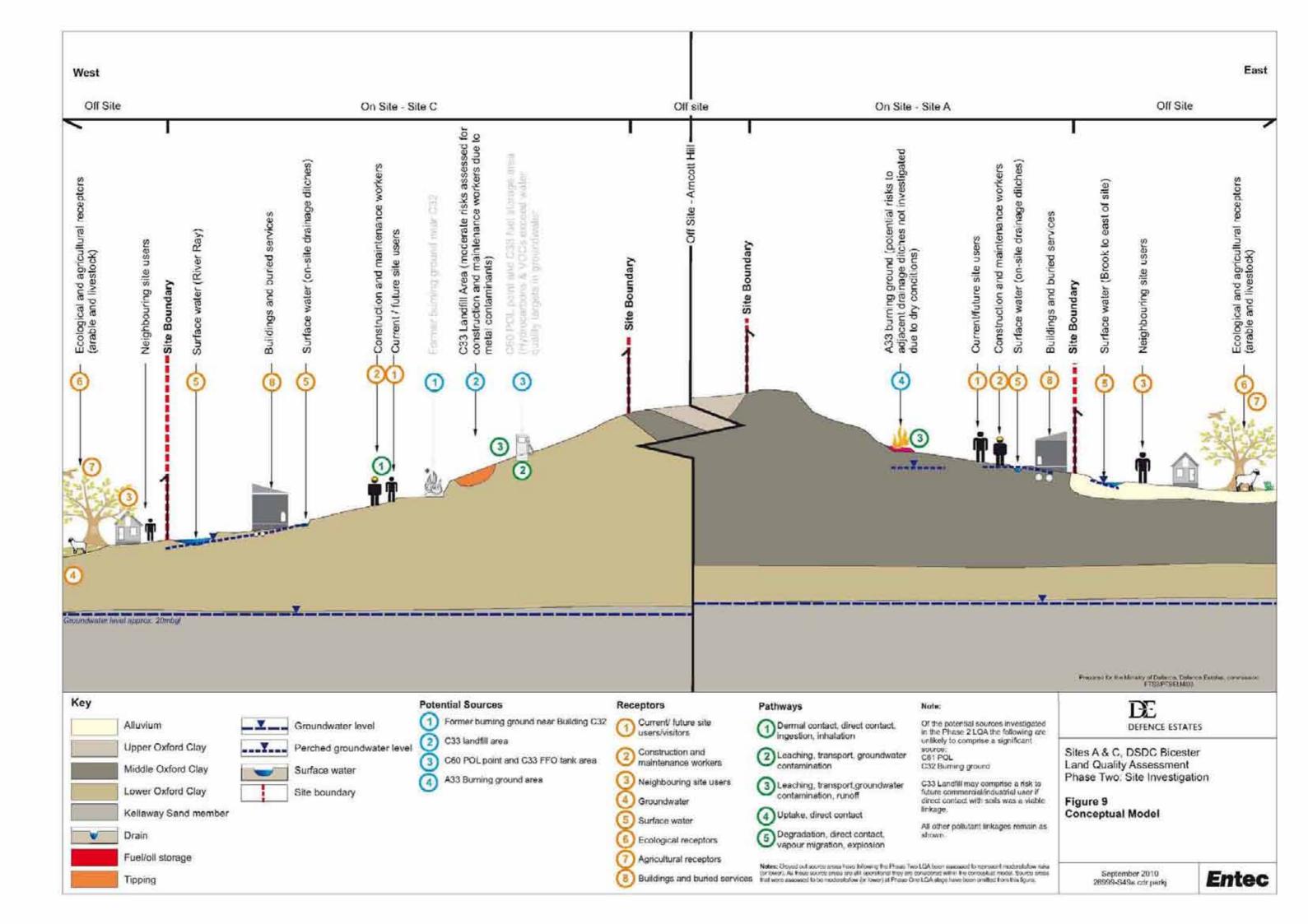












# **Annex A Intrusive Logs**







	May Gurney Limir Geotechnical - Sir Ayton Road, Wyn	le Investigation nondham, NR18 0RH	Window Sample Record						WSA01 Sheet 1 of 1				
MAYGURN	Tel: 01953 60985 Web: www.maygi	6 Fax: 01953 609819 urney.co.uk	Project:	Bice	ster								
Project ID: SI	1622		Client:	Ente	ec UI	K Limited						61mAOD	
Contractors ID	):		Engineer	: Jan	nes I	Ridehalgh	า		Coordinates: 463054.59E 218041.59N				
	Description		Legend	Dep		O.D. Level	Sample Type	e Test Depth (m)		emarks and	PID	Installations	
	rown slightly sandy sli			(m	11)	(m)	Турс	Dopur (III)	168	st Results	(ppm)	-	
consisting of san				0.3	30	63.26						-	
Firm orange-brov	vn-grey mottled sandy	CLAY.		<del>-</del> -			CS01	0.50-0.70			0.00		
Fra 4.00	) t- 4 20 h h	.:		+			CS02	1.00-1.30		0.00			
very sandy.	om to 1.30mbgl becom	ling soit and		<del>-</del> -			C1	1.20-2.00					
with brown organ				1.3		62.26	C2	2.00-3.00					
	Stiff grey slightly sandy laminated CLAY. From 3.80mbgl occasional seashell fossils.			5.00		58.56	C4	4.00-5.00					
Transcor Gampio							Water Leve	el Observat	ions				
Diameter (mm)	Drive Records To (m)	Recovery (%)	Date			Vater rike (m)	Standing Time (Mins	Stan Leve		Casing Depth (r		Depth Sealed (m)	
102 86 76 66	2.00 3.00 4.00 5.00	- 7 (-7)				` ,	rater Encoun	,		,		, ,	
Client: Engineer: Date: Plant: Drilled By: Logged By:	Entec UK Limited James Ridehalgh 21/07/2010 Terrier M. Earl JSR		Remarks: 1. Starter pit dug from GL to 1.20mbgl. 2. Installation details: 32mm HDPE Standpipe installed from GL to 5.00mbgl. Plain pipe from GL to 0.50mbgl and a slotted pipe from 0.50 to 5.00mbgl. Hole backfilled with bentonite from GL to 0.50mbgl and gravel from 0.50m to 5.00mbgl. Hole finished with a flush cover and ga tap.							nd			
Checked By:	P. Lewin										Print	Date: 22/09/2010	

	May Gurney Limi Geotechnical - Si Ayton Road, Wyr	te Investigation nondham, NR18 0RH	Window Sample Record						<b>WSA02</b> Sheet 1 of 1				
MAYGURN	Tel: 01953 60988 Web: www.mayg	66 Fax: 01953 609819 urney.co.uk	Project:	Bice	ster								
Project ID: SI			Client:	Ente	ec U	K Limited			Ground Level: 64.071mAOD Coordinates: 463121.19E				
Contractors ID	D:		Engineer:	: Jan	nes	Ridehalgh	າ					997.57N	
	Description		Legend		pth	O.D. Level	Sample			emarks and	PID	Installations	
TOPSOIL: Stiff b	rown-orange mottled:	eliahtly	X//XX//XX	(n	n)	(m)		Depth (m)	res	t Results	(ppm)		
sandy CLAY with	requent rootlets.	Singritry					CS01	0.10-0.30			0.00	-	
Firm brown-oran	ge mottled sandy CLA	Y.		0.:	.30	63.77						-	
				-								-  :::≣:::	
				F									
				<u>†</u>									
Firm brown-grey	orange mottled sand	/ CLAY.		1.0	.00	63.07							
				F			C1 CS02	1.20-2.00 1.25-1.35			0.00		
From 1.25 slight water	5m to 1.35mbgl sand b r seepage.	oand -		‡			C302	1.25-1.33			0.00		
	. 0			1	.60	62.47							
Firm grey-brown	laminated CLAY.			+ '.'	.00	02.47						-	
From 1.80	Om to 2.00mbgl fine ch	nalk gravel		<u> </u>								-	
	brown laminations. slightly sandy laminat	ed CLAV		2.0	.00	62.07	C2	2.00-3.00				-	
Tilli daik biowii	Silgitity Salidy latrillat	ed CLAT.		-								-	
				‡								-	
				<u> </u>									
				-								-	
				+									
Stiff grey slightly	sandy laminated CLA	Y.		3.0	.00	61.07	C3	3.00-4.00					
				-								-	
				Ī								-	
From 3.50	Ombgl shell fossils.			‡									
				_								-	
				F								-	
				-			C4	4.00-5.00					
				t								-	
				-								-	
				-								-	
												-	
				<u> </u>								-	
Window Sample	e Complete at 5.00 m			<del>†</del> 5.0	.00	59.07	Water Leve	al Observat	ione				
	Drive Records		_	T	1	Water		Stan		Casing	,	Depth	
Diameter (mm)	To (m)	Recovery (%)		` ,		Time (Mins			Depth (r		Sealed (m)		
116 102	0.00 2.00 3.00 4.00 5.00		21/07/10			1.25	-	-		-			
116 102 86 76	4.00 5.00												
Client:	Entec UK Limited	<u>I</u>	Remarks:	1 5+	arter	nit dua fron	n GI to 1 20	)mbal					
Engineer:	James Ridehalgh		] :	2. Slig	ght wa	ater seepag	e from 1.25	m to 1.35n	nbgl.	nd from O	to.		
Date:	21/07/2010		<ol> <li>Installation details: 32mm HDPE Standpipe installed from GL to 1.50mbgl. Plain pipe from GL to 0.50mbgl and a slotted pipe f to 1.50mbgl. Hole backfilled with bentonite from GL to 0.50mb</li> </ol>						e from	0.50m			
Plant:	Terrier					mbgl. Hole i 50m to 1.50							
Drilled By:	M. Earl					d with a flus				0.0011	- 3		
Logged By:	JSR												
Checked By: P. Lewin											Print	Date: 22/09/2010	
			1								. /	00, _010	

	May Gurney Limit Geotechnical - Sit Auton Road, Wyn	ed le Investigation nondham, NR18 0RH	Window Sample Record						WSA03 Sheet 1 of 1					
MAYGURN	Tel: 01953 60985	6 Fax: 01953 609819	Project:	Bices	ster						<u> </u>			
Project ID: SI1	1622		Client:	Ente	c UK	Limited	<u> </u>		Grour	nd Level:	64.6	07mAOD		
Contractors ID	):		Engineer:	: Jam	es R	Ridehalgh	า		Coord	linates:		99.13E 55.41N		
	Description		Legend	Dep	oth	O.D. Level	Sampl	e Test	R	emarks and		Installations		
	·			(m		(m)	Туре	Depth (m)	Tes	t Results	PID (ppm)	motaliations		
TOPSOIL: Stiff bi rootlets.	rown sandy CLAY with	n frequent					CS01	0.10-0.30			0.00	-		
Firm brown sandy	y CLAY.	1		0.3	60	64.31						- - - 		
Firm light brown-	grey-orange mottled s	andy CLAY.		0.7	0	63.91								
From 1.00 band.	m to 1.05mbgl sand a	and shell		1.1	0	63.51	C1	1.20-2.00						
Firm grey-orange weathered chalk	e mottled sandy CLAY veins.	with highly		-										
							C2	2.00-3.00						
Firm grey laminat gypsum crystals.	Firm grey laminated CLAY with abundant fine gypsum crystals.			2.4	.5	62.16	CS02	2.50-2.70			0.00			
				- - - - - - - -			С3	3.00-4.00						
Firm to stiff grey-t	brown laminated CLA	Υ.		3.6	60	61.01	C4	4.00-5.00						
Window Sample	Complete at 5.00 m		V	5.0	0	59.61								
	Drive Records							el Observat						
Diameter (mm)	To (m)	Recovery (%)	Date		Strik	/ater ke (m)	Standing Time (Mins			Casino Depth (r		Depth Sealed (m)		
102 86 76	2.00 3.00 4.00				N	lo Groundw	rater Encoun	ter <b>e</b> d						
Plant: Drilled By:	Entec UK Limited James Ridehalgh 21/07/2010 Terrier M. Earl		Remarks: 1. Starter pit dug from GL to 1.20mbgl. 2. Installation details: 32mm HDPE Standpipe installed from GL to 5.00mbgl. Plain pipe from GL to 0.50mbgl and a slotted pipe from 0.50m to 5.00mbgl. Hole backfilled with bentonite from GL to 0.50mbgl and gravel from 0.50m to 5.00mbgl. Hole finished with a flush cover and gas tap.									nd		
Logged By: Checked By:	JSR P. Lewin										Print	Date: 22/09/2010		

MAYGURNEY	May Gurney Limited Geotechnical - Site Investigation Ayton Road, Wymondham NR18 0RH Tel: 01953 609856 Fax: 01953 609818	9		it Reco	ord	TPC01 Sheet 1 of 1				
	Web: www.maygurney.co.uk	Project: B	icester							
Project ID: SI1622		Client: En	tec UK Lim	ited		Ground Level: 64.008mAOD Coordinates: 460362.34E				
		Engineer:	John Tom	alin		217186.81N				
Orientation of Trial Pit:		Length: -	Width: -		oth: 1.80	Sample / Tes				
Description		Legend	Depth (m)	O.D. Level	Water	Туре	Depth (m)	Test Results PID (ppm)		
MADE GROUND: Grey-brown coarse sand. Gravel is angula limestone, concrete and slag.			0.00	00.74		ES1	0.20	0.00		
Stiff yellow-grey slightly grave is angular fine to coarse limes sandstone.	lly CLAY. Gravel tone and		- 0.30 - -	63.71						
From 0.70mbgl occasiona coarse (sugary) sand sized concretions.			-							
End of Trial Pit at 1.80			- - - - 1.80	62.21		ES2	1.30	0.00		
Client: Entec UK L	imited	Date	· — —	Water Water Strike	r Level Obser	vations Standing Tin	ne (Minc)	Standing Level (m)		
Engineer: John Toma Contractor: May Gurne	y Geotechnical	Groundwater Re		No Gr	roundwater E	ncountered		Standing Level (III)		
Date: 14/07/2010 Plant: JCB					2.3.10					
Logged By: J. Tomalin Checked By: P. Lewin		Remarks: Hol								
Chooked by. 1. Lowin		Hole Stability: Trial pit stable on completion. Print Date: 21/09/2010								

May Gurney Limited Geotechnical - Site Investigation Ayton Road, Wymondham NR18 0RH Tel: 01953 609856 Fax: 01953 6	609819	Trial Pi	t Reco		TPC02 Sheet 1 of 1				
Web: www.maygurney.co.uk	Project: B	icester							
Project ID: SI1622		tec UK Limi			Ground Coordin	nates: 40	4.721mAOD 60375.31E		
				217259.95N					
Orientation of Trial Pit:  Description	Length: - Legend	Width: - Depth (m)	O.D. Level	oth: 2.20 Water	Sampl Type	e / Test Depth (m)	Remarks and Test Results <sub>PID</sub>		
MADE GROUND: Very stiff (hard) dessicated grey and yellow-grey slightly gravelly clay. Gravel is subangular to angular fine to coarse limestone.		-				(,	(ppm)		
MADE GROUND: Very stiff mottled grey and yellow-brown clay.		- 0.40 - - - -	64.32		ES1	0.70	0.00		
MADE GROUND: Dark grey silty gravelly fine and medium sand. Gravel is angular to subangular fine to coarse limestone and concrete.		- 1.00 _ 1.05	63.72 63.67						
MADE GROUND: Yellow-brown silty fine to coarse SAND and angular fine to coarse limestone gravel.		- 1.30 -	63.42						
Stiff dark green-grey CLAY with occasional fine roots (old topsoil).		1.50	63.22		ES2	1.60	0.00		
Stiff slightly green-grey CLAY.									
From 1.80mbgl stiff mottled yellow-grey and brown with occasional fine to coarse (sugary) sand sized calcareous concretions.		- - -							
End of Trial Pit at 2.20 m		- - - - - - - - - - - - - -	Wate	r Level Obse	ervations				
Client: Entec UK Limited	Date	<u> </u>	Water Strik		standing Tin	ne (Mins)	Standing Level (m)		
Engineer: John Tomalin  Contractor: May Gurney Geotechnical  Date: 14/07/2010  Plant: JCB		emarks: No grou	No Gi undwater encou	roundwater E	ncountered				
Logged By: J. Tomalin Checked By: P. Lewin	Remarks: Hole backfilled with arisings.  Hole Stability: Trial pit stable during excavation and on completion.  Print Date: 21/09/2010								

May Gurney Limited Geotechnical - Site Investigation Ayton Road, Wymondham NR18 0RH Tel: 01953 609856 Fax: 01953 6098		Trial P	it Reco	TPC03 Sheet 1 of 1					
Web: www.maygurney.co.uk	Project: B	icester							
Project ID: SI1622	Client: En Engineer:				Ground Level: 64.827mAOD Coordinates: 460385.81E 217270.63N				
Orientation of Trial Pit:	Length: -	Width: -	· Dep	oth: 3.30	Sampl	e / Test	Remarks		
Description	Legend	Depth (m)	O.D. Level	Water	Туре	Depth (m)	and Test Results		
MADE GROUND: Brown-grey silty fine and medium sand.		0.10	64.73						
MADE GROUND: Very stiff dessicated grey and brown-grey slightly gravelly clay. Gravel is angular fine to coarse limestone. From 0.60mbgl very stiff mottled grey with		-			ES1	0.20	0.00		
occasional yellow-grey clay. Occasional limestone gravel.  MADE GROUND: Black silty gravelly fine to coarse		1.10	63.73						
sand. Gravel is angular fine to coarse limestone and concrete.		1.30	63.53		ES2	1.20	0.00		
MADE GROUND: Yellow-brown silty fine to coarse sand and angular fine to coarse limestone gravel.		1.50	63.33						
Stiff slightly green-grey CLAY with occasional fine roots. Slight organic odour. From 1.80mbgl stiff mottled grey and yellow-grey clay.			00.00						
From 2.30mbgl mottled grey and brown.					ES3	2.90	0.00		
End of Trial Pit at 3.30 m		3.30	61.53						
Client: Entec UK Limited	Date	e	Wate Water Strik	r Level Obser e (m)	vations Standing Tin	ne (Mins)	Standing Level (m)		
Engineer: John Tomalin  Contractor: May Gurney Geotechnical  Date: 14/07/2010  Plant: JCB	No Groundwater Encountered  Groundwater Remarks: No groundwater encountered.  Remarks: Hole backfilled with arisings.								
Logged By: J. Tomalin Checked By: P. Lewin	Hole Stability: Trial pit stable throughout and on completion.  Print Date: 21/09/2010								

May Gurney Limited Geotechnical - Site Investigation Ayton Road, Wymondham NR18 0RH Tel: 01953 609856 Fax: 01953 60981		it Reco		TPC04 Sheet 1 of 1					
Web: www.maygurney.co.uk	Project: B	icester							
Project ID: SI1622	Client: En				Ground Coordi	nates: 4	4.651mAOD 60396.26E 17285.57N		
Orientation of Trial Pit:	Length: -	Width: -	Der	oth: 3.20	Sampl	Remarks			
Description	Legend	Depth (m)	O.D. Level	Water	Туре	Depth (m)	and Test Results		
MADE GROUND: Very stiff (dessicated) grey and brown-grey slightly gravelly clay. Gravel is angular fine to coarse limestone. Occasional brick.					ES1	0.50	0.00		
MADE GROUND: Black silty gravelly fine to coarse sand. Gravel is angular fine to coarse granite and concrete. Occasional fragments of metal.		- 0.80 - 1.00	63.85 63.65						
MADE GROUND: Dense yellow-brown silty very gravelly fine to coarse sand. Gravel is angular fine to coarse limestone.		1.20	63.45						
Dark grey-brown silty CLAY with occasional fine roots. Organic odour. (Old topsoil).	<u> </u>	1.35	63.30		ES2	1.50	0.00		
Stiff slightly green-grey CLAY with occasional fine roots. Slight organic odourFrom 1.50mbgl mottled grey and brown-grey occasional decayed roots. From 2.10mbgl grey and brown occasional weak fine to coarse (sugary) sand sized calcareous concretions.		3.20	61.45						
Client: Entec UK Limited Engineer: John Tomalin Contractor: May Gurney Geotechnical Date: 14/07/2010 Plant: JCB			Water Strik No Gr bundwater encou	roundwater E	Standing Tir		Standing Level (m)		
Logged By: J. Tomalin Checked By: P. Lewin	Hole Stability: Trial pit stable during excavation and on completion.  Print Date: 21/09/2010								

MAY GURNEY	May Gurney Limited Geotechnical - Site Investigation Ayton Road, Wymondham NR18 0RH Tel: 01953 609856 Fax: 01953 609818	9		it Reco	rd	TPC05 Sheet 1 of 1				
Wir Galare	Web: www.maygurney.co.uk	Project: Bi	icester							
Project ID: SI1622		Client: Ent				Ground Coordin	nates: 46	4.090mAOD 60421.10E 17302.91N		
Orientation of Trial Pit:		Length: -	Width: -	Dep	th: 3.00	Sample	e / Test	Remarks		
Description		Legend	Depth (m)	O.D. Level	Water	Туре	Depth (m)	and Test Results <sub>PID</sub>		
MADE GROUND: Grey sandy Gravel is angular fine to coarse			0.15	63.94		ES1	0.10	0.00		
MADE GROUND: Black silty grand. Gravel is angular fine to Abundant ash.			- 0.30	63.79						
MADE GROUND: Yellow-brow sand and angular fine to coarse and cobbles.	n silty fine to coarse e limestone gravel		- 0.50 -	63.59						
Stiff grey-brown CLAY with occ	casional fine roots.									
From 0.90mbgl mottled gr	ey and yellow-grey.		- - -			ES2	1.00	0.00		
From 1.40mbgl mottled gr with occasional nodular fine calcareous concretions. Occ roots in fissures.	gravel sized weak		-							
From 2.50mbgl bands of fo	ossil shell debris.		-							
End of Trial Pit at 3.00 r	m		- - 3.00 - -	61.09						
			- - - - - -							
			_							
Client: Entec UK Li	mited	Date	, 1	Water Water Strike	Level Obser		ne (Mine)	Standing Level (m)		
Engineer: John Tomali		Date Water Strike (m) Standing Time (Mins) Standing Level  No Groundwater Encountered  Groundwater Remarks: No groundwater encountered throughout.								
Logged By: J. Tomalin		Remarks: Hol	le backfilled wit	h arisings.						
Checked By: P. Lewin		Hole Stability: Trial pit stable during excavation and on completion.  Print Date: 21/09/2010								

May Gurney Limited Geotechnical - Site Investigation Ayton Road, Wymondham NR18 0RH Tel: 01953 609856 Fax: 01953 60981		it Reco		TPC06 Sheet 1 of 1				
MAY GURNEY Tel: 01953 609856 Fax: 01953 609819 Web: www.maygurney.co.uk	Project: B	icester						
D : 11D 011000	Client: En	tec UK Lim	ited		Ground			
Project ID: SI1622	Engineer:	John Tom	alin		Coordir	Coordinates: -		
Orientation of Trial Pit:	Length: -	Width: -		th: 3.30	Sampl	e / Test	Remarks	
Description	Legend	Depth (m)	O.D. Level	Water	Type	Depth (m)	and Test Results	
MADE GROUND: Grey-brown silty very gravelly fine to coarse sand. Gravel is angular fine and medium brick, granite, limestone and concrete with occasional plastic and metal.		0.25			ES1	0.10	0.00	
MADE GROUND: Yellow-brown silty fine to coarse sand and angular fine to coarse limestone gravel and cobbles.		-						
Stiff mottled brown and grey CLAY with occasional fine gravel sized weak calcareous nodules. Occasional decayed root matter on fissures.		- 0.70 - -						
From 2.70mbgl stiff grey clay with occasional fossil shell debris and coarse sand					ES2	1.00	0.00	
sized gypsum.		3.30						
End of Trial Pit at 3.30 m		- - - - - - -						
Client: Entec UK Limited				r Level Obs		(A.P. \ \	Oten die 1	
Engineer: John Tomalin  Contractor: May Gurney Geotechnical  Date: 15/07/2010  Plant: JCB	Date Water Strike (m) Standing Time (Mins) Standing Level (m)  No Groundwater Encountered  Groundwater Remarks: No groundwater encountered throughout.							
Logged By: J. Tomalin Checked By: P. Lewin		le backfilled with Trial pit stable d	-	and on comp	oletion.		Print Date: 21/09/2010	

May Gurney Limited Geotechnical - Site Investigation Ayton Road, Wymondham NR18 0RH Tel: 01953 609856 Fax: 01953 60981		it Reco		TPC07 Sheet 1 of 1					
Web: www.maygurney.co.uk	Project: B	icester							
Drainat ID: CH 622	Client: En	tec UK Lim	ited		Ground				
Project ID: SI1622	Engineer:	John Tom	alin		Coordir	Coordinates: -			
Orientation of Trial Pit:	Length: - Width: - Depth: 3.30				Sampl	e / Test	Remarks		
Description	Legend	Depth (m)	O.D. Level	Water	Туре	Depth (m)	and Test Results <sub>PID</sub>		
MADE GROUND: Mixed brown-grey and dark brown silty gravelly cobbly sand and stiff clay. Gravel is angular fine to coarse brick, concrete and limestone. Occasional metal and pottery. Possible organic odour.		- - - - 0.60			ES1	0.30	0.00		
Stiff green-grey CLAY.		-							
From 0.90mbgl mottled green-grey and yellow-grey.		-			ES2	1.10	0.00		
From 1.30mbgl mottled grey and yellow-brown with occasional fine gravel sized weak calcareous nodules.		-							
From 1.60mbgl pockets of yellow-brown clayey fine to coarse sandFrom 1.80mbgl stiff mottled grey and brown		-			ES3	1.70	0.00		
clay. Occasional fossil shell debris. Decayed roiots on fissures.  End of Trial Pit at 3.30 m		- - - - - - - - - - - - - - - - - - -							
		- - - - - - -							
Client: Entec UK Limited	Date	,	Water Water Strik	r Level Obs e (m)	ervations Standing Tin	ne (Mins)	Standing Level (m)		
Engineer: John Tomalin  Contractor: May Gurney Geotechnical  Date: 15/07/2010  Plant: JCB	No Groundwater Encountered  Groundwater Remarks: No groundwater encountered throughout.								
Logged By: J. Tomalin Checked By: P. Lewin		le backfilled with	-						
	Hole Stability: Trial pit stable during excavation and on completion. Print Date: 21/09/2010								

MAY GURNEY	May Gurney Limited Geotechnical - Site Investigation Ayton Road, Wymondham NR18 0RH Tel: 01953 609856 Fax: 01953 609819	9		it Reco	TPC08 Sheet 1 of 1					
Will Gall (2)	Web: www.maygurney.co.uk	Project: Bi	icester							
Drainat ID: CI1622		Client: Ent	tec UK Lim	ited		Ground				
Project ID: SI1622		Engineer:	John Tom	alin		Coordinates: -				
Orientation of Trial Pit:		Length: -	Width: -	Den	oth: 3.30	Sample	e / Test	Remarks		
Description		Legend	Depth (m)	O.D. Level	Water	Туре	Depth (m)	and Test Results <sub>PID</sub>		
MADE GROUND: Dark brown coarse sand. Gravel is angular brick, concrete, limestone and wood, plastic and tin cans. Posodour.	fine to coarse occasional metal,					ES1	0.20	0.00		
Mottled black and grey sandy (metal and wood. Possible hydrological Slight water seepage.	CLAY with occasional rocarbon odour.		_ 0.45 - - -			ES2	0.60	0.00		
Stiff mottled green-grey and gr	ey CLAY.		- 0.90 							
From 1.10mbgl mottled gr with pockets of sandy clay a medium sand.	ey and yellow-brown and clayey fine and		- -			ES3	1.60			
Stiff mottled grey and brown-g Occasional decayed root matte occasional weak fine gravel siz nodules.	er on fissures and		- - 1.80 -			200	1.00	0.00		
From 2.20mbgl occasiona debris.	ıl fossil shell		-							
End of Trial Pit at 3.30	m		- 3.30 - - -							
			- - - -							
				 Water	r Level Obser	vations				
Client: Entec UK Li		Date		Water Strike	e (m) S	tanding Tim	ne (Mins)	Standing Level (m)		
Engineer: John Tomal Contractor: May Gurney Date: 15/07/2010 Plant: JCB	in r Geotechnical	No Groundwater Encountered  Groundwater Remarks: No groundwater encountered throughout.								
Logged By: J. Tomalin Checked By: P. Lewin				-	and on occur-	tion				
		Remarks: Hole backfilled with arisings.  Hole Stability: Trial pit stable during excavation and on completion.  Print Date: 21/09/								

May Gurney Limited Geotechnical - Site Investigation Ayton Road, Wymondham NR18 0RH Tel: 01953 609856 Fax: 01953 60981		it Reco	TPC09 Sheet 1 of 1						
Web: www.maygurney.co.uk	Project: B	icester							
Project ID: SI1622	Client: En Engineer:				Ground				
Orientation of Trial Pit:	Length: -	Width: -		oth: 3.20	Sampl	Remarks			
Description	Legend	Depth (m)	O.D. Level	Water	Type	Depth (m)	and Test Results <sub>PID</sub>		
MADE GROUND: Dark brown silty very gravelly fine to coarse sand. Gravel is angular fine to coarse brick, limestone, concrete and occasional metal, wood, plastic, glass, pottery and fragmented asbestos sheeting. Abundant ash.		-			ES1	0.20	0.00		
From 0.50mbgl pockets of sawdust.		- - - 0.70							
Stiff mottled grey, yellow-brown and dark grey CLAY.		0.70							
From 1.00mbgl grey and yellow-brown.		- - - - - -			ES2	1.20	0.00		
From 1.60mbgl pockets of yellow-brown clayey fine to coarse sand.		-							
From 2.10mbgl stiff mottled grey and brown-grey clay. Occasional fine gravel sized weak calcareous nodules. Local bands of fossil shell debris. Decayed root matter on fissures.									
End of Trial Pit at 3.20 m		- - - - - - - - -							
		- - - - -							
		- - - -							
Client: Entec UK Limited	Date	e	Water Water Strike	r Level Obser e (m)	vations Standing Tin	ne (Mins)	Standing Level (m)		
Engineer: Ed Gilligan  Contractor: May Gurney Geotechnical  Date: 15/07/2010  Plant: JCB	No Groundwater Encountered  Groundwater Remarks: No groundwater encountered.								
Logged By: J. Tomalin Checked By: P. Lewin	Remarks: Hole backfilled with arisings.  Hole Stability: Trial pit stable during excavation and on completion.  Print Date: 22/09/2010								

May Gurney Limited Geotechnical - Site Investigation Ayton Road, Wymondham NR18 0RH Tel: 01953 609856 Fax: 01953 60981		Trial P	it Reco	ord			<b>C10</b> t 1 of 1
Web: www.maygurney.co.uk	Project: B	icester					
Draigat ID: CM 622	Client: En	tec UK Lim	ited		Ground		
Project ID: SI1622	Engineer:	John Tom	alin		Coordin	nates: -	
Orientation of Trial Pit:	Length: -	Width: -	Dep	oth: 3.20	Sampl	e / Test	Remarks
Description	Legend	Depth (m)	O.D. Level	Water	Туре	Depth (m)	and Test Results
MADE GROUND: Brown-grey silty gravelly fine to coarse sand. Gravel is angular fine to coarse brick, concrete, clinker and occasional shell asbestos.		0.20			ES1	0.10	0.00
MADE GROUND: Coarse sandy limestone gravel and cobbles.		0.50					
Stiff brown CLAY.		- 0.50 - - -					
From 4.40 wheel mettled converged collections		-			ES2	1.00	6.40
From 1.40mbgl mottled grey and yellow-brown with pockets of clayey fine to coarse sand. Possible hydrocarbon odour.		- - - - -			ES3	1.60	240.00
From 2.00mbgl stiff mottled brown and grey clay, decayed roots on fissures.					ES4	2.20	450.00
End of Trial Pit at 3.20 m		3.20					
		_ - - - - -					
Client: Entec UK Limited				r Level Obse			
Engineer: John Tomalin  Contractor: May Gurney Geotechnical  Date: 15/07/2010  Plant: JCB		emarks: No gro	undwater encou	oundwater E	Standing Tin		Standing Level (m)
Logged By: J. Tomalin Checked By: P. Lewin		ole backfilled with	n arisings. Iuring excavation	and on comple	etion.		Print Date: 21/09/2010

	May Gurney Limited Geotechnical - Site Investigation		Во	reho	le Re	ecord		ВНС	:03	Sheet 1 of 1
MAY GURNEY	Ayton Road, Wymondham, NR18 0RH Tel: 01953 609856 Fax: 01953 609819 Web: www.maygurney.co.uk	Project	: Bic	ester						
Project ID: SI1622		Client :	Ente	UK Li	mited			Ground Level:		
		Enginee	er: Si	imon H	oward			Coordinates:		326.69E 000.96N
Dogorintian			Depth			ple Test	SPT/CPT			
Description		Legend	(m)	Level (m)	Type	Depth (m)	Casing Water Depth Depth (m) (m)	Test Results SPT/HV/PP (Recovery)	חוח	Installation
OPSOIL: Grass over brown slandy with rootlets.	ightly clayey slightly		0.10	64.31						
MADE GROUND: Grey gravelly boulder (up to 280mm) size fund clinker / ash. (Moist).			0.65	63.76	CS01	0.50-0.65			0.00	
Soft green-grey-brown slightly slack staining. Strong hydrocar					CS02	1.00			166.0	
Firm brown-grey CLAY with me	edium coarse sand hands		1.70	62.71						
and occasional black staining.	addin coarse sand bands		- - -		CS03	2.00			9.00	
Firm brown laminated CLAY, n	o staining.		2.30	62.11	CS04	2.50			0.00	
Stiff grey-blue laminated CLAY	with shells.		3.00	61.41						
										- - -
			- - - - -							-
			- - - - -							
			+ - - - -							
			- - - - - - -							
From 6.20mbgl weak mud	stone bands.		-							
Borehole Complete at 7.00 m			7.00	57.41						
			_			Vator Love	el Observatio	ne		
Hole Diameter Detail	Chiseling Details			Water		Standing	Standi			Depth
Diameter Depth Casing (mm) (m) Depth (m)	From To Time (hours)	Date 15/07/10		Strike (		ime (mins)			)	Sealed (m)
Client: Entec UK Lin Engineer: Simon Howa Contractor: May Gurney Dates: 15/07/2010 Plant: Dando Drilled By: T. York	rd	Remarks:	2. 10 litr 3. Wate 4. Instal Plair Hole 1.00	res of water seepage lation detain pipe from backfilled mbgl, granarisings from the seepage was been been been been been been been bee	er added from 2.3 ails: 50m n GL to 1 d with co vel from	between 4 30mbgl. Im HDPE S I.00mbgl and ncrete from 1.00m to 3.	.50m and 7.0 Standpipe instand slotted pipe of GL to 0.50m .00mbgl, bent	Ombgl.  alled from GL to 3.0 a from 1.00m to 3.00 bgl, bentonite from onite from 3.00m to shed with a flush covered to the shed with	0mbgl. 0.50m 4.00m	to bgl

Print Date: 21/09/2010

Logged By: S. Howard Checked By: P. Lewin

	May Gurney Limited Geotechnical - Site Investigation Ayton Road, Wymondham, NR18 0RH		Во	reho	le Re	ecord		вно	05	Sheet 1 of
MAY GURNEY	Tel: 01953 609856 Fax: 01953 609819 Web: www.maygurney.co.uk	Project	: Bic	ester						
Project ID: SI1622		Client :						Ground Level: Coordinates:	4603	371.90E
		Enginee	er: S	imon H			007/007			79.10N
Descriptio	n	Legend	Depth (m)	O.D. Level (m)	Sam Type	Depth (m)	SPT/CPT  Casing Water Depth Depth (m) (m)	Task Dasulks	S PID	Installation
MADE GROUND: Rounded to	subrounded coarse gravel.	*****	0.10	64.69						
MADE GROUND: Reinforced	concrete.		0.35	64.44						
MADE GROUND: Soft light br rare brick rubble.	rown reworked clay with		0.60	64.19						=
MADE GROUND: Black ashy (possible limestone), clinker a hydrocarbon odour.			1.20	63.59	CS01	1.00			0.00	- - - - 
Firm brown-grey mottled sand staining. Hydrocarbon odour.	ly CLAY with black									
Firm brown-grey laminated Cl	ΛV		2.00	62.79	CS02	2.00			0.00	
riim biowii-grey iaminaled Ci	AT.									
			3.50	61.29	CS03	3.00			0.00	
Stiff grey laminated CLAY with	n shells.		- 0.500 	01.29						
Borehole Complete at 5.00 r	n		5.00	59.79						
	011 11 11	1	-		V	Vater Leve	el Observation	ns		
Hole Diameter Detail  Diameter Depth Casing (mm) (m) Depth (m)	Chiseling Details From To Time (m) (m) (hours)	Date		Water Strike ( No G	m) T	Standing ime (mins) ater Encou			)	Depth Sealed (m)
Client: Entec UK L Engineer: Simon How Contractor: May Gurne; Dates: 15/07/2010 Plant: Dando Drilled By: T. York	ard / Geotechnical	Remarks:	2. Instal Plair Hole 1.20	llation deta n pipe fror e backfilled mbgl, gra	ails: 50m n GL to ′ d with co vel from	nm HDPE S 1.20mbgl ar ncrete from 1.20m to 3.	tandpipe instand a slotted pi GL to 0.50m	alled from GL to 3.2 ipe from 1.20m to 3.5 bgl, bentonite from sentonite from 3.20n gas tap.	20mbg 0.50m	jl.

Print Date: 21/09/2010

Logged By: S. Howard Checked By: P. Lewin

	May Gurney Limite Geotechnical - Site Ayton Road, Wymo	d Investigation ondham, NR18 0RH	Wind	ow S	ample F	Record		V	NSC01 Sheet 1 of 2	
MAY GURNEY	Tel: 01953 609856 Web: www.maygur	Fax: 01953 609819 ney.co.uk	Project:	Bicest	er		<b>'</b>			
Project ID: SI1622			Client:	Entec	UK Limite	d			nd Level: 61.6	
Contractors ID:			Engineer	: Jame	s Ridehalg	gh		Coord		334.38E 916.50N
Desc	cription		Legend	Deptl	O.D. Level	Sample	e Test	Re	emarks and	Installations
				(m)	(m)		Depth (m)	Tes	t Results (ppm	
MADE GROUND (TOPS) slightly gravelly clay with Gravel is angular to suba of chalk, ash and wood.	frequent rootle	ts.		>- - 0.20	61.45	CS01	0.00-0.20		0.00	-
Stiff to firm light brown-on CLAY.	ange mottled s	andy		- - -						-
Firm grey-orange mottled gravelly CLAY. Gravel is fine consisting of gypsum chalk.	angular to sub	angular		0.80	60.85					- - -
From 1.40mbgl we	eathered chalk					C1 CS02	1.20-2.00			-
laminations.						0002	1.30-1.70		0.00	-
Firm dark brown CLAY w	ith gypsum cry	stals.		2.10	59.55	C2	2.00-3.00			- - -
						СЗ	3.00-4.00			- - - - - - -
From 3.00mbgl cla shell fossils.	ay is laminated	with								- - - - - - -
From 4.00mbgl cla laminated with fewe	ay is less obvic er shell fossils p	ously oresnt.				C4	4.00-5.00			
				-						-
Continued next sheet				<u> </u>		C5 Water Leve	5.00-6.00 el Observat	ions		-
Drive	Records		Data		Water	Standing	Stan		Casing	Depth
Diameter (mm)  102 86 76 66 56	To (m) 2.00 3.00 4.00 5.00 6.00	Recovery (%)	Date		Strike (m)	Time (Mins	s) Leve		Depth (m)	Sealed (m)
	UK Limited Ridehalgh		Remarks:	1. Start 2. Hole b	er pit dug fro packfilled with	om GL to 1.20 h arisings.	)mbgl.			
Plant: Terrier Drilled By: M. Earl Logged By: JSR										
Checked By: P. Lew	in								Prin	t Date: 22/09/2010

	May Gurney Limit Geotechnical - Si Ayton Road, Wyn	ed le Investigation nondham, NR18 0RH	Winde	ow S	ample R	ecord		,	WSC0 Sheet 2 of	1 2	
MAYGURN	Tal: 01053 60085	6 Fax: 01953 609819	Project:	Bicest	er				<u> </u>		
Project ID: SI1			Client:	Entec	UK Limited	l			nd Level: dinates:		53mAOD 334.38E
Contractors ID	):		Engineer	: Jame	es Ridehalgh	า		Cool	ulliales.		16.50N
	Description		Legend	Dept	h O.D. Level	Sample	e Test	F	Remarks and		Installations
	<b></b>			(m)		Туре	Depth (m)	Te	st Results	PID (ppm)	<i>VSVII</i>
	CLAY with gypsum cr	ystais.		6.00	55.65	CS03	5.50-5.80			0.00	-
Window Sample	Complete at 6.00 m			- 6.00	55.65						
				-							_
	Drive Records				\\/	Water Leve			0	. 1	Death
Diameter (mm)	To (m)	Recovery (%)	Date		Water Strike (m)	Standing Time (Mins		aing (m)	Casing Depth (r	n)	Depth Sealed (m)
102 86 76 66 56	2.00 3.00 4.00 5.00 6.00				No Groundw	ater Encount	tered				
Engineer: Date: Plant: Drilled By:	Entec UK Limited James Ridehalgh 15/07/2010 Terrier M. Earl JSR		Remarks:	1. Star 2. Hole	ter pit dug fron backfilled with	n GL to 1.20 arisings.	)mbgl.				
Checked By:	P. Lewin									Print	Date: 22/09/2010

	May Gurney Limit Geotechnical - Sit Ayton Road, Wyn	ed e Investigation ondham, NR18 0RH	Wind	ow S	ample F	Record		WS Sheet		
MAY GURNEY	Tel: 01953 60985 Web: www.maygu	6 Fax: 01953 609819 rney.co.uk	Project:	Bicest	er		1			
Project ID: SI1622			Client:	Ented	UK Limite	d		Ground Le Coordinate		
Contractors ID:			Engineer	: Jame	es Ridehalg	jh			2179	911.24N
De	escription		Legend	Dept		Sample		Remark and	DID	Installations
MADE GROUND: Brovis angular to subangular consisting of concrete, wood.	ar fine to coarse ACM, brick, cha	lk and		(m)		CS01	Depth (m) 0.20-0.40	Test Res	0.00	- <del> </del>
MADE GROUND: Firm slightly gravelly clay. G consisting of brick with	Fravel is fine	-		> > > > 0.80	60.90					-
Soft blue-grey CLAY w relic organic material.	ith brown mottlir	g and		+ - - - -		CS02 C1	1.20-1.40 1.20-2.00		0.00	- = = =
Soft to firm brown CLA laminations and relic o becomes more yellow	rganic material.	Chalk		1.40						
Dark brown CLAY with relic roots.	gypsum crystal	s and rare		2.00 - - -	59.70	C2	2.00-3.00			
From 2.40mbgl visible.	no roots but sma	all fossils		- - - - - -		CS03	2.40-2.70		0.00	- · · · · · · · · · · · · · · · · · · ·
From 3.00mbgl to stiff.	becoming grey-	orown firm				СЗ	3.00-3.90			
Stiff to hard light grey ( shell fossils. Window Sample Com		lant		3.90 - 4.00						-  -  -  -  -  -  -  -  -  -  -  -  -
						Water Leve	el Observat	ions		
Drameter (mm)  102 86 76	ro (m) 2.00 3.00 3.90	Recovery (%)	Date		Water Strike (m) No Ground	Standing Time (Mins water Encount	,		asing th (m)	Depth Sealed (m)
Engineer: Jame	arl			2. Hole prog 3. Instal 4.00 to 4. bent	ress. lation details: mbgl. Plain p 00mbgl. Hole	32mm HDP ipe from GL backfilled w 20m to 1.00m	nd window  E Standpip to 1.00mboo ith concrete nbgl and gr	sampling tech be installed fror gl and a slotted e from GL to 0 avel from 1.00 tap.	n GL to pipe from .20mbgl, m to 4.00r	1.00m

	May Gurney Limit  Geotechnical - Sit  Ayton Road, Wym		Windo	ow (	Sar	nple R	ecord		V	<b>NSC</b> (Sheet 1 o		
MAY GURNEY	Tel: 01953 60985 Web: www.maygu	5 Fax: 01953 609819 rney.co.uk	Project:	Bice	ster			1				
Project ID: SI1622			Client:	Ente	ec UI	K Limited	l				-	85mAOD
Contractors ID:			Engineer	: Jan	nes I		h			dinates:		352.51E 394.16N
De	escription		Legend	Dep		O.D. Level	Sample Type			emarks and	PID	Installations
MADE GROUND (TOF slightly gravelly clay. G subangular fine to med and chalk.	Fravel is angular	to		(n >- 0.2		(m) 61.59	CS01	Depth (m) 0.00-0.20	res	st Results	0.00	-
Firm to stiff light brown pieces and rootlets.	sandy CLAY wit	h wood		+								- - -
Firm grey-brown-orang slightly gravelly CLAY. fine weathered chalk.	ge mottled slightl Gravel is suban	y sandy gular		0.7	70	61.09	C1	1.20-2.00				
Firm brown-grey slightl abundant rootlets. From 1.50mbgl chalk.	bands of highly	weathered		1.5	50	60.29						
From 1.80m to 3 gypsum crystals. Firm dark brown slightl		/	* * * * * * * * * * * * * * * * * * *	2.0	00	59.79	C2	2.00-3.00				
CLAY. Gravel is suban	igular fine chalk.			2.4	45	59.34	CS02	2.40-2.60			0.00	
mottling and fine gypsuAt 2.45mbgl 5m	ım crystals.			- - - - - - - -								- · · · · · · · · · · · · · · · · · · ·
Stiff dark brown-grey la frequent shell fossils.	aminated CLAY v	vith		3.0	00	58.79	CS03 C3	3.00-3.20 3.00-4.00			0.00	
							C4	4.00-5.00				
Continued next sheet				_			C5	5.00-6.00				- (1)
D-	ivo Doords						Water Leve				<u> </u>	
Diameter (mm)	ive Records To (m)	Recovery (%)	Date		Str	Nater rike (m)	Standing Time (Mins	,		Casin Depth (		Depth Sealed (m)
102 86 76 66 56	2.00 3.00 4.00 5.00 6.00					No Groundw	ater Encount	ered				
Engineer: Jame	arl			2. Inst 6.0 1.0 an	tallation 00mb 00m t	on details: 3 gl. Plain pi to 6.00mbg vel from 1.0	n GL to 1.20 32mm HDP pe from GL I. Hole back 00m to 6.00	E Standpip to 1.00mbo filled with b	gl and a pentonite	slotted pipe from GL	pe from to 1.00 ush cov	mbgl

	May Gurney Limit Geotechnical - Sit Ayton Road, Wym	e Investigation	Wind	ow 9	Sar	nple R	ecord		,	WSC03 Sheet 2 of 2	3	
MAYGURN	Tél: 01953 60985 Web: www.maygu	ondham, NR18 0RH 5 Fax: 01953 609819 rney.co.uk	Project:	Bice	ster							
Project ID: SI1	1622		Client:	Ente	ec UI	K Limited	i		Grou	nd Level: 6	61.78	35mAOD
Contractors ID	):		Engineer	: Jan	nes I	Ridehalg	h		Coor			52.51E 94.16N
	Description		Legend	Do	nth	O.D. Level	Samp	le Test	F	Remarks		
	Description		Legena	De <sub>l</sub>		Level (m)	Туре	Depth (m)	Te	and st Results	PID (ppm)	Installations
Stiff dark brown-g frequent shell fos	grey laminated CLAY v	vith			00	FF 70						
Window Sample	Complete at 6.00 m			- 6.6		55.79						
							Water Lev	el Observat	ions			
Diameter (mm)	Drive Records To (m)	Recovery (%)	Date		Str	Vater rike (m)	Standing Time (Min	s) Level		Casing Depth (m)	)	Depth Sealed (m)
102 86 76 66 56	2.00 3.00 4.00 5.00 6.00					No Groundv	rater Encoun	ntered				
Client: Engineer: Date: Plant: Drilled By:	Entec UK Limited James Ridehalgh 16/07/2010 Terrier M. Earl		Remarks:	2. Inst 6.0 1.0 an	tallation 00mb 00m t	on details: gl. Plain pi o 6.00mbg vel from 1.	32mm HDF pe from GL I. Hole back	PE Standpip to 1.00mbo cfilled with b	gl and a entonite	led from GL slotted pipe e from GL to d with a flush	from 1.00	mbgl
Logged By: Checked By:	JSR P. Lewin										Print	Date: 22/09/2010
											FIIN	Date. 22/09/2010

	May Gurney Limit Geotechnical - Sit Ayton Road, Wym		Windo	ow Sa	mple R	ecord			NSC(		
MAYGURN	Tel: 01953 60985	6 Fax: 01953 609819	Project:	Biceste	r				<u> </u>	•	
Project ID: SI			Client:	Entec U	JK Limited	d			d Level:		44mAOD 35.75E
Contractors II	):		Engineer:	James	Ridehalg	h		00010	matoo.		00.38N
	Description		Legend	Depth	O.D. Level	Sampl	e Test	Re	emarks and		Installations
MADE ODOUNE	) O-6 h hlh	ale manage III	~~~	(m)	(m)	Туре	Depth (m)	Tes	t Results	PID (ppm)	
clay. Gravel is an coarse consisting concrete.	D: Soft brown-black saingular to subangular mg of limestone, brick, a of the total of the tot	nedium to sh and		- - - - - 0.60	63.64	CS01	0.40-0.60			0.00	
	ge-grey mottled sandy	CLAY.		- - - - -		C1	1.20-2.00				
From 1.30	Ombgl becoming very s	sandy.									
Brown very sand		/		1.60 - 1.65	62.64 62.59						
Firm grey-brown	mottled CLAY.			<u> </u>							
Orange SAND a	nd GRAVEL.			2.00 _	62.24	CS02 C2	2.00-2.20 2.00-3.00			0.00	
	laminated CLAY with tal and weathered chawith depth.			- 2.20 	62.04	C3	3.00-4.00				
Window Sample	e Complete at 4.00 m			4.00	60.24						
				-		Water Levi	el Observat	ions			
	Drive Records		Date		Water	Standing	Stan		Casing	g	Depth
Diameter (mm) 102	To (m) 2.00	Recovery (%)	19/07/10	S	3.00	Time (Mins		(m)	Depth (i		Sealed (m)
102 86 76	2.00 3.00 4.00		.5,31710				0.40				
Client: Engineer: Date: Plant: Drilled By: Logged By:	Entec UK Limited James Ridehalgh 19/07/2010 Terrier M. Earl JSR			2. Slight v 3. Water I 4. Installa 2.50m to 2.50 from 0	r pit dug fror vater seepag evel standin tion details: bgl. Plain pi Ombgl. Hole 0.50m to 2.50 ed with a flus	ge at 2.00mb g at 3.45mb 32mm HDP pe from GL backfilled w 0mbgl and b	ogl.  egl. E Standpip to 0.50mbo  ith bentonit  pentonite fro	gl and a s e from G	slotted pip L to 0.50	e from mbgl, g	gravel
Checked By:										Drint	Date: 22/00/2010
										Print	Date: 22/09/2010

	May Gurney Limit Geotechnical - Sit Ayton Road, Wyn	ted te Investigation nondham, NR18 0RH	Windo	ow S	ample R	ecord		,	WSC0 Sheet 1 of		
MAY GURNEY	Tel: 01953 60985 Web: www.maygu	6 Fax: 01953 609819 urney.co.uk	Project:	Bicest	er		<u>'</u>				
Project ID: SI162	22		Client:	Entec	UK Limited	t			nd Level:		
Contractors ID:			Engineer	: Jame	s Ridehalg	h					370.61E 986.52N
1	Description		Legend	Depti (m)	h O.D. Level (m)	Sample	e Test Depth (m)	-	temarks and st Results	PID	Installations
MADE GROUND: Fe		randy grayally		0.05	64.77	.,,,,,	2 op ()	10.	31 11030113	(ppm)	-
clay. Gravel is angulacoarse consisting of and ash.	ar to subrounded r	medium to		0.30	64.52	CS01	0.40-0.60			0.00	
MADE GROUND: Co	oncrete boulder (K	erbstone).		0.65	64.17						
MADE GROUND: Be clay. Gravel is angul coarse consisting of and ash. Becoming the Window Sample Co	ar to subrounded r brick, concrete, lin black stained.	medium to									
				-		Water Leve	l el Observat	ione			1 7
[	Orive Records				Water	Standing	Stan		Casing	,	Depth
Diameter (mm)	To (m)	Recovery (%)	Date		Strike (m)	Time (Mins	s) Leve		Depth (r		Sealed (m)
Engineer: Jai Date: 20 Plant: Te				2. Hole a prog 3. Instal 0.65 to 0.0	ter pit dug fror abandoned at ress. Iation details: mbgl. Plain pi 65mbgl. Hole el from 0.30m	0.65mbgl as 32mm HDP pe from GL backfilled w	s window s  E Standpip to 0.30mbg ith bentonit	e instal gl and a e from (	led from GI slotted pipe GL to 0.30r	L to e from nbgl a over ar	0.30m nd

	May Gurney Limited Geotechnical - Site Ayton Road, Wymon	Investigation ndham, NR18 0RH	Windo	ow Sa	mple R	ecord		WSC( Sheet 1 o		
MAYGURNE	Web: www.maygurr	Fax: 01953 609819 ney.co.uk	Project:	Bicester	•					
Project ID: SI162	22				JK Limited			Ground Level: Coordinates:		35mAOD 345.35E
Contractors ID.			Engineer	James	Ridehalgh				2169	981.66N
	Description		Legend	Depth	O.D. Level	Sampl	e Test	Remarks and		Installations
				(m)	(m)	Туре	Depth (m)	Test Results	PID (ppm)	N//8///8
gravelly clay with rocurs subangular to subroconsisting of chalk a MADE GROUND: B angular to subround of concrete, brick an of concrete. From 0.50mb colour.	Reworked Natural): Botlets. Gravel is bunded fine to mediu and chert.  Brown sandy gravel. Graven sandy gravel. Gravel fine to coarse conditional becoming blacked concrete cobbles be	Gravel is nsisting cobbles		0.05	64.79 64.54 64.04	CS01	0.60-0.80		0.00	
				<u> </u>	<u>I</u>	Water Lev	l el Observat	ions		1 7
	Drive Records		Data		Water	Standing	Stan		q	Depth
Diameter (mm)	To (m)	Recovery (%)	- Date		rrike (m) No Groundw	Time (Min	s) Level	l (m) Depth (	m)	Sealed (m)
Engineer: Ja Date: 20 Plant: Te Drilled By: M	ntec UK Limited ames Ridehalgh 0/07/2010 errier . Earl GR		:	2. Hole ab progre		0.80mbgl a	l Ombgl. s window s	ampling technique		Date: 22/09/2010

		nited Site Investigation mondham, NR18 0RH	Windo	ow Sa	ample F	Record		1	WSC07 Sheet 1 of 2	,	
MAYGURN	Tel: 01953 6098 Web: www.may	56 Fax: 01953 609819 gurney.co.uk	Project:	Biceste	er						
Project ID: SI	1622		Client:	Entec	UK Limited	t		Grou	nd Level: 6	1.92	29mAOD
Contractors IE	<b>)</b> :		Engineer	: Jame	s Ridehalg	h		Coor			20.97E 02.61N
	Description		Legend	Depth	O.D. Level	Sample	e Test	R	emarks and		Installations
				(m)	(m)	Туре	Depth (m)	Tes	at Daguita	PID ppm)	
MADE GROUND		/		0.05	61.88 61.78						-
MADE GROUND	): Concrete. ): Limestone dolomite	/		_							
	Ombgl water ingress.	; IIII. /		0.40	61.53 61.48	C1 CS01	0.40-1.00 0.45-0.60		0.	.00	-
	o: Gravel, consisting our to coarse tarmac estone.			1 : : -							- - -
Firm grey-brown	sandy CLAY with roo	otlets.		L		C2	1.00-2.00				-
From 1.00 weathered	Ombgl orange mottlin chalk veins.	g and		-			1.00 2.00				-
				-							-1::
				1.50	60.43						
Firm brown slight chalk veins.	tly sandy CLAY with	weathered		-	00.10						-
				-							-1::  :::
				-		СЗ	2.00-3.00				
				<u> </u>							- <u>N</u> ES
				-							
	Y with bands of fine g	ypsum		2.40	59.53						
crystals.											- <u>N</u> EX
				_							-
				_		CS02 C4	2.90-3.20 3.00-4.00		0.	.00	
				3.20	58.73						- 1
Stiff grey laminat fossils.	ed CLAY with freque	nt shell		- 5.20	30.73						- # <b>=</b>
				-							
				_							
				-							- : 🖺
				-		C5	4.00-5.00				101
				-							
				-							
				_							- Hilli
				-							- 1
Continued next s	sheet					C6	5.00-6.00				
						Water Leve	el Observat	ions			
Diameter (mm)	Drive Records To (m)	Recovery (%)	Date		Water Strike (m)	Standing Time (Mins	Stan Leve		Casing Depth (m)		Depth Sealed (m)
	1.00 2.00 4.00	7, 7,	19/07/10		0.35	20	0.35	` ,	/	$\top$	· ,
102 86 76 66 56	4.00 5.00 6.00										
Client:	Entec UK Limited				er pit dug fro r ingress fron		)mbgl.				
Engineer:	James Ridehalgh		:	3. Top 1	.00m cased of	off to prevent	water ingr	ess into	drilled hole. led from GL to	^	
Date: Plant:	19/07/2010			6.00r	mbgl. Plain pi	pe from GL	to 1.00mb(	gl and a	slotted pipe f	rom	
Drilled By:	Terrier M. Forl								GL to 1.00mb h a flush cove		
1	M. Earl			tap.		- 9					
Logged By: Checked By:	JSR P. Lewin										
Oneckeu by.	ı.LEWIII									Print	Date: 22/09/2010

	Geotec	urney Limited hnical - Site Investigation toad, Wymondham, NR18 0RH	Wind	ow Sa	mple R	ecord		\	NSC07 Sheet 2 of 2	•	
MAYGURN	Tel: 01: Web: w	953 609856 Fax: 01953 609819 ww.maygurney.co.uk	Project:	Biceste	r		-1				
Project ID: SI1	622		Client:	Entec U	JK Limited	ı		Grour	nd Level: 6	1.92	9mAOD
Contractors ID	):		Engineer	: James	Ridehalg	h		Coord			20.97E 02.61N
	Descriptio	n	Legend	Depth	O.D. Level	Sample	Test	R	emarks		Installations
				(m)	(m)	Туре	Depth (m)	Tes	and at Results (	PID ppm)	IIIStallations
Stiff grey laminate fossils.				6.00	55.93						
Window Sample	Complete at 6	.00 m									
						Water Leve	l Observat	ions			
Diameter (mm)	Drive Recor	rds Recovery	Date	S	Water trike (m)	Standing Time (Mins	Stand Level		Casing Depth (m)		Depth Sealed (m)
102 86 76 66 56	1.00 2.00 4.00 5.00 6.00	1.000.00	19/07/10		0.35	20	0.35		-		
Date: Plant: Drilled By:	Entec UK Lim James Rideha 19/07/2010 Terrier M. Earl JSR P. Lewin			<ol> <li>Water i</li> <li>Top 1.0</li> <li>Installa</li> <li>6.00m</li> <li>6.00</li> </ol>	ngress from 00m cased c tion details: bgl. Plain pi 0mbgl. Hole	off to prevent 32mm HDPE pe from GL t backfilled wi	water ingress Standpip to 1.00mbg	e installe Il and a s e from G	ed from GL to slotted pipe f GL to 1.00mb n a flush cove	rom <sup>*</sup> egl an er and	ıd

	May Gurney Limit Geotechnical - Sit Ayton Road, Wyr	ed e Investigation iondham, NR18 0RH	Windo	ow Sa	ample R	ecord			NSC08 Sheet 1 of 1	
MAYGURN	Tel: 01953 60985	6 Fax: 01953 609819	Project:	Biceste	er					
Project ID: SI	1622		Client:	Entec	UK Limited	t				2.071mAOD
Contractors ID	):		Engineer	: Jame:	s Ridehalg	h		Coord		60840.76E 7883.85N
	Description		Legend	Depth		Sample	e Test Depth (m)		emarks and	Installations
MADE GROUND	): Tarmac.		***	(m) 0.05	(m) 62.02	Туре	Deptil (III)	res	t Results (p	pm)
MADE GROUND		/		0.15	61.92					_
MADE GROUND	): Dolomite fill.			0.40	61.67	CS01	0.40-0.70			
Firm grey-blue sa	andy CLAY with fine co	oal gravel.		- 0.40	01.07	6301	0.40-0.70		0.0	
Firm brown-grey- weathered chalk	orange mottled CLAY bands.	with highly		1.00 - - - -	61.07	C1	1.20-2.00			
weathered chalk crystals.	nated sandy CLAY with bands and abundant f	n highly ine gypsum		- - - 1.80 - -	60.27	C2	2.00-3.00			
From 2.15	5m to 2.60mbgl soft.			- - - - - - -		CS02	2.30-2.50		0.0	00 -
*	Om to 3.30mbgl soft.	Y with		- - - - - 3.30	58.77	С3	3.00-4.00			- (1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
shell fossil fragm	ents.	Y WILL				C4	4.00-4.50			
Window Sample	Complete at 4.50 m			- 4.50 - - -	57.57					- MAN
				1		Water Leve	el Observat	ions		
	Drive Records		Date		Water	Standing	Stan		Casing	Depth
102 86 76 66	To (m) 2.00 3.00 4.00 4.50	Recovery (%)	Date		Strike (m) No Groundv	Time (Mins	s) Leve		Depth (m)	Sealed (m)
Client: Engineer: Date: Plant: Drilled By: Logged By:	Entec UK Limited James Ridehalgh 20/07/2010 Terrier M. Earl JSR		:	2. Hole a progr 3. Installa 4.50n to 4.5	ess. ation details: nbgl. Plain pi i0mbgl. Hole	4.50mbgl as 32mm HDP pe from GL backfilled w	s window s E Standpip to 0.50mbg ith bentonit	e installe gl and a s e from G	techniques un ed from GL to slotted pipe fr GL to 0.50mbç n a flush cove	om 0.50m gl and
Checked By:	P. Lewin								F	Print Date: 22/09/2010

## **Annex B Gas and Water Monitoring Tables**







## **CIRIA C665 Ground Gas Risk Assessment**

Situation A - All Development Types Except Low Rise Housing With Gardens

Project Number: 26999 Site: Bicester - Site A Date: As shown in row

	, and a second			Oito.				1		Duto.	710 01101111111011					
Monitoring Point	Flow Rate	Atmospheric Pressure	Met	hane	Carbon Dioxide	Oxygen	Carbon Monoxide	Hydrogen Sulphide	Methane GSV	Carbon Dioxide GSV	Character-	Additional Factors	Water level	Depth Of Well	Volume Of Gas In Well	Notes
Folit	(l/hr)	(mb)	(% v/v)	(% LEL)	(%)	(%)	(ppm)	(ppm)	(l/hr)	(l/hr)	ISIIC SILUALIOII	Factors	(m bgl)	(m)	(m <sup>3</sup> )	
WSA01	0.0	1012	0.0		0.7	19.7			0	0	1					23/07/2010
WSA01	0	1008	0	•	0.9	19.5			0	0	1					29/07/2010
WSA01	0	997	0		0.8	19.7			0	0	1					04/08/2010
WSA01	0	1006	0		0.5	19.9			0	0	1					13/08/2010
WSA01	0	997	0		0	20.7			0	0	1					18/08/2010
WSA02	0.0	1012			0.6	19.8			0	0	1					23/07/2010
WSA02	0	1008			0.6	19.7			0	0	1					29/07/2010
WSA02	0	997	0		0.5	19.9			0	0	1					04/08/2010
WSA02	0	1006			0.4	19.9			0	0	1					13/08/2010
WSA02	0	997	0		0.5	20.4			0	0	1					18/08/2010
WSA03	0.0	1012			0.7	19.5			0	0	1					23/07/2010
WSA03	0	1008			0.8	19.7			0	0	1					29/07/2010
WSA03	0	997	0		0.9	19.8			0	0	1	·				04/08/2010
WSA03	0	1006			0.7	19.8			0	0	1					13/08/2010
WSA03	0	996	0		0.8	20.5			0	0	1					18/08/2010
												·				

## **CIRIA C665 Ground Gas Risk Assessment**

Situation A - All Development Types Except Low Rise Housing With Gardens

 Project Number:
 26999

 Site:
 Bicester

 Date:
 As shown in row

Monitoring Point	Flow Rate	Atmospheric Pressure	Methane	Carbon Dioxide	Oxygen	Carbon Monoxide	Hydrogen Sulphide	Methane GSV	Carbon Dioxide GSV	Character-	Additional Factors	Water level	Depth Of Well	Volume Of Gas In Well	Notes
Point	(l/hr)	(mb)	(% v/v) (%	LEL) (%)	(%)	(ppm)	(ppm)	(l/hr)	(l/hr)	istic Situation	ractors	(m bgl)	(m)	(m³)	
IC03	0	997	0.2	0.5	18.4			0	0	1					21/07/2010
C03	0	1012	0.1	0.3	19.4			0	0	1					23/07/2010
IC03	0	1008	0.1	1.1	18			0	0	1					29/07/2010
1C03	0	996	0	1.6	17.2			0	0	1					04/08/2010
HC03	0.2	1006	0	0	20.1			0	0	1					13/08/2010
HC03	0	997	0	2	18.4			0	0	1					18/08/2010
SC04	0	997	0	0.1	17.6			0	0	1					21/07/2010
SC04	0	1012	0	0.1	18.4			0	0	1					23/07/2010
SC04	0	1008	0	0.2	19.2			0	0	1					29/07/2010
SC04	0	996	0	0.3	19.5			0	0	1					04/08/2010
SC04	0	1006	0	0.1	19.6			0	0	1					13/08/2010
SC04	0		0	0.4	19.3			0	0	1					18/08/2010
SC05	0	997	0	0	20.3			0	0	1					21/07/2010
SC05	0	1012	0	0	20.1			0	0	1					23/07/2010
SC05	0	1008	0	0	20			0	0	1					29/07/2010
SC05	0	996	0	0	20.2			0	0	1					04/08/2010
SC05	0	1006	0	0.3	19.6			0	0	1					13/08/2010
SC05	0	997	0	0.0	20.7			0	0	1					18/08/2010
0000		301			20.7			, ,	Ů						10/00/2010
HC05	0	997	0	0	20			0	0	1					21/07/2010
HC05	0	1012	0	0.1	19.7			0	0	1					23/07/2010
HC05	0	1008	0	0.2	19.1			0	0	1					29/07/2010
HC05	0	996	0	0.1	19.9			0	0	1					04/08/2010
HC05	0	1006	0	0.3	19.2			0	0	1					13/08/2010
HC05	0	997	0	0.5	19.2			0	0	1					18/08/2010
HC03	U	991	U	0.5	19.3			U	U	'					10/00/2010
/SC07	0	997	0	0	20.3			0	0	1					21/07/2010
SC07 /SC07	0		0	0	20.3			0	0	1					23/07/2010
	0	1012													
SC07	-	1008	0	0	20.4			0	0	1					29/07/2010
SC07	0	995	0	0.3	19.9			0	0	1					04/08/2010
/SC07	0	1006	0	0	20.1			0	0	1					13/08/2010
SC07	0	997	0	0	20.8			0	0	1					18/08/2010
10000		222						_	_						04/07/05:5
SC02	0		0	3.2	18.6			0	0	1					21/07/2010
SC02	0	1012	0	3.3	18.7			0	0	1					23/07/2010
SC02	0	1008	0	1.2	19.5			0	0	1					29/07/2010
SC02	0	995	0	0.8	19.7			0	0	1					04/08/2010
SC02	0	1006	0	0	20.2			0	0	1					13/08/2010
SC02	0	997	0	0	20.8			0	0	1					18/08/2010
SC03	0		0	2.1	19.4			0	0	1					21/07/2010
SC03	-0.1	1012	0	1.2	19.5			0	0	1					23/07/2010
SC03	0	1008	0	0.9	19.6			0	0	1					29/07/2010
SC03	0	995	0	1	19.6			0	0	1					04/08/2010
SC03	0	1006	0	1	19.4			0	0	1					13/08/2010
SC03	0	997	0	1.1	20			0	0	1					18/08/2010

## **CIRIA C665 Ground Gas Risk Assessment**

## Situation A - All Development Types Except Low Rise Housing With Gardens

 Project Number:
 26999

 Site:
 Bicester - Site C - WSC08

 Date:
 As shown in row

-		1						ı		T	1		1	1		
Monitoring Point	Flow Rate	Atmospheric Pressure	Met	thane	Carbon Dioxide	Oxygen	Carbon Monoxide	Hydrogen Sulphide	Methane GSV	Dioxide GSV	Character- istic Situation	Additional Factors	Water level	Depth Of Well	Volume Of Gas In Well	Notes
	(l/hr)	(mb)	(% v/v)	(% LEL)	(%)	(%)	(ppm)	(ppm)	(l/hr)	(l/hr)		raciors	(m bgl)	(m)	(m³)	
SC08 SC08	C		C		0	19.7			0	0	1					21/07/2010
SC08	C		C	)	0.2	17.9			0	0	1					23/07/2010
SC08	C	1008	C	)	0	20.4			0	0	1					29/07/2010
SC08	C			)	2.8	16.8			0	0	1					04/08/2010
SC08	C				0	20.3			0	0	1					13/08/2010
/SC08	C				0.3	20.3			0	0	1					18/08/2010
	-															10,10,=11
						-										
												·				
										1	1					

Site:	26999 Bicester, Oxfordshire
Data Description:	Monitoring Well Records - 1st Round 21/07/10
Completed By:	Nick Huyg
Checked By:	Steve Dooley

Groundwater Monitoring

Gioui	idwater Moni	toring			
<b>Exploratory Hole</b>	Date	Water Level	Depth	Water Column	Comments
		mbgl	mbgl	m	
BHC03	21/07/2010	1.09	2.97	1.88	
BHC05	21/07/2010	2.82	3.22	0.4	
WSC02	21/07/2010	2.23	3.76	1.53	
WSC03	21/07/2010	1.62	5.9	4.28	
WSC04	21/07/2010	0.88	2.64	1.76	
WSC05	21/07/2010	Dry	0.72	N/A	DRY
WSC07	21/07/2010	0.37	5.91	5.54	
WSC08	21/07/2010	0.69	4.56	3.87	

Observation of HC contamination

### Surface Water Monitoring

		Garia	cc water mon	.co.m.g			
		pН	Conductivity	Dissolved Oxygen	Dissolved Oxygen	Temperature	Comments
Exploratory Hole	Date		μS/cm	mg/l	%	°C	
SWA01	21/07/2010	6.86	530	3.2	33.8	18.5	
SWC01	21/07/2010	7.58	970	5.3	57.0	19.5	
SWC02	21/07/2010	7.6	905	4.1	41.4	17.0	
SWC04	21/07/2010	7.6	968	3.9	40.2	16.3	
SWC05	21/07/2010	7.83	734	8.5	93.3	19.1	
SWC08	21/07/2010	7.60	850	4.8	50.6	17.6	

# **Annex C Screened Laboratory Data**







## **Data Summary Statistics**

Site:	DSDC Bicester Site A	Project No:	26999
Data Description:	Site A	SOM (%):	1.0%
Land Use:	Commercial	Completed By:	RIDEJ
Recentor:	Human Health	Checked By:	DOOLS.

Assessment Criteria Key a) 2009 SGV (Res with Plant) b) 2009 SGV (Allotment) c) 2009 SGV (Commercial/Industrial) d) EIC GAC (Res with Plant)

e) EIC GAC (Res without Plant) i) Entec GAC (Res without Plant) j) Entee GAC (Allotment)
j) Entee GAC (Allotment)
k) Entee GAC (Commercial/Ind)
l) LQM CIEH GAC (Res with Plant)
n) LQM CIEH GAC (Res with Plant)
p) Dutch Target Values f) EIC GAC (Allotment) g) EIC GAC (Commercial/Ind) h) Entec GAC (Res with Plant)

o) Dutch Intervention values

m) LQM CIEH GAC (Res without Plant) q) Soil Code: Crops for Consumption u) BRE Special Digest n) LQM CIEH GAC (Commercial/Ind) r) Soil Code: Sensitive Species v) Other Generic Criteria s) Soil Code: Grazing Animals t) Soil Code: Background

w) Site Specific Assessment Criteria
x) Laboratory limit of detection

y) CLR	SGV	for	Lead	(20

							Sur	nmary Stati	stics			Sample Ide	entifiers ar	d Analytica	al Data						
		Method	Assess- ment	Source				, , , , , , , , , , , , , , , , , , , ,				Cumpio iu						 	 		
Contaminant	Units	Detection	Criteria		Total	Results					Number	WSA01		1	WSA03						
		Limit	(AC)	(see key)	Number of	Above Detection	Minimum	Maximum	Arithmetic Mean	Standard Deviation	of results	Site A	Site A	Site A	Site A						4
					Samples	Limit			Weari	Deviation	>AC		1.25-1.35	1	2.5-2.7						
oil Organic Matter (SOM)	%	<0.35 %			3	3	0.381	2.02	4.05000000	3 0.859610571		Nat 0.381	Nat	Nat 1.65	Nat 2.02						4
oil Organic Matter (SOM)	pH Units	1 pH unit	-		4	4	6.85	8.57	7.8325	0.803175987		8.4	8.57	6.85	7.51						_
lphate, 2:1 water soluble	g/l	<0.003 g/l	0.5		4	4	0.0404	1.63		0.797980916		0.0404		1.13	1.63						_
nmoniacal Nitrogen, exchangeable as NH4	mg/kg	<15 mg/kg	15		4	0	15	15	0.711323	0.737300310	0	<15	<15	<15	<15						+
oron, water soluble	mg/kg	<1 mg/kg	190000	n	4	2	1	5.16	2.3825	1.961060512	-	<1	<1	2.37	5.16						+
senic	mg/kg	<0.6 mg/kg	640	С	4	4	4.85	21		6.712845274		13.9	21	15.6	4.85						
nromium, Hexavalent	mg/kg	<0.6 mg/kg	35	n	4	0	0.6	0.6	-	-	0	<0.6	<0.6	<0.6	<0.6						
admium	mg/kg	<0.02 mg/kg	230	С	4	4	0.194	0.464	0.2875	0.120528005	0	0.257	0.235	0.464	0.194						
nromium	mg/kg	<0.9 mg/kg	30000	n	4	4	15.7	51.2	29.925	16.40962624	0	18.4	15.7	51.2	34.4						
opper	mg/kg	<1.4 mg/kg	72000	n	4	4	11.4	16.6	14.125	2.518432052	0	11.4	15.9	16.6	12.6						
ad	mg/kg	<0.7 mg/kg	750	у	4	4	9.42	19.2	12.375	4.628905558	0	9.42	11.3	19.2	9.58						
ercury	mg/kg	<0.14 mg/kg			4	0	0.14	0.14	-	-	0	<0.14	<0.14	<0.14	<0.14						
ckel	mg/kg	<0.2 mg/kg	1800	С	4	4	19.4	36	28.025	7.123844936	0	25.7	31	36	19.4						
elenium	mg/kg	<1 mg/kg	13000	С	4	2	1	1.39	1.175	0.204694895		<1	<1	1.39	1.31						
nc	mg/kg	<1.9 mg/kg	670000	n	4	4	41.9	108	64.5	29.65164414	0	51.2	56.9	108	41.9						
phthalene-d8 % recovery**	%	%	-		1	1	93.7	93.7	93.7	-	-	93.7									
enaphthene-d10 % recovery**	%	%	-		1	1	94	94	94	-	-	94									-
nenanthrene-d10 % recovery**	%	%	-		1	1	94.3	94.3	94.3	-	-	94.3									_
nrysene-d12 % recovery**	%	%	-		1	1	91.8	91.8	91.8	-	-	91.8									-
erylene-d12 % recovery**	%	%	-			1	92.7	92.7	92.7	-	-	92.7									+
aphthalene cenaphthylene		<0.009 mg/kg <0.012 mg/kg		n n	1	0	0.009	0.009	-	-	0	<0.009 <0.012									+
cenaphthene		<0.012 mg/kg		n	1	0	0.012	0.012	-	-	0	<0.012									+
uorene	mg/kg mg/kg	<0.008 mg/kg	64000	n	1	0	0.000	0.000	-	_	0	<0.00									-
henanthrene		<0.015 mg/kg	22000	n	1	0	0.015	0.015	_	_	0	<0.015									+
Inthracene		<0.016 mg/kg	530000	n	1	0	0.016	0.016	-	-	0	<0.016									-
luoranthene		<0.017 mg/kg	1	n	1	0	0.017	0.017	-	-	0	<0.017									
yrene		<0.015 mg/kg	54000	n	1	0	0.015	0.015	-	-	0	<0.015									
enz(a)anthracene		<0.014 mg/kg	90	n	1	0	0.014	0.014	-	-	0	< 0.014									
hrysene	mg/kg	<0.01 mg/kg	140	n	1	0	0.01	0.01	-	-	0	<0.01									
enzo(b)fluoranthene		<0.015 mg/kg	100	n	1	0	0.015	0.015	-	-	0	<0.015									
enzo(k)fluoranthene	mg/kg	<0.014 mg/kg	140	n	1	0	0.014	0.014	-	-	0	<0.014									
enzo(a)pyrene	mg/kg	<0.015 mg/kg	14	n	1	0	0.015	0.015	-	-	0	<0.015									
deno(1,2,3-cd)pyrene		<0.018 mg/kg		n	1	0	0.018	0.018	-	-	0	<0.018									
benzo(a,h)anthracene	Ü	<0.023 mg/kg	4	n	1	0	0.023	0.023	-	-	0	<0.023									
enzo(g,h,i)perylene		<0.024 mg/kg		n	1	0	0.024	0.024	-	-	0	<0.024									
lyaromatic hydrocarbons, Total USEPA 16		<0.118 mg/kg			1	0	0.118	0.118	-	-	0	<0.118									_
PH >C6-C8	mg/kg	<10 mg/kg	10		2	0	10	10	-	-	0		<10		<10						$\perp$
PH >C8-C10	mg/kg	<10 mg/kg	10		2	0	10	10	-	-	0		<10		<10						-
H >C10-C12	mg/kg	<10 mg/kg	10		2	0	10	10	-	-	0		<10		<10						-
PH >C12-C16	mg/kg	<10 mg/kg	10		2	0	10	10	-	-	0		<10	-	<10						-
PH >C16-C21	mg/kg	<10 mg/kg	10		2	0		10	14.05	-	0		<10	-	<10 19.7					+ + + + + + + + + + + + + + + + + + + +	+
PH >C21-C40 PH >C6-C40	mg/kg	<10 mg/kg	10		2	1	10	19.7	14.85 14.85	-	1		<10 <10		19.7					+ + + + + + + + + + + + + + + + + + + +	+
FTI 200-040	mg/kg	< 10 mg/kg	10			1 1	10	19.7	14.85	-	1	1	<10	1	19.7		1				-

Site:	DSDC Bicester - Site A	Project No:	26999
Data Description:	Groundwater and Surface water	SOM (%):	na
Land Use:	MOD Storage and Distribution	Completed By:	MIFFL
Receptor:	Controlled Waters	Checked By:	DOOLS
	·		

Assessment Criteria Key
a) 2009 SGV (Res with Plant)
b) 2009 SGV (Allotment)
c) 2009 SGV (Commercial/Industrial)
d) EIC GAC (Res with Plant)

e) EIC GAC (Res without Plant) f) EIC GAC (Allotment) g) EIC GAC (Commercial/Ind) h) Entec GAC (Res with Plant)

i) Entec GAC (Res without Plant) m) LQM CIEH GAC (Res without Plant) q) Soil Code: Crops for Consumption u) BRE Special Digest
j) Entec GAC (Allotment) n) LQM CIEH GAC (Commercial/Ind) r) Soil Code: Sensitive Species v) Other Generic Criteria
k) Entec GAC (Commercial/Ind) o) Dutch Intervention values s) Soil Code: Grazing Animals w) Site Specific Assessment Criteria
l) LQM CIEH GAC (Res with Plant) p) Dutch Target Values t) Soil Code: Background x) Laboratory limit of detection

y) CLR SGV for Lead (2002) z) Initial Screening Criteria DWS = Drinking Water Standard EQS = Env. Quality Standard

			Receptor:		Controlled	vvators			Спескеа в	,.	DOOLS		u) EIC GAC	(Res with Plant)		n) Enlec GAC	(Res with Plant)	I) EQIVI CIEI	GAC (Res with P	lant) p) Dutch Target Values	t) Soil Code: Background	x) Laboratory	minit or detecti	on	EQS = EIIV. QC	Juality Standard
			Assass-				Su	mmary Sta	tistics			Sample Ide	entifiers ar	nd Analytical	l Data											
Contaminant	Units	Method Detection	Assess- ment	Source								CWADA	CWAOA	SWA01	CWAE	WSA01	WC A O2									
Contaminant	Units	Limit	Criteria	(see key)	Total		Minimum Max		Arithmetic	Standard	Number	SW	SW	SW	SW	GW	GW									
			(AC)	(000 1.0)	Number of			Maximum	Mean	Deviation	of results	21/07/2010	29/07/2010	0.04/08/2010	18/08/2010		04/08/2010									
					Samples	Limit					>AC			1925026		1925590										
organics					0	0	0	0		-	0			1												
linity, Total as CaCO3	mg/l	<2	-	-	1	1	170	170	170	-	-	170		-	-	-	-									
moniacal Nitrogen as NH4	mg/l	<0.3	0.5	DWS	6	5	0.3		0.863166667	0.702120336	3	2.16	0.436	0.753	<0.3	1.12	0.41									
nductivity @ 20 deg.C	mS/cm	< 0.014	-	-	1	1	0.461	0.461	0.461	-	-	0.461		-	-	-	-									
phate	mg/l	<3	400	EQS	6	5	3	1730	571.9166667	840.922963	2	92.7	7.7	<3	18.1	1580	1730									
oride	mg/l	<2	250	EQS	6	5	2	138	35.8	55.39350142	0	5.5	<2	2.7	3.9	138	62.7									
	pH Units	<1	-	-	6	6	7.4	8.5	7.858333333	0.373010277	-	7.87	7.4	7.6	8.5	7.84	7.94									
Itered (Dissolved) Metals	·				0	0	0	0			0															
enic (diss.filt)	mg/l	<0.00012	0.05	EQS	6	6	0.000645	0.0047	0.002104167	0.001365219	0	0.0047	0.00206	0.00156	0.00179	0.00187	0.000645									
on (diss.filt)	mg/l	< 0.00012	2	EQS	6	6	0.032	1.79	0.5234	0.758311545	0	0.036	0.032	0.0344	0.108	1.79	1.14		+				1		+	-
dmium (diss.filt)	mg/l	<0.0004	0.005	EQS	6	1	0.0001	0.000126	0.000104333	-	0	<0.0001	<0.0001	<0.0001	<0.0001	0.000126	<0.0001		+				1		+	-
omium (diss.filt)	mg/l	<0.0001	0.003	EQS	6	6	0.00332	0.000120	0.006743333	0.002277408	0	0.00658	0.0068	0.00553	0.00332	0.000120	0.00826		+ +				1		+	$\overline{}$
ornam (diss.mt)  oper (diss.filt)	mg/l	<0.00022	0.02	EQS	6	4	0.00035	0.00567	0.002395	0.002277400	0	0.00030	<0.00085		0.00332	0.00337	0.00567		+				1		+	$\overline{}$
ad (diss.filt)	mg/l	<0.00003	0.02	EQS	6	5	0.00003	0.000183	0.002333	6.40148E-05	0	0.000115	0.000183	0.00003	<0.0002	0.000052	0.000051		+				1		+	$\overline{}$
kel (diss.filt)	mg/l	<0.00015	0.15	EQS	6	3	0.00015	0.0401	0.007799333	0.015948827	0	0.00527	<0.00015		0.000976	0.0401	<0.00015		1							
enium (diss.filt)	mg/l	<0.00039	0.01	DWS	6	5	0.00039	0.00575	0.001809833	0.002058742	0	0.00241	<0.00039		0.000609	0.00575	0.000907		1							
c (diss.filt)	mg/l	<0.00041	0.075	EQS	6	6	0.00172	0.441	0.130053333	0.196163554	2	0.009	0.00766	0.00172	0.00594	0.315	0.441		1							
rcury (diss.filt)	mg/l	< 0.00001	0.001	EQS	6	0	0.00001	0.00001	-		0	<0.00001	< 0.00001		<0.00001	<0.00001	<0.00001									
asoline Range Organics (GRO)	, , ,				0	0	0	0			0			+												
hatics >C5-C6	mg/l	<0.01	0.01	7	0	0	0	0		-	0			+	-										<del>                                     </del>	$\overline{}$
hatics >C6-C8	mg/l	<0.01	0.01	Z	0	0	0	0			0			++											1	
hatics >C8-C10	mg/l	<0.01	0.01	Z	0	0	0	0	- :		0			++											1	
hatics >C10-C12	mg/l	<0.01	0.01	7	0	0	0	0			0			+											<del>                                     </del>	
al Aliphatics >C5-C12	mg/l	<0.01	0.01	-	0	0	0	0	-	-	-			+	-										<del>                                     </del>	
matics >C6-C7	mg/l	<0.01	0.01	7	0	0	0	0	-	-	0			+												
matics >C7-C8	mg/l	<0.01	0.01	7	0	0	0	0	-		0			+												
matics >EC8-EC10	mg/l	<0.01	0.01	7	0	0	0	0	-	-	0			+	-											
omatics >EC10-EC12	mg/l	<0.01	0.01	7	0	0	0	0	-	-	0			+	-											
tal Aromatics >C6-C12	mg/l	<0.01	-	-	0	0	0	0	-	-	-				-											
O Surrogate % recovery**	%		-	-	0	0	0	0	-	-	-			+	-											
nzene	mg/l	< 0.007	0.3	EQS	2	0	0.007	0.007	-	-	0	-	< 0.007	< 0.007	-	-	-									
uene	mg/l	< 0.004	0.05	EQS	2	0	0.004	0.004	-	-	0	-	<0.004	<0.004	-	-	-									
ylbenzene	mg/l	< 0.005		WHO Health	2	0	0.005	0.005	-	-	0	-	<0.005	<0.005	-	-										
p-Xylene	mg/l	<0.008	_	x	2	0	0.008	0.008	-	-	0	-	<0.008	<0.008	-	-										
ylene	mg/l	< 0.003	-	х	2	0	0.003	0.003		-	0	-	< 0.003	< 0.003	-	-	-									
,o-Xylene	mg/l	< 0.01	0.03	EQS	2	0	0.01	0.01	-	-	0	-	< 0.01	<0.01	-	-										
X, Total	mg/l	< 0.01	-	-	2	0	0.01	0.01	-	-	-	-	<0.01	<0.01	-	-	-									
hyl tertiary butyl ether (MTBE)	mg/l	< 0.003	-	-	2	0	0.003	0.003		-	-	-	< 0.003	< 0.003	-	-	-									
D >C5-C6	mg/l	< 0.01	0.01	z	2	0	0.01	0.01		-	0	-	<0.01	<0.01	-	-	-									
) >C6-C7	mg/l	< 0.01	0.01	z	2	0	0.01	0.01	-	-	0	-	< 0.01	<0.01	-	-	-									
) >C7-C8	mg/l	<0.01	0.01	Z	2	0	0.01	0.01		-	0	-	<0.01	<0.01		-	-									
) >C8-C10	mg/l	<0.01	0.01	z	2	0	0.01	0.01		-	0	-	<0.01	<0.01	-	-	-									
) >C5-C12	mg/l	< 0.05	-		2	0	0.05	0.05		-	-		< 0.05	<0.05		-	-									
) >C10-C12	mg/l	<0.01	0.01	z	2	0	0.01	0.01		-	0		<0.01	<0.01		-	-									
tractable Petroleum Hydrocarbons (EP					0	0	0	0		-	0															
Range >C10 - C40 (aq)	mg/l	<0.046			4	4	0.183	2.22	0.9185	0.915711199		0.881	0.39	2.22	0.183		-		1							
Band >C10-C12 (aq)	mg/l	<0.01		z	4	3	0.01	0.0653	0.033575	0.023247849		0.0259	0.0331	0.0653	<0.01		-		1							
Band >C12-C16 (aq)	mg/l	<0.01	-	z	4	3	0.01	0.093	0.05435	0.034590413	-	0.0497	0.0647	0.093	<0.01	-			1							
Band >C16-C21 (aq)	mg/l	<0.01		z	4	4	0.0486	0.618	0.259875	0.26629414		0.307	0.0659	0.618	0.0486		-		1							
H Band >C21-C28 (aq)	mg/l	<0.01	-	z	4	4	0.0555	0.455	0.2294	0.202063703	-	0.345	0.0621	0.455	0.0555	-	-		1							
H Band > C35-C40 (aq)	mg/l	<0.01	-	z	4	4	0.0118	0.229	0.0756	0.102892468	-	0.0223	0.0393	0.229	0.0118	-	-		1							
H Band >C28-C35 (aq)	mg/l	<0.01	-	7	4	4	0.0671	0.759	0.270275	0.327064778	-	0.13	0.125	0.759	0.0671		-									
											1					1							1			

Site:	DSDC Bicester - Site C	Project No:	26999
Data Description:	Groundwater and Surface water	SOM (%):	na
Land Use:	MOD Storage and Distribution	Completed By:	MIFFL
Receptor:	Controlled Waters	Checked By:	DOOLS

Assessment Criteria Key a) 2009 SGV (Res with Plant) b) 2009 SGV (Allotment) c) 2009 SGV (Commercial/Industrial) d) EIC GAC (Res with Plant)

e) EIC GAC (Res without Plant) f) EIC GAC (Allotment) i) Entec GAC (Res without Plant) j) Entec GAC (Allotment) g) EIC GAC (Commercial/Ind) h) Entec GAC (Res with Plant) k) Entec GAC (Commercial/Ind) I) LQM CIEH GAC (Res with Plant)

n) LQM CIEH GAC (Commercial/Ind) r) Soil Code: Sensitive Species o) Dutch Intervention values

p) Dutch Target Values

m) LQM CIEH GAC (Res without Plant) q) Soil Code: Crops for Consumption s) Soil Code: Grazing Animals

t) Soil Code: Background

u) BRE Special Digest v) Other Generic Criteria w) Site Specific Assessment Criteria
x) Laboratory limit of detection

		Method	Assess-	Source			Sum	mary Statisti	cs			Sample Id	entifiers a	nd Analytic	al Data																	
Contaminant	Units	Method Detection Limit	ment Criteria (AC)	(see key)	Total Number of Samples	Results Above Detection	Minimum	Maximum A	rithmetic Mean	Standard Deviation	Number of results	SWC01 SW 21/07/2010	SWC01 SW 29/07/2010	SWC01 SW 0 04/08/2010	SWC02 SW 21/07/2010	SWC02 SW 29/07/2010	SWC02 SW 04/08/2010	SWC04 SW 21/07/2010	SWC04 SW 29/07/2010	SWC04 SW 04/08/2010	SWC05 SW 21/07/2010	SWC05 SW 29/07/2010	SWC05 SW 04/08/2010	SWC08 SW 21/07/2010	SWC08 SW 29/07/2010	SWC08 SW 0 04/08/2010	WSC04 GW 04/08/2010	WSC04 GW 18/08/2010	WSC08 GW 04/08/2010	WSC8 GW 18/08/2010	BHC03 GW 04/08/2010	
					Samples	Limit					>AC	1858966		1925083		1	-	1859051		1924965	1	1	1	1859388	1896290		1924763	1985060	1925540	1985144	1924902	
Inorganics					0	0	0	0	-	-	0	040			005			005			040			400								
Alkalinity, Total as CaCO3 Ammoniacal Nitrogen as NH4	mg/l mg/l	<2 <0.3	0.5	DWS	5 20	5 10	180 0.3	285 1.66	224 0.4703	39.27467377 0.394686164	- 2	210 <0.3	<0.3	<0.3	285 0.33	<0.3	0.369	235 0.388	<0.3	0.333	210 <0.3	<0.3	0.468	180 <0.3	<0.3	0.477	0.365	0.456	1.56	1.66	<0.3	
Conductivity @ 20 deg.C	mS/cm	<0.014	-	-	5	5	0.68	0.862	0.8024	0.079908072	-	0.862	-	-	0.849	-	-	0.859	-	-	0.68	-	-	0.762	-	-	-	-	-	-	-	
Sulphate	mg/l	<3	400	EQS	20	20	15.6	1660	257.81	447.4282394	2	101	105	85.7	57.8	105	73.3	90.3	103	47.4	72	69.2	15.6	121	119	47.9	358	352	1410	1660	163	
Chloride	mg/l	<2	250	EQS	20	20	15.3		121.725	76.02835257	1	122	179	170	113	147	154	122	145	92.4	84.7	98.3	15.3	86.2	72.8	37.6	79.5	90.2	213	367	45.5	
Filtered (Dissolved) Metals	pH Units	<1	-	-	20	20	7.52	8.55	8.0685	0.246497037	-	8.3	7.97	8.55	8.07	8.09	8.31	8.17	8.2	8.37	8.16	8.34	7.7	7.88	8.01	8.1	7.85	7.95	7.52	8	7.83	
Arsenic (diss.filt)	mg/l	<0.00012	0.05	EQS	0 20	20	0.000664	0.00785	0.00184	0.001564036	0	0.00162	0.000702	0.00149	0.00785	0.00096	0.00162	0.00154	0.00109	0.000874	0.00144	0.0019	0.000664	0.00154	0.00126	0.00125	0.00355	0.00277	0.00145	0.00137	0.00186	
Boron (diss.filt)	mg/l	<0.0094	2	EQS	20	20	0.0208		0.237235	0.421655549	0	0.00102	0.000702	0.105	0.0839	0.104	0.105	0.0876	0.107	0.0671	0.00144	0.0921	0.00004	0.0909	0.105	0.0404	0.301	0.332	0.606	1.93	0.308	
Cadmium (diss.filt)	mg/l	<0.0001	0.005	EQS	20	2	0.0001	0.00012	0.000102	6.15587E-06	0	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	0.00012	<0.0001	
Chromium (diss.filt)	mg/l	<0.00022	0.05	EQS	20	20	0.00134		0.006656	0.002267817	0	0.00615	0.00907	0.00669	0.00855	0.00878	0.00666	0.00683	0.00877	0.00417	0.00584	0.00655	0.00134	0.00382	0.00843	0.00259	0.00864	0.00513	0.00751	0.00874	0.00886	
Copper (diss.filt)	mg/l	<0.00085 <0.00002	0.01	EQS EQS	20 20	12 20	0.00085 0.000044		.0020775	0.001962396	0	<0.00085 0.000077	<0.00085 0.000056	<0.00085 0.000124	0.00102 0.000157	<0.00085 0.000153	<0.00085	0.00102 0.000074	<0.00085	0.00178	0.00113	<0.00085 0.000169	0.00285 0.000124	0.0011	<0.00085	0.00408	0.00298	0.00342	0.00609	0.00784	0.00144	-
Lead (diss.filt) Nickel (diss.filt)	mg/l mg/l	<0.00002	0.02	EQS	20	7	0.000044		.0021135	0.000139601	0	0.00366	<0.00015	<0.000124	0.00369	<0.000153	<0.00015	0.000074	<0.00015	<0.000135	0.000089	<0.000169	< 0.000124	0.000044	<0.00015	<0.00015	<0.00015	0.00556	<0.00015	0.0007	<0.00009	
Selenium (diss.filt)	mg/l	<0.00039	0.01	DWS	20	18	0.00039		0.00266	0.003415486	1	0.000645	<0.00039		0.000899	0.000605	0.000893	0.00057	0.0012	0.000881	0.000569	0.00502	0.00039	0.000642	<0.00039	0.000996	0.013	0.00815	0.00543	0.00606	0.00527	
Zinc (diss.filt)	mg/l	<0.00041	0.075	EQS	20	20	0.00217		.0151575	0.016953668	0	0.0168	0.00849	0.00452	0.0032	0.0108	0.00311	0.00837	0.0096	0.0647	0.0119	0.004	0.0213	0.0374	0.0445	0.0328	0.00217	0.00251	0.00583	0.00898	0.00217	
Mercury (diss.filt)	mg/l	<0.00001	0.001	EQS	20	0	0.00001	0.00001	-	-	0	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-
Gasoline Range Organics ( Aliphatics > C5-C6		<0.01			5	0	0.01	0.0381	0.01562		0		<0.01	<0.01					_		_	_	_	_			_	0.0381	<0.01	-	<0.01	-
Aliphatics >C6-C8	mg/l mg/l	<0.01	-		5	2	0.01	0.755	0.01562	0.323793453	0	1 -	<0.01	<0.01	-		-	-	-	-	-	-	-	-	-	1	-	0.755	<0.01	-	0.134	
Aliphatics >C8-C10	mg/l	<0.01	-		5	0	0.01	0.01	-	-	0	-	<0.01	<0.01	-	-	-	-	ı.	-	-	-		-	-	-	-	<0.01	<0.01	-	<0.01	
Aliphatics >C10-C12	mg/l	<0.01	-		5	0	0.01	0.01	-	-	0	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	<0.01	
Total Aliphatics >C5-C12	mg/l	<0.01	-	-	5	2	0.01		0.1914	0.340563944	- 0	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	0.793	<0.01	-	0.134	
Aromatics >C6-C7 Aromatics >C7-C8	mg/l mg/l	<0.01 <0.01	-		5	0	0.01	0.01	-	-	0	-	<0.01 <0.01	<0.01 <0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01 <0.01	-	<0.01 <0.01	
Aromatics >EC8-EC10	mg/l	<0.01	-		5	0	0.01	0.01	-	-	0	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	<0.01	
Aromatics >EC10-EC12	mg/l	<0.01	-		5	0	0.01	0.01	-	-	0	-	<0.01	<0.01	-	-	-	-		-	-	-	-	-	-	-	-	<0.01	<0.01	-	<0.01	
Total Aromatics >C6-C12	mg/l	<0.01	-	-	5	0	0.01	0.01	-	-	-	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	<0.01	
GRO Surrogate % recovery** Benzene	% mg/l	<0.007	0.3	EQS	8	0	0.007	114 0.007	104.6	10.0895986	0	-	88 <0.007	114 <0.007	-	-	-	-		-	-	-	-	-	<0.007	<0.007	<0.007	103 <0.007	110 <0.007	-	108 <0.007	
Toluene	mg/l	<0.004	0.05	EQS	8	0	0.004	0.004	-	-	0	-	<0.004	<0.004	-	-	-	-	-	-	-	-	-	-	<0.004	<0.004	<0.004	<0.004	<0.004	-	<0.004	
Ethylbenzene	mg/l	<0.005	0.3	WHO Health	8	0	0.005	0.005	-	-	0	-	<0.005	<0.005	-	-	-	-	,	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	
m,p-Xylene	mg/l	<0.008	-	х	8	0	0.008	0.008	-	-	0	-	<0.008	<0.008	-	-	-	-	-	-	-	-	-	-	<0.008	<0.008	<0.008	<0.008	<0.008	-	<0.008	
o-Xylene m,p,o-Xylene	mg/l mg/l	<0.003 <0.01	0.03	X EQS	8	0	0.003	0.003	-	-	0	-	<0.003	<0.003	-	-	-	-	-	-	-	-	-	-	<0.003 <0.01	<0.003	<0.003 <0.01	<0.003	<0.003 <0.01	-	<0.003	
BTEX, Total	mg/l	<0.01	-	-	8	0	0.01	0.01	-	-	-	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	
Methyl tertiary butyl ether (MTBE)	mg/l	<0.003	-	-	8	1	0.003	0.029	0.00625	-	-	-	<0.003	<0.003	-	-	-	-	,	-	-	-	-	-	<0.003	<0.003	< 0.003	<0.003	<0.003	-	0.029	
GRO >C5-C6	mg/l	<0.01	-		4	1	0.01	0.0524	0.0206	-	0	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	0.0524	-	-	-	=	
GRO >C6-C7 GRO >C7-C8	mg/l mg/l	<0.01 <0.01	-		4	1	0.01	0.645 0.142	0.16875	-	0	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	0.645 0.142	-	-	-	-	-
GRO >C8-C10	mg/l	<0.01	-		4	0	0.01	0.01	-	-	0	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	-	-	-		
GRO >C5-C12	mg/l	<0.05	-	-	8	3	0.05	0.839	0.2585	0.351572793	-	-	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	0.839	0.809	<0.05	-	0.17	
GRO >C10-C12	mg/l	<0.01	-		4	0	0.01	0.01	-	-	0	-	<0.01	-	-	-	-	-		-	-	-	-	-	<0.01	<0.01	<0.01	-	-	-	=	
Extractable Petroleum Hydr		0.04-			0	0	0	0	-		0	0.7.7	0		0.5			0.0			0				0	0:	0.5:-			0.5		<u></u>
EPH Range >C10 - C40 (aq) EPH Band >C10-C12 (aq)	mg/l mg/l	<0.046 <0.01	-	-	10	6	0.046 0.01		0.11102	0.085584394	- 0	<0.046	0.278 0.0113	-	0.0964 0.0145	-	-	0.0558 <0.01	-	-	<0.046 <0.01	-	-	0.117 <0.01	<0.046 <0.01	0.137 <0.01	0.242 <0.01	-	-	<0.046 <0.01	-	-
EPH Band >C10-C12 (aq) EPH Band >C12-C16 (aq)	mg/l	<0.01	-		10	4	0.01		0.01058	0.001436663	0	<0.01	0.0113	-	0.0145	-	-	<0.01	-	-	<0.01	-	-	0.0394	<0.01	0.0104	<0.01	-	-	<0.01	-	<u> </u>
EPH Band >C16-C21 (aq)	mg/l	<0.01	-		10	6	0.01		0.02988	0.031070987	0	<0.01	0.0465	-	0.0204	-	-	0.0207	-	-	<0.01	-	-	0.0239	<0.01	0.0363	0.111	-	-	<0.01	-	
EPH Band >C21-C28 (aq)	mg/l	<0.01	-		10	6	0.01		0.02461	0.019617988	0	<0.01	0.0594	-	0.0152	-	-	0.0201	-	-	<0.01	-	-	0.0161	<0.01	0.0388	0.0565	-	-	<0.01	-	<u></u>
EPH Band >C35-C40 (aq) EPH Band >C28-C35 (aq)	mg/l	<0.01 <0.01	-		10 10	6	0.01		0.01191	0.005697261 0.028178362	0	<0.01 <0.01	0.0281 0.0956	-	<0.01 0.0153	-	-	<0.01 0.015	-	-	<0.01 <0.01	-	-	<0.01 0.0287	<0.01 <0.01	<0.01 0.0451	0.011 0.054	-	-	<0.01 <0.01	-	-
Speciated EPH CWG	mg/l	CO.01			0	0	0.01	0.0956	- 16620.0	0.020170302	0	V0.01	0.0900	1	0.0100	<u> </u>	1 -	0.015	-	1 -	<0.01	-	-	0.0201	VO.01	0.0401	0.004	-	1	V0.01	-	1
Aliphatics >C12-C16 (aq)	mg/l	<0.01	-		5	0	0.01	0.01	-	-	0	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	<0.01	
Aliphatics >C16-C21 (aq)	mg/l	<0.01	-		5	0	0.01	0.01	-	-	0	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	<0.01	
Aliphatics >C21-C35 (aq)	mg/l	<0.01	-		5	0	0.01	0.01	-	-	0	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	<0.01	1
Total Aliphatics >C12-C35 (aq)	mg/l	<0.01	-	-	5	0	0.01	0.01	-	-	- 0	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	<0.01 <0.01	-
Aromatics >EC12-EC16 (aq) Aromatics >EC16-EC21 (aq)	mg/l mg/l	<0.01 <0.01	-		5	0	0.01	0.01	-	-	0	-	<0.01 <0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01 <0.01	-	<0.01	<del>                                     </del>
Aromatics >EC21-EC35 (aq)	mg/l	<0.01	-		5	1	0.01		0.0106		0		0.013	<0.01				-			-	-		-		-	-	<0.01	<0.01	-	<0.01	
Total Aromatics >EC12-EC35 (aq)	mg/l	<0.01	-	-	5	1	0.01	0.013	0.0106	-	-	-	0.013	<0.01	-	-	-	-	ì	-	-	-	-	-	-	-	-	<0.01	<0.01	-	<0.01	
Total Aliphatics & Aromatics >C12-C35 (Aqu		<0.01	-	-	5	1	0.01		0.0106	-	-	-	0.013	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	<0.01	<b></b>
TPH Criteria Working Group		0.04			0	0	0	0		-	0		0													1		0.555	0.71		0.451	
Total Aliphatics & Aromatics >C5-35 (aq) Total Aliphatics >C5-C35 (aq)	mg/l mg/l	<0.01 <0.01	-	-	5	2	0.01	0.793 0.793		0.340166871	-	-	0.013 <0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	0.793	<0.01 <0.01	-	0.134	
Total Aromatics >C6-C35 (aq)	mg/l	<0.01	-	-	5	1	0.01		0.0106	-	-	-	0.013	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	<0.01	
	ŭ							-				•								•											-	

		M-45	Assess-	80			Su	mmary Stat	istics			Sample lo	dentifiers a	nd Analytic	al Data																
Contaminant	Units	Method Detectio	n ment	Source		Results						SWC01	SWC01	SWC01	SWC02	SWC02	SWC02	SWC04	SWC04	SWC04	SWC05	SWC05	SWC05	SWC08	SWC08	SWC08	WSC04	WSC04	WSC08	WSC8	BHC03
		Limit	" Criteria (AC)	(see key)	) Total Number of	Above	Minimum	Maximum	Arithmetic	Standard	Number of results	SW	sw	SW	sw	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	GW	GW	GW	GW	GW
			(AC)		Samples	Detection Limit	William	Waxiiiuiii	Mean	Deviation	>AC				21/07/2010												1		04/08/2010	18/08/2010	04/08/2010
	,											1858966	1896305	1925083	1858994	1896283	1925514	1859051	1896287	1924965	1859368	1896313	1924991	1859388	1896290	1924938	1924763	1985060	1925540	1985144	1924902
/aromatic Hydrocarbons	S (				0	0	0	0	-	-	0																				
nalene (aq)	mg/l	<0.0001	0.01	EQS	8	1	0.0001	0.000423	0.000140375		0	-	<0.0001	<0.0001	-	-	-	-	-	-	-	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001	0.000423	<0.0001
phthene (aq)	mg/l	<0.000015 <0.000011	0.0001	DWS	8	1	0.000015	0.000044	0.0000195 0.000011125	1.0198E-05	0	-	<0.000015	<0.000015	-	-	-	-	-	-	-	<0.000015	<0.000015 <0.000011	-	-	-	-	<0.000015 <0.000011	0.000022 <0.000011	0.000044 0.000012	<0.000015
nphthylene (aq) nnthene (aq)	mg/l mg/l	<0.000011	0.0001	DWS	8	7	0.000011	0.00012		0.000341355	3	-	0.000311	0.000022	-	-	-	-		-	-	0.000215	0.000011	-		1		<0.000011	0.001	0.000012	0.000011
acene (aq)	mg/l	<0.000014	0.0001	DWS	8	2	0.000014	0.000064	-	1.71792E-05	0	-	0.000011	<0.000022	-	-	-	_	-	_	-	<0.000213	<0.000015	-	-	-	_	<0.000014	0.00064	<0.000025	<0.00002
inthrene (aq)	mg/l	<0.000022	0.0001	DWS	8	3	0.000022	0.000136		4.51677E-05	2	-	0.000101	<0.000022	-	-	-	-	-	-	-	0.00007	<0.000022	-	-	-	-	<0.000022	0.000136	<0.000022	<0.000022
ene (aq)	mg/l	< 0.000014	0.0001	DWS	8	1	0.000014	0.00002	0.00001475	-	0	-	<0.000014	<0.000014	-	-	-	-	-	-	-	<0.000014	<0.00014	-	-	-	-	<0.000014	0.00002	<0.00014	<0.000014
ene (aq)	mg/l	<0.000013	0.0001	DWS	8	5	0.000013	0.000329	0.000095375	0.000124551	3	-	0.00024	0.000017	-	-	-	-	-	-	-	0.00012	<0.000013	-	-	-	-	<0.000013	0.000329	< 0.000013	0.000018
e (aq)	mg/l	<0.000015	0.0001	DWS	8	6	0.000015	0.00149	0.0002655	0.000506014	3	-	0.0003	0.000021	-	-	-	-	-	-	-	0.000204	<0.000015	-	-	-	-	<0.000015	0.00149	0.000056	0.000023
(a)anthracene (aq)	mg/l	<0.000017	0.0001	DWS	8	6	0.000017	0.000422	0.00009575		2	-	0.000148	0.000021	-	-	-	•	-	-	-	0.0001	<0.000017	-	-	-	-	0.000018	0.000422	<0.000017	0.000023
b)fluoranthene (aq)	mg/l	<0.000023	0.0001	DWS	8	3	0.000023	0.000461		0.000153716	3	-	0.000166	<0.000023	-	-	-	-	-	-	-	0.000145	<0.000023	-	-	-	-	<0.000023	0.000461	<0.000023	<0.000023
k)fluoranthene (aq)	mg/l	<0.000027	0.0001	DWS	8	5	0.000027	0.000436 0.000568	0.00011325		4	-	0.000195	<0.000027 0.00001	-	-	-	-	-	-	-	0.00014	<0.000027 <0.000009	-	-	-	-	<0.000027 <0.000009	0.000436	<0.000027	<0.000027
a)pyrene (aq) o(a,h)anthracene (aq)	mg/l mg/l	<0.000009 <0.000016	0.00001	DWS	8	3	0.000009	0.000366	0.000123623	0.000196813 1.15758E-05	0	-	0.000215 0.000044	<0.00001	-	-	-	-		-	-	0.000155	<0.000016	-		1		<0.000016	0.000568 0.000031	<0.000009 <0.000016	<0.000014
g,h,i)perylene (aq)	mg/l	<0.000016	0.0001	DWS	8	3	0.000016	0.000359		0.000125398	3	-	0.000179	<0.000016	-	-	-	_	-	_	-	0.000037	<0.000016	-	-	-	_	<0.000016	0.000359	<0.000016	<0.000016
1,2,3-cd)pyrene (aq)	mg/l	<0.000014	0.0001	DWS	8	3	0.000014	0.000311		0.00010743	3	-	0.000148	<0.000014	-	-	-	-	-	-	-	0.000112	<0.000014	-	-	-	-	<0.000014	0.000311	< 0.000014	<0.000014
matic hydrocarbons, Total USEPA 16	6 (a mg/l	< 0.0001	-	-	8	4	0.0001	0.00566	0.001227625	0.001913188	-	-	0.00189	<0.0001	-	-	-	-	-	-	-	0.00131	<0.0001	-	-	-	-	<0.0001	0.00566	0.000561	<0.0001
alene-d8	%		-	-	8	8	100	100	100	0	-	-	100	100	-	-	-	-	-	-	-	100	100	-	-	-	-	100	100	100	100
phthene-d10	%		-	-	8	8	100	100	100	0	-	-	100	100	-	-	-	-	-	-	-	100	100	-	-	-	-	100	100	100	100
nthrene-d10	%		-	-	8	8	100	100	100	0	-	-	100	100	-	-	,	-	-	-	-	100	100	-	-	-	-	100	100	100	100
ne-d12	%		-	-	8	8	100	100	100	0	-	-	100	100	-	-	-	-	-	-	-	100	100	-	-	-	-	100	100	100	100
ne-d12	%		-	-	8	8	100	100	100	0	-	-	100	100	-	-		-	-	-	-	100	100	-	-	-	-	100	100	100	100
ոi-Volatile Organic Comլ	ро				0	0	0	0	-	-	0																				
Frichlorobenzene (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-		-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
nlorobenzene (aq)	mg/l	<0.001	-	-	6	1	0.001	0.00249	0.001248333	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00249	<0.001	<0.001	<0.001
hlorobenzene (aq) hlorobenzene (aq)	mg/l mg/l	<0.001 <0.001	-	-	6	0	0.001	0.001	-	-		-	<0.001	<0.001	-	-	-		-	-	-	-	-	-	-	-	-	<0.001	<0.001 <0.001	<0.001 <0.001	<0.001
richlorophenol (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-		-	-	<0.001	<0.001	<0.001	<0.001
richlorophenol (aq)	mg/l	<0.001	-	_	6	0	0.001	0.001	_	-	_	-	<0.001	<0.001	-	_	-	-	-	_	-	_	-	_	_	_	_	<0.001	<0.001	<0.001	<0.001
nlorophenol (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-		-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
nethylphenol (aq)	mg/l	< 0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
itrotoluene (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-		-	<0.001	<0.001	-		-		-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
trotoluene (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	=	-	<0.001	<0.001	-	=	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
onaphthalene (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
rophenol (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-		-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
ylnaphthalene (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
ylphenol (aq) aniline (aq)	mg/l mg/l	<0.001 <0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-			-	-	-	-	-	-		-	-	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001
phenol (aq)	mg/l	<0.001	-		6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-		-		-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
aniline (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	_	-	_	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
ophenylphenylether (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-		-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
p-3-methylphenol (aq)	mg/l	< 0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
paniline (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	,	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
ophenylphenylether (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-				-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
ylphenol (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
ohenol (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
niline (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	•	-	-	<0.001	<0.001	<0.001	<0.001
zene (aq)	mg/l	<0.001 <0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
hthylene (aq)	mg/l	40.001	-	-	3	0	0.001	0.001	-	-	-	-	<0.001	-	-	-	•	•	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-
hthene (aq) ene (aq)	mg/l mg/l	<0.001 <0.001	-	-	3	0	0.001	0.001	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-		-	-	<0.001	-	<0.001 <0.001	
lloroethyl)ether (aq)	mg/l	<0.001	-	_	6	0	0.001	0.001	_	-	_	-	<0.001	<0.001	-	_	-	-	-	_	-	_	-	_	_	_	_	<0.001	<0.001	<0.001	<0.001
iloroethoxy)methane (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
ylhexyl) phthalate (aq)	mg/l	<0.002	-	-	6	0	0.002	0.002	-	-	-	-	<0.002	<0.002	-	-	-		-	-	-	-	-	-	-	-	-	<0.002	<0.002	< 0.002	< 0.002
anthracene (aq)	mg/l	<0.001	-	-	3	0	0.001	0.001	-	-	ē	-	<0.001	-	-	ē	ī	ē	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-
yl phthalate (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
fluoranthene (aq)	mg/l	<0.001	-	-	3	0	0.001	0.001	-	-	-	-	<0.001	-	-		-		-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-
fluoranthene (aq)	mg/l	<0.001	-	-	3	0	0.001	0.001	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-
pyrene (aq)	mg/l	<0.001	-	-	3	0	0.001	0.001	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-
h,i)perylene (aq)	mg/l	<0.001	-	-	3	0	0.001	0.001	-	-	-	-	<0.001	- 0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001		<0.001	- 0.004
ole (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001		-	-	-	-	-	-	-		-	-	-	-	<0.001	<0.001	<0.001	<0.001
e (aq)	mg/l	<0.001	-	-	3 6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001 <0.001	<0.001	<0.001 <0.001	<0.001
furan (aq) I phthalate (aq)	mg/l mg/l	<0.001 <0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-		-	-	<0.001	<0.001	<0.001	<0.001
hthalate (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
printalate (aq) p(a,h)anthracene (aq)	mg/l	<0.001	_	-	3	0	0.001	0.001	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-
rl phthalate (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001
yl phthalate (aq)	mg/l	<0.005	-	-	6	0	0.005	0.005	-	-	-	-	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
thene (aq)	-	<0.001		-	3	0	0.001	0.001	-	-	-	-	<0.001	-	-			-	-	-	-	_		-	-	-	-	<0.001	-	<0.001	-

		Method	Assess-	Source			Sum	nmary Statis	stics			Sample Ide	ntifiers aı	nd Analytic	al Data																	
Contaminant	Units	Detection	Criteria	Source	Total	Results					Number	SWC01	SWC01	SWC01	SWC					SWC04	SWC05	SWC05	SWC05	SWC08	SWC08	SWC08	WSC04	WSC04	WSC08	WSC8	BHC03	
		Limit	(AC)		Number of Samples	Above Detection	Minimum	Maximum	Arithmetic Mean	Standard Deviation	of results	SW 21/07/2010 2	SW 29/07/2010	SW 04/08/2010	SW 21/07/2	SW 2010 29/07/20	SW 10 04/08/20	SW 010 21/07/201	SW 0 29/07/2010	SW 0 04/08/2010	SW 0 21/07/2010	SW 29/07/2010	SW 04/08/2010	SW 21/07/2010	SW 29/07/2010	SW 04/08/2010	GW 04/08/2010	GW 18/08/2010	GW 04/08/2010	GW 18/08/2010	GW 04/08/2010	<del>                                     </del>
luorene (aq)	mg/l	<0.001	_	_	3	Limit 0	0.001	0.001		-		1858966	<b>1896305</b> <0.001	1925083	18589	994 189628	3 192551	14 1859051	1896287	1924965	1859368	1896313	1924991	1859388	1896290	1924938	1924763	<b>1985060</b> <0.001	1925540	<b>1985144</b> <0.001	1924902	
Hexachlorobenzene (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	=	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	1
Hexachlorobutadiene (aq) Pentachlorophenol (aq)	mg/l mg/l	<0.001 <0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	+
Phenol (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	1
i-Nitroso-n-dipropylamine (aq) Hexachloroethane (aq)	mg/l mg/l	<0.001 <0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	+
Nitrobenzene (aq)	mg/l	<0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	
Naphthalene (aq) sophorone (aq)	mg/l mg/l	<0.001 <0.001	-	-	6	0	0.001	0.001 0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001 <0.001	<0.001	<0.001 <0.001	<0.001	
Hexachlorocyclopentadiene (aq)	mg/l	<0.001	-	-	6	0	0.001	0.002	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.002	<0.002	<0.002	
Phenanthrene (aq) ndeno(1,2,3-cd)pyrene (aq)	mg/l mg/l	<0.001 <0.001	-	-	6	0	0.001	0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001 <0.001	<0.001	<0.001 <0.001	<0.001	<u> </u>
Pyrene (aq) Volatile Organic Compoun	mg/l	<0.001	-	-	3	0	0.001	0.001	-		-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	
Dibromofluoromethane**	w %		-	-	6	6	93.8	0 109	100.5333333	- 6.788716128	-	-	99.3	96	-	-	-	-	-	-	-	-	-	-	-	-	-	109	96.1	109	93.8	+
oluene-d8**	%		-	-	6	6	96.8	99.9	98.15	1.277106104	-	-	98.1	97.3	-	-	-	-	-	-	-	-	-	-	-	-	-	99.9	96.8	99.5	97.3	1
-Bromofluorobenzene** Dichlorodifluoromethane	% mg/l	<0.007	-	-	6	6	95 0.007	103 0.007	98.23333333	3.72594507	-	-	96.4 <0.007	95.7 <0.007	-	-	-	-	-	-	-	-	-	-	-	-	-	103 <0.007	96.3 <0.007	103 <0.007	95 <0.007	+
Chloromethane	mg/l	<0.009	- 0.0005	- DWG	6	0	0.009	0.009	- 0.006466667	- 0.040035654	-	-	<0.009	<0.009	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.009	<0.009	<0.009	<0.009	
finyl chloride Bromomethane	mg/l mg/l	<0.0012 <0.002	0.0005	DWS -	6	0	0.0012	0.126 0.002	0.026466667	0.049925651	-	-	<0.0012	<0.0012 <0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	0.126 <0.002	<0.0012 <0.002	<0.0012 <0.002	0.028 <0.002	
chloroethane richlorofluoromethane	mg/l	<0.0025 <0.0013	-	-	6	0	0.0025 0.0013	0.0025 0.0013	-	-	-	-	<0.0025 <0.0013	<0.0025 <0.0013	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0025 <0.0013	<0.0025 <0.0013	<0.0025 <0.0013	<0.0025 <0.0013	<u> </u>
richioroffuoromethane ,1-Dichloroethene	mg/l mg/l	<0.0013 <0.0012	-	-	6	1	0.0013		0.002123333	-	-	-	<0.0013	<0.0013	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0013 0.00674	<0.0013	<0.0013	<0.0013	
arbon disulphide	mg/l	<0.0013 <0.0037	-	-	6	0	0.0013	0.0013 0.0037	-	-	-	-	<0.0013	<0.0013 <0.0037	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0013 <0.0037	<0.0013 <0.0037	<0.0013 <0.0037	<0.0013 <0.0037	-
ichloromethane Methyl tertiary butyl ether (MTBE)	mg/l mg/l	<0.0016	-	-	6	2	0.0016	0.0308		0.013515978	-	-	<0.0016	<0.0037	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0308	<0.0016	<0.0016	0.0241	
ans-1,2-Dichloroethene ,1-Dichloroethane	mg/l mg/l	<0.0019 <0.0012	0.05 WI	HO Health	6	2	0.0019	0.046	0.010173333	0.017690751	0	-	<0.0019	<0.0019 <0.0012	-	-	-	-	-	-	-	-	-	-	-	-	-	0.046 <0.0012	<0.0019 <0.0012	<0.0019 <0.0012	0.00744 <0.0012	+
is-1,2-Dichloroethene	mg/l	<0.0012	0.05 WI	- HO Health	6	2	0.0012	2.36	0.482033333	0.943293523	2	-	<0.0012	<0.0012	-	-	-	-	-	-	-	-	-	-	-	-	-	2.36	<0.0012	<0.0012	0.523	
,2-Dichloropropane Bromochloromethane	mg/l mg/l	<0.0038 <0.0019	-	-	6	0	0.0038	0.0038	-	-	-	-	<0.0038	<0.0038 <0.0019	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0038 <0.0019	<0.0038 <0.0019	<0.0038 <0.0019	<0.0038	-
Chloroform	mg/l	<0.0018	-	-	6	0	0.0018	0.0018	-	-	-	-	<0.0018	<0.0018	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0018	<0.0018	<0.0018	<0.0018	
,1,1-Trichloroethane ,1-Dichloropropene	mg/l mg/l	<0.0013 <0.0013	-	-	6	0	0.0013	0.0013 0.0013	-	-	-	-	<0.0013	<0.0013 <0.0013	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0013 <0.0013	<0.0013 <0.0013	<0.0013 <0.0013	<0.0013 <0.0013	
arbontetrachloride	mg/l	<0.0014	-	-	6	0	0.0014	0.0014	-		-	-	<0.0014	<0.0014	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0014	<0.0014	<0.0014	<0.0014	
,2-Dichloroethane enzene	mg/l mg/l	<0.0033 <0.0013	-	-	6	0	0.0033	0.0033	-	-	-	-	<0.0033	<0.0033 <0.0013	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0033 <0.0013	<0.0033 <0.0013	<0.0033 <0.0013	<0.0033	
richloroethene	mg/l	<0.0025	0.01	EQS	6	2	0.0025	0.682	0.115863333	0.277349325	1	-	<0.0025	<0.0025	-	-	-	-	-	-	-	-	-	-	-	-	-	0.682	<0.0025	<0.0025	0.00318	
,2-Dichloropropane Dibromomethane	mg/l mg/l	<0.003 <0.0027	-	-	6	0	0.003	0.003 0.0027	-	-	-	-	<0.003	<0.003 <0.0027	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.003 <0.0027	<0.003 <0.0027	<0.003 <0.0027	<0.003 <0.0027	+
romodichloromethane	mg/l	<0.0009	-	-	6	0	0.0009	0.0009	-	-	-	-	<0.0009	<0.0009	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0009	<0.0009	<0.0009	<0.0009	1
ris-1,3-Dichloropropene Foluene	mg/l mg/l	<0.0019 <0.0014	-	-	6	0	0.0019	0.0019 0.0014	-	-	-	-	<0.0019	<0.0019 <0.0014	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0019 <0.0014	<0.0019 <0.0014	<0.0019 <0.0014	<0.0019 <0.0014	_
rans-1,3-Dichloropropene	mg/l	<0.0035	-	-	6	0	0.0035	0.0035	-	-	-	-	<0.0035	<0.0035	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0035	<0.0035	<0.0035	<0.0035	-
1,1,2-Trichloroethane 1,3-Dichloropropane	mg/l mg/l	<0.0022 <0.0022	-	-	6	0	0.0022	0.0022 0.0022	-	-	-	-	<0.0022	<0.0022 <0.0022	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0022 <0.0022	<0.0022 <0.0022	<0.0022 <0.0022	<0.0022 <0.0022	<u> </u>
Fetrachloroethene Dibromochloromethane	mg/l mg/l	<0.0015 <0.0017	-	-	6	0	0.0015 0.0017	0.0015 0.0017	-	-	-	-	<0.0015	<0.0015 <0.0017	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0015 <0.0017	<0.0015 <0.0017	<0.0015 <0.0017	<0.0015 <0.0017	
,2-Dibromoethane	mg/l	<0.0023	-	-	6	0	0.0017	0.0023	-	-	-	-	<0.0017	<0.0023	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0023	<0.0017	<0.0017	<0.0023	
Chlorobenzene ,1,1,2-Tetrachloroethane	mg/l mg/l	<0.0035 <0.0013	-	-	6	0	0.0035	0.0035 0.0013	-	-	-	-	<0.0035	<0.0035 <0.0013	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0035 <0.0013	<0.0035 <0.0013	<0.0035 <0.0013	<0.0035 <0.0013	-
Ethylbenzene	mg/l	<0.0025	-	-	6	0	0.0025	0.0025	-	-	-	-	<0.0015	<0.0025	-		-	-	-	-	-	-	-	-	-	-	-	<0.0025	<0.0015	<0.0025	<0.0025	
n,p-Xylene -Xylene	mg/l mg/l	<0.0025 <0.0017	-	-	6	0	0.0025	0.0025 0.0017	-	-	-	-	<0.0025 <0.0017	<0.0025 <0.0017	-		-	-	-	-	-	-	-	-	-	-	-	<0.0025 <0.0017	<0.0025 <0.0017	<0.0025 <0.0017	<0.0025 <0.0017	
Styrene	mg/l	<0.0012	-	-	6	0	0.0012	0.0012	-	-	-	-	<0.0012	<0.0012	-	-	-		-	-	-	-	-	-	-	-	-	<0.0012	<0.0012	<0.0012	<0.0012	
Bromoform sopropylbenzene	mg/l mg/l	<0.003 <0.0014	-	-	6	0	0.003	0.003 0.0014	-	-	-	-	<0.003	<0.003 <0.0014	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.003 <0.0014	<0.003 <0.0014	<0.003 <0.0014	<0.003	
,1,2,2-Tetrachloroethane	mg/l	<0.0052	-	-	6	0	0.0052	0.0052	=	-		-	< 0.0052	<0.0052	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0052	<0.0052	<0.0052	<0.0052	
,2,3-Trichloropropane Bromobenzene	mg/l mg/l	<0.0078 <0.002	-	-	6	0	0.0078	0.0078	-	-	-	-	<0.0078	<0.0078 <0.002	-		-	-	-	-	-	-	-	-	-	-	-	<0.0078 <0.002	<0.0078 <0.002	<0.0078 <0.002	<0.0078	-
ropylbenzene	mg/l	<0.0026	-	-	6	0	0.0026	0.0026	-	-	-	-	<0.0026	<0.0026	-		-	-	-	-	-	-	-	-	-	-	-	<0.0026	<0.0026	<0.0026	<0.0026	1
-Chlorotoluene ,3,5-Trimethylbenzene	mg/l mg/l	<0.0019 <0.0018	-	-	6	0	0.0019	0.0019 0.0018	-	-	-	-	<0.0019	<0.0019 <0.0018	-		-	-	-	-	-	-	-	-	-	-	-	<0.0019 <0.0018	<0.0019 <0.0018	<0.0019 <0.0018	<0.0019 <0.0018	-
-Chlorotoluene	mg/l	<0.0019	-	-	6	0	0.0019	0.0019	-	-	-	-	<0.0019	<0.0019	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0019	<0.0019	<0.0019	<0.0019	
rt-Butylbenzene 2,4-Trimethylbenzene	mg/l mg/l	<0.002 <0.0017	-	-	6	0	0.002	0.002 0.0017	-	-	-	-	<0.002	<0.002 <0.0017	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002 <0.0017	<0.002 <0.0017	<0.002 <0.0017	<0.002 <0.0017	-
ec-Butylbenzene	mg/l	<0.0017	-	-	6	0	0.0017	0.0017	-	-	-	-	<0.0017	<0.0017	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0017	<0.0017	<0.0017	<0.0017	
iso-Propyltoluene 3-Dichlorobenzene	mg/l mg/l	<0.0026 <0.0022	-	-	6	0	0.0026	0.0026 0.0022	-	-	-	-	<0.0026 <0.0022	<0.0026 <0.0022	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0026 <0.0022	<0.0026 <0.0022	<0.0026 <0.0022	<0.0026 <0.0022	+
4-Dichlorobenzene	mg/l	<0.0027	-	-	6	0	0.0027	0.0027	-	-	-	-	<0.0027	<0.0027	-		-	-	-	-	-	-	-	-	-	-	-	<0.0027	<0.0027	<0.0027	<0.0027	1
Butylbenzene 2-Dichlorobenzene	mg/l mg/l	<0.002 <0.0037	-	-	6	0	0.002	0.002 0.0037	-	-	-	-	<0.002	<0.002 <0.0037	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002 <0.0037	<0.002 <0.0037	<0.002 <0.0037	<0.002 <0.0037	<u> </u>
2-Dibromo-3-chloropropane	mg/l	<0.0098	-	-	6	0	0.0098	0.0098	-	-	-	-	<0.0098	<0.0098	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0098	<0.0098	<0.0098	<0.0098	1
2,4-Trichlorobenzene exachlorobutadiene	mg/l mg/l	<0.0023 <0.0025	-	-	6	0	0.0023	0.0023 0.0025	-	-	-	-	<0.0023 <0.0025	<0.0023 <0.0025		-	-		-	<u> </u>	-	-		-	-	-	-	<0.0023 <0.0025	<0.0023 <0.0025	<0.0023 <0.0025	<0.0023 <0.0025	<u> </u>
rt-Amyl methyl ether (TAME)	mg/l	<0.001	-	÷	6	0	0.001	0.001	÷	-	÷	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	1
aphthalene 2,3-Trichlorobenzene	mg/l mg/l	<0.0035 <0.0031	-	-	6	0	0.0035 0.0031	0.0035 0.0031	-	-	-	-	<0.0035 <0.0031	<0.0035 <0.0031	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0035 <0.0031	<0.0035 <0.0031	<0.0035 <0.0031	<0.0035 <0.0031	
3,5-Trichlorobenzene	mg/l	<0.01	-	-	6	0	0.01	0.01	-	-	-		<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	+-
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Site:	DSDC Bicester Site C	Project No:	26999
Data Description:	Zone 1	SOM (%):	1.0%
Land Use:	Commercial	Completed By:	RIDEJ
Recentor:	Human Health	Checked By:	

Assessment Criteria Key a) 2009 SGV (Res with Plant) b) 2009 SGV (Allotment) e) EIC GAC (Res without Plant) f) EIC GAC (Allotment) g) EIC GAC (Commercial/Ind) h) Entec GAC (Res with Plant) c) 2009 SGV (Commercial/Industrial) d) EIC GAC (Res with Plant)

i) Entec GAC (Res without Plant) j) Entec GAC (Allotment) k) Entec GAC (Commercial/Ind) o) Dutch Intervention values
l) LQM CIEH GAC (Res with Plant) p) Dutch Target Values

m) LQM CIEH GAC (Res without Plant) q) Soil Code: Crops for Consumption u) BRE Special Digest n) LQM CIEH GAC (Commercial/Ind) r) Soil Code: Sensitive Species v) Other Generic Criteria o) Dutch Intervention values

v) Other Generic Criteria w) Site Specific Assessment Criteria
x) Laboratory limit of detection s) Soil Code: Grazing Animals

t) Soil Code: Background

		Method	Assess-	Source			Sun	nmary Stati	istics			Sample Id	entifiers a	nd Analytic	cal Data								
Contaminant	Units	Detection	ment Criteria		Total	Results					Number	WSC01											
		Limit	(AC)	(see key)	Number of	Above	Minimum	Maximum	Arithmetic	Standard	of results	C61 POL	C61 POL										
			(7.0)		Samples	2010011011		···ux····u···	Mean	Deviation	>AC	0.0-0.2	0.2-0.4										
					·	Limit						MG	MG										
organics					0	0	0	0	-	-	0												
il Organic Matter (SOM)	%	<0.35 %	0.35		0	0	0	0	-	-	0												
	pH Units	1 pH unit			2	2	7.98	8.13	8.055	0.106066017	0	7.98	8.13										
lphate, 2:1 water soluble	g/l	<0.003 g/l	0.003		2	2	0.043	1.45	0.7465	0.994899241	2	0.043	1.45										
moniacal Nitrogen, exchangeable as NH4	mg/kg	<15 mg/kg	15		2	0	15	15	-	-	0	<15	<15										
ron, water soluble	mg/kg	<1 mg/kg	190000	n	2	0	1	1	-	-	0	<1	<1										
senic	mg/kg	<0.6 mg/kg	640	С	2	2	22.4	24	23.2	1.13137085	0	22.4	24										
romium, Hexavalent	mg/kg	<0.6 mg/kg	35	n	2	0	0.6	1.2	-	-	0	<1.2	<0.6										
dmium	mg/kg	<0.02 mg/kg	230	С	2	0	0.02	0.02	-	-	0	< 0.02	< 0.02										
romium	mg/kg	<0.9 mg/kg	30000	n	2	2	60.5	73.2	66.85	8.980256121	0	60.5	73.2										
ppper	mg/kg	<1.4 mg/kg	72000	n	2	2	20.1	39.4	29.75	13.64716088	0	20.1	39.4										
ad	mg/kg	<0.7 mg/kg	750	у	2	2	29.3	60.1	44.7	21.77888886	0	29.3	60.1										
rcury		<0.14 mg/kg			2	0	0.14	0.14	-	-	0	<0.14	<0.14										
ckel	mg/kg	<0.2 mg/kg	1800	С	2	2	34.9	41.7	38.3	4.808326112	0	34.9	41.7										
lenium	mg/kg	<1 mg/kg	13000	С	2	2	1.23	1.4	1.315	0.120208153	0	1.4	1.23										
С	mg/kg	<1.9 mg/kg	670000	n	2	2	99.6	137	118.3	26.44579362	0	99.6	137										
bestos Containing Material Screen					0	0	#VALUE!	#VALUE!	-	-	0	N	lo ACM Detec	ted									
pestos, Chrysotile (white)					0	0	0	0	-	-	0												

Site:	DSDC Bicester Site C	Project No:	26999
Data Description:	Zone 1	SOM (%):	6.0%
Land Use:	Commercial	Completed By:	RIDEJ
Pagantar:	Human Haalth	Chankad Bur	

Assessment Criteria Key a) 2009 SGV (Res with Plant) b) 2009 SGV (Allotment) c) 2009 SGV (Commercial/Industrial) d) EIC GAC (Res with Plant)

e) EIC GAC (Res without Plant) i) Entec GAC (Res without Plant) f) EIC GAC (Allotment) j) Entec GAC (Allotment) g) EIC GAC (Commercial/Ind) h) Entec GAC (Res with Plant) k) Entec GAC (Commercial/Ind) I) LQM CIEH GAC (Res with Plant) p) Dutch Target Values

m) LQM CIEH GAC (Res without Plant) q) Soil Code: Crops for Consumption u) BRE Special Digest n) LQM CIEH GAC (Commercial/Ind) r) Soil Code: Sensitive Species o) Dutch Intervention values

s) Soil Code: Grazing Animals t) Soil Code: Background

v) Other Generic Criteria w) Site Specific Assessment Criteria
x) Laboratory limit of detection

			Assess-				Sun	nmary Stat	istics			Sample Ide	entifiers ar	nd Analytic	al Data						
Contaminant	Units	Method	ment	Source					1			WSC01	WSC02	WSC03	WSC07	WSC08	WSC08				
Contaminant	Ullits	Detection Limit	Criteria	(see key)	Total	Results Above			Arithmetic	Standard	Number			C61 POL	C61 POL	C61 POL	1				
			(AC)	. ,	Number of Samples	Detection	Minimum	Maximum	Mean	Deviation	of results >AC	1.5-1.7	1.2-1.4		0.45-0.6	0.4-0.7	2.5-2.8				
						LIIIII						Nat	Nat	Nat	Nat	Nat	Nat				
Inorganics		0.05.0/			0	0	0	0		-	0						7.04				
Soil Organic Matter (SOM)	% pH Units	<0.35 % 1 pH unit	-		6	6	7.84 6.79	9.21 8.05	8.525 7.656666667	0.96873629 0.453901605		9.21 7.72	7.7	6.79	8.05	8	7.84 7.68				
Sulphate, 2:1 water soluble	g/l	<0.003 g/l	0.5		6	6	0.127	2.39		1.037684425		2.39	1.92	2.38	0.127	0.154	1.38				
Ammoniacal Nitrogen, exchangeable as NH4	mg/kg	<15 mg/kg	15		6	2	15	129	39.85	45.87564713	2	<15	<15	<15	50.1	129	<15				
Boron, water soluble	mg/kg	<1 mg/kg	190000	n	6	4	1	15.4	5.058333333	5.477066429	0	4.84	6.06	15.4	<1	<1	2.05				
Arsenic	mg/kg	<0.6 mg/kg		С	6	6	4	11.6	7.473333333	2.600528151		7.93	4	6.41	8.75	11.6	6.15				
Chromium, Hexavalent	mg/kg	<0.6 mg/kg	35	n	6	0	0.6	1.2	-	-	0	<0.6	<0.6	<0.6	<0.6	<1.2	<0.6				
Cadmium Chromium	mg/kg mg/kg	<0.02 mg/kg <0.9 mg/kg	230 30000	c n	6	6	0.25 23.4	2.38 136	63.6	0.779178135 38.7510516		0.706 65.8	0.619 61.9	2.38 136	0.25 23.4	0.4 39.9	1.14 54.6				
Copper	mg/kg	<1.4 mg/kg	72000	n	6	6	14.3			14.7804488	0	55.4	31.7	33.7	14.3	18.6	39				
Lead	mg/kg	<0.7 mg/kg	750	V	6	6	9.16	21.8		4.930332308		15.4	9.81	9.16	16.1	21.8	10.3				
Mercury	mg/kg	<0.14 mg/kg	0.14	,	6	0	0.14	0.14	-	-	0	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14				
Nickel	mg/kg	<0.2 mg/kg	1800	С	6	6	17.3	59.5	41.51666667	16.02028922	0	59.5	41	55.3	17.3	29.1	46.9				
Selenium	mg/kg	<1 mg/kg	13000	С	6	5	1	4.97	2.405	1.47926671	0	4.97	2.03	2.11	<1	1.15	3.17				
Zinc	mg/kg	<1.9 mg/kg	670000	n	6	6	57.6	160	101.05	39.20161986		134	71.2	160	57.6	82.5	101				
Asbestos Containing Material Screen Asbestos, Chrysotile (white)					0	0	0	0	-	-	0					-					
napostos, omysotile (write)					U	U	U	U	<del>                                     </del>	-	U										
TPH 6 Split					0	0	0	0	-	-	0										
TPH >C6-C8	mg/kg	<10 mg/kg	42000		3	0	10	10	-	-	0	<10			<10		<10				
TPH >C8-C10	mg/kg	<10 mg/kg			3	0	10	10	-	-	0	<10			<10		<10				
TPH >C10-C12	mg/kg	<10 mg/kg	49000		3	0	10	10	-		0	<10			<10		<10				
TPH >C12-C16	mg/kg	<10 mg/kg	91000		3	1	10	27.6	15.86666667		0	<10			27.6		<10				
TPH >C16-C21	mg/kg	<10 mg/kg			3	1	10	102	40.66666667		0	<10			102		<10				
TPH >C21-C40 TPH >C6-C40	mg/kg	<10 mg/kg			3	3	142 147	620 749	380	254.4038784 323.2228334		230 244			620 749		142 147				
TFT1 >C0-C40	IIIg/kg	< TO HIG/Kg	20000		3	3	147	743	300	323.2220334	0	244			143		147				
Organics					0	0	0	0	-	-	0										
Acenaphthene-d10 % recovery**	%				0	0	0	0	-	-	0										
Naphthalene-d8 % recovery**	%	%	-		1	1	112	112	112	-	-			112							
Acenaphthene-d10 % recovery**	%	%	-		1	1	110	110	110	-	-			110							
Phenanthrene-d10 % recovery** Chrysene-d12 % recovery**	%	%	-		1	1	109 95.9	109 95.9	109 95.9	-	-			109 95.9							
Perylene-d12 % recovery**	%	%	-		1	1	107	107	107	-				107							
Naphthalene	mg/kg	<0.009 mg/kg	g 1100	n	1	0	0.009	0.009	-	-	0			<0.009							
Acenaphthylene	mg/kg	<0.012 mg/kg	g 100000	n	1	0	0.012	0.012	-	-	0			< 0.012							
Acenaphthene	mg/kg	<0.008 mg/kg	g 100000	n	1	0	0.008	0.008	-	-	0			<0.008							
Fluorene	mg/kg	<0.01 mg/kg	47000	n	1	0	0.01	0.01	-	-	0			<0.01							
Phenanthrene	mg/kg	<0.015 mg/kg		n	1	0	0.015	0.015	-	-	0			<0.015							
Anthracene Fluoranthene	mg/kg	<0.016 mg/kg		n n	1	0	0.016 0.017	0.016 0.017	-	-	0			<0.016 <0.017							
Pyrene	mg/kg mg/kg	<0.017 mg/kg	1	n n	1	0	0.017	0.017	-	-	0			<0.017							
Benz(a)anthracene	mg/kg	<0.014 mg/kg	g 97	n	1	0	0.014	0.014	-	-	0			<0.014							
Chrysene	mg/kg	<0.01 mg/kg	140	n	1	0	0.01	0.01	-	-	0			<0.01							
Benzo(b)fluoranthene	mg/kg	<0.015 mg/kg	g 100	n	1	0	0.015	0.015	-	-	0			<0.015							
Benzo(k)fluoranthene	mg/kg	<0.014 mg/kg	g 140	n	1	0	0.014	0.014	-	-	0	-		<0.014			-				
Benzo(a)pyrene Indeno(1,2,3-cd)pyrene	mg/kg mg/kg	<0.015 mg/kg	g 14 g 62	n n	1	0	0.015 0.018	0.015 0.018	-	-	0			<0.015 <0.018		-					
Dibenzo(a,h)anthracene	mg/kg			n n	1	0	0.018	0.018	-	-	0			<0.018		<del>                                     </del>	-	+ + + + + + + + + + + + + + + + + + + +			
Benzo(g,h,i)perylene	mg/kg	<0.024 mg/kg	g 660	n	1	0	0.024	0.024	-	-	0			<0.024							
Polyaromatic hydrocarbons, Total USEPA 16	mg/kg	<0.118 mg/kg	g 0.118		1	0	0.118		-	-	0			<0.118							
TPHCWG		0.07	40		0	0	0	0	-	-	0	-		0.5555			-				
Aliphatics > C5-C6		<0.01 mg/kg		n	1	1	0.0368	0.0368	0.0368	-	0			0.0368							
Aliphatics >C6-C8 Aliphatics >C8-C10		<0.01 mg/kg		n n	1	0	0.494 0.01	0.494	0.494	-	0			0.494 <0.01							
Aliphatics >C0-C10  Aliphatics >C10-C12		<0.01 mg/kg		n	1	0	0.01	0.01	-	-	0			<0.01							
Total Aliphatics >C5-C12		<0.01 mg/kg			1	1	0.531	0.531	0.531	-	1			0.531							
Aromatics >C6-C7	mg/kg	<0.01 mg/kg	90000	n	1	0	0.01	0.01	-	-	0			<0.01							
Aromatics >C7-C8	mg/kg	<0.01 mg/kg	190000	n	1	0	0.01	0.01	-	-	0			<0.01							
Aromatics >EC8-EC10		<0.01 mg/kg		n	1	0	0.01	0.01	-	-	0			<0.01							
Aromatics >EC10-EC12		<0.01 mg/kg		n	1	0	0.01	0.01	-	-	0			<0.01							
Total Aromatics >C6-C12 GRO Surrogate % recovery**	mg/kg %	<0.01 mg/kg	0.01	n	1	0	0.01 19	0.01	19	-	0			<0.01 19		<b> </b>		+ + + + + + + + + + + + + + + + + + + +			
Benzene		<0.01 mg/kg		С	1	0	0.01	0.01	-	-	0			<0.01							
	33		.,								-		1		1			 	, l	T L	

			Assess-				Sun	nmary Statis	stics			Sample Identifier	s and Analytic	al Data						
Contaminant	Units	Method Detection Limit	ment	Source (see key)	Total Number of	Results Above	Minimum	Maximum	Arithmetic	Standard	Number of results	WSC01 WSC C61 POL C61 F		WSC07 C61 POL	WSC08 C61 POL					
			(AC)		Samples		Willimani	Maximum	Mean	Deviation	>AC	1.5-1.7 1.2-1 Nat Na		0.45-0.6 Nat	0.4-0.7 Nat	2.5-2.8 Nat				
Toluene Ethylbenzene	mg/kg mg/kg	<0.002 mg/kg	g 4400 g 2800	C C	1	0	0.002 0.003	0.002 0.003	-	-	0		<0.002 <0.003							
m,p-Xylene				С	1	0	0.006	0.006	-	-	0		<0.006							
o-Xylene	mg/kg	<0.003 mg/kg	g 2600	С	1	0	0.003	0.003	•	-	0		< 0.003							
m,p,o-Xylene	mg/kg	<0.01 mg/kg	2600	С	1	0	0.01	0.01	-	-	0		<0.01							
BTEX, Total  Methyl tertiary butyl ether (MTBE)	mg/kg mg/kg	<0.01 mg/kg	0.01 g 0.005		1	0	0.01	0.01 0.005	-	-	0		<0.01 <0.005				+ + + + + + + + + + + + + + + + + + + +			
GRO >C5-C12	mg/kg	<0.005 mg/kg	g 0.005 g 0.044		1	1	0.531	0.531	0.531	-	1		0.531							
Aliphatics >C12-C16	mg/kg	<0.1 mg/kg	91000	n	1	1	8.72	8.72	8.72	-	0		8.72							
Aliphatics >C16-C21	mg/kg	<0.1 mg/kg	1800000	n	1	1	11.1	11.1	11.1	-	0		11.1							
Aliphatics >C16-C35	mg/kg	<0.1 mg/kg	1800000	n	1	1	63.3	63.3	63.3	-	0		63.3							
Aliphatics >C21-C35	mg/kg	<0.1 mg/kg	1800000		1	1	52.1	52.1	52.1	-	0		52.1							
Aliphatics >C35-C44 Total Aliphatics >C12-C44	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	1800000		1	1	4.19 76.2	4.19 76.2	4.19 76.2	-	0		4.19 76.2							
Aromatics >EC12-EC16	mg/kg	<0.1 mg/kg	37800	n	1	1	7.17	7.17	7.17	-	0		7.17							
Aromatics >EC16-EC21	mg/kg	<0.1 mg/kg	28000	n	1	1	21.7	21.7	21.7	-	0		21.7							
Aromatics >EC21-EC35	mg/kg	<0.1 mg/kg	28000	n	1	1	214	214	214	-	0		214							
Aromatics >EC35-EC44	mg/kg	<0.1 mg/kg	28000	n	1	1	71.5	71.5	71.5	-	0		71.5							
Aromatics >EC40-EC44	mg/kg	<0.1 mg/kg	0.1		1	1	27.4	27.4	27.4	-	1		27.4		-					
Total Aromatics >EC12-EC44  Total Aliphatics >C5-C44	mg/kg	<0.1 mg/kg	-		1	1	314 76.7	314 76.7	314 76.7	-	-		314 76.7							
Total Ariphatics >C5-C44 Total Aromatics >C6-C44	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg			1	1	314	314	314	-	-		314		<del>                                     </del>					
Total Aliphatics & Aromatics >C5-C44	mg/kg	<0.1 mg/kg	-		1	1	391	391	391	-	-		391							
Total Aliphatics >C5-35	mg/kg	<0.1 mg/kg	-		1	1	72.5	72.5	72.5	-	-		72.5							
Total Aromatics >C5-35	mg/kg	<0.1 mg/kg	-		1	1	243	243	243	-	-		243							
Total Aliphatics & Aromatics >C5-35	mg/kg	<0.1 mg/kg	-		1	1	315	315	315	-	-		315							
Other Organics					0	0	0	0	-	-	0									
PCBs (vs Aroclor 1254)	mg/kg	<0.035 mg/kg			0	0	0	0	-	-	0									
Phenol Pentachlorophenol	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	3200 1400	c n	1	0	0.1	0.1	-	-	0		<0.1 <0.1							
n-Nitroso-n-dipropylamine	mg/kg	<0.1 mg/kg		- 11	1	0	0.1	0.1	-	-	0		<0.1							
Nitrobenzene	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1							
Isophorone	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	•	-	0		<0.1							
Hexachloroethane	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1							
Hexachlorocyclopentadiene	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1							
Hexachlorobutadiene	mg/kg	<0.1 mg/kg	120 55	n n	1	0	0.1	0.1	-	-	0		<0.1 <0.1							
Hexachlorobenzene n-Dioctyl phthalate	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg		q	1	0	0.1	0.1	-	-	0		<0.1							
Dimethyl phthalate	mg/kg	<0.1 mg/kg	0.1	9	1	0	0.1	0.1	-	-	0		<0.1							
Diethyl phthalate	mg/kg	<0.1 mg/kg	290000	g	1	0	0.1	0.1	-	-	0		<0.1							
n-Dibutyl phthalate	mg/kg	<0.1 mg/kg	15000	g	1	0	0.1	0.1	-	-	0		<0.1							
Dibenzofuran	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1							
Carbazole	mg/kg	<0.1 mg/kg	0.1 950000		1	0	0.1	0.1	-	-	0		<0.1 <0.1				+			
Butylbenzyl phthalate bis(2-Ethylhexyl) phthalate	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	86000	9	1	0	0.1	0.1	-	-	0		<0.1							
bis(2-Chloroethoxy)methane	mg/kg	<0.1 mg/kg	0.1	9	1	0	0.1	0.1	-	-	0		<0.1							
bis(2-Chloroethyl)ether	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1							
Azobenzene	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1							
4-Nitrophenol	mg/kg	<0.1 mg/kg			1	0	0.1	0.1	-	-	0		<0.1							
4-Nitroaniline 4-Methylphenol		<0.1 mg/kg <0.1 mg/kg			1	0	0.1	0.1	-	-	0		<0.1	1	-					
4-Metnylphenol 4-Chlorophenylphenylether		<0.1 mg/kg <0.1 mg/kg			1	0	0.1	0.1	-	-	0	<del>                                     </del>	<0.1		-					
4-Chloroaniline		<0.1 mg/kg			1	0	0.1	0.1	-	-	0		<0.1							
4-Chloro-3-methylphenol	mg/kg	<0.1 mg/kg		n	1	0	0.1	0.1	-	-	0		<0.1							
4-Bromophenylphenylether	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1							
3-Nitroaniline	mg/kg	<0.1 mg/kg			1	0	0.1	0.1	-	-	0		<0.1							
2-Nitrophenol		<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0	<del>                                     </del>	<0.1							
2-Nitroaniline 2-Methylphenol	mg/kg	<0.1 mg/kg <0.1 mg/kg			1	0	0.1	0.1	-	-	0		<0.1 <0.1							
1,2,4-Trichlorobenzene	mg/kg	<0.1 mg/kg			1	0	0.1	0.1	-	-	0		<0.1							
2-Chlorophenol		<0.1 mg/kg		n	1	0	0.1	0.1	-	-	0		<0.1							
2,6-Dinitrotoluene	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1							
2,4-Dinitrotoluene	mg/kg				1	0	0.1	0.1	-	-	0		<0.1							
2,4-Dimethylphenol		<0.1 mg/kg	30000	g	1	0	0.1	0.1	-	-	0		<0.1							
2,4-Dichlorophenol 2,4,6-Trichlorophenol	mg/kg	<0.1 mg/kg <0.1 mg/kg		n n	1	0	0.1	0.1	-	-	0		<0.1 <0.1	1	-					
2,4,6- i richiorophenoi 2,4,5-Trichlorophenol	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg		n n	1	0	0.1	0.1	-	-	0		<0.1		<del>                                     </del>					
1,4-Dichlorobenzene	mg/kg			n	1	0	0.1	0.1	-	-	0		<0.1							
1,3-Dichlorobenzene		<0.1 mg/kg		n	1	0	0.1	0.1	-	-	0		<0.1							

			Assess-				Sum	mary Stati	stics			Sample Ide	ntifiers and	d Analytica	al Data							
Contaminant	Units	Method Detection	ment	Source		Results						WSC01	WSC02	WSC03	WSC07	WSC08	WSC08					
		Limit	Criteria (AC)	(see key)	Total Number of	Above	Minimum	Maximum	Arithmetic	Standard	Number of results	C61 POL	C61 POL	C61 POL	C61 POL	C61 POL	C61 POL					
					Samples				Mean	Deviation	>AC	1.5-1.7 Nat	1.2-1.4 Nat	2.4-2.6 Nat	0.45-0.6 Nat	0.4-0.7 Nat	2.5-2.8 Nat					
1,2-Dichlorobenzene	mg/kg	<0.1 mg/kg	12000	n	1	0	0.1	0.1	-	-	0			<0.1								
2-Chloronaphthalene 2-Methylnaphthalene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0			<0.1								
Acenaphthylene	mg/kg	<0.1 mg/kg	100000	n	1	0	0.1	0.1	-	-	0			<0.1								
Acenaphthene Anthracene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	100000 540000	n n	1	0	0.1	0.1	-	-	0			<0.1 <0.1								
Benzo(a)anthracene	mg/kg	<0.1 mg/kg		n	1	0	0.1	0.1	-	-	0			<0.1								
Benzo(b)fluoranthene Benzo(k)fluoranthene	mg/kg	<0.1 mg/kg <0.1 mg/kg	100 140	n n	1	0	0.1	0.1	-	-	0			<0.1 <0.1								
Benzo(a)pyrene	mg/kg mg/kg	<0.1 mg/kg	140	n	1	0	0.1	0.1	-	-	0			<0.1								
Benzo(g,h,i)perylene	mg/kg	<0.1 mg/kg		n	1	0	0.1	0.1	-	-	0			<0.1								-
Chrysene Fluoranthene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	140 23000	n n	1	0	0.1	0.1	-	-	0			<0.1								
Fluorene	mg/kg	<0.1 mg/kg		n	1	0	0.1	0.1	-	-	0			<0.1								
Indeno(1,2,3-cd)pyrene Phenanthrene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	62 23000	n n	1	0	0.1	0.1	-	-	0			<0.1 <0.1								-
Pyrene	mg/kg	<0.1 mg/kg	54000	n	1	0	0.1	0.1	-	-	0			<0.1								
Naphthalene Dibenzo(a,h)anthracene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	1100 13	n n	1	0	0.1	0.1	-	-	0			<0.1								
Dibromofluoromethane**	%	%	-		1	1	91.4	91.4	91.4	-	-			91.4								
Toluene-d8**  4-Bromofluorobenzene**	%	%	-		1	1	79.4 165	79.4 165	79.4 165	-	-			79.4 165								+
Dichlorodifluoromethane	mg/kg	<0.004 mg/kg	0.004		1	0	0.004	0.004	-	-	0			<0.004								
Chloromethane Vinyl Chloride		<0.007 mg/kg	g 1.6 0.12	g n	1	0	0.007	0.007	-		0			<0.007 <0.01								
Bromomethane		<0.011 mg/kg	0.12	11	1	0	0.013	0.013	-	-	0			<0.013								
Chloroethane	mg/kg	<0.014 mg/kg	2100	g	1	0	0.014	0.014	-	-	0		-	<0.014		-						
Trichlorofluorormethane 1.1-Dichloroethene	mg/kg mg/kg	<0.006 mg/kg	92 0.006	g	1	0	0.006	0.006	-	-	0			<0.006								+
Carbon Disulphide	mg/kg	<0.007 mg/kg		n	1	1	0.0283	0.0283	0.0283	-	0			0.0283								
Dichloromethane  Methyl Tertiary Butyl Ether	mg/kg mg/ka	<0.01 mg/kg <0.011 mg/kg		g	1	0	0.01	0.01	-	-	0			<0.01								-
trans-1-2-Dichloroethene	mg/kg	<0.011 mg/kg	81	g	1	1	0.0184	0.0184	0.0184	-	0			0.0184								
1.1-Dichloroethane cis-1-2-Dichloroethene	mg/kg mg/kg	<0.008 mg/kg	9 850 9 47	g	1	0	0.008 0.0954	0.008 0.0954	0.0954	-	0			<0.008								
2.2-Dichloropropane	mg/kg	<0.012 mg/kg	0.012	9	1	0	0.012	0.012	-	-	0			<0.012								
Bromochloromethane Chloroform		<0.014 mg/kg	0.014 370	n	1	0	0.014	0.014	-	-	0			<0.014								-
1.1.1-Trichloroethane		<0.008 mg/kg		n	1	0	0.007	0.007	-	-	0			<0.007								-
1.1-Dichloropropene Carbontetrachloride		<0.011 mg/kg	0.011 15	n	1	0	0.011 0.014	0.011 0.014	-	-	0			<0.011								
1.2-Dichloroethane		<0.014 mg/kg	1.8	n	1	0	0.014	0.014	-	-	0			<0.014								+
Benzene		<0.009 mg/kg			1	0	0.009	0.009	-	-	0			<0.009								
Trichloroethene 1.2-Dichloropropane	mg/kg mg/kg	<0.009 mg/kg <0.012 mg/kg	55 12	n g	1	0	4.14 0.012	4.14 0.012	4.14	-	0			4.14 <0.012								
Dibromomethane	mg/kg	<0.009 mg/kg	0.009		1	0	0.009	0.009	-	-	0			<0.009								
Bromodichloromethane cis-1-3-Dichloropropene		<0.007 mg/kg	7.6 0.014	g	1	0	0.007 0.014	0.007	-	-	0			<0.007								-
Toluene	mg/kg	<0.005 mg/kg	0.005		1	0	0.005	0.005	-	-	0			<0.005								
trans-1-3-Dichloropropene 1.1.2-Trichloroethane	mg/kg mg/kg	<0.014 mg/kg	0.014 400	a	1	0	0.014	0.014	-	-	0			<0.014								
1.3-Dichloropropane		<0.007 mg/kg		9	1	0	0.007	0.007	-	-	0			<0.007								
Tetrachloroethene  Dibromochloromethane		<0.005 mg/kg		n	1	0	0.005 0.013	0.005 0.013	-	-	0			<0.005								
1.2-Dibromoethane	mg/kg	<0.013 mg/kg	0.012		1	0	0.013	0.013	-	-	0			<0.012								<u> </u>
Chorobenzene 1.1.1.2-Tetrachloroethane	mg/kg	<0.005 mg/kg	310	n n	1	0	0.005 0.01	0.005 0.01	-		0	<del>                                     </del>		<0.005 <0.01								<del> </del>
Ethylbenzene		<0.01 mg/kg <0.004 mg/kg			1	0	0.01	0.004	-	-	0			<0.004								<u> </u>
p/m-Xylene	mg/kg	<0.014 mg/kg	0.014		1	0	0.014	0.014	-	-	0			<0.014								<u> </u>
o-Xylene Styrene		<0.01 mg/kg <0.01 mg/kg		g	1	0	0.01	0.01	-	-	0			<0.01 <0.01								+
Bromoform	mg/kg	<0.01 mg/kg	3100	g	1	0	0.01	0.01	-	-	0			<0.01								
Isopropylbenzene 1.1.2.2-Tetrachloroethane		<0.005 mg/kg		g n	1	0	0.005	0.005 0.01	-	-	0			<0.005 <0.01								+
1.2.3-Trichloropropane	ma/ka	<0.017 mg/kg	0.017		1	0	0.017	0.017	-	-	0			<0.017								1
Bromobenzene Propylbenzene		<0.01 mg/kg		g	1	0	0.01 0.011	0.01 0.011	-	-	0			<0.01 <0.011								+
2-Chlorotoluene	mg/kg	<0.009 mg/kg	0.009	y	1	0	0.009	0.009	-	-	0			<0.009								1
1.3.5-Trimethylbenzene 4-Chlorotoluene		<0.008 mg/kg	0.008 0.012		1	0	0.008 0.012	0.008 0.012	-		0			<0.008								+
tert-Butylbenzene		<0.012 mg/kg			1	0	0.012	0.012	-	-	0			<0.012								
1.2.4-Trimethylbenzene	mg/kg	<0.009 mg/kg	220	g	1	0	0.009	0.009	-	-	0			<0.009								
sec-Butylbenzene 4-Isopropyltoluene		<0.01 mg/kg <0.011 mg/kg			1	0	0.01 0.011	0.01	-	-	0			<0.01								+
1.3-Dichlorobenzene	mg/kg	<0.006 mg/kg	180	n	1	0	0.006	0.006	-	-	0			<0.006								
1.4-Dichlorobenzene n-Butylbenzene		<0.005 mg/kg		n	1	0	0.005	0.005	-	-	0			<0.005 <0.01								+
1.2-Dichlorobenzene	mg/kg	<0.012 mg/kg	12000	n	1	0	0.012	0.012	-	-	0			<0.012								1
1.2-Dibromo-3-chloropropane Tert-amyl methyl ether		<0.014 mg/kg			1	0	0.014 0.015	0.014 0.015	-	-	0			<0.014 <0.015								+
1.2.4-Trichlorobenzene	mg/kg	<0.006 mg/kg	1300	n	1	0	0.006	0.006	-	-	0			<0.006								
Hexachlorobutadiene		<0.012 mg/kg		n	1	0	0.012	0.012	-	-	0	1		<0.012								1
Naphthalene 1.2.3-Trichlorobenzene		<0.013 mg/kg		n	1	0	0.013 0.006	0.013 0.006	-	-	0			<0.013 <0.006								+
	55				_				·						1	·		<u> </u>	1 1	1 1	1 1	 

Site:	DSDC Bicester Site C	Project No:	26999
Data Description:	Zone 2	SOM (%):	6.0%
Land Use:	Commercial	Completed By:	RIDEJ
Pocontor:	Human Hoalth	Chacked By:	

Assessment Criteria Key a) 2009 SGV (Res with Plant) b) 2009 SGV (Allotment) c) 2009 SGV (Commercial/Industrial) d) EIC GAC (Res with Plant)

i) Entec GAC (Res without Plant) j) Entec GAC (Allotment) k) Entec GAC (Commercial/Ind)

e) EIC GAC (Res without Plant)

g) EIC GAC (Commercial/Ind) h) Entec GAC (Res with Plant)

f) EIC GAC (Allotment)

m) LQM CIEH GAC (Res without Plant) q) Soil Code: Crops for Consumption u) BRE Special Digest n) LQM CIEH GAC (Commercial/Ind) r) Soil Code: Sensitive Species o) Dutch Intervention values I) LQM CIEH GAC (Res with Plant) p) Dutch Target Values

s) Soil Code: Grazing Animals t) Soil Code: Background

v) Other Generic Criteria w) Site Specific Assessment Criteria
x) Laboratory limit of detection

											1										
		Method	Assess-	Source			Sum	mary Stati	stics		Sample Id	entifiers aı	nd Analytic	al Data							
Contaminant	Units	Detection	ment	Jource		Results					TPC01	TPC02	TPC03	TPC03	TPC04	TPC05	TPC06				
		Limit	Criteria (AC)	(see key)	Total Number of	Above	Minimum	Maximum	Arithmetic Standard	Number of results	C32 Burn	C32 Burn	C32 Burn	C32 Burn	C32 Burn	C32 Burn	C32 Burn				
			(AO)		Samples	Detection	· · · · · · · · · · · · · · · · · · ·	Muximum	Mean Deviation	>AC	0.2	0.7	0.2	1.2	0.5	0.1	0.1				
						Limit					MG	MG	MG	MG	MG	MG	MG				
Inorganics					0	0	0	0		0											
Soil Organic Matter (SOM)	%	<0.35 %	-		1 -	1	11.3	11.3	11.3 - 8.364285714 0.205089992	-	0.44	0.40	0.04	11.3	0.40	0.00	0.04				
рн Sulphate. 2:1 water soluble	pH Units	1 pH unit <0.003 g/l	0.5		7	7	8.09 0.0149	8.64 0.132	0.0663 0.044631827	0	8.11 0.132	8.48 0.0701	8.31 0.0149	8.43 0.0593	8.49 0.0204	8.09 0.0504	8.64 0.117				+
Ammoniacal Nitrogen, exchangeable as NH4	mg/kg	<0.003 g/l <15 mg/kg	0.5		7	0	15	15	0.0663 0.044631827	-	<15	<15	<15	<15	<15	<15	<15				-
Boron, water soluble	mg/kg	<1 mg/kg	190000	n	7	4	1	2.85	1.647142857 0.759555008	0	2.51	2.85	1.53	<1	1.64	<1	<1				
Arsenic		<0.6 mg/kg	640	С	7	7	5.91	12.7	9.77 2.618275514	0	7.88	5.91	11.3	7.7	12.4	10.5	12.7				
Chromium, Hexavalent		<0.6 mg/kg	35	n	7	0	0.6	0.6		0	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6				
Cadmium		<0.02 mg/kg	230	С	7	7	0.0735	0.365	0.202785714 0.096062418	0	0.248	0.111	0.22	0.229	0.0735	0.173	0.365				
Chromium	mg/kg	<0.9 mg/kg	30000	n	7	7	22.5	53.1	31.95714286 10.39019684	0	27.2	53.1	35.6	23.5	30	31.8	22.5				
Copper		<1.4 mg/kg	72000	n	7	7	15.6	75.4	30.11428571 20.64077103	0	16.8	25	28.7	28.5	15.6	75.4	20.8				1
Lead	mg/kg	<0.7 mg/kg	750	у	7	7	12.9	55.8	33.57142857 17.65424541	0	55.8	14	46.1	22.7	12.9	50.6	32.9				-
Mercury		<0.14 mg/kg	0.14		7	0	0.14	0.14		0	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14				
Nickel	mg/kg	<0.2 mg/kg	1800	С	7	7	11	85.4	37.12857143 24.60831257	0	11	49.8	33.8	31.9	30.2	85.4	17.8				-
Selenium	mg/kg	<1 mg/kg	13000 670000	C	7	6 7	1 59.7	2.87	1.587142857 0.660699485 79.27142857 17.04373925	0	2.87	1.2	1.07 106	1.89	1.3 59.7	1.78	<1				
Zinc Asbestos Containing Material Screen	mg/kg	<1.9 mg/kg	670000	n	0	0	#VALUE!	106 #VALUE!	15.21142001 11.04313925	0	81.4 o ACM Detect	96.1		61.3 To ACM Detect		74.3	76.1 o ACM Detecte	ad a			+
Asbestos, Chrysotile (white)					0	0	#VALUE:	#VALUE:		0	D ACIVI Detect	eu		NO ACIVI Delecti	Eu	IN.	O ACIVI Detecte	eu eu			+
researce, emyeeme (winter)					ľ	Ü															
TPH 6 Split					0	0	0	0		0											
TPH >C6-C8	mg/kg	<10 mg/kg	42000		3	0	10	10		0	<10			<10		<10					
TPH >C8-C10	mg/kg	<10 mg/kg	12000		3	0	10	10		0	<10			<10		<10					
TPH >C10-C12	mg/kg	<10 mg/kg	49000		3	0	10	10		0	<10			<10		<10					
TPH >C12-C16		<10 mg/kg	91000		3	0	10	10		0	<10			<10		<10					
TPH >C16-C21		<10 mg/kg	28000		3	2	10	23.9	18.43333333 7.409678356	0	23.9			<10		21.4					1
TPH >C21-C40		<10 mg/kg	28000		3	2	10	384	188.3333333 187.6015281	0	384			<10		171					
TPH >C6-C40	mg/kg	<10 mg/kg	28000		3	2	10	411	206 200.6514391	0	411			<10		197					+
Organica					0	0	0	0													
Organics Acenaphthene-d10 % recovery**	%		-		0	0	0	0		-											+
Naphthalene-d8 % recovery**	%	%	_		2	2	96	100	98 2.828427125	-	100					96					
Acenaphthene-d10 % recovery**	%	%	-		2	2	97.8	99.6	98.7 1.272792206	-	97.8					99.6					
Phenanthrene-d10 % recovery**	%	%	-		2	2	96.2	99.7	97.95 2.474873734	-	99.7					96.2					
Chrysene-d12 % recovery**	%	%			2	2	76.3	100	88.15 16.75843071	-	100					76.3					
Perylene-d12 % recovery**	%	%	-		2	2	70.1	119	94.55 34.5775216	-	119					70.1					
Naphthalene		<0.009 mg/kg	1100	1	2	2	0.0493	0.169	0.10915 0.084640682	0	0.0493					0.169					
Acenaphthylene	- 0	<0.012 mg/kg	100000	1	2	2	0.0294	0.0561	0.04275 0.018879751	0	0.0294					0.0561					-
Acenaphthene		<0.008 mg/kg	100000	1	2	2	0.0116	0.0493	0.03045 0.026657926	0	0.0116					0.0493					
Fluorene		<0.01 mg/kg	47000	1	2	2	0.0111	0.0485	0.0298 0.026445794	0	0.0111				-	0.0485					-
Phenanthrene Anthreasan		<0.015 mg/kg	23000	1	2	2	0.186	0.946	0.566 0.537401154	0	0.186	-			-	0.946					-
Anthracene Fluoranthene		<0.016 mg/kg <0.017 mg/kg	540000 23000	1	2	2	0.0735 1.16	0.17 1.47	0.12175	0	0.0735 1.16					1.47					+
Pyrene		<0.017 mg/kg <0.015 mg/kg	54000	1	2	2	1.17	1.47	1.185 0.021213203	0	1.10					1.17					<del>                                     </del>
Benz(a)anthracene		<0.015 mg/kg	97		2	2	0.75	1.07	0.91 0.22627417	0	1.07					0.75					<b>†</b>
Chrysene	0 0	<0.01 mg/kg	140	i	2	2	0.546	1.05	0.798 0.356381818	0	1.05					0.546					
Benzo(b)fluoranthene		<0.015 mg/kg	100	I	2	2	0.943	1.92	1.4315 0.690843325	0	1.92					0.943					
Benzo(k)fluoranthene		<0.014 mg/kg	140	1	2	2	0.288	0.735	0.5115 0.316076731	0	0.735					0.288					
Benzo(a)pyrene	mg/kg	<0.015 mg/kg	14	I	2	2	0.639	1.85	1.2445 0.856306312	0	1.85					0.639					
Indeno(1,2,3-cd)pyrene		<0.018 mg/kg	62	- 1	2	2	0.263	1.4	0.8315 0.80398041	0	1.4					0.263					
Dibenzo(a,h)anthracene		<0.023 mg/kg	13	- 1	2	2	0.0799	0.347	0.21345 0.188868221	0	0.347					0.0799					
Benzo(g,h,i)perylene	- 0	<0.024 mg/kg	660	I	2	2	0.297	1.75	1.0235 1.027426153	0	1.75					0.297					
Polyaromatic hydrocarbons, Total USEPA 16	mg/kg	<0.118 mg/kg	-		2	2	7.89	12.8	10.345 3.471894296	-	12.8					7.89					1

Site:	DSDC Bicester Site C	Project No:	26999
Data Description:	Zone 2	SOM (%):	1.0%
Land Use:	Commercial	Completed By:	RIDEJ
Pocontor:	Human Hoalth	Chacked By:	

Assessment Criteria Key a) 2009 SGV (Res with Plant)

d) EIC GAC (Res with Plant)

b) 2009 SGV (Allotment) c) 2009 SGV (Commercial/Industrial)

e) EIC GAC (Res without Plant) i) Entec GAC (Res without Plant) j) Entec GAC (Allotment) f) EIC GAC (Allotment) g) EIC GAC (Commercial/Ind) h) Entec GAC (Res with Plant) k) Entec GAC (Commercial/Ind) I) LQM CIEH GAC (Res with Plant) p) Dutch Target Values

m) LQM CIEH GAC (Res without Plant) q) Soil Code: Crops for Consumption u) BRE Special Digest n) LQM CIEH GAC (Commercial/Ind) r) Soil Code: Sensitive Species o) Dutch Intervention values

s) Soil Code: Grazing Animals t) Soil Code: Background

y) CLR SGV for Lead (2002) v) Other Generic Criteria w) Site Specific Assessment Criteria

x) Laboratory limit of detection

1		,		1																
		Method	Assess-	Source			Sun	nmary Stati	stics			Samı	ple Identifiers and Analytic	al Data						
Contaminant	Units	Detection Limit	ment Criteria (AC)	(see key)	Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	ber sults C C32	CO4 Burn 1.5							
Inorganics					0	0	0	0	-	-	0	- "								
Soil Organic Matter (SOM)	%	<0.35 %	-		0	0	0	0	-	-	-									
pH	pH Units	1 pH unit	-		1	1	8.15	8.15	8.15	-	-	8.	.15							
Sulphate, 2:1 water soluble	g/l	<0.003 g/l	0.5		1	1	0.0617	0.0617	0.0617	-	0	0.0	0617							
Ammoniacal Nitrogen, exchangeable as NH4	mg/kg	<15 mg/kg	15		1	0	15	15	-	-	0	<	:15							
Boron, water soluble	mg/kg	<1 mg/kg	190000	n	1	1	1.46	1.46	1.46	-	0	1.	.46							
Arsenic	mg/kg	<0.6 mg/kg	640	С	1	1	15.2	15.2	15.2	-	0	15	5.2							
Chromium, Hexavalent	mg/kg	<0.6 mg/kg	35	n	1	0	0.6	0.6	-	-	0	<(	:0.6							
Cadmium	mg/kg	<0.02 mg/kg	230	С	1	1	0.0735	0.0735	0.0735	-	0	0.0	0735							
Chromium	mg/kg	<0.9 mg/kg	30000	n	1	1	44.3	44.3	44.3	-	0	44	4.3							
Copper	mg/kg	<1.4 mg/kg	72000	n	1	1	20.1	20.1	20.1	-	0	20	0.1							
Lead	mg/kg	<0.7 mg/kg	750	у	1	1	19.3	19.3	19.3	-	0	19	9.3							
Mercury	mg/kg	<0.14 mg/kg	0.14		1	0	0.14	0.14	-	-	0	<0	0.14							
Nickel	mg/kg	<0.2 mg/kg	1800	С	1	1	59.7	59.7	59.7	-	0	59	9.7							
Selenium	mg/kg	<1 mg/kg	13000	С	1	1	1.54	1.54	1.54	-	0	1.	.54							
Zinc	mg/kg	<1.9 mg/kg	670000	n	1	1	89.7	89.7	89.7	-	0	89	9.7							
Asbestos Containing Material Screen					0	0	0	0	-	-	0									
Asbestos, Chrysotile (white)					0	0	0	0	-	-	0									
TPH 6 Split					0	0	0	0	-	-	0									
TPH >C6-C8	mg/kg	<10 mg/kg	8300		1	0	10	10	-	-	0	<	:10							
TPH >C8-C10	mg/kg	<10 mg/kg	2100		1	0	10	10	-	-	0	<	:10							
TPH >C10-C12	mg/kg	<10 mg/kg	10000		1	0	10	10	-	-	0	<	:10							
TPH >C12-C16	mg/kg	<10 mg/kg	36000		1	0	10	10	-	-	0	<	:10							
TPH >C16-C21	mg/kg	<10 mg/kg	28000		1	0	10	10	-	-	0	<	:10							
TPH >C21-C40	mg/kg	<10 mg/kg	28000		1	0	10	10	-	-	0	<	:10							
TPH >C6-C40	mg/kg	<10 mg/kg	28000		1	0	10	10	-		0	<	:10							

Site:	DSDC Bicester Site C	Project No:	26999
Data Description:	Zone 3 - C33 FFO Tank Area	SOM (%):	6.0%
Land Use:	Commercial	Completed By:	RIDEJ
Recentor:	Human Health	Checked By:	פ וססת

Assessment Criteria Key
a) 2009 SGV (Res with Plant)
b) 2009 SGV (Allotment) c) 2009 SGV (Commercial/Industrial) d) EIC GAC (Res with Plant)

e) EIC GAC (Res without Plant) i) Entec GAC (Res without Plant) j) Entec GAC (Allotment) n) LQM CIEH GAC (Comme k) Entec GAC (Commercial/Ind) o) Dutch Intervention values l) LQM CIEH GAC (Res with Plant) p) Dutch Target Values f) EIC GAC (Allotment) g) EIC GAC (Commercial/Ind) h) Entec GAC (Res with Plant)

o) Dutch Intervention values

m) LQM CIEH GAC (Res without Plant) q) Soil Code: Crops for Consumption u) BRE Special Digest n) LQM CIEH GAC (Commercial/Ind) r) Soil Code: Sensitive Species s) Soil Code: Grazing Animals t) Soil Code: Background

v) Other Generic Criteria w) Site Specific Assessment Criteria

x) Laboratory limit of detection

							Sun	nmary Statis	stics			Sample Ide	entifiers an	nd Analytic	al Data								
		Method	Assess- ment	Source														 					<del>,</del>
Contaminant	Units	Detection	Criteria		Total	Results					Number	WSC04	WSC05	WSC06	BHC03	BHC05							
		Limit	(AC)	(see key)	Number of	Above Detection	Minimum	Maximum	Arithmetic Mean	Standard Deviation	of results	C33 FFO				C33 FFO							
					Samples	Limit			Wedii	Deviation	>AC	0.40-0.60 MG		1		1.00							
Inorganics					0	0	0	0			0	MG	MG	MG	MG	MG							
Soil Organic Matter (SOM)	%	<0.35 %	_		2	2	3.5	8.38	5.94	3.450681092		3.5	8.38										
pH	pH Units	1 pH unit	-		4	4	8.07	9.75	8.83	0.717077402		8.52	8.07	9.75		8.98							
Sulphate, 2:1 water soluble	g/l	<0.003 g/l	0.5		5	5	0.119	1.14	0.4626	0.409900354		0.119	0.545	0.225	0.284	1.14							
Ammoniacal Nitrogen, exchangeable as NH4	mg/kg	<15 mg/kg	15		4	0	15	15		-	0	<15	<15	<15		<15							
Boron, water soluble	mg/kg	<1 mg/kg	190000	n	4	2	1	3.09	1.7275	0.987163445		<1	1.82	<1		3.09							
Arsenic	mg/kg	<0.6 mg/kg		С	5	5	8.53	13.1	10.878	2.211452012		11.2	8.53	12.9	8.66	13.1							
Chromium, Hexavalent	mg/kg	<0.6 mg/kg	35	n	5	0	0.6	0.6		-	0	<0.6	<0.6	<0.6	<0.6	<0.6							
Cadmium Chromium	mg/kg	<0.02 mg/kg	230 30000	c n	5	5	0.02	0.667 55.2	0.256 33.5	0.262273712		0.667 37.1	0.034 35.9	0.271 19	0.288	<0.02							
	mg/kg	<0.9 mg/kg <1.4 mg/kg		n	5	5	23.1	60.9	35.54	15.52910171		38.8	23.1	23.9	20.3	55.2 60.9							
Copper Lead	mg/kg mg/kg	<0.7 mg/kg	750	V	5	5	20.7	475	140.96	190.6664181	0	60.7	20.7	29.4	475	119							
Mercury	mg/kg	<0.14 mg/kg	_	,	5	0	0.14	0.14	-	-	0	<0.14	<0.14	<0.14	<0.14	<0.14							
Nickel	mg/kg	<0.2 mg/kg	1800	С	5	5	11.5	16	13.74	1.832484652		11.5	15.2	16	13.2	12.8							
Selenium	mg/kg	<1 mg/kg	13000	С	5	5	1.55	4	2.856	1.026562224		2.51	3.8	1.55	2.42	4							
Zinc		<1.9 mg/kg	670000	n	5	5	64	131	88.36	26.15746547	0	131	81.2	64	72.5	93.1							
Asbestos Containing Material Screen					0	0	0	0	-	-	0		-										
Asbestos, Chrysotile (white)					0	0	0	0	-	-	0											1	
						1																	
TPH 6 Split	"	46 6	40000		0 2	0	0	0	-	-	0										+ + + + + + + + + + + + + + + + + + + +		
TPH >C6-C8	mg/kg	<10 mg/kg				0	10	10	-	-	0	<10		<10									
TPH >C8-C10 TPH >C10-C12	mg/kg	<10 mg/kg <10 mg/kg			2	0	10	10 10	-	-	0	<10 <10		<10 <10									
TPH >C10-C12	mg/kg mg/kg	<10 mg/kg			2	2	12.6	21	16.8	5.939696962		21		12.6									
TPH >C16-C21	mg/kg	<10 mg/kg			2	2	110	119	114.5	6.363961031		110		119									
TPH >C21-C40	mg/kg	<10 mg/kg			2	2	1110	1950	1530	593.9696962		1110		1950									
TPH >C6-C40		<10 mg/kg			2	2	1250	2080	1665	586.8986284	0	1250		2080									
Organics					0	0	0	0		-	0												
Acenaphthene-d10 % recovery**	%				0	0	0	0	-	-	0												
Naphthalene-d8 % recovery**	%	%	-		1	1	87.1	87.1	87.1	-	-		87.1										
Acenaphthene-d10 % recovery**	%	%	-		1	1	88.4	88.4	88.4	-	-		88.4										
Phenanthrene-d10 % recovery** Chrysene-d12 % recovery**	%	%	-		1	1	87.6	87.6	87.6	-	-		87.6 82.6										
Perylene-d12 % recovery**	%	%	-		1	1	82.6 87.7	82.6 87.7	82.6 87.7	-			87.7										
Naphthalene	mg/kg	<0.009 mg/k		n	1	1	0.0891	0.0891	0.0891	-	0		0.0891										
Acenaphthylene	mg/kg	<0.012 mg/k		n	1	1	0.026	0.026	0.026	-	0		0.026										
Acenaphthene	mg/kg	<0.008 mg/k	1	n	1	1	0.0118	0.0118	0.0118	-	0		0.0118										
Fluorene	mg/kg	<0.01 mg/kg	47000	n	1	0	0.01	0.01	-	-	0		<0.01										
Phenanthrene	mg/kg	<0.015 mg/k	g 23000	n	1	1	0.295	0.295	0.295	-	0		0.295										
Anthracene	mg/kg	<0.016 mg/k		n	1	1	0.0784	0.0784	0.0784	-	0		0.0784										
Fluoranthene	mg/kg	<0.017 mg/k	1	n	1	1	0.881	0.881	0.881	-	0		0.881										
Pyrene	mg/kg	<0.015 mg/k		n	1	1	0.758	0.758	0.758	-	0		0.758	-							+ + + + + + + + + + + + + + + + + + + +	1	
Benz(a)anthracene	mg/kg	<0.014 mg/k <0.01 mg/kg	-	n	1	1	0.603 0.526	0.603 0.526	0.603 0.526	-	0		0.603	<del>                                     </del>							+ + + + + + + + + + + + + + + + + + + +	+	
Chrysene Benzo(b)fluoranthene	mg/kg mg/kg	<0.01 mg/kg	g 140 g 100	n n	1	1	0.526	0.526	0.844	+ -	0		0.844										
Benzo(k)fluoranthene	mg/kg	<0.013 mg/k	1	n	1	1	0.295	0.844	0.295	-	0		0.295										
Benzo(a)pyrene	mg/kg	<0.015 mg/k	g 14	n	1	1	0.684	0.684	0.684	-	0		0.684										
Indeno(1,2,3-cd)pyrene	mg/kg	<0.018 mg/k	-	n	1	1	0.399	0.399	0.399	-	0		0.399										
Dibenzo(a,h)anthracene	mg/kg	<0.023 mg/k	g 13	n	1	1	0.121	0.121	0.121	-	0		0.121										
Benzo(g,h,i)perylene	mg/kg	<0.024 mg/k	g 660	n	1	1	0.486	0.486	0.486	-	0		0.486										
Polyaromatic hydrocarbons, Total USEPA 16	mg/kg	<0.118 mg/k	g -		1	1	6.1	6.1	6.1	-	-		6.1										
TPHCWG					0	0	0	0	-	-	0												
Aliphatics >C5-C6		<0.01 mg/kg		n	1	0	0.01	0.01	-	-	0		<0.01										
Aliphatics >C6-C8	mg/kg	<0.01 mg/kg	42000	n	1	0	0.01	0.01	-	-	0		<0.01										
Aliphatics >C8-C10		<0.01 mg/kg		n	1	0	0.01	0.01	-	-	0		<0.01	-								1	
Aliphatics >C10-C12		<0.01 mg/kg		n	1	0	0.01	0.01	-	-	0		<0.01										
Total Aliphatics >C5-C12	mg/kg	<0.01 mg/kg	0.01		1	0	0.01	0.01	-	-	0		<0.01								+ + + + + + + + + + + + + + + + + + + +		
Aromatics >C6-C7 Aromatics >C7-C8		<0.01 mg/kg			1	0	0.01	0.01	-	-	0		<0.01 <0.01	-								1	
Aromatics >C7-C8 Aromatics >EC8-EC10	mg/kg	<0.01 mg/kg	190000 18000	n n	1	0	0.01	0.01	-	-	0		<0.01										
Aromatics >EC8-EC10 Aromatics >EC10-EC12	ma/ka	<0.01 mg/kg	34500	n n	1	0	0.01	0.01	-	-	0		<0.01									+	
Total Aromatics >C6-C12		<0.01 mg/kg		n	1	0	0.01	0.01	-		0		<0.01										
GRO Surrogate % recovery**	%		-		1	1	41	41	41	-	-		41										
Benzene		<0.01 mg/kg		С	1	0	0.01	0.01	-	-	0		<0.01										
												<u> </u>					"	 U	-				•

		Markad	Assess-	0			Sur	nmary Statis	tics			Sample Ident	tifiers and	d Analytica	al Data						
Contaminant	Units	Method Detection Limit	ment Criteria (AC)	Source (see key)	Total Number of Samples		Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	WSC04 C33 FFO C 0.40-0.60 0	33 FFO	C33 FFO	C33 FFO	BHC05 C33 FFO 1.00 MG					
Toluene		<0.002 mg/kg		С	1	0	0.002	0.002	-	-	0		<0.002								
Ethylbenzene m,p-Xylene	mg/kg mg/kg	<0.003 mg/kg	g 2800 a 2600	С	1	0	0.003	0.003	-	-	0		<0.003								
o-Xylene		<0.003 mg/kg	·	С	1	0	0.003	0.003	-	-	0		<0.003								
m,p,o-Xylene	mg/kg	<0.01 mg/kg	2600	С	1	0	0.01	0.01	-	-	0		<0.01								
BTEX, Total  Methyl tertiary butyl ether (MTBE)	mg/kg mg/kg	<0.01 mg/kg	g 0.01 g 0.005		1	0	0.01	0.01	-	-	0		<0.01								
GRO >C5-C12	mg/kg	<0.044 mg/kg			1	0	0.044	0.044	-	-	0		<0.044								
Aliphatics >C12-C16	mg/kg	<0.1 mg/kg	91000	n	1	1	5.67	5.67	5.67	-	0		5.67								
Aliphatics >C16-C21 Aliphatics >C16-C35	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	1800000 1800000	n n	1	1	8.36 74.5	8.36 74.5	8.36 74.5	-	0		8.36 74.5								
Aliphatics >C21-C35	mg/kg	<0.1 mg/kg	180000		1	1	66.1	66.1	66.1	-	0		66.1								
Aliphatics >C35-C44	mg/kg	<0.1 mg/kg	0.1		1	1	23.1	23.1	23.1	-	1		23.1								
Total Aliphatics >C12-C44 Aromatics >EC12-EC16	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	37800	n	1	1	103 4.86	103 4.86	103 4.86	-	- 0		103 4.86								
Aromatics >EC16-EC21	mg/kg	<0.1 mg/kg	28000	n	1	1	9.86	9.86	9.86	-	0		9.86								
Aromatics >EC21-EC35	mg/kg	<0.1 mg/kg	28000	n	1	1	48.6	48.6	48.6	-	0		48.6								
Aromatics >EC35-EC44 Aromatics >EC40-EC44	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	28000	n	1	1	29 13	29 13	29 13	-	0		29 13								
Total Aromatics >EC12-EC44	mg/kg	<0.1 mg/kg	-		1	1	92.3	92.3	92.3	-			92.3								
Total Aliphatics >C5-C44	mg/kg	<0.1 mg/kg	0.1		1	1	103	103	103	-	1		103								
Total Alighetics \$ Argustics - C5 C44	mg/kg	<0.1 mg/kg	-		1	1	92.3	92.3	92.3	-	-		92.3								
Total Aliphatics & Aromatics >C5-C44  Total Aliphatics >C5-35	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	0.1		1	1	196 80.1	196 80.1	196 80.1	-	1		196 80.1								
Total Aromatics >C5-35	mg/kg	<0.1 mg/kg	0.1		1	1	63.3	63.3	63.3	-	1		63.3								
Total Aliphatics & Aromatics >C5-35	mg/kg	<0.1 mg/kg	-		1	1	143	143	143	-	-		143								
Other Organics					0	0	0	0	_	-	0										
PCBs (vs Aroclor 1254)	mg/kg	<0.035 mg/kg	g 0.035		1	0	0.035	0.035	-	-	0		<0.035								
Phenol	mg/kg	<0.1 mg/kg	3200	С	1	0	0.1	0.1	-	-	0		<0.1								
Pentachlorophenol n-Nitroso-n-dipropylamine	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	1400 0.1	n	1	0	0.1	0.1	-	-	0		<0.1								
Nitrobenzene	mg/kg	<0.1 mg/kg	+		1	0	0.1	0.1	-	-	0		<0.1								
Isophorone	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1								
Hexachloroethane  Hexachlorocyclopentadiene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1								
Hexachlorobutadiene	mg/kg	<0.1 mg/kg	120	n	1	0	0.1	0.1	-	-	0		<0.1								
Hexachlorobenzene	mg/kg	<0.1 mg/kg		n	1	0	0.1	0.1	-	-	0		<0.1								
n-Dioctyl phthalate Dimethyl phthalate	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	89000 0.1	g	1	0	0.1	0.1	-	-	0		<0.1								
Diethyl phthalate	mg/kg	<0.1 mg/kg	290000	g	1	0	0.1	0.1	-	-	0		<0.1								
n-Dibutyl phthalate	mg/kg	<0.1 mg/kg	15000	g	1	0	0.1	0.1	-	-	0		<0.1								
Dibenzofuran Carbazole	mg/kg	<0.1 mg/kg <0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1								
Butylbenzyl phthalate	mg/kg mg/kg	<0.1 mg/kg	950000	g	1	0	0.1	0.1	-	-	0		<0.1								
bis(2-Ethylhexyl) phthalate	mg/kg	<0.1 mg/kg	86000	g	1	0	0.1	0.1	-	-	0		<0.1								
bis(2-Chloroethoxy)methane bis(2-Chloroethyl)ether	mg/kg	<0.1 mg/kg <0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1								
Azobenzene	mg/kg mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1								
4-Nitrophenol	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1								
4-Nitroaniline 4-Methylphenol		<0.1 mg/kg			1	0	0.1	0.1	-	-	0		<0.1 <0.1								
4-Metnyipnenoi 4-Chlorophenylphenylether	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg			1	0	0.1	0.1	-	-	0		<0.1								
4-Chloroaniline	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1								
4-Chloro-3-methylphenol		<0.1 mg/kg		n	1	0	0.1	0.1	-	-	0		<0.1								
4-Bromophenylphenylether 3-Nitroaniline	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1 <0.1								
2-Nitrophenol		<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1								
2-Nitroaniline	mg/kg	<0.1 mg/kg			1	0	0.1	0.1	-	-	0		<0.1								
2-Methylphenol 1,2,4-Trichlorobenzene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0	<del>                                     </del>	<0.1								
2-Chlorophenol	mg/kg	<0.1 mg/kg	4200	n	1	0	0.1	0.1	-	-	0		<0.1								
2,6-Dinitrotoluene	mg/kg	<0.1 mg/kg			1	0	0.1	0.1	-	-	0		<0.1								
2,4-Dinitrotoluene 2,4-Dimethylphenol	mg/kg	<0.1 mg/kg <0.1 mg/kg	0.1 30000	0	1	0	0.1	0.1	-	-	0		<0.1 <0.1								
2,4-Dimetnyiphenoi 2,4-Dichlorophenol	mg/kg mg/kg	<0.1 mg/kg		n g	1	0	0.1	0.1	-	-	0		<0.1								
2,4,6-Trichlorophenol	mg/kg	<0.1 mg/kg	4200	n	1	0	0.1	0.1	-	-	0		<0.1								
2,4,5-Trichlorophenol	mg/kg	<0.1 mg/kg		n	1	0	0.1	0.1	-	-	0		<0.1								
1,4-Dichlorobenzene 1,3-Dichlorobenzene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg		n n	1	0	0.1	0.1	-	-	0		<0.1								
	55		-		· · · · · · · · · · · · · · · · · · ·	-1		1									· · · · · · · · · · · · · · · · · · ·	 -1	1 1	1 1	 

		Mothad	Assess-	Sauras									ntifiers	and Analyti	cal Data						
Contaminant	Units	Method Detection	ment Criteria	Source	Total	Results					Number			WSC06		3HC05					
		Limit	(AC)	(see key)	Number of	Above Detection	Minimum	Maximum	Arithmetic Mean	Standard Deviation	of results					33 FFO 1.00					
					Samples	Limit					>AC	MG	MG	MG		MG					
1,2-Dichlorobenzene	mg/kg		12000	n	1	0	0.1	0.1	-	-	0		<0.1								
2-Chloronaphthalene 2-Methylnaphthalene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1								
Acenaphthylene	mg/kg	<0.1 mg/kg	100000	n	1	0	0.1	0.1	-	-	0		<0.1								
Acenaphthene	mg/kg	<0.1 mg/kg	100000	n	1	0	0.1	0.1	-	-	0		<0.1								
Anthracene Benzo(a)anthracene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	540000 97	n n	1	0	0.1	0.1	0.322	-	0		<0.1 0.322								
Benzo(b)fluoranthene	mg/kg	<0.1 mg/kg	100	n	1	1	0.336	0.336	0.336	-	0		0.336								
Benzo(k)fluoranthene	mg/kg	<0.1 mg/kg	140	n	1	1	0.275	0.275	0.275	-	0		0.275								
Benzo(a)pyrene Benzo(g,h,i)perylene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	14 660	n n	1	1	0.411 0.226	0.411 0.226	0.411 0.226	-	0		0.411								
Chrysene	mg/kg	<0.1 mg/kg	140	n	1	1	0.341	0.341	0.341	-	0		0.341								
Fluoranthene	mg/kg	<0.1 mg/kg	23000	n	1	1	0.516	0.516	0.516	-	0		0.516								
Fluorene Indeno(1,2,3-cd)pyrene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	47000 62	n n	1	0	0.1	0.1	0.208	-	0		<0.1 0.208								
Phenanthrene	mg/kg	<0.1 mg/kg	23000	n	1	1	0.165	0.165	0.165	-	0		0.165								
Pyrene Naphthalene	mg/kg	<0.1 mg/kg	54000 1100	n n	1	1 0	0.473	0.473	0.473	-	0		0.473 <0.1		+						
Dibenzo(a,h)anthracene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	13	n n	1	0	0.1	0.1	-	-	0		<0.1								
Dibromofluoromethane**	%	%	-		1	1	36.6	36.6	36.6	-	-		36.6								
Toluene-d8**  4-Bromofluorobenzene**	%	%	-		1	1	102 124	102 124	102 124	-	-		102 124								
Dichlorodifluoromethane	_	<0.004 mg/kg	0.004		1	0	0.004	0.004	-	-	0		<0.004								
Chloromethane	mg/kg	<0.007 mg/kg	1.6	g	1	0	0.007	0.007	-	-	0		<0.007								
Vinyl Chloride Bromomethane	mg/kg mg/kg	<0.01 mg/kg <0.013 mg/kg	0.12 0.013	n	1	0	0.01	0.01 0.013	-	-	0		<0.01								
Chloroethane		<0.013 mg/kg <0.014 mg/kg	2100	g	1	0	0.013	0.013	-	-	0		<0.013					<del>                                     </del>			
Trichlorofluorormethane	mg/kg	<0.006 mg/kg	0.006		1	0	0.006	0.006	-	-	0		<0.006								
1.1-Dichloroethene Carbon Disulphide	mg/kg mg/kg	<0.01 mg/kg <0.007 mg/kg	92 50	g n	1	0	0.01	0.01	-	-	0		<0.01								
Dichloromethane	mg/kg	<0.007 mg/kg	560	g	1	0	0.007	0.007	-	-	0		<0.007								
Methyl Tertiary Butyl Ether	mg/kg	<0.011 mg/kg	24000	g	1	0	0.011	0.011	-	-	0		<0.011								
trans-1-2-Dichloroethene		<0.011 mg/kg	81	g	1	0	0.011	0.011	-	-	0		<0.011								
1.1-Dichloroethane cis-1-2-Dichloroethene		<0.008 mg/kg <0.005 mg/kg	850 47	<u>g</u> g	1	1	0.008	0.008	0.00739	-	0		0.00739								
2.2-Dichloropropane	mg/kg	<0.012 mg/kg	0.012	, ,	1	0	0.012	0.012	-	-	0		<0.012								
Bromochloromethane	_	<0.014 mg/kg	0.014		1	0	0.014	0.014	-	-	0		<0.014								
Chloroform 1.1.1-Trichloroethane	mg/kg mg/kg	<0.008 mg/kg <0.007 mg/kg	370 3100	n n	1	0	0.008	0.008	-	-	0		<0.008								
1.1-Dichloropropene	mg/kg	<0.011 mg/kg	0.011		1	0	0.011	0.011	-	-	0		<0.011								
Carbontetrachloride		<0.014 mg/kg	15	n	1	0	0.014	0.014	-	-	0		<0.014								
1.2-Dichloroethane Benzene		<0.005 mg/kg <0.009 mg/kg	1.8 0.009	n	1	0	0.005	0.005	-	-	0		<0.005								
Trichloroethene	mg/kg	<0.009 mg/kg	55	n	1	1	0.307	0.307	0.307	-	0		0.307								
1.2-Dichloropropane Dibromomethane		<0.012 mg/kg <0.009 mg/kg	12 0.009	g	1	0	0.012	0.012	-	-	0		<0.012	_							
Bromodichloromethane		<0.009 mg/kg	7.6	g	1	0	0.003	0.007	-	-	0		<0.003								
cis-1-3-Dichloropropene		<0.014 mg/kg	0.014		1	0	0.014	0.014	-	-	0		<0.014								
Toluene trans-1-3-Dichloropropene		<0.005 mg/kg <0.014 mg/kg	0.005 0.014		1	0	0.005 0.014	0.005 0.014	-		0		<0.005								
1.1.2-Trichloroethane		<0.01 mg/kg	400	g	1	0	0.01	0.01	-	-	0		<0.01								
1.3-Dichloropropane		<0.007 mg/kg	0.007		1	0	0.007	0.007	-	-	0		<0.007								
Tetrachloroethene Dibromochloromethane		<0.005 mg/kg <0.013 mg/kg	660 0.013	n	1	0	0.005 0.013	0.005	-	-	0		<0.005								
1.2-Dibromoethane	mg/kg	<0.012 mg/kg	0.012		1	0	0.012	0.012	-	-	0		<0.012								
Chorobenzene		<0.005 mg/kg	310	n	1	0	0.005	0.005	-	-	0		<0.005								
1.1.1.2-Tetrachloroethane Ethylbenzene	mg/kg mg/kg	<0.01 mg/kg <0.004 mg/kg	590 0.004	n	1	0	0.01	0.01	-	-	0		<0.01					<del>                                     </del>		1	
p/m-Xylene	mg/kg	<0.014 mg/kg	0.014		1	0	0.014	0.014	-	-	0		<0.014								
o-Xylene Styrene	mg/kg	<0.01 mg/kg <0.01 mg/kg	0.01 11000	-	1	0	0.01	0.01	-		0		<0.01					<del>                                     </del>		1	
Styrene Bromoform	mg/kg mg/kg	<0.01 mg/kg	3100	<u>g</u> g	1	0	0.01	0.01	-	-	0		<0.01	_				<del>                                     </del>			
Isopropylbenzene	mg/kg	<0.005 mg/kg	7700	9	1	0	0.005	0.005	-	-	0		<0.005								
1.1.2.2-Tetrachloroethane 1.2.3-Trichloropropane	mg/kg mg/kg	<0.01 mg/kg <0.017 mg/kg	1200 0.017	n	1	0	0.01	0.01	-	-	0		<0.01							-	
Bromobenzene		<0.017 mg/kg	520	g	1	0	0.017	0.017	-	-	0		<0.017								
Propylbenzene	mg/kg	<0.011 mg/kg	21000	9	1	0	0.011	0.011	-	-	0		<0.011								
2-Chlorotoluene 1.3.5-Trimethylbenzene		<0.009 mg/kg <0.008 mg/kg	0.009		1	0	0.009	0.009	-	-	0		<0.009					<del>                                     </del>			
4-Chlorotoluene		<0.008 mg/kg	0.008		1	0	0.008	0.012	-	-	0		<0.008								
tert-Butylbenzene	mg/kg	<0.012 mg/kg	0.012		1	0	0.012	0.012	-	-	0		<0.012								
1.2.4-Trimethylbenzene sec-Butylbenzene	mg/kg mg/kg	<0.009 mg/kg <0.01 mg/kg	220 0.01	g	1	0	0.009	0.009	-	-	0	1	<0.009								
4-Isopropyltoluene		<0.01 mg/kg	0.01		1	0	0.011	0.011	-	-	0		<0.011					<del>                                     </del>			
1.3-Dichlorobenzene	mg/kg	<0.006 mg/kg	180	n	1	0	0.006	0.006	-	-	0		<0.006								
1.4-Dichlorobenzene		<0.005 mg/kg	22000 0.01	n	1	0	0.005	0.005	-	-	0	1	<0.005 <0.01	-				+		1	
n-Butylbenzene 1.2-Dichlorobenzene		<0.01 mg/kg <0.012 mg/kg	12000	n	1	0	0.01 0.012	0.01 0.012	-	-	0		<0.01					<del>                                     </del>		1	
1.2-Dibromo-3-chloropropane	mg/kg	<0.014 mg/kg	0.014		1	0	0.014	0.014	-	-	0		<0.014								
Tert-amyl methyl ether		<0.015 mg/kg	0.015		1	0	0.015	0.015	-	-	0	1	<0.015	_						1	
1.2.4-Trichlorobenzene  Hexachlorobutadiene		<0.006 mg/kg <0.012 mg/kg	1300 120	n n	1	0	0.006 0.012	0.006 0.012	-	-	0	1	<0.006					+ + + + + + + + + + + + + + + + + + + +			
Naphthalene	mg/kg	<0.013 mg/kg	0.013		1	0	0.013	0.013	-	-	0		<0.013								
1.2.3-Trichlorobenzene	mg/kg	<0.006 mg/kg	620	n	1	0	0.006	0.006	-	-	0	1	<0.006							1	

Site:	DSDC Bicester Site C	Project No:	26999
Data Description:	Zone 3 - C33 FFO Tank Area	SOM (%):	1.0%
Land Use:	Commercial	Completed By:	RIDEJ
Recentor:	Human Health	Checked By:	פ וססת

Assessment Criteria Key
a) 2009 SGV (Res with Plant)
b) 2009 SGV (Allotment) c) 2009 SGV (Commercial/Industrial) d) EIC GAC (Res with Plant)

e) EIC GAC (Res without Plant) i) Entec GAC (Res without Plant) f) EIC GAC (Allotment) j) Entec GAC (Allotment) g) EIC GAC (Commercial/Ind) h) Entec GAC (Res with Plant)

m) LQM CIEH GAC (Res without Plant) q) Soil Code: Crops for Consumption u) BRE Special Digest n) LQM CIEH GAC (Commercial/Ind) r) Soil Code: Sensitive Species k) Entec GAC (Commercial/Ind) o) Dutch Intervention values
l) LQM CIEH GAC (Res with Plant) p) Dutch Target Values o) Dutch Intervention values

s) Soil Code: Grazing Animals t) Soil Code: Background

v) Other Generic Criteria w) Site Specific Assessment Criteria
x) Laboratory limit of detection

			Assess-	0-			Sum	nmary Statis	stics			Sample Ide	entifiers a	nd Analytic	al Data								
Contaminant	Units	Method Detection	ment	Source		Results						WSC04	BHC03	BHC03	BHC05	BHC05							
		Limit	Criteria (AC)	(see key)	Total Number of	Above	Minimum	Maximum	Arithmetic	Standard	Number of results	C33 FFO		C33 FFO	C33 FFO	C33 FFO							
			(,,,,,,		Samples			aa.iiiuiii	Mean	Deviation	>AC	2.00-2.20	1.00	2.00	2.00	3.00							
Inorganics					0	0	0	0			0	Nat	Nat	Nat	Nat	Nat							
Soil Organic Matter (SOM)	%	<0.35 %	-		1	1	1.42	1.42	1.42	-	-		1.42										
pH	pH Units	1 pH unit	-		5	5	8.01	8.31	8.132	0.126570139	-	8.1	8.03	8.01	8.21	8.31							
Sulphate, 2:1 water soluble	g/I	<0.003 g/l	0.5		5	5	0.12	0.498	0.2646	0.15490255	0	0.498	0.12	0.148	0.336	0.221							
Ammoniacal Nitrogen, exchangeable as NH4	mg/kg	<15 mg/kg	15		5	1	15	30.6	18.12	- 072204070	1	<15	30.6	<15	<15	<15							
Boron, water soluble Arsenic	mg/kg mg/kg	<1 mg/kg <0.6 mg/kg	190000 640	n c	5	5	1 7.39	1.96 59.2	1.572 27.578	0.373991979 21.19098676		<1 59.2	1.8	1.67 38.9	1.43	1.96 7.39							
Chromium, Hexavalent	mg/kg	<0.6 mg/kg	35	n	5	0	0.6	0.6	-	-	0	<0.6	<0.6	<0.6	<0.6	<0.6							
Cadmium	mg/kg	<0.02 mg/kg	230	С	5	2	0.02	1.19	0.29784	0.504197707	0	1.19	<0.02	<0.2	<0.02	0.0592							
Chromium	mg/kg	<0.9 mg/kg	30000	n	5	5	27.6	50.3	36.32	11.20299067		28	46.7	29	27.6	50.3							
Copper Lead	mg/kg	<1.4 mg/kg		n	5	5	16.5	56.3	27.46	16.45989064	0	56.3	17.5 36.7	22.7	16.5	24.3							
Mercury	mg/kg mg/kg	<0.7 mg/kg <0.14 mg/kg	750 0.14	У	5	0	12.3 0.14	42.5 1.4	24.62	13.9417359	1	42.5 <1.4	<0.14	12.3 <0.14	17.3 <0.14	14.3 <0.14							
Nickel	mg/kg	<0.2 mg/kg	1800	С	5	5	29.5	83.6	50.72	20.49163244	0	83.6	38.8	49.1	29.5	52.6							
Selenium	mg/kg	<1 mg/kg	13000	С	5	1	1	10	4.646	-	0	<10	<1	<10	<1	1.23							
Zinc	mg/kg	<1.9 mg/kg	670000	n	5	5	66.7	324	156.54	103.5459222		324	104	101	66.7	187							
Asbestos Containing Material Screen Asbestos, Chrysotile (white)					0	0	0	0	-	-	0				+				+				
Associates, Omysotile (write)					U	U	U	J	-	-	U				+				+				
TPH 6 Split					0	0	0	0	-	-	0												
TPH >C6-C8	mg/kg	<10 mg/kg			2	1	10	108	59	-	0	<10		108									
TPH >C8-C10	mg/kg	<10 mg/kg			2	1	10	37.7	23.85	-	0	<10		37.7	1								
TPH >C10-C12 TPH >C12-C16	mg/kg	<10 mg/kg	10000 36000		2	0	10	10 10	-	-	0	<10 <10		<10 <10	1				+				
TPH >C12-C16 TPH >C16-C21	mg/kg mg/kg	<10 mg/kg <10 mg/kg			2	0	10	10	-	-	0	<10		<10									
TPH >C21-C40	mg/kg	<10 mg/kg			2	2	72.4	75.8	74.1	2.404163056		75.8		72.4									
TPH >C6-C40		<10 mg/kg			2	2	79.7	226	152.85	103.4497221	0	79.7		226									
_																							
Organics Acenaphthene-d10 % recovery**	%				0	0	0	0	-	-	0												
Naphthalene-d8 % recovery**	%	%	_		2	2	112	112	112	0	-		112		112								
Acenaphthene-d10 % recovery**	%	%	-		2	2	110	111	110.5	0.707106781	-		111		110								
Phenanthrene-d10 % recovery**	%	%	-		2	2	109	110	109.5	0.707106781	-		110		109								
Chrysene-d12 % recovery**	%	%	-		2	2	96.2	97.4	96.8	0.848528137	-		97.4		96.2								
Perylene-d12 % recovery** Naphthalene	% mg/kg	% <0.009 mg/kg	- g 1100	n	2	1	107 0.009	110 0.0244	108.5 0.0167	2.121320344	- 0		110 0.0244		107 <0.009								
Acenaphthylene	mg/kg	<0.012 mg/kg	g 100000	n	2	0	0.012	0.012	-	-	0		<0.012		<0.012								
Acenaphthene	mg/kg	<0.008 mg/kg	1	n	2	0	0.008	0.008	-	-	0		<0.008		<0.008								
Fluorene	mg/kg	<0.01 mg/kg	47000	n	2	0	0.01	0.01	-	-	0		<0.01		<0.01								
Phenanthrene	mg/kg	<0.015 mg/kg		n	2	0	0.015	0.015	-	-	0		<0.015		<0.015								
Anthracene Fluoranthene	mg/kg mg/kg	<0.016 mg/kg		n n	2	0	0.016 0.017	0.016 0.017	-	-	0		<0.016		<0.016 <0.017								
Pyrene	mg/kg	<0.017 mg/kg	1	n	2	0	0.017	0.017	-	-	0		<0.017		<0.017								
Benz(a)anthracene	mg/kg	<0.014 mg/kg	g 97	n	2	0	0.014	0.014	-	-	0		<0.014		<0.014								
Chrysene	mg/kg	<0.01 mg/kg	1	n	2	0	0.01	0.01	-	-	0		<0.01		<0.01								
Benzo(b)fluoranthene Benzo(k)fluoranthene	mg/kg	<0.015 mg/kg	g 100 g 140	n n	2	0	0.015 0.014	0.015 0.014	-	-	0		<0.015 <0.014		<0.015 <0.014				+				
Benzo(k)nuorantnene Benzo(a)pyrene	mg/kg mg/kg	<0.014 mg/kg	g 140 g 14	n n	2	0	0.014	0.014	-	-	0		<0.014		<0.014				+				
Indeno(1,2,3-cd)pyrene	mg/kg	<0.018 mg/kg		n	2	0	0.018	0.018	-	-	0		<0.018		<0.018								
Dibenzo(a,h)anthracene	mg/kg	<0.023 mg/kg	g 13	n	2	0	0.023	0.023	÷	-	0		<0.023		<0.023								
Benzo(g,h,i)perylene	mg/kg	<0.024 mg/kg	g 660	n	2	0	0.024	0.024	-	-	0		<0.024		<0.024								
Polyaromatic hydrocarbons, Total USEPA 16	mg/kg	<0.118 mg/kg	g 0.118		2	0	0.118	0.118	-	-	0		<0.118		<0.118								
TPHCWG					0	0	0	0	-	-	0				<u> </u>								<del>-  </del>
Aliphatics >C5-C6	mg/kg	<0.01 mg/kg	13000	n	2	1	0.01		0.02175	-	0		0.0335		<0.01								
Aliphatics >C6-C8	mg/kg	<0.01 mg/kg	42000	n	2	1	0.01	4.02	2.015	-	0		4.02		<0.01								
Aliphatics >C8-C10		<0.01 mg/kg		n	2	1	0.01	4.76	2.385	-	0		4.76		<0.01				-				
Aliphatics >C10-C12 Total Aliphatics >C5-C12		<0.01 mg/kg		n	2	1	0.01	1.74	0.875 5.305	-	1		1.74		<0.01 <0.01								<del>                                     </del>
Aromatics >C6-C7		<0.01 mg/kg		n	2	0	0.01	0.01	-	-	0		<0.01		<0.01								
Aromatics >C7-C8	mg/kg	<0.01 mg/kg	190000		2	0	0.01	0.01	-	-	0		<0.01		<0.01								
Aromatics >EC8-EC10	mg/kg	<0.01 mg/kg	18000	n	2	1	0.01	7.13	3.57	-	0		7.13		<0.01								
Aromatics >EC10-EC12		<0.01 mg/kg		n	2	1	0.01	2.61	1.31	-	0		2.61		<0.01								
Total Aromatics >C6-C12 GRO Surrogate % recovery**	mg/kg %	<0.01 mg/kg	0.01		2	2	0.01 118	9.74 148	4.875 133	21.21320344	1 -		9.74 148		<0.01 118				+				
Benzene		<0.01 mg/kg		С	2	0	0.01	0.01	133	21.21320344	0		<0.01		<0.01				+				
		g/Ng	,, 50		-										.5.01	1	1 1	1		1		1 1	 

			Assess-				Sum	mary Stati	istics			Sample Ide	ntifiers a	nd Analytic	cal Data									
Contaminant	Units	Method Detection Limit	ment Criteria (AC)	Source (see key)	Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean		Number of results >AC		BHC03 C33 FFO 1.00 Nat			BHC05 C33 FFO 3.00 Nat								
Toluene		<0.002 mg/kg	4400	С	2	0	0.002	0.002	-	-	0		<0.002		<0.002									
Ethylbenzene m,p-Xylene	mg/kg mg/kg	<0.003 mg/kg <0.06 mg/kg	2800 2600	С	2	0	0.003	0.003	-	-	0		<0.003		<0.003 <0.006									
o-Xylene	mg/kg	<0.003 mg/kg	2600	С	2	0	0.003	0.003	-	-	0		<0.003		<0.003									
m,p,o-Xylene BTEX, Total	mg/kg mg/kg	<0.01 mg/kg <0.01 mg/kg	2600 0.01	С	2	0	0.01	0.01	-	-	0		<0.01		<0.01 <0.01									
Methyl tertiary butyl ether (MTBE)	mg/kg	<0.005 mg/kg	24000	g	2	0	0.005	0.005	-	-	0		<0.005		<0.005									
GRO >C5-C12 Aliphatics >C12-C16		<0.044 mg/kg <0.1 mg/kg	0.044 91000	n	2	1 2	0.044	20.3 8.39	10.172 4.5555	5.422801905	1		20.3 8.39		<0.044 0.721									
Aliphatics >C16-C21	mg/kg mg/kg	<0.1 mg/kg	180000	"	2	2	0.959	5.25	3.1045	3.034195198	0		5.25		0.959									
Aliphatics >C16-C35	mg/kg	<0.1 mg/kg	1800000	n	2	2	2.6	17.5	10.05	10.53589104	0		17.5		2.6									
Aliphatics >C21-C35 Aliphatics >C35-C44	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	180000 1800000	n	2	2	1.64 0.1	12.3 3.11	6.97 1.605	7.537758287	0		12.3 3.11		1.64									
Total Aliphatics >C12-C44	mg/kg	<0.1 mg/kg	-		2	2	3.32	29	16.16	18.15850214	-		29		3.32									
Aromatics >EC12-EC16	mg/kg	<0.1 mg/kg	37800	n	2	2	0.389	0.914		0.37123106	0		0.389		0.914									
Aromatics >EC16-EC21 Aromatics >EC21-EC35	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	28000 28000	n n	2	2	1.09 5.16	3.25 16.7	2.17 10.93	1.527350647 8.160012255	0		3.25 16.7		1.09 5.16									
Aromatics >EC35-EC44	mg/kg	<0.1 mg/kg	28000	n	2	2	0.895	6.45	3.6725	3.927978169	0		6.45		0.895									
Aromatics >EC40-EC44 Total Aromatics >EC12-EC44	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	28000	n	2	2	0.333 8.06	2.15 26.8	1.2415 17.43	1.284813021 13.25118108	0		2.15 26.8		0.333 8.06			1	+					-
Total Aliphatics >C5-C44	mg/kg	<0.1 mg/kg	-		2	2	3.32	39.6	21.46	25.65383402			39.6		3.32									
Total Aromatics >C6-C44	mg/kg	<0.1 mg/kg	-		2	2	8.06	36.6		20.18082754	-		36.6		8.06									
Total Aliphatics & Aromatics >C5-C44  Total Aliphatics >C5-35	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	-		2	2	11.4 3.32	76.1 36.5	43.75 19.91	45.74980874 23.461803	-		76.1 36.5		11.4 3.32									
Total Aromatics >C5-35	mg/kg	<0.1 mg/kg	-		2	2	7.17	30.1	18.635	16.21395849	-		30.1		7.17									
Total Aliphatics & Aromatics >C5-35	mg/kg	<0.1 mg/kg	-		2	2	10.5	66.6	38.55	39.66869042			66.6		10.5									
Other Organics					0	0	0	0	-	-	0													
PCBs (vs Aroclor 1254)		<0.035 mg/kg			2	0	0.035	0.035	-	-	0		<0.035		<0.035									
Phenol Pentachlorophenol	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	3200 1400	c n	2	0	0.1	0.1	-	-	0		<0.1		<0.1 <0.1									
n-Nitroso-n-dipropylamine	mg/kg	<0.1 mg/kg	0.1		2	0	0.1	0.1	-	-	0		<0.1		<0.1									
Nitrobenzene	mg/kg	<0.1 mg/kg	0.1		2	0	0.1	0.1	-	-	0		<0.1		<0.1									
Isophorone Hexachloroethane	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	0.1 120	g	2	0	0.1	0.1	-	-	0		<0.1		<0.1 <0.1									
Hexachlorocyclopentadiene	mg/kg	<0.1 mg/kg	0.1		2	0	0.1	0.1	-	-	0		<0.1		<0.1									
Hexachlorobutadiene Hexachlorobenzene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	120 55	n n	2	0	0.1	0.1	-	-	0		<0.1		<0.1 <0.1		+							
n-Dioctyl phthalate	mg/kg	<0.1 mg/kg	89000	g	2	0	0.1	0.1	-	-	0		<0.1		<0.1									
Dimethyl phthalate	mg/kg	<0.1 mg/kg	0.1		2	0	0.1	0.1	-	-	0		<0.1		<0.1									
Diethyl phthalate n-Dibutyl phthalate	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	290000 15000	g	2	0	0.1	0.1	-	-	0		<0.1		<0.1 <0.1									
Dibenzofuran	mg/kg	<0.1 mg/kg	0.1	J	2	0	0.1	0.1	-	-	0		<0.1		<0.1									
Carbazole Butylbenzyl phthalate	mg/kg	<0.1 mg/kg <0.1 mg/kg	0.1 950000	0	2	0	0.1	0.1	-	-	0		<0.1 <0.1		<0.1 <0.1		+							
bis(2-Ethylhexyl) phthalate	mg/kg mg/kg	<0.1 mg/kg	86000	g	2	0	0.1	0.1	-	-	0		<0.1		<0.1									
bis(2-Chloroethoxy)methane	mg/kg	<0.1 mg/kg	0.1		2	0	0.1	0.1	-	-	0		<0.1		<0.1									
bis(2-Chloroethyl)ether Azobenzene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	0.1		2	0	0.1	0.1	-	-	0		<0.1 <0.1		<0.1 <0.1									
4-Nitrophenol	mg/kg	<0.1 mg/kg	0.1		2	0	0.1	0.1	-	-	0		<0.1		<0.1									
4-Nitroaniline 4-Methylphenol	mg/kg	<0.1 mg/kg		_	2	0	0.1	0.1	-	-	0		<0.1		<0.1									
4-Metnylphenol  4-Chlorophenylphenylether	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	180000 0.1	g	2	0	0.1	0.1	-	-	0		<0.1		<0.1 <0.1									
4-Chloroaniline	mg/kg	<0.1 mg/kg			2	0	0.1	0.1	-	-	0		<0.1		<0.1									
4-Chloro-3-methylphenol 4-Bromophenylphenylether	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	4200 0.1	n	2	0	0.1	0.1	-	-	0		<0.1		<0.1 <0.1									
3-Nitroaniline	mg/kg	<0.1 mg/kg	0.1		2	0	0.1	0.1	-	-	0		<0.1		<0.1									
2-Nitrophenol	mg/kg	<0.1 mg/kg	0.1		2	0	0.1	0.1	-	-	0		<0.1		<0.1									
2-Nitroaniline 2-Methylphenol	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	0.1 180000	q	2	0	0.1	0.1	-	-	0		<0.1		<0.1 <0.1			1	+			+		
1,2,4-Trichlorobenzene	mg/kg	<0.1 mg/kg	0.1	9	2	0	0.1	0.1	-	-	0		<0.1		<0.1									
2-Chlorophenol 2,6-Dinitrotoluene	mg/kg	<0.1 mg/kg	4200 1900	n	2	0	0.1	0.1	-	-	0		<0.1 <0.1		<0.1 <0.1									
2,4-Dinitrotoluene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	3800	g g	2	0	0.1	0.1	-	-	0		<0.1		<0.1	-		1				+		
2,4-Dimethylphenol	mg/kg	<0.1 mg/kg	30000	9	2	0	0.1	0.1	-	-	0		<0.1		<0.1									
2,4-Dichlorophenol 2,4,6-Trichlorophenol	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	4200 4200	n n	2	0	0.1	0.1	-	-	0		<0.1		<0.1 <0.1									
2,4,5-Trichlorophenol	mg/kg	<0.1 mg/kg	4200	n	2	0	0.1	0.1	-	-	0		<0.1		<0.1									
1,4-Dichlorobenzene	mg/kg	<0.1 mg/kg	22000	n	2	0	0.1	0.1	-	-	0		<0.1		<0.1							<b>+ - -</b>		
1,3-Dichlorobenzene	mg/kg	<0.1 mg/kg	180	n	2	0	0.1	0.1	-	-	0		<0.1	1	<0.1									

Part			Bankli - 1	Assess-	P			Summary St	atistics	Sample Identifiers and Analytic	cal Data	
Martin	Contaminant	Units		ment	Source		Results			WSC04 BHC03 BHC03	BHC05 BHC05	
Column				Criteria	(see key	) Number of	Above	mum Maximu	Arithmetic Standard	C33 FFO C33 FFO C33 FFO		
Section   1971   1972   1971				(AC)			Detection	mum waximu		2.00-2.20 1.00 2.00		
Contention												
Separation   199					n							
Transfer 1962 1976 1976 1976 1976 1976 1976 1976 1976												
March   196   1970					n				0			
Market 1 19 1 19 1 19 1 19 1 19 1 19 1 19 1		_							0			
STANDAY AND STANDAY OF THE PROPERTY OF THE PRO	Anthracene		<0.1 mg/kg	540000	n	2	0 0.	.1 0.1	0	<0.1	<0.1	
NAME OF THE PARTY												
STATEMEN   1985   198					+							
Company   Comp												
Create					n				0			
Control   Cont	Chrysene		<0.1 mg/kg	140	n	2	0 0.	.1 0.1	0	<0.1	<0.1	
March   Marc												
Control   Cont												
Section 1969 1979 1979 1979 1979 1979 1979 1979												
NAMES OF STATES												
Section   19					n	2			0			
Table   1	Dibenzo(a,h)anthracene				n	2	0 0.	.1 0.1	0			
Standardening   Standardenin				_								
Secondary												+ + + + + + + + + + + + + + + + + + + +
Company   Comp				-								
Accordance				-	g							
Normalization				7								
Interface   Control   Co		mg/kg	<0.013 mg/k	(g 0.013		2						
Contraction					9							
Some Seate 1 19					-							
Schemen				_								
Mar Party Marketon		_		7								
Section   Sect	Methyl Tertiary Butyl Ether	_	<0.011 mg/k	g 24000	g	2	0 0.0	0.011	0	<0.011	<0.011	
\$1.20 March (Control of Control o				-	g							
SEMPORTOPIC   Confession   Co												
Marchener   Page   301 feet   30   301 feet   30   30   30   30   30   30   30   3		_			g							
Content				7								
1.5 Continuation   mgs   strongly   100   n   7   1   100   100   1   100   100   1   1					n				0			
Controlled   Part   Controlled   Controlle			<0.007 mg/k	g 3100	n	2	0 0.0	0.007	0	<0.007	<0.007	
Section   Processing   Company   C				~								
Second   S				~								
Part				-								
1.505transpare												
Provide providence   May   1967   1967   1968   1968   1969   1				-								
## SA-SARAmener   mg/m   cold regular   dold regula	Dibromomethane	mg/kg	<0.009 mg/k	g 0.009		2	0 0.0		0			
Table   Part				7	g							
The Confidence of the Confiden				-								
13.2 Trientendembers   mg/sq   0.00 mg/sq   0.00   0   2   0   0.00   0.				~	C							
S. Disconsequence   moley   action region   action region   action region   moley   action region   action r					g							
Descriptions   Profit	1.3-Dichloropropane				Ů	2	0 0.0	0.007	0	<0.007	<0.007	
1.2 Discreptionseles   mg/lg   0.017 mg/lg		mg/kg	<0.005 mg/k	(g 660	n							
Condensions   mg/g   0.006 mg/g   500 mg/g												
15.13 Teachiorestrate mg/sg of					n							+ + + + + + + + + + + + + + + + + + + +
Enytherane motion motio												
Section   Sect												
Syrene   mg/kg   0.01 mg/kg   1000   g   2   0   0.01   0.01     0   0.01   0.					n							
Bondorform												
Inspire polymerate   mg/kg   0.005 mg/kg   7700   g   2   1   0.005   0.0276   0.0183   - 0 0   0.0076   0.0076   0.0015   0.0017   0.017   1.2.2-Tera/hotropropane   mg/kg   0.0017 mg/kg   0.014   2   0   0.017   0.017   - 0   2   0.017												
11.2.2-Trichothorehane mg/kg 4.001 mg/kg 1200 n 2 0 0.01 0.01 0.01 0.01 0.01 4.001 4		_		_								
12.3-Trichloropropane mg/kg				7								
Brombenzene   mg/kg   c0.01 mg/kg   c0.00												
2-Chlorotoluene mg/kg	Bromobenzene	mg/kg	<0.01 mg/kg	g 0.017	g				-			
1.3.5-Trimethybenzene mg/kg <0.008 mg/kg 0.008					g							
4-Chlorotoluene mg/kg <0.012 mg/kg 0.012 mg/kg 0.012												
tert-Butylbenzene       mg/kg       <0.012 mg/kg       0.012 mg/kg       0.012 mg/kg       0.012 mg/kg       0.009 mg/kg       220 g       2       1       0.009 mg/kg       0.0012 mg/kg       0.009 mg/kg       220 g       2       1       0.00745 mg/kg       0.0117 mg/kg       0.01 mg/kg				-								
1.2.4-Trimethylbenzene mg/kg <0.009 mg/kg <0.009 mg/kg <0.009 mg/kg <0.01 mg/kg <0.01 mg/kg <0.011 mg/kg <0.001 mg/kg <0.005 mg/kg <0.001 mg/kg <0.011 mg/kg <0.011 mg/kg <0.011 mg/kg <0.001 mg/kg <0.005 mg/kg <0.011 mg/kg <0.0												
4-Isopropyltoluene mg/kg <0.011 mg/kg 0.011 2 0 0.011 0.011 0 <0.011 <0.011 <0.011 <0.011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011 <0.0011		mg/kg	<0.009 mg/k	(g 220	g							
1.3-Dichlorobenzene mg/kg <0.006 mg/kg 32 n 2 0 0.006 0.006 0 0 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.006 <0.0												
1.4-Dichlorobenzene mg/kg <0.005 mg/kg 4500 n 2 0 0.005 0.005 0 0 <0.005 <0.005 <0.005				-								
n-Butylbenzene mg/kg <0.01 mg/kg 0.01 2 1 0.01 0.0347 0.02235 - 1 0.0347 <0.01												
1.2-Dichlorobenzene mg/kg <0.012 mg/kg 2100 n 2 0 0.012 0.012 0 <0.012 <0.012					n							
1.2-Dibromo-3-chloropropane mg/kg <0.014 mg/kg 0.014 2 0 0.014 0.014 0 <0.014 <0.014 <0.014 <0.014 <0.014 <0.015 mg/kg <0.015 mg/kg <0.015 2 0 0.015 0.015 0 <0.015 <0.015 <0.015 <0.015 <0.015 <0.015					n							
Tert-amyl methyl ether mg/kg <0.015 mg/kg <0.015 2 0 0.015 0.015 0 <0.015 <0.015 <0.015		mg/kg	<0.014 mg/k	(g 0.014								
		mg/kg				2						
1.2.4-Trichlorobenzene mg/kg <0.006 mg/kg 1300 n 2 0 0.006 0.006 0 <0.006 <0.006				-								
Hexachlorobutadiene mg/kg <0.012 mg/kg 120 n 2 0 0.012 0.012 0 <0.012 <0.012 \ Nachthalene mg/kg <0.013 mg/kg 1100 n 2 0 0.013 0.013 0 <0.013 <0.013 <0.013												
Naphthalene         mg/kg         <0.013 mg/kg         1100         n         2         0         0.013         -         -         0         <0.013         <0.013           1,2,3-Trichlorobenzene         mg/kg         <0.006 mg/kg					<del>-                                    </del>							+ + + + + + + + + + + + + + + + + + + +

Site:	DSDC Bicester Site C	Project No:	26999
Data Description:	Zone 4 - C33 Landfill Area	SOM (%):	1.0%
Land Use:	Commercial	Completed By:	RIDEJ
Pecentor:	Human Health	Checked By:	פ וססח

Assessment Criteria Key a) 2009 SGV (Res with Plant) b) 2009 SGV (Allotment) e) EIC GAC (Res without Plant) f) EIC GAC (Allotment) g) EIC GAC (Commercial/Ind) h) Entec GAC (Res with Plant) c) 2009 SGV (Commercial/Industrial) d) EIC GAC (Res with Plant)

i) Entec GAC (Res without Plant) j) Entec GAC (Allotment) n) LQM CIEH GAC (Comme k) Entec GAC (Commercial/Ind) o) Dutch Intervention values l) LQM CIEH GAC (Res with Plant) p) Dutch Target Values

m) LQM CIEH GAC (Res without Plant) q) Soil Code: Crops for Consumption u) BRE Special Digest n) LQM CIEH GAC (Commercial/Ind) r) Soil Code: Sensitive Species v) Other Generic Criteria o) Dutch Intervention values

s) Soil Code: Grazing Animals t) Soil Code: Background

y) CLR SGV for Lead (2002) v) Other Generic Criteria

•	
v) Site Specific Assessment Criteria	
\ Laboraton limit of datastion	

		Method	Assess-	Source			Sum	nmary Stat	istics		Sample lo	dentifiers	and Analy	ical Data								
Contaminant	Units	Detection	ment			Results					TPC07	TPC09	TPC1									
		Limit	Criteria (AC)	(see key)	Total Number of	Above	Minimum	Maximum	Arithmetic Sta	ndard of results	C33 Land	C33 Lan	nd C33 La	d								
			(AC)		Samples	Detection	William	WIGAIIIIUIII	Mean De	viation of results	0.3	0.2	0.1									
						Limit					MG	MG	MG									
Inorganics					0	0	0	0	-	- 0												
Soil Organic Matter (SOM)	%	<0.35 %	-		0	0	0	0	-	-												
рН	pH Units	1 pH unit	-		3	3	7.87	8.29	8.043333333 0.21	9393102 -	7.97	7.87	8.29									
Sulphate, 2:1 water soluble	g/I	<0.003 g/l	0.5	u	3	3	0.157	0.386	0.235 0.13	0793731 0	0.386	0.157	0.162									
Ammoniacal Nitrogen, exchangeable as NH4	mg/kg	<15 mg/kg	15		3	1	15	105	45	- 1	105	<15	<15									
Boron, water soluble	mg/kg	<1 mg/kg	190000	n	3	3	1.29	4.62	3.213333333 1.72	4074631 0	4.62	3.73	1.29									
Arsenic	mg/kg	<0.6 mg/kg	640	С	3	3	7.07	77.4	32.35666667 39.1	0654208 0	12.6	77.4	7.07									
Chromium, Hexavalent	mg/kg	<0.6 mg/kg	35	n	3	1	0.6	2.44	1.413333333	- 0	<0.6	2.44	<1.2									
Cadmium	mg/kg	<0.02 mg/kg	230	С	3	3	0.32	24.2	10.08 12.5	2281119 0	5.72	24.2	0.32									
Chromium	mg/kg	<0.9 mg/kg	30000	n	3	3	18.9	324	134.3666667 165	.520462 0	60.2	324	18.9									
Copper	mg/kg	<1.4 mg/kg	72000	n	3	3	405	7070	2658 3821	.193138 0	499	7070	405									
Lead	mg/kg	<0.7 mg/kg	750	у	3	3	105	4080	1574.333333 2180	).744445 1	538	4080	105									
Mercury	mg/kg	<0.14 mg/kg	0.14		3	0	0.14	1.4	-	- 1	<0.14	<1.4	<0.14									
Nickel	mg/kg	<0.2 mg/kg	1800	С	3	3	15.5	200	89.6 97.4	5937615 0	53.3	200	15.5									
Selenium	mg/kg	<1 mg/kg	13000	С	3	1	1	10	4.143333333	- 0	1.43	<10	<1									
Zinc	mg/kg	<1.9 mg/kg	670000	n	3	3	219	4600	1791 2438	3.425106 0	554	4600	219									
Asbestos Containing Material Screen					0	0	#VALUE!	#VALUE!	-	- 0	o ACM Detec	cto ACM Det	tecto ACM D	ected								
Asbestos, Chrysotile (white)					0	0	0	0	-	- 0												
TPH 6 Split					0	0	0	0	-	- 0												
TPH >C6-C8	mg/kg	<10 mg/kg	8300		2	0	10	50	-	- 0	<50	<10										
TPH >C8-C10	mg/kg	<10 mg/kg	2100		2	0	10	50	-	- 0	<50	<10										
TPH >C10-C12	mg/kg	<10 mg/kg	10000		2	1	10	76.1	43.05	- 0	76.1	<10										
TPH >C12-C16	mg/kg	<10 mg/kg	36000		2	1	10	417	213.5	- 0	417	<10										
TPH >C16-C21	mg/kg	<10 mg/kg	28000		2	2	110	1080	595 685.	8935778 0	1080	110				-						
FPH >C21-C40	mg/kg	<10 mg/kg	28000		2	2	2420	13600	8010 7905	5.453814 0	13600	2420										
TPH >C6-C40	mg/kg	<10 mg/kg	28000		2	2	2540	15200	8870 895	1.97185 0	15200	2540										

Site:	DSDC Bicester Site C	Project No:	26999
Data Description:	Zone 4 - C33 Landfill Area	SOM (%):	3.0%
Land Use:	Commercial	Completed By:	RIDEJ
Pagantar:	Human Haalth	Chaokad By	2 1000

Assessment Criteria Key a) 2009 SGV (Res with Plant) b) 2009 SGV (Allotment) c) 2009 SGV (Commercial/Industrial) d) EIC GAC (Res with Plant)

e) EIC GAC (Res without Plant) i) Entec GAC (Res without Plant) f) EIC GAC (Allotment) j) Entec GAC (Allotment) g) EIC GAC (Commercial/Ind) h) Entec GAC (Res with Plant) k) Entec GAC (Commercial/Ind) I) LQM CIEH GAC (Res with Plant) p) Dutch Target Values

m) LQM CIEH GAC (Res without Plant) q) Soil Code: Crops for Consumption u) BRE Special Digest n) LQM CIEH GAC (Commercial/Ind) r) Soil Code: Sensitive Species o) Dutch Intervention values

s) Soil Code: Grazing Animals t) Soil Code: Background

v) Other Generic Criteria w) Site Specific Assessment Criteria
x) Laboratory limit of detection

		Method	Assess-	Source			Sum	nmary Sta	istics			Sample Iden	itifiers an	d Analytic	al Data				
Contaminant	Units	Detection	ment	Jource		Results						TPC08	TPC08	TPC10					
		Limit	Criteria (AC)	(see key)	Total Number of	Above	Minimum	Maximum	Arithmetic	Standard	Number of results	C33 LandfillC							
			(****)		Samples				Mean	Deviation	>AC	0.6	1.6	1.6					
Ingraphice					0	0	0	0		_	0	Nat	Nat	Nat					
Inorganics Soil Organic Matter (SOM)	%	<0.35 %	_		2	2	1.52	4.74	3.13	2.276883835		4.74		1.52					
pH	pH Units		-		3	3	8.27	8.51		0.120554275		8.51	8.27	8.41					
Sulphate, 2:1 water soluble	g/I	<0.003 g/l	0.5	u	3	3	0.0732	0.109	0.092333333	0.018027017	0	0.109	0.0948	0.0732					
Ammoniacal Nitrogen, exchangeable as NH4	mg/kg	<15 mg/kg			3	1	15	22.4	17.46666667	-	1	22.4	<15	<15					
Boron, water soluble Arsenic	mg/kg	<1 mg/kg <0.6 mg/kg	190000 640	n c	3	3	1 13.1	2.63 52.4	1.543333333	19.65019084	0	2.63	<1 52.4	<1 32.9					
Chromium, Hexavalent	mg/kg mg/kg	<0.6 mg/kg	35	n	3	1	0.6	1.02	0.74	19.65019084	0	1.02	<0.6	<0.6					
Cadmium	mg/kg	<0.02 mg/kg		С	3	1	0.02	1.29	0.503333333	-	0	1.29	<0.2	<0.02					
Chromium	mg/kg	<0.9 mg/kg	30000	n	3	3	12.6	40.8	28	14.2786554	0	30.6	12.6	40.8					
Copper	mg/kg	<1.4 mg/kg		n	3	3	40.8	153	84.36666667			153	40.8	59.3					
Lead	mg/kg	<0.7 mg/kg	750	У	3	3	37.6	119		45.11156541		119	37.6	44.6					
Mercury Nickel	mg/kg mg/kg	<0.14 mg/kg		С	3	3	0.14 28.2	1.4 52.2	39.03333333	12 1680/056	0	<0.14 28.2	<1.4 52.2	<0.14 36.7					
Selenium	mg/kg	<1 mg/kg	13000	С	3	0	1	10	-	-	0	<1	<10	<1					
Zinc		<1.9 mg/kg		n	3	3	109	332		123.8803186		332	127	109					
Asbestos Containing Material Screen					0	0	0	0	-	-	0								
Asbestos, Chrysotile (white)					0	0	0	0	-	-	0								<u> </u>
TDLI 6 Soliit					_	0	0	0	1		0								
TPH 6 Split TPH >C6-C8	mg/kg	<10 mg/kg	22000		0	0	10	10	-	-	0	<10							
TPH >C8-C10	mg/kg	<10 mg/kg			1	1	285	285	285	-	0	285							
TPH >C10-C12	mg/kg	<10 mg/kg			1	1	279	279	279	-	0	279							
TPH >C12-C16	mg/kg	<10 mg/kg			1	1	104	104	104	-	0	104							
TPH >C16-C21	mg/kg	<10 mg/kg			1	1	386	386	386	-	0	386							
TPH >C21-C40 TPH >C6-C40	mg/kg	<10 mg/kg			1	1	1640 2690	1640 2690	1640 2690	-	0	1640 2690							
1111200 040	mg/kg	< To mg/kg	20000		'		2000	2000	2030		0	2000							
Organics					0	0	0	0	-	-	0								
Acenaphthene-d10 % recovery**	%				0	0	0	0	-	-	0								
Naphthalene-d8 % recovery**	%	%	-		1	1	108	108	108	-	-			108					
Acenaphthene-d10 % recovery** Phenanthrene-d10 % recovery**	%	%	-		1	1	109 110	109 110	109 110	-	-			109 110					
Chrysene-d12 % recovery**	%	%	-		1	1	104	104	104	-	-			104					
Perylene-d12 % recovery**	%	%	-		1	1	117	117	117	-	-			117					
Naphthalene	mg/kg	<0.009 mg/k		k	1	1	0.232	0.232	0.232	-	0			0.232					+
Acenaphthylene	mg/kg	<0.012 mg/k		k	1	0	0.012	0.012	- 0.0405	-	0			<0.012 0.0495					
Acenaphthene Fluorene	mg/kg mg/kg	<0.008 mg/k <0.01 mg/kg		k k	1	1	0.0495	0.0495 0.0956	0.0495 0.0956	-	0			0.0495					
Phenanthrene	mg/kg	<0.015 mg/k		k	1	1	0.345	0.345	0.345	-	0			0.345					
Anthracene	mg/kg	<0.016 mg/k	g 540000	k	1	1	0.0698	0.0698	0.0698	-	0			0.0698					
Fluoranthene	mg/kg	<0.017 mg/k	7	k	1	1	0.302	0.302	0.302	-	0			0.302					
Pyrene	mg/kg	<0.015 mg/k		k	1	1	0.236	0.236	0.236	-	0	+ +		0.236					
Benz(a)anthracene Chrysene	mg/kg mg/kg	<0.014 mg/k <0.01 mg/kg	7	k k	1	1	0.132 0.137	0.132 0.137	0.132 0.137	-	0			0.132 0.137					
Benzo(b)fluoranthene	mg/kg	<0.015 mg/k	g 100	k	1	1	0.137	0.137	0.137	-	0			0.137					
Benzo(k)fluoranthene	mg/kg	<0.014 mg/k	7	k	1	1	0.0578	0.0578	0.0578	-	0			0.0578					
Benzo(a)pyrene	mg/kg	<0.015 mg/k	g 14	k	1	1	0.112	0.112	0.112	-	0			0.112					
Indeno(1,2,3-cd)pyrene Dibenzo(a,h)anthracene	mg/kg	<0.018 mg/k	-	k	1	0	0.054	0.054	0.054	-	0			0.054 <0.023					
Benzo(g,h,i)perylene		<0.023 mg/k <0.024 mg/k		k k	1	1	0.023	0.023	0.067	-	0	+		0.023					
Polyaromatic hydrocarbons, Total USEPA 16	mg/kg	<0.118 mg/k	g 0.118		1	1	2.01		2.01	-	1			2.01					
TPHCWG					0	0	0	0	-	-	0								+ -
Aliphatics > C5-C6		<0.01 mg/kg		k	1	1	0.0121	0.0121	0.0121	-	0			0.0121					
Aliphatics >C6-C8 Aliphatics >C8-C10		<0.01 mg/kg		k k	1	1	0.621 2.19	0.621 2.19	0.621 2.19	-	0			0.621 2.19					
Aliphatics >C10-C12		<0.01 mg/kg		k	1	1	5.25	5.25	5.25	-	0			5.25					
Total Aliphatics >C5-C12	mg/kg	<0.01 mg/kg	0.01		1	1	8.07	8.07	8.07	-	1			8.07					
Aromatics >C6-C7	mg/kg	<0.01 mg/kg	55000		1	0	0.01	0.01	-	-	0			<0.01					<u> </u>
Aromatics >C7-C8	mg/kg	<0.01 mg/kg	130000		1	0	0.01	0.01		-	0			<0.01					
Aromatics >EC8-EC10 Aromatics >EC10-EC12	mg/kg	<0.01 mg/kg	10000 30000	k k	1	1	3.28 7.87	3.28 7.87	3.28 7.87	-	0	+		3.28 7.87					
Total Aromatics >C6-C12		<0.01 mg/kg		K	1	1	11.2	11.2	11.2	<del></del>	1	+		11.2					
GRO Surrogate % recovery**	% %				1	1	81	81	81	-	-			81					
Benzene	mg/kg	<0.01 mg/kg	57	k	1	0	0.01	0.01	-	-	0			<0.01					

		Method	Assess-	Source			Sun	nmary Statis	tics			Sample Identifiers an	nd Analytica	al Data					
Contaminant	Units	Detection	ment Criteria		Total	Results					Number	TPC08 TPC08							
		Limit	(AC)	(see key)	Number of Samples	Detection	Minimum	Maximum	Arithmetic Mean	Standard Deviation	of results >AC	C33 LandfillC33 Landfil 0.6 1.6	1.6						
Toluene	mg/kg	<0.002 mg/kg	g 2300	k	1	Limit 0	0.002	0.002	-	-	0	Nat Nat	<b>Nat</b> <0.002						
Ethylbenzene	mg/kg	<0.003 mg/kg		k	1	0	0.003	0.003	-	-	0		<0.003						
m,p-Xylene o-Xylene		<0.06 mg/kg <0.003 mg/kg	1300 q 1300	k k	1	0	0.006	0.006	-	-	0		<0.006 <0.003						
m,p,o-Xylene	mg/kg mg/kg	<0.003 mg/kg		k	1	0	0.003	0.003	-	-	0		<0.003						
BTEX, Total	mg/kg	<0.01 mg/kg	0.01		1	0	0.01	0.01	-	-	0		<0.01						
Methyl tertiary butyl ether (MTBE)	mg/kg	<0.005 mg/kg			1	0	0.005	0.005	-	-	0		<0.005						
GRO >C5-C12 Aliphatics >C12-C16	mg/kg mg/kg	<0.044 mg/kg	g 0.044 85000	k	1	1	19.2 84.6	19.2 84.6	19.2 84.6	-	0		19.2 84.6						
Aliphatics >C16-C21	mg/kg	<0.1 mg/kg	1800000		1	1	301	301	301	-	0		301						1
Aliphatics >C16-C35	mg/kg	<0.1 mg/kg	1800000	k	1	1	1010	1010	1010	-	0		1010						
Aliphatics >C21-C35	mg/kg	<0.1 mg/kg <0.1 mg/kg	1800000	k k	1	1	704 158	704 158	704 158	-	0		704 158						
Aliphatics >C35-C44 Total Aliphatics >C12-C44	mg/kg mg/kg	<0.1 mg/kg	-	K	1	1	1250	1250	1250	-	-		1250						
Aromatics >EC12-EC16	mg/kg	<0.1 mg/kg	38000	k	1	1	26.1	26.1	26.1	-	0		26.1						
Aromatics >EC16-EC21	mg/kg	<0.1 mg/kg	28000	k	1	1	66.4	66.4	66.4	-	0		66.4		1				
Aromatics >EC21-EC35 Aromatics >EC35-EC44	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	28000 28000	k k	1	1	269 85	269 85	269 85	-	0		269 85				1		
Aromatics >EC40-EC44	mg/kg	<0.1 mg/kg	0.1		1	1	31.2	31.2	31.2	-	1		31.2						
Total Aromatics >EC12-EC44	mg/kg	<0.1 mg/kg	-		1	1	446	446	446	-	-		446						
Total Aliphatics >C5-C44 Total Aromatics >C6-C44	mg/kg	<0.1 mg/kg	-		1	1	1260 457	1260 457	1260 457	-	-		1260 457						
Total Aliphatics & Aromatics >C5-C44	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg			1	1	1710	1710	457 1710	-	-		1710						
Total Aliphatics >C5-35	mg/kg	<0.1 mg/kg	-		1	1	1100	1100	1100	-	-		1100						
Total Aromatics >C5-35	mg/kg	<0.1 mg/kg	-		1	1	372	372	372	-	-		372						
Total Aliphatics & Aromatics >C5-35	mg/kg	<0.1 mg/kg	-		1	1	1470	1470	1470	-	-		1470						
Other Organics					0	0	0	0	-	-	0								
PCBs (vs Aroclor 1254)		<0.035 mg/kg			0	0	0	0	,	-	0								
Phenol  Pentaghlaranhanal	mg/kg		3200 1300	c k	1	0	0.1 0.589	0.1 0.589	0.589	-	0		<0.1 0.589						
Pentachlorophenol n-Nitroso-n-dipropylamine	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg		K	1	0	0.569	0.569	0.569	-	0		<0.1						
Nitrobenzene	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1						
Isophorone	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1						
Hexachloroethane Hexachlorocyclopentadiene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	62 0.1	k	1	0	0.1	0.1	-	-	0		<0.1						
Hexachlorobutadiene	mg/kg	<0.1 mg/kg	79	k	1	0	0.1	0.1	-	-	0		<0.1						
Hexachlorobenzene	mg/kg	<0.1 mg/kg	54	k	1	0	0.1	0.1		-	0		<0.1						
n-Dioctyl phthalate Dimethyl phthalate	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	89000 0.1	k	1	0	0.1	0.1	-	-	0		<0.1						
Diethyl phthalate	mg/kg	<0.1 mg/kg	230000	k	1	0	0.1	0.1	-	-	0		<0.1						
n-Dibutyl phthalate	mg/kg	<0.1 mg/kg	15000	k	1	1	0.209	0.209	0.209	-	0		0.209						
Dibenzofuran	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1						
Carbazole  Butylbenzyl phthalate	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	0.1 940000	k	1	0	0.1	0.1	-	-	0		<0.1 <0.1						_
bis(2-Ethylhexyl) phthalate	mg/kg	<0.1 mg/kg	86000	k	1	1	0.155	0.155	0.155	-	0		0.155						
bis(2-Chloroethoxy)methane	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1						
bis(2-Chloroethyl)ether Azobenzene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1 <0.1						
4-Nitrophenol	mg/kg	<0.1 mg/kg			1	0	0.1	0.1	-	-	0		<0.1						
4-Nitroaniline	mg/kg	<0.1 mg/kg			1	0	0.1	0.1	-	-	0		<0.1						
4-Methylphenol 4-Chlorophenylphenylether		<0.1 mg/kg <0.1 mg/kg		k	1	0	0.1	0.1	-	-	0		<0.1 <0.1						
4-Chloroaniline		<0.1 mg/kg			1	0	0.1	0.1	-	-	0		<0.1						
4-Chloro-3-methylphenol	mg/kg	<0.1 mg/kg	4000	k	1	0	0.1	0.1	-	-	0		<0.1						
4-Bromophenylphenylether	mg/kg	<0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1						
3-Nitroaniline 2-Nitrophenol	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	0.1		1	0	0.1	0.1	-	-	0		<0.1 <0.1						
2-Nitroaniline	mg/kg	<0.1 mg/kg			1	0	0.1	0.1	-	-	0		<0.1						
2-Methylphenol	mg/kg	<0.1 mg/kg	180000	k	1	0	0.1	0.1	-	-	0		<0.1						
1,2,4-Trichlorobenzene	mg/kg	<0.1 mg/kg <0.1 mg/kg	670 4000	k k	1	0	0.1	0.1	-	-	0		<0.1 <0.1						
2-Chlorophenol 2,6-Dinitrotoluene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg		k	1	0	0.1	0.1	-	-	0		<0.1						
2,4-Dinitrotoluene	mg/kg	<0.1 mg/kg	3800	k	1	0	0.1	0.1	-	-	0		<0.1						
2,4-Dimethylphenol		<0.1 mg/kg	25000	k	1	0	0.1	0.1	-	-	0		<0.1		1				
2,4-Dichlorophenol 2,4,6-Trichlorophenol	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg		k k	1	0	0.1	0.1	-	-	0		<0.1 <0.1						
2,4,5-Trichlorophenol	mg/kg	<0.1 mg/kg		k	1	0	0.1	0.1	-	-	0		<0.1						
1,4-Dichlorobenzene	mg/kg	<0.1 mg/kg	12000	k	1	1	0.813	0.813	0.813	-	0		0.813						
1,3-Dichlorobenzene	mg/kg	<0.1 mg/kg	92	k	1	0	0.1	0.1	-	-	0		<0.1				1		

							Sumi	mary Statisti	ics			Sample Id	entifiers and Analytical Data							
Contaminant	Unito	Method	Assess- ment	Source								TDC00	TPC08 TPC10							
Containinant	Units	Detection Limit	Criteria	(see key)	Total	Results Above			Arithmetic		Number		IIC33 LandfillC33 Landfill							
			(AC)		Number of Samples	Detection	Minimum	Maximum	Mean	Deviation	of results >AC	0.6	1.6 1.6							
1.2 Diablorohonze	m = 0.	-0.4 0	0400	1.	1	Limit 1	0.05	2.05	2.05		0	Nat	Nat Nat							
1,2-Dichlorobenzene 2-Chloronaphthalene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	6100 1100	k k	1	0	3.25 0.1	3.25 0.1	3.25	-	0		3.25 <0.1							
2-Methylnaphthalene	mg/kg	<0.1 mg/kg	0.1		1	1	0.17	0.17	0.17	-	1		0.17							
Acenaphthylene	mg/kg	<0.1 mg/kg	99000	k	1	0	0.1	0.1	-	-	0		<0.1							
Acenaphthene Anthracene		<0.1 mg/kg <0.1 mg/kg	99000 540000	k k	1	0	0.1	0.1	-	-	0		<0.1 <0.1							
Benzo(a)anthracene	mg/kg mg/kg	<0.1 mg/kg	96	k	1	0	0.1	0.1	-	-	0		<0.1							
Benzo(b)fluoranthene	mg/kg	<0.1 mg/kg	100	k	1	0	0.1	0.1	-	-	0		<0.1							
Benzo(k)fluoranthene	mg/kg	<0.1 mg/kg	140	k	1	0	0.1	0.1	-	-	0		<0.1							
Benzo(a)pyrene Benzo(g,h,i)perylene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	14 660	k k	1	0	0.1	0.1	-	-	0		<0.1 <0.1							
Chrysene	mg/kg	<0.1 mg/kg	140	k	1	1	0.141		0.141	-	0		0.141							
Fluoranthene	mg/kg	<0.1 mg/kg	23000	k	1	1	0.253	0.253	0.253	-	0		0.253							
Fluorene		<0.1 mg/kg	69000 61	k k	1	0	0.1	0.1	-	-	0		<0.1							
Indeno(1,2,3-cd)pyrene Phenanthrene	mg/kg mg/kg	<0.1 mg/kg <0.1 mg/kg	22000	k k	1	1	0.1		0.286	-	0		0.286							
Pyrene	mg/kg	<0.1 mg/kg	54000	k	1	1	0.216	0.216	0.216	-	0		0.216							
Naphthalene	mg/kg	<0.1 mg/kg	580	k	1	1	0.144		0.144	-	0		0.144							
Dibenzo(a,h)anthracene Dibromofluoromethane**	mg/kg %	<0.1 mg/kg	13	k	1	1	0.1 92.3	0.1 92.3	92.3	-	-		<0.1 92.3							
Toluene-d8**	%	%	-		1	1	93.7	93.7	93.7				93.7							
4-Bromofluorobenzene**	%	%	-		1	1	143	143	143	-	-		143			-				
Dichlorodifluoromethane Chloromethane		<0.004 mg/kg	0.004 1.2	k	1	0	0.004	0.004	-	-	0		<0.004 <0.007							
Vinyl Chloride		<0.007 mg/kg <0.01 mg/kg	0.088	k	1	0	0.007	0.007	-	-	0		<0.007							
Bromomethane		<0.013 mg/kg	0.013		1	0	0.013	0.013	-	-	0		<0.013							
Chloroethane		<0.014 mg/kg	1400	k	1	0	0.014	0.014	-	-	0		<0.014							
Trichlorofluorormethane 1.1-Dichloroethene		<0.006 mg/kg <0.01 mg/kg	0.006 52	k	1	0	0.006	0.006	-	-	0		<0.006 <0.01				+			
Carbon Disulphide		<0.01 mg/kg <0.007 mg/kg	27	k	1	1	0.0549		0.0549	-	0		0.0549							
Dichloromethane		<0.01 mg/kg	390	k	1	0	0.01	0.01	-	-	0		<0.01							
Methyl Tertiary Butyl Ether		<0.011 mg/kg	14000 46	k	1	0	0.011	0.011	-	-	0		<0.011 <0.011							
trans-1-2-Dichloroethene 1.1-Dichloroethane		<0.011 mg/kg <0.008 mg/kg	510	k k	1	0	0.008	0.008	-	-	0		<0.001							
cis-1-2-Dichloroethene		<0.005 mg/kg	28	k	1	1	0.0723		0.0723	-	0		0.0723							
2.2-Dichloropropane		<0.012 mg/kg	0.012		1	0	0.012	0.012	-	-	0		<0.012							
Bromochloromethane Chloroform		<0.014 mg/kg <0.008 mg/kg	0.014 210	k	1	0	0.014	0.014	-	-	0		<0.014 <0.008							
1.1.1-Trichloroethane		<0.007 mg/kg	1700	k	1	0	0.007	0.007	-	-	0		<0.007							
1.1-Dichloropropene	mg/kg	<0.011 mg/kg	0.011		1	0	0.011	0.011	-	-	0		<0.011							
Carbontetrachloride 1.2-Dichloroethane		<0.014 mg/kg <0.005 mg/kg	0.014 1.1	k	1	0	0.014 0.005	0.014	-	-	0		<0.014 <0.005							
Benzene		<0.005 mg/kg	57	k	1	0	0.005	0.005	-	-	0		<0.005							
Trichloroethene		<0.009 mg/kg	29	k	1	1	2.54	2.54	2.54	-	0		2.54							
1.2-Dichloropropane		<0.012 mg/kg	6.7	k	1	0	0.012	0.012	-	-	0		<0.012							
Dibromomethane  Bromodichloromethane		<0.009 mg/kg	0.009 4.3	k	1	0	0.009	0.009	-	-	0		<0.009 <0.007							
cis-1-3-Dichloropropene		<0.014 mg/kg	0.014		1	0	0.014	0.014	-	-	0		<0.014							
Toluene	mg/kg	<0.005 mg/kg	2300	k	1	0	0.005	0.005	-	-	0		<0.005							
trans-1-3-Dichloropropene 1.1.2-Trichloroethane		<0.014 mg/kg <0.01 mg/kg	0.014 220	k	1	0	0.014	0.014	-	-	0		<0.014							
1.3-Dichloropropane		<0.007 mg/kg		K	1	0	0.007	0.007	-	-	0		<0.007							
Tetrachloroethene		<0.005 mg/kg	340	k	1	1	0.159		0.159	-	0		0.159							
Dibromochloromethane	mg/kg	<0.013 mg/kg	0.013		1	0	0.013	0.013	-	-	0		<0.013							
1.2-Dibromoethane Chorobenzene		<0.012 mg/kg <0.005 mg/kg	0.012 160	k	1	0	0.012 0.005	0.012	-	-	0		<0.012 <0.005							
1.1.1.2-Tetrachloroethane		<0.005 mg/kg	310	k	1	0	0.005	0.005	-	-	0		<0.005							
Ethylbenzene	mg/kg	<0.004 mg/kg	1500		1	1	0.00732	0.00732	0.00732	-	0		0.00732			•				
p/m-Xylene		<0.014 mg/kg	0.014		1	0	0.014	0.014	-	-	0		<0.014 <0.01						+ + + + + + + + + + + + + + + + + + + +	
o-Xylene Styrene		<0.01 mg/kg <0.01 mg/kg	0.01 7300	k	1	0	0.01	0.01	-	-	0		<0.01						+ + + + + + + + + + + + + + + + + + + +	
Bromoform	mg/kg	<0.01 mg/kg	1800	k	1	0	0.01	0.01	-	-	0		<0.01							
Isopropylbenzene	mg/kg	<0.005 mg/kg	4000	k	1	1	0.0214		0.0214	-	0		0.0214							
1.1.2.2-Tetrachloroethane 1.2.3-Trichloropropane		<0.01 mg/kg <0.017 mg/kg	670 0.017	k	1	0	0.01 0.017	0.01 0.017	-	-	0		<0.01 <0.017							
Bromobenzene		<0.017 mg/kg	270	k	1	0	0.017	0.017	-	-	0		<0.017							
Propylbenzene	mg/kg	<0.011 mg/kg	11000	k	1	1	0.0364	0.0364	0.0364	-	0		0.0364							
2-Chlorotoluene		<0.009 mg/kg			1	0	0.009	0.009	- 0.0240	-	0		<0.009							
1.3.5-Trimethylbenzene 4-Chlorotoluene		<0.008 mg/kg <0.012 mg/kg	70 0.012		1	0	0.0249 0.012	0.0249	0.0249	-	0		0.0249 <0.012							
tert-Butylbenzene	mg/kg	<0.012 mg/kg	0.012		1	0	0.012	0.012	-	-	0		<0.012							
1.2.4-Trimethylbenzene	mg/kg	<0.009 mg/kg	120	k	1	1	0.18	0.18	0.18	-	0		0.18			-				
sec-Butylbenzene		<0.01 mg/kg	0.01		1	0	0.147		0.147	-	0		0.147 <0.011						+ + + + + + + + + + + + + + + + + + + +	
4-Isopropyltoluene 1.3-Dichlorobenzene		<0.011 mg/kg <0.006 mg/kg	0.011 92	k	1	1	0.011	0.011	0.0959	-	0		<0.011 0.0959							
1.4-Dichlorobenzene		<0.005 mg/kg	12000	k	1	1	0.87	0.87	0.87	-	0		0.87							
n-Butylbenzene		<0.01 mg/kg	0.01		1	0	0.01	0.01	-	-	0		<0.01							
1.2-Dichlorobenzene 1.2-Dibromo-3-chloropropane		<0.012 mg/kg <0.014 mg/kg	6100 0.014	k	1	0	3.28 0.014	3.28 0.014	3.28	-	0		3.28 <0.014							
Tert-amyl methyl ether		<0.014 mg/kg <0.015 mg/kg	0.014		1	0	0.014	0.014	-	-	0		<0.014							
1.2.4-Trichlorobenzene	mg/kg	<0.006 mg/kg	670	k	1	0	0.006	0.006	-	-	0		<0.006							
Hexachlorobutadiene		<0.012 mg/kg	79	k	1	0	0.012	0.012	-	-	0		<0.012							
Naphthalene 1.2.3-Trichlorobenzene		<0.013 mg/kg <0.006 mg/kg	580 320	k k	1	0	0.013 0.006	0.013	-	-	0		<0.013 <0.006							
Thomoroponizono	g/kg	10.000 Hig/kg	020	K		U	5.000	5.500			v		10.000	1 1	1		1 1	 1	1 1	

# **Annex D Laboratory Analysis Certificates**









Unit 7-8 Hawarden Business Park Manor Road (off Manor Lane) Hawarden

> Deeside CH5 3US Tel: (01244) 528700

Fax: (01244) 528701 email: mkt@alcontrol.com Website: www.alcontrol.com

Entec UK Ltd Canon Court North Abbey Lawn Abbey Foregate Shrewsbury Shropshire SY2 5DE

**Attention:** Steve Dooley

#### **CERTIFICATE OF ANALYSIS**

 Date:
 23 July 2010

 Customer:
 H\_ENTEC\_SHW-24

Sample Delivery Group (SDG): 100715-42 Report No.: 91349

Your Reference: 26999

**Location:** KL056 DSDC Bicester

We received 30 samples on Thursday July 15, 2010 and 30 of these samples were scheduled for analysis which was completed on Friday July 23, 2010. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Asbestos testing - we are not accredited for screening soil samples for asbestos fibres. We are only accredited to identify asbestos fibres in bulk material (ACM).

Approved By:



#### **Iain Swinton**

Operations Director - Land UK & Ireland



## **ALcontrol Laboratories Analytical Services**

Order No.:

 SDG:
 100715-42
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999

Location: KL056 DSDC Bicester Report No: 91349

## Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Sampled Date
1822748	BH01	0.70 - 0.90	13/07/2010
1822829	BH01	1.60 - 2.00	13/07/2010
1822729	BH01	3.60 - 3.80	13/07/2010
1822510	TPD10	0.20 - 0.30	13/07/2010
1822602	TPD10	0.50 - 0.60	13/07/2010
1822579	TPD10	1.00 - 1.10	13/07/2010
1822491	TPD10	2.60 - 2.70	13/07/2010
1822592	TPD10	2.90 - 3.00	13/07/2010
1822471	TPD4	0.00 - 0.10	13/07/2010
1822422	TPD4	0.50 - 0.60	13/07/2010
1823171	TPD4	2.80 - 2.90	13/07/2010
1822653	TPD7	0.30 - 0.40	13/07/2010
1822849	TPD7	1.10 - 1.20	13/07/2010
1822792	TPD7	2.10 - 2.20	13/07/2010
1823119	TPD8	0.40 - 0.50	13/07/2010
1822842	TPD8	1.10 - 1.20	13/07/2010
1823129	TPD8	2.50 - 2.60	13/07/2010
1822781	TPD8	2.80 - 2.90	13/07/2010
1822969	TPD9	0.20 - 0.30	13/07/2010
1822414	TPD9	1.00 - 1.10	13/07/2010
1822480	TPD9	3.90 - 4.00	13/07/2010
1822872	WSD14	0.50 - 0.50	13/07/2010
1822803	WSD14	3.00 - 3.20	13/07/2010
1823416	WSD15	0.40 - 0.50	13/07/2010
1822813	WSD15	3.00 - 3.40	13/07/2010
1822855	WSE15	0.30 - 0.40	13/07/2010
1823628	WSE15	1.80 - 2.00	13/07/2010
1822986	WSE16	0.50 - 0.60	13/07/2010
1823508	WSE16	1.20 - 1.40	13/07/2010
1823615	WSE9	0.50 - 0.60	13/07/2010

Only received samples which have had analysis scheduled will be shown on the following pages.

# **ALcontrol Laboratories Analytical Services**

Order No.:

 SDG:
 100715-42
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999

Location: KL056 DSDC Bicester Report No: 91349

#### SOLID

SOLID		_																										
Results Legend	Lab Sample No(s)	1822414		1822422	1822471	1822480	1000	1822491	1822510	1822579	1822592	1822602	1822653		01	1822729	1822748	1077701	1877781	1822792	1822803	1822813		1822829	1822842	1822849	1822855	1822872
X Test								T	Ť					Ť		†			Ť					T				
No Determination Possible	Customer Sample Ref.	- - - - -	100	TPD4	TPD4	1709	100	TPD10	TPD10	TPD10	TPD10	TPD10	   FU/	TBD7		BH01	BH01	-	TPD8	TPD7	WSD14	WSD15	1	BH01	TPD8	רטקו	WSE15	WSD14
	Depth (m)		100	0.50 - 0.60	0.00 - 0.10	3.90 - 4.00	200	2.60 - 2.70	0.20 - 0.30	1.00 - 1.10	2.90 - 3.00	0.50 - 0.60	0.30 - 0.40	0 30 -0 40		3.60 - 3.80	0.70 - 0.90	!!	280-290	2.10 - 2.20	3.00 - 3.20	3.00 - 3.40	,	1.60 - 2.00	1.10 - 1.20	1.10 - 1.20	0.30 - 0.40	0.50 - 0.50
	Container	250g Amber Jar	250g Amber Jar	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	250g Amber Jar	250g Amber Jar 400g Tub	400g Tub	400g Tub	400g Tub 250g Amber Jar	400g Tub 250g Amber Jar	250g Amber Jar	250g Amber Jar 400g Tub	400g Tub	60g VOC	400g Tub	250g Amber Jar	400g Tub	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	250g Amber Jar	400g Tub	400g Tub	250g Amber Jar	400g Tub 250g Amber Jar	400g Tub 250g Amber Jar
Ammonium Soil by Titration	All	)	/	X	v		Н	Ħ	X	v				t	V	†	X	,	X	X	×	H	Н	<u> </u>	v	×	X	X
Asbestos Containing Material Screen	All	)		^	^		$\forall$	$\top$	X	^			Н	t	^	†	^	,	^	^	^	${}^{\dag}$	H	^	^	^	^	^
Boron Water Soluble	All	П	X		V		$\forall$	X	^ >	,			$\Box$	V	H		(	X	<u>.</u>		X	H	V	,	<u>^</u>	V	X	V
EPH CWG (Aliphatic) GC (S)	All	X	<u>^</u>		^		Н	<u>, х</u>					H	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Н	<b>-</b>		۸	×		^	H	X	, 	(	X	<b>^</b>	X
EPH CWG (Aromatic) GC (S)	All	H		Н	+	Н	$\forall$	+	$^{+}$	Н			$\forall$	X		$\dagger$			+	Н	+	$\forall$	H	$^{+}$		H	+	
GRO BTEX MTBE GC (S)	All	H	+	Н	+	Н	$\forall$	$\forall$	$^{+}$	Н		Н	$\forall$	X	H	+			+	Н	+	$\forall$	H	$^{+}$		H	+	Н
Hexavalent Chromium (s)	All	H							+					+		X			+			H	H					
Metals by iCap-OES (Soil)	Arsenic	X	X	X	X	<u> </u>	<b>(</b>	X	X	X	X	X	<b>,</b>	<b>(</b>	X	,	X	X	X	X	X X	X	X	X	X		X	X
	Cadmium		T	П			Н		T				Н	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Н	Ť	<u>.</u>			П	X	H	Ħ		<b>(</b>	X		
	Chromium	X	X	П	X	H	$\forall$	X	<u>&gt;</u>				H	X	H	7		X	X		X	H	X	<u> </u>	(	X	X	X
	Copper	X	X	П	X	Н	$\forall$	X	, ×			Н	$\forall$	X	H	,		X	X		X	$\forall$	X	, ,	(	X	X	X
	Lead	X	X	П	X	Н	$\forall$	X	×	Ħ		Н	$\forall$	X	H	7		X	X		X	H	X	, ,	(	X	X	X
	Mercury	X	X	П	X	Н	+	X	×				Н	X		<u> </u>	(	X	X	П	X	H	X	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<b>(</b>	X	X	X
	Nickel	X	X	П	X	Н	+	X	Ť	<b>(</b>		Н	Н	X	H	<b>)</b>	(	X	X	П	X	${}^{\rm H}$	X	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<b>(</b>	X	X	X
	Selenium	X	X	П	X	Н	+	X	Ť	<b>(</b>		Н	Н	X	H	Ť	(	X	X	П	X	${}^{\rm H}$	X	<mark> </mark>	<b>(</b>	X	X	X
	Zinc	X	X	П	X	Н	+	X	Ť	<b>(</b>			H	X	H	Ť	(	X	X	П	X	$\forall$	X	<mark> </mark>	<b>(</b>	X	X	X
PAH by GCMS	All	X	X		X	Н	+	X	×	<b>(</b>		Н	Н	X	H	<u> </u>	(	X	X		X	${}^{\rm H}$	X	<u> </u>	<b>(</b>	X	X	X
PCBs (vs Aroclor 1254)	All	Н			+	Н	$^{+}$	+	+	Н		Н	Н	X		+			+	Н	+	H	Н	+		H	+	
рН	All	Н	+		+	H	$\forall$	+	+	$\blacksquare$		Н	Н	X	Н	+	H		+	Н	+	H	Н	+		H	+	
Sample description	All	П	<b>(</b>	X	X		$\forall$		X	X	+	$\vdash$	$\forall$	+	X	+	X	П	X	X	X	Н	П	X	X			
Semi Volatile Organic Compounds	All	X	X	H	X	X	X	X	×	<b>(</b>	X	X	X	X	H	<u> </u>	(	X	×		X	X	X	<u> </u>	<b>(</b>	X	X	X
Total Organic Carbon	All	H	$\perp$	H	+	H	H	+	+	+			H	X	H	+		H	+	H	+	${}$	H	+		${\mathbb H}$	+	Н
TPH c6-40 Value of soil	All	H	X	H	+	H	H	+	+	H		$\perp$	H	X	H	>	(	H	+	H	+	${\mathbb H}$	H	<u>&gt;</u>	<b>&lt;</b>	$\dashv$	+	$\mathbb{H}$
		Щ		Ц			Ш	Ш	X	(					Ш	>	(		X		X	Щ	Ш	<u>&gt;</u>	<b>(</b>	X		Ш

	1822969		1822986		1823119		1823129		1823171		1823416		1823508		1823615		1823628	
	TPD9		WSE16		TPD8		TPD8		TPD4		WSD15		WSE16		WSE9		WSE15	
	0.20 - 0.30		0.50 - 0.60		0.40 - 0.50		2.50 - 2.60		2.80 - 2.90		0.40 - 0.50		1.20 - 1.40		0.50 - 0.60		1.80 - 2.00	Total
250a Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	
_			V								V				V		V	0
		H	X		H			H			X			H	X		X	0
		X			H			H		X	H			X		X	H	0 19 0 3 0 19 0 1 0 1 0 1 0 30 0 19 0 1 0 1 0 1 0 1 0 0 1 0 0 1 0 0 0 0
		^			H			H		^	H			^		^	H	0
		H		Г	H		Г	H			H		Г	r		Г	H	0
		H		Г	H		Г	H		Г	H		Г	r		Г	H	0
	X		X		X		X	Г	X		X		X	r	X		X	0
		X	<u>, , , , , , , , , , , , , , , , , , , </u>						<u>, , , , , , , , , , , , , , , , , , , </u>	X				X		X		0 19
		X								X				X		X		0 19
		X								X				X		X		0 19
		X								X	Г		Г	X		X	Г	0 19
		X								X				X		X		0 19
		X								X				X		X		0 19
		X								X				X		X		0 19
		X								X				X		X		0 19
		X								X				X		X		0 19
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																		0 1
Ī														X				0 5
		X								X				X		X		0 10

# **ALcontrol Laboratories Analytical Services**

100715-42 **Customer:** SDG: Entec UK Ltd H\_ENTEC\_SHW-24 Job: Attention: Steve Dooley

Client Reference: Location:	26999 KL056 DSD0	Bicester								lo.: No:			9	134	9																
			102211	1822414	1822422	1822471	1822480	1	1822491	1822510	1822579	7607701	1822502	1822602	1822653		1822729		1822748	1822781	1822792		1822803	1822813	6787781.		1822842	1822849	1822855	00000	1822872
			:	TPD9	TPD4	TPD4	TPD9		TPD10	TPD10	TPD10	1 -	TPD10	TPD10	TPD7		внол	1	BH01	TPD8	1707	1	WSD14	WSD15	BHUT		TPD8	TPD7	WSE 15	10/00145	WSD14
				1.00 - 1.10	0.50 - 0.60	0.00 - 0.10	3.90 - 4.00		2.60 - 2.70	0.20 - 0.30	1.00 - 1.10		2.90 - 3.00	0.50 - 0.60	0.30 - 0.40		3.60 - 3.80		0.70 - 0.90	2.80 - 2.90	2.10 - 2.20		3.00 - 3.20	3.00 - 3.40	1.00 - 2:00	200	1.10 - 1.20	1.10 - 1.20	0.30 - 0.40	0.30 - 0.40	0.50 - 0.50
			250g Amber Jar	250g Amber Jar 400g Tub	400g Tub	400g Tub 250g Amber Jar	400g Tub 250g Amber Jar	250g Amber Jar	400g Tub	400g Tub	250g Amber Jar	250g Amber Jar	400g Tub	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	250g Amber Jar	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	250g Amber Jar	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	250g Amber Jar	400g Tub
TPH CWG GC (S)		All														X															
VOC MS (S)		All															X	<u>(</u>													
Water Soluble Sulphate 2:	:1	All	X	X	,	X			<u>&gt;</u>	<b>(</b>	X	П	T			X		X	)	×	X	X	T		X	X		X	X	X	

	1822969		1822986		1823119		1823129		1823171		1823416		1823508		1823615		1823628			
	TPD9		WSE16		TPD8		TPD8		TPD4		WSD15		WSE16		WSE9		WSE15			
	0.20 - 0.30		0.50 - 0.60		0.40 - 0.50		2.50 - 2.60		2.80 - 2.90		0.40 - 0.50		1.20 - 1.40		0.50 - 0.60		1.80 - 2.00			Total
250g Amber Jar	400g Tub																			
																			0 1	
																			0 1	
		X								X				X		X		1	0 1 0 1 0	

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100715-42
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999

Location: KL056 DSDC Bicester Report No: 91349

### **Sample Descriptions**

Order No.:

#### **Grain Sizes:**

<0.063mm very fine, 0.063mm - 0.1mm fine, 0.1mm - 2mm medium, 2mm - 10mm coarse, >10mm very coarse

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions
1822414	TPD9	1.00 - 1.10	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones
1822422	TPD4	0.50 - 0.60	Dark Brown	Silty Clay	0.063 - 0.1 mm	Vegetation
1822471	TPD4	0.00 - 0.10	Dark Brown	Silty Clay	0.063 - 0.1 mm	Vegetation
1822480	TPD9	3.90 - 4.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones
1822491	TPD10	2.60 - 2.70	Dark Brown	Sand	0.1 - 2 mm	Stones
1822510	TPD10	0.20 - 0.30	Dark Brown	Silty Clay	0.063 - 0.1 mm	N/A
1822579	TPD10	1.00 - 1.10	Dark Brown	Sandy Clay	0.1 - 2 mm	Stones
1822592	TPD10	2.90 - 3.00	Dark Brown	Clay Loam	<0.063 mm	None
1822602	TPD10	0.50 - 0.60	Light Brown	Clay Loam	<0.063 mm	Stones
1822653	TPD7	0.30 - 0.40	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones
1822729	BH01	3.60 - 3.80	Light Brown	Silt Loam	0.063 - 0.1 mm	Stones
1822748	BH01	0.70 - 0.90	Dark Brown	Sandy Clay	0.1 - 2 mm	Stones
1822781	TPD8	2.80 - 2.90	Dark Brown	Sandy Clay	0.1 - 2 mm	Stones
1822792	TPD7	2.10 - 2.20	Dark Brown	Clay Loam	0.063 - 0.1 mm	N/A
1822803	WSD14	3.00 - 3.20	Light Brown	Silt Loam	0.063 - 0.1 mm	Stones
1822813	WSD15	3.00 - 3.40	Light Brown	Sandy Clay	0.1 - 2 mm	Stones
1822829	BH01	1.60 - 2.00	Dark Brown	Silt Loam	0.063 - 0.1 mm	Stones
1822842	TPD8	1.10 - 1.20	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones
1822849	TPD7	1.10 - 1.20	Dark Brown	Sandy Clay Loam	0.063 - 0.1 mm	Stones
1822855	WSE15	0.30 - 0.40	Light Brown	Clay	<0.063 mm	None
1822872	WSD14	0.50 - 0.50	Dark Brown	Clay Loam	<0.063 mm	Stones
1822969	TPD9	0.20 - 0.30	Light Brown	Clay Loam	<0.063 mm	Stones
1822986	WSE16	0.50 - 0.60	Light Brown	Clay Loam	<0.063 mm	None
1823119	TPD8	0.40 - 0.50	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones
1823129	TPD8	2.50 - 2.60	Dark Brown	Clay Loam	0.063 - 0.1 mm	Vegetation
1823171	TPD4	2.80 - 2.90	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	None
1823416	WSD15	0.40 - 0.50	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones
1823508	WSE16	1.20 - 1.40	Light Brown	Silty Clay	0.063 - 0.1 mm	N/A
1823615	WSE9	0.50 - 0.60	Light Brown	Clay	<0.063 mm	None
1823628	WSE15	1.80 - 2.00	Light Brown	Clay	<0.063 mm	None

## **ALcontrol Laboratories Analytical Services**

Order No.:

 SDG:
 100715-42
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999

Location: KL056 DSDC Bicester Report No: 91349

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100715-42
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999 Order No.:

Location: KL056 DSDC Bicester Report No: 91349

## **Test Completion dates**

**SDG reference: 100715-42** 

Lab Sample No(s)	1822414	1822422	1822471	1822480	1822491	1822510	1822579	1822592	1822602	1822653	1822729	1822748
Customer Sample Ref.	TPD9	TPD4	TPD4	TPD9	TPD10	TPD10	TPD10	TPD10	TPD10	TPD7	BH01	BH01
Depth	1.00 - 1.10	0.50 - 0.60	0.00 - 0.10	3.90 - 4.00	2.60 - 2.70	0.20 - 0.30	1.00 - 1.10	2.90 - 3.00	0.50 - 0.60	0.30 - 0.40	3.60 - 3.80	0.70 - 0.90
Туре	SOLID											
Ammonium Soil by Titration	19/07/2010	19/07/2010	19/07/2010			20/07/2010	19/07/2010				19/07/2010	19/07/2010
Asbestos Containing Material	16/07/2010					16/07/2010						
Boron Water Soluble	20/07/2010	20/07/2010	20/07/2010			20/07/2010	20/07/2010				20/07/2010	20/07/2010
EPH CWG (Aliphatic) GC (S)											22/07/2010	
EPH CWG (Aromatic) GC (S)											22/07/2010	
GRO by GC-FID (S)											22/07/2010	
Hexavalent Chromium (s)	20/07/2010	20/07/2010	20/07/2010		20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010
Metals by iCap-OES (Soil)	20/07/2010	20/07/2010	20/07/2010			20/07/2010	20/07/2010				20/07/2010	20/07/2010
PAH by GCMS											19/07/2010	
PCBs (vs Aroclor 1254)											20/07/2010	
рН	19/07/2010	19/07/2010	19/07/2010			19/07/2010	19/07/2010				19/07/2010	19/07/2010
Sample description	16/07/2010	16/07/2010	16/07/2010	20/07/2010	19/07/2010	16/07/2010	16/07/2010	19/07/2010	19/07/2010	19/07/2010	16/07/2010	16/07/2010
Semi Volatile Organic Compounds											20/07/2010	
Total Organic Carbon		20/07/2010									20/07/2010	20/07/2010
TPH c6-40 Value of soil							22/07/2010					20/07/2010
TPH CWG GC (S)											23/07/2010	
VOC MS (S)											21/07/2010	
Water Soluble Sulphate 2:1	20/07/2010	20/07/2010	20/07/2010			20/07/2010	20/07/2010				20/07/2010	20/07/2010

1822781	1822792	1822803	1822813	1822829	1822842	1822849	1822855	1822872	1822969	1822986	1823119	1823129	1823171	1823416
TPD8	TPD7	WSD14	WSD15	BH01	TPD8	TPD7	WSE15	WSD14	TPD9	WSE16	TPD8	TPD8	TPD4	WSD15
2.80 - 2.90	2.10 - 2.20	3.00 - 3.20	3.00 - 3.40	1.60 - 2.00	1.10 - 1.20	1.10 - 1.20	0.30 - 0.40	0.50 - 0.50	0.20 - 0.30	0.50 - 0.60	0.40 - 0.50	2.50 - 2.60	2.80 - 2.90	0.40 - 0.50
SOLID														
19/07/2010	19/07/2010	19/07/2010		19/07/2010	19/07/2010	20/07/2010	19/07/2010	19/07/2010		19/07/2010				19/07/2010
					16/07/2010									
20/07/2010	20/07/2010	20/07/2010		20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010		20/07/2010				20/07/2010
20/07/2010	20/07/2010	20/07/2010	21/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	21/07/2010	20/07/2010	20/07/2010	20/07/2010
20/07/2010	20/07/2010	20/07/2010		20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010		20/07/2010				20/07/2010
19/07/2010	19/07/2010	19/07/2010		19/07/2010	19/07/2010	19/07/2010	19/07/2010	19/07/2010		19/07/2010				19/07/2010
16/07/2010	16/07/2010	16/07/2010	20/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010	19/07/2010	16/07/2010	20/07/2010	19/07/2010	19/07/2010	16/07/2010
					20/07/2010									
	22/07/2010	20/07/2010			20/07/2010	22/07/2010				20/07/2010				20/07/2010
20/07/2010	20/07/2010	20/07/2010		20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010		20/07/2010				20/07/2010

1823508	1823615	1823628
WSE16	WSE9	WSE15
1.20 - 1.40	0.50 - 0.60	1.80 - 2.00
SOLID	SOLID	SOLID
	19/07/2010	19/07/2010
	20/07/2010	20/07/2010
20/07/2010	20/07/2010	20/07/2010
	20/07/2010	20/07/2010
	19/07/2010	19/07/2010
19/07/2010	16/07/2010	16/07/2010
	20/07/2010	
	20/07/2010	20/07/2010
	20/07/2010	20/07/2010

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100715-42

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

	Cuataman	Cample Def	DUIDA	DUIDA		D1.104		TDD 40		TDD40	TDD40	
Results Legend # ISO17025 accredited. M mCERTS accredited.	Customer	Sample Ref.	BH01	BH01		BH01		TPD10		TPD10	TPD10	
aq Aqueous / settled sample.		Depth (m)	0.70 - 0.90	1.60 - 2.00		3.60 - 3.80		0.20 - 0.30		0.50 - 0.60	1.00 - 1.10	
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type ate Sampled	Soil/Solid	Soil/Solid		Soil/Solid		Soil/Solid		Soil/Solid	Soil/Solid	
* subcontracted test.  ** % recovery of the surrogate		te Received	13/07/2010 15/07/2010	13/07/2010 15/07/2010		13/07/2010 15/07/2010		13/07/2010 15/07/2010		13/07/2010 15/07/2010	13/07/2010 15/07/2010	
standard to check the efficiency	,	SDG Ref	100715-42	100715-42		100715-42		100715-42		100715-42	100715-42	
of the method. The results of th individual compounds within	Lab Sa	imple No.(s)	1822748	1822829		1822729		1822510		1822602	1822579	
the samples are not corrected for this recovery.												
Component	LOD/Units	Method										
Asbestos Containing Material Screen	-	TM001						No ACM Detec	ted			
Ammoniacal Nitrogen,	<15 mg/kg	TM024	84	<15		23.1		<15			116	
exchangeable as NH4	<0.002 m/l	TMOOO	M 1 14	1.50	M	1.69	M	0.0182	М		0.0350	M
Sulphate, 2:1 water soluble	<0.003 g/l	TM098	1.44 <b>M</b>	1.59	М	1.68	М	0.0182	м		0.0359	М
Soil Organic Matter (SOM)	<0.35 %	TM132	1.83			3.07						
pH	1 pH Units	TM133	8.13	6.9		6.68	#	8.23			8.13	
Pr.	1 pri onito	1111100	M	0.0	М	0.00	М	0.20	М		0.10	М
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6	<0.6		<0.6		<1.2		<0.6	<0.6	
TPH >C6-C8	<10 mg/kg	TM154	<10		#		#		#	#	<10	#
TPH >C8-C10	<10 mg/kg	TM154	<10								<10	
TPH >C10-C12	<10 mg/kg	TM154	<10								<10	
TDLL > C40 C40		TNASSA									.40	
TPH >C12-C16	<10 mg/kg	TM154	<10								<10	
TPH >C16-C21	<10 mg/kg	TM154	36.5								61.2	
TPH >C21-C40	<10 mg/kg	TM154	219								380	
1PH >C21-C40	<10 mg/kg	11VI154	219								380	
TPH >C6-C40	<10 mg/kg	TM154	266								451	
Arsenic	<0.6 mg/kg	TM181	8.95	9.97		7.11		7.39			8.44	#
Alsenie	40.0 mg/kg	TWITOT	0.55 M	3.37	М	7.11	М	7.55	м		0.44	М
Cadmium	<0.02	TM181	0.208	0.559		0.211		0.0755			0.197	
Chromium	mg/kg <0.9 mg/kg	TM181	<b>M</b> 49.2	60.5	M	38.2	М	25.3	М		33.6	М
			M		М		М		М			М
Copper	<1.4 mg/kg	TM181	24.4	43.9		26.8		18.8	м		20.6	
Lead	<0.7 mg/kg	TM181	17.4	11.4	M	14.7	М	13.9	IVI		18.4	М
			M		M		М		М			М
Mercury	<0.14 mg/kg	TM181	<0.14 <b>M</b>	<0.14	М	<0.14	М	<0.14	М		<0.14	М
Nickel	<0.2 mg/kg	TM181	26.2	48.1	141	35.6		15.2			20.2	
0.1	.4 //	T1404	M	4.00	M	0.07	M	4.00	М		4.50	M
Selenium	<1 mg/kg	TM181	2.32	4.33	#	2.07	#	1.09	#		1.52	#
Zinc	<1.9 mg/kg	TM181	85.2	152		80.1		63.4			88.4	
Boron, water soluble	<1 mg/kg	TM222	1.83	2.14	M	4.09	M	3.04	М		2.63	М
boron, water soluble	- Tillg/kg	I IVIZZZ	1.63 <b>M</b>	2.14	М	4.09	М	3.04	м		2.03	М
		1										

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100715-42

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

DV⊓	by GCMS			
	Results Legend	Customer	Sample Ref.	BH01
	ISO17025 accredited. mCERTS accredited.			
aq	Aqueous / settled sample. Dissolved / filtered sample.	s	Depth (m) sample Type	3.60 - 3.80 Soil/Solid
tot.unfilt	Total / unfiltered sample. subcontracted test.	Da	ate Sampled	13/07/2010
**	% recovery of the surrogate standard to check the efficiency	Da	te Received SDG Ref	15/07/2010 100715-42
	of the method. The results of the individual compounds within	Lab Sa	ample No.(s)	1822729
	the samples are not corrected for this recovery.			
Compo	nent	LOD/Units	Method	
Naphth recover	alene-d8 %	%	TM218	108
Acenap	ohthene-d10 %	%	TM218	105
recover		0/	TMO40	404
recover	nthrene-d10 % ry**	%	TM218	104
Chryse	ne-d12 % recovery**	%	TM218	93.1
Perylen	ne-d12 % recovery**	%	TM218	101
Naphth	ialene	<0.009 mg/kg	TM218	0.0361 I
Acenap	ohthylene	<0.012	TM218	<0.012
Acenar	ohthene	mg/kg <0.008	TM218	0.0622
		mg/kg		ı
Fluoren	ne	<0.01 mg/kg	TM218	0.0485 I
Phenar	nthrene	<0.015	TM218	0.251
Anthrac	cana	mg/kg <0.016	TM218	0.0731
Anunac	Cerie	mg/kg	TIVIZ TO	0.0731
Fluoran	nthene	<0.017	TM218	0.375
Pyrene		mg/kg <0.015	TM218	0.326
D/-	\th	mg/kg	TM218	0.400
Denz(a	)anthracene	<0.014 mg/kg	I IVIZ IO	0.196 I
Chryse	ne	<0.01	TM218	0.182
Benzo(	b)fluoranthene	mg/kg <0.015	TM218	0.26
		mg/kg		ı
Benzo(	k)fluoranthene	<0.014 mg/kg	TM218	0.113 I
Benzo(	a)pyrene	<0.015	TM218	0.237
Indeno	(1,2,3-cd)pyrene	mg/kg <0.018	TM218	0.138
		mg/kg		ı
Dibenzo	o(a,h)anthracene	<0.023 mg/kg	TM218	0.043
Benzo(	g,h,i)perylene	<0.024	TM218	0.182
Polyaro	omatic hydrocarbons,	mg/kg <0.118	TM218	2.52
Total U	ISEPA 16	mg/kg	TIVIZIO	2.52
	-			

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100715-42

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

						<b>7011110.</b> 010		
PCR	s (vs Aroclor 1254	1						
. 00	Results Legend	Cuotama	Sample Ref.	DUIDA	I			
#	ISO17025 accredited.	Customer	Sample Ref.	BH01				
M	mCERTS accredited.		Donth (m)	2.00 2.00				
aq	Aqueous / settled sample.		Depth (m) Sample Type	3.60 - 3.80				
tot.unfilt	Dissolved / filtered sample. Total / unfiltered sample.	3	ample Type	Soil/Solid				
*	subcontracted test.	Da	ate Sampled					
**	% recovery of the surrogate standard to check the efficiency	Da	te Received	15/07/2010				
	of the method. The results of the		SDG Ref	100715-42				
	individual compounds within	Lab Sa	ample No.(s)	1822729				
	the samples are not corrected							
	for this recovery.	LOD/U-it-	Method					
Compo	ment (254)	LOD/Units		-0.005				
PCBs	(vs Aroclor 1254)	<0.035	TM070	<0.035				
		mg/kg		#				
				I				

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100715-42

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Semi	Volatile Organic	Compour	nds	
	Results Legend ISO17025 accredited.		Sample Ref.	BH01
М	mCERTS accredited. Aqueous / settled sample.		Depth (m)	3.60 - 3.80
diss.filt tot.unfilt	Dissolved / filtered sample. Total / unfiltered sample.		ample Type ate Sampled	Soil/Solid 13/07/2010
**	subcontracted test. % recovery of the surrogate		te Received	15/07/2010
	standard to check the efficiency of the method. The results of the	Lab Sa	SDG Ref ample No.(s)	100715-42 1822729
	individual compounds within the samples are not corrected for this recovery.		. ,	
Compo	nent	LOD/Units	Method	
Phenol		<0.1 mg/kg	TM157	<0.1
Pentac	hlorophenol	<0.1 mg/kg	TM157	<0.1
n-Nitros	so-n-dipropylamine	<0.1 mg/kg	TM157	<0.1
Nitrobe	enzene	<0.1 mg/kg	TM157	<0.1
Isophoi	rone	<0.1 mg/kg	TM157	<0.1
Hexach	nloroethane	<0.1 mg/kg	TM157	<0.1
Hexach	nlorocyclopentadiene	<0.1 mg/kg	TM157	<0.1
Hexach	nlorobutadiene	<0.1 mg/kg	TM157	<0.1
Hexach	nlorobenzene	<0.1 mg/kg	TM157	<0.1
n-Dioct	yl phthalate	<0.1 mg/kg	TM157	<0.1
	yl phthalate	<0.1 mg/kg	TM157	<0.1
			TM157	<0.1
	phthalate	<0.1 mg/kg		
	tyl phthalate	<0.1 mg/kg	TM157	<0.1
Dibenz	ofuran	<0.1 mg/kg	TM157	<0.1
Carbaz	cole	<0.1 mg/kg	TM157	<0.1
Butylbe	enzyl phthalate	<0.1 mg/kg	TM157	<0.1
bis(2-E	thylhexyl) phthalate	<0.1 mg/kg	TM157	<0.1
bis(2-C	hloroethoxy)methane	<0.1 mg/kg	TM157	<0.1
bis(2-C	hloroethyl)ether	<0.1 mg/kg	TM157	<0.1
Azober	nzene	<0.1 mg/kg	TM157	<0.1
4-Nitro	phenol	<0.1 mg/kg	TM157	<0.1
4-Nitro		<0.1 mg/kg	TM157	<0.1
	ylphenol	<0.1 mg/kg	TM157	<0.1
	rophenylphenylether	<0.1 mg/kg	TM157	<0.1
4-Chlor	roaniline	<0.1 mg/kg	TM157	<0.1
4-Chlor	ro-3-methylphenol	<0.1 mg/kg	TM157	<0.1
4-Brom	nophenylphenylether	<0.1 mg/kg	TM157	<0.1
3-Nitro	aniline	<0.1 mg/kg	TM157	<0.1
2-Nitro	phenol	<0.1 mg/kg	TM157	<0.1
2-Nitro	aniline	<0.1 mg/kg	TM157	<0.1
2-Meth	ylphenol	<0.1 mg/kg	TM157	<0.1
	richlorobenzene	<0.1 mg/kg	TM157	<0.1
	rophenol	<0.1 mg/kg	TM157	<0.1
	itrotoluene	<0.1 mg/kg	TM157	<0.1
2,4-Din	itrotoluene	<0.1 mg/kg	TM157	<0.1
2,4-Din	nethylphenol	<0.1 mg/kg	TM157	<0.1
2,4-Dic	hlorophenol	<0.1 mg/kg	TM157	<0.1
2,4,6-T	richlorophenol	<0.1 mg/kg	TM157	<0.1
2.4.5-T	richlorophenol	<0.1 mg/kg	TM157	<0.1
. /		.59		

### **ALcontrol Laboratories Analytical Services**

**SDG**: 100715-42

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

**Customer:** Entec UK Ltd **Attention:** Steve Dooley

Order No.:

Results Legend   SO17025 accredited.   Depth (m)   3.60 - 3.80   Soil/Solid   13/07/2010   Sample Type   Sample Sample   Subcontracted test.   Date Sample   SDG Ref   Lab Sample No.(s)   Sample No.(s)   SOIR SAMPLE NO	
# ISO17025 accredited. M mCERTS accredited. M Aqueous / settled sample. diss.filt boolved / filtered sample. * W recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.  **Component**   LOD/Units**   Method**    Lab Sample No.(s)	
M mCERTS acrodited. Aqueous / settled sample. Depth (m) Sample Type Soil/Solid 13/07/2010 15/07/201	
diss.filt tot.unfilt Total / unfiltered sample.  subcontracted test.  "" fecovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.  Component  LOD/Units  Method  1,3-Dichlorobenzene  Sample Type Date Sampled Date Received 15/07/2010 15/07/2010 15/07/2010 15/07/2010 15/07/2010 15/07/2010 1822729  1822729  1822729  1822729	
tot.unfitt Total / unfiltered sample.  * subcontracted test.  * % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.  Component LOD/Units Method  1,4-Dichlorobenzene < 0.1 mg/kg TM157 < 0.1  1,3-Dichlorobenzene < 0.1 mg/kg TM157 < 0.1	
" % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.  Component LOD/Units Method  1,4-Dichlorobenzene < 0.1 mg/kg TM157 < 0.1  1,3-Dichlorobenzene < 0.1 mg/kg TM157 < 0.1	
standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.  Component LOD/Units Method  1,4-Dichlorobenzene <0.1 mg/kg TM157 <0.1  1,3-Dichlorobenzene <0.1 mg/kg TM157 <0.1	
individual compounds within the samples are not corrected for this recovery.  Component LOD/Units Method  1,4-Dichlorobenzene <0.1 mg/kg TM157 <0.1  1,3-Dichlorobenzene <0.1 mg/kg TM157 <0.1	
Component         LOD/Units         Method           1,4-Dichlorobenzene         <0.1 mg/kg	
1,3-Dichlorobenzene <0.1 mg/kg TM157 <0.1	
A DI LI TILLE	
1,2-Dichlorobenzene <0.1 mg/kg TM157 <0.1	
2-Chloronaphthalene <0.1 mg/kg TM157 <0.1	
2-Citioronaphinalene Co. i mg/kg Tivi 157 Co. i	
2-Methylnaphthalene <0.1 mg/kg TM157 <0.1	
Assessbilled as TMC7	
Acenaphthylene <0.1 mg/kg TM157 <0.1	
Acenaphthene <0.1 mg/kg TM157 <0.1	
Anthropping CO 1 mg/kg TM157 CO 1	
Anthracene <0.1 mg/kg TM157 <0.1	
Benzo(a)anthracene <0.1 mg/kg TM157 <0.1	
Benzo(b)fluoranthene <0.1 mg/kg TM157 <0.1	
Benzo(k)fluoranthene <0.1 mg/kg TM157 <0.1	
Benzo(a)pyrene <0.1 mg/kg TM157 <0.1	
Benzo(g,h,i)perylene <0.1 mg/kg TM157 <0.1	
Chrysene <0.1 mg/kg TM157 <0.1	
Fluoranthene <0.1 mg/kg TM157 <0.1	
Fluorene <0.1 mg/kg TM157 <0.1	
Indeno(1,2,3-cd)pyrene <0.1 mg/kg TM157 <0.1	
Phenanthrene <0.1 mg/kg TM157 <0.1	
Pyrene <0.1 mg/kg TM157 <0.1	
Naphthalene <0.1 mg/kg TM157 <0.1	
Dibenzo(a,h)anthracene <0.1 mg/kg TM157 <0.1	

### **ALcontrol Laboratories Analytical Services**

**SDG**: 100715-42

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

TPH CWG (S)								
Results Legend	Customer	Sample Ref.	BH01					
# ISO17025 accredited.  M mCERTS accredited.		Depth (m)	3.60 - 3.80					
aq Aqueous / settled sample. diss.filt Dissolved / filtered sample.	s	Sample Type	3.60 - 3.80 Soil/Solid					
tot.unfilt Total / unfiltered sample.  * subcontracted test.		ate Sampled	13/07/2010					
** % recovery of the surrogate standard to check the efficiency		te Received SDG Ref	15/07/2010 100715-42					
of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1822729					
the samples are not corrected for this recovery.								
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	66					
GRO >C5-C12	<0.044	TM089	<0.044					
Benzene	mg/kg <0.01	TM089	<0.01					
	mg/kg		М					
Ethylbenzene	<0.003 mg/kg	TM089	<0.003					
Toluene	<0.002	TM089	<0.002					
m,p-Xylene	mg/kg <0.006	TM089	<0.006					
	mg/kg		М					
o-Xylene	<0.003 mg/kg	TM089	<0.003 <b>M</b>					
m,p,o-Xylene	<0.01	TM089	<0.01					
BTEX, Total	mg/kg <0.01	TM089	<0.01					
	mg/kg		М					
Methyl tertiary butyl ether (MTBE)	<0.005 mg/kg	TM089	<0.005 #					
Aliphatics >C5-C6	<0.01	TM089	<0.01					
Aliphatics >C6-C8	mg/kg <0.01	TM089	<0.01					
Aliabatica > C9, C10	mg/kg	TM089	<b>~</b> 0.01					
Aliphatics >C8-C10	<0.01 mg/kg	1101089	<0.01					
Aliphatics >C10-C12	<0.01	TM089	<0.01					
Aromatics >C6-C7	mg/kg <0.01	TM089	<0.01					
Aromatics >C7-C8	mg/kg <0.01	TM089	<0.01					
Alomatics >C1-C6	mg/kg	TIVIOOS	<b>\0.01</b>					
Aromatics >EC8-EC10	<0.01 mg/kg	TM089	<0.01					
Aromatics >EC10-EC12	<0.01	TM089	<0.01					
Total Aliphatics >C5-C12	mg/kg <0.01	TM089	<0.01					
	mg/kg							
Total Aromatics >C6-C12	<0.01 mg/kg	TM089	<0.01					
Aliphatics >C12-C16	<0.1 mg/kg	TM173	7.75					
Aliphatics >C16-C21	<0.1 mg/kg	TM173	6.67					
Aliphatics >C16-C35	<0.1 mg/kg	TM173	23.2					
Aliphatics >C21-C35	<0.1 mg/kg	TM173	16.6					
Aliphatics >C35-C44	<0.1 mg/kg	TM173	3.39					
Aromatics >EC12-EC16	<0.1 mg/kg	TM173	8.02					
Aromatics >EC16-EC21	<0.1 mg/kg	TM173	20.6					
Aromatics >EC21-EC35	<0.1 mg/kg	TM173	50.3					
Aromatics >EC35-EC44	<0.1 mg/kg	TM173	17.4					
Aromatics >EC40-EC44	<0.1 mg/kg	TM173	6.11					
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173	34.4					
Total Aromatics	<0.1 mg/kg	TM173	96.3					
>EC12-EC44 Total Aliphatics >C5-35	<0.1 mg/kg	TM173	31					
Total Aliphatics >C5-C44	<0.1 mg/kg	TM173	34.4					
Total Aromatics >C5-35	<0.1 mg/kg	TM173	78.9					
Total Aromatics >C6-C44	<0.1 mg/kg	TM173	96.3					
Total Aliphatics & Aromatics >C5-35	<0.1 mg/kg	TM173	110					
Total Aliphatics & Aromatics >C5-C44	<0.1 mg/kg	TM173	131					
×00-044								

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100715-42

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

					- I	ortito. o		
voc	MS (S)							
.,	Results Legend	Customer	Sample Ref.	BH01				
М	ISO17025 accredited. mCERTS accredited.		Daniella (ma)					
	Aqueous / settled sample. Dissolved / filtered sample.	9	Depth (m) sample Type	3.60 - 3.80				
tot.unfilt	Total / unfiltered sample.		ate Sampled	Soil/Solid 13/07/2010				
	subcontracted test. % recovery of the surrogate		te Received	15/07/2010				
	standard to check the efficiency		SDG Ref	100715-42				
	of the method. The results of the individual compounds within	Lab Sa	ample No.(s)	1822729				
	the samples are not corrected for this recovery.							
Compo		LOD/Units	Method					
Dibrom	ofluoromethane**	%	TM116	89.6				
Toluen	a d8**	%	TM116	91.8				
4-Brom	ofluorobenzene**	%	TM116	147				
Dichlor	odifluoromethane	<0.004	TM116	<0.004				
Chloror	methane	mg/kg <0.007	TM116	<0.007				
		mg/kg		#				
Vinyl C	hloride	<0.01	TM116	<0.01				
Bromor	nethane	mg/kg <0.013	TM116	<b>*</b>				
D. 00.		mg/kg		M				
Chloroe	ethane	<0.014	TM116	<0.014				
Trichlo	ofluorormethane	mg/kg <0.006	TM116	<0.006				
THORIO	ondoronnounding.	mg/kg	TIVITIO	~0.000 <b>M</b>				
1.1-Dic	hloroethene	<0.01	TM116	<0.01				
Carbon	Disulphide	mg/kg <0.007	TM116	0.289				
Carbon	Distripline	mg/kg	TIVITIO	0.269 <b>M</b>				
Dichlor	omethane	<0.01	TM116	<0.01				
N A = 41=l	Tantian Dutyl Ethan	mg/kg	TMAAC	# 40.044				
ivietnyi	Tertiary Butyl Ether	<0.011 mg/kg	TM116	<0.011 <b>M</b>				
trans-1	-2-Dichloroethene	<0.011	TM116	<0.011				
		mg/kg		M				
1.1-DIC	hloroethane	<0.008 mg/kg	TM116	<0.008 <b>M</b>				
cis-1-2-	-Dichloroethene	<0.005	TM116	<0.005				
		mg/kg		М				
2.2-Dic	hloropropane	<0.012	TM116	<0.012				
Bromod	chloromethane	mg/kg <0.014	TM116	<b>M</b> <0.014				
		mg/kg		М				
Chlorof	form	<0.008	TM116	<0.008 <b>M</b>				
1.1.1-T	richloroethane	mg/kg <0.007	TM116	<0.007				
		mg/kg		М				
1.1-Dic	hloropropene	<0.011	TM116	<0.011				
Carbon	tetrachloride	mg/kg <0.014	TM116	<b>M</b> <0.014				
Carbon	ica domondo	mg/kg	1.01110	м				
1.2-Dic	hloroethane	<0.005	TM116	<0.005				
Benzer	10	mg/kg <0.009	TM116	<0.009				
benzer	IC	<0.009 mg/kg	TIVITIO	<0.009 <b>M</b>				
Trichlor	roethene	<0.009	TM116	<0.009				
100:	hlaranrans	mg/kg	TAAAAA	M <0.012				
1.2-DIC	hloropropane	<0.012 mg/kg	TM116	<0.012 <b>M</b>				
Dibrom	omethane	<0.009	TM116	<0.009				
Bromo	dichloromethane	mg/kg <0.007	TM116	<0.007				
Diomoc	dicinoroniethane	mg/kg	TIVITIO	~0.007 <b>M</b>				
cis-1-3-	-Dichloropropene	<0.014	TM116	<0.014				
Toluen	_	mg/kg <0.005	TM116	M <0.005				
roluen		<0.005 mg/kg	TM116	<0.005 <b>M</b>				
trans-1	-3-Dichloropropene	<0.014	TM116	<0.014				
1107	rightoroothono	mg/kg	TM4440	<b>-0.01</b>				
1.1.2-1	richloroethane	<0.01 mg/kg	TM116	<0.01 <b>M</b>				
1.3-Dic	hloropropane	<0.007	TM116	<0.007				
Teta	Jaroethon -	mg/kg	TAAAAA	# <0.005				
retrach	lloroethene	<0.005 mg/kg	TM116	<0.005 <b>M</b>				
Dibrom	ochloromethane	<0.013	TM116	<0.013				
		mg/kg		М				
1.2-Dib	romoethane	<0.012	TM116	<0.012				
Choroh	enzene	mg/kg <0.005	TM116	<b>M</b> <0.005				
		mg/kg		M				
1.1.1.2	-Tetrachloroethane	<0.01	TM116	<0.01				
Ethylbe	enzene	mg/kg <0.004	TM116	<b>M</b> <0.004				
Laryide		mg/kg	1101110	<0.004 <b>M</b>				
		99					 	

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100715-42

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

**Customer:** Entec UK Ltd **Attention:** Steve Dooley

Order No.:

VOC MS (S)	<u> </u>		
Results Legend	Customer	Sample Ref.	BH01
# ISO17025 accredited.  M mCERTS accredited.		Depth (m)	
aq Aqueous / settled sample. diss.filt Dissolved / filtered sample.	S	Sample Type	
tot.unfilt Total / unfiltered sample.  * subcontracted test.  */ recovery of the surregate		ate Sampled ate Received	
standard to check the efficiency		SDG Ref	15/07/2010 100715-42
of the method. The results of the individual compounds within	Lab Sa	ample No.(s)	1822729
the samples are not corrected for this recovery.			
p/m-Xylene	LOD/Units <0.014	Method TM116	<0.014
p/III-Aylerie	mg/kg	TIVITIO	~0.01 <del>4</del> #
o-Xylene	<0.01 mg/kg	TM116	<0.01
Styrene	<0.01	TM116	<0.01
Bromoform	mg/kg <0.01	TM116	<b>M</b> <0.01
Biomolomi	mg/kg		М
Isopropylbenzene	<0.005 mg/kg	TM116	<0.005
1.1.2.2-Tetrachloroethane	<0.01	TM116	<0.01
1.2.3-Trichloropropane	mg/kg <0.017	TM116	<b>*</b> <0.017
	mg/kg		М
Bromobenzene	<0.01 mg/kg	TM116	<0.01
Propylbenzene	<0.011	TM116	<0.011
2-Chlorotoluene	mg/kg <0.009	TM116	<0.009
	mg/kg		М
1.3.5-Trimethylbenzene	<0.008 mg/kg	TM116	<0.008 #
4-Chlorotoluene	<0.012	TM116	<0.012
tert-Butylbenzene	mg/kg <0.012	TM116	<b>M</b> <0.012
	mg/kg	TM116	#
1.2.4-Trimethylbenzene	<0.009 mg/kg		<0.009 #
sec-Butylbenzene	<0.01	TM116	<0.01
4-Isopropyltoluene	mg/kg <0.011	TM116	<0.011
1.3-Dichlorobenzene	mg/kg <0.006	TM116	<0.006
	mg/kg		М
1.4-Dichlorobenzene	<0.005 mg/kg	TM116	<0.005 <b>M</b>
n-Butylbenzene	<0.01	TM116	<0.01
1.2-Dichlorobenzene	mg/kg <0.012	TM116	<b>M</b> <0.012
	mg/kg		М
1.2-Dibromo-3-chloropropan e	<0.014 mg/kg	TM116	<0.014 <b>M</b>
Tert-amyl methyl ether	<0.015	TM116	<0.015
1.2.4-Trichlorobenzene	mg/kg <0.006	TM116	<0.006
	mg/kg		#
Hexachlorobutadiene	<0.012 mg/kg	TM116	<0.012 <b>M</b>
Naphthalene	<0.013	TM116	<0.013
1.2.3-Trichlorobenzene	mg/kg <0.006	TM116	<0.006
	mg/kg		М
	<u> </u>		

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100715-42

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Results Legend # ISO17025 accredited.	Customer	Sample Ref.	TPD10	TPD10	TPD4	TPD4	TPD4	TPD7
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)	2.60 - 2.70	2.90 - 3.00	0.00 - 0.10	0.50 - 0.60	2.80 - 2.90	0.30 - 0.40
diss.filt Dissolved / filtered sample.	s	ample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
tot.unfilt Total / unfiltered sample.  * subcontracted test.		te Sampled	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
** % recovery of the surrogate		te Received	15/07/2010	15/07/2010	15/07/2010	15/07/2010	15/07/2010	15/07/2010
standard to check the efficiency of the method. The results of the		SDG Ref mple No.(s)	100715-42	100715-42	100715-42	100715-42	100715-42	100715-42
individual compounds within the samples are not corrected	Lab Sa	ilipie No.(s)	1822491	1822592	1822471	1822422	1823171	1822653
for this recovery.								
Component	LOD/Units	Method						
Ammoniacal Nitrogen, exchangeable as NH4	<15 mg/kg	TM024			<15 <b>M</b>	<15 <b>M</b>		
Sulphate, 2:1 water soluble	<0.003 g/l	TM098			0.0298	1.1		
					М	M		
Soil Organic Matter (SOM)	<0.35 %	TM132				1.95		
pH	1 pH Units	TM133			7.42	7.72		
					М	M		
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6	<0.6	<3	<0.6	<0.6	<0.6
Arsenic	<0.6 mg/kg	TM181	#	#	7.43	<b>#</b> 8.6	#	;
Alsenic	<0.0 mg/kg	1101101			7.43 <b>M</b>	6.0 M		
Cadmium	<0.02	TM181			0.46	0.505		
Chromium	mg/kg	TM404			M 49.7	M		
Chromium	<0.9 mg/kg	TM181			48.7 <b>M</b>	56 <b>M</b>		
Copper	<1.4 mg/kg	TM181			30.2	29.2		
					M	M		
Lead	<0.7 mg/kg	TM181			23.5	16.1		
Mercury	<0.14	TM181			<b>M</b> <0.14	<b>M</b> <0.14		
y	mg/kg	1,141101			<0.14 <b>M</b>	<0.14 M		
Nickel	<0.2 mg/kg	TM181			40.1	45.8		
Colonium	41 mallea	TM404			1.99	1.66		
Selenium	<1 mg/kg	TM181			1.99	1.00		
Zinc	<1.9 mg/kg	TM181			116	115		
					M	М		
Boron, water soluble	<1 mg/kg	TM222			1.6	2.21		
					M	М		
l l								

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100715-42

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Steve Dooley

Order No.:

			TDD7					
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	TPD7	TPD7	TPD8	TPD8	TPD8	TPD8
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)	1.10 - 1.20	2.10 - 2.20	0.40 - 0.50	1.10 - 1.20	2.50 - 2.60	2.80 - 2.90
diss.filt Dissolved / filtered sample.	s	ample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
ot.unfilt Total / unfiltered sample.  * subcontracted test.		te Sampled	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
** % recovery of the surrogate	Da	te Received	15/07/2010	15/07/2010	15/07/2010	15/07/2010	15/07/2010	15/07/2010
standard to check the efficiency of the method. The results of the		SDG Ref	100715-42	100715-42	100715-42	100715-42	100715-42	100715-42
individual compounds within	Lab Sa	mple No.(s)	1822849	1822792	1823119	1822842	1823129	1822781
the samples are not corrected for this recovery.								
Component	LOD/Units	Method						
Asbestos Containing	-	TM001				No ACM Detected		
Material Screen Ammoniacal Nitrogen,	<15 mg/kg	TM024	26.5	98.1		<15		<15
exchangeable as NH4			м	М		M		
Sulphate, 2:1 water soluble	<0.003 g/l	TM098	1.31	0.0533		0.211		0.044
Soil Organic Matter (SOM)	<0.35 %	TM132	M	M		<b>M</b> 21		
con organio matter (com)	0.00 %					#		
pH	1 pH Units	TM133	7.67	7.81		8.25		8.37
Chromium, Hexavalent	<0.6 mg/kg	TM151	<b>M</b> <0.6	<b>M</b> <0.6	<0.6	<b>M</b> <0.6	<0.6	<0.6
Cilionium, nexavalem	<0.6 mg/kg	TIVITOT	~0.0 #	<b>~</b> 0.0	<b>~</b> 0.0	<b>~</b> 0.0	<b>~</b> 0.0	<0.0
TPH >C6-C8	<10 mg/kg	TM154	<10	<10		<10		
TDU >C0 C10	<10 ma//-	TM454	<10	<b>~10</b>		<b>-10</b>		
TPH >C8-C10	<10 mg/kg	TM154	<10	<10		<10		
TPH >C10-C12	<10 mg/kg	TM154	<10	<10		<10		
TDU >C12 C16	∠10 ma/l-	TM454	10 1	<b>~10</b>		<b>~10</b>		
TPH >C12-C16	<10 mg/kg	TM154	18.1	<10		<10		
TPH >C16-C21	<10 mg/kg	TM154	37.8	<10		63.6		
TPH >C21-C40	∠10 m=//	T14454	200	404		F20		
11 11 /021-040	<10 mg/kg	TM154	300	181		529		
TPH >C6-C40	<10 mg/kg	TM154	362	189		601		
Arsenic	<0.6 ma/ka	TM181	10.7	10.9		10.3		4.11
7130111U	<0.6 mg/kg	I IVI I O I	10.7 <b>M</b>	10.9 <b>M</b>		10.3 <b>M</b>		4.11
Cadmium	<0.02	TM181	0.42	0.227		0.529		0.0656
Ohramium	mg/kg	T\$4404	M	M 24.4		M		40.0
Chromium	<0.9 mg/kg	TM181	32.7 M	34.4 <b>M</b>		20.8 <b>M</b>		16.2
Copper	<1.4 mg/kg	TM181	26.4	23.8		81.2		17.6
			М	M		М		
Lead	<0.7 mg/kg	TM181	25.3	97.4		21.1		21.5
Mercury	<0.14	TM181	<b>M</b> <0.14	<b>M</b> <0.14		<b>M</b> <0.14		<0.14
	mg/kg		М	М		M		
Nickel	<0.2 mg/kg	TM181	28.7	28		33.2		9.06
Selenium	<1 mg/kg	TM181	M 1.54	1.32		M 2.24		2.61
Seleman	- Tillg/kg	1101101	#	1.52		Z.Z4 #		2.01
Zinc	<1.9 mg/kg	TM181	113	113		172		71
Danasstanasliikla	44//	TN4000	M	M		M		<1
Boron, water soluble	<1 mg/kg	TM222	3.49 <b>M</b>	3.21 <b>M</b>		1.23 <b>M</b>		<1

# **ALcontrol Laboratories Analytical Services**

SDG:

100715-42 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester

Entec UK Ltd Customer: Attention: Steve Dooley

Order No.:

Results Legend # ISO17025 accredited.	Customer	Sample Ref.	TPD9	TPD9	WSD14	WSD14	WSD15	WSD15
M mCERTS accredited. aq Aqueous / settled sample.		Depth (m)	0.20 - 0.30	1.00 - 1.10	0.50 - 0.50	3.00 - 3.20	0.40 - 0.50	3.00 - 3.40
diss.filt Dissolved / filtered sample.	8	Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
tot.unfilt Total / unfiltered sample.  * subcontracted test.		ate Sampled	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
** % recovery of the surrogate		ate Received	15/07/2010	15/07/2010	15/07/2010	15/07/2010	15/07/2010	15/07/2010
standard to check the efficier of the method. The results of	41.	SDG Ref	100715-42	100715-42	100715-42	100715-42	100715-42	100715-42
individual compounds within the samples are not corrected	Lab Sa	ample No.(s)	1822969	1822414	1822872	1822803	1823416	1822813
for this recovery.		Madhad						
Component Asbestos Containing	LOD/Units	Method TM001		No ACM Detected				
Material Screen		TIVIOUT		No Acivi Detected				
Ammoniacal Nitrogen,	<15 mg/kg	TM024		117	171	<15	<15	
exchangeable as NH4	10.000 =//	TN4000		M	M	1.69	M	
Sulphate, 2:1 water soluble	<0.003 g/l	TM098		0.122 <b>M</b>	0.0682 <b>M</b>	1.09 M	1.33 <b>M</b>	
рН	1 pH Units	TM133		8.16	8.13	5.91	9.06	
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6	<0.6	<0.6	<b>M</b> <0.6	<0.6	<1.2
Chiomium, nexavalent	<0.0 mg/kg	TIVITOT	~0.0 #	~0.0 #	4	~0.0 #	~0.0 #	<1.Z
TPH >C6-C8	<10 mg/kg	TM154				<10	<10	
TPH >C8-C10	<10 mg/kg	TM154				<10	<10	
11 11 200-010	~ TO HIG/KG	1 IVI 1 34				<b>~10</b>	<b>\10</b>	
TPH >C10-C12	<10 mg/kg	TM154				<10	<10	
TPH >C12-C16	<10 mg/kg	TM154				<10	19.2	
TPH >C16-C21	<10 mg/kg	TM154				<10	167	
TPH >C21-C40	<10 mg/kg	TM154				276	545	
	- To mg/kg							
TPH >C6-C40	<10 mg/kg	TM154				283	731	
Arsenic	<0.6 mg/kg	TM181		6.12	11.2	<b>#</b> 5.38	13.3	
				М	M	М	M	
Cadmium	<0.02	TM181		0.0816 <b>M</b>	0.414 M	0.671 <b>M</b>	0.346	
Chromium	mg/kg <0.9 mg/kg	TM181		26.5	<b>M</b> 39.7	47.9	<b>M</b> 21.9	
				М	M	М	M	
Copper	<1.4 mg/kg	TM181		16.2 <b>M</b>	43 <b>M</b>	34.8 <b>M</b>	51 <b>M</b>	
Lead	<0.7 mg/kg	TM181		14.2	24.5	12.8	39	
				М	M	M	M	
Mercury	<0.14	TM181		<0.14	<0.14	<0.14	<0.14	
Nickel	mg/kg <0.2 mg/kg	TM181		13.8	40.2	<b>M</b> 56.5	<b>M</b> 42.7	
11101101	0.2gg			M	м	M		
Selenium	<1 mg/kg	TM181		1.16	1.65	2.82	1.44	
Zinc	<1.9 mg/kg	TM181		63.9	124	# 155	103	
				M	M	M	M	
Boron, water soluble	<1 mg/kg	TM222		1.91	4.57	5.75	1.64	
	1			M	M	M	M	
	+							
	+							
		7						
	1							

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100715-42

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

	Telegoria in the second									
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	WSE15	WSE15		WSE16	WSE16	WSE9	
М	mCERTS accredited. Aqueous / settled sample.		Depth (m)	0.30 - 0.40	1.80 - 2.00		0.50 - 0.60	1.20 - 1.40	0.50 - 0.60	
aq diss.filt	Dissolved / filtered sample.	S	ample Type	Soil/Solid	Soil/Solid		Soil/Solid	Soil/Solid	Soil/Solid	
tot.unfilt	Total / unfiltered sample. subcontracted test.		ate Sampled	13/07/2010	13/07/2010		13/07/2010	13/07/2010	13/07/2010	
**	% recovery of the surrogate	Da	te Received	15/07/2010	15/07/2010		15/07/2010	15/07/2010	15/07/2010	
	standard to check the efficiency of the method. The results of the	Lob So	SDG Ref imple No.(s)	100715-42	100715-42		100715-42	100715-42	100715-42	
	individual compounds within the samples are not corrected	Lab Sa	imple No.(s)	1822855	1823628		1822986	1823508	1823615	
	for this recovery.									
Compo	nent niacal Nitrogen,	LOD/Units <15 mg/kg	Method TM024	<15	<15		<15		<15	
	geable as NH4	< 15 mg/kg	110024	~15 <b>M</b>	<b>~15</b>	м	~15 <b>N</b>	1	~15 M	
	te, 2:1 water soluble	<0.003 g/l	TM098	0.008	0.307		0.0677		<0.003	
Coil Or	appie Matter (COM)	-0.2E 0/	TM422	М		М	N	1	M	
3011 OI	ganic Matter (SOM)	<0.35 %	TM132						2.31 #	
рН		1 pH Units	TM133	8.36	4.51		8.03		8.32	
				M		М	N		M	
Chrom	um, Hexavalent	<0.6 mg/kg	TM151	<0.6 #	<1.2	#	<1.2	<0.6 # #	<0.6 #	
TPH >0	C6-C8	<10 mg/kg	TM154	п	<10	п	<10	T #	<10	
TPH >0	C8-C10	<10 mg/kg	TM154		<10		<10		<10	
TPH >0	C10-C12	<10 mg/kg	TM154		<10		<10		<10	
TPH >(	C12-C16	<10 mg/kg	TM154		<10		<10		<10	
TPH >0	C16-C21	<10 mg/kg	TM154		<10	-	12.4		30	
		. 5 mg/kg	154				1 <del>4</del>			
TPH >0	C21-C40	<10 mg/kg	TM154		<10		136		224	
TPH >(	C6 C40	<10 mg/kg	TM154		<10	_	152		256	
IPH 20	56-640	<10 mg/kg	1101154		<10	#		#	250 #	
Arsenio	;	<0.6 mg/kg	TM181	7.98	5.67		8.28		8.87	
0.1.1		-0.00	T1404	M	-0.00	М	N	1	M	
Cadmi	ım	<0.02 mg/kg	TM181	0.125 <b>M</b>	<0.02	м	0.212 N	4	0.2 <b>M</b>	
Chromi	um	<0.9 mg/kg	TM181	41.4	42.7	-141	55.5		44.1	
				М		М	N	1	М	
Copper		<1.4 mg/kg	TM181	19 <b>M</b>	25.7	м	28.4 N	4	27.5 <b>M</b>	
Lead		<0.7 mg/kg	TM181	35.1	17.8	IVI	20.3	1	37.8	
				М		М	N	1	М	
Mercur	y	<0.14	TM181	<0.14	<0.14		<0.14	_	<0.14	
Nickel		mg/kg <0.2 mg/kg	TM181	<b>M</b> 17	13.5	М	<b>N</b>	1	<b>M</b> 25.1	
THORE		-0.2 mg/ng	1111101	.,	10.0	М	20.0 N	1	М	
Seleniu	im	<1 mg/kg	TM181	1.15	1.52		1.62		1.67	
Zinc		<1.9 mg/kg	TM181	71.5	37	#	96.9	#	97.9	
ZIIIC		TI.9 IIIg/kg	TIVITOT	71.5 M	37	М	90.9 N	1	97.9 M	
Boron,	water soluble	<1 mg/kg	TM222	2.12	2.52		1.67		2.05	
				M		М	N	1	М	
						-				
						_				
						$\rightarrow$				

### **ALcontrol Laboratories Analytical Services**

100715-42 SDG:

H ENTEC SHW-24 Job:

**Client Reference:** Location:

KL056 DSDC Bicester

26999

Customer: Attention: Order No.:

Entec UK Ltd Steve Dooley

Report No:

91349

### **ASSOCIATED AQC DATA**

### Ammonium Soil by Titration

Component	Method Code	QC 13	QC 17	QC 15	QC 16
Exchangeable	TM024	<b>88.97</b>	<b>87.18</b>	<b>88.08</b>	<b>87.54</b>
Ammonium as NH4		80.84 : 103.27	80.84 : 103.27	80.84 : 103.27	80.84 : 103.27

#### **Boron Water Soluble**

Component	Method Code	QC 11	QC 16	QC 14
Water Soluble Boron	TM222	<b>104.95</b> 82.59 : 112.64	<b>100.20</b> 82.59 : 112.64	<b>99.20</b> 82.59 : 112.64

#### EPH CWG (Aliphatic) GC (S)

Component	Method Code	QC 14
Total Aliphatics >C12-C35	TM173	<b>81.79</b> 55.20 : 114.58

#### Hexavalent Chromium (s)

Component	Method Code	QC 11	QC 13	QC 13
Hexavalent Chromium	TM151	112.80	109.40	108.40
		76.40 : 131.80	76.40 : 131.80	76.40 : 131.80

#### Metals by iCap-OES (Soil)

Component	Method Code	QC 18	QC 15	QC 11
Aluminium	TM181	<b>108.50</b> 95.21 : 133.11	<b>108.11</b> 95.21 : 133.11	<b>109.67</b> 95.21 : 133.11
Antimony	TM181	<b>88.97</b> 63.92 : 138.56	<b>97.82</b> 63.92 : 138.56	<b>104.62</b> 63.92 : 138.56
Arsenic	TM181	<b>93.28</b> 77.96 : 122.04	<b>98.45</b> 77.96 : 122.04	<b>100.34</b> 77.96 : 122.04
Barium	TM181	<b>98.09</b> 90.49 : 117.24	<b>97.90</b> 90.49 : 117.24	<b>105.34</b> 90.49 : 117.24
Beryllium	TM181	<b>85.94</b> 77.50 : 122.50	<b>95.87</b> 77.50 : 122.50	<b>103.31</b> 77.50 : 122.50
Boron	TM181	<b>93.55</b> 82.46 : 141.11	<b>93.82</b> 82.46 : 141.11	<b>108.59</b> 82.46 : 141.11
Cadmium	TM181	<b>86.13</b> 77.50 : 122.50	<b>95.36</b> 77.50 : 122.50	<b>104.18</b> 77.50 : 122.50
Chromium	TM181	<b>94.52</b> 82.90 : 117.10	<b>94.71</b> 82.90 : 117.10	<b>97.47</b> 82.90 : 117.10
Cobalt	TM181	<b>91.12</b> 78.26 : 121.74	<b>96.27</b> 78.26 : 121.74	<b>101.69</b> 78.26 : 121.74
Copper	TM181	<b>96.31</b> 86.52 : 113.48	<b>97.13</b> 86.52 : 113.48	<b>97.81</b> 86.52 : 113.48

### **ALcontrol Laboratories Analytical Services**

**SDG**: 100715-42

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.: Report No:

ort No: 91349

		QC 18	QC 15	QC 11
Iron	TM181	<b>102.14</b> 93.59 : 123.28	<b>101.87</b> 93.59 : 123.28	<b>105.67</b> 93.59 : 123.28
Lead	TM181	<b>97.78</b> 81.22 : 118.78	<b>98.06</b> 81.22 : 118.78	<b>99.78</b> 81.22 : 118.78
Manganese	TM181	<b>92.73</b> 87.42 : 112.58	<b>95.06</b> 87.42 : 112.58	<b>96.80</b> 87.42 : 112.58
Mercury	TM181	<b>95.87</b> 72.27 : 127.73	<b>104.66</b> 72.27 : 127.73	<b>105.10</b> 72.27 : 127.73
Molybdenum	TM181	<b>85.23</b> 71.12 : 128.88	<b>94.49</b> 71.12 : 128.88	<b>114.17</b> 71.12 : 128.88
Nickel	TM181	<b>96.79</b> 81.27 : 118.73	<b>97.48</b> 81.27 : 118.73	<b>99.92</b> 81.27 : 118.73
Phosphorus	TM181	<b>94.48</b> 84.04 : 115.96	<b>98.58</b> 84.04 : 115.96	<b>98.54</b> 84.04 : 115.96
Selenium	TM181	<b>86.36</b> 72.61 : 127.39	<b>104.54</b> 72.61 : 127.39	<b>110.18</b> 72.61 : 127.39
Strontium	TM181	<b>94.79</b> 80.21 : 119.79	<b>99.71</b> 80.21 : 119.79	<b>93.44</b> 80.21 : 119.79
Thallium	TM181	<b>83.07</b> 73.04 : 126.96	<b>90.56</b> 73.04 : 126.96	<b>101.94</b> 73.04 : 126.96
Tin	TM181	<b>88.28</b> 71.55 : 128.45	<b>94.22</b> 71.55 : 128.45	<b>104.41</b> 71.55 : 128.45
Titanium	TM181	<b>99.85</b> 78.26 : 121.74	<b>98.49</b> 78.26 : 121.74	<b>108.78</b> 78.26 : 121.74
Vanadium	TM181	<b>96.22</b> 82.03 : 117.97	<b>97.50</b> 82.03 : 117.97	<b>96.96</b> 82.03 : 117.97
Zinc	TM181	<b>90.30</b> 77.50 : 122.50	<b>93.83</b> 77.50 : 122.50	<b>92.48</b> 77.50 : 122.50

### PAH by GCMS

Component	Method Code	QC 19
Acenaphthene	TM218	<b>96.10</b> 71.41 : 116.50
Acenaphthylene	TM218	<b>86.04</b> 74.28 : 102.70
Anthracene	TM218	<b>91.23</b> 67.40 : 117.21
Benz(a)anthracene	TM218	<b>102.22</b> 66.80 : 125.05
Benzo(a)pyrene	TM218	<b>105.87</b> 69.15 : 119.77
Benzo(b)fluoranthene	TM218	<b>107.60</b> 70.01 : 124.88
Benzo(ghi)perylene	TM218	<b>109.94</b> 81.23 : 116.67
Benzo(k)fluoranthene	TM218	<b>106.01</b> 71.46 : 117.67
Chrysene	TM218	<b>102.71</b> 71.32 : 130.95
Dibenzo(ah)anthracene	TM218	<b>111.74</b> 81.17 : 118.65
Fluoranthene	TM218	<b>95.77</b> 69.52 : 118.84
Fluorene	TM218	<b>94.28</b> 71.38 : 111.04

### **ALcontrol Laboratories Analytical Services**

**SDG**: 100715-42

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Order No.:

**Report No:** 91349

Indeno(123cd)pyrene	TM218	<b>112.31</b> 80.81 : 118.96			
Naphthalene	TM218	<b>90.36</b> 81.16 : 104.84			
Phenanthrene	TM218	<b>96.50</b> 69.56 : 121.45			
Pyrene	TM218	<b>95.68</b> 70.34 : 117.79			

#### PCBs (vs Aroclor 1254)

Component	Method Code	QC 14
PCBs (vs Aroclor 1254)	TM070	109.33
		75.18 : 122.16

#### pН

Component	Method Code	QC 18	QC 19	QC 12	QC 10	QC 14
pН	TM133	100.75	100.38	99.62	98.75	100.00
		97.90 : 102.35	97.90 : 102.35	97.90 : 102.35	97.42 : 102.50	97.90 : 102.35

#### Semi Volatile Organic Compounds

Component	Method Code	QC 10
4-Bromophenylphenyleth er (Soil)	TM157	<b>87.87</b> 28.30 : 143.78
Benzo(a)anthracene (Soil)	TM157	<b>94.55</b> 18.50 : 151.06
Hexachlorobutadiene (Soil)	TM157	<b>86.87</b> 31.16 : 138.34
Naphthalene (Soil)	TM157	<b>89.73</b> 26.59 : 145.57
Nitrobenzene (Soil)	TM157	<b>87.50</b> 25.35 : 142.64
Phenol (Soil)	TM157	<b>86.80</b> 28.59 : 134.35

### Total Organic Carbon

Component	Method Code	QC 11	QC 19	QC 18
Total Organic Carbon	TM132	92.99	98.03	97.96
		88.75 : 104.70	88.75 : 104.70	88.75 : 104.70

#### TPH c6-40 Value of soil

Component	Method Code	QC 16	QC 11
Diesel QC	TM154	<b>92.86</b> 87.23 : 113.71	<b>92.67</b> 87.23 : 113.71
Lube Oil QC	TM154	<b>104.28</b> 88.71 : 110.56	<b>101.36</b> 88.71 : 110.56

**ALcontrol Laboratories Analytical Services** 

100715-42 SDG:

H ENTEC SHW-24 Job:

26999 **Client Reference:** 

Location: KL056 DSDC Bicester **Customer:** Attention:

Entec UK Ltd Steve Dooley

Order No.:

**Report No:** 91349

		QC 16	QC 11
TPH C6-40 Corrected	TM154	<b>98.57</b> 86.39 : 109.99	<b>97.01</b> 86.39 : 109.99

#### Water Soluble Sulphate 2:1

Component	Component Method Code		QC 12	QC 14
Soluble SO4	TM098	<b>82.09</b> 76.87 : 120.45	<b>81.57</b> 76.87 : 120.45	<b>84.69</b> 76.87 : 120.45

The above information details the reference name of the analytical quality control sample (AQC) that has been run with the samples contained in this report for the different methods of analysis.

The figure detailed is the percentage recovery result for the AQC.

The subscript numbers below are the percentage recovery lower control limit (LCL) and the upper control limit (UCL). The percentage recovery result for the AQC should be between these limits to be statistically in control.

### **ALcontrol Laboratories Analytical Services**



### **Table of Results - Appendix**

R	REPORT KEY  Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03x10-7								
	NDP	No Determination Possible	#	ISO 17025 Accredited		Subcontracted Test	M	MCERTS Accredited	
	NFD	No Fibres Detected	PFD	Possible Fibres Detected		Result previously reported (Incremental reports only)	EC	Equivalent Carbon (Aromatics C8-C35)	

Note: Method detection limits are	not always achievable due to various circumstances beyond	our control	
Method No	Reference	Description	Wet/Dry Sample ¹
PM001		Preparation of Samples for Metals Analysis	Dry
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material	Wet
TM001	In - house Method	Determination of asbestos containing material by screening on solids	
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids	Wet
TM070	Modified: US EPA Method 8250 & 625	Determination of Total Polychlorinated Biphenyls (PCBÆs) as Aroclor 1254 by GC-MS in Soils	Dry
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)	
TM098	Method 4500E, AWWA/APHA, 20th Ed., 1999	Determination of Sulphate using the Kone Analyser	Dry
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS	
TM132	In - house Method	ELTRA CS800 Operators Guide	Dry
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter	Wet
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser	Wet
TM154	In - house Method	Determination of Petroleum Hydrocarbons by EZ Flash GC-FID in the Carbon range C6- C40	Wet
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone	Wet
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID	Dry
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES	Dry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers	Dry
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546	Wet
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer	Dry

<sup>&</sup>lt;sup>1</sup> Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

### **APPENDIX**

#### **APPENDIX**

- Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following:
   NRA Leach tests, flash point, ammonium as NH<sub>4</sub> by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and
   TOF-MS TICS.
- 2. Samples will be run in duplicate upon request, but an additional charge may be incurred.
- 3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. Alcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.
- 4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
- 5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
- 6. When requested, the individual sub sample scheduled will be screened in house for the presence of large asbestos containing material fragments/pieces. If no asbestos containing material is found this will be reported as 'no asbestos containing material detected'. If asbestos containing material is detected it will be removed and analysed by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If asbestos containing material is present no further analysis will be undertaken. At no point is the fibre content of the soil sample determined.
- 7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.
- 8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.
- 9. NDP No determination possible due to insufficient/unsuitable sample.
- 10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals total metals must be requested separately.
- 11. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.
- 12. Results relate only to the items tested
- 13. **Surrogate recoveries** Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 130 %.
- Product analyses Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.
- 15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).
- 16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 14).
- 17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
- 18. Our MCERTS accreditation for PAHs by GCMS applies to all product types apart from Kerosene, where naphthalene only is not accredited.
- 19. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
- 19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.
- 20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
- 21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
- 22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
- 23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

#### LIQUID MATRICES EXTRACTION SUMMARY

ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAH MS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GS MS
SVOC	DCM	LIQUID/LIQUID SHAKE	GC MS
FREE SULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST OCP/OPP	DCM	LIQUID/LIQUID SHAKE	GC MS
TRIAZINE HERBS	DCM	LIQUID/LIQUID SHAKE	GC MS
PHENOLS MS	DCM	SOLID PHASE EXTRACTION	GC MS
TPH by INFRA RED (IR)	TCE	LIQUID/LIQUID EXTRACTION	HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID EXTRACTION	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GC FID

#### SOLID MATRICES EXTRACTION SUMMARY

	001.0	MATRICES EXTRACTION SUMMARY		
ANALYSIS	D/C OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	SISATV
Solvent Extractable Matter	D&C	DCM	SOXTHERM	GRAVIMETRIC
Cyclohexane Ext. Matter	D&C	CYCLOHEXANE	SOXTHERM	GRAVIMETRIC
Thin Layer Chromatography	D&C	DCM	SOXTHERM	IATROSCAN
Elemental Sulphur	D&C	DCM	SOXTHERM	HPLC
Phenols by GCMS	WET	DCM	SOXTHERM	GC-MS
Herbicides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
Pesticides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
EPH (DRO)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Min oil)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Cleaned up)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH CWG by GC	D&C	HEXANE:ACETONE	END OVER END	GC-FID
PCB tot / PCB con	D&C	HEXANE:ACETONE	END OVER END	GC-MS
Polyaromatic Hydrocarbons (MS)	WET	HEXANE:ACETONE	Microwave TM218.	GC-MS
C8-C40 (C6-C40)EZ Flash	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Polyaromatic Hydrocarbons Rapid GC	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Semi Volatile Organic Compounds	WET	DCM:ACETONE	SONICATE	GC-MS

#### **Identification of Asbestos in Bulk Materials**

The results for asbestos identification for soil samples are obtained from possible Asbestos Containing Material, removed during the 'Screening of soils for Asbestos Containing Materials', which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

#### **Visual Estimation Of Fibre Content.**

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: -

Trace – Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in MDHS 100.

The identification of asbestos containing materials falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

#### 



Unit 7-8 Hawarden Business Park Manor Road (off Manor Lane) Hawarden

> Deeside CH5 3US Tel: (01244) 528700

Fax: (01244) 528701 email: mkt@alcontrol.com Website: www.alcontrol.com

Entec UK Ltd Canon Court North Abbey Lawn Abbey Foregate Shrewsbury Shropshire SY2 5DE

**Attention:** Steve Dooley

#### **CERTIFICATE OF ANALYSIS**

 Date:
 26 July 2010

 Customer:
 H\_ENTEC\_SHW-25

Sample Delivery Group (SDG): 100716-54 Report No.: 91555

Your Reference: 12L056

Location: DSDC Bicester

We received 45 samples on Friday July 16, 2010 and 45 of these samples were scheduled for analysis which was completed on Monday July 26, 2010. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Asbestos testing - we are not accredited for screening soil samples for asbestos fibres. We are only accredited to identify asbestos fibres in bulk material (ACM).

Approved By:



#### **Iain Swinton**

Operations Director - Land UK & Ireland



### **ALcontrol Laboratories Analytical Services**

 SDG:
 100716-54
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-25
 Attention:
 Steve Dooley

Client Reference: 12L056

Location: DSDC Bicester Report No: 91555

### Received Sample Overview

Order No.:

1832273   BH601   1.00 - 1.30   14/07/2010   1832273   BH601   1.00 - 1.30   14/07/2010   1832274   BH602   1.00 - 1.30   1.407/2010   1832279   BH602   1.60 - 2.00   1.407/2010   1832279   BH602   1.60 - 2.00   1.407/2010   1832279   BH602   1.60 - 2.00   1.407/2010   1832284   BH602   1.60 - 2.00   1.407/2010   1832285   TPC1   1.00   1.407/2010   1.807/2010   1.	Lab Sample No(s)	Received Sample Ov  Customer Sample Ref.	Depth (m)	Sampled Date
1832276   BHE01   3.00 3.20   14/07/2010   1832277   BHE02   0.20 0.40   14/07/2010   1832279   BHE02   1.60 - 2.00   14/07/2010   1832279   BHE02   1.60 - 2.00   14/07/2010   1832287   TPS1   1.00   14/07/2010   1832287   TPS1   0.20   14/07/2010   1832288   TPC1   0.50   14/07/2010   1832288   TPC1   1.30   14/07/2010   1832288   TPC1   1.50   14/07/2010   1832288   TPC1   1.50   14/07/2010   1832288   TPC1   1.50   14/07/2010   1832288   TPC2   0.70   14/07/2010   1832288   TPC2   0.70   14/07/2010   1832288   TPC2   1.60   14/07/2010   1832289   TPC2   1.60   14/07/2010   1832289   TPC3   0.20   14/07/2010   1832289   TPC3   0.20   14/07/2010   1832289   TPC3   0.20   14/07/2010   1832289   TPC3   0.20   14/07/2010   1832293   TPC3   2.50   14/07/2010   1832293   TPC3   2.50   14/07/2010   1832293   TPC3   2.50   14/07/2010   1832293   TPC4   0.50   14/07/2010   1832293   TPC4   0.50   14/07/2010   1832294   TPC4   0.50   14/07/2010   1832295   TPC4   1.50   14/07/2010   1832296   TPC5   0.10   14/07/2010   1832296   TPC5   0.10   14/07/2010   1832296   TPC5   0.50   0.50   14/07/2010   1832296   TPC5   0.50   0.50   14/07/2010   1832206   TPC5   0.50   0.50   0.50   0.50   14/07/2010   1832206   TPC5   0.50   0.50   0.50   14/07/2010   1832206   TPC5   0.50   0.50   0.50   14/07/2010   1832206   TPC5   0.50   0.50   0.50   0.50   14/07/2010   18322				
1832277   BH802   0.20 - 0.40	1832273	BHE01	1.00 - 1.30	14/07/2010
1832279   BHS92   1.60 - 2.00	1832276	BHE01	3.00 - 3.20	14/07/2010
1637261	1832277	BHE02	0.20 - 0.40	14/07/2010
1832282   TPSL	1832279	BHE02	1.60 - 2.00	14/07/2010
1832287   TPC1	1832281	BHE02	6.80 - 7.00	14/07/2010
1832283   TPC1	1832282	TP5L	1.00	14/07/2010
1832285         TPC1         1.30         14/07/2010           1832284         TPC1         1.50         14/07/2010           1832289         TPC2         0.70         14/07/2010           1832288         TPC2         1.60         14/07/2010           1832292         TPC3         0.20         14/07/2010           1832293         TPC3         2.50         14/07/2010           1832293         TPC4         0.50         14/07/2010           1832295         TPC4         0.50         14/07/2010           1832296         TPC4         0.50         14/07/2010           1832297         TPC5         0.10         14/07/2010           1832298         TPC5         0.10         14/07/2010           1832209         TPD1         0.50         14/07/2010           1832201         TPD2         0.50         14/07/2010           1832302         TPD2         0.50         14/07/2010           1832303         TPD3         0.60         14/07/2010           1832304         TPD3         0.60         14/07/2010           1832305         TPD5         0.50         0.60         14/07/2010           1832306         TPD5	1832287	TPC1	0.20	14/07/2010
1832284 TPC1 1.50 14/07/2010 1832289 TPC2 0.70 14/07/2010 1832288 TPC2 1.60 14/07/2010 1832290 TPC3 0.20 14/07/2010 1832290 TPC3 0.20 14/07/2010 1832291 TPC3 1.20 14/07/2010 1832293 TPC3 2.50 14/07/2010 1832294 TPC4 0.50 14/07/2010 1832295 TPC4 1.50 14/07/2010 1832296 TPC5 0.10 14/07/2010 1832297 TPC5 2.00 14/07/2010 1832299 TPC1 1.50 1.40 14/07/2010 1832299 TPC1 1.30 14/07/2010 1832299 TPD1 1.30 14/07/2010 1832299 TPD1 1.30 14/07/2010 1832300 TPD1 1.30 14/07/2010 1832300 TPD2 1.90 14/07/2010 1832301 TPD2 1.90 14/07/2010 1832302 TPD2 0.50 14/07/2010 1832303 TPD3 0.60 14/07/2010 1832304 TPD3 1.40 14/07/2010 1832305 TPD5 0.50 0.60 14/07/2010 1832307 TPD5 3.80 14/07/2010 1832309 TPD6 0.30 14/07/2010 1832301 WSD3 0.10 0.20 14/07/2010 1832301 WSD3 0.10 0.20 14/07/2010 1832313 WSD3 0.10 0.20 14/07/2010 1832314 WSD4 0.00 0.10 14/07/2010 1832315 WSD4 0.00 0.10 14/07/2010 1832317 WSD5 0.50 0.50 0.50 14/07/2010 1832319 WSD5 0.60 0.70 14/07/2010 1832321 WSD6 0.50 0.00 14/07/2010	1832283	TPC1	0.50	14/07/2010
1832289         TPC2         0.70         14/07/2010           1832288         TPC2         1.60         14/07/2010           1832292         TPC3         0.20         14/07/2010           1832293         TPC3         1.20         14/07/2010           1832294         TPC4         0.50         14/07/2010           1832295         TPC4         1.50         14/07/2010           1832298         TPC5         0.10         14/07/2010           1832299         TPD1         0.50         14/07/2010           1832299         TPD1         1.30         14/07/2010           1832301         TPD2         0.50         14/07/2010           1832303         TPD3         0.60         14/07/2010           1832304         TPD3         0.60         14/07/2010           1832305         TPD3         0.60         14/07/2010           1832307         TPD3         0.60         14/07/2010           1832309         TPD5         0.50 - 0.60         14/07/2010           1832309         TPD5         0.50 - 0.60         14/07/2010           1832310         WSD3         0.50 - 0.60         14/07/2010           1832323         WSD3<	1832285	TPC1	1.30	14/07/2010
1832288         TPC2         1.60         14/07/2010           1832292         TPC3         0.20         14/07/2010           1832290         TPC3         1.20         14/07/2010           1832293         TPC3         2.50         14/07/2010           1832294         TPC4         0.50         14/07/2010           1832295         TPC4         1.50         14/07/2010           1832298         TPC5         0.10         14/07/2010           1832299         TPC5         2.00         14/07/2010           1832299         TPD1         0.50         14/07/2010           1832300         TPD1         1.30         14/07/2010           1832301         TPD2         0.50         14/07/2010           1832302         TPD2         1.90         14/07/2010           1832303         TPD3         0.60         14/07/2010           1832304         TPD3         1.40         14/07/2010           1832305         TPD5         3.80         14/07/2010           1832306         TPD5         3.80         14/07/2010           1832309         TPD6         0.50 - 0.60         14/07/2010           1832310         WSD3         <	1832284	TPC1	1.50	14/07/2010
1832292         TPC3         0.20         14/07/2010           1832290         TPC3         1.20         14/07/2010           1832293         TPC3         2.50         14/07/2010           1832294         TPC4         0.50         14/07/2010           1832298         TPC5         0.10         14/07/2010           1832298         TPC5         0.10         14/07/2010           1832290         TPD1         0.50         14/07/2010           1832299         TPD1         1.30         14/07/2010           1832301         TPD2         0.50         14/07/2010           1832302         TPD2         0.50         14/07/2010           1832303         TPD3         0.60         14/07/2010           1832304         TPD3         1.40         14/07/2010           1832305         TPD3         0.60         14/07/2010           1832306         TPD3         0.60         14/07/2010           1832307         TPD5         3.80         14/07/2010           1832309         TPD6         0.30         14/07/2010           1832310         WSD3         0.50 - 0.60         14/07/2010           1832313         WSD3         <	1832289	TPC2	0.70	14/07/2010
1832290         TPC3         1.20         14/07/2010           1832293         TPC3         2.50         14/07/2010           1832294         TPC4         0.50         14/07/2010           1832295         TPC4         1.50         14/07/2010           1832298         TPC5         0.10         14/07/2010           1832297         TPC5         2.00         14/07/2010           1832200         TPD1         0.50         14/07/2010           1832202         TPD2         0.50         14/07/2010           1832202         TPD2         0.50         14/07/2010           1832303         TPD3         0.60         14/07/2010           1832304         TPD3         1.40         14/07/2010           1832305         TPD5         0.50 - 0.60         14/07/2010           1832307         TPD5         3.80         14/07/2010           1832309         TPD6         0.30         14/07/2010           1832310         WSD3         0.10 - 0.20         14/07/2010           1832310         WSD3         0.10 - 0.20         14/07/2010           1832313         WSD3         0.00 - 0.10         14/07/2010           1832314 <t< th=""><td>1832288</td><td>TPC2</td><td>1.60</td><td>14/07/2010</td></t<>	1832288	TPC2	1.60	14/07/2010
1832293         TPC3         2.50         14/07/2010           1832294         TPC4         0.50         14/07/2010           1832295         TPC4         1.50         14/07/2010           1832298         TPC5         0.10         14/07/2010           1832297         TPC5         2.00         14/07/2010           1832300         TPD1         0.50         14/07/2010           1832299         TPD1         1.30         14/07/2010           1832301         TPD2         0.50         14/07/2010           1832303         TPD3         0.60         14/07/2010           1832304         TPD3         1.40         14/07/2010           1832305         TPD3         0.50         14/07/2010           1832307         TPD5         0.50         0.60         14/07/2010           1832308         TPD5         0.50         0.60         14/07/2010           1832312         WSD3         0.50         0.60         14/07/2010           1832312         WSD3         0.10         0.20         14/07/2010           1832313         WSD3         0.50         0.60         14/07/2010           1832314         WSD4         0.00	1832292	TPC3	0.20	14/07/2010
1832294       TPC4       0.50       14/07/2010         1832295       TPC4       1.50       14/07/2010         1832298       TPC5       0.10       14/07/2010         1832297       TEC5       2.00       14/07/2010         1832300       TPD1       0.50       14/07/2010         1832302       TPD2       0.50       14/07/2010         1832303       TPD3       0.60       14/07/2010         1832303       TPD3       0.60       14/07/2010         1832304       TPD3       1.40       14/07/2010         1832305       TPD5       0.50 - 0.60       14/07/2010         1832307       TPD5       3.80       14/07/2010         1832309       TPD6       0.30       14/07/2010         1832309       TPD6       0.30       14/07/2010         1832310       WSD3       0.10 - 0.20       14/07/2010         1832312       WSD3       0.10 - 0.20       14/07/2010         1832313       WSD3       0.50 - 0.60       14/07/2010         1832314       WSD4       0.00 - 0.10       14/07/2010         1832316       WSD4       0.00 - 0.10       14/07/2010         1832319       WSD5 </th <td>1832290</td> <td>TPC3</td> <td>1.20</td> <td>14/07/2010</td>	1832290	TPC3	1.20	14/07/2010
1832295         TPC4         1.50         14/07/2010           1832298         TPC5         0.10         14/07/2010           1832297         TPC5         2.00         14/07/2010           1832300         TPD1         0.50         14/07/2010           1832299         TPD1         1.30         14/07/2010           1832302         TPD2         0.50         14/07/2010           1832301         TPD2         1.90         14/07/2010           1832303         TPD3         0.60         14/07/2010           1832304         TPD3         1.40         14/07/2010           1832305         TPD5         0.50 - 0.60         14/07/2010           1832307         TPD5         3.80         14/07/2010           1832309         TPD6         0.30         14/07/2010           1832309         TPD6         2.40         14/07/2010           1832312         WSD3         0.10 - 0.20         14/07/2010           1832313         WSD3         0.50 - 0.60         14/07/2010           1832313         WSD3         0.50 - 0.60         14/07/2010           1832316         WSD4         0.00 - 0.10         14/07/2010           1832317	1832293	TPC3	2.50	14/07/2010
1832298         TPC5         0.10         14/07/2010           1832297         TPC5         2.00         14/07/2010           1832200         TPD1         0.50         14/07/2010           1832299         TPD1         1.30         14/07/2010           1832301         TPD2         0.50         14/07/2010           1832303         TPD3         0.60         14/07/2010           1832304         TPD3         1.40         14/07/2010           1832305         TPD5         0.50 - 0.60         14/07/2010           1832307         TPD5         3.80         14/07/2010           1832308         TPD6         0.30         14/07/2010           1832312         WSD3         0.10 - 0.20         14/07/2010           1832313         WSD3         0.50 - 0.60         14/07/2010           1832314         WSD4         0.50 - 0.60         14/07/2010           1832315         WSD4         0.00 - 0.10         14/07/2010           1832317         WSD4         0.50 - 0.60         14/07/2010           1832317         WSD5         0.20 - 0.30         14/07/2010           1832319         WSD5         0.60 - 0.70         14/07/2010	1832294	TPC4	0.50	14/07/2010
1832297         TPC5         2.00         14/07/2010           1832300         TPD1         0.50         14/07/2010           1832299         TPD1         1.30         14/07/2010           1832301         TPD2         0.50         14/07/2010           1832303         TPD3         0.60         14/07/2010           1832304         TPD3         1.40         14/07/2010           1832305         TPD5         0.50 - 0.60         14/07/2010           1832307         TPD5         3.80         14/07/2010           1832309         TPD6         0.30         14/07/2010           1832308         TPD6         2.40         14/07/2010           1832310         WSD3         0.10 - 0.20         14/07/2010           1832313         WSD3         0.50 - 0.60         14/07/2010           1832314         WSD4         0.00 - 0.10         14/07/2010           1832315         WSD4         0.00 - 0.10         14/07/2010           1832316         WSD4         0.20 - 0.30         14/07/2010           1832317         WSD5         0.20 - 0.30         14/07/2010           1832319         WSD5         0.60 - 0.70         14/07/2010	1832295	TPC4	1.50	14/07/2010
1832300       TPD1       0.50       14/07/2010         1832299       TPD1       1.30       14/07/2010         1832302       TPD2       0.50       14/07/2010         1832301       TPD2       1.90       14/07/2010         1832303       TPD3       0.60       14/07/2010         1832304       TPD3       1.40       14/07/2010         1832305       TPD5       0.50 - 0.60       14/07/2010         1832307       TPD5       3.80       14/07/2010         1832309       TPD6       0.30       14/07/2010         1832312       WSD3       0.10 - 0.20       14/07/2010         1832312       WSD3       0.50 - 0.60       14/07/2010         1832313       WSD3       0.50 - 0.60       14/07/2010         1832314       WSD4       0.00 - 0.10       14/07/2010         1832315       WSD4       0.00 - 0.60       14/07/2010         1832316       WSD4       0.50 - 0.60       14/07/2010         1832319       WSD5       0.20 - 0.30       14/07/2010         1832320       WSD5       0.60 - 0.70       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1	1832298	TPC5	0.10	14/07/2010
1832299       TPD1       1.30       14/07/2010         1832302       TPD2       0.50       14/07/2010         1832301       TPD2       1.90       14/07/2010         1832303       TPD3       0.60       14/07/2010         1832304       TPD3       1.40       14/07/2010         1832305       TPD5       0.50 - 0.60       14/07/2010         1832307       TPD5       3.80       14/07/2010         1832309       TPD6       0.30       14/07/2010         1832312       WSD3       0.10 - 0.20       14/07/2010         1832312       WSD3       0.50 - 0.60       14/07/2010         1832313       WSD3       0.50 - 0.60       14/07/2010         1832314       WSD4       0.00 - 0.10       14/07/2010         1832315       WSD4       0.00 - 0.10       14/07/2010         1832316       WSD4       0.50 - 0.60       14/07/2010         1832317       WSD5       0.20 - 0.30       14/07/2010         1832319       WSD5       0.60 - 0.70       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       0.30 - 0.60       14/07/2010	1832297	TPC5	2.00	14/07/2010
1832302       TPD2       0.50       14/07/2010         1832301       TPD2       1.90       14/07/2010         1832303       TPD3       0.60       14/07/2010         1832304       TPD3       1.40       14/07/2010         1832305       TPD5       0.50 - 0.60       14/07/2010         1832307       TPD5       3.80       14/07/2010         1832309       TPD6       0.30       14/07/2010         1832312       WSD3       0.10 - 0.20       14/07/2010         1832312       WSD3       0.50 - 0.60       14/07/2010         1832313       WSD3       0.50 - 0.60       14/07/2010         1832314       WSD4       0.00 - 0.10       14/07/2010         1832315       WSD4       0.50 - 0.60       14/07/2010         1832316       WSD4       0.50 - 0.60       14/07/2010         1832317       WSD5       0.20 - 0.30       14/07/2010         1832319       WSD5       0.60 - 0.70       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       0.30 - 0.40       14/07/2010         1832323       WSD6       0.50 - 0.60       14/07/2010 <td>1832300</td> <td>TPD1</td> <td>0.50</td> <td>14/07/2010</td>	1832300	TPD1	0.50	14/07/2010
1832301       TPD2       1.90       14/07/2010         1832303       TPD3       0.60       14/07/2010         1832304       TPD3       1.40       14/07/2010         1832305       TPD5       0.50 - 0.60       14/07/2010         1832307       TPD5       3.80       14/07/2010         1832309       TPD6       0.30       14/07/2010         1832308       TPD6       2.40       14/07/2010         1832312       WSD3       0.10 - 0.20       14/07/2010         1832313       WSD3       0.50 - 0.60       14/07/2010         1832313       WSD3       1.00 - 1.10       14/07/2010         1832314       WSD4       0.00 - 0.10       14/07/2010         1832315       WSD4       0.50 - 0.60       14/07/2010         1832316       WSD4       0.50 - 0.60       14/07/2010         1832317       WSD5       0.20 - 0.30       14/07/2010         1832319       WSD5       0.60 - 0.70       14/07/2010         1832320       WSD5       1.10 - 1.20       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       0.00 - 0.10       14/07/2010 <t< th=""><td>1832299</td><td>TPD1</td><td>1.30</td><td>14/07/2010</td></t<>	1832299	TPD1	1.30	14/07/2010
1832303       TPD3       0.60       14/07/2010         1832304       TPD3       1.40       14/07/2010         1832305       TPD5       0.50 - 0.60       14/07/2010         1832307       TPD5       3.80       14/07/2010         1832309       TPD6       0.30       14/07/2010         1832308       TPD6       2.40       14/07/2010         1832312       WSD3       0.10 - 0.20       14/07/2010         1832313       WSD3       0.50 - 0.60       14/07/2010         1832313       WSD3       1.00 - 1.10       14/07/2010         1832315       WSD4       0.00 - 0.10       14/07/2010         1832314       WSD4       0.20 - 0.30       14/07/2010         1832317       WSD5       0.20 - 0.30       14/07/2010         1832319       WSD5       0.60 - 0.70       14/07/2010         1832320       WSD5       1.10 - 1.20       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832323       WSD6       2.00 - 2.10       14/07/2010	1832302	TPD2	0.50	14/07/2010
1832304       TPD3       1.40       14/07/2010         1832305       TPD5       0.50 - 0.60       14/07/2010         1832307       TPD5       3.80       14/07/2010         1832309       TPD6       0.30       14/07/2010         1832308       TPD6       2.40       14/07/2010         1832312       WSD3       0.10 - 0.20       14/07/2010         1832310       WSD3       0.50 - 0.60       14/07/2010         1832313       WSD3       1.00 - 1.10       14/07/2010         1832315       WSD4       0.00 - 0.10       14/07/2010         1832316       WSD4       0.20 - 0.30       14/07/2010         1832317       WSD5       0.20 - 0.30       14/07/2010         1832319       WSD5       0.60 - 0.70       14/07/2010         1832320       WSD5       1.10 - 1.20       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       2.00 - 2.10       14/07/2010         1832323       WSD7       0.50 - 0.60       14/07/2010	1832301	TPD2	1.90	14/07/2010
1832305       TPD5       0.50 - 0.60       14/07/2010         1832307       TPD5       3.80       14/07/2010         1832309       TPD6       0.30       14/07/2010         1832308       TPD6       2.40       14/07/2010         1832312       WSD3       0.10 - 0.20       14/07/2010         1832310       WSD3       0.50 - 0.60       14/07/2010         1832313       WSD3       1.00 - 1.10       14/07/2010         1832315       WSD4       0.00 - 0.10       14/07/2010         1832314       WSD4       0.20 - 0.30       14/07/2010         1832316       WSD4       0.50 - 0.60       14/07/2010         1832317       WSD5       0.20 - 0.30       14/07/2010         1832319       WSD5       0.60 - 0.70       14/07/2010         1832320       WSD5       1.10 - 1.20       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       2.00 - 2.10       14/07/2010         1832323       WSD7       0.50 - 0.60       14/07/2010	1832303	TPD3	0.60	14/07/2010
1832307       TPD5       3.80       14/07/2010         1832309       TPD6       0.30       14/07/2010         1832308       TPD6       2.40       14/07/2010         1832312       WSD3       0.10 - 0.20       14/07/2010         1832310       WSD3       0.50 - 0.60       14/07/2010         1832313       WSD3       1.00 - 1.10       14/07/2010         1832315       WSD4       0.00 - 0.10       14/07/2010         1832314       WSD4       0.20 - 0.30       14/07/2010         1832316       WSD4       0.50 - 0.60       14/07/2010         1832317       WSD5       0.20 - 0.30       14/07/2010         1832319       WSD5       0.60 - 0.70       14/07/2010         1832320       WSD5       1.10 - 1.20       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       2.00 - 2.10       14/07/2010         1832323       WSD7       0.50 - 0.60       14/07/2010	1832304	TPD3	1.40	14/07/2010
1832309       TPD6       0.30       14/07/2010         1832308       TPD6       2.40       14/07/2010         1832312       WSD3       0.10 - 0.20       14/07/2010         1832310       WSD3       0.50 - 0.60       14/07/2010         1832313       WSD3       1.00 - 1.10       14/07/2010         1832315       WSD4       0.00 - 0.10       14/07/2010         1832314       WSD4       0.50 - 0.60       14/07/2010         1832316       WSD4       0.50 - 0.60       14/07/2010         1832317       WSD5       0.20 - 0.30       14/07/2010         1832319       WSD5       0.60 - 0.70       14/07/2010         1832320       WSD5       1.10 - 1.20       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       2.00 - 2.10       14/07/2010         1832323       WSD7       0.50 - 0.60       14/07/2010	1832305	TPD5	0.50 - 0.60	14/07/2010
1832308       TPD6       2.40       14/07/2010         1832312       WSD3       0.10 - 0.20       14/07/2010         1832310       WSD3       0.50 - 0.60       14/07/2010         1832313       WSD3       1.00 - 1.10       14/07/2010         1832315       WSD4       0.00 - 0.10       14/07/2010         1832314       WSD4       0.20 - 0.30       14/07/2010         1832316       WSD4       0.50 - 0.60       14/07/2010         1832317       WSD5       0.20 - 0.30       14/07/2010         1832319       WSD5       0.60 - 0.70       14/07/2010         1832320       WSD5       1.10 - 1.20       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       2.00 - 2.10       14/07/2010         1832323       WSD7       0.50 - 0.60       14/07/2010	1832307	TPD5	3.80	14/07/2010
1832312       WSD3       0.10 - 0.20       14/07/2010         1832310       WSD3       0.50 - 0.60       14/07/2010         1832313       WSD3       1.00 - 1.10       14/07/2010         1832315       WSD4       0.00 - 0.10       14/07/2010         1832314       WSD4       0.20 - 0.30       14/07/2010         1832316       WSD4       0.50 - 0.60       14/07/2010         1832317       WSD5       0.20 - 0.30       14/07/2010         1832319       WSD5       0.60 - 0.70       14/07/2010         1832320       WSD5       1.10 - 1.20       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       2.00 - 2.10       14/07/2010         1832323       WSD7       0.50 - 0.60       14/07/2010	1832309	TPD6	0.30	14/07/2010
1832310       WSD3       0.50 - 0.60       14/07/2010         1832313       WSD3       1.00 - 1.10       14/07/2010         1832315       WSD4       0.00 - 0.10       14/07/2010         1832314       WSD4       0.20 - 0.30       14/07/2010         1832316       WSD4       0.50 - 0.60       14/07/2010         1832317       WSD5       0.20 - 0.30       14/07/2010         1832319       WSD5       0.60 - 0.70       14/07/2010         1832320       WSD5       1.10 - 1.20       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       2.00 - 2.10       14/07/2010         1832323       WSD7       0.50 - 0.60       14/07/2010	1832308	TPD6	2.40	14/07/2010
1832313       WSD3       1.00 - 1.10       14/07/2010         1832315       WSD4       0.00 - 0.10       14/07/2010         1832314       WSD4       0.20 - 0.30       14/07/2010         1832316       WSD4       0.50 - 0.60       14/07/2010         1832317       WSD5       0.20 - 0.30       14/07/2010         1832319       WSD5       0.60 - 0.70       14/07/2010         1832320       WSD5       1.10 - 1.20       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       2.00 - 2.10       14/07/2010         1832323       WSD7       0.50 - 0.60       14/07/2010	1832312	WSD3	0.10 - 0.20	14/07/2010
1832315       WSD4       0.00 - 0.10       14/07/2010         1832314       WSD4       0.20 - 0.30       14/07/2010         1832316       WSD4       0.50 - 0.60       14/07/2010         1832317       WSD5       0.20 - 0.30       14/07/2010         1832319       WSD5       0.60 - 0.70       14/07/2010         1832320       WSD5       1.10 - 1.20       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       2.00 - 2.10       14/07/2010         1832323       WSD7       0.50 - 0.60       14/07/2010	1832310	WSD3	0.50 - 0.60	14/07/2010
1832314       WSD4       0.20 - 0.30       14/07/2010         1832316       WSD4       0.50 - 0.60       14/07/2010         1832317       WSD5       0.20 - 0.30       14/07/2010         1832319       WSD5       0.60 - 0.70       14/07/2010         1832320       WSD5       1.10 - 1.20       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       2.00 - 2.10       14/07/2010         1832323       WSD7       0.50 - 0.60       14/07/2010	1832313	WSD3		14/07/2010
1832316       WSD4       0.50 - 0.60       14/07/2010         1832317       WSD5       0.20 - 0.30       14/07/2010         1832319       WSD5       0.60 - 0.70       14/07/2010         1832320       WSD5       1.10 - 1.20       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       2.00 - 2.10       14/07/2010         1832323       WSD7       0.50 - 0.60       14/07/2010	1832315	WSD4	0.00 - 0.10	14/07/2010
1832317       WSD5       0.20 - 0.30       14/07/2010         1832319       WSD5       0.60 - 0.70       14/07/2010         1832320       WSD5       1.10 - 1.20       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       2.00 - 2.10       14/07/2010         1832323       WSD7       0.50 - 0.60       14/07/2010		WSD4		14/07/2010
1832319       WSD5       0.60 - 0.70       14/07/2010         1832320       WSD5       1.10 - 1.20       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       2.00 - 2.10       14/07/2010         1832323       WSD7       0.50 - 0.60       14/07/2010	1832316	WSD4	0.50 - 0.60	14/07/2010
1832320       WSD5       1.10 - 1.20       14/07/2010         1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       2.00 - 2.10       14/07/2010         1832323       WSD7       0.50 - 0.60       14/07/2010				
1832321       WSD6       0.30 - 0.40       14/07/2010         1832322       WSD6       2.00 - 2.10       14/07/2010         1832323       WSD7       0.50 - 0.60       14/07/2010				14/07/2010
1832322     WSD6     2.00 - 2.10     14/07/2010       1832323     WSD7     0.50 - 0.60     14/07/2010				14/07/2010
1832323 WSD7 0.50 - 0.60 14/07/2010				14/07/2010
				14/07/2010
1832324 WSD7 1.60 - 1.70 14/07/2010				
	1832324	WSD7	1.60 - 1.70	14/07/2010

**ALcontrol Laboratories Analytical Services** 

 SDG:
 100716-54
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-25
 Attention:
 Steve Dooley

Client Reference: 12L056 Order No.:

Validated

Location: DSDC Bicester Report No: 91555

 1832325
 WSD8
 0.00 - 0.10
 14/07/2010

 1832326
 WSD8
 1.00 - 1.10
 14/07/2010

Only received samples which have had analysis scheduled will be shown on the following pages.

# **ALcontrol Laboratories Analytical Services**

Order No.:

 SDG:
 100716-54
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-25
 Attention:
 Steve Dooley

Client Reference: 12L056

Location: DSDC Bicester Report No: 91555

#### SOLID

Results Legend	Lab Sample No(s)	1000	1832273	1832275	1032270	1832276	18322//	2000		1832279	102201	1832281	1832283	1832284		1832285	1832287	1832288		1832289	1832290	100	1832292	1832293	1832294	1832295	1832297	1832298	1002400	1832299	1832300	1832301	1832302
X Test			†			†		t				†	t	t	t	†			t				†		t	Н	†			†			
No Determination Possible	Customer Sample Ref.	!	BHE01	BHE01	Ţ	RHEO1	внеох			BHE02	1	RHE02	TPC1	TPC1		TPC1	TPC1	I PCZ	3	TPC2	TPC3	:	TPC3	TPC3	TPC4	TPC4	TPC5	TPC5	: :	TPD1	TPD1	TPD2	TPD2
	Depth (m)		1.00 - 1.30	0.10 - 0.30		3.00 - 3.20	0.20 - 0.40	0 00 00 00 00 00 00 00 00 00 00 00 00 0		1.60 - 2.00		6.80 - 7.00	1 00	1.50		1.30	0.20	60	180	0.70	1.20		0.20	2.50	0.50	1.50	2.00	0.10		1.30	0.50	1.90	0.50
	Container	250g Amber Jar	250g Amber Jar 400g Tub	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	4000 Tuh	250g Amber lar	60g VOC	250g Amber Jar	400g Tub	250g Amber Jar	250g Amber Jar	250g Amber Jar	400g Tub	400g Tub	250g Amber Jar	250g Amber Jar	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	400g Tub	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	400g Tub	400g Tub	400g Tub 250g Amber Jar	400g Tub 250g Amber Jar
Ammonium Soil by Titration	All	П								H	+	+	t	t	Н		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		t			Н	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	t		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	+		Н				
Asbestos Containing Material Screen	All	Н	X	X		X	, 	<b>(</b>	X		+	+	+	t	Н	+	X		$^{+}$	X	X	П	X	$^{+}$	X	X	+	X	H	X	X	+	X
Asbestos Identification	All	Н	+	X	Н	+	$^{+}$	t	t	Н	$\dagger$	$^{+}$	$^{+}$	t	Н	+	X		t	Н	X		+	t	t	Н	$\dagger$	+	Н	$^{+}$	Н	+	$\mathbb{H}$
Boron Water Soluble	All			+		+	+			Н	$\dagger$	+	+	t	Н				\	H			$^{+}$	t		V	†	+		<u> </u>		+	$\square$
EPH CWG (Aliphatic) GC (S)	All	X	X		X	7	X	T.		Н	+	$^{+}$	$^{+}$	t	Н	)	(	+	X		X	X	+	t	X	X	Ť	X	X	<u> </u>		+	X
EPH CWG (Aromatic) GC (S)	All	Н	+	t	Н	$\dagger$	$^{+}$	X		Н	+	$^{+}$	$^{+}$	t	Н	+		+	+	Н	+	Н	+	+	t	Н	$\dagger$	+	Н	+	Н	+	H
GRO BTEX MTBE GC (S)	All	Н	+	t	Н	+	$^{+}$	T	(	H	+	+	$^{+}$	t	Н	+			+	Н	+		+	t	t	Н	$\dagger$	+	Н	+	Н	+	H
Hexavalent Chromium (s)	All	Н	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	. V			<u> </u>		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	X	+		<b>4</b> N		H	V	V	,	_		V		V	V		\ <u>\</u>	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Н	\ \	V		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Metals by iCap-OES (Soil)	Arsenic	П	X	X	П	X .	<b>)</b>		X		1	X	X X	X		X ,	X	<u> </u>		X	X	П	X	X		X	T	X	П	X ,	X	X	
	Cadmium	X	X		X	Ť	X	T.		Н	$\dagger$	+	+	t	Н	2	<b>(</b>		X	Н	X	X	+	t	Ė	X	T	X	X	<u> </u>		+	X
	Chromium	X	X	Т	X	Ť	X	X		Н	$\dagger$	$^{\dagger}$	+	t	Н		(		X	Н	X	X	$^{+}$	$^{+}$	X	П	Ť	X	X	, ,		+	X
	Copper	X	X		X	Ť	X	X		Н	+	$\dagger$	+	t	Н		<b>(</b>		X	Н	X	X	$^{+}$	$^{+}$		X	T	X	X	, ,		+	X
	Lead	X	X		X	Ť	X	X	(	Н	+	+	$^{+}$	t	Н	)			X		X	X	+	t	Г	X	T	X	X	<u> </u>		+	X
	Mercury	X	X		X	Ť	X	X	(	Н	+	$^{+}$	$^{+}$	t	Н		<b>(</b>	+	X	Н	X	X	+	t	Г	X	T	X	X	<u> </u>	(	+	X
	Nickel	X	X	Т	X	Ť	X	X	Ì	Н	+	$^{+}$	$^{+}$	t	Н	)	•	+	X		X	X	+	t	Г	X	┪	X	X	<u> </u>		+	X
	Selenium	X	X		X	Ť	X	X	Ì	Н	+	$\dagger$	$^{+}$	t	Н		<b>(</b>		X	Н	X	X	+	t		X	T	X	X	<u> </u>		+	X
	Zinc	X	X		X	Ť	X	X		Н	$\dagger$	$\dagger$	$^{+}$	t	Н		<b>⟨</b>		X	Н	X	X	+	t	Г	X	T	X	X	<u> </u>		+	X
PAH by GCMS	All	X	X		X	7	X	X	(	Н	+	+	$^{+}$	t	Н		<b>(</b>	+	X		X	X	+	+	X	X	T	X	X	<u> </u>		+	X
PCBs (vs Aroclor 1254)	All	H	+	t	H	$\dagger$	+	X	(	H	+	+	+	+	H	<b>)</b>	<b>⟨</b>	+	+	H	+	H	+	+	t	Н	+	X	H	+	H	+	H
рН	All	H	\ \	N/	H	+		+	x -	H	$\dagger$	+	+	$\dagger$	H	+	N/	+	+	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	H	\ \	+		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	+	+	H	\ \	N.	+	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Sample description	All	П	X	X	П	X	T	<b>(</b>	X	H	+	+					X	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		X	X	П	X	+	Т	X	+	X	П	X	X	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	X
Semi Volatile Organic Compounds	All	X	X		X	7	X	X		H	X	+	X X	X	X	<b>)</b>	<b>(</b>	X	X	H	X	X	<u>&gt;</u>	(	X	X	X	X.	X	<u> </u>	<u>\</u>	X	X
Total Organic Carbon	All		X		X	1		X	<b>(</b>												X		1	1			+	<u> </u>	X				

1832303		1832304		1832305		1832307		1832308		1832309		1832310	1832312		1832313	1832314	1832315		1832316		1832317			1832319		1832320		1832321		1832322		1832323		1832324		1832325		1832326			
TPD3		1703	HDD.	-705	1	TPD5		TPD6		TPD6		WSD3	WSD3		WSD3	WSD4	WSD4		WSD4		WSD5			WSD5		WSD5		WSD6		WSD6		WSD7		WSD7		WSD8		WSD8			
0.60		<del>.</del>	4 40	0.50 - 0.60		3.80		2.40		0.30		0.50 - 0.60	0.10 - 0.20		1.00 - 1.10	0.20 - 0.30	0.00 - 0.10		0.50 - 0.60		0.20 - 0.30			0.60 - 0.70		1.10 - 1.20		0.30 - 0.40		2.00 - 2.10		0.50 - 0.60		1.60 - 1.70		0.00 - 0.10		1.00 - 1.10	4 00	Ca	Total
400g Tub 250g Amber Jar	TOO HELD	250g Amber Jar	400a Tub	250g Amber Jar	Anna Tuk	400g lub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	400g Tub	250g Amber Jar	400g Tub	60g VOC	250g Amber Jar	400g Tub	Political Services	400g lub	ADDS Tub																				
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# **ALcontrol Laboratories Analytical Services**

SDG: 100716-54 **Customer:** Entec UK Ltd Steve Dooley Job: H\_ENTEC\_SHW-25 Attention:

Client Reference: Location:	12L056 DSDC Bicest	er							ler l					918	555	5															
			-	1832273	1832275	1832276		1832277		1832279	1832281	1832282	1832284		1832285	1832287	1832288	8077001	400000	1832290	1832292	1832293	1832294	1832295	1832297	1832298	8677001	2000	1832300	1832301	1832302
				BHE01	BHE01	BHE01		BHE02		BHE02	BHE02	TP5L	TBC1		TPC1	TPC1	TPC2		TBC3	TPC3	TPC3	CS	TPC4	TPC4	TPC5	TPC5	- -	TBD1	TPD1	TPD2	TPD2
				1.00 - 1.30	0.10 - 0.30	3.00 - 3.20		0.20 - 0.40		1.60 - 2.00	6.80 - 7.00	1.00	0.50		1.30	0.20	1.60		0.20	1.20	0.20	2.30	0.50	1.50	2.00	0.10		1 30	0.50	1.90	0.50
			250g Amber Jar	400g Tub	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	400g Tub	400g Tub 250g Amber Jar	60g VOC	400g Tub	250g Amber Jar	250g Amber Jar	250g Amber Jar	400g Tub	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	250g Amber Jar 400g Tub	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	400g lub	400g Tub	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	250g Amber Jar 400g Tub	400g Tub	400g Tub 250g Amber Jar	400g Tub 250g Amber Jar
TPH c6-40 Value of soil		All	П		П	Ť			П		t		T	П	>	<	t		X			П		X	,	X	X	T	П	T	П
TPH CWG GC (S)		All	П		$\parallel$	Ť	П	<b>)</b>	X.	П	T	П	Ť	$\parallel$	Ť		Ť	П	T	П	Ť	П	T		Ī	T	П	T	П	$\top$	П
VOC MS (S)		All	П		П	$\top$	П			X	T	П	Ť		Ť	$\parallel$	Ť	П	T	П	T	П	T		П	T	П	T	П	$\top$	П
Water Soluble Sulphate 2:	1	All	X	>	<b>(</b>	X	X	<u>&gt;</u>	×						>	<b>(</b>		X	X		X		X	X	)	X	X	X			X

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400g Tub 250g Amber Jar	Anna Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	7008 100	400g Tub	250g Amber Jar	400g Tub	400g Tub	250g Amber Jar	400g Tub	60g VOC	250g Amber Jar	400g Tub																					
0.60	0 00		1.40		0.50 - 06.0		3.80		2.40		0.00	0 30		0.50 - 0.60	0.10 - 0.20		1.00 - 1.10	0.20 - 0.30	0.00 - 0.10		0.50 - 0.60		0.20 - 0.30			0.60 - 0.70		1.10 - 1.20		0.30 - 0.40		2.00 - 2.10		0.50 - 0.60		1.60 - 1.70		0.00 - 0.10		1.00 - 1.10	
TPD3	1	:	TPD3		TPD5		TPD5		TPD6		700	TBD6		WSD3	WSD3		WSD3	WSD4	WSD4		WSD4		WSD5			WSD5		WSD5		WSD6		WSD6		WSD7		WSD7		WSD8		WSD8	
1832303		0	1832304		1832305		1832307		1832308		1832309	20000		1832310	1832312		1832313	1832314	1832315		1832316		1832317			1832319		1832320		1832321		1832322		1832323		1832324		1832325		1832326	

### **ALcontrol Laboratories Analytical Services**

 SDG:
 100716-54
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-25
 Attention:
 Steve Dooley

Client Reference: 12L056

Location: DSDC Bicester Report No: 91555

### **Sample Descriptions**

Order No.:

#### **Grain Sizes:**

<0.063mm very fine, 0.063mm - 0.1mm fine, 0.1mm - 2mm medium, 2mm - 10mm coarse, >10mm very coarse

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions
1832273	BHE01	1.00 - 1.30	Light Brown	Clay	<0.063 mm	Vegetation
1832275	BHE01	0.10 - 0.30	Light Brown	Sandy Clay	0.1 - 2 mm	Stones
1832276	BHE01	3.00 - 3.20	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones
1832277	BHE02	0.20 - 0.40	Dark Brown	Silty Clay	0.063 - 0.1 mm	Vegetation
1832279	BHE02	1.60 - 2.00	Light Brown	Silty Clay	0.063 - 0.1 mm	Stones
1832281	BHE02	6.80 - 7.00	Dark Brown	Clay	<0.063 mm	None
1832282	TP5L	1.00	Light Brown	Clay	0.063 - 0.1 mm	None
1832283	TPC1	0.50	Light Brown	Clay	<0.063 mm	Stones
1832284	TPC1	1.50	Light Brown	Clay	0.063 - 0.1 mm	Stones
1832285	TPC1	1.30	Light Brown	Clay	<0.063 mm	None
1832287	TPC1	0.20	Dark Brown	Sandy Clay	0.1 - 2 mm	Vegetation
1832288	TPC2	1.60	Light Brown	Silty Clay	0.063 - 0.1 mm	None
1832289	TPC2	0.70	Light Brown	Silty Clay	0.063 - 0.1 mm	Stones
1832290	TPC3	1.20	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones
1832292	TPC3	0.20	Light Brown	Silty Clay	0.063 - 0.1 mm	N/A
1832293	TPC3	2.50	Light Brown	Silty Clay	0.063 - 0.1 mm	Stones
1832294	TPC4	0.50	Light Brown	Clay Loam	<0.063 mm	None
1832295	TPC4	1.50	Light Brown	Clay	<0.063 mm	Stones
1832297	TPC5	2.00	Light Brown	Clay	<0.063 mm	None
1832298	TPC5	0.10	Black	Sand	0.1 - 2 mm	Stones
1832299	TPD1	1.30	Dark Brown	Silty Clay	0.063 - 0.1 mm	Vegetation
1832300	TPD1	0.50	Light Brown	Silty Clay	0.063 - 0.1 mm	Vegetation
1832301	TPD2	1.90	Light Brown	Clay	<0.063 mm	None
1832302	TPD2	0.50	Dark Brown	Silty Clay	0.063 - 0.1 mm	Vegetation
1832303	TPD3	0.60	Light Brown	Sandy Clay	0.1 - 2 mm	Stones
1832304	TPD3	1.40	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones
1832305	TPD5	0.50 - 0.60	Light Brown	Silty Clay	0.063 - 0.1 mm	Stones
1832307	TPD5	3.80	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones
1832308	TPD6	2.40	Dark Brown	Clay Loam	0.063 - 0.1 mm	None
1832309	TPD6	0.30	Dark Brown	Silty Clay	0.063 - 0.1 mm	Vegetation

### **ALcontrol Laboratories Analytical Services**

Order No.:

 SDG:
 100716-54
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-25
 Attention:
 Steve Dooley

Client Reference: 12L056

Location: DSDC Bicester Report No: 91555

			Colour	Description	Grain size	Inclusions
1832310	WSD3	0.50 - 0.60	Light Brown	Silty Clay	0.063 - 0.1 mm	Stones
1832313	WSD3	1.00 - 1.10	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones
1832314	WSD4	0.20 - 0.30	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones
1832315	WSD4	0.00 - 0.10	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Vegetation
1832316	WSD4	0.50 - 0.60	Light Brown	Silty Clay	<0.063 mm	N/A
1832317	WSD5	0.20 - 0.30	Light Brown	Sandy Clay	0.1 - 2 mm	Stones
1832319	WSD5	0.60 - 0.70	Dark Brown	Silty Clay	0.063 - 0.1 mm	Oil/Petroleum
1832320	WSD5	1.10 - 1.20	Dark Brown	Clay	<0.063 mm	None
1832321	WSD6	0.30 - 0.40	Dark Brown	Silty Clay	0.063 - 0.1 mm	Vegetation
1832322	WSD6	2.00 - 2.10	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones
1832323	WSD7	0.50 - 0.60	Light Brown	Clay	<0.063 mm	Stones
1832324	WSD7	1.60 - 1.70	Light Brown	Clay	<0.063 mm	Stones
1832325	WSD8	0.00 - 0.10	Light Brown	Silty Clay	0.063 - 0.1 mm	Vegetation
1832326	WSD8	1.00 - 1.10	Light Brown	Clay	<0.063 mm	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

### **ALcontrol Laboratories Analytical Services**

 SDG:
 100716-54
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-25
 Attention:
 Steve Dooley

Client Reference: 12L056 Order No.:

Location: DSDC Bicester Report No: 91555

### **Test Completion dates**

**SDG reference: 100716-54** 

Lab Sample No(s)	1832273	1832275	1832276	1832277	1832279	1832281	1832282	1832283	1832284	1832285	1832287	1832288
Customer Sample Ref.	BHE01	BHE01	BHE01	BHE02	BHE02	BHE02	TP5L	TPC1	TPC1	TPC1	TPC1	TPC2
Depth	1.00 - 1.30	0.10 - 0.30	3.00 - 3.20	0.20 - 0.40	1.60 - 2.00	6.80 - 7.00	1.00	0.50	1.50	1.30	0.20	1.60
Туре	SOLID        SOLID	SOLID	SOLID	SOLID	SOLID							
Ammonium Soil by Titration	19/07/2010	19/07/2010	19/07/2010	19/07/2010	19/07/2010						19/07/2010	
Asbestos Containing Material		16/07/2010									16/07/2010	
Asbestos Identification												
Boron Water Soluble	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010						20/07/2010	
EPH CWG (Aliphatic) GC (S)					22/07/2010							
EPH CWG (Aromatic) GC (S)					22/07/2010							
GRO by GC-FID (S)					23/07/2010							
Hexavalent Chromium (s)	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	21/07/2010	20/07/2010	20/07/2010
Metals by iCap-OES (Soil)	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010						20/07/2010	
PAH by GCMS					19/07/2010						19/07/2010	
PCBs (vs Aroclor 1254)												
рН	19/07/2010	19/07/2010	19/07/2010	19/07/2010	19/07/2010						19/07/2010	
Sample description	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010	19/07/2010	19/07/2010	19/07/2010	19/07/2010	20/07/2010	16/07/2010	19/07/2010
Semi Volatile Organic Compounds					20/07/2010							
Total Organic Carbon		20/07/2010	20/07/2010		20/07/2010							
TPH c6-40 Value of soil											22/07/2010	
TPH CWG GC (S)					23/07/2010							
VOC MS (S)					21/07/2010							
Water Soluble Sulphate 2:1	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010						20/07/2010	

1832289	1832290	1832292	1832293	1832294	1832295	1832297	1832298	1832299	1832300	1832301	1832302	1832303	1832304	1832305
TPC2	TPC3	TPC3	TPC3	TPC4	TPC4	TPC5	TPC5	TPD1	TPD1	TPD2	TPD2	TPD3	TPD3	TPD5
0.70	1.20	0.20	2.50	0.50	1.50	2.00	0.10	1.30	0.50	1.90	0.50	0.60	1.40	0.50 - 0.60
SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
19/07/2010	19/07/2010	19/07/2010		19/07/2010	19/07/2010		19/07/2010	19/07/2010	19/07/2010		19/07/2010	19/07/2010		19/07/2010
	16/07/2010											16/07/2010		
20/07/2010	20/07/2010	20/07/2010		20/07/2010	20/07/2010		20/07/2010	20/07/2010	20/07/2010		20/07/2010	20/07/2010		20/07/2010
20/01/2010	20/01/2010	20/01/2010		20/01/2010	20/01/2010		20/01/2010	20/01/2010	20/01/2010		20/01/2010	20/01/2010		20/07/2010
20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	21/07/2010	20/07/2010	20/07/2010	21/07/2010	20/07/2010
20/07/2010	20/07/2010	20/07/2010		20/07/2010	20/07/2010		20/07/2010	20/07/2010	20/07/2010		20/07/2010	20/07/2010		20/07/2010
							21/07/2010							
19/07/2010	19/07/2010	19/07/2010		19/07/2010	19/07/2010		19/07/2010	19/07/2010	19/07/2010		19/07/2010	19/07/2010		19/07/2010
16/07/2010	16/07/2010	16/07/2010	19/07/2010	16/07/2010	16/07/2010	19/07/2010	16/07/2010	16/07/2010	16/07/2010	20/07/2010	16/07/2010	16/07/2010	20/07/2010	16/07/2010
	20/07/2010							20/07/2010						
	21/07/2010				20/07/2010		20/07/2010	20/07/2010						
	21/01/2010				20/07/2010		20/01/2010	20/01/2010						
		00/07/00/0			2010=10010						00/0=/00/40			
20/07/2010	20/07/2010	20/07/2010		20/07/2010	20/07/2010		20/07/2010	20/07/2010	20/07/2010		20/07/2010	20/07/2010		20/07/2010

1832307	1832308	1832309	1832310	1832312	1832313	1832314	1832315	1832316	1832317	1832319	1832320	1832321	1832322	1832323
TPD5	TPD6	TPD6	WSD3	WSD3	WSD3	WSD4	WSD4	WSD4	WSD5	WSD5	WSD5	WSD6	WSD6	WSD7
3.80	2.40	0.30	0.50 - 0.60	0.10 - 0.20	1.00 - 1.10	0.20 - 0.30	0.00 - 0.10	0.50 - 0.60	0.20 - 0.30	0.60 - 0.70	1.10 - 1.20	0.30 - 0.40	2.00 - 2.10	0.50 - 0.60
SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
19/07/2010		19/07/2010						19/07/2010	19/07/2010	19/07/2010		19/07/2010	19/07/2010	19/07/2010
				16/07/2010					16/07/2010					
				19/07/2010					22/07/2010					
20/07/2010		20/07/2010						20/07/2010	20/07/2010	20/07/2010		20/07/2010	20/07/2010	20/07/2010
										21/07/2010				
										21/07/2010				
										26/07/2010				
20/07/2010	20/07/2010	20/07/2010	20/07/2010		20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010
20/07/2010		20/07/2010						20/07/2010	20/07/2010	20/07/2010		20/07/2010	20/07/2010	20/07/2010
										19/07/2010				
										20/07/2010				
19/07/2010		19/07/2010						19/07/2010	19/07/2010	19/07/2010		19/07/2010	19/07/2010	19/07/2010
16/07/2010	19/07/2010	16/07/2010	19/07/2010		19/07/2010	19/07/2010	19/07/2010	16/07/2010	16/07/2010	16/07/2010	19/07/2010	16/07/2010	16/07/2010	16/07/2010
										20/07/2010				
20/07/2010										20/07/2010			20/07/2010	
20/07/2010													20/07/2010	
										26/07/2010				
										21/07/2010				
20/07/2010		20/07/2010						20/07/2010	20/07/2010	20/07/2010		20/07/2010	20/07/2010	20/07/2010

1832324	1832325	1832326
WSD7	WSD8	WSD8
1.60 - 1.70	0.00 - 0.10	1.00 - 1.10
SOLID	SOLID	SOLID
	19/07/2010	
	20/07/2010	
20/07/2010		20/07/2010
	20/07/2010	
	19/07/2010	
19/07/2010	16/07/2010	19/07/2010
	20/07/2010	
	20/07/2010	

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Results Legend # ISO17025 accredited.	Custom	er Sample Ref.	BHE01	BHE01		BHE01		BHE02		BHE02		BHE02
M mCERTS accredited. aq Aqueous / settled sample. bissolved / filtered sample. tot.unfilt tot.unfilt subcontracted test. " % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within	y y	Depth (m) Sample Type Date Sampled Date Received SDG Ref Sample No.(s)	Soil/Solid 14/07/2010 16/07/2010 100716-54	1.00 - 1.30 Soil/Solid 14/07/2010 16/07/2010 100716-54 1832273		3.00 - 3.20 Soil/Solid 14/07/2010 16/07/2010 100716-54 1832276		0.20 - 0.40 Soil/Solid 14/07/2010 16/07/2010 100716-54 1832277		1.60 - 2.00 Soil/Solid 14/07/2010 16/07/2010 100716-54 1832279		6.80 - 7.00 Soil/Solid 14/07/2010 16/07/2010 100716-54 1832281
the samples are not corrected for this recovery.												
Component	LOD/Units		N. ACCES									
Asbestos Containing Material Screen	-	TM001	No ACM Detected									
Ammoniacal Nitrogen, exchangeable as NH4	<15 mg/kg	TM024	<15 <b>M</b>	<15	м	26.1	М	<15 <b>M</b>		<15 <b>N</b>	1	
Sulphate, 2:1 water soluble	<0.003 g/	TM098	0.0617 <b>M</b>	0.21	М	1.52	М	1.26 <b>M</b>		1.39 N		
Soil Organic Matter (SOM)	<0.35 %	TM132	1.68		141	7.86		191	Ì	1.98		
pH	1 pH Units	s TM133	<b>8.16</b>	7.91		5.69	#	7.45	+	7.52		
Chromium, Hexavalent	<0.6 mg/k	g TM151	<0.6	<0.6	М	<0.6	M	<0.6	1	<0.6	1	<0.6
Arsenic	<0.6 mg/k	g TM181	9.88	6.45	#	6.18	#	7.38	‡	6.68	ŧ	#
		TM181	М		М		M	0.149	1	N	1	
Cadmium	<0.02 mg/kg		0.107 <b>M</b>		М	0.551	М	M	1	0.0387 N	1	
Chromium	<0.9 mg/k		45.3 <b>M</b>		М	49.6	М	44.5 <b>M</b>	1	48.5 <b>N</b>	1	
Copper	<1.4 mg/k	g TM181	41.4 <b>M</b>	36.9	М	31.4	М	32.6 <b>M</b>	1	30.2 N	ı	
Lead	<0.7 mg/k	g TM181	22.3 M	19.5	М	16	М	24.5 <b>M</b>		17.3 N	1	
Mercury	<0.14 mg/kg	TM181	<0.14 <b>M</b>	<0.14	М	<0.14	М	<0.14		<0.14		
Nickel	<0.2 mg/kg	g TM181	22.2	19.2		107		30.9	Ť	23.3		
Selenium	<1 mg/kg	TM181	1.95	2.53	М	1.77	M	2.38		1.88		
Zinc	<1.9 mg/k	g TM181	95.6	77.3	#	248	#	117	‡	74.4	ŧ	
Boron, water soluble	<1 mg/kg		M 1.4	3.88	М	7.18	M	4.73	1	1.9	1	
Boron, water soluble	1 mg/kg	TIVIZZZ	и		М	7.10	M	4.75 M	1	N	ı	
									+			
									+			
									+			
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					-				+			
									+			

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

DALL	by CCMC						
PAH	by GCMS Results Legend	Cuetomor	Sample Ref.	BHE02			
	ISO17025 accredited. mCERTS accredited.	Customer	Jampie Kei.	BHEU2			
aq	Aqueous / settled sample.		Depth (m)				
tot.unfilt	Dissolved / filtered sample. Total / unfiltered sample.		ample Type ate Sampled	Soil/Solid 14/07/2010			
**	subcontracted test. % recovery of the surrogate		te Received	16/07/2010			
	standard to check the efficiency of the method. The results of the		SDG Ref	100716-54			
	individual compounds within the samples are not corrected	Lab Sa	imple No.(s)	1832279			
	for this recovery.	100///	Method				
Compo Naphth	nent alene-d8 %	LOD/Units	TM218	105			
recove			2.10				
Acenap recover	hthene-d10 %	%	TM218	102			
	nthrene-d10 %	%	TM218	101			
recover		%	TM218	07.0			
Chryse	ne-d12 % recovery**	%	TIVIZ 18	87.3			
Peryler	ne-d12 % recovery**	%	TM218	90			
Naphth	alene	<0.009	TM218	<0.009			
		mg/kg		М			
Acenap	hthylene	<0.012 mg/kg	TM218	<0.012 <b>M</b>			
Acenap	hthene	<0.008	TM218	<0.008			
Fluorer	10	mg/kg <0.01	TM218	<0.01			
i iuorer		<0.01 mg/kg		<0.01 <b>M</b>	 	 	
Phenar	nthrene	<0.015	TM218	<0.015		 	
Anthrac	cene	mg/kg <0.016	TM218	<b>M</b> <0.016			
		mg/kg		М			
Fluorar	ithene	<0.017 mg/kg	TM218	<0.017 <b>M</b>			
Pyrene		<0.015	TM218	<0.015			
Renz(a	)anthracene	mg/kg <0.014	TM218	0.0225			
		mg/kg	TIVIZIO	0.0223 M			
Chryse	ne	<0.01	TM218	0.0222			
Benzo(	b)fluoranthene	mg/kg <0.015	TM218	0.0204			
	·	mg/kg		М			
Benzo(	k)fluoranthene	<0.014 mg/kg	TM218	<0.014 <b>M</b>			
Benzo(	a)pyrene	<0.015	TM218	<0.015			
Indeno	(1,2,3-cd)pyrene	mg/kg <0.018	TM218	<b>M</b> <0.018			
		mg/kg		М			
Dibenz	o(a,h)anthracene	<0.023 mg/kg	TM218	<0.023			
Benzo(	g,h,i)perylene	<0.024	TM218	<0.024			
Dolyaro	omatic hydrocarbons,	mg/kg <0.118	TM218	<b>M</b> <0.118			
Total U	SEPA 16	mg/kg	TIVIZIO	<0.116 <b>M</b>			
	$\exists$						

# **ALcontrol Laboratories Analytical Services**

SDG:

100716-54 H\_ENTEC\_SHW-25 Job:

Client Reference: 12L056

Location: **DSDC** Bicester Customer: Entec UK Ltd Steve Dooley Attention:

Order No.:

					JOIL NO.		
Semi	Volatile Organic						
М	Results Legend ISO17025 accredited. mCERTS accredited.	Customer	Sample Ref.  Depth (m)	BHE02			
	Aqueous / settled sample. Dissolved / filtered sample. Total / unfiltered sample.		ample Type ate Sampled	1.60 - 2.00 Soil/Solid 14/07/2010			
**	subcontracted test. % recovery of the surrogate standard to check the efficiency		te Received SDG Ref	16/07/2010 100716-54			
	of the method. The results of the individual compounds within the samples are not corrected	Lab Sa	imple No.(s)	1832279			
Compo	for this recovery.	LOD/Units	Method				
Phenol		<0.1 mg/kg	TM157	<0.1			
Pentac	hlorophenol	<0.1 mg/kg	TM157	<0.1			
n-Nitro	so-n-dipropylamine	<0.1 mg/kg	TM157	<0.1			
Nitrobe	enzene	<0.1 mg/kg	TM157	<0.1			
Isopho	rone	<0.1 mg/kg	TM157	<0.1			
	nloroethane	<0.1 mg/kg	TM157	<0.1			
	nlorocyclopentadiene	<0.1 mg/kg	TM157	<0.1			
	nlorobutadiene	<0.1 mg/kg	TM157	<0.1			
	nlorobenzene	<0.1 mg/kg	TM157	<0.1			
	yl phthalate	<0.1 mg/kg	TM157	<0.1			
	yl phthalate	<0.1 mg/kg	TM157	<0.1 <0.1			
	phthalate	<0.1 mg/kg	TM157	<0.1			
Dibenz	tyl phthalate	<0.1 mg/kg	TM157	<0.1			
Carbaz		<0.1 mg/kg	TM157	<0.1			
	enzyl phthalate	<0.1 mg/kg	TM157	<0.1			
	thylhexyl) phthalate	<0.1 mg/kg	TM157	<0.1			
	hloroethoxy)methane	<0.1 mg/kg	TM157	<0.1			
bis(2-C	hloroethyl)ether	<0.1 mg/kg	TM157	<0.1			
Azobei	nzene	<0.1 mg/kg	TM157	<0.1			
4-Nitro	phenol	<0.1 mg/kg	TM157	<0.1			
4-Nitro	aniline	<0.1 mg/kg	TM157	<0.1			
4-Meth	ylphenol	<0.1 mg/kg	TM157	<0.1			
4-Chlo	rophenylphenylether	<0.1 mg/kg	TM157	<0.1			
4-Chlo	roaniline	<0.1 mg/kg	TM157	<0.1			
4-Chlo	ro-3-methylphenol	<0.1 mg/kg	TM157	<0.1			
4-Brom	nophenylphenylether	<0.1 mg/kg	TM157	<0.1			
3-Nitro		<0.1 mg/kg	TM157	<0.1			
2-Nitro		<0.1 mg/kg	TM157	<0.1			
2-Nitro		<0.1 mg/kg	TM157	<0.1			
	ylphenol	<0.1 mg/kg	TM157	<0.1			
	richlorobenzene	<0.1 mg/kg	TM157	<0.1			
	rophenol	<0.1 mg/kg	TM157	<0.1			
	itrotoluene itrotoluene	<0.1 mg/kg	TM157	<0.1 <0.1			
	nethylphenol	<0.1 mg/kg	TM157	<0.1			
	:hlorophenol	<0.1 mg/kg	TM157	<0.1			
	richlorophenol	<0.1 mg/kg	TM157	<0.1			
	richlorophenol	<0.1 mg/kg	TM157	<0.1			
-,-,∪-1		.o. i mg/kg	1101137	70.1			

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Steve Dooley

Order No.:

Semi	Volatile Organic	Сотрош	nds	
	Results Legend	Customer	Sample Ref.	BHE02
М	ISO17025 accredited.  mCERTS accredited.  Aqueous / settled sample.		Depth (m)	
diss.filt	Dissolved / filtered sample. Total / unfiltered sample.		Sample Type ate Sampled	Soil/Solid
**	subcontracted test. % recovery of the surrogate	Da	ate Received	14/07/2010 16/07/2010
	standard to check the efficiency of the method. The results of the		SDG Ref ample No.(s)	
	individual compounds within the samples are not corrected for this recovery.		, (.,	
Compo	nent	LOD/Units	Method	
1,4-Dic	chlorobenzene	<0.1 mg/kg	TM157	<0.1
1,3-Dic	chlorobenzene	<0.1 mg/kg	TM157	<0.1
1,2-Dic	chlorobenzene	<0.1 mg/kg	TM157	<0.1
2-Chlor	ronaphthalene	<0.1 mg/kg	TM157	<0.1
2-Meth	ylnaphthalene	<0.1 mg/kg	TM157	<0.1
Acenar	phthylene	<0.1 mg/kg	TM157	<0.1
	phthene	<0.1 mg/kg	TM157	<0.1
Anthrac		<0.1 mg/kg	TM157	<0.1
Benzo(	(a)anthracene	<0.1 mg/kg	TM157	<0.1
Benzo(	(b)fluoranthene	<0.1 mg/kg	TM157	<0.1
Benzo(	(k)fluoranthene	<0.1 mg/kg	TM157	<0.1
Benzo(	(a)pyrene	<0.1 mg/kg	TM157	<0.1
Benzo(	(g,h,i)perylene	<0.1 mg/kg	TM157	<0.1
Chryse	ene	<0.1 mg/kg	TM157	<0.1
Fluorar		<0.1 mg/kg	TM157	<0.1
Fluorer		<0.1 mg/kg	TM157	<0.1
Indeno	(1,2,3-cd)pyrene	<0.1 mg/kg	TM157	<0.1
Phenar	nthrene	<0.1 mg/kg	TM157	<0.1
Pyrene	•	<0.1 mg/kg	TM157	<0.1
Naphth	nalene	<0.1 mg/kg	TM157	<0.1
Dibenz	co(a,h)anthracene	<0.1 mg/kg	TM157	<0.1
			-	

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

TPH CWG (S)										
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	BHE02							
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)								
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.  * subcontracted test.		ample Type ate Sampled	Soil/Solid 14/07/2010							
** % recovery of the surrogate standard to check the efficiency		te Received SDG Ref	16/07/2010 100716-54							
of the method. The results of th individual compounds within		imple No.(s)	1832279							
the samples are not corrected for this recovery.										
Component GRO Surrogate %	LOD/Units	Method TM089	103							
recovery** GRO >C5-C12	<0.044	TM089	<0.044							
	mg/kg									
Benzene	<0.01 mg/kg	TM089	<0.01 <b>M</b>							
Ethylbenzene	<0.003 mg/kg	TM089	<0.003 <b>M</b>							
Toluene	<0.002 mg/kg	TM089	<0.002							
m,p-Xylene	<0.006	TM089	<0.006							
o-Xylene	mg/kg <0.003	TM089	<0.003							
m,p,o-Xylene	mg/kg <0.01	TM089	<b>M</b> <0.01							
BTEX, Total	mg/kg <0.01	TM089	<b>M</b> <0.01							
	mg/kg		М							
Methyl tertiary butyl ether (MTBE)	<0.005 mg/kg	TM089	<0.005 #							
Aliphatics >C5-C6	<0.01 mg/kg	TM089	<0.01							
Aliphatics >C6-C8	<0.01 mg/kg	TM089	<0.01							
Aliphatics >C8-C10	<0.01	TM089	<0.01							
Aliphatics >C10-C12	mg/kg <0.01	TM089	<0.01							
Aromatics >C6-C7	mg/kg <0.01	TM089	<0.01							
Aromatics >C7-C8	mg/kg <0.01	TM089	<0.01							
	mg/kg									
Aromatics >EC8-EC10	<0.01 mg/kg	TM089	<0.01							
Aromatics >EC10-EC12	<0.01 mg/kg	TM089	<0.01							
Total Aliphatics >C5-C12	<0.01 mg/kg	TM089	<0.01							
Total Aromatics >C6-C12	<0.01	TM089	<0.01							
Aliphatics >C12-C16	mg/kg <0.1 mg/kg	TM173	5.16							
Aliphatics >C16-C21	<0.1 mg/kg	TM173	3.41							
Aliphatics >C16-C35	<0.1 mg/kg	TM173	12.2							
Aliphatics >C21-C35	<0.1 mg/kg	TM173	8.78							
Aliphatics >C35-C44	<0.1 mg/kg	TM173	<0.1							
Aromatics >EC12-EC16	<0.1 mg/kg	TM173	0.599							
Aromatics >EC16-EC21	<0.1 mg/kg	TM173	3.86							
Aromatics >EC21-EC35	<0.1 mg/kg	TM173	11.9							
Aromatics >EC35-EC44	<0.1 mg/kg	TM173	6.92							
Aromatics >EC40-EC44	<0.1 mg/kg	TM173	1.85							
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173	17.3							
Total Aromatics	<0.1 mg/kg	TM173	23.3							
>EC12-EC44										
Total Aliphatics >C5-35	<0.1 mg/kg	TM173	17.3							
Total Aliphatics >C5-C44	<0.1 mg/kg	TM173	17.3							
Total Aromatics >C5-35	<0.1 mg/kg	TM173	16.4							
Total Aromatics >C6-C44	<0.1 mg/kg	TM173	23.3							
Total Aliphatics & Aromatics	<0.1 mg/kg	TM173	33.7							
>C5-35 Total Aliphatics & Aromatics	<0.1 mg/kg	TM173	40.6							
>C5-C44										

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54 **Job**: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

VOC	MS (S)						
	Results Legend ISO17025 accredited.	Customer	Sample Ref.	BHE02			
М	mCERTS accredited. Aqueous / settled sample.		Depth (m)	1.60 - 2.00			
diss.filt	Dissolved / filtered sample.  Total / unfiltered sample.		ample Type	Soil/Solid			
*	subcontracted test. % recovery of the surrogate		ate Sampled ite Received	14/07/2010 16/07/2010			
	standard to check the efficiency of the method. The results of the		SDG Ref	100716-54			
	individual compounds within the samples are not corrected	Lab Sa	imple No.(s)	1832279			
Compo	for this recovery.	LOD/Units	Method				
	ofluoromethane**	%	TM116	98.9			
Toluen	e-d8**	%	TM116	101			
4-Brom	ofluorobenzene**	%	TM116	111			
Dichlor	odifluoromethane	<0.004	TM116	<0.004			
Chloro	methane	mg/kg <0.007	TM116	<b>M</b> <0.007			
Vinyl C	hloride	mg/kg <0.01	TM116	<0.01			
Bromoi	nethane	mg/kg <0.013	TM116	<b>*</b>			
Chloroe	ethane	mg/kg <0.014	TM116	<b>M</b> <0.014			
		mg/kg		М			
i richloi	rofluorormethane	<0.006 mg/kg	TM116	<0.006 <b>M</b>			
1.1-Dic	hloroethene	<0.01 mg/kg	TM116	<0.01 #			
Carbon	Disulphide	<0.007 mg/kg	TM116	<0.007 <b>M</b>			
Dichlor	omethane	<0.01 mg/kg	TM116	<0.01			
Methyl	Tertiary Butyl Ether	<0.011 mg/kg	TM116	<0.011 <b>M</b>			
trans-1	-2-Dichloroethene	<0.011 mg/kg	TM116	<0.011 <b>M</b>			
1.1-Dic	hloroethane	<0.008 mg/kg	TM116	<0.008 <b>M</b>			
cis-1-2	-Dichloroethene	<0.005 mg/kg	TM116	<0.005 <b>M</b>			
2.2-Dic	hloropropane	<0.012 mg/kg	TM116	<0.012 <b>M</b>			
Bromod	chloromethane	<0.014 mg/kg	TM116	<0.014 <b>M</b>			
Chlorof		<0.008 mg/kg	TM116	<0.008 <b>M</b>			
1.1.1-T	richloroethane	<0.007 mg/kg	TM116	<0.007 <b>M</b>			
	hloropropene	<0.011 mg/kg	TM116	<0.011 <b>M</b>			
	tetrachloride	<0.014 mg/kg	TM116	<0.014 M			
	hloroethane	<0.005 mg/kg	TM116	<0.005 <b>M</b>			
Benzer		<0.009 mg/kg	TM116	<0.009 <b>M</b>			
Trichlo	roethene	<0.009 mg/kg	TM116	<0.009 <b>M</b>			
1.2-Dic	hloropropane	<0.012 mg/kg	TM116	<0.012 <b>M</b>			
Dibrom	omethane	<0.009 mg/kg	TM116	<0.009 <b>M</b>			
Bromod	dichloromethane	<0.007 mg/kg	TM116	<0.007 <b>M</b>			
cis-1-3-	-Dichloropropene	<0.014	TM116	<0.014			
Toluen	e	mg/kg <0.005	TM116	<0.005			
trans-1	-3-Dichloropropene	mg/kg <0.014	TM116	<0.014			
1.1.2-T	richloroethane	mg/kg <0.01	TM116	<0.01			
1.3-Dic	hloropropane	mg/kg <0.007 mg/kg	TM116	<0.007			
Tetrach	nloroethene	<0.005 mg/kg	TM116	<0.005 <b>M</b>			
Dibrom	ochloromethane	<0.013 mg/kg	TM116	<0.013 M			
1.2-Dib	romoethane	<0.012 mg/kg	TM116	<0.012 <b>M</b>			
Chorob	penzene	<0.005 mg/kg	TM116	<0.005			
1.1.1.2	-Tetrachloroethane	<0.01	TM116	<0.01			
Ethylbe	enzene	mg/kg <0.004	TM116	<0.004			
		mg/kg		М			

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

VOC	MS (S)			
	Results Legend	Customer	Sample Ref.	BHE02
М	ISO17025 accredited. mCERTS accredited.		Depth (m)	1.60 - 2.00
diss.filt	Aqueous / settled sample. Dissolved / filtered sample. Total / unfiltered sample.		ample Type	Soil/Solid
*	subcontracted test. % recovery of the surrogate		ate Sampled te Received	14/07/2010 16/07/2010
	standard to check the efficiency of the method. The results of the		SDG Ref	100716-54
	individual compounds within the samples are not corrected	Lab Sa	imple No.(s)	1832279
	for this recovery.	LOD/Units	Method	
p/m-Xyl		<0.014	TM116	<0.014
o-Xylen	ne.	mg/kg <0.01	TM116	<b>*</b>
		mg/kg		М
Styrene		<0.01 mg/kg	TM116	<0.01 <b>M</b>
Bromof	orm	<0.01	TM116	<0.01
Isoprop	ylbenzene	mg/kg <0.005	TM116	<0.005
1122-	-Tetrachloroethane	mg/kg <0.01	TM116	<b>M</b> <0.01
		mg/kg		#
1.2.3-11	richloropropane	<0.017 mg/kg	TM116	<0.017 <b>M</b>
Bromob	penzene	<0.01 mg/kg	TM116	<0.01 <b>M</b>
Propylb	penzene	<0.011	TM116	<0.011
2-Chlor	otoluene	mg/kg <0.009	TM116	<0.009
		mg/kg		М
1.3.5-11	rimethylbenzene	<0.008 mg/kg	TM116	<0.008 #
4-Chlor	rotoluene	<0.012 mg/kg	TM116	<0.012 <b>M</b>
tert-But	ylbenzene	<0.012	TM116	<0.012
1.2.4-Tı	rimethylbenzene	mg/kg <0.009	TM116	<b>*</b>
sec But	tylbenzene	mg/kg <0.01	TM116	<b>*</b>
		mg/kg		М
4-Isopro	opyltoluene	<0.011 mg/kg	TM116	<0.011 <b>M</b>
1.3-Dicl	hlorobenzene	<0.006	TM116	<0.006
1.4-Dicl	hlorobenzene	mg/kg <0.005	TM116	<b>M</b> <0.005
n-Rutvll	benzene	mg/kg <0.01	TM116	<b>M</b> <0.01
		mg/kg		М
1.2-Dicl	hlorobenzene	<0.012 mg/kg	TM116	<0.012 <b>M</b>
	romo-3-chloropropan	<0.014	TM116	<0.014 <b>M</b>
e Tert-am	nyl methyl ether	mg/kg <0.015	TM116	<0.015
1.2.4-Tı	richlorobenzene	mg/kg <0.006	TM116	<0.006
		mg/kg		#
	llorobutadiene	<0.012 mg/kg	TM116	<0.012 <b>M</b>
Naphth	alene	<0.013 mg/kg	TM116	<0.013 <b>M</b>
1.2.3-Ti	richlorobenzene	<0.006	TM116	<0.006
		mg/kg		М
	Т			

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Results Legend # ISO17025 accredited.	Custom	er Sample Ref.	TP5L	TPC1	TPC1	TPC1	TPC1	TPC2
m/CERTS accredited. aq Aqueous / settled sample. diss.filit Dissolved / filtered sample. tot.unfilt * output *		Depth (m) Sample Type Date Sampled Date Received	Soil/Solid 14/07/2010	0.20 Soil/Solid 14/07/2010 16/07/2010	0.50 Soil/Solid 14/07/2010 16/07/2010	1.30 Soil/Solid 14/07/2010 16/07/2010	1.50 Soil/Solid 14/07/2010 16/07/2010	0.70 Soil/Solid 14/07/2010 16/07/2010
standard to check the efficien of the method. The results of individual compounds within the samples are not corrected for this recovery.	the Lab	SDG Ref Sample No.(s)	100716-54 1832282	100716-54 1832287	100716-54 1832283	100716-54 1832285	100716-54 1832284	100716-54 1832289
Component Asbestos Containing	LOD/Units	Method TM001		No ACM Detected				
Material Screen Ammoniacal Nitrogen,	<15 mg/kg			<15				<15
exchangeable as NH4				М				М
Sulphate, 2:1 water soluble	<0.003 g/			0.132 <b>M</b>				0.0701 <b>M</b>
рН	1 pH Units	TM133		8.11 <b>M</b>				8.48 <b>M</b>
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6 #	<0.6 #	<0.6	<0.6	<0.6	<0.6 #
TPH >C6-C8	<10 mg/kg	TM154		<10				
TPH >C8-C10	<10 mg/kg	TM154		<10				
TPH >C10-C12	<10 mg/kg	TM154		<10				
TPH >C12-C16	<10 mg/kg	TM154		<10				
TPH >C16-C21	<10 mg/kg	TM154		23.9				
TPH >C21-C40	<10 mg/kg	TM154		384				
TPH >C6-C40	<10 mg/kg	TM154		411				
Arsenic	<0.6 mg/k	g TM181		7.88				5.91
Cadmium	<0.02	TM181		0.248				<b>M</b> 0.111
Chromium	mg/kg <0.9 mg/kg	TM181		27.2				<b>M</b> 53.1
Copper	<1.4 mg/k	TM181		M 16.8				M 25
Lead	<0.7 mg/k			55.8				14
Mercury	<0.14	TM181		<0.14				M <0.14
	mg/kg			11 M				М
Nickel	<0.2 mg/k			М				49.8 <b>M</b>
Selenium	<1 mg/kg	TM181		2.87				1.2
Zinc	<1.9 mg/k	TM181		81.4 <b>M</b>				96.1 <b>M</b>
Boron, water soluble	<1 mg/kg	TM222		2.51 M				2.85 <b>M</b>

# **ALcontrol Laboratories Analytical Services**

SDG:

100716-54 H\_ENTEC\_SHW-25 Job:

Client Reference: 12L056

Location: **DSDC** Bicester Customer: Entec UK Ltd Steve Dooley Attention:

Order No.:

DALL	by GCMS			
PAH	by GCMS Results Legend	Customer	Sample Ref.	TPC1
	ISO17025 accredited.  mCERTS accredited.	Gustomer	Cumple Nel.	IPUI
aq	Aqueous / settled sample.		Depth (m)	
tot.unfilt	Dissolved / filtered sample. Total / unfiltered sample.		ample Type ate Sampled	Soil/Solid 14/07/2010
**	subcontracted test. % recovery of the surrogate		te Received	16/07/2010
	standard to check the efficiency of the method. The results of the		SDG Ref	100716-54
	individual compounds within the samples are not corrected	Lab Sa	imple No.(s)	1832287
	for this recovery.		Madle ad	
Nanhth	nent alene-d8 %	LOD/Units	Method TM218	100
recover		70	TIVIZIO	100
	ohthene-d10 %	%	TM218	97.8
recover	nthrene-d10 %	%	TM218	99.7
recover	y**			
Chryse	ne-d12 % recovery**	%	TM218	100
Perylen	ne-d12 % recovery**	%	TM218	119
Nonbth	alana	<0.009	TM218	0.0493
Naphth	alerie	mg/kg	I IVIZ IO	0.0493 <b>M</b>
Acenap	hthylene	<0.012	TM218	0.0294
Acenap	hthene	mg/kg <0.008	TM218	0.0116
		mg/kg		М
Fluoren	ne	<0.01 mg/kg	TM218	0.0111 <b>M</b>
Phenar	nthrene	<0.015	TM218	0.186
۸ سال		mg/kg	TM040	M
Anthrac	ene	<0.016 mg/kg	TM218	0.0735 <b>M</b>
Fluoran	thene	<0.017	TM218	1.16
Pyrene		mg/kg <0.015	TM218	1.2
		mg/kg		М
Benz(a	)anthracene	<0.014	TM218	1.07
Chryse	ne	mg/kg <0.01	TM218	1.05
		mg/kg		М
Benzo(	b)fluoranthene	<0.015 mg/kg	TM218	1.92 <b>M</b>
Benzo(	k)fluoranthene	<0.014	TM218	0.735
Benzo/	a)pyrene	mg/kg <0.015	TM218	1.85
,		mg/kg		М
Indeno	(1,2,3-cd)pyrene	<0.018	TM218	1.4
Dibenzo	o(a,h)anthracene	mg/kg <0.023	TM218	0.347
		mg/kg		М
Benzo(	g,h,i)perylene	<0.024 mg/kg	TM218	1.75 <b>M</b>
Polyard	omatic hydrocarbons,	<0.118	TM218	12.8
Total U	SEPA 16	mg/kg		М

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

		_										
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	TPC2	TPC3		TPC3		TPC3	TPC4	TPC4	
М	mCERTS accredited. Aqueous / settled sample.		Depth (m)	1.60	0.20		1.20		2.50	0.50	1.50	
diss.filt	Dissolved / filtered sample.	s	ample Type	Soil/Solid	Soil/Solid		Soil/Solid		Soil/Solid	Soil/Solid	Soil/Solid	
	Total / unfiltered sample. subcontracted test.	Da	ate Sampled	14/07/2010	14/07/2010		14/07/2010		14/07/2010	14/07/2010	14/07/2010	)
**	% recovery of the surrogate	Da	te Received	16/07/2010	16/07/2010		16/07/2010		16/07/2010	16/07/2010	16/07/2010	
	standard to check the efficiency of the method. The results of the		SDG Ref	100716-54	100716-54		100716-54		100716-54	100716-54	100716-54	
	individual compounds within the samples are not corrected	Lab Sa	imple No.(s)	1832288	1832292		1832290		1832293	1832294	1832295	
	for this recovery.											
Compo		LOD/Units	Method			_	No ACM Detect					
	os Containing I Screen	-	TM001				No ACM Detecte	ea				
	iacal Nitrogen,	<15 mg/kg	TM024		<15		<15			<15	<15	
exchan	geable as NH4					М		M		M		N
Sulphat	e, 2:1 water soluble	<0.003 g/l	TM098		0.0149		0.0593			0.0204	0.0617	
Soil Ord	ganic Matter (SOM)	<0.35 %	TM132			М	11.3	M		M		N
	,,							#				
рН		1 pH Units	TM133		8.31		8.43			8.49	8.15	
Chromi	um, Hexavalent	<0.6 mg/kg	TM151	<1.2	<0.6	М	<0.6	M	<0.6	<0.6	<0.6	N
CHIOHIII	uiii, riexavaieiii	<0.0 mg/kg	TIVITOT	<b>~1.2</b> #	<b>~</b> 0.0	#	<b>\0.0</b>	#	~0.0 #	~0.0 #		;
TPH >C	C6-C8	<10 mg/kg	TM154				<10			<u> </u>	<10	
TDU	20.040	-110 "	T) 145 1				.40					
TPH >C	8-C10	<10 mg/kg	TM154				<10				<10	
TPH >C	C10-C12	<10 mg/kg	TM154				<10				<10	
TPH >C	C12-C16	<10 mg/kg	TM154				<10				<10	
TPH >C	°16-C21	<10 mg/kg	TM154				<10				<10	
	7.10-021	- 10 mg/kg	1101134				~10				~10	
TPH >C	21-C40	<10 mg/kg	TM154				<10				<10	
TDUSC	20.040	440 //	TN454				-10				-10	
TPH >C	6-C40	<10 mg/kg	TM154				<10	#			<10	1
Arsenic		<0.6 mg/kg	TM181		11.3		7.7	т		12.4	15.2	
						М		M		M		N
Cadmiu	m	<0.02	TM181		0.22		0.229			0.0735	0.0735	
Chromi	ım	mg/kg <0.9 mg/kg	TM181		35.6	М	23.5	M		<b>M</b>	44.3	N
0111011111	ann	-o.o mg/kg	1111101		00.0	М	20.0	M		M		N
Copper		<1.4 mg/kg	TM181		28.7		28.5			15.6	20.1	
Lead		<0.7 mg/kg	TM181		46.1	М	22.7	M		12.9	19.3	N
Leau		<0.7 mg/kg	1101101		40.1	М	22.1	М		12.9 <b>M</b>		N
Mercury	1	<0.14	TM181		<0.14		<0.14			<0.14	<0.14	
		mg/kg	771101			М		M		M		N
Nickel		<0.2 mg/kg	TM181		33.8	м	31.9	М		30.2 M	59.7	N
Seleniu	m	<1 mg/kg	TM181		1.07	141	1.89	IVI		1.3	1.54	
						#		#		#		1
Zinc		<1.9 mg/kg	TM181		106		61.3			59.7	89.7	
Boron	water soluble	<1 mg/kg	TM222		1.53	М	<1	M		1.64	1.46	N
Boron,	water soluble	*Tillg/kg	1101222		1.55	М	-1	М		M		N
						$\dashv$						
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# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

	Results Legend	Customer	Sample Ref.	TPC5	TPC5	TPD1	TPD1	TPD2	TPD2
M m	O17025 accredited. CERTS accredited.		Danish ( )						
	queous / settled sample.	s	Depth (m) ample Type	0.10 Soil/Solid	2.00 Soil/Solid	0.50 Soil/Solid	1.30 Soil/Solid	0.50 Soil/Solid	1.90 Soil/Solid
tot.unfilt T	otal / unfiltered sample.		te Sampled	14/07/2010	14/07/2010	14/07/2010	14/07/2010	14/07/2010	14/07/2010
	ubcontracted test.		te Received	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
	tandard to check the efficiency f the method. The results of the		SDG Ref	100716-54	100716-54	100716-54	100716-54	100716-54	100716-54
in	idividual compounds within	Lab Sa	mple No.(s)	1832298	1832297	1832300	1832299	1832302	1832301
	ne samples are not corrected or this recovery.								
Compon		LOD/Units	Method						
	acal Nitrogen,	<15 mg/kg	TM024	<15		<15	<15	<15	
	eable as NH4 e, 2:1 water soluble	<0.003 g/l	TM098	0.0504		0.119	0.546	0.254	
Odipriate	, z. i water soluble	10.000 g/i	110000	0.0304 M		0.115 M		0.234 M	
Soil Orga	anic Matter (SOM)	<0.35 %	TM132				8.9		
pН		1 pH Units	TM133	8.09		8.35	6.01	5.47	
PIT		i pi i oiiito	1111100	М.		0.00 N		М	
Chromiu	m, Hexavalent	<0.6 mg/kg	TM151	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
TPH >C6	S C8	<10 mg/kg	TM154	<b>*</b>	#	#	<10	#	#
1111700	0-00	~ To mg/kg	1101134	110			~10		
TPH >C	8-C10	<10 mg/kg	TM154	<10			<10		
TPH >C	10-C12	<10 ma/ka	TM154	<10			16.8		
IFIT >C	10-012	<10 mg/kg	1 IVI 154	<b>\10</b>			10.0		
TPH >C	12-C16	<10 mg/kg	TM154	<10			<10		
TPH >C	16-C21	<10 mg/kg	TM154	21.4			31.2		
IFH >C	10-021	< TO HIG/Kg	1101134	21.4			31.2		
TPH >C	21-C40	<10 mg/kg	TM154	171			403		
TPH >C6	C 040	<10 mg/kg	TM154	197			458		
IPH >C	0-040	< 10 mg/kg	1101154	#			450		
Arsenic		<0.6 mg/kg	TM181	10.5		10.9	6.88	5.56	
Cadmiur	w	<0.02	TM181	0.173		<0.02	0.418	<0.02	
Caumur	"	mg/kg	TIVITOT	0.173 <b>M</b>		<0.02 M		<0.02 M	
Chromiu	m	<0.9 mg/kg	TM181	31.8		56.8	44.3	46.1	
0		44.4 //	TM404	M 75.4		N 20.0		M	
Copper		<1.4 mg/kg	TM181	75.4 <b>M</b>		26.9 M	22.5 M	28.3 <b>M</b>	
Lead		<0.7 mg/kg	TM181	50.6		15.7	30.2	15.1	
		.0.44	T1404	M		N .0.11		M	
Mercury		<0.14 mg/kg	TM181	<0.14 <b>M</b>		<0.14	<0.14	<0.14 <b>M</b>	
Nickel		<0.2 mg/kg	TM181	85.4		46.1	22.2	18.7	
0.1		.4 11	T1404	M		N		M	
Seleniun	n	<1 mg/kg	TM181	1.78 #		1.48	1.58	1.97	
Zinc		<1.9 mg/kg	TM181	74.3		88.4	82.2	60	
_			71.1000	M		N		M	
Boron, w	ater soluble	<1 mg/kg	TM222	<1 <b>M</b>		4.09 M	5.04 <b>M</b>	1.69 <b>M</b>	
									<u>                                     </u>

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

					OICIO. OIC		
PAH	by GCMS						
	Results Legend	Customer	Sample Ref.	TPC5			
	ISO17025 accredited.  mCERTS accredited.						
aq	Aqueous / settled sample.		Depth (m) ample Type	0.10			
	Dissolved / filtered sample. Total / unfiltered sample.		ample Type	Soil/Solid			
*	subcontracted test. % recovery of the surrogate		te Received	14/07/2010 16/07/2010			
	standard to check the efficiency		SDG Ref	100716-54			
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1832298			
	the samples are not corrected						
Compo	for this recovery.	LOD/Units	Method				
	nalene-d8 %	%	TM218	96			
recove		, ,					
	phthene-d10 %	%	TM218	99.6			
recove			7711010				
Phena: recove	nthrene-d10 %	%	TM218	96.2			
	ene-d12 % recovery**	%	TM218	76.3			
,							
Peryle	ne-d12 % recovery**	%	TM218	70.1			
				0.400			
Naphth	nalene	<0.009	TM218	0.169 <b>M</b>			
Acenai	phthylene	mg/kg <0.012	TM218	0.0561			
	,	mg/kg		M			
Acena	phthene	<0.008	TM218	0.0493		 	
Гh		mg/kg	T14040	M			
Fluore	ne	<0.01	TM218	0.0485 <b>M</b>			
Phena	nthrene	mg/kg <0.015	TM218	0.946			
		mg/kg		0.540 M			
Anthra	cene	<0.016	TM218	0.17			
		mg/kg		M			
Fluorai	nthene	<0.017 mg/kg	TM218	1.47 <b>M</b>			
Pyrene	<u> </u>	<0.015	TM218	1.17			
, yronc	,	mg/kg	1111210	,			
Benz(a	a)anthracene	<0.014	TM218	0.75			
		mg/kg		М			
Chryse	ene	<0.01	TM218	0.546			
Renzo	(b)fluoranthene	mg/kg <0.015	TM218	0.943			
Denzo	(D)IIIIOI AITII IEITE	mg/kg	TIVIZIO	0.943 M			
Benzo	(k)fluoranthene	<0.014	TM218	0.288			
	` ′	mg/kg		М			
Benzo	(a)pyrene	<0.015	TM218	0.639			
Indono	(1.0.0 ad)nymana	mg/kg	TMO10	M			
inaeno	(1,2,3-cd)pyrene	<0.018 mg/kg	TM218	0.263 <b>M</b>			
Dibenz	o(a,h)anthracene	<0.023	TM218	0.0799			
	` ' '	mg/kg		М			
Benzo	(g,h,i)perylene	< 0.024	TM218	0.297			
D.1	C . L	mg/kg	T14040	M 7.00			
Polyard	omatic hydrocarbons, JSEPA 16	<0.118 mg/kg	TM218	7.89 <b>M</b>			
Total C	JOLI A 10	mg/kg		IVI			

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

M mC aq Aqu diss.filt Dis	Results Legend 017025 accredited. ERTS accredited.	Customer	Sample Ref.	TPD3	TPD3	TPD5	TPD5	TPD6	TPD6
aq Aqu diss.filt Dis									
diss.filt Dis	ueous / settled sample.		Depth (m)	0.60	1.40	0.50 - 0.60	3.80	0.30	2.40
tot.unfilt Tot	solved / filtered sample.		ample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
* sub	ocontracted test.		te Sampled	14/07/2010	14/07/2010	14/07/2010	14/07/2010	14/07/2010	14/07/2010
	recovery of the surrogate ndard to check the efficiency	Da	te Received SDG Ref	16/07/2010 100716-54	16/07/2010 100716-54	16/07/2010 100716-54	16/07/2010 100716-54	16/07/2010 100716-54	16/07/2010 100716-54
	the method. The results of the lividual compounds within	Lab Sa	mple No.(s)	1832303	1832304	1832305	1832307	1832309	1832308
the	samples are not corrected this recovery.								
Compone		LOD/Units	Method						
	Containing	-	TM001	No ACM Detected					
Material S	Screen cal Nitrogen,	<15 mg/kg	TM024	<15		<15	138	<15	
	able as NH4	< 15 mg/kg	1101024	×15		~15 <b>M</b>	M	V13	
Sulphate,	2:1 water soluble	<0.003 g/l	TM098	1.42		0.0386	0.0282	0.0255	
Soil Organ	nic Matter (SOM)	<0.35 %	TM132	M		M	M 1.05	M	
	,						#		
pН		1 pH Units	TM133	7.43 <b>M</b>		8.54 <b>M</b>	7.62 <b>M</b>	8.3 M	
Chromium	n, Hexavalent	<0.6 mg/kg	TM151	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
				#	#	#	#	#	;
TPH >C6-	-C8	<10 mg/kg	TM154				<10		
TPH >C8-	-C10	<10 mg/kg	TM154				<10		
TDU SO44	0.012	<10 ma//cs	TM454				<b>~10</b>		
TPH >C10	U-U 12	<10 mg/kg	TM154				<10		
TPH >C12	2-C16	<10 mg/kg	TM154				<10		
TDU SOM	6 C21	<10 mg//cg	TM454				~10		
TPH >C16	0-021	<10 mg/kg	TM154				<10		
TPH >C21	1-C40	<10 mg/kg	TM154				86.1		
TPH >C6-	-C40	<10 mg/kg	TM154				89.1		
1711/00-	O-10	- To mg/kg	TIVITO4				o9.1 #		
Arsenic		<0.6 mg/kg	TM181	7.12		8.93	10.7	9.66	
Cadmium		<0.02	TM181	0.376		<b>M</b> 0.484	0.455	0.395	
		mg/kg		М		M	М	М	
Chromium	ı	<0.9 mg/kg	TM181	54.2		44.2	54	46.6	
Copper		<1.4 mg/kg	TM181	<b>M</b> 31		<b>M</b> 18	<b>M</b> 20.9	M 21.4	
				М		M	М	М	
Lead		<0.7 mg/kg	TM181	14.4 <b>M</b>		15.9 <b>M</b>	19.1 <b>M</b>	21.2 <b>M</b>	
Mercury		<0.14	TM181	<0.14		<0.14	<0.14	<0.14	
		mg/kg		М		М	M	М	
Nickel		<0.2 mg/kg	TM181	55.1 <b>M</b>		27.1 <b>M</b>	37.2 M	30.8 M	
Selenium		<1 mg/kg	TM181	2.71		1.58	2.11	1.88	
7		.4.0 //	T1404	#		#	#	#	
Zinc		<1.9 mg/kg	TM181	123 <b>M</b>		76.2 <b>M</b>	114 <b>M</b>	102 <b>M</b>	
Boron, wa	ater soluble	<1 mg/kg	TM222	2.74		3.39	3.68	1.26	
				M		M	M	M	
	-								
	Т								
	+								
	+								

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Steve Dooley

Order No.:

		_						
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSD3	WSD3	WSD3	WSD4	WSD4	WSD4
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)	0.10 - 0.20	0.50 - 0.60	1.00 - 1.10	0.00 - 0.10	0.20 - 0.30	0.50 - 0.60
diss.filt Dissolved / filtered sample.	s	ample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
tot.unfilt Total / unfiltered sample.  * subcontracted test.		te Sampled	14/07/2010	14/07/2010	14/07/2010	14/07/2010	14/07/2010	14/07/2010
** % recovery of the surrogate		te Received	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
standard to check the efficiency		SDG Ref	100716-54	100716-54	100716-54	100716-54	100716-54	100716-54
of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1832312	1832310	1832313	1832315	1832314	1832316
the samples are not corrected for this recovery.								
Component	LOD/Units	Method						
Asbestos Containing	-	TM001	Possible ACM Detect					
Material Screen								
Ammoniacal Nitrogen,	<15 mg/kg	TM024						<15
exchangeable as NH4								2.212
Sulphate, 2:1 water soluble	<0.003 g/l	TM098						0.212
pH	1 pH Units	TM133						8.13
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6	<0.6	<3	<1.2	<0.6
				#	#	#	#	
Arsenic	<0.6 mg/kg	TM181						9.59
Cadmium	<0.02	TM181						0.353
Oddinium	mg/kg	TIVITOT						0.353
Chromium	<0.9 mg/kg	TM181						49.6
Copper	<1.4 mg/kg	TM181						26
Lead	<0.7 ma//c	TM181						17.1
Lead	<0.7 mg/kg	LINLIQI						17.1
Mercury	<0.14	TM181						<0.14
,	mg/kg							-0.14
Nickel	<0.2 mg/kg	TM181						44.6
Colonium	-4 "	T14404						1.00
Selenium	<1 mg/kg	TM181						1.98
Zinc	<1.9 mg/kg	TM181						120
								120
Boron, water soluble	<1 mg/kg	TM222						3.81
								ı

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSD5	WSD5	WSD5	WSD6	WSD6	WSD7
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)	0.20 - 0.30	0.60 - 0.70	1.10 - 1.20	0.30 - 0.40	2.00 - 2.10	0.50 - 0.60
diss.filt Dissolved / filtered sample.	S	ample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
tot.unfilt Total / unfiltered sample.  * subcontracted test.		ate Sampled	14/07/2010	14/07/2010	14/07/2010	14/07/2010	14/07/2010	14/07/2010
** % recovery of the surrogate standard to check the efficiency		te Received	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
of the method. The results of the		SDG Ref imple No.(s)	100716-54 1832317	100716-54 1832319	100716-54 1832320	100716-54 1832321	100716-54 1832322	100716-54 1832323
individual compounds within the samples are not corrected			1002017	1002010	1002020	1002021	1002022	1002020
for this recovery.  Component	LOD/Units	Method						
Asbestos Containing	-	TM001	No ACM Detected					
Material Screen Ammoniacal Nitrogen,	<15 mg/kg	TM024	<15	<15		<15	32.3	<15
exchangeable as NH4	15 mg/kg	1101024	~15 M		и	M	32.3 M	~13 M
Sulphate, 2:1 water soluble	<0.003 g/l	TM098	0.0234	1.47		0.004	1.63	1.09
Soil Organic Matter (SOM)	<0.35 %	TM132	M	7.48	M .	M	9.69	M
pH	1 pH Units	TM133	8.15	6.54	#	7.39	5.66	5.58
Chromium, Hexavalent	<0.6 mg/kg	TM151	<b>M</b> <0.6	<0.6	<b>VI</b> <3	<0.6	<b>M</b> <0.6	<b>M</b> <1.2
TPH >C6-C8	<10 mg/kg	TM154	#		# #		<10	#
TPH >C8-C10	<10 mg/kg	TM154					<10	
TPH >C10-C12	<10 mg/kg	TM154					<10	
TPH >C12-C16	<10 mg/kg	TM154					<10	
TPH >C16-C21	<10 mg/kg	TM154					26.9	
TPH >C21-C40	<10 mg/kg	TM154					348	
TPH >C6-C40	<10 mg/kg	TM154					381	
Arsenic	<0.6 mg/kg	TM181	9.52	5.8		6.94	7.16	8.28
Cadmium	<0.02	TM181	0.587	0.16	M	1 1	0.888	<0.02
Chromium	mg/kg <0.9 mg/kg	TM181	<b>M</b> 59	53.4	W .	76.4	<b>M</b> 53.9	53.6
Copper	<1.4 mg/kg	TM181	<b>M</b> 37.9	44.4	W .	<b>M</b> 50.4	M 37.6	<b>M</b> 29.4
Lead	<0.7 mg/kg	TM181	<b>M</b> 20.6		М	M 19.9	11.8	16.5
Mercury	<0.7 mg/kg	TM181	<0.14		М	<0.14	<0.14	<0.14
	mg/kg		M	I	М	М	M	М
Nickel	<0.2 mg/kg	TM181	48.4 <b>M</b>		м	56.7 <b>M</b>	108 <b>M</b>	23.3 M
Selenium	<1 mg/kg	TM181	2.66 #		#	3.46	3.22 #	1.93 #
Zinc	<1.9 mg/kg	TM181	123 <b>M</b>	85.6	м	146 <b>M</b>	288 <b>M</b>	79.7 <b>M</b>
Boron, water soluble	<1 mg/kg	TM222	1.82 <b>M</b>	1.56	М	3.93 M	5.29 M	1.33 <b>M</b>

# **ALcontrol Laboratories Analytical Services**

SDG:

100716-54 H\_ENTEC\_SHW-25 Job:

Client Reference: 12L056

Location: **DSDC** Bicester Customer: Entec UK Ltd Steve Dooley Attention:

Order No.:

DALL	hy CCMC						
rah	by GCMS Results Legend	Customer	Sample Ref.	WSD5	1		
#	ISO17025 accredited.	Gustoiller	cample Rel.	vvəDə			
M aq	mCERTS accredited. Aqueous / settled sample.		Depth (m)	0.60 - 0.70			
	Dissolved / filtered sample. Total / unfiltered sample.		ample Type	Soil/Solid			
*	subcontracted test.		ate Sampled te Received	14/07/2010 16/07/2010			
**	% recovery of the surrogate standard to check the efficiency		SDG Ref	100716-54			
	of the method. The results of the individual compounds within	Lab Sa	imple No.(s)	1832319			
	the samples are not corrected for this recovery.						
Compo		LOD/Units	Method				
	alene-d8 %	%	TM218	107			
recove							
Acena; recove	ohthene-d10 %	%	TM218	110			
	nthrene-d10 %	%	TM218	116			
recove		,0	1111210	110			
Chryse	ne-d12 % recovery**	%	TM218	103			
Dondor	ne-d12 % recovery**	%	TM218	111			
Perylei	ie-d 12 % recovery	70	I IVIZ IO	111			
Naphth	alene	<0.009	TM218	0.0636			
		mg/kg		М			
Acena	ohthylene	<0.012	TM218	<0.012			
Acenar	ohthene	mg/kg <0.008	TM218	0.134			
		mg/kg		0.134 M			
Fluorer	ne	<0.01	TM218	0.783			
Dhone	othrana	mg/kg	TM249	1 55			
riienai	nthrene	<0.015 mg/kg	TM218	1.55 <b>M</b>			
Anthra	cene	<0.016	TM218	0.264			
		mg/kg		М			
Fluorar	nthene	<0.017	TM218	0.0626 <b>M</b>			
Pyrene		mg/kg <0.015	TM218	0.106			
-		mg/kg		М		 	
Benz(a	)anthracene	<0.014	TM218	<0.014			
Chryse	ne	mg/kg <0.01	TM218	0.0281			
Jinyae		mg/kg	I IVIZ TO	0.0281 <b>M</b>			
Benzo(	b)fluoranthene	<0.015	TM218	<0.015			
Da	l/fluoronth	mg/kg	TM4040	M <0.014			
Benzo(	k)fluoranthene	<0.014 mg/kg	TM218	<0.014 <b>M</b>			
Benzo	a)pyrene	<0.015	TM218	<0.015			
	<i></i>	mg/kg		М			
Indeno	(1,2,3-cd)pyrene	<0.018	TM218	<0.018			
Dihenz	o(a,h)anthracene	mg/kg <0.023	TM218	<0.023			
		mg/kg		10.020 M			
Benzo(	g,h,i)perylene	<0.024	TM218	<0.024			
Polyon	omatic hydrocarbons,	mg/kg <0.118	TM210	2 99			
Total I	SEPA 16	<0.118 mg/kg	TM218	2.99 <b>M</b>			
- 101 0							
	П						

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

					<b>JOIL 110.</b> 010			
PCR	s (vs Aroclor 1254	1						
. 00:	Results Legend	Custin	Comple D-f	WODE				
#	ISO17025 accredited.	Customer	Sample Ref.	WSD5				
M	mCERTS accredited.		Donth (m)	0.00 0.70				
aq	Aqueous / settled sample.		Depth (m) Sample Type	0.60 - 0.70				
tot.unfilt	Dissolved / filtered sample. Total / unfiltered sample.	3	ample Type	Soil/Solid				
*	subcontracted test.	Da	ate Sampled					
**	% recovery of the surrogate standard to check the efficiency	Da	te Received					
	of the method. The results of the		SDG Ref	100716-54				
	individual compounds within	Lab Sa	ample No.(s)	1832319				
	the samples are not corrected for this recovery.							
Compo	for this recovery.	LOD/Units	Method					
Compo	ment (254)	LOD/Onits	TM070	-0.005				
PCBS (	(vs Aroclor 1254)	<0.035	TIVIO70	<0.035				
		mg/kg		#				
				I.			I.	

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Steve Dooley

Order No.:

Semi	emi Volatile Organic Compounds									
	Results Legend ISO17025 accredited.	Customer	Sample Ref.	WSD5						
aq	mCERTS accredited.  Aqueous / settled sample.  Dissolved / filtered sample.	s	Depth (m) ample Type	0.60 - 0.70						
tot.unfilt *	Total / unfiltered sample. subcontracted test.	Da	te Sampled	Soil/Solid 14/07/2010						
	% recovery of the surrogate standard to check the efficiency		te Received SDG Ref	16/07/2010 100716-54						
	of the method. The results of the individual compounds within the samples are not corrected	Lab Sa	mple No.(s)	1832319						
	for this recovery.	LOD/Units	Method							
Phenol		<0.1 mg/kg	TM157	<0.1						
Pentac	hlorophenol	<0.1 mg/kg	TM157	<0.1						
n-Nitro	so-n-dipropylamine	<0.1 mg/kg	TM157	<0.1						
Nitrobe	nzene	<0.1 mg/kg	TM157	<0.1						
Isopho	one	<0.1 mg/kg	TM157	<0.1						
Hexach	loroethane	<0.1 mg/kg	TM157	<0.1						
Hexach	llorocyclopentadiene	<0.1 mg/kg	TM157	<0.1						
Hexach	lorobutadiene	<0.1 mg/kg	TM157	<0.1						
Hexach	llorobenzene	<0.1 mg/kg	TM157	<0.1						
n-Dioct	yl phthalate	<0.1 mg/kg	TM157	<0.1						
Dimeth	yl phthalate	<0.1 mg/kg	TM157	<0.1						
Diethyl	phthalate	<0.1 mg/kg	TM157	<0.1						
n-Dibut	yl phthalate	<0.1 mg/kg	TM157	<0.1						
Dibenz	ofuran	<0.1 mg/kg	TM157	<0.1						
Carbaz	ole	<0.1 mg/kg	TM157	<0.1						
Butylbe	nzyl phthalate	<0.1 mg/kg	TM157	<0.1						
bis(2-E	thylhexyl) phthalate	<0.1 mg/kg	TM157	<0.1						
bis(2-C	hloroethoxy)methane	<0.1 mg/kg	TM157	<0.1						
bis(2-C	hloroethyl)ether	<0.1 mg/kg	TM157	<0.1						
Azober	nzene	<0.1 mg/kg	TM157	<0.1						
4-Nitro	ohenol	<0.1 mg/kg	TM157	<0.1						
4-Nitro	aniline	<0.1 mg/kg	TM157	<0.1						
	ylphenol	<0.1 mg/kg	TM157	<0.1						
	ophenylphenylether	<0.1 mg/kg	TM157	<0.1						
4-Chlor	oaniline	<0.1 mg/kg	TM157	<0.1						
	ro-3-methylphenol	<0.1 mg/kg	TM157	<0.1						
	ophenylphenylether	<0.1 mg/kg	TM157	<0.1						
3-Nitro		<0.1 mg/kg	TM157	<0.1						
2-Nitro		<0.1 mg/kg	TM157	<0.1						
2-Nitro		<0.1 mg/kg	TM157	<0.1						
	ylphenol	<0.1 mg/kg	TM157	<0.1						
	richlorobenzene	<0.1 mg/kg	TM157	<0.1						
	rophenol	<0.1 mg/kg	TM157	<0.1						
	itrotoluene	<0.1 mg/kg	TM157	<0.1						
2,4-Din	itrotoluene	<0.1 mg/kg	TM157	0.184						
2,4-Din	nethylphenol	<0.1 mg/kg	TM157	<0.1						
2,4-Dic	hlorophenol	<0.1 mg/kg	TM157	<0.1						
	richlorophenol	<0.1 mg/kg	TM157	<0.1						
2,4,5-T	richlorophenol	<0.1 mg/kg	TM157	<0.1						

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Sami	Volatile Organic	Compo	ınde	
	Results Legend	Custom	er Sample Ref.	WSD5
M	ISO17025 accredited. mCERTS accredited.		Depth (m)	
diss.filt	Aqueous / settled sample. Dissolved / filtered sample.		Sample Type	Soil/Solid
*	Total / unfiltered sample. subcontracted test.		Date Sampled Date Received	
	% recovery of the surrogate standard to check the efficiency		SDG Ref	100716-54
	of the method. The results of the individual compounds within the samples are not corrected	Lab	Sample No.(s)	1832319
	for this recovery.	LOD/Units	Method	
	hlorobenzene	<0.1 mg/kg		<0.1
1,3-Dic	hlorobenzene	<0.1 mg/kg	TM157	<0.1
1.2-Dic	hlorobenzene	<0.1 mg/kg		<0.1
	ronaphthalene	<0.1 mg/kg		<0.1
2-Meth	ylnaphthalene	<0.1 mg/kg	TM157	<0.1
Acenap	ohthylene	<0.1 mg/k	TM157	<0.1
Acenap	ohthene	<0.1 mg/kg	TM157	<0.1
Anthrac	cene	<0.1 mg/kg	TM157	<0.1
Benzo(	a)anthracene	<0.1 mg/kg	TM157	<0.1
Benzo(	b)fluoranthene	<0.1 mg/kg		<0.1
	k)fluoranthene	<0.1 mg/k		<0.1
Benzo(	a)pyrene	<0.1 mg/k	TM157	<0.1
Benzo(	g,h,i)perylene	<0.1 mg/kg	TM157	<0.1
Chryse	ne	<0.1 mg/kg	TM157	<0.1
Fluorar	nthene	<0.1 mg/kg	TM157	<0.1
Fluorer	ne	<0.1 mg/kg	TM157	0.229
	(1,2,3-cd)pyrene	<0.1 mg/kg		<0.1
	nthrene	<0.1 mg/k		0.406
Pyrene		<0.1 mg/kg	TM157	<0.1
Naphth	alene	<0.1 mg/kg	TM157	<0.1
Dibenz	o(a,h)anthracene	<0.1 mg/kg	TM157	<0.1

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

TPH CWG (S)						
Results Legend	Customer	Sample Ref.	WSD5			
# ISO17025 accredited.  M mCERTS accredited.		5 (1 ( )				
aq Aqueous / settled sample. diss.filt Dissolved / filtered sample.	S	Depth (m) ample Type				
tot.unfilt Total / unfiltered sample.  * subcontracted test.		ate Sampled				
** % recovery of the surrogate		te Received	16/07/2010			
standard to check the efficiency of the method. The results of the		SDG Ref imple No.(s)				
individual compounds within the samples are not corrected	200 00		1032313			
for this recovery.  Component	LOD/Units	Method				
GRO Surrogate %	%	TM089	49			
recovery**	.0.044	T14000	0.00			
GRO >C5-C12	<0.044 mg/kg	TM089	8.96			
Benzene	<0.01	TM089	<0.01			
Ethylbenzene	mg/kg <0.003	TM089	<0.003			
	mg/kg		М			
Toluene	<0.002 mg/kg	TM089	<0.002 <b>M</b>			
m,p-Xylene	<0.006	TM089	<0.006			
. V I	mg/kg	T14000	M			
o-Xylene	<0.003 mg/kg	TM089	<0.003			
m,p,o-Xylene	<0.01	TM089	<0.01			
BTEX, Total	mg/kg <0.01	TM089	<0.01			
	mg/kg		М			
Methyl tertiary butyl ether (MTBE)	<0.005 mg/kg	TM089	<0.005 #			
Aliphatics >C5-C6	<0.01	TM089	0.0218			
	mg/kg	TMOOO	0.400			
Aliphatics >C6-C8	<0.01 mg/kg	TM089	0.166			
Aliphatics >C8-C10	<0.01	TM089	0.862			
Aliphatics >C10-C12	mg/kg <0.01	TM089	2.65			
	mg/kg					
Aromatics >C6-C7	<0.01 mg/kg	TM089	<0.01			
Aromatics >C7-C8	<0.01	TM089	<0.01			
A	mg/kg	TM000	4.00			
Aromatics >EC8-EC10	<0.01 mg/kg	TM089	1.29			
Aromatics >EC10-EC12	<0.01	TM089	3.97			
Total Aliphatics >C5-C12	mg/kg <0.01	TM089	3.7			
	mg/kg					
Total Aromatics >C6-C12	<0.01 mg/kg	TM089	5.26			
Aliphatics >C12-C16	<0.1 mg/kg	TM173	192			
Al' 1 - 1' 040 004	.0.4	T14470	000			
Aliphatics >C16-C21	<0.1 mg/kg	TM173	333			
Aliphatics >C16-C35	<0.1 mg/kg	TM173	490			
Aliphatics >C21-C35	<0.1 mg/kg	TM173	157			
· ·						
Aliphatics >C35-C44	<0.1 mg/kg	TM173	<0.1			
Aromatics >EC12-EC16	<0.1 mg/kg	TM173	24.7			
Aromatics >EC16-EC21	-0.1 m = //:	TA4470	52.0			
Aromatics >EC 10-EC21	<0.1 mg/kg	TM173	53.9			
Aromatics >EC21-EC35	<0.1 mg/kg	TM173	59.5			
Aromatics >EC35-EC44	<0.1 mg/kg	TM173	16.4			
Aromatics >EC40-EC44	<0.1 mg/kg	TM173	5.39			
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173	682			
·		TA4470	454			
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173	154			
Total Aliphatics >C5-35	<0.1 mg/kg	TM173	686			
Total Aliphatics >C5-C44	<0.1 mg/kg	TM173	686			
Total Aromatics >C5-35	<0.1 mg/kg	TM173	143			
Total Aromatics >C6-C44	<0.1 mg/kg	TM173	160			
			000			
Total Aliphatics & Aromatics >C5-35	<0.1 mg/kg	TM173	829			
Total Aliphatics & Aromatics	<0.1 mg/kg	TM173	845			
>C5-C44						

# **ALcontrol Laboratories Analytical Services**

100716-54 SDG:

H\_ENTEC\_SHW-25 Job:

Client Reference: 12L056

Location: **DSDC** Bicester Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

# I	MS (S)  Results Legend						
M r	ISO17025 accredited.	Customer	Sample Ref.	WSD5			
	mCERTS accredited. Aqueous / settled sample.		Depth (m)	0.60 - 0.70			
diss.filt [	Dissolved / filtered sample.		ample Type	Soil/Solid			
* 8	Total / unfiltered sample. subcontracted test.		ate Sampled te Received	14/07/2010			
s	% recovery of the surrogate standard to check the efficiency	Da	SDG Ref	16/07/2010 100716-54			
i	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1832319			
	the samples are not corrected for this recovery.						
Compor		LOD/Units	Method				
Dibromo	ofluoromethane**	%	TM116	90.5			
Toluene	e-d8**	%	TM116	88.1			
4-Bromo	ofluorobenzene**	%	TM116	167			
Dichloro	odifluoromethane	<0.004	TM116	<0.004			
Chlorom	nethane	mg/kg <0.007	TM116	<b>M</b> <0.007			
Vinyl Ch	nloride	mg/kg <0.01	TM116	<b>*</b>			
Bromon		mg/kg <0.013	TM116	<b>*</b>			
		mg/kg		М			
Chloroe	thane	<0.014 mg/kg	TM116	<0.014 <b>M</b>			
Trichlor	ofluorormethane	<0.006 mg/kg	TM116	<0.006			
1.1-Dich	nloroethene	<0.01	TM116	<0.01			
Carbon	Disulphide	mg/kg <0.007	TM116	0.0403			
Dichloro	omethane	mg/kg <0.01	TM116	<0.01			
Methyl 7	Tertiary Butyl Ether	mg/kg <0.011	TM116	<b>*</b>			
	2-Dichloroethene	mg/kg <0.011	TM116	<b>M</b> <0.011			
	nloroethane	mg/kg <0.008	TM116	<0.008			
		mg/kg		М			
	Dichloroethene	<0.005 mg/kg	TM116	<0.005 <b>M</b>			
2.2-Dich	nloropropane	<0.012 mg/kg	TM116	<0.012 <b>M</b>			
Bromoc	hloromethane	<0.014 mg/kg	TM116	<0.014 <b>M</b>			
Chlorofo	orm	<0.008 mg/kg	TM116	<0.008 <b>M</b>			
1.1.1-Tr	richloroethane	<0.007 mg/kg	TM116	<0.007 <b>M</b>			
1.1-Dich	nloropropene	<0.011	TM116	<0.011			
Carbont	tetrachloride	mg/kg <0.014	TM116	<0.014			
1.2-Dich	nloroethane	mg/kg <0.005	TM116	<0.005			
Benzene	e	mg/kg <0.009	TM116	<b>M</b> <0.009			
	oethene	mg/kg <0.009	TM116	<b>M</b> <0.009			
	nloropropane	mg/kg <0.012	TM116	<0.012			
		mg/kg		M			
	omethane	<0.009 mg/kg	TM116	<0.009 <b>M</b>			
Bromod	lichloromethane	<0.007 mg/kg	TM116	<0.007 <b>M</b>			
cis-1-3-	Dichloropropene	<0.014	TM116	<0.014			
Toluene	9	mg/kg <0.005	TM116	<0.005			
trans-1-	3-Dichloropropene	mg/kg <0.014	TM116	<0.014			
1.1.2-Tr	richloroethane	mg/kg <0.01	TM116	<0.01			
1.3-Dich	nloropropane	mg/kg <0.007	TM116	<b>M</b> <0.007			
	loroethene	mg/kg <0.005	TM116	<b>*</b>			
	ochloromethane	mg/kg <0.013	TM116	<0.013			
		mg/kg		М			
	romoethane	<0.012 mg/kg	TM116	<0.012 <b>M</b>			
Chorobe		<0.005 mg/kg	TM116	<0.005 <b>M</b>			
1.1.1.2-	Tetrachloroethane	<0.01 mg/kg	TM116	<0.01			
Ethylber	nzene	<0.004 mg/kg	TM116	<0.004 <b>M</b>			

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

VOC	MS (S)			
	Results Legend	Customer	Sample Ref.	WSD5
М	ISO17025 accredited. mCERTS accredited.		Depth (m)	0.60 0.70
diss.filt	Aqueous / settled sample. Dissolved / filtered sample.		ample Type	0.60 - 0.70 Soil/Solid
*	Total / unfiltered sample. subcontracted test.		te Sampled	14/07/2010
	% recovery of the surrogate standard to check the efficiency		te Received SDG Ref	16/07/2010 100716-54
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1832319
	the samples are not corrected for this recovery.			
p/m-Xyl		<0.014	Method TM116	<0.014
		mg/kg		#
o-Xylen	ne	<0.01 mg/kg	TM116	<0.01
Styrene	•	<0.01	TM116	<0.01
Bromof	orm	mg/kg <0.01	TM116	<0.01
Isonron	ylbenzene	mg/kg <0.005	TM116	0.0468
		mg/kg		М
1.1.2.2-	-Tetrachloroethane	<0.01 mg/kg	TM116	<0.01 #
1.2.3-Tı	richloropropane	<0.017	TM116	<0.017 <b>M</b>
Bromob	penzene	mg/kg <0.01	TM116	<0.01
Propylb	penzene	mg/kg <0.011	TM116	0.0502
		mg/kg		М
2-Cnior	rotoluene	<0.009 mg/kg	TM116	<0.009 <b>M</b>
1.3.5-Tı	rimethylbenzene	<0.008 mg/kg	TM116	<0.008
4-Chlor	otoluene	<0.012	TM116	<0.012
tert-But	ylbenzene	mg/kg <0.012	TM116	<0.012
		mg/kg		#
	rimethylbenzene	<0.009 mg/kg	TM116	0.0175 #
sec-But	tylbenzene	<0.01	TM116	0.229 <b>M</b>
4-Isopro	opyltoluene	mg/kg <0.011	TM116	0.0553
1,3-Dicl	hlorobenzene	mg/kg <0.006	TM116	<0.006
		mg/kg		М
1.4-Dicl	hlorobenzene	<0.005 mg/kg	TM116	<0.005 <b>M</b>
n-Butyll	benzene	<0.01	TM116	<0.01
1.2-Dicl	hlorobenzene	mg/kg <0.012	TM116	<0.012
1.2-Dih	romo-3-chloropropan	mg/kg <0.014	TM116	<b>M</b> <0.014
е		mg/kg		М
Tert-am	nyl methyl ether	<0.015 mg/kg	TM116	<0.015
1.2.4-Tı	richlorobenzene	<0.006 mg/kg	TM116	<0.006
Hexach	lorobutadiene	<0.012	TM116	<0.012
Naphth	alene	mg/kg <0.013	TM116	<0.013
		mg/kg		М
1.2.3-Ti	richlorobenzene	<0.006 mg/kg	TM116	<0.006 <b>M</b>

## **ALcontrol Laboratories Analytical Services**

Customer:

Attention:

Order No.:

Entec UK Ltd

Steve Dooley

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056
Location: DSDC Bic

cation: DSDC Bicester Report No: 91555

Results Legend	Customer	Sample Ref.	WSD7	WSD8	WSD8			
# ISO17025 accredited.  M mCERTS accredited.								
aq Aqueous / settled sample. diss.filt Dissolved / filtered sample.		Depth (m) sample Type		0.00 - 0.10	1.00 - 1.10			
tot.unfilt Total / unfiltered sample.		ate Sampled	Soil/Solid 14/07/2010	Soil/Solid 14/07/2010	Soil/Solid 14/07/2010			
* subcontracted test.  ** % recovery of the surrogate		te Received	16/07/2010	16/07/2010	16/07/2010			
standard to check the efficiency of the method. The results of the		SDG Ref	100716-54	100716-54	100716-54			
individual compounds within	Lab Sa	ample No.(s)	1832324	1832325	1832326			
the samples are not corrected for this recovery.								
Component	LOD/Units	Method		-45				
Ammoniacal Nitrogen, exchangeable as NH4	<15 mg/kg	TM024		<15 <b>M</b>				
Sulphate, 2:1 water soluble	<0.003 g/l	TM098		0.133				
ali	1 nl l l lnito	TM133		7.82				
pH	1 pH Units	1101133		7.02 M				
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6	<1.2	<0.6			
TPH >C6-C8	<10 mg/kg	TM154	#	<b>*</b>	#			
TPH >C8-C10	<10 mg/kg	TM154		<10				
TPH >C10-C12	<10 mg/kg	TM154		<10				
TPH >C12-C16	<10 mg/kg	TM154		<10				
TPH >C16-C21	<10 mg/kg	TM154		<10				
TPH >C21-C40	<10 ma//c	TM154		119				
11°11 2021-040	<10 mg/kg	1101104		119				
TPH >C6-C40	<10 mg/kg	TM154		127				
Arsenic	<0.6 mg/kg	TM181		7.71				
Alsenie	-o.o mg/kg	TIWITOT		М				
Cadmium	<0.02	TM181		0.21				
Chromium	mg/kg <0.9 mg/kg	TM181		52.6				
				М				
Copper	<1.4 mg/kg	TM181		23.8 <b>M</b>				
Lead	<0.7 mg/kg	TM181		24.8				
				M				
Mercury	<0.14 mg/kg	TM181		<0.14				
Nickel	<0.2 mg/kg	TM181		23.4				
Selenium	<1 mg/kg	TM181		1.95				
Selement	~ i ilig/kg	TIWITOT		#				
Zinc	<1.9 mg/kg	TM181		83.9				
Boron, water soluble	<1 mg/kg	TM222		3.19				
,	J 3			М				
				l	l .		I .	

## **ALcontrol Laboratories Analytical Services**

100716-54 SDG:

H ENTEC SHW-25 Job:

**Client Reference:** Location:

12L056

**DSDC** Bicester

**Customer:** Attention:

Entec UK Ltd Steve Dooley

Order No.:

Report No: 91555

## **ASSOCIATED AQC DATA**

### Ammonium Soil by Titration

Component	Method Code	QC 13	QC 17	QC 15
Exchangeable Ammonium as NH4	TM024	<b>88.97</b> 80.84 : 103.27	<b>87.18</b> 80.84 : 103.27	<b>88.08</b> 80.84 : 103.27

### **Boron Water Soluble**

Component	Method Code	QC 17	QC 11	QC 16	QC 12	QC 14
Water Soluble Boron	TM222	<b>100.80</b> 82.59 : 112.64	<b>104.95</b> 82.59 : 112.64	<b>100.20</b> 82.59 : 112.64	<b>98.80</b> 82.59 : 112.64	<b>99.20</b> 82.59 : 112.64

### EPH CWG (Aliphatic) GC (S)

Component	Method Code	QC 15	QC 14
Total Aliphatics >C12-C35	TM173	<b>77.51</b> 60.00 : 116.88	<b>81.79</b> 66.13 : 101.56

### EPH CWG (Aromatic) GC (S)

Component	Method Code	QC 15
Total Aromatics >EC12-EC35	TM173	<b>79.23</b> 64.98 : 117.66

### Hexavalent Chromium (s)

Component	Method Code	QC 11	QC 13	QC 13	QC 13
Hexavalent Chromium	TM151	<b>112.80</b> 76.40 : 131.80	<b>109.40</b> 76.40 : 131.80	<b>117.80</b> 76.40 : 131.80	<b>108.40</b> 76.40 : 131.80

### Metals by iCap-OES (Soil)

Component	Method Code	QC 16	QC 18	QC 15	QC 11	QC 10	QC 13
Aluminium	TM181	<b>112.20</b> 95.21 : 133.11	<b>108.50</b> 95.21 : 133.11	<b>108.11</b> 95.21 : 133.11	<b>109.67</b> 95.21 : 133.11	<b>102.37</b> 95.21 : 133.11	<b>118.24</b> 95.21 : 133.11
Antimony	TM181	<b>113.55</b> 63.92 : 138.56	<b>88.97</b> 63.92 : 138.56	<b>97.82</b> 63.92 : 138.56	<b>104.62</b> 63.92 : 138.56	<b>120.94</b> 63.92 : 138.56	<b>111.91</b> 63.92 : 138.56
Arsenic	TM181	<b>104.22</b> 77.96 : 122.04	<b>93.28</b> 77.96 : 122.04	<b>98.45</b> 77.96 : 122.04	<b>100.34</b> 77.96 : 122.04	<b>107.24</b> 77.96 : 122.04	<b>101.72</b> 77.96 : 122.04
Barium	TM181	<b>101.42</b> 90.49 : 117.24	<b>98.09</b> 90.49 : 117.24	<b>97.90</b> 90.49 : 117.24	<b>105.34</b> 90.49 : 117.24	<b>90.84</b> 90.49 : 117.24	<b>105.14</b> 90.49 : 117.24
Beryllium	TM181	<b>112.86</b> 77.50 : 122.50	<b>85.94</b> 77.50 : 122.50	<b>95.87</b> 77.50 : 122.50	<b>103.31</b> 77.50 : 122.50	<b>102.48</b> 77.50 : 122.50	<b>108.36</b> 77.50 : 122.50
Boron	TM181	<b>99.64</b> 82.46 : 141.11	<b>93.55</b> 82.46 : 141.11	<b>93.82</b> 82.46 : 141.11	<b>108.59</b> 82.46 : 141.11	<b>104.30</b> 82.46 : 141.11	<b>114.32</b> 82.46 : 141.11

## **ALcontrol Laboratories Analytical Services**

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: Location: 12L056 DSDC Bicester Customer: Attention: Entec UK Ltd Steve Dooley

Order No.:

Report No: 91555

		QC 16	QC 18	QC 15	QC 11	QC 10	QC 13
Cadmium	TM181	<b>113.37</b> 77.50 : 122.50	<b>86.13</b> 77.50 : 122.50	<b>95.36</b> 77.50 : 122.50	<b>104.18</b> 77.50 : 122.50	<b>120.51</b> 77.50 : 122.50	<b>106.63</b> 77.50 : 122.50
Chromium	TM181	<b>123.03</b> 82.90 : 117.10	<b>94.52</b> 82.90 : 117.10	<b>94.71</b> 82.90 : 117.10	<b>97.47</b> 82.90 : 117.10	<b>92.85</b> 82.90 : 117.10	<b>95.66</b> 82.90 : 117.10
Cobalt	TM181	<b>107.19</b> 78.26 : 121.74	<b>91.12</b> 78.26 : 121.74	<b>96.27</b> 78.26 : 121.74	<b>101.69</b> 78.26 : 121.74	<b>107.64</b> 78.26 : 121.74	<b>102.31</b> 78.26 : 121.74
Copper	TM181	<b>101.26</b> 86.52 : 113.48	<b>96.31</b> 86.52 : 113.48	<b>97.13</b> 86.52 : 113.48	<b>97.81</b> 86.52 : 113.48	<b>91.54</b> 86.52 : 113.48	<b>99.27</b> 86.52 : 113.48
Iron	TM181	<b>108.38</b> 93.59 : 123.28	<b>102.14</b> 93.59 : 123.28	<b>101.87</b> 93.59 : 123.28	<b>105.67</b> 93.59 : 123.28	<b>90.46</b> 93.59 : 123.28	<b>105.40</b> 93.59 : 123.28
Lead	TM181	<b>99.89</b> 81.22 : 118.78	<b>97.78</b> 81.22 : 118.78	<b>98.06</b> 81.22 : 118.78	<b>99.78</b> 81.22 : 118.78	<b>116.31</b> 81.22 : 118.78	<b>95.67</b> 81.22 : 118.78
Manganese	TM181	<b>96.60</b> 87.42 : 112.58	<b>92.73</b> 87.42 : 112.58	<b>95.06</b> 87.42 : 112.58	<b>96.80</b> 87.42 : 112.58	<b>75.61</b> 87.42 : 112.58	<b>94.09</b> 87.42 : 112.58
Mercury	TM181	<b>116.61</b> 72.27 : 127.73	<b>95.87</b> 72.27 : 127.73	<b>104.66</b> 72.27 : 127.73	<b>105.10</b> 72.27 : 127.73	<b>116.52</b> 72.27 : 127.73	<b>108.44</b> 72.27 : 127.73
Molybdenum	TM181	<b>112.92</b> 71.12 : 128.88	<b>85.23</b> 71.12 : 128.88	<b>94.49</b> 71.12 : 128.88	<b>114.17</b> 71.12 : 128.88	<b>121.67</b> 71.12 : 128.88	<b>108.23</b> 71.12 : 128.88
Nickel	TM181	<b>101.45</b> 81.27 : 118.73	<b>96.79</b> 81.27 : 118.73	<b>97.48</b> 81.27 : 118.73	<b>99.92</b> 81.27 : 118.73	<b>92.21</b> 81.27 : 118.73	<b>97.02</b> 81.27 : 118.73
Phosphorus	TM181	<b>101.67</b> 84.04 : 115.96	<b>94.48</b> 84.04 : 115.96	<b>98.58</b> 84.04 : 115.96	<b>98.54</b> 84.04 : 115.96	<b>114.19</b> 84.04 : 115.96	<b>101.52</b> 84.04 : 115.96
Selenium	TM181	<b>116.53</b> 72.61 : 127.39	<b>86.36</b> 72.61 : 127.39	<b>104.54</b> 72.61 : 127.39	<b>110.18</b> 72.61 : 127.39	<b>115.12</b> 72.61 : 127.39	<b>112.10</b> 72.61 : 127.39
Strontium	TM181	<b>97.92</b> 80.21 : 119.79	<b>94.79</b> 80.21 : 119.79	<b>99.71</b> 80.21 : 119.79	<b>93.44</b> 80.21 : 119.79	<b>90.64</b> 80.21 : 119.79	<b>98.60</b> 80.21 : 119.79
Thallium	TM181	<b>108.53</b> 73.04 : 126.96	<b>83.07</b> 73.04 : 126.96	<b>90.56</b> 73.04 : 126.96	<b>101.94</b> 73.04 : 126.96	<b>120.50</b> 73.04 : 126.96	<b>102.60</b> 73.04 : 126.96
Tin	TM181	<b>113.05</b> 71.55 : 128.45	<b>88.28</b> 71.55 : 128.45	<b>94.22</b> 71.55 : 128.45	<b>104.41</b> 71.55 : 128.45	<b>116.12</b> 71.55 : 128.45	<b>105.66</b> 71.55 : 128.45
Titanium	TM181	<b>98.13</b> 78.26 : 121.74	<b>99.85</b> 78.26 : 121.74	<b>98.49</b> 78.26 : 121.74	<b>108.78</b> 78.26 : 121.74	<b>99.03</b> 78.26 : 121.74	<b>105.26</b> 78.26 : 121.74
Vanadium	TM181	<b>100.00</b> 82.03 : 117.97	<b>96.22</b> 82.03 : 117.97	<b>97.50</b> 82.03 : 117.97	<b>96.96</b> 82.03 : 117.97	<b>100.78</b> 82.03 : 117.97	<b>101.68</b> 82.03 : 117.97
Zinc	TM181	<b>95.19</b> 77.50 : 122.50	<b>90.30</b> 77.50 : 122.50	<b>93.83</b> 77.50 : 122.50	<b>92.48</b> 77.50 : 122.50	<b>84.17</b> 77.50 : 122.50	<b>92.30</b> 77.50 : 122.50

### PAH by GCMS

Component	Method Code	QC 15	QC 19	QC 15
Acenaphthene	TM218	<b>101.47</b> 68.10 : 128.67	<b>96.10</b> 71.41 : 116.50	<b>95.73</b> 72.32 : 109.44
Acenaphthylene	TM218	<b>93.77</b> 68.11 : 109.28	<b>86.04</b> 74.28 : 102.70	<b>83.84</b> 68.65 : 103.57
Anthracene	TM218	<b>98.69</b> 61.75 : 122.01	<b>91.23</b> 67.40 : 117.21	<b>90.99</b> 69.18 : 111.83
Benz(a)anthracene	TM218	<b>95.64</b> 79.35 : 115.30	<b>102.22</b> 66.80 : 125.05	<b>107.56</b> 75.52 : 122.57
Benzo(a)pyrene	TM218	<b>98.16</b> 79.80 : 116.48	<b>105.87</b> 69.15 : 119.77	<b>113.11</b> 71.24 : 119.68
Benzo(b)fluoranthene	TM218	<b>100.82</b> 79.51 : 116.19	<b>107.60</b> 70.01 : 124.88	<b>116.45</b> 75.05 : 121.20
Benzo(ghi)perylene	TM218	<b>100.15</b> 80.08 : 114.22	<b>109.94</b> 81.23 : 116.67	<b>102.34</b> 74.07 : 119.02
Benzo(k)fluoranthene	TM218	<b>97.51</b> 65.05 : 129.07	<b>106.01</b> 71.46 : 117.67	<b>100.40</b> 73.14 : 117.51

## **ALcontrol Laboratories Analytical Services**

100716-54 SDG:

H\_ENTEC\_SHW-25 Job:

**Client Reference:** 12L056 Location:

**DSDC** Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Report No: 91555

		QC 15	QC 19	QC 15
Chrysene	TM218	<b>99.16</b> 80.14 : 113.92	<b>102.71</b> 71.32 : 130.95	<b>98.07</b> 75.35 : 119.13
Dibenzo(ah)anthracene	TM218	<b>98.02</b> 59.79 : 136.56	<b>111.74</b> 81.17 : 118.65	<b>99.66</b> 72.56 : 120.05
Fluoranthene	TM218	<b>97.89</b> 74.35 : 115.70	<b>95.77</b> 69.52 : 118.84	<b>98.51</b> 72.66 : 116.78
Fluorene	TM218	<b>100.23</b> 75.68 : 111.55	<b>94.28</b> 71.38 : 111.04	<b>94.30</b> 72.26 : 119.17
Indeno(123cd)pyrene	TM218	<b>98.87</b> 74.42 : 114.62	<b>112.31</b> 80.81 : 118.96	<b>105.93</b> 71.54 : 119.37
Naphthalene	TM218	<b>92.45</b> 73.21 : 108.15	<b>90.36</b> 81.16 : 104.84	<b>92.13</b> 76.45 : 106.42
Phenanthrene	TM218	<b>103.45</b> 66.61 : 129.12	<b>96.50</b> 69.56 : 121.45	<b>96.99</b> 71.89 : 117.20
Pyrene	TM218	<b>99.01</b> 74.35 : 111.75	<b>95.68</b> 70.34 : 117.79	<b>98.48</b> 73.05 : 116.68

### PCBs (vs Aroclor 1254)

Component	Method Code	QC 14
PCBs (vs Aroclor 1254)	TM070	<b>109.33</b> 75.18 : 122.16

### рΗ

Component	Method Code	QC 18	QC 19	QC 12	QC 12	QC 14
pН	TM133	100.75	100.38	99.62	101.13	100.00
		97.90 : 102.35	97.90 : 102.35	97.90 : 102.35	97.90 : 102.35	97.90 : 102.35

### Semi Volatile Organic Compounds

Component	Method Code	QC 10
4-Bromophenylphenyleth er (Soil)	TM157	<b>87.87</b> 28.30 : 143.78
Benzo(a)anthracene (Soil)	TM157	<b>94.55</b> 18.50 : 151.06
Hexachlorobutadiene (Soil)	TM157	<b>86.87</b> 31.16 : 138.34
Naphthalene (Soil)	TM157	<b>89.73</b> 26.59 : 145.57
Nitrobenzene (Soil)	TM157	<b>87.50</b> 25.35 : 142.64
Phenol (Soil)	TM157	<b>86.80</b> 28.59 : 134.35

### Total Organic Carbon

Component	Method Code	QC 11	QC 19	QC 18
Total Organic Carbon	TM132	92.99	98.03	97.96
		88.75 : 104.70	88.75 : 104.70	88.75 : 104.70

## **ALcontrol Laboratories Analytical Services**

100716-54 SDG:

H ENTEC SHW-25 Job:

**Client Reference:** Location:

12L056 **DSDC** Bicester **Customer:** Attention:

Entec UK Ltd Steve Dooley

Order No.: **Report No:** 

91555

### TPH c6-40 Value of soil

Component	Method Code	QC 16	QC 14	QC 11
Diesel QC	TM154	<b>92.86</b> 87.23 : 113.71	<b>94.61</b> 87.23 : 113.71	<b>92.67</b> 87.23 : 113.71
Lube Oil QC	TM154	<b>104.28</b> 88.71 : 110.56	<b>102.08</b> 88.71 : 110.56	<b>101.36</b> 88.71 : 110.56
TPH C6-40 Corrected	TM154	<b>98.57</b> 86.39 : 109.99	<b>98.35</b> 86.39 : 109.99	<b>97.01</b> 86.39 : 109.99

### Water Soluble Sulphate 2:1

Component	Method Code	QC 11	QC 19	QC 12	QC 14	QC 10
Soluble SO4	TM098	<b>86.26</b> 76.87 : 120.45	<b>82.09</b> 76.87 : 120.45	<b>81.57</b> 76.87 : 120.45	<b>84.69</b> 76.87 : 120.45	<b>92.60</b> 76.87 : 120.45

The above information details the reference name of the analytical quality control sample (AQC) that has been run with the samples contained in this report for the different methods of analysis.

The figure detailed is the percentage recovery result for the AQC.

The subscript numbers below are the percentage recovery lower control limit (LCL) and the upper control limit (UCL). The percentage recovery result for the AQC should be between these limits to be statistically in control.

## **ALcontrol Laboratories Analytical Services**

**Customer:** 

Attention:

Order No.:

Entec UK Ltd

Steve Dooley

**SDG**: 100716-54

Job: H\_ENTEC\_SHW-25

Client Reference: 12L056

Location: DSDC Bicester Report No: 91555

### **Asbestos Identification**

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Customer Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	WSD3 NS Z 0.10 - 0.20 SOLID 14/07/2010 00:00:00 16/07/2010 10:48:07 1007:16-54 1,832,312 TM048	19/7/10	Tomasz Pawlikowski	Typical of asbestos cement	Not Detected	Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
Customer Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	WSD5 NS Z 0.20 - 0.30 0.20 - 0.30 5.0LID 14/07/2010 00:00:00 16/07/2010 11:03:40 100716-54 1,832,317 TM048	22/7/0	Rhodri Williams	Typical of asbestos cement	Not Detected	Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

## **ALcontrol Laboratories Analytical Services**



## **Table of Results - Appendix**

SDG Number: 100716-54 Client: Entec UK Ltd Client Ref: 12L056

REPORT KEY  Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03x10-7								
NDP	No Determination Possible	#	ISO 17025 Accredited		Subcontracted Test	M	MCERTS Accredited	
NFD	No Fibres Detected	PFD	Possible Fibres Detected		Result previously reported (Incremental reports only)	EC	Equivalent Carbon (Aromatics C8-C35)	

Method No	not always achievable due to various circumstances beyond o	Description	Wet/Dry Sample <sup>1</sup>
PM001		Preparation of Samples for Metals Analysis	Dry
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material	Wet
TM001	In - house Method	Determination of asbestos containing material by screening on solids	
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids	Wet
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material	
TM070	Modified: US EPA Method 8250 & 625	Determination of Total Polychlorinated Biphenyls (PCBÆs) as Aroclor 1254 by GC-MS in Soils	Dry
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)	
TM098	Method 4500E, AWWA/APHA, 20th Ed., 1999	Determination of Sulphate using the Kone Analyser	Dry
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS	
TM132	In - house Method	ELTRA CS800 Operators Guide	Dry
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter	Wet
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser	Wet
TM154	In - house Method	Determination of Petroleum Hydrocarbons by EZ Flash GC-FID in the Carbon range C6- C40	Wet
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone	Wet
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID	Dry
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES	Dry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers	Dry
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546	Wet
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer	Dry

<sup>&</sup>lt;sup>1</sup> Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

## **APPENDIX**

#### **APPENDIX**

- Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following:
   NRA Leach tests, flash point, ammonium as NH<sub>4</sub> by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and
   TOF-MS TICS.
- 2. Samples will be run in duplicate upon request, but an additional charge may be incurred.
- 3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. Alcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.
- 4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
- 5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
- 6. When requested, the individual sub sample scheduled will be screened in house for the presence of large asbestos containing material fragments/pieces. If no asbestos containing material is found this will be reported as 'no asbestos containing material detected'. If asbestos containing material is detected it will be removed and analysed by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If asbestos containing material is present no further analysis will be undertaken. At no point is the fibre content of the soil sample determined.
- 7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.
- 8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.
- 9. NDP No determination possible due to insufficient/unsuitable sample.
- 10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals total metals must be requested separately.
- 11. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.
- 12. Results relate only to the items tested
- 13. **Surrogate recoveries** Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 130 %.
- Product analyses Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.
- 15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).
- 16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 14).
- 17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
- 18. Our MCERTS accreditation for PAHs by GCMS applies to all product types apart from Kerosene, where naphthalene only is not accredited.
- 19. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
- 19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.
- 20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
- 21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
- 22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
- 23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

Last updated 1 April 2010

### LIQUID MATRICES EXTRACTION SUMMARY

ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAH MS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GS MS
SVOC	DCM	LIQUID/LIQUID SHAKE	GC MS
FREE SULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST OCP/OPP	DCM	LIQUID/LIQUID SHAKE	GC MS
TRIAZINE HERBS	DCM	LIQUID/LIQUID SHAKE	GC MS
PHENOLS MS	DCM	SOLID PHASE EXTRACTION	GC MS
TPH by INFRA RED (IR)	TCE	LIQUID/LIQUID EXTRACTION	HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID EXTRACTION	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GC FID

### SOLID MATRICES EXTRACTION SUMMARY

	JOLID	MATRICES EXTRACTION SUMMARY	,	
ANALYSIS	D/C OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	SISATUR
Solvent Extractable Matter	D&C	DCM	SOXTHERM	GRAVIMETRIC
Cyclohexane Ext. Matter	D&C	CYCLOHEXANE	SOXTHERM	GRAVIMETRIC
Thin Layer Chromatography	D&C	DCM	SOXTHERM	IATROSCAN
Elemental Sulphur	D&C	DCM	SOXTHERM	HPLC
Phenols by GCMS	WET	DCM	SOXTHERM	GC-MS
Herbicides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
Pesticides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
EPH (DRO)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Min oil)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Cleaned up)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH CWG by GC	D&C	HEXANE:ACETONE	END OVER END	GC-FID
PCB tot / PCB con	D&C	HEXANE:ACETONE	END OVER END	GC-MS
Polyaromatic Hydrocarbons (MS)	WET	HEXANE:ACETONE	Microwave TM218.	GC-MS
C8-C40 (C6-C40)EZ Flash	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Polyaromatic Hydrocarbons Rapid GC	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Semi Volatile Organic Compounds	WET	DCM:ACETONE	SONICATE	GC-MS

### **Identification of Asbestos in Bulk Materials**

The results for asbestos identification for soil samples are obtained from possible Asbestos Containing Material, removed during the 'Screening of soils for Asbestos Containing Materials', which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

### **Visual Estimation Of Fibre Content.**

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: -

Trace – Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in MDHS 100.

The identification of asbestos containing materials falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

#### 



Unit 7-8 Hawarden Business Park Manor Road (off Manor Lane) Hawarden

> Deeside CH5 3US

Tel: (01244) 528700 Fax: (01244) 528701 email: mkt@alcontrol.com Website: www.alcontrol.com

Entec UK Ltd Canon Court North Abbey Lawn Abbey Foregate Shrewsbury Shropshire SY2 5DE

> Attention: Steve Dooley

### **CERTIFICATE OF ANALYSIS**

Date: 28 July 2010 **Customer:** H\_ENTEC\_SHW-24

Sample Delivery Group (SDG): 100719-9 Report No.: 91728

Your Reference: 26999

Location: KL056 DSDC Bicester

We received 48 samples on Saturday July 17, 2010 and 29 of these samples were scheduled for analysis which was completed on Wednesday July 28, 2010. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Asbestos testing - we are not accredited for screening soil samples for asbestos fibres. We are only accredited to identify asbestos fibres in bulk material (ACM).

Approved By:



#### **Iain Swinton**

Operations Director - Land UK & Ireland



Location:

## **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Report No: 91728

## Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Sampled Date
1836401	внс3	0.50 - 0.65	15/07/2010
1836414	BHC3	1.00	15/07/2010
1837405	BHC3	2.00	15/07/2010
1837306	BHC3	2.50	15/07/2010
1837396	BHC5	1.00	15/07/2010
1837371	BHC5	2.00	15/07/2010
1837412	BHC5	3.00	15/07/2010
1837381	TPC10 ES1	0.10	15/07/2010
1837355	TPC10 ES2	1.00	15/07/2010
1837139	TPC10 ES3	1.60	15/07/2010
1837142	TPC10 ES4	2.20	15/07/2010
1837467	TPC6 ES1	0.10	15/07/2010
1837333	TPC6 ES2	1.00	15/07/2010
1844739	TPC7 ES1	0.30	15/07/2010
1837312	TPC7 ES2	1.10	15/07/2010
1837349	TPC7 ES3	1.70	15/07/2010
1837435	TPC8 ES1	0.20	15/07/2010
1837478	TPC8 ES2	0.60	15/07/2010
1837295	TPC8 ES3	1.60	15/07/2010
1837454	TPC9 ES1	0.20	15/07/2010
1837299	TPC9 ES2	1.20	15/07/2010
1837117	TPE1 ES1	0.50	15/07/2010
1837103	TPE1 ES2	1.10	15/07/2010
1837129	TPE2 ES1	0.50	15/07/2010
1837108	TPE2 ES2	1.80	15/07/2010
1836354	WSC1	0.00 - 0.20	16/07/2010
1836522	WSC1	1.50 - 1.70	16/07/2010
1836584	WSC1	5.50 - 5.80	16/07/2010
1836545	WSC2	0.20 - 0.40	16/07/2010
1836658	WSC2	1.20 - 1.40	16/07/2010
1836678	WSC2	2.40 - 2.70	16/07/2010
1836437	WSC3	0.00 - 0.20	16/07/2010
1836565	WSC3	2.40 - 2.60	16/07/2010
1836593	WSC3	3.00 - 3.20	16/07/2010
1836207	WSD10	0.20 - 0.40	15/07/2010
1836248	WSD10	1.60 - 1.90	15/07/2010
1836258	WSD11	0.30 - 0.40	15/07/2010
1841524	WSD11	2.90 - 3.10	15/07/2010
1836179	WSD12	0.30 - 0.60	15/07/2010
1836196	WSD12	1.50 - 1.70	15/07/2010
1836188	WSD12	3.25 - 3.40	15/07/2010
1836238	WSD13	0.10 - 0.30	15/07/2010
1836263	WSD13	2.50 - 2.80	15/07/2010

Validated	ALcontrol Lal	boratori	es Analyt	ical Services	
SDG: Job: Client Reference: Location:	100719-9 H_ENTEC_SHW-24 26999 KL056 DSDC Bicester		Customer: Attention: Order No.: Report No:	Entec UK Ltd Steve Dooley 91728	
1836192		WSD9		0.30 - 0.50	15/07/2010
1836218		WSD9		3.80 - 4.00	15/07/2010
1836227		WSE17		0.20 - 0.40	15/07/2010
1836300	,	WSE17		0.60 - 0.80	15/07/2010
1836307		WSE17		2.40 - 2.60	15/07/2010

Only received samples which have had analysis scheduled will be shown on the following pages.

# **ALcontrol Laboratories Analytical Services**

Order No.:

 SDG:
 100719-9
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999

Location: KL056 DSDC Bicester Report No: 91728

### SOLID

Ammonium Soil by Titration  All  X X X X X X X X X X X X X X X X X	SOLID																															
No Determination	Results Legend	Lab Sample No(s)	7610001	1000	1836196		1836218	1836238	0420001	1836248	1836300	1836307		1836354	1836401		1836414		1836522	1836545		1836565	10000	1226658	1837108	183/11/		1837129		1837139	1837295	
Depth (m)	X Test				7					Ť				1				Γ	1					Ť			T	1				T
Container			V C	W/SDo	WSD12		WSD9	WSD13	0	WSD10	WSE17	WSE17		WSC1	внс3		внсз		WSC1	WSC2		WSC3	()	WSC2	TPE2 ES2	FE   EO	1	TPE2 ES1		TPC10 ES3	IPC8 Ess	1
Ammonium Soil by Titration  All  X X X X X X X X X X X X X X X X X X		Depth (m)	0.00	0.30 - 0.50	1.50 - 1.70		3.80 - 4.00	0.10 - 0.30		1.60 - 1.90	0.60 - 0.80	2.40 - 2.60		0.00 - 0.20	0.50 - 0.65		1.00		1.50 - 1.70	0.20 - 0.40		2.40 - 2.60		1.20 - 1.40	1.80	0:50		0.50		1.60	1.00	
Abselsos Containing Material Screen  All  Sabestos Containing Material S		Container	250g Amber Jar	250g Amber Jar 400g Tub	400g Tub	400g Tub 250g Amber Jar	60g VOC	400g Tub 250g Amber Jar	250g Amber Jar	400g Tub	400g Tub	250g Amber Jar	250g Amber Jar	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	400r Tub	250g Amber Jar	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	400g Tub ວອດຕ Amber Jar	250g Amber Jar	250g Amber Jar	400g Tub	400g Tub 250a Amber Jar	60g VOC	250g Amber Jar	250g Amber Jar
Abestos Containing Material Screen  All  X X X X X X X X X X X X X X X X X X	Ammonium Soil by Titration	All	Η,	<u>v</u>	v	v		v		v	v	V		v	Т	,	,	П	v	v		v	П	v	v	,	,	v	v	Ħ	×	$\prod$
Boron Water Soluble	Asbestos Containing Material Screen	All	П		1	^		^	Н	^	^	^		^		<b>-</b>	\	Н	^	^ v	П	1	П	1	^	_ <mark>/</mark>	•	^		Н		
EPH CWG (Aliphatic) GC (S)  All  X  EPH CWG (Aromatic) GC (S)  All  X  All  X  X  X  X  X  X  X  X  X  X  X  X	Boron Water Soluble	All	П		1	v	Н	<u> </u>	v	,	,	v	v	H		v	t	v		^	v	$\dagger$	v	<b>+</b>		v	v	^	<u>_</u>	Н	v	
EPH CWG (Aromatic) GC (S)  All    All	EPH CWG (Aliphatic) GC (S)	All	Ĥ	^	Ť		Н	^	^		\	^	^	Н			t	^	-	1	^	$\dagger$	^	<del> </del>		^	^		\ \ \	Н	^	П
All	EPH CWG (Aromatic) GC (S)	All	H	$\dagger\dagger$	Ť		Н	+	H	$\dagger$	$^{+}$	H	Н	Н	Н		t	Н		$^{+}$	<u>۸</u>	$^{+}$	Н	†	$\forall$	+	Н	-	\ \ \	Н		T
Hexavalent Chromium (s)  All  X X X X X X X X X X X X X X X X X X	GRO BTEX MTBE GC (S)	All	H	$\forall$	Ť	X			H	$^{\dagger}$	t		Н	Н	Н	X	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Н		$^{+}$	X	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	H	$\dagger$	$\forall$	+	Н		<u>\</u>			T A
Metals by iCap-OES (Soil)         Arsenic         X <t< td=""><td>Hexavalent Chromium (s)</td><td>All</td><td>H</td><td>H</td><td>+</td><td></td><td>Ĥ</td><td></td><td>H</td><td>+</td><td></td><td></td><td></td><td></td><td></td><td></td><td>. X</td><td></td><td></td><td></td><td>Н</td><td>X</td><td></td><td>+</td><td></td><td></td><td></td><td></td><td>+</td><td>Ĥ</td><td></td><td>H</td></t<>	Hexavalent Chromium (s)	All	H	H	+		Ĥ		H	+							. X				Н	X		+					+	Ĥ		H
Chromium    X	Metals by iCap-OES (Soil)	Arsenic	П			T			V		T		П	П		▮	<b>(</b>	V	X ,	X		X	П						Ť	П		П
Chromium		Cadmium	П		T		Н		^	Ť				П	П		t	^	-	^		$\dagger$	П	T			Ï		\ \ \	П		П
Copper		Chromium			Ť		Н	<u>Λ</u>	Λ ν		,		Λ	<b>-</b>	<b>\</b>	<u>۸</u>	t	Λ ν	-	^	<u>۸</u>	$^{+}$	^			Λ.	X	-	\ \ \	П		╽
Lead		Copper			T		Н	X	X	,			X		X	X	t	X	-	X	X	$^{+}$	X	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		X	X		<u>\</u>	П		X
Mercury  X X X X X X X X X X X X X X X X X X X		Lead			T		Н		X	Í			Ď	, ,	X	X	t	X		X	X	+	Ö	Ť			X	,	<u> </u>	Н		X
Nickel		Mercury			Ť		Н		X	Ť			Ď	)	X	X	$^{+}$	X		X	X	+		Ť			X	7	K	Н		
Selenium  X X X X X X X X X X X X X X X X X X X		Nickel	П		T		Н		X	Ť			Ĺ	П			$^{+}$	X	-	X	X	+		Ť			X	7	<u> </u>	Н		
Zinc   X		Selenium	П		T		Н		Ħ	Ť			Ĺ	П	Ħ		+	X	-	X		+		T			X		<u>(</u>	П		П
PAH by GCMS         All         X         <		Zinc			T		Н		Ĥ	Ť			İ	ΗÍ		Ť	+	X	-	X	Ĥ	+		Ť			Ť		<u>(</u>	П		
PCBs (vs Aroclor 1254)  All  X  X  X  X  X  X  X  X  X  X  X  X	PAH by GCMS	All	X	X	T	T	Н	X	X	<u> </u>	<b>(</b>	X	X	)	X		+	X		X	X	+	X	<b>+</b>	(	X	X	7	X _	Н	X	П
pH         All         x	PCBs (vs Aroclor 1254)	All	Н	$\forall \exists$	 	X	Н		Н	+	+		Н	Н	$\top$		$^{+}$	Н		+	X	+	Н	+	+	+	Н		X.	Н	+	П
Sample description  All  X X X X X X X X X X X X X X X X X X	pH	All	Н	H	+	+	Н		H	+	t		H	H	+		t	Н		+	Н	+	Н	$\pm$	H		H	+	t	H	H	П
	Sample description	All	П	П	7	Ť			П				П	П	H	Ħ	(		X	X	Ħ	X	П		Ť			X	X	H	Ħ	П
	Semi Volatile Organic Compounds	All	X	X	+	X	H	X	X	<b>\</b>	(	X	X		X		+	X	<b>—</b>	X	Ĥ	+	X	+	<u>C</u>	X	X	<b>—</b>	<u> </u>	H	X	X
Total Organic Carbon All	Total Organic Carbon	All	H	+	-	X	H	+	H	+	+	${\mathbb H}$	Н	${\mathbb H}$	H		+		+	+	X	+	$\forall$	+	+	+	H	7	<u>(</u>	H	+	X
TPH c6-40 Value of soil  X X X X X X X X X X X X X X X X X X X	TPH c6-40 Value of soil	All	X	X	+	$\dagger$			X	) )	<b>(</b>	X	H	$\parallel$	$\parallel$	X	+	X		$\dagger$		$\dagger$	X	+	$\dagger$	$\parallel$	X		K	H	+	H

			1837381		1837396		1837405		1837412		1837454		1837467		1837478		1841524		1844739	
			TPC10 ES1		BHC5		внсз		BHC5		TPC9 ES1		TPC6 ES1		TPC8 ES2		WSD11		TPC7 ES1	
			0.10		1.00		2.00		3.00		0.20		0.10		0.60		2.90 - 3.10		0.30	Total
400a Tub	60g VOC	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	
×			X		X		X		X		X		X		X		X		X	0 28
_			X		<u>, , , , , , , , , , , , , , , , , , , </u>	Г	<u>, , , , , , , , , , , , , , , , , , , </u>	Г			X		X	Г					X	0 28 0 7 0 28 0 5 0 5 0 5 0 5 0 5 0 29 0 29 0 29 0 29
_		X	,	X		X		X		X	Ť	X	,	X		X		X	,	0
-		<u> </u>			Г			Ť			r			Ť	Г		Г	<u>, , , , , , , , , , , , , , , , , , , </u>		0
-											r									0
-	X				Н			Н			r		Н	Н		Н	Н		Н	0
_	^				_	Н		Н			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Н		Н			_			0
X			X		X		X	_	X		X		X	_	X		X		X	0
-	Н	X		Х	Н	X	Н	X		X	H	X	Н	X	H	X	Н	X	Н	0
-		X		X	H	X	H	X		X	H	X	H	X	H	X	H	X	H	29 0
-	H	X		X	H	X	H	X		X	H	X	H	X	H	X	H	X	H	29 0
_	H	X		X	H	X	H	X		X	H	X	H	X	H	X	H	X	H	29 0
_		X		X	H	X		X		X	H	X		X	H	X	H	X		29 0
_		X		X	L	X		X		X	L	X		X	L	X	H	X	L	29 0
_		X		X	L	X		X		X	L	X		X	L	X	L	X	L	29 0
_		X		X	L	X		X		X	L	X		X	L	X	L	X		29
_		X		X	L	X		X		X	L	X		X	L	X	L	X		0 29
_						L					L	L								0 5
											L									0 2
X			X		X		X		X		X		X		X		X		X	0 28
		X		X		X		X		X		X		X		X		X		0 29
																				0 5
														X						0
						X				X				X		X		X		0 13

# **ALcontrol Laboratories Analytical Services**

Order No.:

SDG: 100719-9 **Customer:** 

Entec UK Ltd Job: H\_ENTEC\_SHW-24 Attention: Steve Dooley

**Client Reference:** 26999

Location:	KL056 DSD0	C Bicester					Re	po	ort N	lo:			91	728	3															
			1000102	1836100	1836196	10000	1826218	1836238	1836248	1000000	1036300	1836307	1836354	1836401		1836414		1836522	1836545		1836565	100000	1936678	1837108	1837117	6217681	1027120	1007 108	7 000	1837295
				WSD9	WSD12		W/SD9	WSD13	WSD10	\$ G C C C C C C C C C C C C C C C C C C	\N/SE17	WSE17	WSC1	внсз	5	BITCS		WSC1	WSC2		WSC3	000	WSC2	TPE2 ES2	TPE1 ES1	- - -	TDE2 ES1	0000	400 UCO	TPC8 ES3
				0.30 - 0.50	1.50 - 1.70		3.80 - 4.00	0.10 - 0.30	1.60 - 1.90	0.00	0.60 - 0.80	2.40 - 2.60	0.00 - 0.20	0.50 - 0.65			2	1.50 - 1.70	0.20 - 0.40		2.40 - 2.60		1.20 - 1.40	1.80	0.50		0.50		1 80	1.60
			250g Amber Jar	250g Amber Jar 400g Tub	400g Tub	400g Tub	250g Amber Jar 60g VOC	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	250g Amber Jar 400g Tub	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	400g Tub	250g Amber Jar	60g VOC 400g Tub	250g Amber Jar	250g Amber Jar 400g Tub	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	250g Amber Jar 400g Tub	400g Tub	250g Amber Jar	250g Amber Jar 400g Tub
TPH CWG GC (S)		All	П		<b>&gt;</b>	(				П	T	П			X				T	X	T	П	T	П	T	П	X		T	X
VOC MS (S)		All	П		T		X	П	T	П	T	П				)	<b>&lt;</b>		Ť	П	X	П	Ť	П	T	П	T	,	×	
Water Soluble Sulpha	te 2:1	All	X	X	<u>&gt;</u>	<b>(</b>	X		X	X	X	 	X	X	X		X	>	<b>&lt;</b>	X		X	X		X	X	X		X	X

Total
Total  TPC7 ES1  0.30  409 Tub 2509 Amber Jar 400 Tub
Total  TPC7 ES1 0.30  WSD11 2.90 - 3.10  TPC8 ES2 0.60  TPC9 ES1 0.10  TPC9 ES1 0.20  BHC5 3.00  BHC5 1.00  TPC10 ES1 0.10
Tota  TPC7 ES1  WSD11  TPC8 ES2  TPC6 ES1  TPC9 ES1  BHC5  BHC5  BHC5  TPC10 ES1
1844739 1841524 1837478 1837467 1837467 1837454 1837745 18377405 1837396 1837381

## **ALcontrol Laboratories Analytical Services**

 SDG:
 100719-9
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999

Location: KL056 DSDC Bicester Report No: 91728

### **Sample Descriptions**

Order No.:

#### **Grain Sizes:**

<0.063mm very fine, 0.063mm - 0.1mm fine, 0.1mm - 2mm medium, 2mm - 10mm coarse, >10mm very coarse

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions				
1836192	WSD9	0.30 - 0.50	Dark Brown	Clay Loam	0.063 - 0.1 mm	Stones				
1836196	WSD12	1.50 - 1.70	Dark Brown	Silty Clay Loam	<0.063 mm	N/A				
1836218	WSD9	3.80 - 4.00	Dark Brown	Sandy Clay	0.063 - 0.1 mm	Stones				
1836238	WSD13	0.10 - 0.30	Light Brown	Silty Clay	0.063 - 0.1 mm	Stones				
1836248	WSD10	1.60 - 1.90	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones				
1836300	WSE17	0.60 - 0.80	Dark Brown	Silty Clay Loam	<0.063 mm	Stones				
1836307	WSE17	2.40 - 2.60	Dark Brown	Clay	<0.063 mm	None				
1836354	WSC1	0.00 - 0.20	Light Brown	Silty Clay	0.063 - 0.1 mm	Vegetation				
1836401	ВНС3	0.50 - 0.65	Black	Sandy Silt Loam	0.1 - 2 mm	Stones				
1836414	ВНС3	1.00	Dark Brown	Clay	<0.063 mm	None				
1836522	WSC1	1.50 - 1.70	Dark Brown	Silty Clay Loam	<0.063 mm	N/A				
1836545	WSC2	0.20 - 0.40	Dark Brown	Clay Loam	0.063 - 0.1 mm	Vegetation				
1836565	WSC3 2.40 - 2.60 Dark Brown		Clay	<0.063 mm	Vegetation					
1836658	WSC2	1.20 - 1.40	- 1.40 Light Brown Clay		<0.063 mm	Vegetation				
1837108	TPE2	1.80	Light Brown Clay		<0.063 mm	None				
1837117	TPE1	0.50	Grey	Silty Sand	0.063 - 0.1 mm	Stones				
1837129	TPE2	0.50	Light Brown	Silty Clay	0.063 - 0.1 mm	Stones				
1837139	TPC10	1.60	Light Brown	Sandy Clay	0.1 - 2 mm	Stones				
1837295	TPC8 1.60 Light Brown		Silty Clay	0.063 - 0.1 mm	Stones					
1837371	ВНС5	2.00	Light Brown	Clay	<0.063 mm	Stones				
1837381	TPC10	0.10	Grey	Silt	0.063 - 0.1 mm	Stones				
1837396	ВНС5	1.00	Grey	Sandy Clay Loam	0.1 - 2 mm	Stones				
1837405	ВНС3	2.00	Dark Brown	Clay	<0.063 mm	Stones				
1837412	BHC5	3.00	Dark Brown	Clay	<0.063 mm	N/A				
1837454	TPC9	0.20	Dark Brown	Top Soil	0.063 - 0.1 mm	Vegetation				
1837467	TPC6	0.10	Dark Brown	Sandy Loam	0.063 - 0.1 mm	Stones				
1837478	TPC8	0.60	Dark Brown	Clay	<0.063 mm	Stones				
1841524	WSD11	2.90 - 3.10	Dark Brown	Sandy Clay Loam	0.063 - 0.1 mm	N/A				
1844739	TPC7	0.30	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones				

## **ALcontrol Laboratories Analytical Services**

Order No.:

 SDG:
 100719-9
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999

Location: KL056 DSDC Bicester Report No: 91728

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

### **ALcontrol Laboratories Analytical Services**

 SDG:
 100719-9
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999 Order No.:

Location: KL056 DSDC Bicester Report No: 91728

### **Test Completion dates**

SDG reference: 100719-9

Lab Sample No(s)	1836192	1836196	1836218	1836238	1836248	1836300	1836307	1836354	1836401	1836414	1836522	1836545
Customer Sample Ref.	WSD9	WSD12	WSD9	WSD13	WSD10	WSE17	WSE17	WSC1	ВНС3	ВНС3	WSC1	WSC2
Depth	0.30 - 0.50	1.50 - 1.70	3.80 - 4.00	0.10 - 0.30	1.60 - 1.90	0.60 - 0.80	2.40 - 2.60	0.00 - 0.20	0.50 - 0.65	1.00	1.50 - 1.70	0.20 - 0.40
Туре	SOLID        SOLID	SOLID										
Ammonium Soil by Titration	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010		21/07/2010	21/07/2010	21/07/2010
Asbestos Containing Material	20/07/2010											20/07/2010
Boron Water Soluble	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010		21/07/2010	22/07/2010	22/07/2010
EPH CWG (Aliphatic) GC (S)			23/07/2010							23/07/2010		
EPH CWG (Aromatic) GC (S)			23/07/2010							23/07/2010		
GRO by GC-FID (S)			27/07/2010							27/07/2010		
Hexavalent Chromium (s)	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010
Metals by iCap-OES (Soil)	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	21/07/2010	22/07/2010	22/07/2010
PAH by GCMS			21/07/2010							21/07/2010		
PCBs (vs Aroclor 1254)										22/07/2010		
рН	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010		21/07/2010	21/07/2010	21/07/2010
Sample description	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010
Semi Volatile Organic Compounds			22/07/2010							23/07/2010		
Total Organic Carbon					22/07/2010	22/07/2010				21/07/2010	22/07/2010	
TPH c6-40 Value of soil	22/07/2010	22/07/2010			22/07/2010	22/07/2010	22/07/2010				22/07/2010	
TPH CWG GC (S)			28/07/2010							27/07/2010		
VOC MS (S)			22/07/2010							22/07/2010		
Water Soluble Sulphate 2:1	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010

1836565	1836658	1837108	1837117	1837129	1837139	1837295	1837371	1837381	1837396	1837405	1837412	1837454	1837467	1837478
WSC3	WSC2	TPE2	TPE1	TPE2	TPC10	TPC8	BHC5	TPC10	BHC5	BHC3	BHC5	TPC9	TPC6	TPC8
2.40 - 2.60	1.20 - 1.40	1.80	0.50	0.50	1.60	1.60	2.00	0.10	1.00	2.00	3.00	0.20	0.10	0.60
SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010
				20/07/2010				20/07/2010				20/07/2010	20/07/2010	
22/07/2010	22/07/2010	22/07/2010	21/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	21/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010
23/07/2010					23/07/2010		23/07/2010							
23/07/2010					23/07/2010		23/07/2010							
27/07/2010					27/07/2010		27/07/2010							
21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010
22/07/2010	22/07/2010	21/07/2010	21/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010
21/07/2010					21/07/2010		21/07/2010							
							22/07/2010							
21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010
20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010
23/07/2010					23/07/2010		22/07/2010							
					22/07/2010									22/07/2010
	22/07/2010			22/07/2010						22/07/2010		22/07/2010		22/07/2010
27/07/2010					27/07/2010		27/07/2010							
23/07/2010					23/07/2010		22/07/2010							
22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010

1841524	1844739
WSD11	TPC7
2.90 - 3.10	0.30
SOLID	SOLID
21/07/2010	21/07/2010
	20/07/2010
22/07/2010	22/07/2010
21/07/2010	21/07/2010
22/07/2010	22/07/2010
21/07/2010	21/07/2010
20/07/2010	20/07/2010
22/07/2010	22/07/2010
22/07/2010	22/07/2010

# **ALcontrol Laboratories Analytical Services**

SDG:

100719-9 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

	Results Legend 17025 accredited.	Customer	Sample Ref.	BHC3	BHC	3	BHC3		BHC5		BHC5		BHC5	
	ERTS accredited. leous / settled sample.		Depth (m)	0.50 - 0.65	1.00	1	2.00		1.00		2.00		3.00	
diss.filt Diss	solved / filtered sample.		ample Type	Soil/Solid	Soil/So		Soil/Solid		Soil/Solid		Soil/Solid		Soil/Solid	
* subc	contracted test.		ate Sampled	15/07/2010	15/07/2		15/07/2010		15/07/2010		15/07/2010		15/07/2010	
	ecovery of the surrogate adard to check the efficiency	Da	te Received SDG Ref	17/07/2010	17/07/2		17/07/2010		17/07/2010	)	17/07/2010		17/07/2010	
of th	he method. The results of the	Lab Sa	mple No.(s)	100719-9 1836401	100719 18364		100719-9 1837405		100719-9 1837396		100719-9 1837371		100719-9 1837412	
the s	vidual compounds within samples are not corrected		. ,											
Componen	this recovery.	LOD/Units	Method											
Ammoniac	cal Nitrogen,	<15 mg/kg	TM024		30.6		<15		<15		<15		<15	
	able as NH4 2:1 water soluble	<0.003 g/l	TM098	0.284	0.12	M	0.148	М	1.14	М	0.336	М	0.221	M
Odipriate, 2	2.1 Water Soluble	-0.000 g/i	110000	0.20 <del>4</del>		M	0.140	М	1.14	М	0.550	М	0.221	M
Soil Organ	nic Matter (SOM)	<0.35 %	TM132		1.42									
pН		1 pH Units	TM133		8.03	#	8.01		8.98		8.21		8.31	
						М		М		М		М		M
Chromium,	, Hexavalent	<0.6 mg/kg	TM151	<0.6	<0.6	#	<0.6	#	<0.6	#	<0.6	#	<0.6	#
TPH >C6-0	C8	<10 mg/kg	TM154		"		108							
TPH >C8-0	C10	<10 mg/kg	TM154				37.7							
1FH >00-0	CIO	< 10 mg/kg	1101134				37.7							
TPH >C10	)-C12	<10 mg/kg	TM154				<10							
TPH >C12	2-C16	<10 mg/kg	TM154				<10							
TPH >C16	S-C21	<10 mg/kg	TM154				<10							
TPH >C21	-C40	<10 mg/kg	TM154				72.4							
TPH >C6-0	C40	<10 ma/ka	TM154				226							
1717 / 00-0	U+U	<10 mg/kg	1 IVI 104				220	#						
Arsenic		<0.6 mg/kg	TM181	8.66	17.1		38.9		13.1		15.3		7.39	
Cadmium		<0.02	TM181	0.288	/ <0.02	<b>M</b> 2	<0.2	M	<0.02	M	<0.02	М	0.0592	M
		mg/kg		N	A	М		М		М		М		M
Chromium		<0.9 mg/kg	TM181	20.3 N	46.7	М	29	м	55.2	М	27.6	м	50.3	M
Copper		<1.4 mg/kg	TM181	31	17.5	;	22.7		60.9		16.5		24.3	
Lead		<0.7 mg/kg	TM181	475	36.7	M	12.3	М	119	М	17.3	М	14.3	M
Leau		<0.7 mg/kg	TIVITOT	475 N		м	12.3	М	119	М	17.3	М	14.5	М
Mercury		<0.14	TM181	<0.14	<0.14		<0.14		<0.14		<0.14		<0.14	
Nickel		mg/kg <0.2 mg/kg	TM181	13.2	38.8	M	49.1	М	12.8	М	29.5	М	52.6	M
				N	Л	М		М		М		М		M
Selenium		<1 mg/kg	TM181	2.42	<1 #	#	<10	#	4	#	<1	#	1.23	#
Zinc		<1.9 mg/kg	TM181	72.5	104		101	"	93.1	<i>π</i>	66.7	#	187	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
D	ta	44 //	TMOOO	N		М	4.07	М	2.00	М	4.40	М	4.00	M
Boron, wat	ter soluble	<1 mg/kg	TM222		1.8	М	1.67	м	3.09	м	1.43	М	1.96	М
			ı I		1									

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

DA11	h 00140							
PAH	by GCMS Results Legend	Customer	Sample Ref.	DUO	DUOE		<u> </u>	I
#	ISO17025 accredited.	Customer	Sample Ker.	BHC3	BHC5			
M aq	mCERTS accredited. Aqueous / settled sample.		Depth (m)	1.00	2.00			
	Dissolved / filtered sample. Total / unfiltered sample.		ample Type	Soil/Solid	Soil/Solid			
*	subcontracted test.		ate Sampled ite Received	15/07/2010 17/07/2010	15/07/2010			
**	% recovery of the surrogate standard to check the efficiency	Da	SDG Ref	17/07/2010	17/07/2010 100719-9			
	of the method. The results of the individual compounds within	Lab Sa	ample No.(s)	1836414	1837371			
	the samples are not corrected for this recovery.							
Compo		LOD/Units	Method					
	nalene-d8 %	%	TM218	112	112			
recove	ry** ohthene-d10 %	%	TM218	111	110			
recove		70	TIVIZIO	111	110			
	nthrene-d10 %	%	TM218	110	109			
Chryse	ry** ene-d12 % recovery**	%	TM218	97.4	96.2			
Onlyso	inc-d 12 70 recovery	70	TIVIZIO	37.4	30.2			
Peryler	ne-d12 % recovery**	%	TM218	110	107			
Naphth	nalene	<0.009	TM218	0.0244	<0.009			
Ιναριιιι	iaicric	mg/kg	1101210	0.0244 M	V0.009			
Acena	ohthylene	<0.012	TM218	<0.012	<0.012			
Acens	ohthene	mg/kg <0.008	TM218	<0.008	<0.008			
, world		mg/kg		М	М	 		
Fluorer	ne	<0.01	TM218	<0.01	<0.01			
Phenai	nthrene	mg/kg <0.015	TM218	<0.015	<0.015			
		mg/kg		М	М			
Anthra	cene	<0.016 mg/kg	TM218	<0.016 <b>M</b>	<0.016			
Fluorar	nthene	<0.017	TM218	<0.017	<0.017			
_		mg/kg	77.40.40	M	M			
Pyrene		<0.015 mg/kg	TM218	<0.015 <b>M</b>	<0.015			
Benz(a	)anthracene	<0.014	TM218	<0.014	<0.014			
Chrisa		mg/kg <0.01	TM218	<b>M</b> <0.01	<0.01			
Chryse	ille	mg/kg	TIVIZIO	~0.01 <b>M</b>	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			
Benzo(	(b)fluoranthene	<0.015	TM218	<0.015	<0.015			
Benzo/	(k)fluoranthene	mg/kg <0.014	TM218	<b>M</b> <0.014	<0.014			
DCIIZO(	Kylidorantilono	mg/kg	TIVIZIO	10.014 M	10.014 M			
Benzo(	(a)pyrene	<0.015	TM218	<0.015	<0.015			
Indeno	(1,2,3-cd)pyrene	mg/kg <0.018	TM218	<b>M</b> <0.018	<0.018			
		mg/kg		М	М			
Dibenz	o(a,h)anthracene	<0.023 mg/kg	TM218	<0.023	<0.023			
Benzo(	(g,h,i)perylene	<0.024	TM218	<0.024	<0.024			
Dalisan		mg/kg	TMO40	M	M 40.440			
Total U	omatic hydrocarbons, JSEPA 16	<0.118 mg/kg	TM218	<0.118 <b>M</b>	<0.118			
		3 3						
					1			<u> </u>

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

					·	ort no.		
PCB:	s (vs Aroclor 1254	<b>.</b> )						
	Results Legend	Customer	Sample Ref.	BHC3	BHC5			
#	ISO17025 accredited.				Diloo			
M aq	mCERTS accredited. Aqueous / settled sample.		Depth (m)	1.00	2.00			
diss.filt	Dissolved / filtered sample.	S	ample Type	Soil/Solid	Soil/Solid			
tot.unfilt	Total / unfiltered sample. subcontracted test.	- Da	ate Sampled	15/07/2010	15/07/2010			
**	% recovery of the surrogate standard to check the efficiency	Da	te Received	17/07/2010	17/07/2010			
	standard to check the efficiency of the method. The results of the		SDG Ref		100719-9			
	individual compounds within	Lab Sa	imple No.(s)	1836414	1837371			
	the samples are not corrected							
Compo	for this recovery.	LOD/Units	Method					
PCRe /	(vs Aroclor 1254)	<0.035	TM070	<0.035	<0.035			
1 003	(V3 A100101 1204)	mg/kg	TIMO70	#				
	T							
						-	-	

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.: Report No:

port No: 91728

Semi Volatile Organic						
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	BHC3	BHC5		
M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample.	9	Depth (m) ample Type	1.00	2.00		
tot.unfilt Total / unfiltered sample.  * subcontracted test.	Da	te Sampled	Soil/Solid 15/07/2010	Soil/Solid 15/07/2010		
** % recovery of the surrogate standard to check the efficiency	,	te Received SDG Ref	17/07/2010 100719-9	17/07/2010 100719-9		
of the method. The results of th individual compounds within the samples are not corrected	e Lab Sa	mple No.(s)	1836414	1837371		
for this recovery.  Component	LOD/Units	Method				
Phenol	<0.1 mg/kg	TM157	<0.1	<0.1		
Pentachlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1		
n-Nitroso-n-dipropylamine	<0.1 mg/kg	TM157	<0.1	<0.1		
Nitrobenzene	<0.1 mg/kg	TM157	<0.1	<0.1		
Isophorone	<0.1 mg/kg	TM157	<0.1	<0.1		
Hexachloroethane	<0.1 mg/kg	TM157	<0.1	<0.1		
Hexachlorocyclopentadiene	<0.1 mg/kg	TM157	<0.1	<0.1		
Hexachlorobutadiene	<0.1 mg/kg	TM157	<0.1	<0.1		
Hexachlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1		
n-Dioctyl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
Dimethyl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
Diethyl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
n-Dibutyl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
Dibenzofuran	<0.1 mg/kg	TM157	<0.1	<0.1		
Carbazole	<0.1 mg/kg	TM157	<0.1	<0.1		
Butylbenzyl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
bis(2-Ethylhexyl) phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
bis(2-Chloroethoxy)methane	<0.1 mg/kg	TM157	<0.1	<0.1		
bis(2-Chloroethyl)ether	<0.1 mg/kg	TM157	<0.1	<0.1		
Azobenzene	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Nitrophenol	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Nitroaniline	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Methylphenol	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Chlorophenylphenylether	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Chloroaniline	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Chloro-3-methylphenol	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Bromophenylphenylether	<0.1 mg/kg	TM157	<0.1	<0.1		
3-Nitroaniline	<0.1 mg/kg	TM157	<0.1	<0.1		
2-Nitrophenol	<0.1 mg/kg	TM157	<0.1	<0.1		
2-Nitroaniline	<0.1 mg/kg	TM157	<0.1	<0.1		
2-Methylphenol	<0.1 mg/kg	TM157	<0.1	<0.1		
1,2,4-Trichlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1		
2-Chlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1		
2,6-Dinitrotoluene	<0.1 mg/kg	TM157	<0.1	<0.1		
2,4-Dinitrotoluene	<0.1 mg/kg	TM157	<0.1	<0.1		
2,4-Dimethylphenol	<0.1 mg/kg	TM157	<0.1	<0.1		
2,4-Dichlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1		
2,4,6-Trichlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1		
2,4,5-Trichlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1		

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Steve Dooley

Order No.:

Semi	i Volatile Organic	Compour	nds		
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	BHC3	BHC5
М	ISO17025 accredited.  mCERTS accredited.  Aqueous / settled sample.		Depth (m)	1.00	2.00
diss.filt	Dissolved / filtered sample.  Total / unfiltered sample.		Sample Type ate Sampled	Soil/Solid	Soil/Solid
*	subcontracted test. % recovery of the surrogate	Da	te Received	15/07/2010 17/07/2010	15/07/2010 17/07/2010
	standard to check the efficiency of the method. The results of the		SDG Ref ample No.(s)	100719-9 1836414	100719-9 1837371
	individual compounds within the samples are not corrected for this recovery.		1	1999 11 1	100.0.1
Compo	nent	LOD/Units	Method	.0.1	.0.1
	chlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1
1,3-Dic	chlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1
1,2-Dic	chlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1
2-Chlo	ronaphthalene	<0.1 mg/kg	TM157	<0.1	<0.1
2-Meth	ylnaphthalene	<0.1 mg/kg	TM157	<0.1	<0.1
Acena	phthylene	<0.1 mg/kg	TM157	<0.1	<0.1
	phthene	<0.1 mg/kg	TM157	<0.1	<0.1
Anthra		<0.1 mg/kg	TM157	<0.1	<0.1
	(a)anthracene	<0.1 mg/kg	TM157	<0.1	<0.1
Benzo	(b)fluoranthene	<0.1 mg/kg	TM157	<0.1	<0.1
Benzo	(k)fluoranthene	<0.1 mg/kg	TM157	<0.1	<0.1
Benzo	(a)pyrene	<0.1 mg/kg	TM157	<0.1	<0.1
Benzo	(g,h,i)perylene	<0.1 mg/kg	TM157	<0.1	<0.1
Chryse		<0.1 mg/kg	TM157	<0.1	<0.1
Fluora	ntnene	<0.1 mg/kg	TM157	<0.1	<0.1
Fluore	ne	<0.1 mg/kg	TM157	<0.1	<0.1
Indeno	(1,2,3-cd)pyrene	<0.1 mg/kg	TM157	<0.1	<0.1
Phena	nthrene	<0.1 mg/kg	TM157	<0.1	<0.1
Pyrene		<0.1 mg/kg	TM157	<0.1	<0.1
Naphth	nalene	<0.1 mg/kg	TM157	<0.1	<0.1
Dibenz	o(a,h)anthracene	<0.1 mg/kg	TM157	<0.1	<0.1

# **ALcontrol Laboratories Analytical Services**

SDG:

100719-9 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester

Entec UK Ltd Customer: Steve Dooley Attention:

Order No.:

TPH CWG (S)						
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	BHC3	BHC5		
M mCERTS accredited. aq Aqueous / settled sample.		Depth (m)	1.00	2.00		
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		Sample Type	Soil/Solid	Soil/Solid		
* subcontracted test.		ate Sampled	15/07/2010	15/07/2010		
** % recovery of the surrogate standard to check the efficiency	/	te Received SDG Ref	17/07/2010 100719-9	17/07/2010 100719-9		
of the method. The results of the individual compounds within	Lab Sa	ample No.(s)	1836414	1837371		
the samples are not corrected for this recovery.						
Component	LOD/Units	Method				
GRO Surrogate % recovery**	%	TM089	148	118		
GRO >C5-C12	<0.044	TM089	20.3	<0.044		
Benzene	mg/kg <0.01	TM089	<0.01	<0.01		
Delizerie	mg/kg	1101009	~0.01 M	<0.01 <b>M</b>		
Ethylbenzene	<0.003	TM089	<0.003	<0.003 <b>M</b>		
Toluene	mg/kg <0.002	TM089	<0.002	<0.002		
m n Vidono	mg/kg	TMOOO	M ×0.006	M <0.006		
m,p-Xylene	<0.006 mg/kg	TM089	<0.006 <b>M</b>	<0.006 <b>M</b>		
o-Xylene	<0.003	TM089	<0.003 <b>M</b>	<0.003	 	
m,p,o-Xylene	mg/kg <0.01	TM089	<0.01	<0.01		
	mg/kg	TMOSO	<b>M</b> <0.01	<0.01		
BTEX, Total	<0.01 mg/kg	TM089	<0.01 <b>M</b>	<0.01 <b>M</b>		
Methyl tertiary butyl ether	<0.005	TM089	<0.005	<0.005	 	
(MTBE) Aliphatics >C5-C6	mg/kg <0.01	TM089	0.0335	<0.01		
·	mg/kg					
Aliphatics >C6-C8	<0.01 mg/kg	TM089	4.02	<0.01		
Aliphatics >C8-C10	<0.01	TM089	4.76	<0.01		
Aliphatics >C10-C12	mg/kg <0.01	TM089	1.74	<0.01		
·	mg/kg					
Aromatics >C6-C7	<0.01 mg/kg	TM089	<0.01	<0.01		
Aromatics >C7-C8	<0.01	TM089	<0.01	<0.01		
Aromatics >EC8-EC10	mg/kg <0.01	TM089	7.13	<0.01		
	mg/kg					
Aromatics >EC10-EC12	<0.01 mg/kg	TM089	2.61	<0.01		
Total Aliphatics >C5-C12	<0.01	TM089	10.6	<0.01		
Total Aromatics >C6-C12	mg/kg <0.01	TM089	9.74	<0.01		
	mg/kg					
Aliphatics >C12-C16	<0.1 mg/kg	TM173	8.39	0.721		
Aliphatics >C16-C21	<0.1 mg/kg	TM173	5.25	0.959		
Aliphatics >C16-C35	<0.1 mg/kg	TM173	17.5	2.6		
Aliphatics >C21-C35	<0.1 mg/kg	TM173	12.3	1.64		
Aliphatics >C35-C44	<0.1 mg/kg	TM173	3.11	<0.1		
Aromatics >EC12-EC16	<0.1 mg/kg	TM173	0.389	0.914		
Aromatics >EC16-EC21	<0.1 mg/kg	TM173	3.25	1.09		
Aromatics >EC21-EC35	<0.1 mg/kg	TM173	16.7	5.16		
Aromatics >EC35-EC44	<0.1 mg/kg	TM173	6.45	0.895		
Aromatics >EC40-EC44	<0.1 mg/kg	TM173	2.15	0.333		
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173	29	3.32		
Total Aromatics	<0.1 mg/kg	TM173	26.8	8.06		
>EC12-EC44						
Total Aliphatics >C5-35	<0.1 mg/kg	TM173	36.5	3.32		
Total Aliphatics >C5-C44	<0.1 mg/kg	TM173	39.6	3.32		
Total Aromatics >C5-35	<0.1 mg/kg	TM173	30.1	7.17		
Total Aromatics >C6-C44	<0.1 mg/kg	TM173	36.6	8.06		
Total Aliphatics & Aromatics	<0.1 mg/kg	TM173	66.6	10.5		
>C5-35						
Total Aliphatics & Aromatics >C5-C44	<0.1 mg/kg	TM173	76.1	11.4		
						-

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

voc	MS (S)						
	Results Legend ISO17025 accredited.	Customer	Sample Ref.	BHC3	BHC5		
М	mCERTS accredited. Aqueous / settled sample.		Depth (m)	1.00	2.00		
diss.filt	Dissolved / filtered sample.	s	ample Type	Soil/Solid	Soil/Solid		
*	Total / unfiltered sample. subcontracted test.		ate Sampled	15/07/2010	15/07/2010		
	% recovery of the surrogate standard to check the efficiency	Da	te Received SDG Ref	17/07/2010 100719-9	17/07/2010 100719-9		
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1836414	1837371		
	the samples are not corrected for this recovery.						
Compo		LOD/Units	Method				
Dibrom	ofluoromethane**	%	TM116	106	55.9		
Toluen	e-d8**	%	TM116	102	103		
4-Brom	ofluorobenzene**	%	TM116	121	106		
Dichlor	odifluoromethane	<0.004	TM116	<0.004	<0.004		
Chloro	nethane	mg/kg <0.007	TM116	<b>M</b> <0.007	<0.007		
Vinyl C	hloride	mg/kg <0.01	TM116	<b>#</b> <0.01	<0.01		
Bromoi	nethane	mg/kg <0.013	TM116	<b>*</b>	<0.013		
Chloro	ethane	mg/kg <0.014	TM116	<b>M</b> <0.014	<b>M</b> <0.014		
Trichlo	ofluorormethane	mg/kg <0.006	TM116	<b>M</b> <0.006	<0.006		
	hloroethene	mg/kg <0.01	TM116	<b>M</b> <0.01	<0.01		
	Disulphide	mg/kg <0.007	TM116	0.0657	<0.007		
	omethane	mg/kg <0.01	TM116	0.0657 <b>M</b> <0.01	<0.007 M <0.01		
		mg/kg		#	#		
	Tertiary Butyl Ether	<0.011 mg/kg	TM116	<0.011 <b>M</b>	<0.011 M		
	-2-Dichloroethene	<0.011 mg/kg	TM116	<0.011 <b>M</b>	<0.011 <b>M</b>		
1.1-Dic	hloroethane	<0.008 mg/kg	TM116	<0.008 <b>M</b>	<0.008 <b>M</b>		
cis-1-2	-Dichloroethene	<0.005 mg/kg	TM116	0.107 <b>M</b>	<0.005 <b>M</b>		
2.2-Dic	hloropropane	<0.012 mg/kg	TM116	<0.012 <b>M</b>	<0.012		
Bromo	chloromethane	<0.014 mg/kg	TM116	<0.014 <b>M</b>	<0.014		
Chlorof	orm	<0.008 mg/kg	TM116	<0.008	<0.008		
1.1.1-T	richloroethane	<0.007 mg/kg	TM116	<0.007 <b>M</b>	<0.007		
1.1-Dic	hloropropene	<0.011 mg/kg	TM116	<0.011 <b>M</b>	<0.011 <b>M</b>		
Carbon	tetrachloride	<0.014 mg/kg	TM116	<0.014 <b>M</b>	<0.014		
1.2-Dic	hloroethane	<0.005	TM116	<0.005	<0.005		
Benzer	ne	mg/kg <0.009	TM116	0.0313	<0.009		
Trichlo	roethene	mg/kg <0.009	TM116	0.142	0.119		
1.2-Dic	hloropropane	mg/kg <0.012	TM116	<0.012	<0.012		
Dibrom	omethane	mg/kg <0.009	TM116	<0.009	<0.009		
Bromo	dichloromethane	mg/kg <0.007	TM116	<b>M</b> <0.007	<0.007		
cis-1-3-	-Dichloropropene	mg/kg <0.014	TM116	<b>M</b> <0.014	<b>M</b> <0.014		
Toluen		mg/kg <0.005	TM116	<b>M</b> 0.0231	0.00732		
	-3-Dichloropropene	mg/kg <0.014	TM116	<b>M</b> <0.014	<b>M</b> <0.014		
	richloroethane	mg/kg <0.01	TM116	<0.01	<0.01		
	hloropropane	mg/kg <0.007	TM116	<0.007 <b>M</b>	<0.01 M		
	iloroethene	mg/kg <0.005	TM116	<0.007 # <0.005	<0.007		
		mg/kg		М	M		
	ochloromethane	<0.013 mg/kg	TM116	<0.013 <b>M</b>	<0.013 M		
	romoethane	<0.012 mg/kg	TM116	<0.012 <b>M</b>	<0.012 M		
	enzene	<0.005 mg/kg	TM116	<0.005	<0.005		
	-Tetrachloroethane	<0.01 mg/kg	TM116	<0.01 <b>M</b>	<0.01 <b>M</b>		
Ethylbe	nzene	<0.004 mg/kg	TM116	0.0306 <b>M</b>	<0.004		

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

voc	MS (S)					
	Results Legend ISO17025 accredited.	Customer	Sample Ref.	BHC3	BHC5	
М	mCERTS accredited. Aqueous / settled sample.		Depth (m)	1.00	2.00	
diss.filt	Aqueous / settled sample.  Dissolved / filtered sample.  Total / unfiltered sample.		ample Type	Soil/Solid	Soil/Solid	
*	subcontracted test.		ate Sampled ite Received	10/01/2010	15/07/2010	
	% recovery of the surrogate standard to check the efficiency		SDG Ref	17/07/2010 100719-9	17/07/2010 100719-9	
	of the method. The results of the individual compounds within	Lab Sa	imple No.(s)	1836414	1837371	
	the samples are not corrected for this recovery.					
Compo p/m-Xy		LOD/Units <0.014	Method TM116	0.035	<0.014	
р/п-ху	iciic	mg/kg	TIWITIO	0.055 #	VO.014	#
o-Xylen	ne	<0.01 mg/kg	TM116	<0.01 <b>M</b>	<0.01	М
Styrene	e	<0.01	TM116	<0.01	<0.01	
Bromof	form	mg/kg <0.01	TM116	<0.01	<0.01	М
		mg/kg		М		М
Isoprop	ylbenzene	<0.005 mg/kg	TM116	0.0276 <b>M</b>	<0.005	М
1.1.2.2-	-Tetrachloroethane	<0.01	TM116	<0.01	<0.01	
122 T	richloropropane	mg/kg <0.017	TM116	<b>*</b>	<0.017	#
1.2.3-1	попогоргорапе	<0.017 mg/kg	TIVITIO	М		М
Bromob	oenzene	<0.01	TM116	<0.01	<0.01	
Propylb	penzene	mg/kg <0.011	TM116	0.0534	<0.011	M
		mg/kg		М		М
2-Chlor	rotoluene	<0.009 mg/kg	TM116	<0.009 <b>M</b>	<0.009	М
1.3.5-T	rimethylbenzene	<0.008	TM116	<0.008	<0.008	
4-Chlor	otoluene	mg/kg <0.012	TM116	<0.012	<0.012	#
		mg/kg		М		М
tert-But	tylbenzene	<0.012	TM116	<0.012 #	<0.012	#
1.2.4-T	rimethylbenzene	mg/kg <0.009	TM116	0.0745	<0.009	#
	·	mg/kg		#		#
sec-But	tylbenzene	<0.01 mg/kg	TM116	0.0285 <b>M</b>	<0.01	М
4-Isopre	opyltoluene	<0.011	TM116	<0.011	<0.011	
1,3-Did	hlorobenzene	mg/kg <0.006	TM116	<0.006	<0.006	М
		mg/kg		М		М
1.4-Dic	hlorobenzene	<0.005	TM116	<0.005	<0.005	М
n-Butyll	benzene	mg/kg <0.01	TM116	0.0347	<0.01	IVI
		mg/kg	T14440	M	.0.040	M
1.2-DIC	hlorobenzene	<0.012 mg/kg	TM116	<0.012 <b>M</b>	<0.012	М
	romo-3-chloropropan	<0.014	TM116	<0.014	<0.014	
e Tert an	nyl methyl ether	mg/kg	TM116	<0.015	<0.015	M
	nyl methyl ether	<0.015 mg/kg	TM116		<0.015	
1.2.4-T	richlorobenzene	<0.006	TM116	<0.006	<0.006	#
Hexach	nlorobutadiene	mg/kg <0.012	TM116	<0.012	<0.012	#
		mg/kg		М		М
Naphth	aiene	<0.013 mg/kg	TM116	<0.013 <b>M</b>	<0.013	М
1.2.3-T	richlorobenzene	<0.006	TM116	<0.006	<0.006	
		mg/kg		М		М

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Results Legend # ISO17025 accredited.	Customer	Sample Ref.	TPC10 ES1	TPC10 ES3		TPC6 ES1		TPC7 ES1	TPC8 ES2	TPC8 ES3	
M mCERTS accredited.		Depth (m)	0.10	1.60		0.10		0.30	0.60	1.60	
aq Aqueous / settled sample. diss.filt Dissolved / filtered sample.	S	Sample Type	Soil/Solid	Soil/Solid		Soil/Solid		Soil/Solid	Soil/Solid	Soil/Solid	
tot.unfilt Total / unfiltered sample.  * subcontracted test.		ate Sampled	15/07/2010	15/07/2010		15/07/2010		15/07/2010	15/07/2010	15/07/2010	
** % recovery of the surrogate		te Received	17/07/2010	17/07/2010		17/07/2010		17/07/2010	17/07/2010	17/07/2010	
standard to check the efficiency of the method. The results of th		SDG Ref	100719-9	100719-9		100719-9		100719-9	100719-9	100719-9	
individual compounds within	Lab Sa	ample No.(s)	1837381	1837139		1837467		1844739	1837478	1837295	
the samples are not corrected for this recovery.											
Component	LOD/Units	Method	No AOM Detected			N. AOM D. C. C.		N. AOM Data da I			
Asbestos Containing Material Screen	-	TM001	No ACM Detected			No ACM Detecte	ea	No ACM Detected			
Ammoniacal Nitrogen,	<15 mg/kg	TM024	<15	<15		<15		105	22.4	<15	
exchangeable as NH4	<0.002 α/Ι	TM098	0.162	0.0732	М	0.117	М	0.386	0.109	0.0948	М
Sulphate, 2:1 water soluble	<0.003 g/l	TIVIU90	0.102	0.0732	м	0.117	М	0.360 <b>M</b>	0.109 <b>M</b>	0.0946	М
Soil Organic Matter (SOM)	<0.35 %	TM132		1.52	ш				4.74		
pH	1 pH Units	TM133	8.29	8.41	#	8.64		7.97	<b>#</b> 8.51	8.27	
Chromium, Hexavalent	<0.6 mg/kg	TM151	<b>*</b>	<0.6	М	<0.6	M	<b>M</b> <0.6	1.02	<0.6	М
			#	-0.0	#	-0.0	#	#	#	-0.0	#
TPH >C6-C8	<10 mg/kg	TM154						<50	<10		
TPH >C8-C10	<10 mg/kg	TM154						<50	285		
TPH >C10-C12	<10 mg/kg	TM154						76.1	279		
TPH >C12-C16	<10 mg/kg	TM154						417	104		
TPH >C16-C21	<10 mg/kg	TM154						1080	386		
TPH >C21-C40	<10 mg/kg	TM154						13600	1640		
TPH >C6-C40	<10 mg/kg	TM154						15200	2690		
Arsenic	<0.6 mg/kg	TM181	7.07	32.9		12.7		<b>#</b> 12.6	13.1	52.4	
Cadmium	<0.02	TM181	0.32	<0.02	М	0.365	M	5.72	1.29	<0.2	M
	mg/kg		#		М		М	M	M		М
Chromium	<0.9 mg/kg	TM181	18.9 #	40.8	м	22.5	М	60.2 <b>M</b>	30.6 <b>M</b>	12.6	М
Copper	<1.4 mg/kg	TM181	405 #	59.3	м	20.8	М	499 <b>M</b>	153 <b>M</b>	40.8	М
Lead	<0.7 mg/kg	TM181	105 #	44.6	М	32.9	М	538 <b>M</b>	119 <b>M</b>	37.6	М
Mercury	<0.14 mg/kg	TM181	<0.14	<0.14	М	<0.14	м	<0.14 <b>M</b>	<0.14	<1.4	м
Nickel	<0.2 mg/kg	TM181	15.5	36.7		17.8		53.3	28.2	52.2	
Selenium	<1 mg/kg	TM181	<1	<1	M	<1	M	1.43	<b>M</b>	<10	M
Zinc	<1.9 mg/kg	TM181	219	109	#	76.1	#	# 554	332	127	#
Boron, water soluble	<1 mg/kg	TM222	1.29	<1	М	<1	M	<b>M</b> 4.62	2.63	<1	М
Doron, mater colubie	99		#		M		M	M	M		M

# **ALcontrol Laboratories Analytical Services**

SDG:

100719-9 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

KL056 DSDC Bicester Location:

Entec UK Ltd Customer: Steve Dooley Attention:

Order No.:

PAH by GCMS										
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	TPC10 ES3							
M mCERTS accredited. aq Aqueous / settled sample.		Depth (m)	1.60							
diss.filt Dissolved / filtered sample.		Sample Type	Soil/Solid							
tot.unfilt  * Total / unfiltered sample.  subcontracted test.		ate Sampled	15/07/2010							
** % recovery of the surrogate standard to check the efficiency		te Received SDG Ref	17/07/2010 100719-9							
of the method. The results of the individual compounds within	e Lab Sa	ample No.(s)	1837139							
the samples are not corrected for this recovery.										
Component	LOD/Units	Method								
Naphthalene-d8 %	%	TM218	108							
recovery** Acenaphthene-d10 %	%	TM218	109							
recovery**										
Phenanthrene-d10 % recovery**	%	TM218	110							
Chrysene-d12 % recovery**	%	TM218	104							
Perylene-d12 % recovery**	0/.	TMO10	117							
r erylene-u iz % recovery	%	TM218	117							
Naphthalene	<0.009	TM218	0.232							
Acenaphthylene	mg/kg <0.012	TM218	<0.012							
	mg/kg		М							
Acenaphthene	<0.008	TM218	0.0495							
Fluorene	mg/kg <0.01	TM218	0.0956							
	mg/kg		М							
Phenanthrene	<0.015 mg/kg	TM218	0.345 <b>M</b>							
Anthracene	<0.016	TM218	0.0698							
Fluoranthene	mg/kg <0.017	TM218	0.302							
	mg/kg		М							
Pyrene	<0.015	TM218	0.236 <b>M</b>							
Benz(a)anthracene	mg/kg <0.014	TM218	0.132							
	mg/kg	TMO40	M 0.127							
Chrysene	<0.01 mg/kg	TM218	0.137 <b>M</b>							
Benzo(b)fluoranthene	<0.015	TM218	0.123							
Benzo(k)fluoranthene	mg/kg <0.014	TM218	0.0578							
Denzo(k)naoraminene	mg/kg		M							
Benzo(a)pyrene	<0.015	TM218	0.112 <b>M</b>							
Indeno(1,2,3-cd)pyrene	mg/kg <0.018	TM218	0.054							
	mg/kg	T14040	M							
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218	<0.023							
Benzo(g,h,i)perylene	<0.024	TM218	0.067							
Polyaromatic hydrocarbons,	mg/kg <0.118	TM218	2.01							
Total USEPA 16	mg/kg	1101210	M							

# **ALcontrol Laboratories Analytical Services**

SDG:

100719-9 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

					ort no.		
Semi	Volatile Organic						
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	TPC10 ES3			
M aq	mCERTS accredited. Aqueous / settled sample.		Depth (m)	1.60			
diss.filt	Dissolved / filtered sample. Total / unfiltered sample.		ample Type	Soil/Solid			
*	subcontracted test.		ate Sampled	15/07/2010			
**	% recovery of the surrogate standard to check the efficiency	Da	te Received SDG Ref	17/07/2010 100719-9			
	of the method. The results of the individual compounds within	Lab Sa	imple No.(s)	1837139			
	the samples are not corrected for this recovery.						
Compo		LOD/Units	Method				
Phenol		<0.1 mg/kg	TM157	<0.1			
Pentac	hlorophenol	<0.1 mg/kg	TM157	0.589			
n-Nitro	so-n-dipropylamine	<0.1 mg/kg	TM157	<0.1			
Nitrobe	enzene	<0.1 mg/kg	TM157	<0.1			
Isopho	rone	<0.1 mg/kg	TM157	<0.1			
Hexacl	nloroethane	<0.1 mg/kg	TM157	<0.1			
	nlorocyclopentadiene	<0.1 mg/kg	TM157	<0.1			
	nlorobutadiene	<0.1 mg/kg	TM157	<0.1			
	nlorobenzene	<0.1 mg/kg	TM157	<0.1			
	tyl phthalate	<0.1 mg/kg	TM157	<0.1			
	nhthalate	<0.1 mg/kg	TM157	<0.1 <0.1			
	phthalate tyl phthalate	<0.1 mg/kg	TM157	0.209			
Dibenz		<0.1 mg/kg	TM157	<0.1			
Carbaz		<0.1 mg/kg	TM157	<0.1			
	enzyl phthalate	<0.1 mg/kg	TM157	<0.1			
	thylhexyl) phthalate	<0.1 mg/kg	TM157	0.155			
bis(2-C	Chloroethoxy)methane	<0.1 mg/kg	TM157	<0.1			
bis(2-C	Chloroethyl)ether	<0.1 mg/kg	TM157	<0.1			
Azobei	nzene	<0.1 mg/kg	TM157	<0.1			
4-Nitro	phenol	<0.1 mg/kg	TM157	<0.1			
4-Nitro	aniline	<0.1 mg/kg	TM157	<0.1			
4-Meth	ylphenol	<0.1 mg/kg	TM157	<0.1			
4-Chlo	rophenylphenylether	<0.1 mg/kg	TM157	<0.1			
4-Chlo	roaniline	<0.1 mg/kg	TM157	<0.1			
4-Chlo	ro-3-methylphenol	<0.1 mg/kg	TM157	<0.1			
4-Brom	nophenylphenylether	<0.1 mg/kg	TM157	<0.1			
3-Nitro		<0.1 mg/kg	TM157	<0.1			
2-Nitro		<0.1 mg/kg	TM157	<0.1			
2-Nitro		<0.1 mg/kg	TM157	<0.1			
	ylphenol	<0.1 mg/kg	TM157	<0.1			
	richlorobenzene	<0.1 mg/kg	TM157	<0.1			
	rophenol	<0.1 mg/kg	TM157	<0.1			
	nitrotoluene	<0.1 mg/kg	TM157	<0.1			
	nethylphenol	<0.1 mg/kg	TM157	<0.1			
	nethylphenol	<0.1 mg/kg	TM157	<0.1 <0.1			
	richlorophenol	<0.1 mg/kg	TM157	<0.1			
	richlorophenol	<0.1 mg/kg	TM157	<0.1			
<u>-,</u> -,∪-1		-o. i ilig/kg	INITO	٠٠.١			

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Sem	i Volatile Organic			
#	Results Legend ISO17025 accredited.		Sample Ref.	TPC10 ES3
M aq	mCERTS accredited. Aqueous / settled sample.		Depth (m)	1.60
diss.filt	Dissolved / filtered sample. Total / unfiltered sample.		ample Type	Soil/Solid
*	subcontracted test.		ate Sampled ite Received	15/07/2010 17/07/2010
	% recovery of the surrogate standard to check the efficiency of the method. The results of the		SDG Ref	100719-9
	individual compounds within	Lab Sa	ample No.(s)	1837139
	the samples are not corrected for this recovery.			
Compo	onent chlorobenzene	LOD/Units <0.1 mg/kg	Method TM157	0.813
1,4-DI	chiorobenzene	<0.1 mg/kg	TIVI157	0.813
1,3-Di	chlorobenzene	<0.1 mg/kg	TM157	<0.1
1,2-Di	chlorobenzene	<0.1 mg/kg	TM157	3.25
2 Chla	rananhthalana	<0.1 ma//ra	TM157	<0.1
Z-CITIC	ronaphthalene	<0.1 mg/kg	TIVITO	
2-Meth	nylnaphthalene	<0.1 mg/kg	TM157	0.17
Acena	phthylene	<0.1 mg/kg	TM157	<0.1
Acena	phthene	<0.1 mg/kg	TM157	<0.1
Anthra	cene	<0.1 mg/kg	TM157	<0.1
Benzo	(a)anthracene	<0.1 mg/kg	TM157	<0.1
Benzo	(b)fluoranthene	<0.1 mg/kg	TM157	<0.1
Benzo	(k)fluoranthene	<0.1 mg/kg	TM157	<0.1
Renzo	(a)pyrene	<0.1 mg/kg	TM157	<0.1
Benzo	(g,h,i)perylene	<0.1 mg/kg	TM157	<0.1
Chryse	ene	<0.1 mg/kg	TM157	0.141
			TM157	0.253
riuora	nthene	<0.1 mg/kg		0.253
Fluore	ne	<0.1 mg/kg	TM157	<0.1
Indend	o(1,2,3-cd)pyrene	<0.1 mg/kg	TM157	<0.1
Phena	nthrene	<0.1 mg/kg	TM157	0.286
Pyrene	9	<0.1 mg/kg	TM157	0.216
Napht	nalene	<0.1 mg/kg	TM157	0.144
Dibenz	zo(a,h)anthracene	<0.1 mg/kg	TM157	<0.1

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

TPH CWG (S)				
	Results Legend	Customer	Sample Ref.	TPC10 ES3
М	ISO17025 accredited. mCERTS accredited.		Depth (m)	1.60
diss.filt	Aqueous / settled sample. Dissolved / filtered sample.		ample Type	Soil/Solid
*	Total / unfiltered sample. subcontracted test. % recovery of the surrogate		ate Sampled te Received	15/07/2010 17/07/2010
	standard to check the efficiency of the method. The results of the		SDG Ref	100719-9
	individual compounds within the samples are not corrected	Lab Sa	imple No.(s)	1837139
	for this recovery.	1.00///	Method	
Compo GRO S	urrogate %	LOD/Units	TM089	81
recover	у**	.0.044	T14000	40.0
GRU >	C5-C12	<0.044 mg/kg	TM089	19.2
Benzen	ne	<0.01	TM089	<0.01
Ethylbe	nzene	mg/kg <0.003	TM089	<0.003
Toluene	e	mg/kg <0.002	TM089	<0.002
		mg/kg		М
m,p-Xy	lene	<0.006 mg/kg	TM089	<0.006 <b>M</b>
o-Xylen	ne	<0.003	TM089	<0.003
m,p,o->	(ylene	mg/kg <0.01	TM089	<0.01
BTEX,		mg/kg <0.01	TM089	<0.01
		mg/kg		М
Methyl (MTBE)	tertiary butyl ether	<0.005 mg/kg	TM089	<0.005 #
	ics >C5-C6	<0.01	TM089	0.0121
Aliphati	ics >C6-C8	mg/kg <0.01	TM089	0.621
		mg/kg		
Aliphati	ics >C8-C10	<0.01 mg/kg	TM089	2.19
Aliphati	ics >C10-C12	<0.01	TM089	5.25
Aromat	ics >C6-C7	mg/kg <0.01	TM089	<0.01
Aromat	ics >C7-C8	mg/kg		
		<0.01 mg/kg	TM089	<0.01
Aromat	ics >EC8-EC10	<0.01 mg/kg	TM089	3.28
Aromat	ics >EC10-EC12	<0.01	TM089	7.87
Total A	liphatics >C5-C12	mg/kg <0.01	TM089	8.07
		mg/kg		
Total A	romatics >C6-C12	<0.01 mg/kg	TM089	11.2
Aliphati	ics >C12-C16	<0.1 mg/kg	TM173	84.6
Aliphati	ics >C16-C21	<0.1 mg/kg	TM173	301
•				
•	ics >C16-C35	<0.1 mg/kg	TM173	1010
Aliphati	ics >C21-C35	<0.1 mg/kg	TM173	704
Aliphati	ics >C35-C44	<0.1 mg/kg	TM173	158
·				26.4
	ics >EC12-EC16	<0.1 mg/kg	TM173	26.1
Aromat	ics >EC16-EC21	<0.1 mg/kg	TM173	66.4
Aromat	ics >EC21-EC35	<0.1 mg/kg	TM173	269
Aromat	ics >EC35-EC44	<0.1 mg/kg	TM173	85
Aromat	ics >EC40-EC44	<0.1 mg/kg	TM173	31.2
Total A	liphatics >C12-C44	<0.1 mg/kg	TM173	1250
Total A	romatics	<0.1 mg/kg	TM173	446
>EC12-	-EC44			
	liphatics >C5-35	<0.1 mg/kg	TM173	1100
Total A	liphatics >C5-C44	<0.1 mg/kg	TM173	1260
Total A	romatics >C5-35	<0.1 mg/kg	TM173	372
Total A	romatics >C6-C44	<0.1 mg/kg	TM173	457
Total A	liphatics & Aromatics	<0.1 mg/kg	TM173	1470
Total A	liphatics & Aromatics	<0.1 mg/kg	TM173	1710
>C5-C4	14			

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

VOC	MS (S)							
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	TPC10 ES3				
M aq	mCERTS accredited. Aqueous / settled sample.		Depth (m)	1.60				
diss.filt	Dissolved / filtered sample.  Total / unfiltered sample.		ample Type	Soil/Solid				
*	subcontracted test. % recovery of the surrogate		ate Sampled te Received	15/07/2010 17/07/2010				
	standard to check the efficiency of the method. The results of the		SDG Ref	100719-9				
	individual compounds within the samples are not corrected	Lab Sa	imple No.(s)	1837139				
	for this recovery.	1.00///	Method					
Compo Dibrom	ofluoromethane**	LOD/Units	TM116	92.3				
Toluen	o d0**	%	TM116	93.7				
	ofluorobenzene**							
		%	TM116	143				
	odifluoromethane	<0.004 mg/kg	TM116	<0.004 <b>M</b>				
Chloro	methane	<0.007 mg/kg	TM116	<0.007 #				
Vinyl C	hloride	<0.01 mg/kg	TM116	<0.01 #				
Bromo	methane	<0.013	TM116	<0.013				
Chloro	ethane	mg/kg <0.014	TM116	<0.014				
Trichlo	rofluorormethane	mg/kg <0.006	TM116	<0.006				
1.1-Dic	hloroethene	mg/kg <0.01	TM116	<b>M</b> <0.01				
	Disulphide	mg/kg <0.007	TM116	0.0549				
	·	mg/kg		М				
	omethane	<0.01 mg/kg	TM116	<0.01				
	Tertiary Butyl Ether	<0.011 mg/kg	TM116	<0.011 <b>M</b>				
trans-1	-2-Dichloroethene	<0.011 mg/kg	TM116	<0.011 <b>M</b>				
1.1-Dic	hloroethane	<0.008 mg/kg	TM116	<0.008 <b>M</b>				
cis-1-2	-Dichloroethene	<0.005 mg/kg	TM116	0.0723 <b>M</b>				
2.2-Dic	hloropropane	<0.012	TM116	<0.012				
Bromo	chloromethane	mg/kg <0.014	TM116	<0.014				
Chloro	form	mg/kg <0.008	TM116	<b>M</b> <0.008				
1.1.1-T	richloroethane	mg/kg <0.007	TM116	<b>M</b> <0.007				
1.1-Dic	hloropropene	mg/kg <0.011	TM116	<b>M</b> <0.011				
Carbor	tetrachloride	mg/kg <0.014	TM116	<b>M</b> <0.014				
1 2-Dic	hloroethane	mg/kg <0.005	TM116	<b>M</b> <0.005				
		mg/kg		М				
Benzer		<0.009 mg/kg	TM116	<0.009 <b>M</b>				
Trichlo	roethene	<0.009 mg/kg	TM116	2.54 <b>M</b>				
1.2-Dic	hloropropane	<0.012 mg/kg	TM116	<0.012 <b>M</b>				
Dibrom	omethane	<0.009	TM116	<0.009				
Bromo	dichloromethane	mg/kg <0.007	TM116	<0.007				
cis-1-3	-Dichloropropene	mg/kg <0.014	TM116	<b>M</b> <0.014				
Toluen	e	mg/kg <0.005	TM116	<b>M</b> <0.005				
trans-1	-3-Dichloropropene	mg/kg <0.014	TM116	<b>M</b> <0.014				
	richloroethane	mg/kg <0.01	TM116	<0.01				
	hloropropane	mg/kg <0.007	TM116	<0.01 M				
		mg/kg		#				
	nloroethene	<0.005 mg/kg	TM116	0.159 <b>M</b>				
	ochloromethane	<0.013 mg/kg	TM116	<0.013 <b>M</b>				
1.2-Dib	romoethane	<0.012 mg/kg	TM116	<0.012 <b>M</b>				
Chorob	enzene	<0.005 mg/kg	TM116	<0.005				
1.1.1.2	-Tetrachloroethane	<0.01	TM116	<0.01				
Ethylbe	enzene	mg/kg <0.004	TM116	0.00732				
		mg/kg		М		<u> </u>	<u> </u>	

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

**Customer:** Entec UK Ltd **Attention:** Steve Dooley

Order No.:

voc	MS (S)			
	Results Legend	Customer	Sample Ref.	TPC10 ES3
# M	ISO17025 accredited. mCERTS accredited.		Depth (m)	1.60
diss.filt	Aqueous / settled sample. Dissolved / filtered sample.	s	ample Type	Soil/Solid
*	Total / unfiltered sample. subcontracted test.		ate Sampled	15/07/2010
**	% recovery of the surrogate standard to check the efficiency		te Received SDG Ref	17/07/2010 100719-9
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1837139
	the samples are not corrected for this recovery.			
Compo		LOD/Units	Method	0.011
p/m-Xy	lene	<0.014 mg/kg	TM116	<0.014 #
o-Xyler	ne	<0.01	TM116	<0.01
Styrene	9	mg/kg <0.01	TM116	<b>M</b> <0.01
		mg/kg		М
Bromot	form	<0.01 mg/kg	TM116	<0.01 <b>M</b>
Isoprop	oylbenzene	<0.005	TM116	0.0214
1122	-Tetrachloroethane	mg/kg <0.01	TM116	<0.01
		mg/kg		#
1.2.3-T	richloropropane	<0.017 mg/kg	TM116	<0.017 <b>M</b>
Bromol	benzene	<0.01	TM116	<0.01
Dropylk	penzene	mg/kg <0.011	TM116	0.0364
Тторук	Jenzene	mg/kg		0.0304 M
2-Chlor	rotoluene	<0.009	TM116	<0.009
1.3.5-T	rimethylbenzene	mg/kg <0.008	TM116	0.0249
4 Chlor	rotoluono	mg/kg	TM11C	# <0.012
4-Chioi	rotoluene	<0.012 mg/kg	TM116	<0.012 <b>M</b>
tert-But	tylbenzene	<0.012	TM116	<0.012
1.2.4-T	rimethylbenzene	mg/kg <0.009	TM116	0.18
D.	t. dla = = = = =	mg/kg	TM44C	#
sec-Bu	tylbenzene	<0.01 mg/kg	TM116	0.147 <b>M</b>
4-Isopr	opyltoluene	<0.011	TM116	<0.011
1.3-Dic	hlorobenzene	mg/kg <0.006	TM116	0.0959
		mg/kg		М
1.4-Dic	hlorobenzene	<0.005 mg/kg	TM116	0.87 <b>M</b>
n-Butyl	benzene	<0.01	TM116	<0.01
1.2-Dic	hlorobenzene	mg/kg <0.012	TM116	3.28
		mg/kg		М
1.2-Dib e	romo-3-chloropropan	<0.014 mg/kg	TM116	<0.014 <b>M</b>
	nyl methyl ether	<0.015	TM116	<0.015
1 2 <i>4</i> -T	richlorobenzene	mg/kg <0.006	TM116	<0.006
		mg/kg		#
Hexach	nlorobutadiene	<0.012 mg/kg	TM116	<0.012 <b>M</b>
Naphth	alene	<0.013	TM116	<0.013
100T	richlorobenzene	mg/kg <0.006	TM116	<0.006
1.2.3-1	richioropenzene	mg/kg	TIVITIO	<0.006 <b>M</b>

# **ALcontrol Laboratories Analytical Services**

SDG:

100719-9 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester Customer: Entec UK Ltd Steve Dooley Attention:

Order No.:

	-				_			
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	TPC9 ES1	TPE1 ES1	TPE2 ES1	TPE2 ES2	WSC1	WSC1
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)	0.20	0.50	0.50	1.80	0.00 - 0.20	1.50 - 1.70
diss.filt Dissolved / filtered sample.		ample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
t.unfilt Total / unfiltered sample.  * subcontracted test.		ite Sampled	15/07/2010	15/07/2010	15/07/2010	15/07/2010	16/07/2010	16/07/2010
** % recovery of the surrogate		te Received	17/07/2010	17/07/2010	17/07/2010	17/07/2010	17/07/2010	17/07/2010
standard to check the efficiency of the method. The results of the	_	SDG Ref	100719-9	100719-9	100719-9	100719-9	100719-9	100719-9
individual compounds within the samples are not corrected	Lab Sa	mple No.(s)	1837454	1837117	1837129	1837108	1836354	1836522
for this recovery.								
Component	LOD/Units	Method	No ACM Detected		No ACM Detected			
Asbestos Containing Material Screen	-	TM001	No ACM Detected		No ACM Detected			
Ammoniacal Nitrogen,	<15 mg/kg	TM024	<15	<15	<15	<15	<15	<15
exchangeable as NH4			М	ı		M	М	
Sulphate, 2:1 water soluble	<0.003 g/l	TM098	0.157	1.35 I	0.0277 I M	0.214 <b>M</b>	0.043	2.39
Soil Organic Matter (SOM)	<0.35 %	TM132	M		I M	IVI	M	9.21
pH	1 pH Units	TM133	7.87	8.46	8.64	7.43	7.98	7.72
Chromium, Hexavalent	<0.6 mg/kg	TM151	M 2.44	<0.6	1 M <0.6	<0.6	<1.2	<0.6
Chilomium, nexavalem	<0.0 Hig/kg	TIVITOT	2. <del>44</del> #		# **	~0.0 #	<b>\1.2</b> #	<b>\0.0</b>
TPH >C6-C8	<10 mg/kg	TM154	<10		<10			<10
TDU 00 040	10 "							
TPH >C8-C10	<10 mg/kg	TM154	<10		<10			<10
TPH >C10-C12	<10 mg/kg	TM154	<10		<10			<10
TPH >C12-C16	<10 mg/kg	TM154	<10		<10			<10
TPH >C16-C21	<10 mg/kg	TM154	110		76.5			<10
11 11 / 0 10-021	< 10 mg/kg	1 IVI 134	110		70.5			<b>~10</b>
TPH >C21-C40	<10 mg/kg	TM154	2420		700			230
TDLL > 00 040		T) 1/5	0540		700			04:
TPH >C6-C40	<10 mg/kg	TM154	2540 #		786			244
Arsenic	<0.6 mg/kg	TM181	77.4	11.2	9.13	10.2	22.4	7.93
			М	ı	I M	М	М	
Cadmium	<0.02	TM181	24.2	<0.02	<0.02	<0.02	<0.02	0.706
Chromium	mg/kg <0.9 mg/kg	TM181	M 324	14.6	1 M	26.4	M 60.5	65.8
Omomuni	-o.s mg/kg	TIVITOT	324 <b>M</b>	14.6		26.4 M	60.5 <b>M</b>	65.8
Copper	<1.4 mg/kg	TM181	7070	23.8	12.2	21.7	20.1	55.4
			M			M	M	
Lead	<0.7 mg/kg	TM181	4080 <b>M</b>	32.9	9.78 I M	103 <b>M</b>	29.3 M	15.4
Mercury	<0.14	TM181	<1.4	<0.14	<0.14	<0.14	<0.14	<0.14
,	mg/kg		М			М	М	
Nickel	<0.2 mg/kg	TM181	200	12.9	13.9	21.4	34.9	59.5
Colonium	<1 mg/kg	TM181	<b>M</b> <10	<b>!</b> <1	1 M	<b>M</b> <1	M 1.4	4.97
Selenium	<1 mg/kg	TIVITOT	×10 #		# *	#	1.4	4.97
Zinc	<1.9 mg/kg	TM181	4600	74.4	34	70.8	99.6	134
			M		M		M	
Boron, water soluble	<1 mg/kg	TM222	3.73	<1	<1 M	1.38	<1	4.84
			M		I M	M	M	
					<u> </u>			
					The second secon	i contraction of the contraction		

# **ALcontrol Laboratories Analytical Services**

SDG:

100719-9 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester Customer: Entec UK Ltd Steve Dooley Attention:

Order No.:

## ISO17028 accredited.  M mCERTs accredited.  aq Aqueous / settled sample.  diss.filit Dissolved / filtered sample.  Depth (m) 0.20 - 0.40 1.20 - 1.40 2.40 - 2.60 1.60 - 1.90 2.90 - 3.10 1.50 - 1.7  diss.filit Dissolved / filtered sample.  Sample Type   Soil/Solid   Soil/Soild										
	Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSC2	WSC2	WSC3	WSD10	WSD11	WSD12	
Same of the most sam	M mCERTS accredited.		Depth (m)	0.20 0.40	1 20 1 40	2.40 2.60	160 100	200 310	150 170	
Date   Sample of Date		9								
No. Composition for the surrogate interest of the surrogate interest	tot.unfilt Total / unfiltered sample.									
SDO Ref   Lib Samples on 100719-9   100719-9   1836565									17/07/2010	
International Procession of the methods in the service of the methods in the service of the methods in the service of the methods in the service of the methods of the me	standard to check the efficienc	у							100719-9	
December   December		ne Lab Sa	ample No.(s)						1836196	
Component   CoUntries   Method   No ACM Detected   No ACM Detect	the samples are not corrected									
Asbestos Containing Material Screen Ammonical Nitrogen, exchangeable as NH4 Sulphate, 2:15 mg/kg 145 mg/kg 2:15	LOD/Units	Method								
Material Screen		-	_	No ACM Detected						
Exchangeable as NH4										
Sulphake, 2:1 water soluble   0.003 gl   TM098   1.45   M		<15 mg/kg	TM024							
Soil Organic Matter (SOM)	•	.0.000 . #	T1 1000						N	
Sell Organic Matter (SOM)	Sulphate, 2:1 water soluble	<0.003 g/I	11/1098						1.8 N	
PH	Soil Organic Matter (SOM)	<0.35 %	TM132	·	141	in in	2.62	101	<u>'</u>	
Chromium, Hexavalent	pH	1 pH Units	TM133	8.13	7.7	6.79		5.38	7.1	
# # # # # # # # # # # # # # # # # # #				М	M	M	М	М	N	
TPH > C8-C10	Chromium, Hexavalent	<0.6 mg/kg	TM151						<0.6	
TPH > C10 - C12	TPH >C6-C8	<10 mg/kg	TM154							
TPH > C12-C16	TPH >C8-C10	<10 mg/kg	TM154		<10		<10	<10	<10	
TPH > C12-C16	TPH >C10-C12	<10 ma/ka	TM154		<10		<10	<10	<10	
TPH > C16-C21										
TPH > C21 - C40										
TPH > C6-C40	TPH >C16-C21	<10 mg/kg	TM154		<10		<10	<10	<10	
Arsenic	TPH >C21-C40	<10 mg/kg	TM154		100		128	124	14.4	
Arsenic	TPH >C6-C40	<10 mg/kg	TM154							
Cadmium         <0.02 mg/kg         TM181 mg/kg         <0.02 mg/kg         M         0.619 mg/kg         2.38 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.02 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg/kg         <0.04 mg	Arsenic	<0.6 mg/kg	TM181		4	6.41	8.09	7.49		
Chromium         <0.9 mg/kg         TM181         73.2 m/s         61.9 m/s         136 m/s         20.7 m/s         27.9 m/s         58.1           Copper         <1.4 mg/kg	Cadmium	<0.02	TM181	<0.02	0.619	2.38	<0.02	<0.02		
Copper	Chromium		TM181						58.1	
Lead				М	M	M	М	М	I	
Mercury				M	M	M	М	М	ı	
mg/kg         M <td>Lead</td> <td>&lt;0.7 mg/kg</td> <td>TM181</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>12.8 N</td>	Lead	<0.7 mg/kg	TM181						12.8 N	
Nickel         <0.2 mg/kg         TM181         41.7         41         55.3         61.1         23.4         31.2           Selenium         <1 mg/kg         TM181         1.23         2.03         2.11         1.29         1.35         3.62           Zinc         <1.9 mg/kg         TM181         137         71.2         160         74         53.7         83.5           Boron, water soluble         <1 mg/kg         TM22         <1         6.06         15.4         2.72         5.22         1.27	Mercury		TM181						<0.14	
Selenium     <1 mg/kg     TM181     1.23     2.03     2.11     1.29     1.35     3.62       Zinc     <1.9 mg/kg     TM181     137     71.2     160     74     53.7     83.5       M     M     M     M     M     M       Boron, water soluble     <1 mg/kg     TM22     <1     6.06     15.4     2.72     5.22     1.27	Nickel		TM181	41.7	41	55.3	61.1	23.4		
Zinc	Selenium	<1 mg/kg	TM181	1.23	2.03	2.11	1.29	1.35		
Boron, water soluble          M	Zinc	<1.9 mg/kg	TM181	137	71.2	160	74	53.7	83.5	
	Boron, water soluble	<1 mg/kg	TM222				2.72	5.22	I 1.27	
				М	M	M		M	N	

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

DV⊓	by GCMS			
	Results Legend	Customer	Sample Ref.	WSC3
М	ISO17025 accredited. mCERTS accredited.			
aq	Aqueous / settled sample. Dissolved / filtered sample.	S	Depth (m) Sample Type	2.40 - 2.60 Soil/Solid
tot.unfilt	Total / unfiltered sample. subcontracted test.	Da	ate Sampled	16/07/2010
**	% recovery of the surrogate standard to check the efficiency	Da	te Received SDG Ref	17/07/2010 100719-9
	of the method. The results of the individual compounds within	Lab Sa	ample No.(s)	1836565
	the samples are not corrected for this recovery.			
Compo	nent	LOD/Units	Method	
Naphth recover	alene-d8 % rv**	%	TM218	112
Acenar	ohthene-d10 %	%	TM218	110
recover	ry** nthrene-d10 %	%	TM218	109
recover	ry**			
Chryse	ne-d12 % recovery**	%	TM218	95.9
Peryler	ne-d12 % recovery**	%	TM218	107
Naphth	alene	<0.009	TM218	<0.009
		mg/kg	TN4040	
Acenap	ohthylene	<0.012 mg/kg	TM218	<0.012
Acenap	ohthene	<0.008	TM218	<0.008
Fluorer	ne	mg/kg <0.01	TM218	<0.01
Phenar	othrana	mg/kg <0.015	TM218	<0.015
FIIEIIAI	iuliene	mg/kg	TIVIZIO	<0.015
Anthrad	cene	<0.016	TM218	<0.016
Fluorar	nthene	mg/kg <0.017	TM218	<0.017
Pyrene		mg/kg <0.015	TM218	<0.015
		mg/kg		
Benz(a	)anthracene	<0.014 mg/kg	TM218	<0.014
Chryse	ne	<0.01	TM218	<0.01
Renzo(	b)fluoranthene	mg/kg <0.015	TM218	<0.015
		mg/kg		
Benzo(	k)fluoranthene	<0.014 mg/kg	TM218	<0.014
Benzo(	a)pyrene	<0.015	TM218	<0.015
Indeno	(1,2,3-cd)pyrene	mg/kg <0.018	TM218	<0.018
		mg/kg		
Dibenz	o(a,h)anthracene	<0.023 mg/kg	TM218	<0.023
Benzo(	g,h,i)perylene	<0.024	TM218	<0.024
Polyaro	omatic hydrocarbons,	mg/kg <0.118	TM218	<0.118
Total U	ISEPA 16	mg/kg	1111210	-0.110

# **ALcontrol Laboratories Analytical Services**

SDG:

100719-9 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester Customer: Entec UK Ltd Steve Dooley Attention:

Order No.:

Semi	i Volatile Organio	nds		
#	Results Legend ISO17025 accredited.		Sample Ref.	WSC3
M aq	mCERTS accredited. Aqueous / settled sample.		Depth (m)	2.40 - 2.60
	Dissolved / filtered sample. Total / unfiltered sample.		ample Type ate Sampled	Soil/Solid 16/07/2010
-	subcontracted test. % recovery of the surrogate standard to check the efficiency	Da	te Received	17/07/2010
	of the method. The results of the individual compounds within		SDG Ref ample No.(s)	100719-9 1836565
	the samples are not corrected for this recovery.			
Compo		LOD/Units <0.1 mg/kg	Method TM157	<0.1
		<0.1 mg/kg	TM157	<0.1
	chlorophenol			
	so-n-dipropylamine	<0.1 mg/kg	TM157	<0.1
Nitrobe	enzene	<0.1 mg/kg	TM157	<0.1
Isopho	rone	<0.1 mg/kg	TM157	<0.1
Hexacl	hloroethane	<0.1 mg/kg	TM157	<0.1
Hexacl	hlorocyclopentadiene	<0.1 mg/kg	TM157	<0.1
Hexacl	hlorobutadiene	<0.1 mg/kg	TM157	<0.1
Hexacl	hlorobenzene	<0.1 mg/kg	TM157	<0.1
n-Dioc	tyl phthalate	<0.1 mg/kg	TM157	<0.1
	nyl phthalate	<0.1 mg/kg	TM157	<0.1
Diethyl	l phthalate	<0.1 mg/kg	TM157	<0.1
n-Dibu	tyl phthalate	<0.1 mg/kg	TM157	<0.1
Dibenz	ofuran	<0.1 mg/kg	TM157	<0.1
Carbaz	zole	<0.1 mg/kg	TM157	<0.1
Butylbe	enzyl phthalate	<0.1 mg/kg	TM157	<0.1
bis(2-E	Ethylhexyl) phthalate	<0.1 mg/kg	TM157	<0.1
bis(2-C	Chloroethoxy)methane	<0.1 mg/kg	TM157	<0.1
	Chloroethyl)ether	<0.1 mg/kg	TM157	<0.1
Azobei	nzene	<0.1 mg/kg	TM157	<0.1
4-Nitro	phenol	<0.1 mg/kg	TM157	<0.1
4-Nitro	aniline	<0.1 mg/kg	TM157	<0.1
4-Meth	nylphenol	<0.1 mg/kg	TM157	<0.1
4-Chlo	rophenylphenylether	<0.1 mg/kg	TM157	<0.1
4-Chlo	roaniline	<0.1 mg/kg	TM157	<0.1
4-Chlo	ro-3-methylphenol	<0.1 mg/kg	TM157	<0.1
4-Bron	nophenylphenylether	<0.1 mg/kg	TM157	<0.1
3-Nitro		<0.1 mg/kg	TM157	<0.1
2-Nitro		<0.1 mg/kg	TM157	<0.1
2-Nitro	aniline	<0.1 mg/kg	TM157	<0.1
2-Meth	nylphenol	<0.1 mg/kg	TM157	<0.1
1,2,4-T	Trichlorobenzene	<0.1 mg/kg	TM157	<0.1
2-Chlo	rophenol	<0.1 mg/kg	TM157	<0.1
2,6-Dir	nitrotoluene	<0.1 mg/kg	TM157	<0.1
2,4-Dir	nitrotoluene	<0.1 mg/kg	TM157	<0.1
	methylphenol	<0.1 mg/kg	TM157	<0.1
	chlorophenol	<0.1 mg/kg	TM157	<0.1
2,4,6-T	Trichlorophenol	<0.1 mg/kg	TM157	<0.1
2,4,5-T	Frichlorophenol	<0.1 mg/kg	TM157	<0.1

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Semi	<b>Volatile Organic</b>	Compour	nds			
	Results Legend		Sample Ref.	WSC3		
М	ISO17025 accredited. mCERTS accredited.		Donth ()	0.40.0.		
aq diss.filt	Aqueous / settled sample. Dissolved / filtered sample.	s	Depth (m) ample Type	2.40 - 2.60 Soil/Solid		
	Total / unfiltered sample.		ite Sampled	16/07/2010		
**	subcontracted test. % recovery of the surrogate		te Received	17/07/2010		
	standard to check the efficiency		SDG Ref	100719-9		
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1836565		
	the samples are not corrected for this recovery.					
Compo		LOD/Units	Method			
	hlorobenzene	<0.1 mg/kg	TM157	<0.1		
1,3-Dic	hlorobenzene	<0.1 mg/kg	TM157	<0.1		
1,2-Dic	hlorobenzene	<0.1 mg/kg	TM157	<0.1		
2-Chlor	onaphthalene	<0.1 mg/kg	TM157	<0.1		
2-Meth	ylnaphthalene	<0.1 mg/kg	TM157	<0.1		
Acenar	ohthylene	<0.1 mg/kg	TM157	<0.1		
cenar	ohthene	<0.1 mg/kg	TM157	<0.1		
Anthra	cene	<0.1 mg/kg	TM157	<0.1		
3enzo(	a)anthracene	<0.1 mg/kg	TM157	<0.1		
3enzo(	b)fluoranthene	<0.1 mg/kg	TM157	<0.1		
	k)fluoranthene	<0.1 mg/kg	TM157	<0.1		
	a)pyrene	<0.1 mg/kg	TM157	<0.1		
	g,h,i)perylene	<0.1 mg/kg	TM157	<0.1		
Chryse		<0.1 mg/kg	TM157	<0.1		
	nthene	<0.1 mg/kg	TM157	<0.1		
luorer		<0.1 mg/kg	TM157	<0.1		
	(1,2,3-cd)pyrene	<0.1 mg/kg	TM157	<0.1		
	nthrene	<0.1 mg/kg	TM157	<0.1		
Pyrene		<0.1 mg/kg	TM157	<0.1		
laphth	alene	<0.1 mg/kg	TM157	<0.1		
Dibenz	o(a,h)anthracene	<0.1 mg/kg	TM157	<0.1		

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

TPH CWG (S)											
Results Legend	Customer	Sample Ref.	WSC3								
# ISO17025 accredited.  M mCERTS accredited.		5 (1 ( )									
aq Aqueous / settled sample. diss.filt Dissolved / filtered sample.	S	Depth (m) sample Type	2.40 - 2.60 Soil/Solid								
tot.unfilt Total / unfiltered sample.  * subcontracted test.		ate Sampled	16/07/2010								
** % recovery of the surrogate		te Received	17/07/2010								
standard to check the efficiency of the method. The results of the		SDG Ref ample No.(s)	100719-9 1836565								
individual compounds within the samples are not corrected	200 00		1030303								
for this recovery.  Component	LOD/Units	Method									
GRO Surrogate %	%	TM089	19								
recovery**	2211										
GRO >C5-C12	<0.044 mg/kg	TM089	0.531								
Benzene	<0.01	TM089	<0.01								
Ethylbenzene	mg/kg <0.003	TM089	<0.003								
Laryiberizerie	mg/kg	1111000	м								
Toluene	<0.002	TM089	<0.002								
m,p-Xylene	mg/kg <0.006	TM089	<0.006								
	mg/kg		М								
o-Xylene	<0.003 mg/kg	TM089	<0.003								
m,p,o-Xylene	<0.01	TM089	<0.01								
BTEX, Total	mg/kg <0.01	TM089	<b>M</b> <0.01								
DILA, IUIAI	<0.01 mg/kg	I MIDOS	<0.01 <b>M</b>								
Methyl tertiary butyl ether	<0.005	TM089	<0.005								
(MTBE) Aliphatics >C5-C6	mg/kg <0.01	TM089	0.0368								
	mg/kg										
Aliphatics >C6-C8	<0.01 mg/kg	TM089	0.494								
Aliphatics >C8-C10	<0.01	TM089	<0.01								
Aliphatics >C10-C12	mg/kg <0.01	TM089	<0.01								
Aliphatics >C10-C12	mg/kg	TIVIOOS	<b>\0.01</b>								
Aromatics >C6-C7	<0.01	TM089	<0.01								
Aromatics >C7-C8	mg/kg <0.01	TM089	<0.01								
	mg/kg										
Aromatics >EC8-EC10	<0.01 mg/kg	TM089	<0.01								
Aromatics >EC10-EC12	<0.01	TM089	<0.01								
Tatal Aliabatias > OF O40	mg/kg	TN4000	0.504								
Total Aliphatics >C5-C12	<0.01 mg/kg	TM089	0.531								
Total Aromatics >C6-C12	<0.01	TM089	<0.01								
Aliphatics >C12-C16	mg/kg <0.1 mg/kg	TM173	8.72								
	-0.1 mg/kg	1111110	0.72								
Aliphatics >C16-C21	<0.1 mg/kg	TM173	11.1								
Aliphatics >C16-C35	<0.1 mg/kg	TM173	63.3								
Alinhatics >C21 C25	<0.1 ma//c	TM4170	50 1								
Aliphatics >C21-C35	<0.1 mg/kg	TM173	52.1								
Aliphatics >C35-C44	<0.1 mg/kg	TM173	4.19								
Aromatics >EC12-EC16	<0.1 mg/kg	TM173	7.17								
Aromatics >EC16-EC21	<0.1 mg/kg	TM173	21.7								
Aromatics >EC21-EC35	<0.1 mg/kg	TM173	214								
Aromatics >EC35-EC44	<0.1 mg/kg	TM173	71.5								
	-o. i mg/kg										
Aromatics >EC40-EC44	<0.1 mg/kg	TM173	27.4								
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173	76.2								
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173	314								
Total Aliphatics >C5-35	<0.1 mg/kg	TM173	72.5								
Total Aliphatics >C5-C44	<0.1 mg/kg	TM173	76.7								
	-o. i mg/kg										
Total Aromatics >C5-35	<0.1 mg/kg	TM173	243								
Total Aromatics >C6-C44	<0.1 mg/kg	TM173	314								
Total Aliphatics & Aromatics >C5-35	<0.1 mg/kg	TM173	315								
Total Aliphatics & Aromatics	<0.1 mg/kg	TM173	391								
>C5-C44											

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Component	
Marchery of the survey control search (search (sear	
Sample Type   Date Sample Type Type   Date Sample Type Type Type   Date Sample Type Type Type Type Type Type Type Typ	
Dichlorodifluoromethane	
SOC Ref   1007/19-9   1836565   1007/19-9   1836565   1007/19-9   1836565   1007/19-9   1836565   1007/19-9   1836565   1007/19-9   1836565   1007/19-9   1836565   1007/19-9   1836565   1007/19-9   1836565   1007/19-9   1836565   1007/19-9   1836565   1007/19-9   1007	
Inclusive a compounds within the sample are not conversed.   Include the scorery.   Inclu	
Component   LODIUnits   Method	
Dibromofiloromethane**   %   TM116   91.4	
Toluene-48**	
## ABromofluorobenzene**	
Dichlorodifluoromethane	
Chloromethane	
Chloromethane	
Vinyl Chloride	
Vinyl Chloride	
Bromomethane	
Chloroethane	
Trichlorofluorormethane	
Trichlorofluorormethane	
March   Marc	
Carbon Disulphide	
Carbon Disulphide	
Dichloromethane	
Methyl Tertiary Butyl Ether	
Trans-1-2-Dichloroethene	
trans-1-2-Dichloroethene         <0.011 mg/kg         TM116 mg/kg         0.0184 m           1.1-Dichloroethane         <0.008 mg/kg	
1.1-Dichloroethane	
mg/kg	
mg/kg	
2.2-Dichloropropane	
Bromochloromethane	
mg/kg	
mg/kg         M           1.1.1-Trichloroethane         <0.007	
1.1.1-Trichloroethane	
mg/kg M	
Carbontetrachloride <0.014 TM116 <0.014 mg/kg M	
1.2-Dichloroethane <0.005 TM116 <0.005	
mg/kg         M           Benzene         <0.009	
mg/kg M	
Trichloroethene	
1.2-Dichloropropane <0.012 TM116 <0.012	
mg/kg         M           Dibromomethane         <0.009	
mg/kg M	
Bromodichloromethane <0.007 TM116 <0.007 mg/kg M	
cis-1-3-Dichloropropene <0.014 TM116 <0.014	
mg/kg         M           Toluene         <0.005	
mg/kg M	
trans-1-3-Dichloropropene <0.014 TM116 <0.014 mg/kg	
1.1.2-Trichloroethane <0.01 TM116 <0.01	
mg/kg         M           1.3-Dichloropropane         <0.007	
mg/kg #	
Tetrachloroethene	
Dibromochloromethane <0.013 TM116 <0.013	
mg/kg         M           1.2-Dibromoethane         <0.012	
mg/kg M	
Chorobenzene	
1.1.1.2-Tetrachloroethane <0.01 TM116 <0.01	
mg/kg         M           Ethylbenzene         <0.004	
mg/kg M	

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Steve Dooley

Order No.:

VOC MS (S)		<u> </u>	
Results Legend	Customer	Sample Ref.	WSC3
# ISO17025 accredited.  M mCERTS accredited.		Donth (m)	
aq Aqueous / settled sample. diss.filt Dissolved / filtered sample.	S	Depth (m) Sample Type	
tot.unfilt Total / unfiltered sample.  * subcontracted test.		ate Sampled	16/07/2010
** % recovery of the surrogate standard to check the efficiency		te Received SDG Ref	17/07/2010 100719-9
of the method. The results of the individual compounds within	e Lab Sa	ample No.(s)	
the samples are not corrected for this recovery.			
Component	LOD/Units	Method	
p/m-Xylene	<0.014 mg/kg	TM116	<0.014 #
o-Xylene	<0.01	TM116	<0.01
Styrene	mg/kg <0.01	TM116	<b>M</b> <0.01
	mg/kg	T11110	M
Bromoform	<0.01 mg/kg	TM116	<0.01 <b>M</b>
Isopropylbenzene	<0.005	TM116	<0.005
1.1.2.2-Tetrachloroethane	mg/kg <0.01	TM116	<0.01
	mg/kg		#
1.2.3-Trichloropropane	<0.017 mg/kg	TM116	<0.017 <b>M</b>
Bromobenzene	<0.01	TM116	<0.01
Propylbenzene	mg/kg <0.011	TM116	<b>M</b> <0.011
	mg/kg		М
2-Chlorotoluene	<0.009 mg/kg	TM116	<0.009 <b>M</b>
1.3.5-Trimethylbenzene	<0.008	TM116	<0.008
4-Chlorotoluene	mg/kg <0.012	TM116	<b>*</b>
	mg/kg		М
tert-Butylbenzene	<0.012 mg/kg	TM116	<0.012 #
1.2.4-Trimethylbenzene	<0.009	TM116	<0.009
sec-Butylbenzene	mg/kg <0.01	TM116	<b>*</b>
	mg/kg		М
4-Isopropyltoluene	<0.011 mg/kg	TM116	<0.011 <b>M</b>
1.3-Dichlorobenzene	<0.006	TM116	<0.006
1.4-Dichlorobenzene	mg/kg <0.005	TM116	<b>M</b> <0.005
	mg/kg		М
n-Butylbenzene	<0.01 mg/kg	TM116	<0.01
1.2-Dichlorobenzene	<0.012	TM116	<0.012
1.2-Dibromo-3-chloropropan	mg/kg <0.014	TM116	<b>M</b> <0.014
е	mg/kg		М
Tert-amyl methyl ether	<0.015 mg/kg	TM116	<0.015
1.2.4-Trichlorobenzene	<0.006	TM116	<0.006
Hexachlorobutadiene	mg/kg <0.012	TM116	<b>*</b>
	mg/kg		М
Naphthalene	<0.013 mg/kg	TM116	<0.013
1.2.3-Trichlorobenzene	<0.006	TM116	<0.006
	mg/kg		M
	1		

# **ALcontrol Laboratories Analytical Services**

SDG:

100719-9 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester Customer: Entec UK Ltd Steve Dooley Attention:

Order No.:

Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSD13	WSD9	WSD9	WSE17	WSE17	
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)	0.10 - 0.30	0.30 - 0.50	3.80 - 4.00	0.60 - 0.80	2.40 - 2.60	
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	
* subcontracted test.		te Sampled te Received	15/07/2010	15/07/2010	15/07/2010	15/07/2010	15/07/2010	
standard to check the efficiency	,	SDG Ref	17/07/2010 100719-9	17/07/2010 100719-9	17/07/2010 100719-9	17/07/2010 100719-9	17/07/2010 100719-9	
of the method. The results of the individual compounds within	e Lab Sa	mple No.(s)	1836238	1836192	1836218	1836300	1836307	
the samples are not corrected for this recovery.								
Component	LOD/Units	Method						
Asbestos Containing Material Screen	-	TM001		No ACM Detected				
Ammoniacal Nitrogen,	<15 mg/kg	TM024	<15	<15	<15	55.4	<15	
exchangeable as NH4 Sulphate, 2:1 water soluble	<0.003 g/l	TM098	<b>M</b> 0.122	0.159	1.61	<b>M</b> 0.477	1.6	
Sulpriate, 2.1 water soluble	<0.003 g/i	110090	0.122 M	0.139 M	1.01 M	0.477 M	1.0 M	
Soil Organic Matter (SOM)	<0.35 %	TM132				0.876 #		
рН	1 pH Units	TM133	8.2	8.32	5.77	7.64	5.85	
Chromium, Hexavalent	<0.6 ma/ka	TM151	<b>M</b> <0.6	M	M	M	M	
	<0.6 mg/kg	TM151	<0.6	<0.6 #	<0.6	<0.6 #	<0.6 #	
TPH >C6-C8	<10 mg/kg	TM154		<10		<10	<10	
TPH >C8-C10	<10 mg/kg	TM154		<10		<10	<10	
TPH >C10-C12	<10 mg/kg	TM154		<10		<10	<10	
	- TO HIG/KG	1101104		<b>\10</b>		<b>\10</b>	<b>\10</b>	
TPH >C12-C16	<10 mg/kg	TM154		<10		<10	<10	
TPH >C16-C21	<10 mg/kg	TM154		12.8		<10	<10	
TPH >C21-C40	<10 mg/kg	TM154		134		69.4	101	
TPH >C6-C40	<10 mg/kg	TM154		151		78.6	106	
Arsenic	<0.6 mg/kg	TM181	12.1	9.65	32.5	7.15	5.77	
			M	М	М	М	M	
Cadmium	<0.02 mg/kg	TM181	0.0948 <b>M</b>	0.384 <b>M</b>	<0.2	<0.02 <b>M</b>	0.1 <b>M</b>	
Chromium	<0.9 mg/kg	TM181	38.3	56.7	<9	32.6	29.7	
Copper	<1.4 mg/kg	TM181	<b>M</b> 24.1	M 36.5	42.7	M 11.1	27.3	
			M	М	М	М	M	
Lead	<0.7 mg/kg	TM181	18.2 <b>M</b>	29.1 <b>M</b>	<7	13.5 <b>M</b>	15.4 <b>M</b>	
Mercury	<0.14	TM181	<0.14	<0.14	<1.4	<0.14	<0.14	
Nickel	mg/kg <0.2 mg/kg	TM181	<b>M</b> 29.3	M 44.4	61.2	<b>M</b> 20.9	21.6	
			M	M	M	. M	M	
Selenium	<1 mg/kg	TM181	<1 #	1.32	<10 #	<1 #	1.21	
Zinc	<1.9 mg/kg	TM181	92.7	149	56.9	81.1	41	
Boron, water soluble	<1 mg/kg	TM222	<b>M</b> 1.49	<b>M</b> <1	1.86	<b>M</b> <1	2.08	
•			M	M		M	M	

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Loca	uon:	KL050 D	SDC RICE	SIEI	Rep	ort No: 917	20	
ДΔΗ	by GCMS							
FAII	Results Legend	Customer	Sample Ref.	WCDO				
	ISO17025 accredited.	Customer	Jampie Kei.	WSD9				
	mCERTS accredited. Aqueous / settled sample.		Depth (m)	3.80 - 4.00				
diss.filt	Dissolved / filtered sample.	S	ample Type	Soil/Solid				
tot.unfilt	Total / unfiltered sample. subcontracted test.		ate Sampled	15/07/2010				
	% recovery of the surrogate	Da	te Received	17/07/2010				
	standard to check the efficiency		SDG Ref	100719-9				
	of the method. The results of the individual compounds within	Lab Sa	ample No.(s)	1836218				
	the samples are not corrected							
Compo	for this recovery.	LOD/Units	Method					
	alene-d8 %	%	TM218	105				
recover		/0	1101210	100				
	ohthene-d10 %	%	TM218	102				
recove				-				
	nthrene-d10 %	%	TM218	104				
recove								
Chryse	ne-d12 % recovery**	%	TM218	88.7				
D	140.0/	0/	T14040	04.0				
Peryler	ne-d12 % recovery**	%	TM218	94.8				
Manhth	olono	<0.000	TM210	<0.000				
Naphth	iaiciic	<0.009 mg/kg	TM218	<0.009 <b>M</b>				
Acenar	ohthylene	<0.012	TM218	<0.012				
oonap	,	mg/kg		~0.012 <b>M</b>				
Acenar	ohthene	<0.008	TM218	<0.008				
		mg/kg		М				
Fluorer	ne	<0.01	TM218	<0.01				
		mg/kg		M				
Phenar	nthrene	<0.015	TM218	<0.015				
•		mg/kg	T. 10	M				
Anthra	cene	<0.016	TM218	<0.016				
Fluorar	othene	mg/kg <0.017	TM218	<b>M</b> <0.017				
Fluorar	itnene	<0.017 mg/kg	1101218	<0.017 <b>M</b>				
Pyrene		<0.015	TM218	<0.015				
i yiciic		mg/kg	1101210	10.015 M				
Benz(a	)anthracene	<0.014	TM218	<0.014				
	,	mg/kg		М				
Chryse	ne	<0.01	TM218	<0.01				
		mg/kg		М				
Benzo(	b)fluoranthene	<0.015	TM218	<0.015				
		mg/kg		М				
Benzo(	k)fluoranthene	<0.014	TM218	<0.014				
D		mg/kg	T14040	M				
Benzo(	a)pyrene	<0.015	TM218	<0.015				
Indeno	(1,2,3-cd)pyrene	mg/kg <0.018	TM218	<b>M</b> <0.018				
macmo	(1,2,5-ca)pyrcric	mg/kg	1101210	10.010 M				
Dibenz	o(a,h)anthracene	<0.023	TM218	<0.023				
	. (., ,	mg/kg		М				
Benzo(	g,h,i)perylene	<0.024	TM218	<0.024				
		mg/kg		М				
	omatic hydrocarbons,	<0.118	TM218	<0.118				
Total U	ISEPA 16	mg/kg		М				
								-
								1

# **ALcontrol Laboratories Analytical Services**

SDG:

100719-9 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester Customer: Entec UK Ltd Steve Dooley Attention:

Order No.:

Semi	Volatile Organic	Compou	nds	
#	Results Legend ISO17025 accredited.		Sample Ref.	WSD9
M	mCERTS accredited. Aqueous / settled sample.		Depth (m)	3.80 - 4.00
diss.filt	Dissolved / filtered sample. Total / unfiltered sample.		ample Type ate Sampled	Soil/Solid
**	subcontracted test. % recovery of the surrogate	Da	te Received	15/07/2010 17/07/2010
	standard to check the efficiency of the method. The results of the		SDG Ref ample No.(s)	100719-9 1836218
	individual compounds within the samples are not corrected for this recovery.			1000210
Compo	nent	LOD/Units	Method	
Phenol		<0.1 mg/kg	TM157	<0.1
Pentac	chlorophenol	<0.1 mg/kg	TM157	<0.1
n-Nitro	so-n-dipropylamine	<0.1 mg/kg	TM157	<0.1
Nitrobe	enzene	<0.1 mg/kg	TM157	<0.1
Isopho	rone	<0.1 mg/kg	TM157	<0.1
Hexach	hloroethane	<0.1 mg/kg	TM157	<0.1
Hexacl	hlorocyclopentadiene	<0.1 mg/kg	TM157	<0.1
Hexacl	hlorobutadiene	<0.1 mg/kg	TM157	<0.1
	hlorobenzene	<0.1 mg/kg	TM157	<0.1
n-Dioci	tyl phthalate	<0.1 mg/kg	TM157	<0.1
Dimeth	nyl phthalate	<0.1 mg/kg	TM157	<0.1
Diethyl	phthalate	<0.1 mg/kg	TM157	<0.1
n-Dibut	tyl phthalate	<0.1 mg/kg	TM157	<0.1
Dibenz	ofuran	<0.1 mg/kg	TM157	<0.1
Carbaz	zole	<0.1 mg/kg	TM157	<0.1
Butylbe	enzyl phthalate	<0.1 mg/kg	TM157	<0.1
bis(2-E	thylhexyl) phthalate	<0.1 mg/kg	TM157	<0.1
	Chloroethoxy)methane	<0.1 mg/kg	TM157	<0.1
bis(2-C	Chloroethyl)ether	<0.1 mg/kg	TM157	<0.1
Azober	nzene	<0.1 mg/kg	TM157	<0.1
4-Nitro	phenol	<0.1 mg/kg	TM157	<0.1
4-Nitro	aniline	<0.1 mg/kg	TM157	<0.1
4-Meth	ylphenol	<0.1 mg/kg	TM157	<0.1
4-Chlo	rophenylphenylether	<0.1 mg/kg	TM157	<0.1
4-Chlo	roaniline	<0.1 mg/kg	TM157	<0.1
4-Chlo	ro-3-methylphenol	<0.1 mg/kg	TM157	<0.1
	nophenylphenylether	<0.1 mg/kg	TM157	<0.1
3-Nitro		<0.1 mg/kg	TM157	<0.1
2-Nitro		<0.1 mg/kg	TM157	<0.1
2-Nitro	aniline	<0.1 mg/kg	TM157	<0.1
2-Meth	ylphenol	<0.1 mg/kg	TM157	<0.1
1,2,4-T	richlorobenzene	<0.1 mg/kg	TM157	<0.1
2-Chlor	rophenol	<0.1 mg/kg	TM157	<0.1
2,6-Din	nitrotoluene	<0.1 mg/kg	TM157	<0.1
	nitrotoluene	<0.1 mg/kg	TM157	<0.1
	methylphenol	<0.1 mg/kg	TM157	<0.1
2,4-Dic	chlorophenol	<0.1 mg/kg	TM157	<0.1
2,4,6-T	richlorophenol	<0.1 mg/kg	TM157	<0.1
2,4,5-T	richlorophenol	<0.1 mg/kg	TM157	<0.1

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Semi	Volatile Organic	Compou	nds	
	Results Legend	Customer	Sample Ref.	WSD9
М	ISO17025 accredited.  mCERTS accredited.		Depth (m)	3.80 - 4.00
diss.filt	Aqueous / settled sample. Dissolved / filtered sample.		ample Type	Soil/Solid
*	Total / unfiltered sample. subcontracted test.		ate Sampled ite Received	15/07/2010
	% recovery of the surrogate standard to check the efficiency		SDG Ref	17/07/2010 100719-9
	of the method. The results of the individual compounds within the samples are not corrected	Lab Sa	ample No.(s)	1836218
	for this recovery.	100///	Method	
Compo 1,4-Dic	chlorobenzene	LOD/Units <0.1 mg/kg	TM157	<0.1
1.3-Dic	chlorobenzene	<0.1 mg/kg	TM157	<0.1
1,2-DIC	chlorobenzene	<0.1 mg/kg	TM157	<0.1
2-Chlor	ronaphthalene	<0.1 mg/kg	TM157	<0.1
2-Meth	ylnaphthalene	<0.1 mg/kg	TM157	<0.1
Acenar	ohthylene	<0.1 mg/kg	TM157	<0.1
Acenar	ohthene	<0.1 mg/kg	TM157	<0.1
Anthra		<0.1 mg/kg	TM157	<0.1
Benzo(	(a)anthracene	<0.1 mg/kg	TM157	<0.1
Benzo(	(b)fluoranthene	<0.1 mg/kg	TM157	<0.1
Benzo(	(k)fluoranthene	<0.1 mg/kg	TM157	<0.1
Benzo(	(a)pyrene	<0.1 mg/kg	TM157	<0.1
	(g,h,i)perylene	<0.1 mg/kg	TM157	<0.1
Chryse	ene	<0.1 mg/kg	TM157	<0.1
Fluorar	nthene	<0.1 mg/kg	TM157	<0.1
Fluorer	ne	<0.1 mg/kg	TM157	<0.1
Indeno	(1,2,3-cd)pyrene	<0.1 mg/kg	TM157	<0.1
Phenar	nthrene	<0.1 mg/kg	TM157	<0.1
Pyrene		<0.1 mg/kg	TM157	<0.1
Naphth	nalene	<0.1 mg/kg	TM157	<0.1
Dibenz	o(a,h)anthracene	<0.1 mg/kg	TM157	<0.1

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

TPH CWG (S)										
Results Legend	Customer	Sample Ref.	WSD9							
# ISO17025 accredited.  M mCERTS accredited.		5 (1 ( )								
aq Aqueous / settled sample. diss.filt Dissolved / filtered sample.	s	Depth (m) sample Type	3.80 - 4.00 Soil/Solid							
tot.unfilt Total / unfiltered sample.  * subcontracted test.	Da	ate Sampled	15/07/2010							
** % recovery of the surrogate standard to check the efficiency		te Received	17/07/2010							
of the method. The results of th		SDG Ref ample No.(s)	100719-9 1836218							
individual compounds within the samples are not corrected		(.,	1000210							
for this recovery.  Component	LOD/Units	Method								
GRO Surrogate %	%	TM089	45							
recovery** GRO >C5-C12	<0.044	TM089	0.238							
GRO 203-012	mg/kg	TIVIOOS	0.236							
Benzene	<0.01	TM089	<0.01							
Ethylbenzene	mg/kg <0.003	TM089	<0.003							
Til	mg/kg	T14000	M							
Toluene	<0.002 mg/kg	TM089	<0.002 <b>M</b>							
m,p-Xylene	<0.006	TM089	<0.006							
o-Xylene	mg/kg <0.003	TM089	<0.003							
	mg/kg		М							
m,p,o-Xylene	<0.01	TM089	<0.01 <b>M</b>							
BTEX, Total	mg/kg <0.01	TM089	<0.01							
	mg/kg		M							
Methyl tertiary butyl ether (MTBE)	<0.005 mg/kg	TM089	<0.005 #							
Aliphatics >C5-C6	<0.01	TM089	0.0199							
Aliphatics >C6-C8	mg/kg <0.01	TM089	0.0745							
Aliphatics - 00-00	mg/kg	110000	0.0743							
Aliphatics >C8-C10	<0.01	TM089	0.0177							
Aliphatics >C10-C12	mg/kg <0.01	TM089	0.0362							
	mg/kg									
Aromatics >C6-C7	<0.01 mg/kg	TM089	<0.01							
Aromatics >C7-C8	<0.01	TM089	<0.01							
Aromatics >EC8-EC10	mg/kg <0.01	TM089	0.0266							
Alomatics > Loo-Lo to	mg/kg	110000	0.0200							
Aromatics >EC10-EC12	<0.01	TM089	0.0543							
Total Aliphatics >C5-C12	mg/kg <0.01	TM089	0.148							
	mg/kg									
Total Aromatics >C6-C12	<0.01 mg/kg	TM089	0.0809							
Aliphatics >C12-C16	<0.1 mg/kg	TM173	4.99							
Aliphatics >C16-C21	<0.1 mg/kg	TM173	2.69							
Aliphatics 2010-021		TIVITA	2.09							
Aliphatics >C16-C35	<0.1 mg/kg	TM173	12							
Aliphatics >C21-C35	<0.1 mg/kg	TM173	9.31							
Aliphatics >C35-C44	<0.1 mg/kg	TM173	<0.1							
Aromatics >EC12-EC16	<0.1 mg/kg	TM173	2.83							
Aromatics >EC16-EC21	<0.1 mg/kg	TM173	4.83							
Aromatics >EC21-EC35	<0.1 mg/kg	TM173	14.1							
Aromatics >EC35-EC44	<0.1 mg/kg	TM173	8.06							
Aromatics >EC40-EC44	<0.1 mg/kg	TM173	3.27							
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173	17							
Total Aromatics	<0.1 mg/kg	TM173	29.9							
>EC12-EC44										
Total Aliphatics >C5-35	<0.1 mg/kg	TM173	17.1							
Total Aliphatics >C5-C44	<0.1 mg/kg	TM173	17.1							
· ·										
Total Aromatics >C5-35	<0.1 mg/kg	TM173	21.9							
Total Aromatics >C6-C44	<0.1 mg/kg	TM173	29.9							
Total Aliphatics & Aromatics	<0.1 mg/kg	TM173	39							
>C5-35										
Total Aliphatics & Aromatics >C5-C44	<0.1 mg/kg	TM173	47.1							
<b>~∪∪-∪44</b>										

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

VOC	MS (S)						
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	WSD9			
М	mCERTS accredited.		Depth (m)	3.80 - 4.00			
	Aqueous / settled sample.  Dissolved / filtered sample.		ample Type	Soil/Solid			
*	Total / unfiltered sample. subcontracted test.		ate Sampled	15/07/2010			
**	% recovery of the surrogate standard to check the efficiency	Da	te Received SDG Ref	17/07/2010 100719-9			
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1836218			
	the samples are not corrected for this recovery.						
Compo	nent	LOD/Units	Method				
Dibrom	ofluoromethane**	%	TM116	97.7			
Toluen	e-d8**	%	TM116	93.6			
4-Brom	ofluorobenzene**	%	TM116	142			
Dichlor	odifluoromethane	<0.004	TM116	<0.004			
Chloro	methane	mg/kg <0.007	TM116	<b>M</b> <0.007			
Vinyl C	hloride	mg/kg <0.01	TM116	<b>*</b>			
Bromo	nethane	mg/kg <0.013	TM116	<b>*</b>			
		mg/kg		М			
Chloro		<0.014 mg/kg	TM116	<0.014 <b>M</b>			
Trichlo	rofluorormethane	<0.006 mg/kg	TM116	<0.006 <b>M</b>			
1.1-Dic	hloroethene	<0.01 mg/kg	TM116	<0.01			
Carbor	Disulphide	<0.007 mg/kg	TM116	<0.007 <b>M</b>			
Dichlor	omethane	<0.01	TM116	<0.01 #			
Methyl	Tertiary Butyl Ether	mg/kg <0.011	TM116	<0.011			
trans-1	-2-Dichloroethene	mg/kg <0.011	TM116	<b>M</b> <0.011			
1.1-Dic	hloroethane	mg/kg <0.008	TM116	<b>M</b> <0.008			
cis-1-2	-Dichloroethene	mg/kg <0.005	TM116	<b>M</b> <0.005			
2.2-Dic	hloropropane	mg/kg <0.012	TM116	<b>M</b> <0.012			
	chloromethane	mg/kg <0.014	TM116	<b>M</b> <0.014			
Chloro		mg/kg <0.008	TM116	<0.008			
		mg/kg		М			
	richloroethane	<0.007 mg/kg	TM116	<0.007 <b>M</b>			
	hloropropene	<0.011 mg/kg	TM116	<0.011 <b>M</b>			
Carbor	tetrachloride	<0.014 mg/kg	TM116	<0.014 <b>M</b>			
1.2-Dic	hloroethane	<0.005 mg/kg	TM116	<0.005 <b>M</b>			
Benzer	ne	<0.009 mg/kg	TM116	<0.009 <b>M</b>			
Trichlo	roethene	<0.009	TM116	0.0768 <b>M</b>			
1.2-Dic	hloropropane	mg/kg <0.012	TM116	<0.012			
Dibrom	omethane	mg/kg <0.009	TM116	<0.009			
Bromo	dichloromethane	mg/kg <0.007	TM116	<0.007			
cis-1-2	-Dichloropropene	mg/kg <0.014	TM116	<b>M</b> <0.014			
		mg/kg		М			
Toluen		<0.005 mg/kg	TM116	<0.005 <b>M</b>			
	-3-Dichloropropene	<0.014 mg/kg	TM116	<0.014			
	richloroethane	<0.01 mg/kg	TM116	<0.01 <b>M</b>			
1.3-Dic	hloropropane	<0.007 mg/kg	TM116	<0.007 #			
Tetrach	nloroethene	<0.005 mg/kg	TM116	<0.005 <b>M</b>			
Dibrom	ochloromethane	<0.013 mg/kg	TM116	<0.013			
1.2-Dib	romoethane	<0.012	TM116	<0.012			
Chorob	enzene	mg/kg <0.005	TM116	<0.005			
1.1.1.2	-Tetrachloroethane	mg/kg <0.01	TM116	<0.01			
Ethylbe	enzene	mg/kg <0.004	TM116	<b>M</b> <0.004			
		mg/kg		М			

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

VOC	MS (S)			
	Results Legend	Customer	Sample Ref.	WSD9
М	ISO17025 accredited. mCERTS accredited.		Depth (m)	3 90 4 00
diss.filt	Aqueous / settled sample. Dissolved / filtered sample.		ample Type	3.80 - 4.00 Soil/Solid
*	Total / unfiltered sample. subcontracted test.		ate Sampled	15/07/2010
	% recovery of the surrogate standard to check the efficiency		te Received SDG Ref	17/07/2010 100719-9
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1836218
	the samples are not corrected for this recovery.			
p/m-Xyl		<0.014	Method TM116	<0.014
		mg/kg		#
o-Xylen	ne	<0.01 mg/kg	TM116	<0.01 <b>M</b>
Styrene	•	<0.01	TM116	<0.01
Bromof	orm	mg/kg <0.01	TM116	<b>M</b> <0.01
Isoprop	ylbenzene	mg/kg <0.005	TM116	<0.005
		mg/kg		М
1.1.2.2-	-Tetrachloroethane	<0.01 mg/kg	TM116	<0.01 #
1.2.3-Tı	richloropropane	<0.017	TM116	<0.017 <b>M</b>
Bromob	penzene	mg/kg <0.01	TM116	<0.01
Propylb	penzene	mg/kg <0.011	TM116	<b>M</b> <0.011
		mg/kg		М
2-Chlor	rotoluene	<0.009 mg/kg	TM116	<0.009 <b>M</b>
1.3.5-Tı	rimethylbenzene	<0.008	TM116	<0.008
4-Chlor	otoluene	mg/kg <0.012	TM116	<0.012
tert-But	ylbenzene	mg/kg <0.012	TM116	<b>M</b> <0.012
		mg/kg		#
1.2.4-Ti	rimethylbenzene	<0.009 mg/kg	TM116	<0.009 #
sec-But	tylbenzene	<0.01	TM116	<0.01
4-Isopro	opyltoluene	mg/kg <0.011	TM116	<b>M</b> <0.011
1 3-Dic	hlorobenzene	mg/kg <0.006	TM116	<0.006
		mg/kg		М
1.4-Dicl	hlorobenzene	<0.005 mg/kg	TM116	<0.005 <b>M</b>
n-Butyll	benzene	<0.01	TM116	<0.01
1.2-Dicl	hlorobenzene	mg/kg <0.012	TM116	<b>M</b> <0.012
1.2 Dib	romo-3-chloropropan	mg/kg <0.014	TM116	<b>M</b> <0.014
е		mg/kg		М
Tert-am	nyl methyl ether	<0.015 mg/kg	TM116	<0.015
1.2.4-Tı	richlorobenzene	<0.006	TM116	<0.006
Hexach	lorobutadiene	mg/kg <0.012	TM116	<b>*</b>
Naphth	alene	mg/kg <0.013	TM116	<b>M</b> <0.013
		mg/kg		М
1.2.3-Tı	richlorobenzene	<0.006 mg/kg	TM116	<0.006 <b>M</b>
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### **ALcontrol Laboratories Analytical Services**

100719-9 SDG:

H\_ENTEC\_SHW-24 Job:

**Client Reference:** Location:

26999

KL056 DSDC Bicester

**Customer:** Attention:

Entec UK Ltd Steve Dooley

Order No.: **Report No:** 

91728

### **ASSOCIATED AQC DATA**

### Ammonium Soil by Titration

Component	Method Code	QC 10	QC 17
Exchangeable	TM024	<b>89.60</b>	<b>90.50</b>
Ammonium as NH4		80.84 : 103.27	80.84 : 103.27

#### **Boron Water Soluble**

Component	Method Code	QC 19	QC 14	QC 13
Water Soluble Boron	TM222	<b>99.80</b> 82.59 : 112.64	<b>94.70</b> 82.59 : 112.64	<b>103.85</b> 82.59 : 112.64

### EPH CWG (Aliphatic) GC (S)

Component	Method Code	QC 14	QC 18	QC 12
Total Aliphatics >C12-C35	TM173	<b>75.74</b> 55.20 : 114.58	<b>80.45</b> 58.96 : 117.71	<b>74.07</b> 55.20 : 114.58

#### EPH CWG (Aromatic) GC (S)

Component	Method Code	QC 14	QC 18	QC 12
Total Aromatics >EC12-EC35	TM173	<b>73.49</b> 54.00 : 123.00	<b>89.70</b> 58.79 : 118.66	<b>89.90</b> 54.00 : 123.00

#### Hexavalent Chromium (s)

Component	Method Code	QC 15	QC 16	QC 19
Hexavalent Chromium	TM151	105.60	103.00	103.00
		76.40 : 131.80	76.40 : 131.80	76.40 : 131.80

### Metals by iCap-OES (Soil)

Component	Method Code	QC 16	QC 10	QC 14	QC 17
Aluminium	TM181	<b>109.18</b> 95.21 : 133.11	<b>112.69</b> 95.21 : 133.11	<b>115.22</b> 95.21 : 133.11	<b>109.28</b> 95.21 : 133.11
Antimony	TM181	<b>92.46</b> 63.92 : 138.56	<b>108.62</b> 63.92 : 138.56	<b>106.67</b> 63.92 : 138.56	<b>105.13</b> 63.92 : 138.56
Arsenic	TM181	<b>97.67</b> 77.96 : 122.04	<b>97.76</b> 77.96 : 122.04	<b>102.67</b> 77.96 : 122.04	<b>99.57</b> 77.96 : 122.04
Barium	TM181	<b>104.94</b> 90.49 : 117.24	<b>102.20</b> 90.49 : 117.24	<b>109.15</b> 90.49 : 117.24	<b>104.06</b> 90.49 : 117.24
Beryllium	TM181	<b>93.94</b> 77.50 : 122.50	<b>108.26</b> 77.50 : 122.50	<b>107.16</b> 77.50 : 122.50	<b>105.23</b> 77.50 : 122.50
Boron	TM181	<b>106.54</b> 82.46 : 141.11	<b>114.68</b> 82.46 : 141.11	<b>112.26</b> 82.46 : 141.11	<b>108.95</b> 82.46 : 141.11

### **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

**Customer:** Entec UK Ltd **Attention:** Steve Dooley

Order No.:

Report No: 91728

		QC 16	QC 10	QC 14	QC 17
Cadmium	TM181	<b>92.21</b> 77.50 : 122.50	<b>105.71</b> 77.50 : 122.50	<b>106.33</b> 77.50 : 122.50	<b>102.65</b> 77.50 : 122.50
Chromium	TM181	<b>96.95</b> 82.90 : 117.10	<b>97.57</b> 82.90 : 117.10	<b>100.91</b> 82.90 : 117.10	<b>97.23</b> 82.90 : 117.10
Cobalt	TM181	<b>94.76</b> 78.26 : 121.74	<b>107.64</b> 78.26 : 121.74	<b>103.37</b> 78.26 : 121.74	<b>103.64</b> 78.26 : 121.74
Copper	TM181	<b>99.54</b> 86.52 : 113.48	<b>101.26</b> 86.52 : 113.48	<b>105.41</b> 86.52 : 113.48	<b>101.50</b> 86.52 : 113.48
Iron	TM181	<b>102.77</b> 93.59 : 123.28	<b>99.70</b> 93.59 : 123.28	<b>106.75</b> 93.59 : 123.28	<b>103.77</b> 93.59 : 123.28
Lead	TM181	<b>97.67</b> 81.22 : 118.78	<b>98.00</b> 81.22 : 118.78	<b>106.27</b> 81.22 : 118.78	<b>104.10</b> 81.22 : 118.78
Manganese	TM181	<b>96.45</b> 87.42 : 112.58	<b>97.83</b> 87.42 : 112.58	<b>101.27</b> 87.42 : 112.58	<b>104.28</b> 87.42 : 112.58
Mercury	TM181	<b>99.30</b> 72.27 : 127.73	<b>108.17</b> 72.27 : 127.73	<b>109.23</b> 72.27 : 127.73	<b>106.85</b> 72.27 : 127.73
Molybdenum	TM181	<b>91.51</b> 71.12 : 128.88	<b>105.63</b> 71.12 : 128.88	<b>103.41</b> 71.12 : 128.88	<b>100.49</b> 71.12 : 128.88
Nickel	TM181	<b>97.18</b> 81.27 : 118.73	<b>95.73</b> 81.27 : 118.73	<b>99.85</b> 81.27 : 118.73	<b>99.47</b> 81.27 : 118.73
Phosphorus	TM181	<b>107.04</b> 84.04 : 115.96	<b>98.65</b> 84.04 : 115.96	<b>106.68</b> 84.04 : 115.96	<b>106.59</b> 84.04 : 115.96
Selenium	TM181	<b>97.89</b> 72.61 : 127.39	<b>111.79</b> 72.61 : 127.39	<b>105.54</b> 72.61 : 127.39	<b>107.06</b> 72.61 : 127.39
Strontium	TM181	<b>97.01</b> 80.21 : 119.79	<b>96.91</b> 80.21 : 119.79	<b>101.98</b> 80.21 : 119.79	<b>101.88</b> 80.21 : 119.79
Thallium	TM181	<b>90.24</b> 73.04 : 126.96	<b>26.62</b> 73.04 : 126.96	<b>100.36</b> 73.04 : 126.96	<b>97.62</b> 73.04 : 126.96
Tin	TM181	<b>90.60</b> 71.55 : 128.45	<b>110.27</b> 71.55 : 128.45	<b>104.13</b> 71.55 : 128.45	<b>100.10</b> 71.55 : 128.45
Titanium	TM181	<b>100.93</b> 78.26 : 121.74	<b>103.82</b> 78.26 : 121.74	<b>102.91</b> 78.26 : 121.74	<b>104.99</b> 78.26 : 121.74
Vanadium	TM181	<b>99.45</b> 82.03 : 117.97	<b>99.18</b> 82.03 : 117.97	<b>106.05</b> 82.03 : 117.97	<b>100.94</b> 82.03 : 117.97
Zinc	TM181	<b>91.41</b> 77.50 : 122.50	<b>93.65</b> 77.50 : 122.50	<b>96.38</b> 77.50 : 122.50	<b>93.53</b> 77.50 : 122.50

### PAH by GCMS

Component	Method Code	QC 18	QC 13
Acenaphthene	TM218	<b>101.77</b> 68.10 : 128.67	<b>99.12</b> 71.41 : 116.50
Acenaphthylene	TM218	<b>93.72</b> 68.11 : 109.28	<b>88.58</b> 74.28 : 102.70
Anthracene	TM218	<b>95.97</b> 61.75 : 122.01	<b>93.36</b> 67.40 : 117.21
Benz(a)anthracene	TM218	<b>100.80</b> 79.35 : 115.30	<b>104.79</b> 66.80 : 125.05
Benzo(a)pyrene	TM218	<b>103.07</b> 79.80 : 116.48	<b>107.96</b> 69.15 : 119.77
Benzo(b)fluoranthene	TM218	<b>103.98</b> 79.51 : 116.19	<b>106.72</b> 70.01 : 124.88
Benzo(ghi)perylene	TM218	<b>100.82</b> 80.08 : 114.22	<b>101.42</b> 81.23 : 116.67
Benzo(k)fluoranthene	TM218	<b>101.42</b> 65.05 : 129.07	<b>99.63</b> 71.46 : 117.67

### **ALcontrol Laboratories Analytical Services**

100719-9 SDG:

H\_ENTEC\_SHW-24 Job:

**Client Reference:** 26999

KL056 DSDC Bicester Location:

Customer: Attention:

Entec UK Ltd Steve Dooley

Order No.: Report No:

91728

		QC 18	QC 13
Chrysene	TM218	<b>100.97</b> 80.14 : 113.92	<b>99.82</b> 71.32 : 130.95
Dibenzo(ah)anthracene	TM218	<b>100.16</b> 59.79 : 136.56	<b>103.52</b> 81.17 : 118.65
Fluoranthene	TM218	<b>98.87</b> 74.35 : 115.70	<b>98.01</b> 69.52 : 118.84
Fluorene	TM218	<b>99.43</b> 75.68 : 111.55	<b>98.40</b> 71.38 : 111.04
Indeno(123cd)pyrene	TM218	<b>102.48</b> 74.42 : 114.62	<b>103.93</b> 80.81 : 118.96
Naphthalene	TM218	<b>99.74</b> 73.21 : 108.15	<b>96.79</b> 81.16 : 104.84
Phenanthrene	TM218	<b>100.24</b> 66.61 : 129.12	<b>99.05</b> 69.56 : 121.45
Pyrene	TM218	<b>97.66</b> 74.35 : 111.75	<b>97.27</b> 70.34 : 117.79

### PCBs (vs Aroclor 1254)

Component	Method Code	QC 16
PCBs (vs Aroclor 1254)	TM070	<b>102.84</b> 75.18 : 122.16

### рΗ

Component	Method Code	QC 17	QC 18	QC 15	QC 13
рН	TM133	<b>100.75</b> 97.90 : 102.35	<b>98.75</b> 97.42 : 102.50	<b>100.13</b> 97.90 : 102.35	<b>99.87</b> 97.90 : 102.35

### Semi Volatile Organic Compounds

Component	Method Code	QC 17	QC 11
4-Bromophenylphenyleth er (Soil)	TM157	<b>98.08</b> 28.30 : 143.78	<b>94.28</b> 12.25 : 162.08
Benzo(a)anthracene (Soil)	TM157	<b>103.15</b> 18.50 : 151.06	<b>98.45</b> 38.70 : 146.05
Hexachlorobutadiene (Soil)	TM157	<b>97.13</b> 31.16 : 138.34	<b>95.46</b> 17.33 : 157.33
Naphthalene (Soil)	TM157	<b>99.82</b> 26.59 : 145.57	<b>96.09</b> 17.33 : 157.33
Nitrobenzene (Soil)	TM157	<b>98.07</b> 25.35 : 142.64	<b>93.63</b> 19.50 : 154.53
Phenol (Soil)	TM157	<b>94.88</b> 28.59 : 134.35	<b>95.35</b> 23.40 : 144.15

### Total Organic Carbon

Component	Method Code	QC 15	QC 12
Total Organic Carbon	TM132	<b>94.81</b> 88.75 : 104.70	<b>100.53</b> 88.75 : 104.70

## **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Report No: 91728

#### TPH c6-40 Value of soil

Component	Method Code	QC 14
Diesel QC	TM154	<b>98.42</b> 87.23 : 113.71
Lube Oil QC	TM154	<b>103.20</b> 88.71 : 110.56
TPH C6-40 Corrected	TM154	<b>100.81</b> 86.39 : 109.99

### VOC MS (S)

Component	Method Code	QC 14
1,1,1,2-tetrachloroethane	TM116	<b>102.02</b> 68.18 : 144.88
1,1,1-Trichloroethane	TM116	<b>107.54</b> 67.21 : 142.82
1,1,2-Trichloroethane	TM116	<b>116.93</b> 75.40 : 160.23
1,1-Dichloroethene	TM116	101.50
1,2-Dichloroethane	TM116	<b>124.72</b> 72.96 : 155.03
1,4-Dichlorobenzene	TM116	<b>104.13</b> 72.36 : 153.77
2-Chlorotoluene	TM116	<b>126.50</b> 83.36 : 177.15
4-Chlorotoluene	TM116	<b>121.55</b> 84.28 : 179.10
Benzene	TM116	<b>107.50</b> 69.92 : 148.58
Carbon Disulphide	TM116	<b>91.40</b> 63.87 : 135.73
Carbontetrachloride	TM116	<b>113.76</b> 73.39 : 155.95
Chlorobenzene	TM116	<b>99.76</b> 69.59 : 147.89
Chloroform	TM116	<b>112.78</b> 70.48 : 149.78
Chloromethane	TM116	<b>128.96</b> 75.88 : 161.25
Cis-1,2-Dichloroethene	TM116	<b>105.81</b> 65.49 : 139.18
Dibromomethane	TM116	<b>103.74</b> 65.97 : 140.19
Dichloromethane	TM116	<b>119.23</b> 71.23 : 151.36
Ethylbenzene	TM116	<b>98.44</b> 68.41 : 145.37
Hexachlorobutadiene	TM116	<b>92.91</b> 85.39 : 181.46
Isopropylbenzene	TM116	<b>88.46</b> 58.18 : 123.62
Naphthalene	TM116	<b>99.43</b> 75.23 : 159.86

### **ALcontrol Laboratories Analytical Services**

**SDG**: 100719-9

Job: H ENTEC SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd
Attention: Steve Dooley

Order No.:

Report No: 91728

		QC 14
o-Xylene	TM116	<b>103.22</b> 65.38 : 138.92
p/m-Xylene	TM116	<b>98.01</b> 68.19 : 144.91
Sec-Butylbenzene	TM116	<b>92.66</b> 66.07 : 140.41
Tetrachloroethene	TM116	<b>100.39</b> 72.85 : 154.80
Toluene	TM116	<b>102.94</b> 67.17 : 142.75
Trichloroethene	TM116	<b>103.13</b> 68.75 : 146.10
Trichlorofluoromethane	TM116	<b>96.07</b> 62.67 : 133.18
Vinyl Chloride	TM116	<b>106.86</b> 67.16 : 142.72

#### Water Soluble Sulphate 2:1

Component	Method Code	QC 13	QC 12	QC 11	QC 10
Soluble SO4	TM098	<b>86.50</b> 76.87 : 120.45	<b>82.52</b> 76.87 : 120.45	<b>82.01</b> 76.87 : 120.45	<b>84.80</b> 76.87 : 120.45

The above information details the reference name of the analytical quality control sample (AQC) that has been run with the samples contained in this report for the different methods of analysis.

The figure detailed is the percentage recovery result for the AQC.

The subscript numbers below are the percentage recovery lower control limit (LCL) and the upper control limit (UCL). The percentage recovery result for the AQC should be between these limits to be statistically in control.

### **ALcontrol Laboratories Analytical Services**



### **Table of Results - Appendix**

SDG Number: 100719-9 Client: Entec UK Ltd Client Ref: 26999

R	EPOF	RT KEY			Results	expressed a	as (e.g.) 1.03E-07 is equivalent to 1.03x10-7
	NDP	No Determination Possible	#	ISO 17025 Accredited	Subcontracted Test	M	MCERTS Accredited
	NFD	No Fibres Detected	PFD	Possible Fibres Detected	Result previously reported (Incremental reports only)	EC	Equivalent Carbon (Aromatics C8-C35)

		(incremental reports only)	(Aromatics C8-C35)
Note: Method detection limits are	not always achievable due to various circumstances beyond	our control	
Method No	Reference	Description	Wet/Dry Sample <sup>1</sup>
PM001		Preparation of Samples for Metals Analysis	Dry
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material	Wet
TM001	In - house Method	Determination of asbestos containing material by screening on solids	
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids	Wet
TM070	Modified: US EPA Method 8250 & 625	Determination of Total Polychlorinated Biphenyls (PCBÆs) as Aroclor 1254 by GC-MS in Soils	Dry
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)	
TM098	Method 4500E, AWWA/APHA, 20th Ed., 1999	Determination of Sulphate using the Kone Analyser	Dry
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS	
TM132	In - house Method	ELTRA CS800 Operators Guide	Dry
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter	Wet
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser	Wet
TM154	In - house Method	Determination of Petroleum Hydrocarbons by EZ Flash GC-FID in the Carbon range C6- C40	Wet
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone	Wet
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID	Dry
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES	Dry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers	Dry
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546	Wet
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by	Dry

IRIS Emission Spectrometer

<sup>&</sup>lt;sup>1</sup> Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

### **APPENDIX**

#### **APPENDIX**

- Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following:
   NRA Leach tests, flash point, ammonium as NH<sub>4</sub> by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and
   TOF-MS TICS.
- 2. Samples will be run in duplicate upon request, but an additional charge may be incurred.
- 3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. Alcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.
- 4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
- 5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
- 6. When requested, the individual sub sample scheduled will be screened in house for the presence of large asbestos containing material fragments/pieces. If no asbestos containing material is found this will be reported as 'no asbestos containing material detected'. If asbestos containing material is detected it will be removed and analysed by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If asbestos containing material is present no further analysis will be undertaken. At no point is the fibre content of the soil sample determined.
- 7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.
- 8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.
- 9. NDP No determination possible due to insufficient/unsuitable sample.
- 10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals total metals must be requested separately.
- 11. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.
- 12. Results relate only to the items tested
- 13. **Surrogate recoveries** Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 130 %.
- Product analyses Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.
- 15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).
- 16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 14).
- 17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
- 18. Our MCERTS accreditation for PAHs by GCMS applies to all product types apart from Kerosene, where naphthalene only is not accredited.
- 19. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
- 19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.
- 20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
- 21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
- 22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
- 23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

### LIQUID MATRICES EXTRACTION SUMMARY

ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAH MS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GS MS
SVOC	DCM	LIQUID/LIQUID SHAKE	GC MS
FREE SULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST OCP/OPP	DCM	LIQUID/LIQUID SHAKE	GC MS
TRIAZINE HERBS	DCM	LIQUID/LIQUID SHAKE	GC MS
PHENOLS MS	DCM	SOLID PHASE EXTRACTION	GC MS
TPH by INFRA RED (IR)	TCE	LIQUID/LIQUID EXTRACTION	HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID EXTRACTION	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GC FID

#### **SOLID MATRICES EXTRACTION SUMMARY**

		WATRICES EXTRACTION SUMMART		
ANALYSIS	D/C OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
Solvent Extractable Matter	D&C	DCM	SOXTHERM	GRAVIMETRIC
Cyclohexane Ext. Matter	D&C	CYCLOHEXANE	SOXTHERM	GRAVIMETRIC
Thin Layer Chromatography	D&C	DCM	SOXTHERM	IATROSCAN
Elemental Sulphur	D&C	DCM	SOXTHERM	HPLC
Phenols by GCMS	WET	DCM	SOXTHERM	GC-MS
Herbicides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
Pesticides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
EPH (DRO)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Min oil)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Cleaned up)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH CWG by GC	D&C	HEXANE:ACETONE	END OVER END	GC-FID
PCB tot / PCB con	D&C	HEXANE:ACETONE	END OVER END	GC-MS
Polyaromatic Hydrocarbons (MS)	WET	HEXANE:ACETONE	Microwave TM218.	GC-MS
C8-C40 (C6-C40)EZ Flash	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Polyaromatic Hydrocarbons Rapid GC	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Semi Volatile Organic Compounds	WET	DCM:ACETONE	SONICATE	GC-MS

#### **Identification of Asbestos in Bulk Materials**

The results for asbestos identification for soil samples are obtained from possible Asbestos Containing Material, removed during the 'Screening of soils for Asbestos Containing Materials', which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

#### **Visual Estimation Of Fibre Content.**

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: -

Trace – Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in MDHS 100.

The identification of asbestos containing materials falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

#### 



Unit 7-8 Hawarden Business Park Manor Road (off Manor Lane) Hawarden

> Deeside CH5 3US

Tel: (01244) 528700 Fax: (01244) 528701 email: mkt@alcontrol.com Website: www.alcontrol.com

Entec UK Ltd Canon Court North Abbey Lawn Abbey Foregate Shrewsbury Shropshire SY2 5DE

Attention: Steve Dooley

#### **CERTIFICATE OF ANALYSIS**

 Date:
 26 July 2010

 Customer:
 H\_ENTEC\_SHW-24

Sample Delivery Group (SDG): 100721-18 Report No.: 91567

Your Reference: 26999

**Location:** KL056 DSDC Bicester

We received 9 samples on Wednesday July 21, 2010 and 8 of these samples were scheduled for analysis which was completed on Monday July 26, 2010. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Asbestos testing - we are not accredited for screening soil samples for asbestos fibres. We are only accredited to identify asbestos fibres in bulk material (ACM).

Approved By:



#### **Iain Swinton**

Operations Director - Land UK & Ireland



### **ALcontrol Laboratories Analytical Services**

 SDG:
 100721-18
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999

Location: KL056 DSDC Bicester Report No: 91567

### Received Sample Overview

Order No.:

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Sampled Date
1847612	HDPER3	0.20 - 0.30	16/07/2010
1847955	WSC04	0.40 - 0.60	19/07/2010
1847961	WSC04	2.00 - 2.20	19/07/2010
1847967	WSC05	0.40 - 0.60	19/07/2010
1847974	WSC06	0.60 - 0.80	19/07/2010
1847629	WSC07	0.45 - 0.60	19/07/2010
1847911	WSC07	2.90 - 3.20	19/07/2010
1847926	WSC08	0.40 - 0.70	19/07/2010
1847951	WSC08	2.50 - 2.80	19/07/2010

Only received samples which have had analysis scheduled will be shown on the following pages.

## **ALcontrol Laboratories Analytical Services**

Order No.:

 SDG:
 100721-18
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999

Location: KL056 DSDC Bicester Report No: 91567

### **SOLID**

Results Legend	Lab (	Sample No(s)		1847612		1847629	0	1847926	1847951		1847955		1847961		0	1847967	:	1847974	
No Determination Possible	Custo	Customer Sample Ref.				WSC07		WSC08	WSCO8		WSC04		WSC04			WSC05		WSC06	
	Γ	Depth (m)		0.20 - 0.30		0.45 - 0.60	_	0.40 - 0.70	2.50 - 2.80		0.40 - 0.60		2.00 - 2.20			0.40 - 0.60		0.60 - 0.80	Total
	(	Container	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	60g VOC	250g Amber Jar	400g Tub	
Ammonium Soil by Titration	All				Н		+	+	t	t				+		+			0
Asbestos Containing Material Screen	All			X	Н	X	1	X	×		X	Н	X	+	X	+	-	X	0
Boron Water Soluble	All			X	Н	H	$\exists$	+	+	+	H		Н	$\exists$	$\dashv$	$\dashv$		$\vdash$	0
EPH CWG (Aliphatic) GC (S)	All		X		X	Н	X	) 	<b>&lt;</b>	X		X	Н	X	$\dashv$	$\dashv$	X	Н	0
EPH CWG (Aromatic) GC (S)	All		H		Н	Н	+	+	+	+	┝	Н	Н	X	+	+	-	Н	0
GRO BTEX MTBE GC (S)	All		L	H	Н	Н	+	+	+	+	$\vdash$	Н	Н	X	+	+	-	Н	0
Hexavalent Chromium (s)	All				Н	Н	+	+	+	+	H	Н	Н	$\dashv$	-	X	-	Н	0
Metals by iCap-OES (Soil)	Ars	senic	L	X	Н	X	+	X	X	(	X	Н	X	$\dashv$	X	$\dashv$	-	X	8
	Ca	dmium	X		X	Н	X	)	<b>&lt;</b>	X		X	Н	X	4	4	X	Н	8
		romium	X		X	Ц	X	)	<b>&lt;</b>	X		X	Ц	X	4	4	X	Ц	8
			X		X		X	)	<b>&lt;</b>	X		X		X	_		X		0 8
	Со	pper	X		X		X	)	<b>&lt;</b>	X		X		X			X		0 8
	Lea	ad	X		X		X	)	<b>⟨</b>	X		X		X			X		0 8
	Ме	rcury	X		X		X	)	<b>(</b>	X		Х		X		٦	X		0 8
	Nic	kel	X		X	П	X	T	<	X	Т	X	П	X			X		0
	Se	lenium				П		T		T	Г	П	П		7	T		П	0
	Zin	С	X		X	П	X	T	<b>(</b>	X	Г	X	H	X	$\dashv$	+	X	Н	0
PAH by GCMS	All		X		X	H	X	7	<b>(</b>	X		X	H	X	+	+	X	$\parallel$	0
PCBs (vs Aroclor 1254)	All				H	Н	+	+	+	+	$\vdash$	Н	H	X	+	+	-	H	0
pH	All				H	H	+	+	+	+	t	Н		X	$\frac{1}{2}$	+			0
Sample description	All			X	Н	X	T	X	×	T	X	П	X	$\dashv$	X	+	-	X	8
Semi Volatile Organic Compounds	All		X		X	H	X	)	<b>&lt;</b>	X		X	Н	X	+	+	X	$\parallel$	8
Total Organic Carbon	All			H	Н	Ц	4	+	+	+	H	Н	Н	X	+	$\downarrow$	_	Ц	1 0
					Ц	Ц	4	)	<b>&lt;</b>	X		Ц	Ц	X	4	4		Ц	3
TPH c6-40 Value of soil	All		X		X			)	<b>&lt;</b>	X		X					X		0 6

## **ALcontrol Laboratories Analytical Services**

Order No.:

 SDG:
 100721-18
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999

Location: KL056 DSDC Bicester Report No: 91567

			1847612	184/629		1847926	1077001	1877051	1847955		1847961		;	1847967		1847974		
			HDPER3	WSCOZ		WSC08		WSCOR	WSC04		WSC04			WSC05		WSC06		
			0.20 - 0.30	0.45 - 0.60	200	0.40 - 0.70		2.50 - 2.80	0.40 - 0.60		2.00 - 2.20			0.40 - 0.60		0.60 - 0.80	i ca	Total
		250g Amber Jar	400g Tub	250g Amber Jar	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	400g Tub 250g Amber Jar	250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	60g VOC	250g Amber Jar	400g Tub		
TPH CWG GC (S)	All	Г	П	Ť	T		T	Ť	Ť	Г		X					0	
VOC MS (S)	All		Ħ	Ť	T			Ť	Ť					X			0	
Water Soluble Sulphate 2:1	All	X	,	X	X		X	)	Κ	X		X			X		0 8	

### **ALcontrol Laboratories Analytical Services**

 SDG:
 100721-18
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999

Location: KL056 DSDC Bicester Report No: 91567

### **Sample Descriptions**

Order No.:

#### **Grain Sizes:**

<0.063mm very fine, 0.063mm - 0.1mm fine, 0.1mm - 2mm medium, 2mm - 10mm coarse, >10mm very coarse

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions
1847612	HDPER3	0.20 - 0.30	Dark Brown	Clay Loam	0.063 - 0.1 mm	Stones
1847629	WSC07	0.45 - 0.60	Dark Brown	Sandy Clay	0.063 - 0.1 mm	Stones
1847926	WSC08	0.40 - 0.70	Dark Brown	Silty Clay Loam	<0.063 mm	Stones
1847951	WSC08	2.50 - 2.80	Dark Brown	Silty Clay Loam	<0.063 mm	N/A
1847955	WSC04	0.40 - 0.60	Dark Brown	Sandy Loam	0.063 - 0.1 mm	Stones
1847961	WSC04	2.00 - 2.20	Light Brown	Sandy Clay	0.063 - 0.1 mm	Stones
1847967	WSC05	0.40 - 0.60	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones
1847974	WSC06	0.60 - 0.80	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

## **ALcontrol Laboratories Analytical Services**

 SDG:
 100721-18
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999 Order No.:

Location: KL056 DSDC Bicester Report No: 91567

### **Test Completion dates**

SDG reference: 100721-18

Lab Sample No(s)	1847612	1847629	1847926	1847951	1847955	1847961	1847967	1847974
,	HDPER3	WSC07	WSC08	WSC08	WSC04	WSC04	WSC05	WSC06
Customer Sample Ref.	0.20 - 0.30	0.45 - 0.60	0.40 - 0.70	2.50 - 2.80	0.40 - 0.60	2.00 - 2.20	0.40 - 0.60	0.60 - 0.80
Depth								
Туре	SOLID							
Ammonium Soil by Titration	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010
Asbestos Containing Material	21/07/2010							
Boron Water Soluble	23/07/2010	23/07/2010	23/07/2010	23/07/2010	23/07/2010	23/07/2010	23/07/2010	23/07/2010
EPH CWG (Aliphatic) GC (S)							23/07/2010	
EPH CWG (Aromatic) GC (S)							23/07/2010	
GRO by GC-FID (S)							26/07/2010	
Hexavalent Chromium (s)	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010
Metals by iCap-OES (Soil)	23/07/2010	23/07/2010	23/07/2010	23/07/2010	23/07/2010	26/07/2010	23/07/2010	23/07/2010
PAH by GCMS							22/07/2010	
PCBs (vs Aroclor 1254)							22/07/2010	
рН	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010
Sample description	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010	21/07/2010
Semi Volatile Organic Compounds							23/07/2010	
Total Organic Carbon				22/07/2010	22/07/2010		22/07/2010	
TPH c6-40 Value of soil	23/07/2010	23/07/2010		23/07/2010	23/07/2010	23/07/2010		23/07/2010
TPH CWG GC (S)							26/07/2010	
VOC MS (S)							23/07/2010	
Water Soluble Sulphate 2:1	23/07/2010	23/07/2010	23/07/2010	23/07/2010	23/07/2010	23/07/2010	23/07/2010	23/07/2010

# **ALcontrol Laboratories Analytical Services**

SDG:

100721-18 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester

Entec UK Ltd Customer: Steve Dooley Attention:

Order No.: Report No:

91567

Results Legend								
# ISO17025 accredited.	Customer	Sample Ref.	HDPER3	WSC04	WSC04	WSC05	WSC06	WSC07
<ul> <li>M mCERTS accredited.</li> <li>aq Aqueous / settled sample.</li> </ul>		Depth (m)	0.20 - 0.30	0.40 - 0.60	2.00 - 2.20	0.40 - 0.60	0.60 - 0.80	0.45 - 0.60
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
* subcontracted test.		ate Sampled ate Received	16/07/2010	19/07/2010	19/07/2010	19/07/2010	19/07/2010	19/07/2010
** % recovery of the surrogate standard to check the efficiency		SDG Ref	21/07/2010 100721-18	21/07/2010 100721-18	21/07/2010 100721-18	21/07/2010 100721-18	21/07/2010 100721-18	21/07/2010 100721-18
of the method. The results of th individual compounds within		ample No.(s)	1847612	1847955	1847961	1847967	1847974	1847629
the samples are not corrected		. ,						
for this recovery.  Component	LOD/Units	Method						
Asbestos Containing	-	TM001	No ACM Detected					
Material Screen Ammoniacal Nitrogen,	<15 mg/kg	TM024	<15	<15	<15	<15	<15	50.1
exchangeable as NH4	15 mg/kg	11024	×13	~15 <b>M</b>	M	M	~13 M	M
Sulphate, 2:1 water soluble	<0.003 g/l	TM098	0.0255	0.119	0.498	0.545	0.225	0.127
Soil Organic Matter (SOM)	<0.35 %	TM132	M	3.5	M	8.38	M	М
oon organio matter (com)	-0.00 /0	1111102		#		#		
pH	1 pH Units	TM133	8.05	8.52	8.1	8.07	9.75	8.05
Chromium, Hexavalent	<0.6 mg/kg	TM151	<b>M</b>	<0.6	<0.6	<0.6	<0.6	<0.6
			#	#	#	#	#	#
TPH >C6-C8	<10 mg/kg	TM154	<10	<10	<10		<10	<10
TPH >C8-C10	<10 mg/kg	TM154	<10	<10	<10		<10	<10
		T14454		-40			-40	-40
TPH >C10-C12	<10 mg/kg	TM154	<10	<10	<10		<10	<10
TPH >C12-C16	<10 mg/kg	TM154	<10	21	<10		12.6	27.6
TPH >C16-C21	<10 ma/ka	TM154	25.3	110	<10		119	102
11 rt >010-021	<10 mg/kg	1 IVI 1 04	25.3	110	<u> </u>		118	102
TPH >C21-C40	<10 mg/kg	TM154	273	1110	75.8		1950	620
TPH >C6-C40	<10 mg/kg	TM154	301	1250	79.7		2080	749
	10 1119/119		#	#	#		#	#
Arsenic	<0.6 mg/kg	TM181	18.5 <b>M</b>	11.2 <b>M</b>	59.2 <b>M</b>	8.53 <b>M</b>	12.9 <b>M</b>	8.75 <b>M</b>
Cadmium	<0.02	TM181	0.522	0.667	1.19	0.034	0.271	0.25
	mg/kg		М	M	М	М	М	М
Chromium	<0.9 mg/kg	TM181	33.7 M	37.1 <b>M</b>	28 M	35.9 <b>M</b>	19 <b>M</b>	23.4 M
Copper	<1.4 mg/kg	TM181	44.2	38.8	56.3	23.1	23.9	14.3
1	40.7	TN4404	M	M	M	M	M	M
Lead	<0.7 mg/kg	TM181	59.6 <b>M</b>	60.7 <b>M</b>	42.5 <b>M</b>	20.7 M	29.4 <b>M</b>	16.1 <b>M</b>
Mercury	<0.14	TM181	<0.14	<0.14	<1.4	<0.14	<0.14	<0.14
Nickel	mg/kg <0.2 mg/kg	TM181	30.5	11.5	83.6	15.2	16	17.3
NIONCI	10.2 mg/kg	1101101	30.3 M	11.5 M	М	M	M	17.5
Selenium	<1 mg/kg	TM181	2.6	2.51	<10	3.8	1.55	<1 "
Zinc	<1.9 mg/kg	TM181	# 154	131	# 324	<b>#</b> 81.2	64	<b>#</b> 57.6
			М	M	M	М	М	М
Boron, water soluble	<1 mg/kg	TM222	1.01 <b>M</b>	<1 <b>M</b>	<1 M	1.82 <b>M</b>	<1 M	<1 M
			IVI	IVI	IVI	IVI	IVI	IVI

# **ALcontrol Laboratories Analytical Services**

SDG:

100721-18 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester

Entec UK Ltd Customer: Attention: Steve Dooley

Order No.:

					•	ortito. ort		
PAH	by GCMS							
	Results Legend	Customer	Sample Ref.	WSC05				
	ISO17025 accredited.  mCERTS accredited.							
aq	Aqueous / settled sample.		Depth (m)					
	Dissolved / filtered sample. Total / unfiltered sample.		ample Type	Soil/Solid				
*	subcontracted test.		ate Sampled	19/07/2010				
**	% recovery of the surrogate standard to check the efficiency	Da	te Received	21/07/2010				
	of the method. The results of the	l ab Ca	SDG Ref imple No.(s)	100721-18				
	individual compounds within the samples are not corrected	Lab Sa	imple No.(s)	1847967				
	for this recovery.							
Compo		LOD/Units	Method					
Naphth	alene-d8 %	%	TM218	87.1				
recove								
	ohthene-d10 %	%	TM218	88.4				
recove			<b></b>					
	nthrene-d10 %	%	TM218	87.6				
recove	ne-d12 % recovery**	%	TM218	82.6				
Offigac	11C-012 /01CCOVCTY	70	TWIZTO	02.0				
Pervler	ne-d12 % recovery**	%	TM218	87.7				
.,.								
Naphth	alene	<0.009	TM218	0.0891				
		mg/kg		М				
Acenap	ohthylene	<0.012	TM218	0.026				
	1.0	mg/kg	T1 10 1	M				
Acenar	ohthene	<0.008	TM218	0.0118				
Eluoro	10	mg/kg	TM240	M <0.01				
Fluorer	IC	<0.01 mg/kg	TM218	<0.01 <b>M</b>				
Phenar	nthrene	<0.015	TM218	0.295				
		mg/kg		0.293 <b>M</b>				
Anthra	cene	<0.016	TM218	0.0784				
		mg/kg		м				
Fluorar	nthene	<0.017	TM218	0.881				
		mg/kg		М				
Pyrene		<0.015	TM218	0.758				
		mg/kg		М				
Benz(a	)anthracene	<0.014	TM218	0.603				
0		mg/kg	TM040	M				
Chryse	ne	<0.01	TM218	0.526 <b>M</b>				
Ronzo/	b)fluoranthene	mg/kg <0.015	TM218	0.844				
Delizo(	D)IIUOI ariti lerie	mg/kg	TIVIZIO	0.644 <b>M</b>				
Benzo(	k)fluoranthene	<0.014	TM218	0.295				
2020(	11,1140141110110	mg/kg	12.10	м				
Benzo(	a)pyrene	<0.015	TM218	0.684				
`	, ,,,	mg/kg		М				
Indeno	(1,2,3-cd)pyrene	<0.018	TM218	0.399				
		mg/kg		М				
Dibenz	o(a,h)anthracene	<0.023	TM218	0.121				
		mg/kg	77.40.40	M				
Benzo(	g,h,i)perylene	<0.024	TM218	0.486				
Dolvoro	omatic hydrocarbons,	mg/kg <0.118	TM218	<b>M</b> 6.1				
Total I I	ISEPA 16	mg/kg	TIVIZIO	M				
. otal U	S=17(10	mg/kg		IVI				
					1			

# **ALcontrol Laboratories Analytical Services**

SDG:

100721-18 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester

Entec UK Ltd **Customer:** Attention: Steve Dooley

Order No.:

					•	<b>JOIC 110</b> : 0 10		
PCR	s (vs Aroclor 1254	١						
	Results Legend	Custom	Comple Def	MOOOF				
#	ISO17025 accredited.	Customer	Sample Ref.	WSC05				
M	mCERTS accredited.		Donth (m)	0.40.000				
aq	Aqueous / settled sample.		Depth (m) ample Type	0.40 - 0.60				
tot.unfilt	Dissolved / filtered sample. Total / unfiltered sample.	3	ample Type	Soil/Solid				
*	subcontracted test.	Da	ate Sampled					
**	% recovery of the surrogate standard to check the efficiency	Da	te Received	21/07/2010				
	of the method. The results of the		SDG Ref	100721-18				
	individual compounds within	Lab Sa	imple No.(s)	1847967				
	the samples are not corrected							
	for this recovery.	I OD/Unite	Method					
Compo	ment (Control of Control of Contr	LOD/Units		-0.00F				
PCBs (	(vs Aroclor 1254)	<0.035	TM070	<0.035				
		mg/kg		#				
	+							
	+							
							<u></u>	
_			-					

# **ALcontrol Laboratories Analytical Services**

SDG:

100721-18 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester

Entec UK Ltd Customer: Steve Dooley Attention:

Order No.:

Semi	Volatile Organic			
#	Results Legend ISO17025 accredited.	Custome	r Sample Ref.	WSC05
	mCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample.		Depth (m) Sample Type	0.40 - 0.60
	Total / unfiltered sample. subcontracted test.	D	ate Sampled	Soil/Solid 19/07/2010
**	% recovery of the surrogate standard to check the efficiency		ate Received SDG Ref	21/07/2010 100721-18
	of the method. The results of the individual compounds within the samples are not corrected	Lab S	ample No.(s)	1847967
Compo	for this recovery.	LOD/Units	Method	
Phenol		<0.1 mg/kg	_	<0.1
Pentac	hlorophenol	<0.1 mg/kg	TM157	<0.1
n-Nitro	so-n-dipropylamine	<0.1 mg/kg	TM157	<0.1
Nitrobe	enzene	<0.1 mg/kg	TM157	<0.1
Isopho	rone	<0.1 mg/kg	TM157	<0.1
Hexacl	nloroethane	<0.1 mg/kg		<0.1
	nlorocyclopentadiene	<0.1 mg/kg		<0.1
	nlorobutadiene			
		<0.1 mg/kg		<0.1
	nlorobenzene	<0.1 mg/kg		<0.1
	tyl phthalate	<0.1 mg/kg		<0.1
Dimeth	yl phthalate	<0.1 mg/kg	TM157	<0.1
Diethyl	phthalate	<0.1 mg/kg	TM157	<0.1
n-Dibu	tyl phthalate	<0.1 mg/kg	TM157	<0.1
Dibenz	ofuran	<0.1 mg/kg	TM157	<0.1
Carbaz	zole	<0.1 mg/kg	TM157	<0.1
Butylbe	enzyl phthalate	<0.1 mg/kg	TM157	<0.1
bis(2-E	thylhexyl) phthalate	<0.1 mg/kg	TM157	<0.1
bis(2-C	Chloroethoxy)methane	<0.1 mg/kg	TM157	<0.1
bis(2-C	Chloroethyl)ether	<0.1 mg/kg		<0.1
Azobei		<0.1 mg/kg		<0.1
4-Nitro		<0.1 mg/kg		<0.1
4-Nitro		<0.1 mg/kg		<0.1
	ylphenol	<0.1 mg/kg		<0.1
	rophenylphenylether	<0.1 mg/kg		<0.1
	roaniline	<0.1 mg/kg	TM157	<0.1
4-Chlo	ro-3-methylphenol	<0.1 mg/kg	TM157	<0.1
4-Brom	nophenylphenylether	<0.1 mg/kg	TM157	<0.1
3-Nitro	aniline	<0.1 mg/kg	TM157	<0.1
2-Nitro	phenol	<0.1 mg/kg	TM157	<0.1
2-Nitro	aniline	<0.1 mg/kg	TM157	<0.1
2-Meth	ylphenol	<0.1 mg/kg	TM157	<0.1
1,2,4-T	richlorobenzene	<0.1 mg/kg		<0.1
	rophenol	<0.1 mg/kg		<0.1
	nitrotoluene	<0.1 mg/kg		<0.1
	nitrotoluene	<0.1 mg/kg		<0.1
	nethylphenol	<0.1 mg/kg		<0.1
	chlorophenol	<0.1 mg/kg		<0.1
2,4,6-T	richlorophenol	<0.1 mg/kg	TM157	<0.1
2,4,5-T	richlorophenol	<0.1 mg/kg	TM157	<0.1

## **ALcontrol Laboratories Analytical Services**

SDG:

100721-18 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester

Entec UK Ltd Customer: Attention: Steve Dooley

Order No.:

Semi	Volatile Organic	Compour	nds	
	Results Legend	Customer	Sample Ref.	WSC05
М	ISO17025 accredited.  mCERTS accredited.		Depth (m)	0.40 - 0.60
diss.filt	Aqueous / settled sample. Dissolved / filtered sample.		Sample Type	
*	Total / unfiltered sample. subcontracted test.		ate Sampled ite Received	19/07/2010
	% recovery of the surrogate standard to check the efficiency		SDG Ref	
	of the method. The results of the individual compounds within the samples are not corrected	Lab Sa	ample No.(s)	1847967
	for this recovery.	1000111	Method	
Compo 1,4-Dic	chlorobenzene	LOD/Units <0.1 mg/kg	TM157	<0.1
1 3-Dic	chlorobenzene	<0.1 mg/kg	TM157	<0.1
·				
1,2-Dic	chlorobenzene	<0.1 mg/kg	TM157	<0.1
2-Chlor	ronaphthalene	<0.1 mg/kg	TM157	<0.1
2-Meth	ylnaphthalene	<0.1 mg/kg	TM157	<0.1
Acenar	ohthylene	<0.1 mg/kg	TM157	<0.1
	ohthene	<0.1 mg/kg	TM157	<0.1
Anthra	cene	<0.1 mg/kg	TM157	<0.1
Benzo(	(a)anthracene	<0.1 mg/kg	TM157	0.322
Benzo(	(b)fluoranthene	<0.1 mg/kg	TM157	0.336
Benzo(	(k)fluoranthene	<0.1 mg/kg	TM157	0.275
	` '			
	(a)pyrene	<0.1 mg/kg	TM157	0.411
Benzo(	(g,h,i)perylene	<0.1 mg/kg	TM157	0.226
Chryse	ene	<0.1 mg/kg	TM157	0.341
Fluorar	nthene	<0.1 mg/kg	TM157	0.516
Fluorer	ne.	<0.1 mg/kg	TM157	<0.1
	(1,2,3-cd)pyrene	<0.1 mg/kg	TM157	0.208
Phenar	nthrene	<0.1 mg/kg	TM157	0.165
Pyrene	•	<0.1 mg/kg	TM157	0.473
Naphth	nalene	<0.1 mg/kg	TM157	<0.1
Dibenz	o(a,h)anthracene	<0.1 mg/kg	TM157	<0.1
5.50.12	.s(a,, 1)a.1.a.1.a.so.1.s	0g		<b></b>

# **ALcontrol Laboratories Analytical Services**

SDG:

100721-18 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester

Entec UK Ltd Customer: Attention: Steve Dooley

Order No.:

TPH CWG (S)								
Results Legend	Customer	Sample Ref.	WSC05					
# ISO17025 accredited.  M mCERTS accredited.		Depth (m)	0.40.000					
aq Aqueous / settled sample. diss.filt Dissolved / filtered sample.	S	Sample Type	0.40 - 0.60 Soil/Solid					
tot.unfilt Total / unfiltered sample.  * subcontracted test.		ate Sampled	19/07/2010					
** % recovery of the surrogate standard to check the efficiency		te Received SDG Ref	21/07/2010 100721-18					
of the method. The results of the individual compounds within	Lab Sa	ample No.(s)	1847967					
the samples are not corrected for this recovery.								
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	41					
GRO >C5-C12	<0.044	TM089	<0.044					
Benzene	mg/kg <0.01	TM089	<0.01					
	mg/kg		М					
Ethylbenzene	<0.003 mg/kg	TM089	<0.003					
Toluene	<0.002	TM089	<0.002					
m,p-Xylene	mg/kg <0.006	TM089	<0.006					
	mg/kg		М					
o-Xylene	<0.003 mg/kg	TM089	<0.003					
m,p,o-Xylene	<0.01	TM089	<0.01					
BTEX, Total	mg/kg <0.01	TM089	<0.01					
	mg/kg	TM089	М					
Methyl tertiary butyl ether (MTBE)	<0.005 mg/kg	1101089	<0.005 #					
Aliphatics >C5-C6	<0.01 mg/kg	TM089	<0.01					
Aliphatics >C6-C8	<0.01	TM089	<0.01					
Aliphatics >C8-C10	mg/kg <0.01	TM089	<0.01					
	mg/kg							
Aliphatics >C10-C12	<0.01 mg/kg	TM089	<0.01					
Aromatics >C6-C7	<0.01	TM089	<0.01					
Aromatics >C7-C8	mg/kg <0.01	TM089	<0.01					
	mg/kg							
Aromatics >EC8-EC10	<0.01 mg/kg	TM089	<0.01					
Aromatics >EC10-EC12	<0.01	TM089	<0.01					
Total Aliphatics >C5-C12	mg/kg <0.01	TM089	<0.01					
Total Aromatics >C6-C12	mg/kg <0.01	TM089	<0.01					
	mg/kg							
Aliphatics >C12-C16	<0.1 mg/kg	TM173	5.67					
Aliphatics >C16-C21	<0.1 mg/kg	TM173	8.36					
Aliphatics >C16-C35	<0.1 mg/kg	TM173	74.5					
Aliphatics >C21-C35	<0.1 mg/kg	TM173	66.1					
Aliphatics >C35-C44	<0.1 mg/kg	TM173	23.1					
Aromatics >EC12-EC16	<0.1 mg/kg	TM173	4.86					
Aromatics >EC16-EC21	<0.1 mg/kg	TM173	9.86					
		TM173	48.6					
Aromatics >EC21-EC35	<0.1 mg/kg							
Aromatics >EC35-EC44	<0.1 mg/kg	TM173	29					
Aromatics >EC40-EC44	<0.1 mg/kg	TM173	13					
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173	103					
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173	92.3					
Total Aliphatics >C5-35	<0.1 mg/kg	TM173	80.1					
Total Aliphatics >C5-C44	<0.1 mg/kg	TM173	103					
Total Aromatics >C5-35	<0.1 mg/kg	TM173	63.3					
Total Aromatics >C6-C44	<0.1 mg/kg	TM173	92.3					
Total Aliphatics & Aromatics	<0.1 mg/kg	TM173	143					
>C5-35 Total Aliphatics & Aromatics	<0.1 mg/kg	TM173	196					
>C5-C44	.59							

## **ALcontrol Laboratories Analytical Services**

**SDG**: 100721-18

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

voc	MS (S)							
	Results Legend ISO17025 accredited.	Customer	Sample Ref.	WSC05				
М	mCERTS accredited. Aqueous / settled sample.		Depth (m)	0.40 - 0.60				
diss.filt	Dissolved / filtered sample.  Total / unfiltered sample.		ample Type	Soil/Solid				
*	subcontracted test.		ate Sampled te Received	19/07/2010 21/07/2010				
~~	% recovery of the surrogate standard to check the efficiency		SDG Ref	100721-18				
	of the method. The results of the individual compounds within the samples are not corrected	Lab Sa	imple No.(s)	1847967				
	for this recovery.		<b>35</b> (1 1					
Compo	nent ofluoromethane**	LOD/Units	Method TM116	36.6				
Toluen								
		%	TM116	102				
	ofluorobenzene**	%	TM116	124				
	odifluoromethane	<0.004 mg/kg	TM116	<0.004 <b>M</b>				
Chloro	methane	<0.007 mg/kg	TM116	<0.007 #				
Vinyl C	hloride	<0.01 mg/kg	TM116	<0.01 #				
Bromoi	methane	<0.013	TM116	<0.013				
Chloro	ethane	mg/kg <0.014	TM116	<b>M</b> <0.014				
Trichlo	rofluorormethane	mg/kg <0.006	TM116	<b>M</b> <0.006				
	hloroethene	mg/kg <0.01	TM116	<b>M</b> <0.01				
		mg/kg		#				
	ı Disulphide	<0.007 mg/kg	TM116	<0.007 <b>M</b>				
Dichlor	omethane	<0.01 mg/kg	TM116	<0.01 #				
Methyl	Tertiary Butyl Ether	<0.011 mg/kg	TM116	<0.011 <b>M</b>				
trans-1	-2-Dichloroethene	<0.011 mg/kg	TM116	<0.011 <b>M</b>				
1.1-Dic	hloroethane	<0.008 mg/kg	TM116	<0.008				
cis-1-2	-Dichloroethene	<0.005	TM116	0.00739				
2.2-Dic	hloropropane	mg/kg <0.012	TM116	<0.012				
Bromo	chloromethane	mg/kg <0.014	TM116	<b>M</b> <0.014				
Chlorof	form	mg/kg <0.008	TM116	<b>M</b> <0.008				
1.1.1-T	richloroethane	mg/kg <0.007	TM116	<b>M</b> <0.007				
1.1-Dic	hloropropene	mg/kg <0.011	TM116	<b>M</b> <0.011				
	itetrachloride	mg/kg <0.014	TM116	<b>M</b> <0.014				
		mg/kg		М				
	hloroethane	<0.005 mg/kg	TM116	<0.005 <b>M</b>				
Benzer	ne	<0.009 mg/kg	TM116	<0.009 <b>M</b>				
Trichlo	roethene	<0.009 mg/kg	TM116	0.307 <b>M</b>				
1.2-Dic	hloropropane	<0.012 mg/kg	TM116	<0.012 <b>M</b>				
Dibrom	omethane	<0.009	TM116	<0.009				
Bromod	dichloromethane	mg/kg <0.007	TM116	<0.007				
cis-1-3-	-Dichloropropene	mg/kg <0.014	TM116	<b>M</b> <0.014				
Toluen	e	mg/kg <0.005	TM116	<b>M</b> <0.005				
trans-1	-3-Dichloropropene	mg/kg <0.014	TM116	<b>M</b> <0.014				
	richloroethane	mg/kg <0.01	TM116	<0.01				
	hloropropane	mg/kg <0.007	TM116	<0.01 M				
		mg/kg		#				
	nloroethene	<0.005 mg/kg	TM116	<0.005 <b>M</b>				
	ochloromethane	<0.013 mg/kg	TM116	<0.013 <b>M</b>				
1.2-Dib	romoethane	<0.012 mg/kg	TM116	<0.012 <b>M</b>				
Chorob	enzene	<0.005 mg/kg	TM116	<0.005 <b>M</b>				
1.1.1.2	-Tetrachloroethane	<0.01	TM116	<0.01				
Ethylbe	enzene	mg/kg <0.004	TM116	<0.004				
		mg/kg		М		-	<u> </u>	

# **ALcontrol Laboratories Analytical Services**

SDG:

100721-18 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester

Entec UK Ltd Customer: Attention: Steve Dooley

Order No.:

VOC	MS (S)			
	Results Legend	Customer	Sample Ref.	WSC05
# M	ISO17025 accredited.  mCERTS accredited.		Depth (m)	
diss.filt	Aqueous / settled sample. Dissolved / filtered sample.	s	Sample Type	
*	Total / unfiltered sample. subcontracted test.		ate Sampled ite Received	19/07/2010
	% recovery of the surrogate standard to check the efficiency		SDG Ref	21/07/2010 100721-18
	of the method. The results of the individual compounds within the samples are not corrected	Lab Sa	ample No.(s)	1847967
	for this recovery.		Made a	
p/m-Xy		LOD/Units <0.014	Method TM116	<0.014
		mg/kg		#
o-Xyleı	ne	<0.01 mg/kg	TM116	<0.01 <b>M</b>
Styren	e	<0.01	TM116	<0.01
Bromo	form	mg/kg <0.01	TM116	<0.01
Isonror	pylbenzene	mg/kg <0.005	TM116	<0.005
		mg/kg		М
1.1.2.2	-Tetrachloroethane	<0.01 mg/kg	TM116	<0.01 #
1.2.3-T	richloropropane	<0.017	TM116	<0.017
Bromo	benzene	mg/kg <0.01	TM116	<b>M</b> <0.01
Dropull	benzene	mg/kg <0.011	TM116	<b>M</b> <0.011
		mg/kg		М
2-Chlo	rotoluene	<0.009 mg/kg	TM116	<0.009 <b>M</b>
1.3.5-T	rimethylbenzene	<0.008	TM116	<0.008
4-Chlo	rotoluene	mg/kg <0.012	TM116	<b>*</b>
		mg/kg		М
tert-Bu	tylbenzene	<0.012 mg/kg	TM116	<0.012 #
1.2.4-T	rimethylbenzene	<0.009	TM116	<0.009
sec-Bu	itylbenzene	mg/kg <0.01	TM116	<b>*</b>
4 leon	ropyltoluene	mg/kg <0.011	TM116	<b>M</b> <0.011
		mg/kg		М
1.3-Dic	chlorobenzene	<0.006 mg/kg	TM116	<0.006 <b>M</b>
1.4-Dic	chlorobenzene	<0.005	TM116	<0.005
n-Butvl	lbenzene	mg/kg <0.01	TM116	<b>M</b> <0.01
		mg/kg		М
1.2-Dic	chlorobenzene	<0.012 mg/kg	TM116	<0.012 <b>M</b>
	oromo-3-chloropropan	<0.014	TM116	<0.014
e Tert-ar	nyl methyl ether	mg/kg <0.015	TM116	<b>M</b> <0.015
	richlorobenzene	mg/kg <0.006	TM116	<0.006
		mg/kg		#
Hexacl	hlorobutadiene	<0.012 mg/kg	TM116	<0.012 <b>M</b>
Naphth	nalene	<0.013	TM116	<0.013
1.2.3-T	richlorobenzene	mg/kg <0.006	TM116	<0.006
		mg/kg		М

## **ALcontrol Laboratories Analytical Services**

**SDG**: 100721-18

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Results Legend	Customer	Sample Ref.	WSC08	WSC08		
# ISO17025 accredited.  M mCERTS accredited.		Depth (m)	0.40.070	0.50 0.00		
aq Aqueous / settled sample. diss.filt Dissolved / filtered sample.	S	Sample Type	0.40 - 0.70 Soil/Solid	2.50 - 2.80 Soil/Solid		
tot.unfilt Total / unfiltered sample.  * subcontracted test.	Da	ate Sampled	19/07/2010	19/07/2010		
** % recovery of the surrogate standard to check the efficiency		te Received SDG Ref	21/07/2010	21/07/2010		
of the method. The results of the individual compounds within		ample No.(s)	100721-18 1847926	100721-18 1847951		
the samples are not corrected for this recovery.						
Component	LOD/Units	Method				
Ammoniacal Nitrogen,	<15 mg/kg	TM024	129	<15		
exchangeable as NH4 Sulphate, 2:1 water soluble	<0.003 g/l	TM098	<b>M</b> 0.154	1.38		
	-0.000 gri	11000	M	M		
Soil Organic Matter (SOM)	<0.35 %	TM132		7.84 #		
рН	1 pH Units	TM133	8	7.68		
Chromium, Hexavalent	<0.6 mg/kg	TM151	<b>M</b> <1.2	<0.6		
Chilomium, nexavalem	~0.0 mg/kg	TIVITOT	<1.2 #	~0.0 #		
TPH >C6-C8	<10 mg/kg	TM154		<10		
TPH >C8-C10	<10 mg/kg	TM154		<10		
TPH >C10-C12	<10 mg/kg	TM154		<10		
TPH >C12-C16	<10 mg/kg	TM154		<10		
TPH >C16-C21	<10 mg/kg	TM154		<10		
TPH >C21-C40	<10 mg/kg	TM154		142		
TPH >C6-C40	<10 mg/kg	TM154		147		
Arsenic		TM181	11.6	6.15		
Arsenic	<0.6 mg/kg	1101181	11.6 <b>M</b>	0.15 <b>M</b>		
Cadmium	<0.02	TM181	0.4	1.14		
Chromium	mg/kg <0.9 mg/kg	TM181	<b>M</b> 39.9	<b>M</b> 54.6		
			М	M		
Copper	<1.4 mg/kg	TM181	18.6 <b>M</b>	39 <b>M</b>		
Lead	<0.7 mg/kg	TM181	21.8	10.3		
Mercury	<0.14	TM181	<b>M</b> <0.14	<b>M</b> <0.14		
wicroury	mg/kg	11011	10.14 M	M		
Nickel	<0.2 mg/kg	TM181	29.1 <b>M</b>	46.9 <b>M</b>		
Selenium	<1 mg/kg	TM181	1.15	3.17		
7ino	<1.0 mg/kg	TM181	# 82.5	101		
Zinc	<1.9 mg/kg	TIVITOT	62.5 <b>M</b>	101 M		
Boron, water soluble	<1 mg/kg	TM222	<1	2.05		
			М	M		
						-
						-

### **ALcontrol Laboratories Analytical Services**

**SDG**: 100721-18

Job: H ENTEC SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Attention: Entec UK Ltd Steve Dooley

Order No.: Report No:

91567

### **ASSOCIATED AQC DATA**

### Ammonium Soil by Titration

Component	Method Code	QC 17
Exchangeable Ammonium as NH4	TM024	<b>89.60</b> 80.84 : 103.27

#### **Boron Water Soluble**

Component	Method Code	QC 17
Water Soluble Boron	TM222	<b>98.00</b> 82.59 : 112.64

### EPH CWG (Aliphatic) GC (S)

Component	Method Code	QC 17
Total Aliphatics >C12-C35	TM173	<b>88.27</b> 66.13 : 101.56

### EPH CWG (Aromatic) GC (S)

Component	Method Code	QC 17
Total Aromatics >EC12-EC35	TM173	<b>86.85</b> 64.00 : 112.00

#### Hexavalent Chromium (s)

Component	Method Code	QC 11
Hexavalent Chromium	TM151	104.00
		76.40 : 131.80

### Metals by iCap-OES (Soil)

Component	Method Code	QC 12
Aluminium	TM181	<b>110.94</b> 95.21 : 133.11
Antimony	TM181	<b>105.34</b> 63.92 : 138.56
Arsenic	TM181	<b>102.41</b> 77.96 : 122.04
Barium	TM181	<b>105.04</b> 90.49 : 117.24
Beryllium	TM181	<b>104.22</b> 77.50 : 122.50
Boron	TM181	<b>105.19</b> 82.46 : 141.11

## **ALcontrol Laboratories Analytical Services**

**SDG**: 100721-18

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Report No: 91567

Location.	TIESUS BU	B C Biccottoi
		QC 12
Cadmium	TM181	<b>101.08</b> 77.50 : 122.50
Chromium	TM181	<b>99.71</b> 82.90 : 117.10
Cobalt	TM181	<b>99.82</b> 78.26 : 121.74
Copper	TM181	<b>102.45</b> 86.52 : 113.48
Iron	TM181	<b>112.09</b> 93.59 : 123.28
Lead	TM181	<b>99.33</b> 81.22 : 118.78
Manganese	TM181	<b>96.35</b> 87.42 : 112.58
Mercury	TM181	<b>105.98</b> 72.27 : 127.73
Molybdenum	TM181	<b>102.24</b> 71.12 : 128.88
Nickel	TM181	<b>98.85</b> 81.27 : 118.73
Phosphorus	TM181	<b>99.55</b> 84.04 : 115.96
Selenium	TM181	<b>102.22</b> 72.61 : 127.39
Strontium	TM181	<b>100.19</b> 80.21 : 119.79
Thallium	TM181	<b>93.39</b> 73.04 : 126.96
Tin	TM181	<b>97.98</b> 71.55 : 128.45
Titanium	TM181	<b>107.78</b> 78.26 : 121.74
Vanadium	TM181	<b>104.68</b> 82.03 : 117.97
Zinc	TM181	<b>95.47</b> 77.50 : 122.50

### PAH by GCMS

Component	Method Code	QC 17
Acenaphthene	TM218	<b>96.24</b> 71.41 : 116.50
Acenaphthylene	TM218	<b>84.45</b> 74.28 : 102.70
Anthracene	TM218	<b>91.88</b> 67.40 : 117.21
Benz(a)anthracene	TM218	<b>99.53</b> 66.80 : 125.05
Benzo(a)pyrene	TM218	<b>102.57</b> 69.15 : 119.77
Benzo(b)fluoranthene	TM218	<b>99.08</b> 70.01 : 124.88
Benzo(ghi)perylene	TM218	<b>99.98</b> 81.23 : 116.67
Benzo(k)fluoranthene	TM218	<b>99.49</b> 71.46 : 117.67

## **ALcontrol Laboratories Analytical Services**

**SDG**: 100721-18

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

**Customer:** Entec UK Ltd **Attention:** Steve Dooley

Order No.:

**Report No:** 91567

		QC 17
Chrysene	TM218	<b>97.07</b> 71.32 : 130.95
Dibenzo(ah)anthracene	TM218	<b>99.47</b> 81.17 : 118.65
Fluoranthene	TM218	<b>94.36</b> 69.52 : 118.84
Fluorene	TM218	<b>94.61</b> 71.38 : 111.04
Indeno(123cd)pyrene	TM218	<b>100.72</b> 80.81 : 118.96
Naphthalene	TM218	<b>93.64</b> 81.16 : 104.84
Phenanthrene	TM218	<b>94.56</b> 69.56 : 121.45
Pyrene	TM218	<b>95.17</b> 70.34 : 117.79

### PCBs (vs Aroclor 1254)

Component	Method Code	QC 16
PCBs (vs Aroclor 1254)	TM070	<b>102.84</b> 75.18 : 122.16

### рΗ

Component	Method Code	QC 17
рН	TM133	<b>100.75</b> 97.90 : 102.35

### Semi Volatile Organic Compounds

Component	Method Code	QC 14
4-Bromophenylphenyleth er (Soil)	TM157	<b>99.76</b> 12.25 : 162.08
Benzo(a)anthracene (Soil)	TM157	<b>106.21</b> 38.70 : 146.05
Hexachlorobutadiene (Soil)	TM157	<b>100.16</b> 17.33 : 157.33
Naphthalene (Soil)	TM157	<b>101.57</b> 17.33 : 157.33
Nitrobenzene (Soil)	TM157	<b>99.76</b> 19.50 : 154.53
Phenol (Soil)	TM157	<b>100.58</b> 23.40 : 144.15

### **Total Organic Carbon**

Component	Method Code	QC 13
Total Organic Carbon	TM132	<b>95.43</b> 88.75 : 104.70

### **ALcontrol Laboratories Analytical Services**

**SDG**: 100721-18

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Report No: 91567

#### TPH c6-40 Value of soil

Component	Method Code	QC 19
Diesel QC	TM154	94.39
		87.23 : 113.71
Lube Oil QC	TM154	101.40
		88.71 : 110.56
TPH C6-40 Corrected	TM154	97.90
		86.39 : 109.99

#### Water Soluble Sulphate 2:1

Component	Method Code	QC 14
Soluble SO4	TM098	<b>82.20</b> 76.87 : 120.45

The above information details the reference name of the analytical quality control sample (AQC) that has been run with the samples contained in this report for the different methods of analysis.

The figure detailed is the percentage recovery result for the AQC.

The subscript numbers below are the percentage recovery lower control limit (LCL) and the upper control limit (UCL). The percentage recovery result for the AQC should be between these limits to be statistically in control.

### **ALcontrol Laboratories Analytical Services**



### **Table of Results - Appendix**

SDG Number: 100721-18 Client: Entec UK Ltd Client Ref: 26999

REPOR	RT KEY			Desulte		( ) 4 025 07 in any inclement to 4 02 v40 7
KEI OI	\			Results	expressed	as (e.g.) 1.03E-07 is equivalent to 1.03x10-7
NDP	No Determination Possible	#	ISO 17025 Accredited	Subcontracted Test	M	MCERTS Accredited
NFD	No Fibres Detected	PFD	Possible Fibres Detected	Result previously reported (Incremental reports only)	EC	Equivalent Carbon (Aromatics C8-C35)

Method No	not always achievable due to various circumstances beyond of Reference	Description	Wet/Dry Sample <sup>1</sup>
PM001		Preparation of Samples for Metals Analysis	Dry
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material	Wet
TM001	In - house Method	Determination of asbestos containing material by screening on solids	
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids	Wet
TM070	Modified: US EPA Method 8250 & 625	Determination of Total Polychlorinated Biphenyls (PCB/Es) as Aroclor 1254 by GC-MS in Soils	Dry
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)	
TM098	Method 4500E, AWWA/APHA, 20th Ed., 1999	Determination of Sulphate using the Kone Analyser	Dry
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS	
TM132	In - house Method	ELTRA CS800 Operators Guide	Dry
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter	Wet
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser	Wet
TM154	In - house Method	Determination of Petroleum Hydrocarbons by EZ Flash GC-FID in the Carbon range C6- C40	Wet
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone	Wet
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID	Dry
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES	Dry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers	Dry
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546	Wet
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer	Dry

<sup>&</sup>lt;sup>1</sup> Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

### **APPENDIX**

#### **APPENDIX**

- Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following:
   NRA Leach tests, flash point, ammonium as NH<sub>4</sub> by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and
   TOF-MS TICS.
- 2. Samples will be run in duplicate upon request, but an additional charge may be incurred.
- 3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. Alcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.
- 4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
- 5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
- 6. When requested, the individual sub sample scheduled will be screened in house for the presence of large asbestos containing material fragments/pieces. If no asbestos containing material is found this will be reported as 'no asbestos containing material detected'. If asbestos containing material is detected it will be removed and analysed by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If asbestos containing material is present no further analysis will be undertaken. At no point is the fibre content of the soil sample determined.
- 7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.
- 8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.
- 9. NDP No determination possible due to insufficient/unsuitable sample.
- 10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals total metals must be requested separately.
- 11. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.
- 12. Results relate only to the items tested
- 13. **Surrogate recoveries** Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 130 %.
- Product analyses Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.
- 15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).
- 16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 14).
- 17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
- 18. Our MCERTS accreditation for PAHs by GCMS applies to all product types apart from Kerosene, where naphthalene only is not accredited.
- 19. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
- 19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.
- 20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
- 21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
- 22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
- 23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

### LIQUID MATRICES EXTRACTION SUMMARY

ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAH MS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GS MS
SVOC	DCM	LIQUID/LIQUID SHAKE	GC MS
FREE SULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST OCP/OPP	DCM	LIQUID/LIQUID SHAKE	GC MS
TRIAZINE HERBS	DCM	LIQUID/LIQUID SHAKE	GC MS
PHENOLS MS TPH by INFRA RED (IR)	DCM TCE	SOLID PHASE EXTRACTION LIQUID/LIQUID EXTRACTION	GC MS HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID EXTRACTION	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GC FID

#### **SOLID MATRICES EXTRACTION SUMMARY**

		WATRICES EXTRACTION SUMMART		
ANALYSIS	D/C OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
Solvent Extractable Matter	D&C	DCM	SOXTHERM	GRAVIMETRIC
Cyclohexane Ext. Matter	D&C	CYCLOHEXANE	SOXTHERM	GRAVIMETRIC
Thin Layer Chromatography	D&C	DCM	SOXTHERM	IATROSCAN
Elemental Sulphur	D&C	DCM	SOXTHERM	HPLC
Phenols by GCMS	WET	DCM	SOXTHERM	GC-MS
Herbicides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
Pesticides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
EPH (DRO)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Min oil)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Cleaned up)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH CWG by GC	D&C	HEXANE:ACETONE	END OVER END	GC-FID
PCB tot / PCB con	D&C	HEXANE:ACETONE	END OVER END	GC-MS
Polyaromatic Hydrocarbons (MS)	WET	HEXANE:ACETONE	Microwave TM218.	GC-MS
C8-C40 (C6-C40)EZ Flash	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Polyaromatic Hydrocarbons Rapid GC	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Semi Volatile Organic Compounds	WET	DCM:ACETONE	SONICATE	GC-MS

#### **Identification of Asbestos in Bulk Materials**

The results for asbestos identification for soil samples are obtained from possible Asbestos Containing Material, removed during the 'Screening of soils for Asbestos Containing Materials', which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

#### **Visual Estimation Of Fibre Content.**

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: -

Trace – Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in MDHS 100.

The identification of asbestos containing materials falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

#### 



Unit 7-8 Hawarden Business Park Manor Road (off Manor Lane) Hawarden

> Deeside CH5 3US Tel: (01244) 528700

Fax: (01244) 528701 email: mkt@alcontrol.com Website: www.alcontrol.com

Entec UK Ltd Canon Court North Abbey Lawn Abbey Foregate Shrewsbury Shropshire SY2 5DE

> Attention: Steve Dooley

#### **CERTIFICATE OF ANALYSIS**

29 July 2010 Date: **Customer:** H\_ENTEC\_SHW-24

Sample Delivery Group (SDG): 100722-28 91905 Report No.:

Your Reference: 26999

Location: KL056 DSDC Bicester

We received 19 samples on Thursday July 22, 2010 and 12 of these samples were scheduled for analysis which was completed on Thursday July 29, 2010. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Asbestos testing - we are not accredited for screening soil samples for asbestos fibres. We are only accredited to identify asbestos fibres in bulk material (ACM).

Approved By:



#### **Iain Swinton**

Operations Director - Land UK & Ireland



### **ALcontrol Laboratories Analytical Services**

SDG: 100722-28 Job:

H\_ENTEC\_SHW-24

**Client Reference:** 26999

Location: KL056 DSDC Bicester **Customer:** Entec UK Ltd Attention: Steve Dooley

Order No.: 228113 **Report No:** 91905

### Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Sampled Date
1854740	WSD1	0.00 - 0.20	20/07/2010
1854741	WSD1	1.60 - 1.80	20/07/2010
1854742	WSD2	0.20 - 0.40	20/07/2010
1854743	WSD2	1.20 - 1.40	20/07/2010
1854744	WSD2	4.00 - 4.20	20/07/2010
1854770	WSE10	0.10 - 0.30	20/07/2010
1854772	WSE10	0.70 - 0.90	20/07/2010
1854773	WSE10	3.00 - 3.30	20/07/2010
1854745	WSE5	0.50 - 0.70	20/07/2010
1854747	WSE5	1.80 - 2.00	20/07/2010
1854748	WSE6	0.30 - 0.50	20/07/2010
1854749	WSE6	2.80 - 3.00	20/07/2010
1854751	WSE7	0.00 - 0.20	20/07/2010
1854754	WSE7	1.70 - 1.90	20/07/2010
1854761	WSE8	0.40 - 0.60	20/07/2010
1854764	WSE8	0.70 - 0.90	20/07/2010
1854765	WSE8	1.60 - 1.80	20/07/2010
1854767	WSE9	0.40 - 0.50	20/07/2010
1854768	WSE9	1.50 - 1.60	20/07/2010

Only received samples which have had analysis scheduled will be shown on the following pages.

## **ALcontrol Laboratories Analytical Services**

SDG: 100722-28 **Customer:** Entec UK Ltd Job: H\_ENTEC\_SHW-24 Attention: Steve Dooley

**Client Reference:** 26999 Order No.: 228113 KL056 DSDC Bicester 91905 **Report No:** 

Location:

### **SOLID**

Results Legend	Lab Sample No(s)	0	1854740	1854/42		1854743	1854745		1854749	1854751	1004	1951761	1854764		1854/6/	1071	1854768	1004770	1951770	1854773	
X Test  No Determination Possible	Customer Sample Ref.		WSD1	WSD2		WSD2	WS IT S		WSE6	WSE7	, , , , , , , , , , , , , , , , , , ,	W/V/N	WSE8		WOE	NOTO TO	WSE9	(	WSE10	WSE10	
	Depth (m)		0.00 - 0.20	0.20 - 0.40		1.20 - 1.40	0.50 - 0.70		2.80 - 3.00	0.00 - 0.20		0 40 - 0 60	0.70 - 0.90		0.40 - 0.50	0.00	1.50 - 1.60	0:00	0.10 - 0.30	3.00 - 3.30	i Olai
	Container	250g Amber Jar	400g Tub	250g Amber Jar	250g Amber Jar	400g Tub	1kg TUB	1kg TUB	250g Amber Jar	250g Amber Jar 1kg TUB	1kg TUB	250g Amber Jar	250g Amber Jar 1kg TUB	1kg TUB	250g Amber Jar	1kg TUB	250g Amber Jar	1kg TUB	250g Amber Jar	250g Amber Jar 1kg TUB	
Ammonium Soil by Titration	All		X	<u>&gt;</u>	,	X	v	X		X	X	,	×	X	+	X	H	X	,	X	0 12
Asbestos Containing Material Screen	All	П	X			^	^	^	П	X	^	<b>'</b>	^	^	+	r	T	X	Ť	`	0 3
Boron Water Soluble	All	◨	T	,	X	Н	×		▮	X		X	X	H	X	t	X		X	X	0
EPH CWG (Aliphatic) GC (S)	All	X	T	<b>(</b>	^	Н		•	X	^	ľ	1	^	П		$\dagger$	Â	,	Ť	^	0
EPH CWG (Aromatic) GC (S)	All	Н	+	t	+	Н	+	Н	Н	+	Н	$^{+}$	+	П	X	+	H	Н	$^{\dagger}$	+	0
GRO BTEX MTBE GC (S)	All	Н	+	$^{+}$	+	Н	+	Н	Н	+	Н	+	+	Н	X	+	H	Н	$^{+}$	+	0
Hexavalent Chromium (s)	All	Н	+	t	+	Н	+		H	+		+	+	Н	<u>&gt;</u>		H		+	+	0
Metals by iCap-OES (Soil)	Arsenic	Н	X	×		X		X	╛	X	X	T	X	X	+	X		X	Ť	X	12 0
	Cadmium	X	)	<b>(</b>	X		×		X	X		X	X	Н	X	+	X	;	X	X	12 0
	Chromium	X	)	<b>&lt;</b>	X	Н	×		X	X	<u>;</u>	X	X		X	+	X	;	X	X	12 0
	Copper	X	)	<b>&lt;</b>	X	Н	X		X	X		X	X		X	+	X	;	X	X	12 0
	Lead	X	)	<	X	Н	X		X	X		X	X	Н	X	+	X		X	X	
	Mercury	X	)	<b>&lt;</b>	X	Н	X		X	X		X	X	Н	X	+	X	;	X	X	
	·	X	)	<b>&lt;</b>	X		X		X	X		X	X		X	1	X	;	X	X	12
	Nickel	X	>	<b>&lt;</b>	X	Ц	X		X	X		X	X	Ц	X	ļ	X		X	X	
	Selenium	X	>	<b>&lt;</b>	X	Ц	×		X	X		X	X	Ц	X	L	X	<u> </u>	X	X	
	Zinc	X	)	<b>〈</b>	X		×	<u>(</u>	X	X	<u>'</u>	X	X		X		X	;	X	X	
PAH by GCMS	All	Ш	$\perp$			Ш					Ц			Ц	X		L	Ц	$\perp$	$\perp$	0 1
PCBs (vs Aroclor 1254)	All														X						0 1
pH	All		X	<b>&gt;</b>	(	X	X	X		X	X	>	X	X		X		X	;	X	0 12
Sample description	All	X	)	<b>(</b>	X		×		X	X		X	X	П	X	T	Х	,	X	X	0 12
Semi Volatile Organic Compounds	All	П	T	T	T		T				П			П	X	T	Γ	П	1	T	0
Total Organic Carbon	All	П	$\dagger$	Ť	X	П	×			$\dagger$	П	†	X	П	X	Ť	Γ	H	†	Ť	0 4
TPH c6-40 Value of soil	All	Н	+	Ť	Ť	Н	<b>1</b>	Н	H	$^{+}$	Н	†		Н		$^{\dagger}$	t	H	†	t	0 8

## **ALcontrol Laboratories Analytical Services**

SDG: 100722-28 Customer: Entec UK Ltd

Job: H\_ENTEC\_SHW-24 Attention: Steve Dooley
Client Reference: 26999 Order No.: 228113

Location: KL056 DSDC Bicester Report No: 91905

		0	1854740	1854/42	1051710	1854743	1854/45		1854749	1854751	0	1854761	1854/64		0	1854767	1854768		1854770	1854773		
		:	WSD1	WOUZ	W/SD3	WSD2	Wolfe		WSE6	WSE7		WSE8	W			WSE9	WSE9		WSE10	WSE10		
			0.00 - 0.20	0.10	0.20 - 0.40	1.20 - 1.40	0.50 - 0.70		2.80 - 3.00	0.00 - 0.20		0.40 - 0.60	0.70 - 0.90			0.40 - 0.50	1.50 - 1.60		0.10 - 0.30	3.00 - 3.30	Total	
		250g Amber Jar	400g Tub	250g Amber Jar	400g Tub	400g Tub	1kg TUB	1kg TUB	250g Amber Jar	250g Amber Jar 1kg TUB	1kg TUB	250g Amber Jar	1kg TUB	1kg TUB	250g Amber Jar	60g VOC	250g Amber Jan 1kg TUB	1kg TUB	250g Amber Jar	250g Amber Jar 1kg TUB		
TPH CWG GC (S)	All	П	T	T	Ť	П	T		П		П	T	T	Γ	X	T	T	T		T	0	1
VOC MS (S)	All	П		T	Ť		T		П		П	7	T			X	T				0 1	1
Water Soluble Sulphate 2:1	All	X		X	×	<b>(</b>	<u>&gt;</u>	(	X	X		X	×	<u>(</u>	X		X	·	X	X	0 12	

Job:

### **ALcontrol Laboratories Analytical Services**

**SDG**: 100722-28

H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd

Attention: Steve Dooley
Order No.: 228113

**Report No:** 91905

#### **Sample Descriptions**

#### **Grain Sizes:**

<0.063mm very fine, 0.063mm - 0.1mm fine, 0.1mm - 2mm medium, 2mm - 10mm coarse, >10mm very coarse

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions
1854740	WSD1	0.00 - 0.20	Dark Brown	Clay Loam	0.063 - 0.1 mm	Vegetation
1854742	WSD2	0.20 - 0.40	Light Brown	Clay	<0.063 mm	N/A
1854743	WSD2	1.20 - 1.40	Dark Brown	Silty Clay	<0.063 mm	N/A
1854745	WSE5	0.50 - 0.70	Light Brown	Clay Loam	<0.063 mm	N/A
1854749	WSE6	2.80 - 3.00	Dark Brown	Clay	<0.063 mm	N/A
1854751	WSE7	0.00 - 0.20	Dark Brown	Clay Loam	0.063 - 0.1 mm	Stones
1854761	WSE8	0.40 - 0.60	Light Brown	Sandy Loam	0.1 - 2 mm	Stones
1854764	WSE8	0.70 - 0.90	Light Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones
1854767	WSE9	0.40 - 0.50	Black	Loamy Sand	0.1 - 2 mm	Stones
1854768	WSE9	1.50 - 1.60	Dark Brown	Silty Clay	<0.063 mm	N/A
1854770	WSE10	0.10 - 0.30	Dark Brown	Sandy Clay Loam	0.063 - 0.1 mm	Stones
1854773	WSE10	3.00 - 3.30	Dark Brown	Sand	0.1 - 2 mm	N/A

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

# **ALcontrol Laboratories Analytical Services**

SDG: 100722-28 Customer: Entec UK Ltd

Job:H\_ENTEC\_SHW-24Attention:Steve DooleyClient Reference:26999Order No.:228113

Location: KL056 DSDC Bicester Report No: 91905

## **Test Completion dates**

SDG reference: 100722-28

Lab Sample No(s)	1854740	1854742	1854743	1854745	1854749	1854751	1854761	1854764	1854767	1854768	1854770	1854773
Customer Sample Ref.	WSD1	WSD2	WSD2	WSE5	WSE6	WSE7	WSE8	WSE8	WSE9	WSE9	WSE10	WSE10
Depth	0.00 - 0.20	0.20 - 0.40	1.20 - 1.40	0.50 - 0.70	2.80 - 3.00	0.00 - 0.20	0.40 - 0.60	0.70 - 0.90	0.40 - 0.50	1.50 - 1.60	0.10 - 0.30	3.00 - 3.30
Туре	SOLID											
Ammonium Soil by Titration	23/07/2010	26/07/2010	23/07/2010	26/07/2010	23/07/2010	23/07/2010	27/07/2010	27/07/2010	23/07/2010	23/07/2010	23/07/2010	27/07/2010
Asbestos Containing Material	22/07/2010					22/07/2010					22/07/2010	
Boron Water Soluble	23/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	23/07/2010	26/07/2010	27/07/2010	23/07/2010	23/07/2010	23/07/2010	26/07/2010
EPH CWG (Aliphatic) GC (S)									26/07/2010			
EPH CWG (Aromatic) GC (S)									26/07/2010			
GRO by GC-FID (S)									29/07/2010			
Hexavalent Chromium (s)	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010
Metals by iCap-OES (Soil)	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	27/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010
PAH by GCMS									23/07/2010			
PCBs (vs Aroclor 1254)									23/07/2010			
рН	23/07/2010	23/07/2010	23/07/2010	23/07/2010	23/07/2010	23/07/2010	26/07/2010	26/07/2010	23/07/2010	23/07/2010	23/07/2010	26/07/2010
Sample description	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	23/07/2010	23/07/2010	22/07/2010	22/07/2010	22/07/2010	23/07/2010
Semi Volatile Organic Compounds									26/07/2010			
Total Organic Carbon			23/07/2010	23/07/2010				27/07/2010	23/07/2010			
TPH c6-40 Value of soil	27/07/2010		27/07/2010	27/07/2010	27/07/2010			29/07/2010		27/07/2010	27/07/2010	29/07/2010
TPH CWG GC (S)									29/07/2010			
VOC MS (S)									23/07/2010			
Water Soluble Sulphate 2:1	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	27/07/2010	27/07/2010	26/07/2010	26/07/2010	26/07/2010	27/07/2010

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100722-28

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Location.	KL030 D	ODO DICC		ive <sub>l</sub>	port No.			
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSD1	WSD2	WSD2	WSE10	WSE10	WSE5
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)	0.00 - 0.20	0.20 - 0.40	1.20 - 1.40	0.10 - 0.30	3.00 - 3.30	0.50 - 0.70
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
* subcontracted test.		ate Sampled	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010
** % recovery of the surrogate standard to check the efficiency		te Received SDG Ref	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010
of the method. The results of the		imple No.(s)	100722-28 1854740	100722-28 1854742	100722-28 1854743	100722-28 1854770	100722-28 1854773	100722-28 1854745
individual compounds within the samples are not corrected			1004740	100-11-12	1004740	1004170	1004170	100-11-10
for this recovery.	100//11//	Method						
Component Asbestos Containing	LOD/Units	TM001	No ACM Detected			No ACM Detected		
Material Screen			110710111 20100104			THE FROM DOLOGICA		
Ammoniacal Nitrogen,	<15 mg/kg	TM024	<15	<15	<15	<15	64.9	66.6
exchangeable as NH4 Sulphate, 2:1 water soluble	<0.003 g/l	TM098	0.0034	0.222	0.231	1.37	0.0438	0.0228
outpriate, 2.1 mater colubio	0.000 gr.	1111000	м	V.222		M	M	M
Soil Organic Matter (SOM)	<0.35 %	TM132			1.9			0.921
pH	1 pH Units	TM133	7.45	5.26	6.25	8.16	8.31	7.88
p	, pri cime		M	М		M	м	M
Chromium, Hexavalent	<0.6 mg/kg	TM151	<1.2	<0.6	<0.6	<0.6	<0.6	<0.6
TPH >C6-C8	<10 mg/kg	TM154	<10	#	<10	<b>*</b>	<b>*</b>	<b>*</b>
1111200-00	- To mg/kg	1101134	~10		10	~10	10	~10
TPH >C8-C10	<10 mg/kg	TM154	<10		<10	<10	<10	<10
TPH >C10-C12	<10 mg/kg	TM154	<10		<10	<10	<10	<10
11 11 2010-012	~ 10 mg/kg	1101104	`10		-10	>10	~10	~10
TPH >C12-C16	<10 mg/kg	TM154	<10		<10	<10	<10	<10
TDU >C16 C24	∠10 m=//	TNAAFA	42.8		-10	04.0	-10	×40
TPH >C16-C21	<10 mg/kg	TM154	42.8		<10	24.8	<10	<10
TPH >C21-C40	<10 mg/kg	TM154	491		<10	359	<10	149
TDI I : 00 040	.40 !!	T1454	500		.40	000	.40	454
TPH >C6-C40	<10 mg/kg	TM154	538 #		<10 #	393 #	<10 #	151 #
Arsenic	<0.6 mg/kg	TM181	10.1	8.44	7.59	14.3	15.9	13.3
			М	M		M	М	M
Cadmium	<0.02 mg/kg	TM181	0.426 <b>M</b>	0.21 <b>M</b>	0.205 <b>M</b>	0.336 <b>M</b>	0.432 <b>M</b>	0.603 <b>M</b>
Chromium	<0.9 mg/kg	TM181	41.5	59.4	35.1	24.4	21.5	47.1
			М	M		М	М	M
Copper	<1.4 mg/kg	TM181	28.1 <b>M</b>	36.1 <b>M</b>	15.6 <b>M</b>	31 <b>M</b>	16.5 <b>M</b>	16 <b>M</b>
Lead	<0.7 mg/kg	TM181	26.9	20.1	14.1	37.2	10.3	16.7
			М	M		М	М	M
Mercury	<0.14 mg/kg	TM181	<0.14 <b>M</b>	<0.14 <b>M</b>	<0.14	<0.14	<0.14	<0.14 <b>M</b>
Nickel	<0.2 mg/kg	TM181	18.1	16.7	14.2	22.6	44.4	33.3
			М	M		M	М	M
Selenium	<1 mg/kg	TM181	1.54 #	2.1 #	1.15	1.04	<1 #	1.78 #
Zinc	<1.9 mg/kg	TM181	92.4	75.1	33	70.1	96.4	97.4
		T1 1000	M	M		M	M	<u>M</u>
Boron, water soluble	<1 mg/kg	TM222	<1 <b>M</b>	2.28 M	2.37 M	<1 M	1.55 <b>M</b>	1.4 <b>M</b>
			·	III.				· · ·
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# **ALcontrol Laboratories Analytical Services**

**SDG**: 100722-28

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

	Results Legend	Customer	Sample Ref.	WSE6	WSE7	WSE8	WSE8	WSE9	WSE9
	ISO17025 accredited.	Gustomer	Cample Nel.	VVOEO	WOE/	WOE8	VVOEO	MOEA	MOEA
	mCERTS accredited. Aqueous / settled sample.		Depth (m)	2.80 - 3.00	0.00 - 0.20	0.40 - 0.60	0.70 - 0.90	0.40 - 0.50	1.50 - 1.60
diss.filt	Dissolved / filtered sample.	S	ample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
	Total / unfiltered sample.		te Sampled	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010	20/07/2010
	subcontracted test. % recovery of the surrogate	Da	te Received	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010	22/07/2010
	standard to check the efficiency		SDG Ref	100722-28	100722-28	100722-28	100722-28	100722-28	100722-28
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1854749	1854751	1854761	1854764	1854767	1854768
	the samples are not corrected								
	for this recovery.	LOD/Units	Method						
Ashesto	os Containing	- LOD/Units	TM001		No ACM Detected				
	ll Screen		11001		140 / tolii Deleoled				
	niacal Nitrogen,	<15 mg/kg	TM024	<15	<15	<15	47.6	<15	<15
	geable as NH4			М	М			М	М
Sulphat	te, 2:1 water soluble	<0.003 g/l	TM098	1.97	0.0478	0.0791	0.0486	0.0178	1.76
Soil Or	ganic Matter (SOM)	<0.35 %	TM132	M	M	M	1.09	60.5	M
Son Oit	gariic Matter (SOM)	<b>~0.55</b> /6	1101132				1.09	#	
рН		1 pH Units	TM133	5.53	8.27	9.01	7.59	8.17	4.23
		·		М	М	М	М	М	М
Chromi	um, Hexavalent	<0.6 mg/kg	TM151	<0.6	<0.6	<0.6	<0.6	<0.6	<1.2
TDU >	C8 C8	<10 ma//c	TM1E1	# <10	#	#		#	# ~10
TPH >0	JU-U0	<10 mg/kg	TM154	<10			<10		<10
TPH >0	C8-C10	<10 mg/kg	TM154	<10			<10		<10
TPH >C	C10-C12	<10 mg/kg	TM154	<10			<10		<10
TDU	242 046	-10 "	Thiaci	-40			-40		-40
IPH >(	C12-C16	<10 mg/kg	TM154	<10			<10		<10
TPH >C	C16-C21	<10 mg/kg	TM154	<10			<10		<10
		. o mg/ng		-10			110		-10
TPH >C	C21-C40	<10 mg/kg	TM154	254			73.1		<10
TPH >C	C6-C40	<10 mg/kg	TM154	256			77.9		<10
Arsenio	`	<0.6 mg/kg	TM181	<b>#</b> 8.88	9.34	10.9	8.74	12.2	4.29
Arsenic	·	<0.0 mg/kg	TIVITOT	0.00 <b>M</b>	9.34 M			12.2 M	4.29 M
Cadmiu	ım	<0.02	TM181	0.351	0.217	0.207	0.167	0.298	0.493
		mg/kg		М	М	M	М	М	М
Chromi	um	<0.9 mg/kg	TM181	41.3	24.6	8.49	41.6	20.4	14.6
0		.4.4	T1404	M				M	M
Copper		<1.4 mg/kg	TM181	22.2 <b>M</b>	20 M	9.37 <b>M</b>	19.3 <b>M</b>	36.8 <b>M</b>	11.7 <b>M</b>
Lead		<0.7 mg/kg	TM181	12.9	15.5	5.16	13.7	42.5	7.01
2000		on mgmg		. д. б	M			M	М
Mercur	y	<0.14	TM181	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
		mg/kg		M				M	M
Nickel		<0.2 mg/kg	TM181	29.4	16.7	7.45	20.1	29.3	4.71
Seleniu	ım	<1 mg/kg	TM181	1.65	1.07	<b>M</b> <1	1.59	1.09	2.21
Selerilu	"""	<1 mg/kg	TIVITOT	#	#		1.59	1.09	Z.Z I #
Zinc		<1.9 mg/kg	TM181	133	50.4	55.4	79.5	61.8	19.9
				М	М			М	М
Boron,	water soluble	<1 mg/kg	TM222	4.97	<1	1.09	1.39	<1	<1
				M	М	M	M	M	M
					I .	The second secon			

# **ALcontrol Laboratories Analytical Services**

Report No:

**SDG**: 100722-28

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley Order No.: 228113

DALL	hy CCMC						
PAH	by GCMS Results Legend	Customer	Sample Ref.	WSE9	1		
	ISO17025 accredited. mCERTS accredited.	Customer	Jampie Kei.	W2E9			
aq	Aqueous / settled sample.		Depth (m)				
tot.unfilt	Dissolved / filtered sample. Total / unfiltered sample.		ample Type ate Sampled	Soil/Solid 20/07/2010			
**	subcontracted test. % recovery of the surrogate		te Received	22/07/2010			
	standard to check the efficiency of the method. The results of the		SDG Ref	100722-28			
	individual compounds within the samples are not corrected	Lab Sa	imple No.(s)	1854767			
	for this recovery.		Method				
Compo Naphth	nent alene-d8 %	LOD/Units	TM218	92.1			
recove			1111210	02.1			
	hthene-d10 %	%	TM218	93.5			
recover Phenar	y hthrene-d10 %	%	TM218	90.1			
recover			T11010	20.4			
Chryse	ne-d12 % recovery**	%	TM218	82.4			
Peryler	e-d12 % recovery**	%	TM218	76.9			
Nanhth	alana	<0.000	TM218	0.257			
Naphth	alerie	<0.009 mg/kg	I IVIZ IO	0.257 <b>M</b>			
Acenap	hthylene	<0.012	TM218	0.204			
Acenar	hthene	mg/kg <0.008	TM218	0.251			
		mg/kg		M			
Fluorer	ie	<0.01 mg/kg	TM218	0.149 <b>M</b>			
Phenar	threne	<0.015	TM218	2.32			
A m41-		mg/kg	TM4040	M			
Anthrac	cerie	<0.016 mg/kg	TM218	0.49 <b>M</b>			
Fluorar	thene	<0.017	TM218	6.95			
Pyrene		mg/kg <0.015	TM218	<b>M</b> 5.94			
i yrene		mg/kg	TIVIZ TO	3.94 M			
Benz(a	)anthracene	<0.014	TM218	3.11			
Chryse	ne	mg/kg <0.01	TM218	<b>M</b> 2.84			
-		mg/kg		M			
Benzo(	b)fluoranthene	<0.015 mg/kg	TM218	4.08 <b>M</b>			
Benzo(	k)fluoranthene	<0.014	TM218	1.74			
D/	->	mg/kg	TMO40	M			
Benzo(	a)pyrene	<0.015 mg/kg	TM218	3.21 <b>M</b>			
Indeno	(1,2,3-cd)pyrene	<0.018	TM218	1.55			
Dibenz	o(a,h)anthracene	mg/kg <0.023	TM218	<b>M</b> 0.459			
		mg/kg		M			
Benzo(	g,h,i)perylene	<0.024 mg/kg	TM218	1.7 <b>M</b>			
Polyard	matic hydrocarbons,	<0.118	TM218	35.3			
Total U	SEPA 16	mg/kg		M			

# **ALcontrol Laboratories Analytical Services**

100722-28 SDG:

H\_ENTEC\_SHW-24 Job:

Client Reference: 26999 **Customer:** Entec UK Ltd Attention: Steve Dooley Order No.: 228113

Client F Locatio	Reference: on:	26999 KL056 D	SDC Bice	ester	ler No.: 228 port No: 919	113 905	
PCBs (	vs Aroclor 1254	4)					
# ISO M mCI aq Aqu diss.filt tot.unfilt * sub ** % re star of tt indi the for t	17025 accredited. ERTS accredited. seous / settled sample. solved / filtered sample. al / unfiltered sample. contracted test. ecovery of the surrogate ndard to check the efficiency he method. The results of the vidual compounds within samples are not corrected this recovery.	S Da Da Lab Sa	Sample Ref.  Depth (m) ample Type ate Sampled te Received SDG Ref ample No.(s)	Soil/Solid 20/07/2010 22/07/2010 100722-28			
PCBs (vs.	nt Aroclor 1254)	<0.035	Method TM070	<0.035			
		mg/kg		#			

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100722-28

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

					JOIL NO. G.		
Semi	Volatile Organic						
	Results Legend ISO17025 accredited. mCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample.		Sample Ref.  Depth (m) sample Type	WSE9 0.40 - 0.50 Soil/Solid			
tot.unfilt  *  **	Total / unfiltered sample. subcontracted test. % recovery of the surrogate standard to check the efficiency of the method. The results of the	Da	ate Sampled te Received SDG Ref ample No.(s)	20/07/2010 22/07/2010 100722-28			
	individual compounds within the samples are not corrected	Lab Sa	illiple No.(s)	1854767			
Compo	for this recovery.	LOD/Units	Method				
Pheno		<0.1 mg/kg	TM157	2.49			
	hlorophenol	<0.1 mg/kg	TM157	<0.1			
n-Nitro	so-n-dipropylamine	<0.1 mg/kg	TM157	<0.1			
Nitrobe		<0.1 mg/kg	TM157	<0.1 <0.1			
	nloroethane	<0.1 mg/kg	TM157	<0.1 <0.1			
	nlorobutadiene	<0.1 mg/kg	TM157	<0.1			
	nlorobenzene	<0.1 mg/kg	TM157	<0.1			
n-Dioc	tyl phthalate	<0.1 mg/kg	TM157	<0.1			
	ıyl phthalate	<0.1 mg/kg	TM157	<0.1			
Diethyl	phthalate	<0.1 mg/kg	TM157	<0.1			
n-Dibu	tyl phthalate	<0.1 mg/kg	TM157	<0.1			
Dibenz	ofuran	<0.1 mg/kg	TM157	<0.1			
Carbaz	zole	<0.1 mg/kg	TM157	0.203			
Butylbe	enzyl phthalate	<0.1 mg/kg	TM157	<0.1			
bis(2-E	thylhexyl) phthalate	<0.1 mg/kg	TM157	<0.1			
	Chloroethoxy)methane	<0.1 mg/kg	TM157	<0.1			
bis(2-C	Chloroethyl)ether	<0.1 mg/kg	TM157	<0.1 <0.1			
4-Nitro		<0.1 mg/kg	TM157	<0.1 <0.1			
		<0.1 mg/kg	TM157	<0.1			
	ylphenol rophenylphenylether	<0.1 mg/kg	TM157	<0.1			
	roaniline ro-3-methylphenol	<0.1 mg/kg	TM157	<0.1 <0.1			
	nophenylphenylether	<0.1 mg/kg	TM157	<0.1			
3-Nitro		<0.1 mg/kg	TM157	<0.1			
2-Nitro		<0.1 mg/kg	TM157	<0.1			
2-Nitro		<0.1 mg/kg	TM157	<0.1			
2-Meth	ylphenol	<0.1 mg/kg	TM157	<0.1			
1,2,4-7	richlorobenzene	<0.1 mg/kg	TM157	<0.1			
2-Chlo	rophenol	<0.1 mg/kg	TM157	<0.1			
	nitrotoluene	<0.1 mg/kg	TM157	<0.1			
	nitrotoluene	<0.1 mg/kg	TM157	<0.1			
	nethylphenol	<0.1 mg/kg	TM157	<0.1			
	chlorophenol richlorophenol	<0.1 mg/kg	TM157	<0.1 <0.1			
	richlorophenol	<0.1 mg/kg	TM157	<0.1			
۱ -ر-, -		.o. i ilig/kg	1101137	٠٠.١			

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100722-28

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Semi '	Volatile Organic	Compour	nds	
	Results Legend SO17025 accredited.	Customer	Sample Ref.	WSE9
M n	nCERTS accredited.		Depth (m)	0.40 - 0.50
diss.filt D tot.unfilt T	Dissolved / filtered sample. Total / unfiltered sample.		ample Type	Soil/Solid
* s	ubcontracted test.		te Received	20/07/2010 22/07/2010
0	tandard to check the efficiency of the method. The results of the	l ah Sa	SDG Ref imple No.(s)	100722-28 1854767
tł	ndividual compounds within he samples are not corrected or this recovery.	Lub Gu	imple No.(o)	1004707
Compon	ent	LOD/Units	Method	
1,4-Dich	lorobenzene	<0.1 mg/kg	TM157	<0.1
1,3-Dich	lorobenzene	<0.1 mg/kg	TM157	<0.1
1,2-Dich	lorobenzene	<0.1 mg/kg	TM157	<0.1
2-Chloro	onaphthalene	<0.1 mg/kg	TM157	<0.1
2-Methyl	Inaphthalene	<0.1 mg/kg	TM157	<0.1
Acenaph	nthylene	<0.1 mg/kg	TM157	<0.1
Acenaph	nthene	<0.1 mg/kg	TM157	0.235
Anthrace		<0.1 mg/kg	TM157	0.674
	)anthracene	<0.1 mg/kg	TM157	3.9
Benzo(b	)fluoranthene	<0.1 mg/kg	TM157	4.12
Benzo(k	)fluoranthene	<0.1 mg/kg	TM157	3.73
Benzo(a	)pyrene	<0.1 mg/kg	TM157	5.88
Benzo(g	,h,i)perylene	<0.1 mg/kg	TM157	2.87
Chrysen	e	<0.1 mg/kg	TM157	4.47
Fluorant		<0.1 mg/kg	TM157	8.97
Fluorene		<0.1 mg/kg	TM157	0.152
	1,2,3-cd)pyrene	<0.1 mg/kg	TM157	2.74
Phenant	threne	<0.1 mg/kg	TM157	3.16
Pyrene		<0.1 mg/kg	TM157	8.07
Naphtha	ılene	<0.1 mg/kg	TM157	<0.1
Dibenzo	(a,h)anthracene	<0.1 mg/kg	TM157	0.549

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100722-28

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

TPH CWG (S)						
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSE9			
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)	0.40 - 0.50			
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type ite Sampled	Soil/Solid			
* subcontracted test.  ** % recovery of the surrogate		te Received	20/07/2010 22/07/2010			
standard to check the efficiency of the method. The results of the		SDG Ref	100722-28			
individual compounds within the samples are not corrected	Lab Sa	mple No.(s)	1854767			
for this recovery.  Component	LOD/Units	Method				
GRO Surrogate %	%	TM089	23			
recovery** GRO >C5-C12	<0.044	TM089	<0.044			
	mg/kg					
Benzene	<0.01 mg/kg	TM089	<0.01 <b>M</b>			
Ethylbenzene	< 0.003	TM089	<0.003			
Toluene	mg/kg <0.002	TM089	<b>M</b> <0.002			
m,p-Xylene	mg/kg <0.006	TM089	<b>M</b> <0.006			
	mg/kg		М			
o-Xylene	<0.003 mg/kg	TM089	<0.003 <b>M</b>			
m,p,o-Xylene	<0.01	TM089	<0.01			
BTEX, Total	mg/kg <0.01	TM089	<b>M</b> <0.01			
Methyl tertiary butyl ether	mg/kg <0.005	TM089	<b>M</b> <0.005			
(MTBE)	mg/kg		#			
Aliphatics >C5-C6	<0.01 mg/kg	TM089	<0.01			
Aliphatics >C6-C8	<0.01 mg/kg	TM089	<0.01			
Aliphatics >C8-C10	<0.01	TM089	<0.01			
Aliphatics >C10-C12	mg/kg <0.01	TM089	<0.01			
Aromatics >C6-C7	mg/kg <0.01	TM089	<0.01			
	mg/kg					
Aromatics >C7-C8	<0.01 mg/kg	TM089	<0.01			
Aromatics >EC8-EC10	<0.01	TM089	<0.01			
Aromatics >EC10-EC12	mg/kg <0.01	TM089	<0.01			
Total Aliphatics >C5-C12	mg/kg <0.01	TM089	<0.01			
Total Aromatics >C6-C12	mg/kg <0.01	TM089	<0.01			
	mg/kg					
Aliphatics >C12-C16	<0.1 mg/kg	TM173	8.31			
Aliphatics >C16-C21	<0.1 mg/kg	TM173	10.9			
Aliphatics >C16-C35	<0.1 mg/kg	TM173	39.2			
Aliphatics >C21-C35	<0.1 mg/kg	TM173	28.3			
Aliphatics >C35-C44		TM173	<0.1			
	<0.1 mg/kg					
Aromatics >EC12-EC16	<0.1 mg/kg	TM173	7.32			
Aromatics >EC16-EC21	<0.1 mg/kg	TM173	33.8			
Aromatics >EC21-EC35	<0.1 mg/kg	TM173	106			
Aromatics >EC35-EC44	<0.1 mg/kg	TM173	25.1			
Aromatics >EC40-EC44	<0.1 mg/kg	TM173	8.21			
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173	47.5			
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173	172			
Total Aliphatics >C5-35	<0.1 mg/kg	TM173	47.5			
Total Aliphatics >C5-C44	<0.1 mg/kg	TM173	47.5			
Total Aromatics >C5-35	<0.1 mg/kg	TM173	147			
Total Aromatics >C6-C44	<0.1 mg/kg	TM173	172			
Total Aliphatics & Aromatics >C5-35	<0.1 mg/kg	TM173	194			
Total Aliphatics & Aromatics	<0.1 mg/kg	TM173	219			
>C5-C44						

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100722-28

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

VOC	MS (S)							
	Results Legend	Customer	Sample Ref.	WSE9				
# M	mCERTS accredited.		Depth (m)	0.40 0.50				
	Aqueous / settled sample. Dissolved / filtered sample.	s	ample Type	0.40 - 0.50 Soil/Solid				
tot.unfilt	Total / unfiltered sample. subcontracted test.		te Sampled	20/07/2010				
**	% recovery of the surrogate standard to check the efficiency	Da	te Received SDG Ref	22/07/2010				
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	100722-28 1854767				
	the samples are not corrected for this recovery.							
Compo		LOD/Units	Method					
Dibron	ofluoromethane**	%	TM116	104				
Toluen	e-d8**	%	TM116	103				
4-Bron	nofluorobenzene**	%	TM116	135				
Dichlo	odifluoromethane	<0.004	TM116	<0.004				
Chloro	methane	mg/kg <0.007	TM116	<0.007	1			
	chloride	mg/kg <0.01	TM116		<b>#</b>			
	methane	mg/kg <0.013	TM116	<0.013	¥			
		mg/kg		N	1			
	ethane	<0.014 mg/kg	TM116	<0.014	1			
	rofluorormethane	<0.006 mg/kg	TM116	<0.006 N	1			
1.1-Dio	chloroethene	<0.01 mg/kg	TM116	<0.01	<b>‡</b>			
Carbor	n Disulphide	<0.007 mg/kg	TM116	<0.007				
Dichlo	omethane	<0.01 mg/kg	TM116	<0.01	<del>'</del>			
Methyl	Tertiary Butyl Ether	<0.011	TM116	<0.011				
trans-1	-2-Dichloroethene	mg/kg <0.011	TM116	<0.011				
1.1-Dio	chloroethane	mg/kg <0.008	TM116	<0.008				
cis-1-2	-Dichloroethene	mg/kg <0.005	TM116	<0.005	1			
2.2-Dio	chloropropane	mg/kg <0.012	TM116	<0.012	1			
	chloromethane	mg/kg <0.014	TM116	<0.014	1			
Chloro		mg/kg <0.008	TM116	<0.008	1			
	richloroethane	mg/kg <0.007	TM116	<0.007	1			
		mg/kg		N	1			
	chloropropene	<0.011 mg/kg	TM116	<0.011 <b>N</b>	1			
	ntetrachloride	<0.014 mg/kg	TM116	<0.014 N	1			
1.2-Dio	chloroethane	<0.005 mg/kg	TM116	<0.005 N	1			
Benze	ne	<0.009 mg/kg	TM116	<0.009				
Trichlo	roethene	<0.009 mg/kg	TM116	<0.009				
1.2-Dio	chloropropane	<0.012	TM116	<0.012				
Dibron	nomethane	mg/kg <0.009	TM116	<0.009				
Bromo	dichloromethane	mg/kg <0.007	TM116	<0.007				
cis-1-3	-Dichloropropene	mg/kg <0.014	TM116	<0.014	1			
Toluen		mg/kg <0.005	TM116	<0.005	1			
	-3-Dichloropropene	mg/kg <0.014	TM116	<0.014	1			
	richloroethane	mg/kg <0.01	TM116	<0.01				
	chloropropane	mg/kg <0.007	TM116	<0.01 N	1			
		mg/kg		;	¥			
	nloroethene	<0.005 mg/kg	TM116	<0.005	1			
Dibron	nochloromethane	<0.013 mg/kg	TM116	<0.013	1			
1.2-Dib	promoethane	<0.012 mg/kg	TM116	<0.012				
Chorol	penzene	<0.005 mg/kg	TM116	<0.005				
1.1.1.2	-Tetrachloroethane	<0.01	TM116	<0.01				
Ethylbe	enzene	mg/kg <0.004	TM116	<0.004				
		mg/kg		N	1		-	

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100722-28

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd
Attention: Steve Dooley
Order No.: 228113

91905

Report No:

י אטע	MS (S)			
	Results Legend	Customer	Sample Ref.	WSE9
M r	SO17025 accredited. mCERTS accredited.		Depth (m)	0.40.050
diss.filt [	Aqueous / settled sample. Dissolved / filtered sample.	s	ample Type	0.40 - 0.50 Soil/Solid
* 5	Total / unfiltered sample. subcontracted test.	Da	te Sampled	20/07/2010
s	% recovery of the surrogate standard to check the efficiency		te Received SDG Ref	22/07/2010 100722-28
li	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1854767
f	the samples are not corrected for this recovery.			
p/m-Xyle		<0.014	Method TM116	<0.014
		mg/kg	TIVITIO	#
o-Xylene	e	<0.01 mg/kg	TM116	<0.01
Styrene		<0.01	TM116	<0.01
Bromofo	orm	mg/kg <0.01	TM116	<b>M</b> <0.01
laanran	ylbenzene	mg/kg <0.005	TM116	<b>M</b> <0.005
isopiop	yiberizerie	mg/kg	TIVITIO	М
1.1.2.2-	Tetrachloroethane	<0.01 mg/kg	TM116	<0.01 #
1.2.3-Tr	richloropropane	<0.017	TM116	<0.017
Bromob	enzene	mg/kg <0.01	TM116	<b>M</b> <0.01
Dropulle	-nn-	mg/kg	TM116	M <0.011
Propylbe		<0.011 mg/kg	TIVITIO	<0.011 <b>M</b>
2-Chloro	otoluene	<0.009 mg/kg	TM116	<0.009 <b>M</b>
1.3.5-Tr	imethylbenzene	<0.008	TM116	<0.008
4-Chlord	otoluene	mg/kg <0.012	TM116	<b>*</b>
tort Dut	ylbenzene	mg/kg <0.012	TM116	<b>M</b> <0.012
		mg/kg		#
1.2.4-Tr	rimethylbenzene	<0.009 mg/kg	TM116	<0.009 #
sec-Buty	ylbenzene	<0.01	TM116	<0.01
4-Isopro	ppyltoluene	mg/kg <0.011	TM116	<b>M</b> <0.011
		mg/kg		М
1.3-Dicr	nlorobenzene	<0.006 mg/kg	TM116	<0.006 <b>M</b>
1.4-Dich	nlorobenzene	<0.005	TM116	<0.005 <b>M</b>
n-Butylb	penzene	mg/kg <0.01	TM116	<0.01
1.2-Dich	nlorobenzene	mg/kg <0.012	TM116	<b>M</b> <0.012
		mg/kg		М
1.2-Dibr e	romo-3-chloropropan	<0.014 mg/kg	TM116	<0.014 <b>M</b>
Tert-am	yl methyl ether	<0.015 mg/kg	TM116	<0.015
1.2.4-Tr	richlorobenzene	<0.006	TM116	<0.006
Hexachi	lorobutadiene	mg/kg <0.012	TM116	<b>*</b>
		mg/kg		М
Naphtha		<0.013 mg/kg	TM116	<0.013 <b>M</b>
1.2.3-Tr	richlorobenzene	<0.006 mg/kg	TM116	<0.006 <b>M</b>
		g/kg		M

## **ALcontrol Laboratories Analytical Services**

**SDG**: 100722-28

Job: H\_ENTEC\_SHW-24

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## **ASSOCIATED AQC DATA**

### Ammonium Soil by Titration

Component	Method Code	QC 15	QC 17
Exchangeable	TM024	<b>89.60</b>	<b>97.42</b>
Ammonium as NH4		80.84 : 103.27	80.84 : 103.27

### Boron Water Soluble

Component	Method Code	QC 11	QC 15	QC 12
Water Soluble Boron	TM222	<b>95.25</b> 82.59 : 112.64	<b>101.55</b> 82.59 : 112.64	<b>99.45</b> 82.59 : 112.64

### EPH CWG (Aliphatic) GC (S)

Component	Method Code	QC 10
Total Aliphatics >C12-C35	TM173	<b>83.99</b> 55.20 : 114.58

### EPH CWG (Aromatic) GC (S)

Component	Method Code	QC 10
Total Aromatics >EC12-EC35	TM173	<b>81.32</b> 54.00 : 123.00

### Hexavalent Chromium (s)

Component	Method Code	QC 18	QC 16
Hexavalent Chromium	TM151	<b>101.20</b> 76.40 : 131.80	<b>101.80</b> 76.40 : 131.80

## Metals by iCap-OES (Soil)

Component	Method Code	QC 14	QC 17	QC 14	QC 13	QC 14
Aluminium	TM181	<b>114.93</b> 95.21 : 133.11	<b>105.48</b> 95.21 : 133.11	<b>112.01</b> 95.21 : 133.11	<b>120.29</b> 95.21 : 133.11	<b>109.18</b> 95.21 : 133.11
Antimony	TM181	<b>111.40</b> 63.92 : 138.56	<b>89.75</b> 63.92 : 138.56	<b>94.73</b> 63.92 : 138.56	<b>90.17</b> 63.92 : 138.56	<b>108.11</b> 63.92 : 138.56
Arsenic	TM181	<b>105.94</b> 77.96 : 122.04	<b>95.78</b> 77.96 : 122.04	<b>107.06</b> 77.96 : 122.04	<b>96.12</b> 77.96 : 122.04	<b>97.33</b> 77.96 : 122.04
Barium	TM181	<b>111.31</b> 90.49 : 117.24	<b>98.48</b> 90.49 : 117.24	<b>105.63</b> 90.49 : 117.24	<b>108.86</b> 90.49 : 117.24	<b>103.38</b> 90.49 : 117.24
Beryllium	TM181	<b>105.88</b> 77.50 : 122.50	<b>88.62</b> 77.50 : 122.50	<b>94.67</b> 77.50 : 122.50	<b>91.44</b> 77.50 : 122.50	<b>106.24</b> 77.50 : 122.50
Boron	TM181	<b>104.30</b> 82.46 : 141.11	<b>93.82</b> 82.46 : 141.11	<b>114.68</b> 82.46 : 141.11	<b>126.41</b> 82.46 : 141.11	<b>105.28</b> 82.46 : 141.11

# **ALcontrol Laboratories Analytical Services**

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		QC 14	QC 17	QC 14	QC 13	QC 14
Cadmium	TM181	<b>106.33</b> 77.50 : 122.50	<b>88.04</b> 77.50 : 122.50	<b>93.77</b> 77.50 : 122.50	<b>90.69</b> 77.50 : 122.50	<b>104.80</b> 77.50 : 122.50
Chromium	TM181	<b>97.90</b> 82.90 : 117.10	<b>92.18</b> 82.90 : 117.10	<b>93.13</b> 82.90 : 117.10	<b>98.86</b> 82.90 : 117.10	<b>97.04</b> 82.90 : 117.10
Cobalt	TM181	<b>103.29</b> 78.26 : 121.74	<b>90.41</b> 78.26 : 121.74	<b>94.32</b> 78.26 : 121.74	<b>93.25</b> 78.26 : 121.74	<b>101.07</b> 78.26 : 121.74
Copper	TM181	<b>102.17</b> 86.52 : 113.48	<b>96.93</b> 86.52 : 113.48	<b>97.81</b> 86.52 : 113.48	<b>97.72</b> 86.52 : 113.48	<b>100.16</b> 86.52 : 113.48
Iron	TM181	<b>104.85</b> 93.59 : 123.28	<b>99.79</b> 93.59 : 123.28	<b>101.33</b> 93.59 : 123.28	<b>106.30</b> 93.59 : 123.28	<b>104.13</b> 93.59 : 123.28
Lead	TM181	<b>92.90</b> 81.22 : 118.78	<b>91.18</b> 81.22 : 118.78	<b>90.13</b> 81.22 : 118.78	<b>91.35</b> 81.22 : 118.78	<b>100.39</b> 81.22 : 118.78
Manganese	TM181	<b>92.13</b> 87.42 : 112.58	<b>91.68</b> 87.42 : 112.58	<b>91.15</b> 87.42 : 112.58	<b>94.84</b> 87.42 : 112.58	<b>97.52</b> 87.42 : 112.58
Mercury	TM181	<b>105.18</b> 72.27 : 127.73	<b>96.84</b> 72.27 : 127.73	<b>98.59</b> 72.27 : 127.73	<b>97.72</b> 72.27 : 127.73	<b>106.50</b> 72.27 : 127.73
Molybdenum	TM181	<b>111.35</b> 71.12 : 128.88	<b>84.05</b> 71.12 : 128.88	<b>91.92</b> 71.12 : 128.88	<b>87.38</b> 71.12 : 128.88	<b>106.25</b> 71.12 : 128.88
Nickel	TM181	<b>96.72</b> 81.27 : 118.73	<b>92.14</b> 81.27 : 118.73	<b>92.37</b> 81.27 : 118.73	<b>94.43</b> 81.27 : 118.73	<b>95.80</b> 81.27 : 118.73
Phosphorus	TM181	<b>96.86</b> 84.04 : 115.96	<b>96.06</b> 84.04 : 115.96	<b>99.45</b> 84.04 : 115.96	<b>98.11</b> 84.04 : 115.96	<b>98.06</b> 84.04 : 115.96
Selenium	TM181	<b>106.25</b> 72.61 : 127.39	<b>88.21</b> 72.61 : 127.39	<b>98.01</b> 72.61 : 127.39	<b>92.82</b> 72.61 : 127.39	<b>106.65</b> 72.61 : 127.39
Strontium	TM181	<b>95.22</b> 80.21 : 119.79	<b>99.37</b> 80.21 : 119.79	<b>98.41</b> 80.21 : 119.79	<b>101.64</b> 80.21 : 119.79	<b>97.15</b> 80.21 : 119.79
Thallium	TM181	<b>100.95</b> 73.04 : 126.96	<b>77.87</b> 73.04 : 126.96	<b>85.12</b> 73.04 : 126.96	<b>81.68</b> 73.04 : 126.96	<b>95.91</b> 73.04 : 126.96
Tin	TM181	<b>103.65</b> 71.55 : 128.45	<b>87.11</b> 71.55 : 128.45	<b>91.98</b> 71.55 : 128.45	<b>88.35</b> 71.55 : 128.45	<b>104.61</b> 71.55 : 128.45
Titanium	TM181	<b>105.44</b> 78.26 : 121.74	<b>86.98</b> 78.26 : 121.74	<b>112.29</b> 78.26 : 121.74	<b>125.73</b> 78.26 : 121.74	<b>100.48</b> 78.26 : 121.74
Vanadium	TM181	<b>100.78</b> 82.03 : 117.97	<b>99.57</b> 82.03 : 117.97	<b>99.80</b> 82.03 : 117.97	<b>104.13</b> 82.03 : 117.97	<b>99.10</b> 82.03 : 117.97
Zinc	TM181	<b>92.82</b> 77.50 : 122.50	<b>89.81</b> 77.50 : 122.50	<b>90.92</b> 77.50 : 122.50	<b>90.24</b> 77.50 : 122.50	<b>91.07</b> 77.50 : 122.50

## PAH by GCMS

Component	Method Code	QC 10
Acenaphthene	TM218	<b>96.98</b> 71.41 : 116.50
Acenaphthylene	TM218	<b>86.55</b> 74.28 : 102.70
Anthracene	TM218	<b>93.34</b> 67.40 : 117.21
Benz(a)anthracene	TM218	<b>102.85</b> 66.80 : 125.05
Benzo(a)pyrene	TM218	<b>105.50</b> 69.15 : 119.77
Benzo(b)fluoranthene	TM218	<b>103.70</b> 70.01 : 124.88
Benzo(ghi)perylene	TM218	<b>98.48</b> 81.23 : 116.67
Benzo(k)fluoranthene	TM218	<b>100.27</b> 71.46 : 117.67

# **ALcontrol Laboratories Analytical Services**

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		QC 10
Chrysene	TM218	<b>99.48</b> 71.32 : 130.95
Dibenzo(ah)anthracene	TM218	<b>97.11</b> 81.17 : 118.65
Fluoranthene	TM218	<b>102.47</b> 69.52 : 118.84
Fluorene	TM218	<b>95.54</b> 71.38 : 111.04
Indeno(123cd)pyrene	TM218	<b>100.03</b> 80.81 : 118.96
Naphthalene	TM218	<b>93.61</b> 81.16 : 104.84
Phenanthrene	TM218	<b>100.11</b> 69.56 : 121.45
Pyrene	TM218	<b>101.02</b> 70.34 : 117.79

## PCBs (vs Aroclor 1254)

Component	Method Code	QC 12
PCBs (vs Aroclor 1254)	TM070	<b>99.04</b> 75.18 : 122.16

### рН

Component	Method Code	QC 19	QC 17	QC 15
рН	TM133	101.25	100.25	100.38
		97.90 : 102.35	97.90 : 102.35	97.90 : 102.35

### Semi Volatile Organic Compounds

Component	Method Code	QC 12
4-Bromophenylphenyleth er (Soil)	TM157	<b>104.59</b> 12.25 : 162.08
Benzo(a)anthracene (Soil)	TM157	<b>109.99</b> 38.70 : 146.05
Hexachlorobutadiene (Soil)	TM157	<b>105.03</b> 17.33 : 157.33
Naphthalene (Soil)	TM157	<b>106.70</b> 17.33 : 157.33
Nitrobenzene (Soil)	TM157	<b>104.47</b> 19.50 : 154.53
Phenol (Soil)	TM157	<b>105.58</b> 23.40 : 144.15

### Total Organic Carbon

	Component	Method Code	QC 17	QC 10	QC 10
	Total Organic Carbon	TM132	101.29	103.01	94.59
١			88.75 : 104.70	88.75 : 104.70	88.75 : 104.70

## **ALcontrol Laboratories Analytical Services**

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### TPH c6-40 Value of soil

Component	Method Code	QC 16	QC 16
Diesel QC	TM154	<b>104.41</b> 87.23 : 113.71	<b>93.69</b> 87.23 : 113.71
Lube Oil QC	TM154	<b>97.45</b> 88.71 : 110.56	<b>96.08</b> 88.71 : 110.56
TPH C6-40 Corrected	TM154	<b>100.93</b> 86.39 : 109.99	<b>94.89</b> 86.39 : 109.99

### Water Soluble Sulphate 2:1

Component	Method Code	QC 15	QC 12
Soluble SO4	TM098	<b>85.83</b> 76.87 : 120.45	<b>101.46</b> 76.87 : 120.45

The above information details the reference name of the analytical quality control sample (AQC) that has been run with the samples contained in this report for the different methods of analysis.

The figure detailed is the percentage recovery result for the AQC.

The subscript numbers below are the percentage recovery lower control limit (LCL) and the upper control limit (UCL). The percentage recovery result for the AQC should be between these limits to be statistically in control.

## **ALcontrol Laboratories Analytical Services**



## **Table of Results - Appendix**

SDG Number: 100722-28 Client: Entec UK Ltd Client Ref: 26999

REPO	RT KEY			Desulte		( ) 4 025 07 in any inclement to 4 02 v40 7
IXEI OI	\			Results	expressed	as (e.g.) 1.03E-07 is equivalent to 1.03x10-7
NDP	No Determination Possible	#	ISO 17025 Accredited	Subcontracted Test	M	MCERTS Accredited
NFD	No Fibres Detected	PFD	Possible Fibres Detected	Result previously reported (Incremental reports only)	EC	Equivalent Carbon (Aromatics C8-C35)

Method No	e not always achievable due to various circumstances beyond  Reference	Description	Wet/Dry Sample <sup>1</sup>
PM001		Preparation of Samples for Metals Analysis	Dry
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material	Wet
TM001	In - house Method	Determination of asbestos containing material by screening on solids	
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids	Wet
TM070	Modified: US EPA Method 8250 & 625	Determination of Total Polychlorinated Biphenyls (PCBÆs) as Aroclor 1254 by GC-MS in Soils	Dry
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)	
TM098	Method 4500E, AWWA/APHA, 20th Ed., 1999	Determination of Sulphate using the Kone Analyser	Dry
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS	
TM132	In - house Method	ELTRA CS800 Operators Guide	Dry
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter	Wet
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser	Wet
TM154	In - house Method	Determination of Petroleum Hydrocarbons by EZ Flash GC-FID in the Carbon range C6- C40	Wet
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone	Wet
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID	Dry
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES	Dry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers	Dry
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546	Wet
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer	Dry

<sup>&</sup>lt;sup>1</sup> Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

## **APPENDIX**

### **APPENDIX**

- Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following:
   NRA Leach tests, flash point, ammonium as NH<sub>4</sub> by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and
   TOF-MS TICS.
- 2. Samples will be run in duplicate upon request, but an additional charge may be incurred.
- 3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. Alcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.
- 4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
- 5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
- 6. When requested, the individual sub sample scheduled will be screened in house for the presence of large asbestos containing material fragments/pieces. If no asbestos containing material is found this will be reported as 'no asbestos containing material detected'. If asbestos containing material is detected it will be removed and analysed by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If asbestos containing material is present no further analysis will be undertaken. At no point is the fibre content of the soil sample determined.
- 7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.
- 8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.
- 9. NDP No determination possible due to insufficient/unsuitable sample.
- 10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals total metals must be requested separately.
- 11. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.
- 12. Results relate only to the items tested
- 13. **Surrogate recoveries** Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 130 %.
- Product analyses Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.
- 15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).
- 16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 14).
- 17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
- 18. Our MCERTS accreditation for PAHs by GCMS applies to all product types apart from Kerosene, where naphthalene only is not accredited.
- 19. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
- 19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.
- 20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
- 21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
- 22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
- 23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

## LIQUID MATRICES EXTRACTION SUMMARY

ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAH MS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GS MS
SVOC	DCM	LIQUID/LIQUID SHAKE	GC MS
FREE SULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST OCP/OPP	DCM	LIQUID/LIQUID SHAKE	GC MS
TRIAZINE HERBS	DCM	LIQUID/LIQUID SHAKE	GC MS
PHENOLS MS TPH by INFRA RED (IR)	DCM TCE	SOLID PHASE EXTRACTION LIQUID/LIQUID EXTRACTION	GC MS HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID EXTRACTION	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GC FID

### **SOLID MATRICES EXTRACTION SUMMARY**

		WATRICES EXTRACTION SUMMART		
ANALYSIS	D/C OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
Solvent Extractable Matter	D&C	DCM	SOXTHERM	GRAVIMETRIC
Cyclohexane Ext. Matter	D&C	CYCLOHEXANE	SOXTHERM	GRAVIMETRIC
Thin Layer Chromatography	D&C	DCM	SOXTHERM	IATROSCAN
Elemental Sulphur	D&C	DCM	SOXTHERM	HPLC
Phenols by GCMS	WET	DCM	SOXTHERM	GC-MS
Herbicides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
Pesticides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
EPH (DRO)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Min oil)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Cleaned up)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH CWG by GC	D&C	HEXANE:ACETONE	END OVER END	GC-FID
PCB tot / PCB con	D&C	HEXANE:ACETONE	END OVER END	GC-MS
Polyaromatic Hydrocarbons (MS)	WET	HEXANE:ACETONE	Microwave TM218.	GC-MS
C8-C40 (C6-C40)EZ Flash	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Polyaromatic Hydrocarbons Rapid GC	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Semi Volatile Organic Compounds	WET	DCM:ACETONE	SONICATE	GC-MS

### **Identification of Asbestos in Bulk Materials**

The results for asbestos identification for soil samples are obtained from possible Asbestos Containing Material, removed during the 'Screening of soils for Asbestos Containing Materials', which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

### **Visual Estimation Of Fibre Content.**

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: -

Trace – Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in MDHS 100.

The identification of asbestos containing materials falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.



Unit 7-8 Hawarden Business Park Manor Road (off Manor Lane) Hawarden

> Deeside CH5 3US Tel: (01244) 528700

Fax: (01244) 528701 email: mkt@alcontrol.com Website: www.alcontrol.com

Entec UK Ltd Canon Court North Abbey Lawn Abbey Foregate Shrewsbury Shropshire SY2 5DE

Attention: Steve Dooley

### **CERTIFICATE OF ANALYSIS**

 Date:
 02 August 2010

 Customer:
 H\_ENTEC\_SHW-24

Sample Delivery Group (SDG): 100723-15 Report No.: 91932

Your Reference: 26999

**Location:** KL056 DSDC Bicester

We received 14 samples on Friday July 23, 2010 and 10 of these samples were scheduled for analysis which was completed on Thursday July 29, 2010. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Asbestos testing - we are not accredited for screening soil samples for asbestos fibres. We are only accredited to identify asbestos fibres in bulk material (ACM).

Approved By:



### **Iain Swinton**

Operations Director - Land UK & Ireland



# **ALcontrol Laboratories Analytical Services**

SDG: 100723-15 Job:

H\_ENTEC\_SHW-24

**Client Reference:** 

Location: KL056 DSDC Bicester **Customer:** Entec UK Ltd Attention: Steve Dooley

228113 Order No.: **Report No:** 91932

## Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Sampled Date
1857891	WSA1	0.50 - 0.70	21/07/2010
1858022	WSA1	1.00 - 1.30	21/07/2010
1858062	WSA2	0.10 - 0.30	21/07/2010
1858288	WSA2	1.25 - 1.35	21/07/2010
1858312	WSA3	0.10 - 0.30	21/07/2010
1858332	WSA3	2.50 - 2.70	21/07/2010
1858380	WSE11	0.10 - 0.30	21/07/2010
1858410	WSE11	0.80 - 1.00	21/07/2010
1858445	WSE12	0.10 - 0.30	21/07/2010
1858493	WSE12	2.00 - 2.30	21/07/2010
1858520	WSE13	0.20 - 0.40	21/07/2010
1858543	WSE13	0.80 - 1.20	21/07/2010
1858555	WSE14	0.40 - 0.70	21/07/2010
1858572	WSE14	2.40 - 2.60	21/07/2010

Only received samples which have had analysis scheduled will be shown on the following pages.

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100723-15
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

 Client Reference:
 26999
 Order No.:
 228113

 Location:
 KL056 DSDC Bicester
 Report No:
 91932

### **SOLID**

Test No Determination Possible  Customer Sample Ref.  Depth (m)    1	1858555	
Container	WSE14	
Ammonium Soil by Titration  All  All  Asbestos Containing Material Screen  All  All  All  Asbestos Containing Material Screen  All  All  Asbestos Identification  All  All  All  All  All  All  All  A	0.40 - 0.70	ַ
Asbestos Containing Material Screen  All  All  All  All  All  All  All	60g VOC 250g Amber Jar	
Asbestos Containing Material Screen  All  All  Asbestos Identification  All  All  All  All  All  Asbestos Identification  All  All  All  All  All  All  All  A		0
Asilestos Identification  All  Boron Water Soluble  All  All  All  All  All  All  All		9
Born Water Soluble All All All All All All All All All A		0
EPH CWG (Aliphatic) GC (S)  All  All  All  All  All  All  All  A		0
EPH CWG (Aromatic) GC (S)       All       Image: control of the control of th	X	9
All	X	0
All	X	0
Metals by iCap-OES (Soil)  Arsenic  Cadmium  X X X X X X X X X X X X X X X X X X X	X	0
Cadmium		9
Chromium    X   X   X   X   X   X   X   X   X	X	9
Copper	X	9
Company   Comp	X	9
Mercury	X	9
Nickel   N	X	9
Selenium	X	0 9
X   X   X   X   X   X   X   X   X   X	X	0 9
PAH by GCMS       All       X       <	X	0 9
PCBs (vs Aroclor 1254)  All  All  X X X X X X X X X X X X X X X X X X	X	0 9
PCBs (vs Aroclor 1254)       All       Image: square of the content of the co	X	0
pH       All       x	X	0 2
Sample description All XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		0 9
	V	0
	X	9
Total Organic Carbon All X	X	0 3

# **ALcontrol Laboratories Analytical Services**

100723-15 SDG: **Customer:** Entec UK Ltd Steve Dooley Job: H\_ENTEC\_SHW-24 Attention:

**Client Reference:** 26999

Order No.: 228113 KL056 DSDC Bicester 91932 Location: **Report No:** 

			1858022		1858288	1858312		1858332	1858380		1858410		1000440	1828112	1858493		1858520			1858555		
			WSA1		WSA2	WSA3		WSA3	WSE11		WSE11		¥000	WSE12	WSE12		WSE13			WSE14		
			1.00 - 1.30		1.25 - 1.35	0.10 -0.30		2.50 - 2.70	0.10 - 0.30		0.80 - 1.00			0.10 - 0.30	2.00 - 2.30		0.20 - 0.40			0.40 - 0.70	lotal	1
		1kgTUB	250g Amber Jar	1kgTUB	250g Amber Jar	1kgTUB	JEOG Ambor los	250g Amber Jar	1kgTUB	1kgTUB	250g Amber Jar	1kgTUB	250g Amber Jar	60g VOC	250g Amber Jar	1kgTUB	250g Amber Jar	1kg TUB	250g Amber Jar	60g VOC		
TPH c6-40 Value of soil	All				X	Ť	t	X						t	X						0	
TPH CWG GC (S)	All					Ť	Ť	Ī		П			X	Ť	T				X		0	
VOC MS (S)	All					T		Γ					7	X	T	Γ				X	0 2	
Water Soluble Sulphate 2:1	All		X		X	>	<b>(</b>	X			X		X		X	<u>.</u>	X		X		0 9	

## **ALcontrol Laboratories Analytical Services**

100723-15 Entec UK Ltd SDG: **Customer:** Job: H\_ENTEC\_SHW-24 Attention: Steve Dooley

**Client Reference:** 26999 Order No.: 228113

KL056 DSDC Bicester 91932 Location: Report No:

## **Sample Descriptions**

#### **Grain Sizes:**

<0.063mm very fine, 0.063mm - 0.1mm fine, 0.1mm - 2mm medium, 2mm - 10mm coarse, >10mm very coarse

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions
1858022	WSA1	1.00 - 1.30	Light Brown	Sandy Clay Loam	0.1 - 2 mm	Stones
1858288	WSA2	1.25 - 1.35	Light Brown	Sandy Clay	0.1 - 2 mm	Stones
1858312	WSA3	0.10 - 0.30	Dark Brown	Clay Loam	<0.063 mm	Stones
1858332	WSA3	2.50 - 2.70	Dark Brown	Silty Clay Loam	<0.063 mm	N/A
1858410	WSE11	0.80 - 1.00	Light Brown	Sandy Loam	0.063 - 0.1 mm	N/A
1858445	WSE12	0.10 - 0.30	Light Brown	Sandy Clay	0.1 - 2 mm	Stones
1858493	WSE12	2.00 - 2.30	Dark Brown	Clay	<0.063 mm	None
1858520	WSE13	0.20 - 0.40	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones
1858555	WSE14	0.40 - 0.70	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

## **ALcontrol Laboratories Analytical Services**

 SDG:
 100723-15
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

 Client Reference:
 26999
 Order No.:
 228113

 Location:
 KL056 DSDC Bicester
 Report No:
 91932

## **Test Completion dates**

SDG reference: 100723-15

Lab Sample No(s)	1858022	1858288	1858312	1858332	1858380	1858410	1858445	1858493	1858520	1858555
Customer Sample Ref.	WSA1	WSA2	WSA3	WSA3	WSE11	WSE11	WSE12	WSE12	WSE13	WSE14
Depth	1.00 - 1.30	1.25 - 1.35	0.10 - 0.30	2.50 - 2.70	0.10 - 0.30	0.80 - 1.00	0.10 - 0.30	2.00 - 2.30	0.20 - 0.40	0.40 - 0.70
Туре	SOLID									
Ammonium Soil by Titration	27/07/2010	27/07/2010	27/07/2010	27/07/2010		27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010
Asbestos Containing Material Screen					23/07/2010		23/07/2010			23/07/2010
Asbestos Identification					26/07/2010					
Boron Water Soluble	27/07/2010	27/07/2010	27/07/2010	27/07/2010		27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010
EPH CWG (Aliphatic) GC (S)							27/07/2010			27/07/2010
EPH CWG (Aromatic) GC (S)							27/07/2010			27/07/2010
GRO by GC-FID (S)							29/07/2010			29/07/2010
Hexavalent Chromium (s)	27/07/2010	27/07/2010	27/07/2010	27/07/2010		27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010
Metals by iCap-OES (Soil)	27/07/2010	27/07/2010	27/07/2010	27/07/2010		27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010
PAH by GCMS	27/07/2010						27/07/2010			28/07/2010
PCBs (vs Aroclor 1254)							29/07/2010			29/07/2010
рН	27/07/2010	27/07/2010	27/07/2010	27/07/2010		27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010
Sample description	26/07/2010	23/07/2010	23/07/2010	23/07/2010		23/07/2010	26/07/2010	26/07/2010	26/07/2010	23/07/2010
Semi Volatile Organic Compounds							27/07/2010			27/07/2010
Total Organic Carbon	27/07/2010		27/07/2010	27/07/2010						
TPH c6-40 Value of soil		29/07/2010		29/07/2010				28/07/2010		
TPH CWG GC (S)							29/07/2010			29/07/2010
VOC MS (S)							27/07/2010			27/07/2010
Water Soluble Sulphate 2:1	27/07/2010	27/07/2010	28/07/2010	28/07/2010		28/07/2010	27/07/2010	27/07/2010	27/07/2010	28/07/2010

# **ALcontrol Laboratories Analytical Services**

Report No:

100723-15 SDG

Job: Client Reference: H\_ENTEC\_SHW-24

26999

Location: KL056 DSDC Bicester

Entec UK Ltd **Customer:** Attention: Steve Dooley 228113 Order No.:

	C	Comple D.f	1410 - 1		14/0.40	14/0 - 0		14/010		WOEAR	14/0=	
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSA1		WSA2	WSA3		WSA3		WSE11	WSE11	
M mCERTS accredited.		Donth (m)	4.00 4.00		4.054.05	0.40000		0.50 0.70		0.40000	0.00 4.00	
aq Aqueous / settled sample. iss.filt Dissolved / filtered sample.		Depth (m)	1.00 - 1.30		1.25 - 1.35	0.10 - 0.30		2.50 - 2.70		0.10 - 0.30	0.80 - 1.00	
t.unfilt Total / unfiltered sample.		ample Type	Soil/Solid		Soil/Solid	Soil/Solid		Soil/Solid		Soil/Solid	Soil/Solid	
* subcontracted test.		te Sampled	21/07/2010		21/07/2010	21/07/2010		21/07/2010		21/07/2010	21/07/2010	
** % recovery of the surrogate		te Received	23/07/2010		23/07/2010	23/07/2010		23/07/2010		23/07/2010	23/07/2010	
standard to check the efficiency of the method. The results of th		SDG Ref	100723-15		100723-15	100723-15		100723-15		100723-15	100723-15	
individual compounds within	Lab Sa	mple No.(s)	1858022		1858288	1858312		1858332		1858380	1858410	
the samples are not corrected for this recovery.												
Component	LOD/Units	Method										
Asbestos Containing	-	TM001								Possible ACM		
Material Screen										1 000,010 / 10111		
Ammoniacal Nitrogen,	<15 mg/kg	TM024	<15		<15	<15		<15			<15	
exchangeable as NH4				М	М		М		М			
Sulphate, 2:1 water soluble	<0.003 g/l	TM098	0.0404		0.0473	1.13		1.63			0.0166	
				М	M		М		М			
Soil Organic Matter (SOM)	<0.35 %	TM132	0.381			1.65		2.02				
				#			#		#			
pH	1 pH Units	TM133	8.4		8.57	6.85		7.51			7.66	
				М	M		М		М			
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6		<0.6	<0.6		<0.6			<0.6	
				#	#		#		#			
TPH >C6-C8	<10 mg/kg	TM154			<10			<10				
TDU - 00 0 12	.42 "	T1										
TPH >C8-C10	<10 mg/kg	TM154			<10			<10				
TDU > C40 C40	410 "	TNACA			-40			-10				
TPH >C10-C12	<10 mg/kg	TM154			<10			<10				
TDU > C40 C40	410 "	TRACE			-40			-10				
TPH >C12-C16	<10 mg/kg	TM154			<10			<10				
TDU > C46 C24	<10 "·	TMACA			240			-40				
TPH >C16-C21	<10 mg/kg	TM154			<10			<10				
TPH >C21-C40	<10 mg/kg	TM154			<10			19.7				
11 11 /021-040	~ 10 mg/kg	1 IVI 104			~10			19.7				
TPH >C6-C40	<10 mg/kg	TM154			<10			19.7				
1111700-040	~ 10 mg/kg	1 IVI 1 34			<10 #			19.7	#			
Arsenic	<0.6 mg/kg	TM181	13.9		21	15.6		4.85	#		8.96	
	J.J. J. Hig/kg	1 10 1 10 1	10.5	М	Z 1	13.0	М	7.00	м		0.90	
Cadmium	<0.02	TM181	0.257	141	0.235	0.464	ivi	0.194	:#1		0.298	
	mg/kg		0.201	М	0.233 <b>M</b>	0.707	М	5.154	М		5.250	
Chromium	<0.9 mg/kg	TM181	18.4		15.7	51.2	441	34.4			20	
				М	13.7 <b>M</b>	J <u>z</u>	М	<b>-</b> 7.7	М			
Copper	<1.4 mg/kg	TM181	11.4		15.9	16.6		12.6			10.8	
				м	10.5 <b>M</b>		М	.2.0	М		.0.0	
Lead	<0.7 mg/kg	TM181	9.42		11.3	19.2	401	9.58			21.6	
	.59		· ·-	М	M		М		М			
Mercury	<0.14	TM181	<0.14		<0.14	<0.14		<0.14			<0.14	
	mg/kg			М	М		М		М			
Nickel	<0.2 mg/kg	TM181	25.7		31	36		19.4			15.8	
				М	M		М		М			
Selenium	<1 mg/kg	TM181	<1		<1	1.39		1.31			<1	
				#	#		#		#			
Zinc	<1.9 mg/kg	TM181	51.2		56.9	108		41.9			47.5	
				М	M		М		М			
Boron, water soluble	<1 mg/kg	TM222	<1		<1	2.37		5.16			<1	
				М	M		М		М			
												_
												_

# **ALcontrol Laboratories Analytical Services**

Report No:

100723-15 SDG

H\_ENTEC\_SHW-24 Job: Client Reference:

26999

Location: KL056 DSDC Bicester

Entec UK Ltd **Customer:** Attention: Steve Dooley 228113 Order No.:

					·			
PAH	by GCMS							
	Results Legend	Customer	Sample Ref.	WSA1				
	ISO17025 accredited.  mCERTS accredited.							
aq	Aqueous / settled sample.		Depth (m)					
	Dissolved / filtered sample. Total / unfiltered sample.		ample Type	Soil/Solid				
*	subcontracted test.		ite Sampled	21/07/2010				
**	% recovery of the surrogate standard to check the efficiency		te Received	23/07/2010				
	of the method. The results of the		SDG Ref mple No.(s)	100723-15				
	individual compounds within the samples are not corrected	Lab Sa	mpie No.(s)	1858022				
	for this recovery.							
Compo		LOD/Units	Method					
Naphth	nalene-d8 %	%	TM218	93.7				
recove	ry**							
	phthene-d10 %	%	TM218	94				
recove								
	nthrene-d10 %	%	TM218	94.3				
Chryso	ry^^ ene-d12 % recovery**	%	TM218	91.8				
Ciliyse	rile-u12 % recovery	70	1101210	91.0				
Pervler	ne-d12 % recovery**	%	TM218	92.7				
,	,	,,,						
Naphth	nalene	<0.009	TM218	<0.009				
		mg/kg		M				
Acenap	phthylene	<0.012	TM218	<0.012				
	1.0	mg/kg	T	M				
Acenar	phthene	<0.008	TM218	<0.008				
Fluorer	ne	mg/kg <0.01	TM218	<b>M</b> <0.01				
. Idolel		mg/kg	1 1712 10	<0.01 <b>M</b>				
Phenar	nthrene	<0.015	TM218	<0.015				
27.01		mg/kg		M				
Anthra	cene	<0.016	TM218	<0.016				
		mg/kg		М				
Fluorar	nthene	<0.017	TM218	<0.017				
<b>D</b>		mg/kg	T	M				
Pyrene		<0.015	TM218	<0.015				
Renz/o	a)anthracene	mg/kg <0.014	TM218	<b>M</b> <0.014				
Deliz(a	yanunacene	<0.014 mg/kg	1 IVIZ 10	<0.014 <b>M</b>				
Chryse	ene	<0.01	TM218	<0.01				
,		mg/kg		M				
Benzo(	(b)fluoranthene	<0.015	TM218	<0.015				
	` ′	mg/kg		М				
Benzo(	(k)fluoranthene	<0.014	TM218	<0.014				
		mg/kg		M				
Benzo(	(a)pyrene	<0.015	TM218	<0.015				
Indono	(1,2,3-cd)pyrene	mg/kg	TM218	<b>M</b> <0.018				
mueno	(1,2,5-ca)pyrene	<0.018 mg/kg	1101210	<0.016 <b>M</b>				
Dibenz	o(a,h)anthracene	<0.023	TM218	<0.023				
	(=,,=	mg/kg		М				
Benzo(	(g,h,i)perylene	<0.024	TM218	<0.024				
		mg/kg		М				
Polyard	omatic hydrocarbons,	<0.118	TM218	<0.118				
Total U	JSEPA 16	mg/kg		М				
							-	

# **ALcontrol Laboratories Analytical Services**

Report No:

100723-15 SDG

Job: Client Reference: H\_ENTEC\_SHW-24

26999

Location: KL056 DSDC Bicester

Entec UK Ltd **Customer:** Attention: Steve Dooley 228113 Order No.:

Results Legend	Customan	Sample Ref.	WSE12	WSE12	WSE13	WSE14	
# ISO17025 accredited.	Customer	cample Kel.	VVSE12	VV5E12	VV5E13	VV5E14	
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)	0.10 - 0.30	2.00 - 2.30	0.20 - 0.40	0.40 - 0.70	
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	
* subcontracted test.		te Sampled	21/07/2010	21/07/2010	21/07/2010	21/07/2010	
** % recovery of the surrogate standard to check the efficiency		te Received	23/07/2010	23/07/2010	23/07/2010	23/07/2010	
of the method. The results of th		SDG Ref	100723-15	100723-15	100723-15	100723-15	
individual compounds within the samples are not corrected	Lab Sa	mple No.(s)	1858445	1858493	1858520	1858555	
for this recovery.							
Component	LOD/Units	Method					
Asbestos Containing	-	TM001	No ACM Detected			No ACM Detected	
Material Screen Ammoniacal Nitrogen,	<15 mg/kg	TM024	<15	<15	<15	<15	
exchangeable as NH4	110 Hig/kg	TWOZŦ	110 M	110 M	110 M	110 M	
Sulphate, 2:1 water soluble	<0.003 g/l	TM098	0.103	1.73	0.0209	0.274	
			M	M	M	M	
рН	1 pH Units	TM133	8.44 <b>M</b>	4.09 <b>M</b>	7.76 <b>M</b>	4.89 <b>M</b>	
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6	<0.6	<0.6	<1.2	
			#	#	#	#	
TPH >C6-C8	<10 mg/kg	TM154		<10			
TPH >C8-C10	<10 mg/kg	TM154		<10			
1111/00-010	< 10 Hig/kg	1 IVI 1 54		<b>~10</b>			
TPH >C10-C12	<10 mg/kg	TM154		<10			
TDU 040 5 1-							
TPH >C12-C16	<10 mg/kg	TM154		<10			
TPH >C16-C21	<10 mg/kg	TM154		<10			
TPH >C21-C40	<10 mg/kg	TM154		209			
TPH >C6-C40	<10 mg/kg	TM154		227			
1111700-040	~ 10 mg/kg	1 IVI 1 34		221 #			
Arsenic	<0.6 mg/kg	TM181	15.4	3.53	357	9.18	
0.1.	2.5	T	M	M	M	M	
Cadmium	<0.02	TM181	0.265 <b>M</b>	0.0799 <b>M</b>	3.58 <b>M</b>	0.631 <b>M</b>	
Chromium	mg/kg <0.9 mg/kg	TM181	32.2	33.8	83.8	37.2	
			М	М	М	М	
Copper	<1.4 mg/kg	TM181	21.5	29	351	281	
Lead	<0.7 mg/kg	TM181	30.6	12.6	M 423	<b>M</b> 34.6	
Leau	<0.7 mg/kg	TIVITOT	30.0 M	12.0 <b>M</b>	423 <b>M</b>	34.0 M	
Mercury	<0.14	TM181	<0.14	<0.14	<0.14	<0.14	
	mg/kg		M	М	М	М	
Nickel	<0.2 mg/kg	TM181	23.6	10.2	115	73.2	
Selenium	<1 mg/kg	TM181	1.77	1.46	<b>M</b> 24.5	1.29	
			#	#	#	#	
Zinc	<1.9 mg/kg	TM181	74.1	22.2	279	169	
Danes water calcula	44	TN4000	M	M	M	M	
Boron, water soluble	<1 mg/kg	TM222	1.55 <b>M</b>	1.64 <b>M</b>	6.91 <b>M</b>	<1 <b>M</b>	

# **ALcontrol Laboratories Analytical Services**

Report No:

100723-15 SDG

H\_ENTEC\_SHW-24 Job: Client Reference:

26999

Location: KL056 DSDC Bicester

Entec UK Ltd **Customer:** Attention: Steve Dooley 228113 Order No.:

				- 1		
PAH by GCMS						
Results Legend	Customer	Sample Ref.	WSE12	WSE14		
# ISO17025 accredited.  M mCERTS accredited.						
aq Aqueous / settled sample.		Depth (m)	0.10 - 0.30	0.40 - 0.70		
diss.filt Dissolved / filtered sample.	S	ample Type	Soil/Solid	Soil/Solid		
tot.unfilt Total / unfiltered sample.  * subcontracted test.		ate Sampled	21/07/2010	21/07/2010		
** % recovery of the surrogate		te Received	23/07/2010	23/07/2010		
standard to check the efficiency		SDG Ref	100723-15	100723-15		
of the method. The results of the individual compounds within	Lab Sa	ample No.(s)	1858445	1858555		
the samples are not corrected						
for this recovery.	100/11/1	Mathad				
Component	LOD/Units	Method				
Naphthalene-d8 %	%	TM218	94	98.2		
recovery**	%	TN4040	93.9	405		
Acenaphthene-d10 % recovery**	70	TM218	93.9	105		
Phenanthrene-d10 %	%	TM218	95	99.9		
recovery**	/0	TIVIZIO	33	33.3		
Chrysene-d12 % recovery**	%	TM218	92	70.7		
, , , , , , , , , , , , , , , , , , , ,						
Perylene-d12 % recovery**	%	TM218	94	61.6		
Naphthalene	<0.009	TM218	0.0408	0.104		
•	mg/kg		М	М		
Acenaphthylene	<0.012	TM218	<0.012	0.0124		
	mg/kg	_	M	M		
Acenaphthene	<0.008	TM218	0.0129	<0.008		
FI	mg/kg	T14040	M	M		
Fluorene	<0.01	TM218	<0.01	<0.01		
Phononthrone	mg/kg	TMO40	0.204	0.150		
Phenanthrene	<0.015	TM218	0.294	0.159 M		
Anthracene	mg/kg	TM218	0.0364	0.0188		
Anthracene	<0.016 mg/kg	I IVIZ 18	0.0364 <b>M</b>	0.0188 <b>M</b>		
Fluoranthene	<0.017	TM218	0.434	0.0813		
cordinatorio	mg/kg	1171210	0.434 M	0.0013 <b>M</b>		
Pyrene	<0.015	TM218	0.343	0.069		
, ,,,,,,	mg/kg		М	М		
Benz(a)anthracene	<0.014	TM218	0.246	0.0361		
, ,	mg/kg		М	М		
Chrysene	<0.01	TM218	0.252	0.0443		
	mg/kg		M	М		
Benzo(b)fluoranthene	<0.015	TM218	0.319	0.0452		
	mg/kg		M	M		
Benzo(k)fluoranthene	<0.014	TM218	0.128	<0.014		
	mg/kg		M	M		
Benzo(a)pyrene	<0.015	TM218	0.221	0.024		
Indeno(1,2,3-cd)pyrene	mg/kg	TM218	M	<b>M</b> <0.018		
indeno(1,2,3-cd)pyrene	<0.018	I IVIZ 10	0.121 <b>M</b>	<0.016 <b>M</b>		
Dibenzo(a,h)anthracene	mg/kg <0.023	TM218	0.0393	<0.023		
Dibenzo(a,rr)antinacene	mg/kg	TIVIZIO	0.0000 M	10.025 M		
Benzo(g,h,i)perylene	<0.024	TM218	0.159	<0.024		
	mg/kg		М	М		
Polyaromatic hydrocarbons,	<0.118	TM218	2.65	0.593		
Total USEPA 16	mg/kg		М	М		
	, ,					

# **ALcontrol Laboratories Analytical Services**

100723-15 SDG

Job: Client Reference: H\_ENTEC\_SHW-24

26999

Entec UK Ltd **Customer:** Attention: Steve Dooley Order No.: 228113

Location:	KL056 D	SDC Bice	ester	Rep	ort No: 919	932	
PCBs (vs Aroclor 125	4)						
Results Legend	Customer	Sample Ref.	WSE12	WSE14			
# ISO17025 accredited.  M mCERTS accredited.  aq diss.filt Dissolved / filtered sample.  tot.unfilt Total / unfiltered sample.  * subcontracted test.  * % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Da Da Lab Sa	Depth (m) ample Type ate Sampled te Received SDG Ref ample No.(s)	0.10 - 0.30 Soil/Solid 21/07/2010 23/07/2010 100723-15 1858445	0.40 - 0.70 Soil/Solid 21/07/2010 23/07/2010 100723-15 1858555			
Component	LOD/Units	Method					
PCBs (vs Aroclor 1254)	<0.035 mg/kg	TM070	<0.035 #	<0.035 #			

# **ALcontrol Laboratories Analytical Services**

100723-15 SDG

Job: Client Reference: H\_ENTEC\_SHW-24

26999

Location: KL056 DSDC Bicester **Customer:** Entec UK Ltd Attention: Steve Dooley 228113 Order No.: Report No: 91932

Results Legend # ISO17025 accredited. # M MCERTS accredited. # GERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * subcontracted test. * % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected	Customer S S Da	Sample Ref.  Depth (m) ample Type	WSE12 0.10 - 0.30	WSE14		
M mCERTs accredited. Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.  ** bubcontracted test. ** /* recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected	Da		0.10 - 0.30			
	Lab Sa	te Sampled te Received SDG Ref mple No.(s)	Soil/Solid 21/07/2010 23/07/2010 100723-15 1858445	0.40 - 0.70 Soil/Solid 21/07/2010 23/07/2010 100723-15 1858555		
	LOD/Units	Method				
Phenol	<0.1 mg/kg	TM157	<0.1	<0.1		
Pentachlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1		
n-Nitroso-n-dipropylamine	<0.1 mg/kg	TM157	<0.1	<0.1		
Nitrobenzene	<0.1 mg/kg	TM157	<0.1	<0.1		
Isophorone	<0.1 mg/kg	TM157	<0.1	<0.1		
Hexachloroethane	<0.1 mg/kg	TM157	<0.1	<0.1		
Hexachlorocyclopentadiene	<0.1 mg/kg	TM157	<0.1	<0.1		
Hexachlorobutadiene	<0.1 mg/kg	TM157	<0.1	<0.1		
Hexachlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1		
n-Dioctyl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
Dimethyl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
Diethyl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
n-Dibutyl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
Dibenzofuran	<0.1 mg/kg	TM157	<0.1	<0.1		
Carbazole	<0.1 mg/kg	TM157	<0.1	<0.1		
Butylbenzyl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
bis(2-Ethylhexyl) phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
bis(2-Chloroethoxy)methane	<0.1 mg/kg	TM157	<0.1	<0.1		
bis(2-Chloroethyl)ether	<0.1 mg/kg	TM157	<0.1	<0.1		
Azobenzene	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Nitrophenol	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Nitroaniline	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Methylphenol	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Chlorophenylphenylether	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Chloroaniline	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Chloro-3-methylphenol	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Bromophenylphenylether	<0.1 mg/kg	TM157	<0.1	<0.1		
3-Nitroaniline	<0.1 mg/kg	TM157	<0.1	<0.1		
2-Nitrophenol	<0.1 mg/kg	TM157	<0.1	<0.1		
2-Nitroaniline	<0.1 mg/kg	TM157	<0.1	<0.1		
2-Methylphenol	<0.1 mg/kg	TM157	<0.1	<0.1		
1,2,4-Trichlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1		
2-Chlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1		
2,6-Dinitrotoluene	<0.1 mg/kg	TM157	<0.1	<0.1		
2,4-Dinitrotoluene	<0.1 mg/kg	TM157	<0.1	<0.1		
2,4-Dimethylphenol	<0.1 mg/kg	TM157	<0.1	<0.1		
2,4-Dichlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1		
2,4,6-Trichlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1		
2,4,5-Trichlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1		

# **ALcontrol Laboratories Analytical Services**

Order No.:

Report No:

100723-15 SDG

H\_ENTEC\_SHW-24 Job: Client Reference:

26999

Location: KL056 DSDC Bicester

Entec UK Ltd **Customer:** Attention: Steve Dooley 228113

						Joint No.		
Semi	i Volatile Organic			MOE40	WOE44			
M aq diss.filt tot.unfilt * **	ISO17025 accredited. mCERTS accredited. TCERTS accredited. Dissolved / filtered sample. Dissolved / filtered sample. Total / unfiltered sample. subcontracted test. % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	S Da Da Lab Sa	Depth (m) sample Type ate Sampled te Received SDG Ref ample No.(s)	WSE12 0.10 - 0.30 Soil/Solid 21/07/2010 23/07/2010 100723-15 1858445	WSE14  0.40 - 0.70 Soil/Solid 21/07/2010 23/07/2010 100723-15 1858555			
Compo	onent chlorobenzene	<0.1 mg/kg	Method TM157	<0.1	<0.1			
	chlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1			
	chlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1			
2-Chlo	ronaphthalene	<0.1 mg/kg	TM157	<0.1	<0.1			
2-Meth	nylnaphthalene	<0.1 mg/kg	TM157	0.18	0.114			
Acena	phthylene	<0.1 mg/kg	TM157	<0.1	<0.1			
Acena	phthene	<0.1 mg/kg	TM157	<0.1	<0.1			
Anthra	cene	<0.1 mg/kg	TM157	<0.1	<0.1			
Benzo	(a)anthracene	<0.1 mg/kg	TM157	0.402	<0.1			
Benzo	(b)fluoranthene	<0.1 mg/kg	TM157	0.313	<0.1			
Benzo	(k)fluoranthene	<0.1 mg/kg	TM157	0.403	<0.1			
Benzo	(a)pyrene	<0.1 mg/kg	TM157	0.513	<0.1			
Benzo	(g,h,i)perylene	<0.1 mg/kg	TM157	0.25	<0.1			
Chryse	ene	<0.1 mg/kg	TM157	0.545	<0.1			
Fluora	nthene	<0.1 mg/kg	TM157	0.863	<0.1			
Fluore		<0.1 mg/kg	TM157	<0.1	<0.1			
	(1,2,3-cd)pyrene	<0.1 mg/kg	TM157	0.238	<0.1			
	nthrene	<0.1 mg/kg	TM157	0.701	0.147			
Pyrene		<0.1 mg/kg	TM157	0.756 <0.1	<0.1			
Naphth	zo(a,h)anthracene	<0.1 mg/kg	TM157	<0.1	<0.1			
DIDCHZ	o(a,rr)aritiracerie	-o.1 mg/kg	TWITO	-0.1	-0.1			

# **ALcontrol Laboratories Analytical Services**

100723-15 SDG

Job: Client Reference: H\_ENTEC\_SHW-24

26999

KL056 DSDC Bicester Location:

Entec UK Ltd **Customer:** Attention: Steve Dooley 228113 Order No.: 91932 **Report No:** 

TPH CWG (S)						
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSE12	WSE14		
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)	0.10 - 0.30	0.40 - 0.70		
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Soil/Solid	Soil/Solid		
* subcontracted test.		te Sampled te Received	21/07/2010 23/07/2010	21/07/2010 23/07/2010		
standard to check the efficiency		SDG Ref	100723-15	100723-15		
of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1858445	1858555		
the samples are not corrected for this recovery.						
Component	LOD/Units	Method	47	24		
GRO Surrogate % recovery**	%	TM089	47	34		
GRO >C5-C12	<0.044	TM089	<0.044	<0.044		
Benzene	mg/kg <0.01	TM089	<0.01	<0.01		
Ethydhanzana	mg/kg	TM089	<b>M</b> <0.003	<0.003		
Ethylbenzene	<0.003 mg/kg	I IVIU09	<0.003 M	<0.003 <b>M</b>		
Toluene	<0.002 mg/kg	TM089	<0.002 <b>M</b>	<0.002 <b>M</b>		
m,p-Xylene	<0.006	TM089	<0.006	<0.006		
o-Xylene	mg/kg <0.003	TM089	<0.003	<0.003		
	mg/kg		М	M		
m,p,o-Xylene	<0.01 mg/kg	TM089	<0.01 <b>M</b>	<0.01 <b>M</b>		
BTEX, Total	<0.01	TM089	<0.01	<0.01		
Methyl tertiary butyl ether	mg/kg <0.005	TM089	<0.005	<0.005		
(MTBE)	mg/kg		#	#		
Aliphatics >C5-C6	<0.01 mg/kg	TM089	<0.01	<0.01		
Aliphatics >C6-C8	<0.01	TM089	<0.01	<0.01		
Aliphatics >C8-C10	mg/kg <0.01	TM089	<0.01	<0.01		
	mg/kg					
Aliphatics >C10-C12	<0.01 mg/kg	TM089	<0.01	<0.01		
Aromatics >C6-C7	<0.01	TM089	<0.01	<0.01		
Aromatics >C7-C8	mg/kg <0.01	TM089	<0.01	<0.01		
Aramatica > FC9 FC40	mg/kg	TMOOO	z0.01	<b>~0.01</b>		
Aromatics >EC8-EC10	<0.01 mg/kg	TM089	<0.01	<0.01		
Aromatics >EC10-EC12	<0.01	TM089	<0.01	<0.01		
Total Aliphatics >C5-C12	mg/kg <0.01	TM089	<0.01	<0.01		
Total Aromatics >C6-C12	mg/kg <0.01	TM089	<0.01	<0.01		
	mg/kg					
Aliphatics >C12-C16	<0.1 mg/kg	TM173	12.5	18.1		
Aliphatics >C16-C21	<0.1 mg/kg	TM173	8.54	5.96		
Aliphatics >C16-C35	<0.1 mg/kg	TM173	44.6	19.5		
Ali-h-4i > 004 005		TM173	20.4	40.0		
Aliphatics >C21-C35	<0.1 mg/kg	1101173	36.1	13.6		
Aliphatics >C35-C44	<0.1 mg/kg	TM173	10.4	<0.1		
Aromatics >EC12-EC16	<0.1 mg/kg	TM173	24.4	6.1		
Aromatics >EC16-EC21	<0.1 mg/kg	TM173	40.7	6.32		
Aromatics >EC21-EC35	<0.1 mg/kg	TM173	97	11.4		
Aromatics >EC35-EC44	<0.1 mg/kg	TM173	31.7	5.96		
Aromatics >EC40-EC44	<0.1 mg/kg	TM173	11.9	1.94		
			67.5			
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173		37.6		
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173	194	29.8		
Total Aliphatics >C5-35	<0.1 mg/kg	TM173	57.2	37.6		
Total Aliphatics >C5-C44	<0.1 mg/kg	TM173	67.5	37.6		
·						
Total Aromatics >C5-35	<0.1 mg/kg	TM173	162	23.8		
Total Aromatics >C6-C44	<0.1 mg/kg	TM173	194	29.8		
Total Aliphatics & Aromatics	<0.1 mg/kg	TM173	219	61.4		
>C5-35 Total Aliphatics & Aromatics	<0.1 mg/kg	TM173	261	67.4		
>C5-C44	-o. i mg/kg	1101173	201	07.4		

# **ALcontrol Laboratories Analytical Services**

100723-15 SDG

H\_ENTEC\_SHW-24 Job: Client Reference:

26999

Location: KL056 DSDC Bicester

Entec UK Ltd **Customer:** Attention: Steve Dooley 228113 Order No.: Report No: 91932

						JOIL HO. J.		
VOC	MS (S)							
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	WSE12	WSE14			
М	mCERTS accredited.		Depth (m)	0.40 0.00	0.40 0.70			
aq diss.filt	Aqueous / settled sample. Dissolved / filtered sample.	S	ample Type	0.10 - 0.30 Soil/Solid	0.40 - 0.70 Soil/Solid			
tot.unfilt	Total / unfiltered sample. subcontracted test.		te Sampled	21/07/2010	21/07/2010			
**	% recovery of the surrogate	Da	te Received	23/07/2010	23/07/2010			
	standard to check the efficiency of the method. The results of the	I ob Se	SDG Ref imple No.(s)	100723-15	100723-15 1858555			
	individual compounds within the samples are not corrected	Lab Sa	imple No.(s)	1858445	1000000			
_	for this recovery.	100///	Mathad					
Dibron	nofluoromethane**	LOD/Units	Method TM116	86.2	104			
Dibion	iondorometriane	70	TWITTO	00.2	104			
Toluen	e-d8**	%	TM116	99.6	98.6			
4-Bron	nofluorobenzene**	%	TM116	119	114			
Dichlor	odifluoromethane	<0.004 mg/kg	TM116	<0.004 <b>M</b>	<0.004			
Chloro	methane	<0.007	TM116	<0.007	<0.007			
		mg/kg		#	#			
Vinyl C	Chloride	<0.01 mg/kg	TM116	<0.01 #	<0.01			
Bromo	methane	<0.013	TM116	<0.013	<0.013			
Chi	othono	mg/kg	TNAAAO	M	M <0.014			
Cnioro	ethane	<0.014 mg/kg	TM116	<0.014 <b>M</b>	<0.014			
Trichlo	rofluorormethane	<0.006	TM116	<0.006	<0.006			
1.1 Dis	chloroethene	mg/kg <0.01	TM116	<b>M</b> <0.01	<b>M</b> <0.01			
1.1-DIC	cnioroetnene	<0.01 mg/kg	TIVITIO	<0.01	<0.01			
Carbor	n Disulphide	<0.007	TM116	<0.007	<0.007			
Dioblor	omethane	mg/kg <0.01	TM116	<b>M</b> <0.01	<0.01			
DICITIO	Omethane	mg/kg	TIVITIO	~0.01 #	~0.01 #			
Methyl	Tertiary Butyl Ether	<0.011	TM116	<0.011	<0.011			
trans-1	-2-Dichloroethene	mg/kg <0.011	TM116	<b>M</b> <0.011	<0.011			
uuno i	2 Biomorocatorio	mg/kg	111110	м	М			
1.1-Did	chloroethane	<0.008	TM116	<0.008	<0.008			
cis-1-2	-Dichloroethene	mg/kg <0.005	TM116	<0.005	<0.005			
010 1 2	Diomoroculono	mg/kg	111110	м	М			
2.2-Did	chloropropane	<0.012	TM116	<0.012	<0.012			
Bromo	chloromethane	mg/kg <0.014	TM116	<b>M</b> <0.014	<b>M</b> <0.014			
		mg/kg		M	М			
Chloro	form	<0.008	TM116	<0.008 <b>M</b>	<0.008			
1.1.1-T	richloroethane	mg/kg <0.007	TM116	<0.007	<0.007			
		mg/kg		М	M			
1.1-Dic	chloropropene	<0.011 mg/kg	TM116	<0.011 <b>M</b>	<0.011 <b>M</b>			
Carbor	ntetrachloride	<0.014	TM116	<0.014	<0.014			
4 0 D:	.bl	mg/kg	TMAAC	M	M			
1.2-DIC	chloroethane	<0.005 mg/kg	TM116	<0.005 <b>M</b>	<0.005			
Benzei	ne	<0.009	TM116	<0.009	<0.009			
Trichlo	roethene	mg/kg <0.009	TM116	<0.009	<0.009			
Menio	roctriono	mg/kg	TIVITIO	<0.009 <b>M</b>	<0.009 M		 	
1.2-Dic	chloropropane	<0.012	TM116	<0.012	<0.012			
Dibrom	nomethane	mg/kg <0.009	TM116	<0.009	<0.009			
		mg/kg		M	М			
Bromo	dichloromethane	<0.007	TM116	<0.007 <b>M</b>	<0.007			
cis-1-3	-Dichloropropene	mg/kg <0.014	TM116	<0.014	<0.014			
		mg/kg		M	М			
Toluen	е	<0.005 mg/kg	TM116	<0.005 <b>M</b>	<0.005			
trans-1	-3-Dichloropropene	<0.014	TM116	<0.014	<0.014			
110-	rightor of	mg/kg	TNAAAO	-0.04	-0.04			
1.1.2-1	richloroethane	<0.01 mg/kg	TM116	<0.01 <b>M</b>	<0.01			
1.3-Dic	chloropropane	<0.007	TM116	<0.007	<0.007			
Tetroc	hloroethene	mg/kg <0.005	TM116	<b>*</b>	<b>*</b>			
reuaci	norocurone	mg/kg	TIVITIO	<0.005 <b>M</b>	<0.005 <b>M</b>			
Dibron	nochloromethane	<0.013	TM116	<0.013	<0.013			
1 2-014	promoethane	mg/kg <0.012	TM116	<0.012	<0.012			
1.Z-DIL	or or noctrial IC	mg/kg	TIVITIO	<0.012 <b>M</b>	<0.012 M			
Chorol	penzene	<0.005	TM116	<0.005	<0.005			
1,112	-Tetrachloroethane	mg/kg <0.01	TM116	<b>M</b> <0.01	<0.01			
		mg/kg		M	М			
Ethylbe	enzene	<0.004	TM116	<0.004	<0.004			
		mg/kg		M	М			

## **ALcontrol Laboratories Analytical Services**

100723-15 SDG

Job: H ENTEC SHW-24

**Client Reference:** 26999

KL056 DSDC Bicester Location:

**Customer:** Entec UK Ltd Attention: Steve Dooley

228113 Order No.: 91932 **Report No:** VOC MS (S) Customer Sample Ref. WSE12 WSE14 ISO17025 accredited mCERTS accredited.
Aqueous / settled sample.
Dissolved / filtered sample.
Total / unfiltered sample. Depth (m) 0.10 - 0.30 0.40 - 0.70 Sample Type Soil/Solid Soil/Solid **Date Sampled** 21/07/2010 21/07/2010 subcontracted test. subcontracted test.
% recovery of the surrogate
standard to check the efficiency
of the method. The results of the
individual compounds within
the samples are not corrected Date Received 23/07/2010 23/07/2010 SDG Ref 100723-15 100723-15 Lab Sample No.(s) 1858445 1858555 for this recovery Component LOD/Units Method TM116 <0.014 <0.014 p/m-Xylene <0.014 mg/kg <0.01 TM116 <0.01 <0.01 o-Xylene mg/kg М Styrene <0.01 TM116 <0.01 <0.01 mg/kg TM116 Bromoform < 0.01 < 0.01 < 0.01 М mg/kg М TM116 <0.005 <0.005 Isopropylbenzene < 0.005 М mg/kg 1.1.2.2-Tetrachloroethane TM116 <0.01 <0.01 <0.01 mg/kg 1.2.3-Trichloropropane <0.017 TM116 <0.017 <0.017 mg/kg М Bromobenzene <0.01 TM116 < 0.01 < 0.01 mg/kg TM116 < 0.011 <0.011 Propylbenzene < 0.011 mg/kg М <0.009 TM116 <0.009 <0.009 2-Chlorotoluene ma/ka 1.3.5-Trimethylbenzene <0.008 TM116 <0.008 <0.008 mg/kg 4-Chlorotoluene <0.012 TM116 <0.012 <0.012 mg/kg TM116 tert-Butylbenzene <0.012 <0.012 <0.012 mg/kg 1.2.4-Trimethylbenzene TM116 < 0.009 < 0.009 < 0.009 mg/kg <0.01 TM116 <0.01 sec-Butylbenzene <0.01 mg/kg 4-Isopropyltoluene <0.011 TM116 <0.011 <0.011 mg/kg М 1.3-Dichlorobenzene <0.006 TM116 <0.006 <0.006 mg/kg М M TM116 1.4-Dichlorobenzene < 0.005 < 0.005 < 0.005 mg/kg М TM116 <0.01 <0.01 n-Butylbenzene <0.01 mg/kg 1.2-Dichlorobenzene <0.012 TM116 <0.012 <0.012 mg/kg 1.2-Dibromo-3-chloropropan <0.014 TM116 <0.014 <0.014 mg/kg TM116 Tert-amyl methyl ether < 0.015 < 0.015 < 0.015 mg/kg 1.2.4-Trichlorobenzene TM116 <0.006 <0.006 < 0.006 mg/kg <0.012 TM116 Hexachlorobutadiene <0.012 <0.012 mg/kg Naphthalene <0.013 TM116 <0.013 <0.013 mg/kg М 1.2.3-Trichlorobenzene <0.006 TM116 <0.006 <0.006 mg/kg

## **ALcontrol Laboratories Analytical Services**

100723-15 SDG

H ENTEC SHW-24 Job:

**Client Reference:** 26999

Location: KL056 DSDC Bicester **Customer:** Attention:

Entec UK Ltd Steve Dooley

228113 Order No.: 91932 Report No:

## **ASSOCIATED AQC DATA**

### Ammonium Soil by Titration

Component	Method Code	QC 17
Exchangeable Ammonium as NH4	TM024	<b>97.42</b> 80.84 : 103.27

### **Boron Water Soluble**

Component	Method Code	QC 12	QC 16	QC 12
Water Soluble Boron	TM222	99.45	97.70	95.75
		82.59 : 112.64	82.59 : 112.64	82.59 : 112.64

### EPH CWG (Aliphatic) GC (S)

	Component	Method Code	QC 11	QC 19
Total	Aliphatics >C12-C35	TM173	<b>78.74</b> 66.13 : 101.56	<b>68.23</b> 60.00 : 116.88

### EPH CWG (Aromatic) GC (S)

Component	Method Code	QC 11	QC 19
Total Aromatics >EC12-EC35	TM173	<b>83.11</b> 64.00 : 112.00	<b>104.50</b> 64.98 : 117.66

### Hexavalent Chromium (s)

Component	Method Code	QC 10
Hexavalent Chromium	TM151	109.00
		76.40 : 131.80

## Metals by iCap-OES (Soil)

Component	Method Code	QC 19	QC 14	QC 10
Aluminium	TM181	<b>107.24</b> 95.21 : 133.11	<b>109.18</b> 95.21 : 133.11	<b>115.51</b> 95.21 : 133.11
Antimony	TM181	<b>108.62</b> 63.92 : 138.56	<b>108.11</b> 63.92 : 138.56	<b>91.90</b> 63.92 : 138.56
Arsenic	TM181	<b>109.04</b> 77.96 : 122.04	<b>97.33</b> 77.96 : 122.04	<b>95.52</b> 77.96 : 122.04
Barium	TM181	<b>101.71</b> 90.49 : 117.24	<b>103.38</b> 90.49 : 117.24	<b>111.11</b> 90.49 : 117.24
Beryllium	TM181	<b>107.07</b> 77.50 : 122.50	<b>106.24</b> 77.50 : 122.50	<b>93.48</b> 77.50 : 122.50
Boron	TM181	<b>105.37</b> 82.46 : 141.11	<b>105.28</b> 82.46 : 141.11	<b>114.95</b> 82.46 : 141.11

Client Reference:

# **ALcontrol Laboratories Analytical Services**

**SDG** 100723-15 **Job:** H\_ENTEC\_SHW-24

26999

Location: KL056 DSDC Bicester

Customer: Attention: Order No.:

**Report No:** 

Entec UK Ltd Steve Dooley 228113 91932

		QC 19	QC 14	QC 10
Cadmium	TM181	<b>106.22</b> 77.50 : 122.50	<b>104.80</b> 77.50 : 122.50	<b>90.62</b> 77.50 : 122.50
Chromium	TM181	<b>93.80</b> 82.90 : 117.10	<b>97.04</b> 82.90 : 117.10	<b>97.28</b> 82.90 : 117.10
Cobalt	TM181	<b>103.11</b> 78.26 : 121.74	<b>101.07</b> 78.26 : 121.74	<b>93.69</b> 78.26 : 121.74
Copper	TM181	<b>96.99</b> 86.52 : 113.48	<b>100.16</b> 86.52 : 113.48	<b>101.08</b> 86.52 : 113.48
Iron	TM181	<b>101.33</b> 93.59 : 123.28	<b>104.13</b> 93.59 : 123.28	<b>104.49</b> 93.59 : 123.28
Lead	TM181	<b>91.96</b> 81.22 : 118.78	<b>100.39</b> 81.22 : 118.78	<b>92.46</b> 81.22 : 118.78
Manganese	TM181	<b>91.22</b> 87.42 : 112.58	<b>97.52</b> 87.42 : 112.58	<b>95.89</b> 87.42 : 112.58
Mercury	TM181	<b>101.93</b> 72.27 : 127.73	<b>106.50</b> 72.27 : 127.73	<b>97.98</b> 72.27 : 127.73
Molybdenum	TM181	<b>105.31</b> 71.12 : 128.88	<b>106.25</b> 71.12 : 128.88	<b>91.26</b> 71.12 : 128.88
Nickel	TM181	<b>90.53</b> 81.27 : 118.73	<b>95.80</b> 81.27 : 118.73	<b>96.11</b> 81.27 : 118.73
Phosphorus	TM181	<b>97.05</b> 84.04 : 115.96	<b>98.06</b> 84.04 : 115.96	<b>98.28</b> 84.04 : 115.96
Selenium	TM181	<b>104.74</b> 72.61 : 127.39	<b>106.65</b> 72.61 : 127.39	<b>101.61</b> 72.61 : 127.39
Strontium	TM181	<b>95.99</b> 80.21 : 119.79	<b>97.15</b> 80.21 : 119.79	<b>99.03</b> 80.21 : 119.79
Thallium	TM181	<b>99.88</b> 73.04 : 126.96	<b>95.91</b> 73.04 : 126.96	<b>85.02</b> 73.04 : 126.96
Tin	TM181	<b>103.65</b> 71.55 : 128.45	<b>104.61</b> 71.55 : 128.45	<b>89.70</b> 71.55 : 128.45
Titanium	TM181	<b>100.75</b> 78.26 : 121.74	<b>100.48</b> 78.26 : 121.74	<b>109.68</b> 78.26 : 121.74
Vanadium	TM181	<b>98.21</b> 82.03 : 117.97	<b>99.10</b> 82.03 : 117.97	<b>99.10</b> 82.03 : 117.97
Zinc	TM181	<b>88.38</b> 77.50 : 122.50	<b>91.07</b> 77.50 : 122.50	<b>91.91</b> 77.50 : 122.50

### PAH by GCMS

Component	Method Code	QC 16	QC 19
Acenaphthene	TM218	<b>98.41</b> 72.57 : 113.17	<b>100.84</b> 72.57 : 113.17
Acenaphthylene	TM218	<b>88.37</b> 71.02 : 96.03	<b>93.67</b> 71.02 : 96.03
Anthracene	TM218	<b>92.49</b> 76.12 : 108.98	<b>96.94</b> 76.12 : 108.98
Benz(a)anthracene	TM218	<b>110.38</b> 78.66 : 118.62	<b>104.40</b> 78.66 : 118.62
Benzo(a)pyrene	TM218	<b>112.38</b> 80.21 : 117.00	<b>105.16</b> 80.21 : 117.00
Benzo(b)fluoranthene	TM218	<b>112.70</b> 81.65 : 115.86	<b>103.50</b> 81.65 : 115.86
Benzo(ghi)perylene	TM218	<b>107.93</b> 76.98 : 113.58	<b>98.49</b> 76.98 : 113.58
Benzo(k)fluoranthene	TM218	<b>108.07</b> 79.33 : 114.91	<b>95.24</b> 79.33 : 114.91

**Client Reference:** 

# **ALcontrol Laboratories Analytical Services**

100723-15 SDG H\_ENTEC\_SHW-24 Job:

26999

KL056 DSDC Bicester Location:

**Customer:** Entec UK Ltd Attention:

Steve Dooley Order No.: 228113 91932 **Report No:** 

		QC 16	QC 19
Chrysene	TM218	<b>111.82</b> 79.48 : 114.86	<b>94.65</b> 79.48 : 114.86
Dibenzo(ah)anthracene	TM218	<b>109.02</b> 78.93 : 113.23	<b>97.86</b> 78.93 : 113.23
Fluoranthene	TM218	<b>98.80</b> 77.73 : 113.38	<b>97.21</b> 77.73 : 113.38
Fluorene	TM218	<b>97.99</b> 71.81 : 113.08	<b>101.36</b> 71.81 : 113.08
Indeno(123cd)pyrene	TM218	<b>112.42</b> 79.11 : 114.44	<b>99.02</b> 79.11 : 114.44
Naphthalene	TM218	<b>96.75</b> 74.81 : 102.18	<b>88.05</b> 74.81 : 102.18
Phenanthrene	TM218	<b>97.38</b> 78.74 : 112.18	<b>99.27</b> 78.74 : 112.18
Pyrene	TM218	<b>96.97</b> 77.72 : 113.01	<b>95.77</b> 77.72 : 113.01

### PCBs (vs Aroclor 1254)

Component	Method Code	QC 19
PCBs (vs Aroclor 1254)	TM070	105.20
		75.18 : 122.16

### рΗ

Component	Method Code	QC 13
pH	TM133	<b>100.00</b> 97.90 : 102.35

### Semi Volatile Organic Compounds

0	Mathad Cada		
Component	Method Code	QC 11	QC 14
4-Bromophenylphenylether (Soil)	TM157	<b>89.39</b> 12.25 : 162.08	<b>89.80</b> 30.30 : 139.75
Benzo(a)anthracene (Soil)	TM157	<b>94.89</b> 38.70 : 146.05	<b>94.88</b> 27.20 : 137.40
Hexachlorobutadiene (Soil)	TM157	<b>90.24</b> 17.33 : 157.33	<b>91.91</b> 28.70 : 141.30
Naphthalene (Soil)	TM157	<b>92.01</b> 17.33 : 157.33	<b>93.80</b> 39.23 : 145.41
Nitrobenzene (Soil)	TM157	<b>89.65</b> 19.50 : 154.53	<b>91.73</b> 41.78 : 147.15
Phenol (Soil)	TM157	<b>92.68</b> 23.40 : 144.15	<b>93.40</b> 51.88 : 150.83

### Total Organic Carbon

Component	Method Code	QC 16	QC 10
Total Organic Carbon	TM132	<b>96.01</b> 88.75 : 104.70	<b>94.59</b> 88.75 : 104.70

## **ALcontrol Laboratories Analytical Services**

**SDG** 100723-15

Job: H ENTEC SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

**Customer:** Entec UK Ltd **Attention:** Steve Dooley

Order No.: 228113 Report No: 91932

#### TPH c6-40 Value of soil

Component	Method Code	QC 16	QC 16
Diesel QC	TM154	<b>92.68</b> 87.23 : 113.71	<b>93.69</b> 87.23 : 113.71
Lube Oil QC	TM154	<b>94.93</b> 88.71 : 110.56	<b>96.08</b> 88.71 : 110.56
TPH C6-40 Corrected	TM154	<b>93.80</b> 86.39 : 109.99	<b>94.89</b> 86.39 : 109.99

### Water Soluble Sulphate 2:1

Component	Method Code	QC 12	QC 15
Soluble SO4	TM098	101.46	85.91
		76.87 : 120.45	76.87 : 120.45

The above information details the reference name of the analytical quality control sample (AQC) that has been run with the samples contained in this report for the different methods of analysis.

The figure detailed is the percentage recovery result for the AQC.

The subscript numbers below are the percentage recovery lower control limit (LCL) and the upper control limit (UCL). The percentage recovery result for the AQC should be between these limits to be statistically in control.

# **ALcontrol Laboratories Analytical Services**

Order No.:

**Report No:** 

100723-15 SDG:

H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

KL056 DSDC Bicester Location:

**Customer:** Entec UK Ltd Attention: Steve Dooley 228113

91932

#### **Asbestos Identification**

	Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Customer Sample Ref.	26/7/10	Rhodri Williams	Typical of asbestos cement	Not Detected	Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

## **ALcontrol Laboratories Analytical Services**



## **Table of Results - Appendix**

SDG Number: 100723-15 Client: Entec UK Ltd Client Ref: 26999

REPOR	REPORT KEY  Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03x10-7								
NDP	No Determination Possible	#	ISO 17025 Accredited	*	Subcontracted Test	M	MCERTS Accredited		
NFD	No Fibres Detected	PFD	Possible Fibres Detected	»	Result previously reported (Incremental reports only)	EC	Equivalent Carbon (Aromatics C8-C35)		

NFD	No 1 lbres beteeted	PPD 1 OSSISIE 1 IS/CS Detected	(Incremental reports only)	EC	(Aromatics C8-C35)
Note: Metho		achievable due to various circumstances beyond our control			Wet/Dry
	Method No	Reference	Description		Sample <sup>1</sup>
	PM001		Preparation of Samples for Metals Analysis		Dry
	PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens Asbestos Containing Material	of soils for	Wet
	TM001	In - house Method	Determination of asbestos containing material by screening of	on solids	
	TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal N by titration on solids	Nitrogen as	Wet
	TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material		
	TM070	Modified: US EPA Method 8250 & 625	Determination of Total Polychlorinated Biphenyls (PCBÆs) as 1254 by GC-MS in Soils	Aroclor	Dry
	TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and B (MTBE) compounds by Headspace GC-FID (C4-C12)	TEX	
	TM098	Method 4500E, AWWA/APHA, 20th Ed., 1999	Determination of Sulphate using the Kone Analyser		Dry
	TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace	/ GC-MS	
	TM132	In - house Method	ELTRA CS800 Operators Guide		Dry
	TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Me	eter	Wet
	TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser		Wet
	TM154	In - house Method	Determination of Petroleum Hydrocarbons by EZ Flash GC-FI Carbon range C6- C40	D in the	Wet
	TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonice DCM/Acetone	ation in	Wet
	TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarb by GC-FID	ons in Soils	Dry
	TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo IC	P-OES	Dry
	TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers		Dry
	TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		Wet
	TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Wa	ter:soil) by	Dry

IRIS Emission Spectrometer

<sup>&</sup>lt;sup>1</sup> Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

## **APPENDIX**

#### **APPENDIX**

- Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following:
   NRA Leach tests, flash point, ammonium as NH<sub>4</sub> by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and
   TOF-MS TICS.
- 2. Samples will be run in duplicate upon request, but an additional charge may be incurred.
- 3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. Alcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.
- 4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
- 5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
- 6. When requested, the individual sub sample scheduled will be screened in house for the presence of large asbestos containing material fragments/pieces. If no asbestos containing material is found this will be reported as 'no asbestos containing material detected'. If asbestos containing material is detected it will be removed and analysed by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If asbestos containing material is present no further analysis will be undertaken. At no point is the fibre content of the soil sample determined.
- 7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.
- 8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.
- 9. NDP No determination possible due to insufficient/unsuitable sample.
- 10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals total metals must be requested separately.
- 11. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.
- 12. Results relate only to the items tested
- 13. **Surrogate recoveries** Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 130 %.
- Product analyses Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.
- 15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).
- 16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 14).
- 17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
- 18. Our MCERTS accreditation for PAHs by GCMS applies to all product types apart from Kerosene, where naphthalene only is not accredited.
- 19. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
- 19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.
- 20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
- 21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
- 22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
- 23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

Last updated 1 April 2010

### LIQUID MATRICES EXTRACTION SUMMARY

ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAH MS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GS MS
SVOC	DCM	LIQUID/LIQUID SHAKE	GC MS
FREE SULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST OCP/OPP	DCM	LIQUID/LIQUID SHAKE	GC MS
TRIAZINE HERBS	DCM	LIQUID/LIQUID SHAKE	GC MS
PHENOLS MS	DCM	SOLID PHASE EXTRACTION	GC MS
TPH by INFRA RED (IR)	TCE	LIQUID/LIQUID EXTRACTION	HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID EXTRACTION	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GC FID

#### **SOLID MATRICES EXTRACTION SUMMARY**

		WATRICES EXTRACTION SUMMART		
ANALYSIS	D/C OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	SISATANA
Solvent Extractable Matter	D&C	DCM	SOXTHERM	GRAVIMETRIC
Cyclohexane Ext. Matter	D&C	CYCLOHEXANE	SOXTHERM	GRAVIMETRIC
Thin Layer Chromatography	D&C	DCM	SOXTHERM	IATROSCAN
Elemental Sulphur	D&C	DCM	SOXTHERM	HPLC
Phenols by GCMS	WET	DCM	SOXTHERM	GC-MS
Herbicides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
Pesticides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
EPH (DRO)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Min oil)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Cleaned up)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH CWG by GC	D&C	HEXANE:ACETONE	END OVER END	GC-FID
PCB tot / PCB con	D&C	HEXANE:ACETONE	END OVER END	GC-MS
Polyaromatic Hydrocarbons (MS)	WET	HEXANE:ACETONE	Microwave TM218.	GC-MS
C8-C40 (C6-C40)EZ Flash	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Polyaromatic Hydrocarbons Rapid GC	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Semi Volatile Organic Compounds	WET	DCM:ACETONE	SONICATE	GC-MS

#### **Identification of Asbestos in Bulk Materials**

The results for asbestos identification for soil samples are obtained from possible Asbestos Containing Material, removed during the 'Screening of soils for Asbestos Containing Materials', which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

#### **Visual Estimation Of Fibre Content.**

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: -

Trace – Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in MDHS 100.

The identification of asbestos containing materials falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

#### 



Unit 7-8 Hawarden Business Park Manor Road (off Manor Lane) Hawarden

> Deeside CH5 3US Tel: (01244) 528700

Fax: (01244) 528701 email: mkt@alcontrol.com Website: www.alcontrol.com

Entec UK Ltd Canon Court North Abbey Lawn Abbey Foregate Shrewsbury Shropshire SY2 5DE

Attention: Steve Dooley

### **CERTIFICATE OF ANALYSIS**

 Date:
 28 July 2010

 Customer:
 H\_ENTEC\_SHW-24

Sample Delivery Group (SDG): 100723-33 Report No.: 91741

Your Reference: 26999

**Location:** KL056 DSDC Bicester

We received 10 samples on Friday July 23, 2010 and 10 of these samples were scheduled for analysis which was completed on Wednesday July 28, 2010. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Asbestos testing - we are not accredited for screening soil samples for asbestos fibres. We are only accredited to identify asbestos fibres in bulk material (ACM).

Approved By:

Menistan

**Iain Swinton** 

Operations Director - Land UK & Ireland



## **ALcontrol Laboratories Analytical Services**

 SDG:
 100723-33
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999

Location: KL056 DSDC Bicester Report No: 91741

## Received Sample Overview

Order No.:

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Sampled Date
1858925	SWA1		21/07/2010
1858966	SWC1		21/07/2010
1858994	SWC2		21/07/2010
1859051	SWC4		21/07/2010
1859368	SWC5		21/07/2010
1859388	SWC8		21/07/2010
1859442	SWD6		21/07/2010
1859457	SWD9		21/07/2010
1859405	SWE1		21/07/2010
1859421	SWE5		21/07/2010

Only received samples which have had analysis scheduled will be shown on the following pages.

# **ALcontrol Laboratories Analytical Services**

Order No.:

 SDG:
 100723-33
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999

Location: KL056 DSDC Bicester Report No: 91741

### LIQUID

Results Legend	Lab Sample No(s)			1858925		996898			1858994		00000	2000		1859368		1859388			1859405		1	1859421		1859442	)		1859457		
No Determination Possible	Customer Sample Ref.			SWA1		OWC			SWC2		0	CWC		SWC5		SWC8			SWE1			SWE5		SWD6	סואוסה		SWD9		
	Depth (m)																											,	T >+ >
	Container	11 green glass bottle	500ml Plastic	H2SO4	1l green glass bottle	500ml Plastic	HOSOA Some	11 green glass bottle	H2SO4	1l green glass bottle	500ml Plastic	11 green glass bottle	500ml Plastic	H2SO4	1l green glass bottle	F00ml Plastic	1l green glass bottle	500ml Plastic	H2SO4	1l green glass bottle	500ml Plastic	H2SO4	11 green glass bottle	500ml Plastic	H2SO4	500ml Plastic	H2SO4		
Alkalinity as CaCO3	All	Γ	X	П	,	X	Ť	X	(		X	T	X		,	<b>(</b>	Γ	X	Ī		X	T	>	X	Т	X	П	0 10	
Ammonium	All			X		>	<b>(</b>	T	X		7	<b>&lt;</b>		X		X			X			X	Ť	×	<u>ζ</u>	T	X	0 10	
Anions by Kone (w)	All	Γ	X		,	X		X	(		X		Х		)	<b>(</b>		Х			X	Ī	,	X	T	X	П	0 10	
Conductivity (at 20 deg.C)	All	Γ	X		,	X		X	(		X		Х		)	<b>(</b>		Х			X	T	,	X	T	×	П	0 10	
Dissolved Metals by ICP-MS	All		X		,	X		X	(		X		X		)	<b>(</b>		X			X	J	>	X	T	X		0 10	
EPH (DRO) (C10-C40) Aqueous (W)	All	X			X		>	<b>(</b>		X		X			X		X			X		,	X	Ι	X	(		0 10	
Mercury Dissolved	All	X			X		>	<b>(</b>		X		X			X		X			X		,	X		X	(		0 10	
pH Value	All		X		,	X		X	(		X		X		)	<b>(</b>		X			X		)	K	$\prod$	×		0 10	

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100723-33
 Customer:
 Entec UK Ltd

 Job:
 H\_ENTEC\_SHW-24
 Attention:
 Steve Dooley

Client Reference: 26999

Location: KL056 DSDC Bicester Report No: 91741

### **Test Completion dates**

Order No.:

SDG reference: 100723-33

Lab Sample No(s)	1858925	1858966	1858994	1859051	1859368	1859388	1859405	1859421	1859442	1859457
Customer Sample Ref.	SWA1	SWC1	SWC2	SWC4	SWC5	SWC8	SWE1	SWE5	SWD6	SWD9
Depth										
Туре	LIQUID									
Alkalinity as CaCO3	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010
Ammonium	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010
Anions by Kone (w)	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010
Conductivity (at 20 deg.C)	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010
Dissolved Metals by ICP-MS	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010
EPH (DRO) (C10-C40) Aqueous (W)	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010
Mercury Dissolved	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010
pH Value	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100723-33

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Report No: 91741

						011			
	Results Legend	Customer	Sample Ref.	SWA1	CMC4	SWC2	SWC4	CMCE	OWOO
#	ISO17025 accredited.	Customer	Sample Ket.	SWA1	SWC1	SWC2	SWC4	SWC5	SWC8
M aq	mCERTS accredited. Aqueous / settled sample.		Depth (m)						
diss.filt tot.unfilt	Dissolved / filtered sample. Total / unfiltered sample.		ample Type ite Sampled	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
*	subcontracted test. % recovery of the surrogate		te Received	21/07/2010 23/07/2010	21/07/2010 23/07/2010	21/07/2010 23/07/2010	21/07/2010 23/07/2010	21/07/2010 23/07/2010	21/07/2010 23/07/2010
	standard to check the efficiency of the method. The results of the		SDG Ref	100723-33	100723-33	100723-33	100723-33	100723-33	100723-33
	individual compounds within	Lab Sa	mple No.(s)	1858925	1858966	1858994	1859051	1859368	1859388
	the samples are not corrected for this recovery.								
Compo	nent ity, Total as CaCO3	LOD/Units <2 mg/l	Method TM043	170	210	285	235	210	180
Alkalili	ity, Total as CaCO3	\2 IIIg/I	1101043	#	210 #	265 #	235	210 #	160
NH4	niacal Nitrogen as	<0.3 mg/l	TM099	2.16 #	<0.3 #	0.33 #	0.388 #	<0.3 #	<0.3 #
Condu	ctivity @ 20 deg.C	<0.014 mS/cm	TM120	0.461 #	0.862	0.849 #	0.859 #	0.68 #	0.762 #
Arsenio	c (diss.filt)	<0.00012 mg/l	TM152	0.0047	0.00162	0.00785 #	0.00154 #	0.00144 #	0.00154 #
Boron	(diss.filt)	<0.0094 mg/l	TM152	0.036	0.0815	0.0839	0.0876	0.0811 #	0.0909
Cadmi	um (diss.filt)	<0.0001 mg/l	TM152	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001 #	<0.0001
Chrom	ium (diss.filt)	<0.00022 mg/l	TM152	0.00658	0.00615	0.00855	0.00683	0.00584 #	0.00382
Coppe	r (diss.filt)	<0.00085 mg/l	TM152	0.00113	<0.00085	0.00102	0.00102	0.00113	0.0011
Lead (	diss.filt)	<0.00002	TM152	0.000125	0.000077	0.000157	0.000074	0.000089	0.000044
Nickel	(diss.filt)	mg/l <0.00015 mg/l	TM152	0.00527 #	0.00366	0.00369	0.00399	0.00381	0.00251 #
Seleniu	um (diss.filt)	<0.00039	TM152	0.00241	0.000645	0.000899	0.00057	0.000569	0.000642
Zinc (d	iss.filt)	mg/l <0.00041	TM152	0.009 #	0.0168	0.0032	0.00837	0.0119	0.0374 #
	ange >C10 - C40	mg/l <0.046 mg/l	TM172	0.881	<0.046	0.0964	0.0558	<0.046	0.117
(aq) EPH B	and >C10-C12 (aq)	<0.01 mg/l	TM172	0.0259	<0.01	0.0145	<0.01	<0.01	<0.01
EPH B	and >C12-C16 (aq)	<0.01 mg/l	TM172	0.0497	<0.01	0.0311	<0.01	<0.01	0.0394
EPH B	and >C16-C21 (aq)	<0.01 mg/l	TM172	0.307	<0.01	0.0204	0.0207	<0.01	0.0239
EPH B	and >C21-C28 (aq)	<0.01 mg/l	TM172	0.345	<0.01	0.0152	0.0201	<0.01	0.0161
EPH B	and >C35-C40 (aq)	<0.01 mg/l	TM172	0.0223	<0.01	<0.01	<0.01	<0.01	<0.01
EPH B	and >C28-C35 (aq)	<0.01 mg/l	TM172	0.13	<0.01	0.0153	0.015	<0.01	0.0287
Mercur	y (diss.filt)	<0.00001 mg/l	TM183	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001 #
Sulpha	te	<3 mg/l	TM184	92.7	101	57.8 #	90.3	72 #	121
Chloric	e	<2 mg/l	TM184	5.5	122 #	113 #	122 #	84.7	86.2
рН		<1 pH Units	TM256	7.87	8.3	8.07	8.17	8.16	7.88
				#	#	#	#	#	#

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100723-33

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Report No: 91741

	Results Legend	Customer	Sample Ref.	SWD6	SWD9	SWE1	SWE5	
# M	ISO17025 accredited. mCERTS accredited.				OWDS	OWLI	OWLS	
aq	Aqueous / settled sample.		Depth (m) ample Type					
diss.filt tot.unfilt	Dissolved / filtered sample. Total / unfiltered sample.		ite Sampled	Water(GW/SW) 21/07/2010	Water(GW/SW) 21/07/2010	Water(GW/SW) 21/07/2010	Water(GW/SW) 21/07/2010	
**	subcontracted test. % recovery of the surrogate		te Received	23/07/2010	23/07/2010	23/07/2010	23/07/2010	
	standard to check the efficiency of the method. The results of the		SDG Ref	100723-33	100723-33	100723-33	100723-33	
	individual compounds within the samples are not corrected	Lab Sa	mple No.(s)	1859442	1859457	1859405	1859421	
	for this recovery.							
Compo	nent ty, Total as CaCO3	<pre>LOD/Units &lt;2 mg/l</pre>	Method TM043	285	170	245	140	
Airaiiiii	ly, Total as CaCO3	<b>\2</b> IIIg/I	1101043	200 #	#	Z43 #	#	
	niacal Nitrogen as	<0.3 mg/l	TM099	4.42	2.69	0.405	0.459	
NH4 Conduc	ctivity @ 20 deg.C	<0.014	TM120	1.09	1.07	0.855	0.944	
Condu	20 dog.0	mS/cm		#	#	#	#	
Arsenio	(diss.filt)	<0.00012 mg/l	TM152	0.00712 #	0.0037	0.0059	0.000744	
Boron (	diss.filt)	<0.0094	TM152	0.0814	0.187	0.116	0.0819	
	, II - 6103	mg/l	T144 E0	#	#	#	#	
Cadmii	ım (diss.filt)	<0.0001 mg/l	TM152	<0.0001 #	<0.0001 #	<0.0001 #	<0.0001 #	
Chromi	um (diss.filt)	<0.00022	TM152	0.00592	0.00449	0.00484	0.00324	
Conne	(diss.filt)	mg/l <0.00085	TM152	<b>*</b>	<b>*</b>	<b>*</b>	0.00173	
		mg/l		#	#	#	#	
Lead (d	liss.filt)	<0.00002 mg/l	TM152	0.000057 #	<0.00002 #	0.000049 #	0.000132 #	
Nickel	(diss.filt)	<0.00015	TM152	0.00374	0.00753	0.00456	0.00394	
		mg/l	TM450	# 0.00113	4 0.0013	0.000003	0.000676	
Seieniu	ım (diss.filt)	<0.00039 mg/l	TM152	0.00112 #	0.0013 #	0.000993	0.000676 #	
Zinc (d	iss.filt)	<0.00041	TM152	0.00348	0.00169	0.000895	0.0204	
EPH R	ange >C10 - C40	mg/l <0.046 mg/l	TM172	# 0.173	0.476	<0.046	0.0978	+
(aq)				#	#	#	#	
EPH B	and >C10-C12 (aq)	<0.01 mg/l	TM172	<0.01	0.0203	<0.01	<0.01	
EPH B	and >C12-C16 (aq)	<0.01 mg/l	TM172	0.0322	0.0712	<0.01	0.0348	
EDU D	and >C16-C21 (aq)	<0.01 mg/l	TM172	0.0318	0.174	<0.01	0.0187	
EPH D	and >C16-C21 (aq)	<0.01 mg/l	1101172	0.0316	0.174	<0.01	0.0167	
EPH B	and >C21-C28 (aq)	<0.01 mg/l	TM172	0.0267	0.097	<0.01	0.0186	
EPH B	and >C35-C40 (aq)	<0.01 mg/l	TM172	<0.01	<0.01	<0.01	<0.01	
			T111 T0	2.254	2.112			
EPH B	and >C28-C35 (aq)	<0.01 mg/l	TM172	0.0751	0.113	<0.01	0.0203	
Mercur	y (diss.filt)	<0.00001	TM183	<0.00001	<0.00001	<0.00001	<0.00001	
Sulpha	te	mg/l <3 mg/l	TM184	43.5	416	176	168	
, i				#	#	#	#	
Chlorid	е	<2 mg/l	TM184	188 #	51.9 #	63.9	138 #	
рН		<1 pH Units	TM256	7.82	7.09	7.89	7.77	
				#	#	#	#	
	Т							
								+

Location:

# **ALcontrol Laboratories Analytical Services**

100723-33 SDG: Job:

H\_ENTEC\_SHW-24 26999

Client Reference:

KL056 DSDC Bicester

Customer: Attention:

Steve Dooley Order No.:

Report No:

91741

Entec UK Ltd

## **ASSOCIATED AQC DATA**

### Alkalinity as CaCO3

Component	Method Code	QC 10
Total Alkalinity as CaCO3	TM043	<b>100.00</b> 95.50 : 104.50

#### Ammonium

Component	Method Code	QC 15	QC 11
Ammoniacal Nitrogen as N	TM099	<b>101.42</b> 98.81 : 106.69	<b>101.28</b> 98.81 : 106.69

### Anions by Kone (w)

Component	Method Code	QC 18	QC 14
Chloride	TM184	<b>98.40</b> 92.01 : 104.18	<b>98.70</b> 92.01 : 104.18
Nitrite as NO2	TM184	<b>98.40</b> 92.92 : 105.47	<b>98.60</b> 92.92 : 105.47
Phosphate (Ortho as PO4)	TM184	<b>99.32</b> 94.22 : 106.12	<b>99.80</b> 94.22 : 106.12
Sulphate (soluble)	TM184	<b>102.64</b> 95.09 : 105.03	<b>101.08</b> 95.09 : 105.03
TON as NO3	TM184	<b>102.35</b> 94.35 : 105.63	<b>102.51</b> 94.35 : 105.63

### Conductivity (at 20 deg.C)

Component	Method Code	QC 16
Conductivity (at 20 deg.C)	TM120	<b>98.98</b> 97.19 : 102.36

### Dissolved Metals by ICP-MS

Component	Method Code	QC 10	QC 18
Aluminium	TM152	<b>103.09</b> 85.00 : 115.00	<b>107.12</b> 85.00 : 115.00
Antimony	TM152	<b>105.95</b> 85.00 : 115.00	<b>104.67</b> 85.00 : 115.00
Arsenic	TM152	<b>106.11</b> 85.00 : 115.00	<b>99.44</b> 85.00 : 115.00
Barium	TM152	<b>102.76</b> 85.00 : 115.00	<b>102.61</b> 85.00 : 115.00
Beryllium	TM152	<b>109.48</b> 85.00 : 115.00	<b>100.05</b> 85.00 : 115.00
Bismuth	TM152	<b>105.55</b> 85.00 : 115.00	<b>105.29</b> 85.00 : 115.00
Boron	TM152	<b>96.16</b> 77.43 : 112.32	<b>106.57</b> 77.43 : 112.32

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100723-33

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.:

Report No: 91741

Cadmium         TM152         104.45           85.00:115.00         85.00:115.00           Chromium         TM152         107.41           85.00:115.00         104.28	QC 18  103.20 85.00:115.00  103.71 85.00:115.00  100.35 85.00:115.00
TM152 107.41 85.00 : 115.00 Chromium TM152 107.41 85.00 : 115.00	85.00 : 115.00 103.71 85.00 : 115.00 100.35 85.00 : 115.00
85.00 : 115.00	85.00 : 115.00 <b>100.35</b> 85.00 : 115.00
Cobalt TM152 <b>104.28</b>	85.00 : 115.00
85.00 : 115.00	
Copper TM152 <b>109.44</b>	<b>100.25</b>
85.00 : 115.00	85.00 : 115.00
Lead TM152 <b>104.48</b>	<b>104.80</b>
85.00 : 115.00	85.00 : 115.00
Lithium TM152 <b>104.76</b>	<b>105.73</b>
85.00 : 115.00	85.00 : 115.00
Manganese TM152 <b>104.33</b> 85.00 : 115.00	<b>104.45</b> 85.00 : 115.00
Molybdenum TM152 <b>102.37</b>	<b>97.16</b>
85.00 : 115.00	85.00 : 115.00
Nickel TM152 <b>106.53</b>	<b>107.44</b>
85.00 : 115.00	85.00 : 115.00
Niobium TM152 <b>98.99</b>	<b>132.52</b>
85.00 : 115.00	85.00 : 115.00
Phosphorus TM152 <b>100.75</b>	<b>107.23</b>
85.00 : 115.00	85.00 : 115.00
Selenium TM152 <b>105.96</b>	<b>102.24</b>
85.00 : 115.00	85.00 : 115.00
Silver TM152 <b>102.91</b>	<b>101.83</b>
85.00 : 115.00	85.00 : 115.00
Strontium TM152 <b>103.44</b>	<b>105.93</b>
85.00 : 115.00	85.00 : 115.00
Tellurium TM152 <b>104.48</b>	<b>99.56</b>
85.00 : 115.00	85.00 : 115.00
Thallium TM152 <b>101.25</b> 85.00 : 115.00	<b>101.43</b> 85.00 : 115.00
Tin TM152 <b>118.37</b> 85.00 : 115.00	<b>110.88</b> 85.00 : 115.00
Titanium TM152 <b>104.87</b> 85.00 : 115.00	<b>104.53</b> 85.00 : 115.00
Tungsten TM152 <b>98.72</b> 85.00 : 115.00	<b>95.37</b> 85.00 : 115.00
Uranium TM152 <b>104.04</b>	<b>106.12</b>
85.00 : 115.00	85.00 : 115.00
Vanadium TM152 <b>105.11</b>	<b>103.60</b>
85.00 : 115.00	85.00 : 115.00
Zinc TM152 <b>107.41</b>	<b>102.32</b>
85.00 : 115.00	85.00 : 115.00
Zirconium TM152 <b>105.44</b> 85.00 : 115.00	<b>103.41</b> 85.00 : 115.00

### EPH (DRO) (C10-C40) Aqueous (W)

	Component	Method Code	QC 16	QC 13
EP	H (DRO) (C10-C40)	TM172	88.37	61.40
			38.00 : 127.50	38.50 : 139.00

## **ALcontrol Laboratories Analytical Services**

100723-33 SDG:

H ENTEC SHW-24 Job:

26999 **Client Reference:** 

Location: KL056 DSDC Bicester **Customer:** Entec UK Ltd Attention: Steve Dooley

Order No.:

**Report No:** 91741

Component	Method Code	QC 11	QC 12
Mercury Dissolved	TM183	<b>87.80</b>	<b>87.80</b>
(CVAF)		79.41 : 116.68	79.41 : 116.68

#### pH Value

Component	Method Code	QC 13	QC 18
рН	TM256	<b>99.86</b> 95.71 : 104.28	<b>99.71</b> 95.71 : 104.28

The above information details the reference name of the analytical quality control sample (AQC) that has been run with the samples contained in this report for the different methods of analysis.

The figure detailed is the percentage recovery result for the AQC.

The subscript numbers below are the percentage recovery lower control limit (LCL) and the upper control limit (UCL). The percentage recovery result for the AQC should be between these limits to be statistically in control.

## **ALcontrol Laboratories Analytical Services**



## **Table of Results - Appendix**

100723-33 Client: Entec UK Ltd **Client Ref: 26999** SDG Number: **REPORT KEY** Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03x10-7 No Determination Possible NDP ISO 17025 Accredited MCERTS Accredited М Result previously reported (Incremental reports only) Possible Fibres Detected Equivalent Carbon NFD No Fibres Detected PFD (Aromatics C8-C35)

Note: Method detection limits are not always achievable due to various circumstances beyond our control

Method No	not always achievable due to various circumstances beyond Reference	Description	Wet/Dry Sample <sup>1</sup>
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples	
TM061	Method for the Determination of EPH,Massachusetts Dept.of EP, 1998	Determination of Extractable Petroleum Hydrocarbons by GC-FID (C10-C40)	
TM099	BS 2690: Part 7:1968 / BS 6068: Part2.11:1984	Determination of Ammonium in Water Samples using the Kone Analyser	
TM120	Method 2510B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part 9:1970	Determination of Electrical Conductivity using a Conductivity Meter	
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS	
TM172	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	EPH in Waters	
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry	
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers	
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter	

<sup>&</sup>lt;sup>1</sup> Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

## **APPENDIX**

#### **APPENDIX**

- Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following:
   NRA Leach tests, flash point, ammonium as NH<sub>4</sub> by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and
   TOF-MS TICS.
- 2. Samples will be run in duplicate upon request, but an additional charge may be incurred.
- 3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. Alcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.
- 4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
- 5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
- 6. When requested, the individual sub sample scheduled will be screened in house for the presence of large asbestos containing material fragments/pieces. If no asbestos containing material is found this will be reported as 'no asbestos containing material detected'. If asbestos containing material is detected it will be removed and analysed by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If asbestos containing material is present no further analysis will be undertaken. At no point is the fibre content of the soil sample determined.
- 7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.
- 8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.
- 9. NDP No determination possible due to insufficient/unsuitable sample.
- 10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals total metals must be requested separately.
- 11. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.
- 12. Results relate only to the items tested
- 13. **Surrogate recoveries** Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 130 %.
- Product analyses Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.
- 15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).
- 16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 14).
- 17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
- 18. Our MCERTS accreditation for PAHs by GCMS applies to all product types apart from Kerosene, where naphthalene only is not accredited.
- 19. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
- 19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.
- 20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
- 21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
- 22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
- 23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

### LIQUID MATRICES EXTRACTION SUMMARY

ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAH MS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GS MS
SVOC	DCM	LIQUID/LIQUID SHAKE	GC MS
FREE SULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST OCP/OPP	DCM	LIQUID/LIQUID SHAKE	GC MS
TRIAZINE HERBS	DCM	LIQUID/LIQUID SHAKE	GC MS
PHENOLS MS	DCM	SOLID PHASE EXTRACTION	GC MS
TPH by INFRA RED (IR)	TCE	LIQUID/LIQUID EXTRACTION	HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID EXTRACTION	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GC FID

### SOLID MATRICES EXTRACTION SUMMARY

	001.0	MATRICES EXTRACTION SUMMARY		
ANALYSIS	D/C OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	SISATV
Solvent Extractable Matter	D&C	DCM	SOXTHERM	GRAVIMETRIC
Cyclohexane Ext. Matter	D&C	CYCLOHEXANE	SOXTHERM	GRAVIMETRIC
Thin Layer Chromatography	D&C	DCM	SOXTHERM	IATROSCAN
Elemental Sulphur	D&C	DCM	SOXTHERM	HPLC
Phenols by GCMS	WET	DCM	SOXTHERM	GC-MS
Herbicides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
Pesticides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
EPH (DRO)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Min oil)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Cleaned up)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH CWG by GC	D&C	HEXANE:ACETONE	END OVER END	GC-FID
PCB tot / PCB con	D&C	HEXANE:ACETONE	END OVER END	GC-MS
Polyaromatic Hydrocarbons (MS)	WET	HEXANE:ACETONE	Microwave TM218.	GC-MS
C8-C40 (C6-C40)EZ Flash	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Polyaromatic Hydrocarbons Rapid GC	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Semi Volatile Organic Compounds	WET	DCM:ACETONE	SONICATE	GC-MS

### **Identification of Asbestos in Bulk Materials**

The results for asbestos identification for soil samples are obtained from possible Asbestos Containing Material, removed during the 'Screening of soils for Asbestos Containing Materials', which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

#### **Visual Estimation Of Fibre Content.**

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: -

Trace – Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in MDHS 100.

The identification of asbestos containing materials falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

#### 



Unit 7-8 Hawarden Business Park Manor Road (off Manor Lane) Hawarden

> Deeside CH5 3US

Tel: (01244) 528700 Fax: (01244) 528701 email: mkt@alcontrol.com Website: www.alcontrol.com

Entec UK Ltd Canon Court North Abbey Lawn Abbey Foregate Shrewsbury Shropshire SY2 5DE

Attention: Steve Dooley

### **CERTIFICATE OF ANALYSIS**

 Date:
 03 August 2010

 Customer:
 H\_ENTEC\_SHW-24

Sample Delivery Group (SDG): 100726-8 Report No.: 92286

Your Reference: 26999

**Location:** KL056 DSDC Bicester

We received 30 samples on Saturday July 24, 2010 and 23 of these samples were scheduled for analysis which was completed on Tuesday August 03, 2010. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Asbestos testing - we are not accredited for screening soil samples for asbestos fibres. We are only accredited to identify asbestos fibres in bulk material (ACM).

Approved By:



#### **Iain Swinton**

Operations Director - Land UK & Ireland



## **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd
Attention: Steve Dooley

Order No.: 228113 Report No: 92286

## Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Sampled Date
1864569	WSE 1	0.40 - 0.60	22/07/2010
1864515	WSE 1	2.80 - 3.00	22/07/2010
1864750	WSE 16	0.20 - 0.40	22/07/2010
1865961	WSE 16	0.50 - 0.70	22/07/2010
1865960	WSE 16	1.40 - 1.60	22/07/2010
1865962	WSE 17	0.10 - 0.30	22/07/2010
1865964	WSE 17	2.80 - 3.00	22/07/2010
1864709	WSE 19	0.30 - 0.50	22/07/2010
1864700	WSE 19	0.60 - 0.70	22/07/2010
1864848	WSE 19	3.30 - 3.50	22/07/2010
1864588	WSE 2	0.50 - 0.70	22/07/2010
1864517	WSE 2	2.10 - 2.30	22/07/2010
1864714	WSE 20	0.20 - 0.40	22/07/2010
1864829	WSE 20	3.40 - 3.60	22/07/2010
1864863	WSE 21	0.85 - 0.95	22/07/2010
1864857	WSE 21	1.60 - 1.90	22/07/2010
1864989	WSE 22	0.40 - 0.60	23/07/2010
1864953	WSE 22	2.40 - 2.60	23/07/2010
1864982	WSE 23	0.70 - 1.00	23/07/2010
1864968	WSE 23	1.20 - 1.40	23/07/2010
1864945	WSE 24	0.30 - 0.50	23/07/2010
1864958	WSE 24	4.40 - 4.60	23/07/2010
1865056	WSE 25	0.20 - 0.50	23/07/2010
1864974	WSE 25	1.30 - 1.60	23/07/2010
1865078	WSE 26	0.10 - 0.30	23/07/2010
1864965	WSE 26	2.00 - 2.30	23/07/2010
1864601	WSE 3	0.30 - 0.40	21/07/2010
1864503	WSE 3	2.30 - 2.50	22/07/2010
1864528	WSE 4	0.20 - 0.40	21/07/2010
1864626	WSE 4	1.60 - 1.80	22/07/2010

Only received samples which have had analysis scheduled will be shown on the following pages.

# **ALcontrol Laboratories Analytical Services**

SDG: 100726-8 Customer: Entec UK Ltd

Job: H\_ENTEC\_SHW-24 Attention: Steve Dooley
Client Reference: 26999 Order No.: 228113

Location: KL056 DSDC Bicester Report No: 92286

### SOLID

SOLID																									
Results Legend	Lab Sample No(s)	1000	100/15/02	1864517	1864528	1864569	1864588	1864626		1864700	1864709	1864714	1864750	1864829		1864863	1864945	1864958	1864965	1864968		1864982	1864989	1865056	1865078
X Test			Ť						Γ							$^{\dagger}$									П
No Determination Possible	Customer Sample Ref.	C C	W/Ω∏ 2	WSE 2	WSE 4	WSE 1	WUEL	N N I		WSE 19	WSE 19	WSE 20	WSE 16	WSE 20		WSE 21	WSE 24	WSE 24	WSE 26	WSE 23		WSE 23	WSE 22	WSE 25	WSE 26
	Depth (m)		2 30 - 2 50	2.10 - 2.30	0.20 - 0.40	0.40 - 0.60	0.80 - 0.70	1.60 - 1.80		0.60 - 0.70	0.30 - 0.50	0.20 - 0.40	0.20 - 0.40	3.40 - 3.60		0.85 - 0.95	0.30 - 0.50	4.40 - 4.60	2.00 - 2.30	1.20 - 1.40		0.70 - 1.00	0.40 - 0.60	0.20 - 0.50	0.10 - 0.30
	Container	1kg TUB	1kg TUB 250g Amber Jar	250g Amber Jar	250g Amber Jar 1kg TUB	250g Amber Jar 1kg TUB	1kg TUB	1kg TUB	1kg TUB	60g VOC 250g Amber Jar	250g Amber Jar 1kg TUB	250g Amber Jar 1kg TUB	250g Amber Jar 1kg TUB	250g Amber Jar 1kg TUB	250g Amber Jar 1kg TUB	60g VOC	250g Amber Jar	250g Amber Jar 1kg TUB	250g Amber Jar 1kg TUB	250g Amber Jar 1kg TUB	1kg TUB	60g VOC	250g Amber Jar 1kg TUB	250g Amber Jar 1kg TUB	250g Amber Jar 1kg TUB
Ammonium Soil by Titration	All	X	X	П	v	v	X	X	X	П	X	v	v	v	v	X	П	X	v	v	v	T	X	X	X
Asbestos Containing Material Screen	All				^		^	^		П	X	Y	^	^	^			^	^	^	Y	t	X	^	^
Boron Water Soluble	All	Ħ,	X	X	X	X	<b>\</b>	( ×		X	X	, v	v	X	X		X	X	X	X	Ä,	K	X	X	X
EPH CWG (Aliphatic) GC (S)	All	Н	^	^	^		/	\		^ _		^	^	^	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		^	^	^	^	П	× ×	^	^	
EPH CWG (Aromatic) GC (S)	All	H	t	Н	+		Ħ	$\dagger \dagger$	Ħ	X	+				×	$^{\dagger}$	Н	+			Η̈́	\ <b>\</b>	$\top$		Ш
GRO BTEX MTBE GC (S)	All	H	$\dagger$	Н	$^{+}$		H	$\dagger \dagger$	Ħ	^	+			$\vdash$	^	X	Н	+				X	$\top$	$\vdash$	Ш
Hexavalent Chromium (s)	All	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	V	Н	V	V	V	V	V	Α.		V/	V	¥	V		H	X	¥	V	X	X	V	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	V
Metals by iCap-OES (Soil)	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	×	X	X	X	X	Ĥ	Κ	X	X	X
	Cadmium	П	X	X	^	X	П		П	X	X	^	^	×	П	$^{+}$	X	X	×	X	П	\ <b>\</b>	X	X	
	Chromium	П	X	X	^ 	X	П		П	^ _	^	^	_ ^ 	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	$^{+}$	v	^ 	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	^		\ \	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	X	
	Copper	П	X	X	^	X	П		П	^ _	X	^	^	^	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		^ v	X	^	^		χ	X	X	
	Lead	П	X	X	^	^	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		П	^	×	^	^	^	_ ^		X	X	^	^		<u>`</u>	X	^	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	Mercury	П	X	X	^	X		( )	П	X	X	^	^	^	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		X	X	^	X		\ 	X	X	X
	Nickel	П	X	X	^ 	X	П		П	X	X	^	_ ^	×	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	+	X	X	^ 	^	П	Κ	X	X	
	Selenium	П	X	X	×	X	П		П	X	X	X	×	X	X	$\dagger$	X	X	X	×	П	Κ	X	X	
	Zinc	П	X	X	X		П		П	X	X	X	X				X	X	X	X	П	Κ	X	X	
PAH by GCMS	All	П	^	^	^	^		\	П	^ V	^	^	^	^	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		^	^	^	^	П	<u> </u>	^	^	
PCBs (vs Aroclor 1254)	All	Н	Ť	Н			Ħ		Ħ	^					^		Н					<u>`</u>			Ш
pH	All	X	X	Н	X	X	X	X	X	^	X	X	V	X	X	×		X	X	v	v	`	X	X	X
Sample description	All	П	X	X	X		П	( X	П	X	X	^	X	X		<b>-</b>	X	X	^ _	X	^	<b>X</b>	X	X	Ш
Semi Volatile Organic Compounds	All	H	^	^	^	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		^ _	^	^	^		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	+	^	^	<mark>^</mark>	^	1	\ \	^		^
Total Organic Carbon	All	H	+	H	+	$\vdash$	$\dag \uparrow$	$\dagger\dagger$	$\prod$	^		+	+	+	X	+	H	+	X	X	H	<u>\</u>	$\vdash$	×	H
TPH c6-40 Value of soil	All	<u>;</u>	X	X			>	( <u>)</u>	(			X					X	X	X	X			X	X	X

	1865960			1865961		1865964	
	WSE 16			WSE 16		WSE 17	
	1.40 - 1.60			0.50 - 0.70		2.80 - 3.00	Total
1kg TUB	250g Amber Jar	1kg TUB	250g Amber Jar	60g VOC	1kg TUB	250g Amber Jar	
							0
X		X			X	Н	0 23 0 4 0 23 0 4 0 4 0 4 0 23 0 23 0 23
-	H			H		Н	4 0
_	X		X	H		X	23 0
_			X				4
			X				4
				X			4
X		X			X		0 23
	X		X			X	0 23
	X		X			X	0 23
	X		X			X	0 23
	X		X			X	0 23
7							0
-	X		X			X	23 0
-	X		X			X	0
-	X	_	X	H	_	X	23 0
-	X	H	X	H	H	X	23 0
-	X	H	X	H	H	X	23 0
4			X				4 0
4			X				4
X		X			X		23
	X		X			X	0 23
			X				0 4
			X			X	0 5
	X						0 12

# **ALcontrol Laboratories Analytical Services**

SDG: 100726-8 **Customer:** Entec UK Ltd

Steve Dooley Job: H\_ENTEC\_SHW-24 Attention:

26999 **Client Reference:** Order No.: 228113

KL056 DSDC Bicester 92286 Location: **Report No:** 

			1864503	1864517	1804528	1000	1864569	1864588	0	1864626	1864/00		1864709	1864714	1864750	1864829		1804803		1864945	1864958	1001	1864065	1864968		1864982	1864989		1865056	1865078
			WSE 3	WSE 2	WU T T	N/OII	WSE 1	WSE 2		WSE 4	W I		WSE 19	WSE 20	WSE 16	WSE 20		VV I	100	WSE 24	WSE 24	01	WSE 26	WSE 23		WSE 23	WSE 22		WSE 25	WSE 26
			2.30 - 2.50	2.10 - 2.30		0 20 - 0 40	0.40 - 0.60	0.50 - 0.70		1.60 - 1.80	0.80 - 0.70		0.30 - 0.50	0.20 - 0.40	0.20 - 0.40	3.40 - 3.60	3	0.00	0 00 00 00 00 00 00 00 00 00 00 00 00 0	0.30 - 0.50	4.40 - 4.60		2.00 - 2.30	1.20 - 1.40		0.70 - 1.00	0.40 - 0.60		0.20 - 0.50	0.10 - 0.30
		1kg TUB	250g Amber Jar	250g Amber Jar 1kg TUB	1kg TUB	1kg TUB 250g Amber Jar	250g Amber Jar	250g Amber Jar 1kg TUB	1kg TUB	250g Amber Jar	250g Amber Jar	1kg TUB	250g Amber Jar	250g Amber Jar	250g Amber Jar 1kg TUB	1kg TUB	1kg TUB	250g Amber Jar	1kg TUB	250g Amber Jar	250g Amber Jar 1kg TUB	1kg TUB	250g Amber Jar	250g Amber Jar 1kg TUB	1kg TUB	60g VOC 250g Amber Jar	1kg TUB	1kg TUB	1kg TUB 250g Amber Jar	250g Amber Jar
TPH CWG GC (S)	All	П	T		Т	T	П	T	П	T	X	T	Т	П	T	П	T	X	T	П	T	П	T		,	<b>&lt;</b>		П	T	П
VOC MS (S)	All										<b>&gt;</b>	(						)	<b>(</b>							X				
Water Soluble Sulphate 2:1	All		X	X	<u>)</u>	X	X	X		X	X		X	X	X	<u>&gt;</u>	<b>(</b>	X		X	X		X	X	)	<b>K</b>	×	(	X	X

		_		_			_	
	,	1865964		1865961			1865960	
		WSE 17		WSE 16			WSE 16	
Total		2.80 - 3.00		0.50 - 0.70			1.40 - 1.60	
		250g Amber Jar	1kg TUB	60g VOC	250g Amber Jar	1kg TUB	250g Amber Jar	1kg TUB
	0				Y			
	0			X	^			
	0 4 0 4 0 23	X		^	X		X	

## **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd

Attention: Steve Dooley
Order No.: 228113

Report No: 92286

### **Sample Descriptions**

#### **Grain Sizes:**

<0.063mm very fine, 0.063mm - 0.1mm fine, 0.1mm - 2mm medium, 2mm - 10mm coarse, >10mm very coarse

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions
1864503	WSE 3	2.30 - 2.50	Light Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones
1864517	WSE 2	2.10 - 2.30	Light Brown	Clay	<0.063 mm	Stones
1864528	WSE 4	0.20 - 0.40	Dark Brown	Silt Loam	0.063 - 0.1 mm	Vegetation
1864569	WSE 1	0.40 - 0.60	Dark Brown	Sandy Clay	0.1 - 2 mm	Stones
1864588	WSE 2	0.50 - 0.70	Dark Brown	Silt Loam	0.063 - 0.1 mm	Vegetation
1864626	WSE 4	1.60 - 1.80	Light Brown	Clay	<0.063 mm	None
1864700	WSE 19	0.60 - 0.70	Dark Brown	Clay Loam	0.063 - 0.1 mm	Metal
1864709	WSE 19	0.30 - 0.50	Light Brown	Silt Loam	0.063 - 0.1 mm	Stones
1864714	WSE 20	0.20 - 0.40	Dark Brown	Clay	<0.063 mm	N/A
1864750	WSE 16	0.20 - 0.40	Dark Brown	Clay Loam	0.063 - 0.1 mm	Stones
1864829	WSE 20	3.40 - 3.60	Light Brown	Sand	0.1 - 2 mm	Stones
1864863	WSE 21	0.85 - 0.95	Dark Brown	Sand	0.1 - 2 mm	Vegetation
1864945	WSE 24	0.30 - 0.50	Light Brown	Sandy Loam	0.1 - 2 mm	Stones
1864958	WSE 24	4.40 - 4.60	Grey	Sand	0.1 - 2 mm	N/A
1864965	WSE 26	2.00 - 2.30	Dark Brown	Clay	<0.063 mm	N/A
1864968	WSE 23	1.20 - 1.40	Dark Brown	Clay	<0.063 mm	N/A
1864982	WSE 23	0.70 - 1.00	Dark Brown	Clay Loam	0.063 - 0.1 mm	N/A
1864989	WSE 22	0.40 - 0.60	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones
1865056	WSE 25	0.20 - 0.50	Light Brown	Silty Clay	0.063 - 0.1 mm	None
1865078	WSE 26	0.10 - 0.30	Dark Brown	Silt Loam	0.063 - 0.1 mm	Vegetation
1865960	WSE 16	1.40 - 1.60	Light Brown	Silty Clay	0.063 - 0.1 mm	Stones
1865961	WSE 16	0.50 - 0.70	Dark Brown	Sandy Clay	0.1 - 2 mm	Stones
1865964	WSE 17	2.80 - 3.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

SDG:

## **ALcontrol Laboratories Analytical Services**

100726-8 Customer: Entec UK Ltd

Job:H\_ENTEC\_SHW-24Attention:Steve DooleyClient Reference:26999Order No.:228113

Location: KL056 DSDC Bicester Report No: 92286

## **Test Completion dates**

SDG reference: 100726-8

Lab Sample No(s)	1864503	1864517	1864528	1864569	1864588	1864626	1864700	1864709	1864714	1864750	1864829	1864863
Customer Sample Ref.	WSE 3	WSE 2	WSE 4	WSE 1	WSE 2	WSE 4	WSE 19	WSE 19	WSE 20	WSE 16	WSE 20	WSE 21
Depth	2.30 - 2.50	2.10 - 2.30	0.20 - 0.40	0.40 - 0.60	0.50 - 0.70	1.60 - 1.80	0.60 - 0.70	0.30 - 0.50	0.20 - 0.40	0.20 - 0.40	3.40 - 3.60	0.85 - 0.95
Туре	SOLID											
Ammonium Soil by Titration	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	28/07/2010	27/07/2010	28/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010
Asbestos Containing Material								26/07/2010	26/07/2010			
Boron Water Soluble	28/07/2010	28/07/2010	27/07/2010	27/07/2010	27/07/2010	28/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010
EPH CWG (Aliphatic) GC (S)							29/07/2010					28/07/2010
EPH CWG (Aromatic) GC (S)							29/07/2010					28/07/2010
GRO by GC-FID (S)							30/07/2010					30/07/2010
Hexavalent Chromium (s)	28/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010
Metals by iCap-OES (Soil)	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010
PAH by GCMS							30/07/2010					30/07/2010
PCBs (vs Aroclor 1254)							29/07/2010					29/07/2010
рН	26/07/2010	27/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	28/07/2010	26/07/2010	26/07/2010	26/07/2010
Sample description	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010
Semi Volatile Organic Compounds							27/07/2010					27/07/2010
Total Organic Carbon												
TPH c6-40 Value of soil	28/07/2010	28/07/2010			28/07/2010	28/07/2010			28/07/2010			
TPH CWG GC (S)							30/07/2010					30/07/2010
VOC MS (S)							03/08/2010					03/08/2010
Water Soluble Sulphate 2:1	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	27/07/2010	27/07/2010

1864945	1864958	1864965	1864968	1864982	1864989	1865056	1865078	1865960	1865961	1865964
WSE 24	WSE 24	WSE 26	WSE 23	WSE 23	WSE 22	WSE 25	WSE 26	WSE 16	WSE 16	WSE 17
0.30 - 0.50	4.40 - 4.60	2.00 - 2.30	1.20 - 1.40	0.70 - 1.00	0.40 - 0.60	0.20 - 0.50	0.10 - 0.30	1.40 - 1.60	0.50 - 0.70	2.80 - 3.00
SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	28/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010
				26/07/2010	26/07/2010					
27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010	27/07/2010
				28/07/2010					28/07/2010	
				28/07/2010					28/07/2010	
				30/07/2010					30/07/2010	
28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010
27/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	27/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010
				30/07/2010					27/07/2010	
				29/07/2010					29/07/2010	
26/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	28/07/2010	26/07/2010	28/07/2010
26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010	26/07/2010
				27/07/2010					28/07/2010	
		28/07/2010	28/07/2010			28/07/2010			28/07/2010	28/07/2010
28/07/2010	28/07/2010	28/07/2010	28/07/2010		28/07/2010		28/07/2010	28/07/2010		
				30/07/2010					30/07/2010	
				30/07/2010					30/07/2010	
27/07/2010	27/07/2010	28/07/2010	28/07/2010	28/07/2010	27/07/2010	27/07/2010	28/07/2010	27/07/2010	27/07/2010	27/07/2010

# **ALcontrol Laboratories Analytical Services**

Report No:

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley Order No.: 228113

92286

Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSE 1		WSE 16	WSE 16	6	WSE 16		WSE 17		WSE 19	
M mCERTS accredited.  aq Algueous / settled sample.  tot.unfilt Total / unfiltered sample.  * ubcontracted test.  * " % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected	Da Da	Depth (m) cample Type ate Sampled te Received SDG Ref ample No.(s)	0.40 - 0.60 Soil/Solid 22/07/2010 24/07/2010 100726-8 1864569		0.20 - 0.40 Soil/Solid 22/07/2010 24/07/2010 100726-8 1864750	0.50 - 0.7 Soil/Soli 22/07/20 24/07/20 100726- 186596	d 10 10 8	1.40 - 1.60 Soil/Solid 22/07/2010 24/07/2010 100726-8 1865960		2.80 - 3.00 Soil/Solid 22/07/2010 24/07/2010 100726-8 1865964		0.30 - 0.50 Soil/Solid 22/07/2010 24/07/2010 100726-8 1864709	)
for this recovery.	I OD/Unite	Mothod											
Component Asbestos Containing	LOD/Units	Method TM001										No ACM Detec	cted
Material Screen Ammoniacal Nitrogen,	<15 mg/kg	TM024	<15		<15	114		<15		35.5		<15	
exchangeable as NH4				М	М		М		М		М		М
Sulphate, 2:1 water soluble	<0.003 g/l	TM098	0.0329	М	0.109 <b>M</b>	0.308	М	0.308	М	1.76	М	0.113	М
Soil Organic Matter (SOM)	<0.35 %	TM132				1.91	#			3.9	#		
рН	1 pH Units	TM133	8		8.23	7.47		7.91		5.98		8.64	
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6	М	<0.6	<0.6	M	<0.6	M	<0.6	М	9.06	М
TPH >C6-C8	<10 mg/kg	TM154		#	#		#	<10	#		#		#
TPH >C8-C10	<10 mg/kg	TM154						<10					
TPH >C10-C12	<10 mg/kg	TM154						<10					
TPH >C12-C16	<10 mg/kg	TM154						<10					
TPH >C16-C21	<10 mg/kg	TM154						<10					
TPH >C21-C40	<10 mg/kg	TM154						<10					
TPH >C6-C40	<10 mg/kg	TM154						<10					
Arsenic	<0.6 mg/kg	TM181	13		10.7	10.4		6.75	#	6.11		18.7	
Cadmium	<0.02	TM181	0.458	M	0.524	0.645	М	2.2	М	0.114	M	0.621	М
	mg/kg			М	М		М	37	М	45.2	М	32.8	М
Chromium	<0.9 mg/kg	TM181	33.8	М	15.6 <b>M</b>		М		М		М		М
Copper	<1.4 mg/kg	TM181	14.8	М	22.6 <b>M</b>	18.2	М	28.1	М	37.2	М	69.8	м
Lead	<0.7 mg/kg	TM181	25.2	М	40.3 <b>M</b>	19.3	М	12	М	12.4	М	108	М
Mercury	<0.14	TM181	<0.14		<0.14	<0.14		<0.14		<0.14		<0.14	
Nickel	mg/kg <0.2 mg/kg	TM181	26.1	М	19.6	25.7	M	113	M	18.5	М	21	М
Selenium	<1 mg/kg	TM181	<1	М	<b>M</b> <1	1.2	М	3.27	М	1.6	М	<1	М
Zinc	<1.9 mg/kg	TM181	83.8	#	133	97	#	392	#	49.8	#	319	#
Boron, water soluble	<1 mg/kg	TM222	1.09	М	<b>M</b>		М	<1	М	3.26	М	1.27	М
				M	М		M		M		M		M

# **ALcontrol Laboratories Analytical Services**

Report No:

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley Order No.: 228113

92286

					•	011110. 022		
PAH	by GCMS							
	Results Legend	Customer	Sample Ref.	WSE 16				
	ISO17025 accredited. mCERTS accredited.	_						
aq	Aqueous / settled sample.		Depth (m)	0.50 - 0.70				
diss.filt	Dissolved / filtered sample.		ample Type	Soil/Solid				
	Total / unfiltered sample. subcontracted test.		ate Sampled	22/07/2010				
**	% recovery of the surrogate	Da	te Received	24/07/2010				
	standard to check the efficiency		SDG Ref	100726-8				
	of the method. The results of the individual compounds within	Lab Sa	ample No.(s)	1865961				
	the samples are not corrected							
	for this recovery.	L OD/Ll-it-	Method					
ompo		LOD/Units		400				
	alene-d8 %	%	TM218	108				
recover	hthene-d10 %	%	TM218	105				
ecover		70	TIVIZ TO	103				
	threne-d10 %	%	TM218	105				
ecove		70	TIVIZIO	103				
	ne-d12 % recovery**	%	TM218	88.9				
,		,,,						
Peryler	e-d12 % recovery**	%	TM218	97.2				
,	,			-				
Naphth	alene	<0.009	TM218	0.0164				
,		mg/kg		M			 	
Acenap	hthylene	<0.012	TM218	<0.012				
		mg/kg		M				
Acenap	hthene	<0.008	TM218	<0.008				
		mg/kg		М				
luorer	e	<0.01	TM218	<0.01				
		mg/kg		M				
henar	ithrene	<0.015	TM218	0.0437				
		mg/kg	T. 10	M				
Anthrac	cene	<0.016	TM218	<0.016				
Elusar	thono	mg/kg	TM218	0.121				
Fluorar	itnene	<0.017	1101218	0.121 <b>M</b>				
Pyrene		mg/kg <0.015	TM218	0.111				
yrene		mg/kg	TIVIZ 10	0.1111 <b>M</b>				
Renz(a	)anthracene	<0.014	TM218	0.09				
20112(u	jantin addine	mg/kg	1111210	0.00 M				
Chryse	ne	<0.01	TM218	0.0711				
,		mg/kg		М				
Benzo(	b)fluoranthene	<0.015	TM218	0.128				
`	·	mg/kg		М				
Benzo(	k)fluoranthene	<0.014	TM218	0.0418				
· ·	·	mg/kg		М				
Benzo(	a)pyrene	<0.015	TM218	0.0646				
		mg/kg		M				
Indeno	(1,2,3-cd)pyrene	<0.018	TM218	0.0428				
		mg/kg		M				
Dibenz	o(a,h)anthracene	<0.023	TM218	<0.023				
<b>D</b>	. I. N I	mg/kg	T14040	M				
Benzo(	g,h,i)perylene	<0.024	TM218	0.0589				
Dalvara	matia budra aarbana	mg/kg <0.118	TM218	0.79				
Polyard	matic hydrocarbons,		1101218					
ı ulal U	SEPA 16	mg/kg		M				

# **ALcontrol Laboratories Analytical Services**

100726-8 SDG:

H\_ENTEC\_SHW-24 Job:

Client Reference: 26999 **Customer:** Entec UK Ltd Attention: Steve Dooley Order No.: 228113

Loca	t Reference: tion:	26999 KL056 D	SDC Bice	ester	Ord Rej	der No.: 228 port No: 922		
РСВ	s (vs Aroclor 125	4)						
# M aq diss.filt tot.unfilt *	Rosults Logond ISO17025 accredited. mCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample. Total / unfiltered sample. subcontracted test. % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Custome  D  Lab S	r Sample Ref.  Depth (m) Sample Type late Sampled ate Received SDG Ref ample No.(s)	Soil/Solid 22/07/2010 24/07/2010 100726-8				
PCBs	onent (vs Aroclor 1254)	<pre>LOD/Units   &lt;0.035   mg/kg</pre>	Method TM070	<0.035				
		mg/kg		#				
					I	<u> </u>	<u> </u>	

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd
Attention: Steve Dooley
Order No.: 228113
Report No: 92286

Semi	Volatile Organic			
	Results Legend ISO17025 accredited.	Customer	Sample Ref.	WSE 16
aq	mCERTS accredited. Aqueous / settled sample.	_	Depth (m)	
tot.unfilt	Dissolved / filtered sample. Total / unfiltered sample. subcontracted test.		ample Type ite Sampled	Soil/Solid 22/07/2010
**	% recovery of the surrogate standard to check the efficiency	Da	te Received SDG Ref	24/07/2010
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	100726-8 1865961
	the samples are not corrected for this recovery.		Method	
Compo Phenol		LOD/Units <0.1 mg/kg	TM157	<0.1
Pentacl	hlorophenol	<0.1 mg/kg	TM157	<0.1
n-Nitros	so-n-dipropylamine	<0.1 mg/kg	TM157	<0.1
Nitrobe	nzene	<0.1 mg/kg	TM157	<0.1
Isophor	one	<0.1 mg/kg	TM157	<0.1
Hexach	loroethane	<0.1 mg/kg	TM157	<0.1
Hexach	llorocyclopentadiene	<0.1 mg/kg	TM157	<0.1
Hexach	ılorobutadiene	<0.1 mg/kg	TM157	<0.1
Hexach	llorobenzene	<0.1 mg/kg	TM157	<0.1
	yl phthalate	<0.1 mg/kg	TM157	<0.1
	yl phthalate	<0.1 mg/kg	TM157	<0.1
	phthalate	<0.1 mg/kg	TM157	<0.1
	yl phthalate	<0.1 mg/kg	TM157	<0.1
Dibenzo	ofuran	<0.1 mg/kg	TM157	<0.1
Carbaz	ole	<0.1 mg/kg	TM157	<0.1
Butylbe	nzyl phthalate	<0.1 mg/kg	TM157	<0.1
bis(2-E	thylhexyl) phthalate	<0.1 mg/kg	TM157	<0.1
bis(2-C	hloroethoxy)methane	<0.1 mg/kg	TM157	<0.1
bis(2-C	hloroethyl)ether	<0.1 mg/kg	TM157	<0.1
Azoben	nzene	<0.1 mg/kg	TM157	<0.1
4-Nitrop	ohenol	<0.1 mg/kg	TM157	<0.1
4-Nitroa	aniline	<0.1 mg/kg	TM157	<0.1
4-Meth	ylphenol	<0.1 mg/kg	TM157	<0.1
4-Chlor	ophenylphenylether	<0.1 mg/kg	TM157	<0.1
4-Chlor	oaniline	<0.1 mg/kg	TM157	<0.1
4-Chlor	o-3-methylphenol	<0.1 mg/kg	TM157	<0.1
	ophenylphenylether	<0.1 mg/kg	TM157	<0.1
3-Nitroa		<0.1 mg/kg	TM157	<0.1
2-Nitrop			TM157	<0.1
		<0.1 mg/kg		
2-Nitroa		<0.1 mg/kg	TM157	<0.1
	ylphenol	<0.1 mg/kg	TM157	<0.1
1,2,4-T	richlorobenzene	<0.1 mg/kg	TM157	<0.1
2-Chlor	rophenol	<0.1 mg/kg	TM157	<0.1
2,6-Din	itrotoluene	<0.1 mg/kg	TM157	<0.1
2,4-Din	itrotoluene	<0.1 mg/kg	TM157	<0.1
2,4-Dim	nethylphenol	<0.1 mg/kg	TM157	<0.1
2,4-Dic	hlorophenol	<0.1 mg/kg	TM157	<0.1
2,4,6-T	richlorophenol	<0.1 mg/kg	TM157	<0.1
	richlorophenol	<0.1 mg/kg	TM157	<0.1
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# **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Semi	Volatile Organic	Compour	nds	
	Results Legend ISO17025 accredited.	Customer	Sample Ref.	WSE 16
M aq diss.filt tot.unfilt	mCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample. Total / unfiltered sample.		Depth (m) ample Type ate Sampled	0.50 - 0.70 Soil/Solid 22/07/2010
**	subcontracted test. % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within	Da	te Received SDG Ref imple No.(s)	24/07/2010 24/07/2010 100726-8 1865961
	the samples are not corrected for this recovery.	LOD/Units	Method	
	hlorobenzene	<0.1 mg/kg	TM157	<0.1
1,3-Dic	hlorobenzene	<0.1 mg/kg	TM157	<0.1
1,2-Dic	hlorobenzene	<0.1 mg/kg	TM157	<0.1
2-Chlor	ronaphthalene	<0.1 mg/kg	TM157	<0.1
2-Meth	ylnaphthalene	<0.1 mg/kg	TM157	<0.1
Acenap	ohthylene	<0.1 mg/kg	TM157	<0.1
Acenap	ohthene	<0.1 mg/kg	TM157	<0.1
Anthrad	cene	<0.1 mg/kg	TM157	<0.1
Benzo(	a)anthracene	<0.1 mg/kg	TM157	0.137
Benzo(	b)fluoranthene	<0.1 mg/kg	TM157	0.13
Benzo(	k)fluoranthene	<0.1 mg/kg	TM157	0.131
	a)pyrene	<0.1 mg/kg	TM157	0.171
	g,h,i)perylene	<0.1 mg/kg	TM157	<0.1
Chryse		<0.1 mg/kg	TM157	0.168
Fluorar		<0.1 mg/kg	TM157	0.245
Fluorer		<0.1 mg/kg	TM157	<0.1
	(1,2,3-cd)pyrene	<0.1 mg/kg	TM157	<0.1
Phenar		<0.1 mg/kg	TM157	<0.1
Pyrene		<0.1 mg/kg	TM157	0.248 <0.1
Naphth	o(a,h)anthracene	<0.1 mg/kg	TM157	<0.1
Diberiz	o(a,ii)aiitiiiaceile	<0.1 mg/kg	TIVITO	<b>~0.1</b>

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley Order No.: 228113

Order No.: 228113 Report No: 92286

TPH CWG (S)						
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSE 16			
M mCERTS accredited. aq Aqueous / settled sample.		Depth (m)				
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type ate Sampled	Soil/Solid			
* subcontracted test.  ** % recovery of the surrogate		te Received	22/07/2010 24/07/2010			
standard to check the efficiency of the method. The results of the		SDG Ref	100726-8			
individual compounds within the samples are not corrected	Lab Sa	imple No.(s)	1865961			
for this recovery.						
Component GRO Surrogate %	LOD/Units %	Method TM089	101			
recovery**	/0	TIVIOOS	101			
GRO >C5-C12	<0.044	TM089	<0.044			
Benzene	mg/kg <0.01	TM089	<0.01			
Ethe dhannan	mg/kg	TMOOO	M			
Ethylbenzene	<0.003 mg/kg	TM089	<0.003 <b>M</b>			
Toluene	<0.002	TM089	<0.002			
m,p-Xylene	mg/kg <0.006	TM089	<0.006			
	mg/kg		М			
o-Xylene	<0.003 mg/kg	TM089	<0.003 <b>M</b>			
m,p,o-Xylene	<0.01	TM089	<0.01			
BTEX, Total	mg/kg <0.01	TM089	<0.01			
	mg/kg		М			
Methyl tertiary butyl ether (MTBE)	<0.005 mg/kg	TM089	<0.005 #			
Aliphatics >C5-C6	<0.01	TM089	<0.01			
Aliphatics >C6-C8	mg/kg <0.01	TM089	<0.01			
	mg/kg					
Aliphatics >C8-C10	<0.01 mg/kg	TM089	<0.01			
Aliphatics >C10-C12	<0.01	TM089	<0.01			
Aromatics >C6-C7	mg/kg <0.01	TM089	<0.01			
Alomatics > Co-Cr	mg/kg	110009	<b>~0.01</b>			
Aromatics >C7-C8	<0.01	TM089	<0.01			
Aromatics >EC8-EC10	mg/kg <0.01	TM089	<0.01			
A	mg/kg	T14000	.0.04			
Aromatics >EC10-EC12	<0.01 mg/kg	TM089	<0.01			
Total Aliphatics >C5-C12	<0.01	TM089	<0.01			
Total Aromatics >C6-C12	mg/kg <0.01	TM089	<0.01			
	mg/kg					
Aliphatics >C12-C16	<0.1 mg/kg	TM173	<0.1			
Aliphatics >C16-C21	<0.1 mg/kg	TM173	<0.1			
Aliphatics >C16-C35	<0.1 mg/kg	TM173	2.08			
Aliphatics >C21-C35	<0.1 mg/kg	TM173	2.08			
Aliphatics >C35-C44	<0.1 mg/kg	TM173	<0.1			
Aromatics >EC12-EC16	<0.1 mg/kg	TM173	<0.1			
Aromatics >EC16-EC21	<0.1 mg/kg	TM173	0.406			
Aromatics >EC21-EC35	<0.1 mg/kg	TM173	20			
Aromatics >EC35-EC44	<0.1 mg/kg	TM173	4.4			
Aromatics >EC40-EC44	<0.1 mg/kg	TM173	<0.1			
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173	2.08			
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173	24.8			
Total Aliphatics >C5-35	<0.1 mg/kg	TM173	2.08			
Total Aliphatics >C5-C44	<0.1 mg/kg	TM173	2.08			
Total Aromatics >C5-35	<0.1 mg/kg	TM173	20.4			
Total Aromatics >C6-C44	<0.1 mg/kg	TM173	24.8			
Total Aliphatics & Aromatics	<0.1 mg/kg	TM173	22.5			
>C5-35						
Total Aliphatics & Aromatics >C5-C44	<0.1 mg/kg	TM173	26.9			
~UU-U44						

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

VOC	MS (S)						
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	WSE 16			
	mCERTS accredited. Aqueous / settled sample.		Depth (m)	0.50 - 0.70			
tot.unfilt	Dissolved / filtered sample. Total / unfiltered sample.		ample Type ate Sampled	Soil/Solid			
	subcontracted test. % recovery of the surrogate		te Received	22/07/2010 24/07/2010			
	standard to check the efficiency of the method. The results of the		SDG Ref	100726-8			
	individual compounds within the samples are not corrected	Lab Sa	imple No.(s)	1865961			
	for this recovery.		<b>35</b> (1 1				
Compo Dibrom	nent ofluoromethane**	LOD/Units	Method TM116	102			
Toluene	e-d8**	%	TM116	98.7			
4-Brom	ofluorobenzene**	%	TM116	126			
Dichlor	odifluoromethane	<0.004	TM116	<0.004			
Dictrion	odilidololiletilaile	mg/kg	TIVITIO	<0.004 M			
Chloror	methane	<0.007	TM116	<0.007 #			
Vinyl C	hloride	mg/kg <0.01	TM116	<0.01			
Dromo	mathana	mg/kg	TM11C	# -0.013			
וטווטום	methane	<0.013 mg/kg	TM116	<0.013 <b>M</b>			
Chloroe	ethane	<0.014	TM116	<0.014			 
Trichlo	rofluorormethane	mg/kg <0.006	TM116	<0.006			
1 1 D:	hloroothona	mg/kg	TM116	М			
I.I-DIC	hloroethene	<0.01 mg/kg	1101116	<0.01 #			
Carbon	Disulphide	<0.007	TM116	0.0312			
Dichlor	omethane	mg/kg <0.01	TM116	<b>M</b> <0.01			
	T. C B (150	mg/kg		#			
Methyl	Tertiary Butyl Ether	<0.011 mg/kg	TM116	<0.011 <b>M</b>			
trans-1	-2-Dichloroethene	<0.011	TM116	<0.011			
1.1-Dic	hloroethane	mg/kg <0.008	TM116	<b>M</b> <0.008			
		mg/kg		M			
cis-1-2-	-Dichloroethene	<0.005 mg/kg	TM116	<0.005 <b>M</b>			
2.2-Dic	hloropropane	<0.012	TM116	<0.012			
Bromor	chloromethane	mg/kg <0.014	TM116	<b>M</b> <0.014			
		mg/kg		M			
Chlorof	form	<0.008 mg/kg	TM116	<0.008 <b>M</b>			
1.1.1-T	richloroethane	<0.007	TM116	<0.007			
1 1-Dic	hloropropene	mg/kg <0.011	TM116	<b>M</b> <0.011			
1.1-010	illoroproperie	mg/kg		М			
Carbon	tetrachloride	<0.014	TM116	<0.014 <b>M</b>			
1.2-Dic	hloroethane	mg/kg <0.005	TM116	<0.005			
Benzen	10	mg/kg <0.009	TM116	<b>M</b> <0.009			
		mg/kg		M			
Trichlor	roethene	<0.009	TM116	<0.009 <b>M</b>			
1.2-Dic	hloropropane	mg/kg <0.012	TM116	<0.012			
Dibrom	omethane	mg/kg <0.009	TM116	<0.009			
		mg/kg		М		 	 
Bromod	dichloromethane	<0.007	TM116	<0.007 <b>M</b>			
cis-1-3-	-Dichloropropene	mg/kg <0.014	TM116	<0.014			
Toluene	Δ	mg/kg <0.005	TM116	<0.005			
roluene		<0.005 mg/kg	TIVITIO	M		 	
trans-1	-3-Dichloropropene	<0.014	TM116	<0.014			
1.1.2-T	richloroethane	mg/kg <0.01	TM116	<0.01			
1 2 Di-	hloroproposo	mg/kg	TM116	M			
1.3-DIC	hloropropane	<0.007 mg/kg	TM116	<0.007 #			
Tetrach	loroethene	<0.005	TM116	<0.005			
Dibrom	ochloromethane	mg/kg <0.013	TM116	<b>M</b> <0.013			
		mg/kg		M			
1.2-Dib	romoethane	<0.012 mg/kg	TM116	<0.012 <b>M</b>			
Chorob	enzene	<0.005	TM116	<0.005			
1.1.1.2	-Tetrachloroethane	mg/kg <0.01	TM116	<b>M</b> <0.01			
		mg/kg		М			
Ethylbe		< 0.004	TM116	<0.004	I and the second		I and the second

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

					011110. 022		
voc	MS (S)						
	Results Legend	Customer	Sample Ref.	WSE 16			
	ISO17025 accredited. mCERTS accredited.						
aq	Aqueous / settled sample.		Depth (m)	0.50 - 0.70			
	Dissolved / filtered sample. Total / unfiltered sample.		ample Type	Soil/Solid			
*	subcontracted test.		ate Sampled	22/07/2010			
	% recovery of the surrogate standard to check the efficiency	Ба	te Received SDG Ref	24/07/2010			
	of the method. The results of the	Lab Sa	mple No.(s)	100726-8			
	individual compounds within the samples are not corrected	Lab Sa	(2)	1865961			
	for this recovery.						
Compo	nent	LOD/Units	Method				
p/m-Xy	lene	<0.014	TM116	<0.014			
		mg/kg		#			
o-Xyler	ne	<0.01	TM116	<0.01			
Styrene	`	mg/kg <0.01	TM116	<0.01			
Otyron	<b>^</b>	mg/kg	1101110	40.01 M			
Bromof	orm	<0.01	TM116	<0.01			
		mg/kg		М			
Isoprop	ylbenzene	<0.005	TM116	<0.005			
		mg/kg		М			
1.1.2.2	-Tetrachloroethane	<0.01	TM116	<0.01			
122T	richloropropage	mg/kg <0.017	TM116	<b>*</b>			
۱-د.ع-۱	richloropropane	<0.017 mg/kg	TIVITIO	<0.017 <b>M</b>			
Bromol	penzene	<0.01	TM116	<0.01			
		mg/kg		м			
Propylb	enzene	<0.011	TM116	<0.011			
		mg/kg		М			
2-Chlor	rotoluene	<0.009	TM116	<0.009			
1257	rimethylhenzene	mg/kg	TM116	<0.008			
1.J.D-1	rimethylbenzene	<0.008 mg/kg	TIVITIO	<0.008			
4-Chlor	otoluene	<0.012	TM116	<0.012			
		mg/kg		М			
tert-But	ylbenzene	<0.012	TM116	<0.012			
		mg/kg		#			
1.2.4-T	rimethylbenzene	<0.009	TM116	<0.009			
ooo Du	hulhanzana	mg/kg	TM116	# 40.01			
sec-Bu	tylbenzene	<0.01 mg/kg	TM116	<0.01 <b>M</b>			
4-Isonr	opyltoluene	<0.011	TM116	<0.011			
Поорг	opynoidene	mg/kg	1111110	м			
1.3-Dic	hlorobenzene	<0.006	TM116	<0.006			
		mg/kg		М			
1.4-Dic	hlorobenzene	<0.005	TM116	<0.005			
		mg/kg	T11110	M			
n-Butyi	benzene	<0.01	TM116	<0.01 <b>M</b>			
1 2-Dic	hlorobenzene	mg/kg <0.012	TM116	<0.012			
1.2 010	INOTOBETIZETIE	mg/kg	1111110	-0.012 M			
1.2-Dib	romo-3-chloropropan	<0.014	TM116	<0.014			
е		mg/kg		M			
Tert-an	nyl methyl ether	<0.015	TM116	<0.015			
1017	rightorohonas	mg/kg	TM440	<b>40.000</b>			
1.2.4-1	richlorobenzene	<0.006 mg/kg	TM116	<0.006 #			
Hexach	lorobutadiene	<0.012	TM116	<0.012			
		mg/kg		N			
Naphth	alene	<0.013	TM116	<0.013			
		mg/kg		М			
1.2.3-T	richlorobenzene	<0.006	TM116	<0.006			
		mg/kg		М			

# **ALcontrol Laboratories Analytical Services**

Report No:

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd
Attention: Steve Dooley
Order No.: 228113

Results Legend	Cuetomor	Sample Ref.	MOE 40	M/SE 3	MICE	MGE 30	MGE 30	MCE 24
# ISO17025 accredited.	Customer	Jampie Ket.	WSE 19	WSE 2	WSE 2	WSE 20	WSE 20	WSE 21
M mCERTS accredited.		Depth (m)	0.60 - 0.70	0.50 - 0.70	2.10 - 2.30	0.20 - 0.40	3.40 - 3.60	0.85 - 0.95
aq Aqueous / settled sample.  diss.filt Dissolved / filtered sample.	9	Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
ot.unfilt Total / unfiltered sample.		ate Sampled			22/07/2010			
* subcontracted test.		te Received	22/07/2010	22/07/2010		22/07/2010 24/07/2010	22/07/2010	22/07/2010
** % recovery of the surrogate standard to check the efficiency		SDG Ref	24/07/2010	24/07/2010	24/07/2010		24/07/2010	24/07/2010
of the method. The results of th			100726-8	100726-8	100726-8	100726-8	100726-8	100726-8
individual compounds within the samples are not corrected	Lab Sa	imple No.(s)	1864700	1864588	1864517	1864714	1864829	1864863
for this recovery.								
Component	LOD/Units	Method						
Asbestos Containing	-	TM001				No ACM Detected		
Material Screen								
Ammoniacal Nitrogen,	<15 mg/kg	TM024	<15	<15	<15	<15	<15	<15
exchangeable as NH4			N			M	M	
Sulphate, 2:1 water soluble	<0.003 g/l	TM098	0.654	0.036	1.67	0.0785	0.0331	1.13
	4 1111.7	T14400	N 7.51			M	M	7.04
pH	1 pH Units	TM133	7.51	7.83	6.06	8.13	8.66	7.81
Chramium Havavalant	co e malka	TM151	N 2.55			M	M	<b>~</b> 0.6
Chromium, Hexavalent	<0.6 mg/kg	TM151	2.55	<0.6	<0.6	<0.6	<0.6	<0.6
TPH >C6-C8	<10 mg/kg	TMAEA	#				#	
1PH >C6-C8	<10 mg/kg	TM154		<10	<10	<10		
TDU >C0 C10	210 m = //:	TNAAFA		210	240	240		
TPH >C8-C10	<10 mg/kg	TM154		<10	<10	<10		
TDU >C10 C12	210 m = //-	TNAAFA		210	240	240		
TPH >C10-C12	<10 mg/kg	TM154		<10	<10	<10		
TPH >C12-C16	<10 mg/kg	TM154		<10	<10	<10		
11 11 / 012-010	<10 mg/kg	1 (VI 104		<b>\10</b>	<b>\10</b>	<b>\10</b>		
TPH >C16-C21	<10 mg/kg	TM154		<10	<10	<10		
11 11 -010-021	< 10 mg/kg	1 IVI 104		<b>\10</b>	<b>\10</b>	<b>\10</b>		
TPH >C21-C40	<10 mg/kg	TM154		92.3	13.3	101		
11 11 /021-040	< 10 mg/kg	1 IVI 104		92.3	13.3	101		
TPH >C6-C40	<10 mg/kg	TM154		105	13.3	112		
11 11 200-040	~ 10 mg/kg	1101104		105		#		
Arsenic	<0.6 mg/kg	TM181	50.3	10.3	5.81	9.48	3.38	14.3
11 301 110	~0.0 mg/kg	1 (01 10)	50.3 <b>N</b>			9.48 <b>M</b>	3.38 <b>M</b>	14.3
Cadmium	<0.02	TM181	5.99	0.458	0.508	0.697	0.103	0.253
oddillulli	mg/kg	INITOT	5.99 N			0.697 <b>M</b>	0.103 <b>M</b>	0.233
Chromium	<0.9 mg/kg	TM181	92	29.2	35.4	53.2	2.81	20.6
om omium	-0.9 mg/kg	INITOT	92 N			55.2 M	2.01 <b>M</b>	20.0
Conner	<1.4 ma/ka	TM181	36200	12.5	16.2	313	2.35	56.3
Copper	<1.4 mg/kg	1 101 10 1	36200 <b>N</b>			313 M	2.35 <b>M</b>	30.3
Lead	<0.7 mg/kg	TM181	589	12.9	9.08	19.1	1.76	34.1
Lead	~∪./ mg/kg	1101101	589 N			19.1 <b>M</b>	1.76 <b>M</b>	34.1
Mercury	<0.14	TM181	<1.4	1 (0.14	<0.14	<0.14	<0.14	<0.14
IVIOI GUI Y	<0.14 mg/kg	1 (01 10)	<1.4 M			<0.14 M	<0.14 <b>M</b>	<b>~</b> 0.14
Nickel	<0.2 mg/kg	TM181	913	24.4	32	47.6	4.08	37.1
	-0.2 mg/kg	INITOT	913 N			47.6 M	4.06 M	57.1
Selenium	<1 mg/kg	TM181	<10	<1	1.54	1.27	<1	<1
	9/1(9	51	#			#	#	•
Zinc	<1.9 mg/kg	TM181	24200	59.8	122	330	10.4	54.8
		51	Z4200 N			M	10.4 M	00
Boron, water soluble	<1 mg/kg	TM222	3.09	1.02	3.38	1.32	<1	<1
,	3 3		N			M	М	
	<u>L</u>							
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# **ALcontrol Laboratories Analytical Services**

Report No:

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd
Attention: Steve Dooley
Order No.: 228113

Location:	KLU56 D	SDC RICE	ester	Rep	ort No:	92286	
PAH by GCMS							
Results Legend	Customo	r Comple Dof	WOE 40	MOE 04	I		
# ISO17025 accredited.	Customei	r Sample Ref.	WSE 19	WSE 21			
M mCERTS accredited.		Depth (m)	0.60 - 0.70	0.85 - 0.95			
aq Aqueous / settled sample. diss.filt Dissolved / filtered sample.		Sample Type	Soil/Solid	Soil/Solid			
tot.unfilt Total / unfiltered sample.		ate Sampled	22/07/2010	22/07/2010			
* subcontracted test.  ** % recovery of the surrogate	Da	ate Received	24/07/2010	24/07/2010			
standard to check the efficience		SDG Ref	100726-8	100726-8			
of the method. The results of t individual compounds within	he Lab S	ample No.(s)	1864700	1864863			
the samples are not corrected							
for this recovery.	LOD/Units	Method					
Component Naphthalene-d8 %	%	TM218	96.9	96.9			
recovery**	70	1101210	90.9	90.9			
Acenaphthene-d10 %	%	TM218	97.3	98.4			
recovery**	,,	2.0	07.0	33.1			
Phenanthrene-d10 %	%	TM218	95.9	84.8			
recovery**							
Chrysene-d12 % recovery**	%	TM218	93	51.9			
	0/						
Perylene-d12 % recovery**	%	TM218	93.5	44.6			
Nanhthalana	<0.000	TMO10	0.120	0.204			
Naphthalene	<0.009 mg/kg	TM218	0.139 <b>M</b>	0.204 <b>M</b>			
Acenaphthylene	<0.012	TM218	0.0169	0.125			
. , , , ,	mg/kg		M	M			
Acenaphthene	<0.008	TM218	0.143	0.115			
	mg/kg		М	М			
Fluorene	<0.01	TM218	0.115	0.0735			
Di	mg/kg	T1 10 13	M	M			
Phenanthrene	<0.015	TM218	1.76	0.593			
Anthropone	mg/kg	TN4040	M	M			
Anthracene	<0.016	TM218	0.344 <b>M</b>	0.124 <b>M</b>			
Fluoranthene	mg/kg <0.017	TM218	2.47	1.06			
Tuorantiene	mg/kg	TIVIZIO	Z.47 M	1.00 M			
Pyrene	<0.015	TM218	2.07	0.865			
,	mg/kg		М	М			
Benz(a)anthracene	<0.014	TM218	1.07	0.421			
	mg/kg		M	M			
Chrysene	<0.01	TM218	0.942	0.432			
	mg/kg		М	M			
Benzo(b)fluoranthene	<0.015	TM218	1.33	0.765			
Donza/k\ftuerenthene	mg/kg	TMO10	M 0.459	M			
Benzo(k)fluoranthene	<0.014	TM218	0.458 <b>M</b>	0.236 <b>M</b>			
Benzo(a)pyrene	mg/kg <0.015	TM218	1.03	0.406			
Delize(a)pyrene	mg/kg	1101210	1.00	M			
Indeno(1,2,3-cd)pyrene	<0.018	TM218	0.552	0.199			
	mg/kg		М	М			
Dibenzo(a,h)anthracene	<0.023	TM218	0.149	0.0695			
	mg/kg		M	M			
Benzo(g,h,i)perylene	<0.024	TM218	0.649	0.27			
Delveremetic budrecerbane	mg/kg <0.118	TMO10	M 12.2	F.06			
Polyaromatic hydrocarbons, Total USEPA 16	<0.118 mg/kg	TM218	13.2 <b>M</b>	5.96 <b>M</b>			
Total OSEFA TO	Hig/kg		IVI	IVI			
	1						
	-						
	1						
	<u></u>						

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Location:	KL056	DSDC Bice	ester	Rep	oort No:	92286	
PCRs (vs Araclar 12	54)						
# ISO17025 accredited. # ISO17025 accredited. # Aqueous / settled sample. diss.fil: Dissolved / filtered sample. tot.unfilt tot.unfilt subcontracted test. " % recovery of the surrogate standard to check the efficiency of the method. The results of the	,	Depth (m) Sample Type Date Sampled Date Received SDG Ref Sample No.(s)	Soil/Solid 22/07/2010 24/07/2010 100726-8	WSE 21  0.85 - 0.95 Soil/Solid 22/07/2010 24/07/2010 100726-8 1864863			
individual compounds within the samples are not corrected for this recovery.		,	1004700	1001000			
Component	LOD/Units						
PCBs (vs Aroclor 1254)	<0.035 mg/kg	TM070	<0.035	<0.035 #			

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley

Order No.: 228113 Report No: 92286

Semi	Volatile Organic					 	 
	Results Legend ISO17025 accredited.	Customer	Sample Ref.	WSE 19	WSE 21		
	mCERTS accredited. Aqueous / settled sample.		Depth (m)	0.60 - 0.70	0.85 - 0.95		
	Dissolved / filtered sample. Total / unfiltered sample.		ample Type	Soil/Solid	Soil/Solid		
*	subcontracted test. % recovery of the surrogate		te Sampled te Received	22/07/2010 24/07/2010	22/07/2010 24/07/2010		
ŀ	standard to check the efficiency		SDG Ref	100726-8	100726-8		
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1864700	1864863		
	the samples are not corrected for this recovery.						
Compoi Phenol	nent	<0.1 mg/kg	Method TM157	<0.1	<0.1		
THEHOI		-0.1 mg/kg	TIVITOT	<b>~0.1</b>	40.1		
Pentach	nlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1		
n-Nitros	so-n-dipropylamine	<0.1 mg/kg	TM157	<0.1	<0.1		
Nitrobe	nzene	<0.1 mg/kg	TM157	<0.1	<0.1		
loonbor			TM457	<b>40.1</b>	<0.1		
Isophor	orie	<0.1 mg/kg	TM157	<0.1	<0.1		
Hexach	loroethane	<0.1 mg/kg	TM157	<0.1	<0.1		
Hexach	lorocyclopentadiene	<0.1 mg/kg	TM157	<0.1	<0.1		
Hexach	lorobutadiene	<0.1 mg/kg	TM157	<0.1	<0.1		
nexach	lorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1		
n-Diocty	yl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
Dimethy	yl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
Diethyl	phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
	yl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
Dibenzo	ofuran	<0.1 mg/kg	TM157	<0.1	<0.1		
Carbaz	ole	<0.1 mg/kg	TM157	0.218	<0.1		
Butylbe	nzyl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
bis(2-Et	thylhexyl) phthalate	<0.1 mg/kg	TM157	<0.1	<0.1		
DIS(2-CI	hloroethoxy)methane	<0.1 mg/kg	TM157	<0.1	<0.1		
bis(2-Cl	hloroethyl)ether	<0.1 mg/kg	TM157	<0.1	<0.1		
Azoben	zene	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Nitrop	henol	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Nitroa	aniline	<0.1 mg/kg	TM157	<0.1	<0.1		
4-ivietny	ylphenol	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Chlor	ophenylphenylether	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Chlor	oaniline	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Chlor	o-3-methylphenol	<0.1 mg/kg	TM157	<0.1	<0.1		
4-Brom	ophenylphenylether	<0.1 mg/kg	TM157	<0.1	<0.1		
3-Nitroa		<0.1 mg/kg	TM157	<0.1	<0.1		
2-Nitrop	henol	<0.1 mg/kg	TM157	<0.1	<0.1		
2-Nitroa	aniline	<0.1 mg/kg	TM157	<0.1	<0.1		
2-Methy	/lphenol	<0.1 mg/kg	TM157	<0.1	<0.1		
	richlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1		
2-Chlor	ophenol	<0.1 mg/kg	TM157	<0.1	<0.1		
2,6-Dini	itrotoluene	<0.1 mg/kg	TM157	<0.1	<0.1		
2,4-Dini	itrotoluene	<0.1 mg/kg	TM157	<0.1	<0.1		
2,4-Dim	nethylphenol	<0.1 mg/kg	TM157	<0.1	<0.1		
	hlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1		
2,4,6-Tr	richlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1		
2,4,5-Tr	richlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1		

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

	137 1 47 2				110
Sem	i Volatile Organic		1ds Sample Ref.	MCE 40	MOT 04
# M	ISO17025 accredited.  mCERTS accredited.	Customer		WSE 19	WSE 21
aq	Aqueous / settled sample.  Dissolved / filtered sample.		Depth (m) Sample Type	0.60 - 0.70	0.85 - 0.95
	Total / unfiltered sample.		ate Sampled	Soil/Solid 22/07/2010	Soil/Solid 22/07/2010
**	subcontracted test. % recovery of the surrogate		te Received	24/07/2010	24/07/2010
	standard to check the efficiency of the method. The results of the	Lah Sa	SDG Ref ample No.(s)	100726-8 1864700	100726-8 1864863
	individual compounds within the samples are not corrected		, ,	.004700	.001000
Compo	for this recovery.	LOD/Units	Method		
	chlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1
1,3-Di	chlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1
1,2-Dio	chlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1
2-Chlo	ronaphthalene	<0.1 mg/kg	TM157	<0.1	<0.1
2-Meth	nylnaphthalene	<0.1 mg/kg	TM157	<0.1	<0.1
Acena	phthylene	<0.1 mg/kg	TM157	<0.1	<0.1
Acena	phthene	<0.1 mg/kg	TM157	0.156	<0.1
Anthra	cene	<0.1 mg/kg	TM157	0.356	<0.1
Benzo	(a)anthracene	<0.1 mg/kg	TM157	0.862	0.253
Benzo	(b)fluoranthene	<0.1 mg/kg	TM157	0.829	0.521
Benzo	(k)fluoranthene	<0.1 mg/kg	TM157	0.615	0.345
Benzo	(a)pyrene	<0.1 mg/kg	TM157	1.11	0.568
Benzo	(g,h,i)perylene	<0.1 mg/kg	TM157	0.588	0.542
Chryse	ene	<0.1 mg/kg	TM157	0.973	0.328
Fluora	nthene	<0.1 mg/kg	TM157	2.12	0.441
Fluore	ne	<0.1 mg/kg	TM157	0.122	<0.1
Indend	o(1,2,3-cd)pyrene	<0.1 mg/kg	TM157	0.582	0.52
Phena	nthrene	<0.1 mg/kg	TM157	1.74	0.179
Pyrene	e	<0.1 mg/kg	TM157	1.9	0.432
Naphti	nalene	<0.1 mg/kg	TM157	0.148	<0.1
Dibenz	zo(a,h)anthracene	<0.1 mg/kg	TM157	0.121	<0.1

# **ALcontrol Laboratories Analytical Services**

Report No:

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley Order No.: 228113

IFII							
l l	CWG (S)  Results Legend	Customer	Sample Ref.	WSE 19	WSE 21		
	ISO17025 accredited. mCERTS accredited.		·				
aq	Aqueous / settled sample. Dissolved / filtered sample.		Depth (m) ample Type	0.60 - 0.70	0.85 - 0.95		
tot.unfilt	Total / unfiltered sample.		te Sampled	Soil/Solid 22/07/2010	Soil/Solid 22/07/2010		
	subcontracted test. % recovery of the surrogate		te Received	24/07/2010	24/07/2010		
	standard to check the efficiency of the method. The results of the		SDG Ref	100726-8	100726-8		
ļi	individual compounds within	Lab Sa	mple No.(s)	1864700	1864863		
	the samples are not corrected for this recovery.						
Compor		LOD/Units	Method				
	urrogate %	%	TM089	24	6		
recover	y** C5-C12	<0.044	TM089	0.655	0.131		
GRO >	C0-C12	mg/kg	TIVIUOS	0.055	0.131		
Benzen	ie	<0.01	TM089	<0.01	<0.01		
Ethylbe	n7000	mg/kg <0.003	TM089	<0.003	<0.003		
Luiyibe	TIZETIE	mg/kg	110000	<0.003 M	<0.003 <b>M</b>		
Toluene	Э	<0.002	TM089	<0.002	<0.002		
m n Vul	lono	mg/kg <0.006	TM089	<b>M</b> <0.006	<0.006		
m,p-Xyl	lerie	mg/kg	TIVIUOS	<0.006 <b>M</b>	<0.006 <b>M</b>		
o-Xylen	ie	<0.003	TM089	<0.003	<0.003		
m n - \	(vlana	mg/kg	TMOOO	M	M < 0.01		
m,p,o-X	kylerie	<0.01 mg/kg	TM089	<0.01 <b>M</b>	<0.01 <b>M</b>		
BTEX,	Total	<0.01	TM089	<0.01	<0.01		
14-11	tantian de la la la	mg/kg	T14000	M	M		
Methyl t (MTBE)	tertiary butyl ether	<0.005 mg/kg	TM089	<0.005 #	<0.005 #		
	cs >C5-C6	<0.01	TM089	<0.01	<0.01		
		mg/kg					
Aliphation	cs >C6-C8	<0.01 mg/kg	TM089	0.0524	0.0158		
Aliphati	cs >C8-C10	<0.01	TM089	0.0241	<0.01		
		mg/kg					
Aliphatio	cs >C10-C12	<0.01	TM089	0.209	0.0332		
Aromati	ics >C6-C7	mg/kg <0.01	TM089	<0.01	<0.01		
		mg/kg					
Aromati	ics >C7-C8	<0.01	TM089	<0.01	<0.01		
Aromati	ics >EC8-EC10	mg/kg <0.01	TM089	0.0362	<0.01		
		mg/kg					
Aromati	ics >EC10-EC12	<0.01	TM089	0.313	0.0498		
Total Al	liphatics >C5-C12	mg/kg <0.01	TM089	0.285	0.049		
		mg/kg					
Total Ar	romatics >C6-C12	<0.01	TM089	0.349	0.0498		
Aliphati	cs >C12-C16	mg/kg <0.1 mg/kg	TM173	5.07	4.55		
Aliphati	cs >C16-C21	<0.1 mg/kg	TM173	4.57	6.79		
Aliphati	cs >C16-C35	<0.1 mg/kg	TM173	40.4	44.9		
Aliphati	cs >C21-C35	<0.1 mg/kg	TM173	35.8	38.1		
Alinhati	cs >C35-C44	<0.1 mg/kg	TM173	30.7	21.2		
, inprioriti		-o. i mg/kg	11.170	50.1		 	
Aromati	ics >EC12-EC16	<0.1 mg/kg	TM173	4.23	<0.1		
Aromati	ics >EC16-EC21	<0.1 mg/kg	TM173	8.03	7.1		
Jinali	20.0 2021	5.1 mg/kg	70	0.00		 	
Aromati	ics >EC21-EC35	<0.1 mg/kg	TM173	66.2	62.3		
Aromati	ics >EC35-EC44	<0.1 mg/kg	TM173	51.3	62.8		
Aromati	ics >EC40-EC44	<0.1 mg/kg	TM173	25.9	28.4		
Total Al	liphatics >C12-C44	<0.1 mg/kg	TM173	76.2	70.7		
	•						
	romatics	<0.1 mg/kg	TM173	130	132		
>EC12- Total Al	-EC44 liphatics >C5-35	<0.1 mg/kg	TM173	45.7	49.5		
. Otal Al	p.://di.doc.e.	-o.r mg/kg	11/11/3		<del></del>		
Total Al	liphatics >C5-C44	<0.1 mg/kg	TM173	76.5	70.7		
Total A	romatics >C5-35	<0.1 mg/kg	TM173	78.8	69.4		
i Utai Al	TOTTIALIOS /00-00	~o.1 mg/kg	11011/3	10.0	09.4		
Total A	romatics >C6-C44	<0.1 mg/kg	TM173	130	132		
Tot-! *	linhatian C A	-0.4 "	T84470	405	440		
Total Al >C5-35	liphatics & Aromatics	<0.1 mg/kg	TM173	125	119		
		<0.1 mg/kg	TM173	207	203		
Total Al	liphatics & Aromatics	ogg					
		0.1gg		·			

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

LUCA		112000 B	ODC DICE		110	JOIL NO.	92200	
voc	MS (S)							
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	WSE 19	WSE 21			
М	mCERTS accredited.		Depth (m)	0.60 - 0.70	0.85 - 0.95			
	Aqueous / settled sample. Dissolved / filtered sample.	s	ample Type	Soil/Solid	Soil/Solid			
*	Total / unfiltered sample. subcontracted test.		ate Sampled	22/07/2010	22/07/2010			
**	% recovery of the surrogate standard to check the efficiency	Da	te Received SDG Ref	24/07/2010	24/07/2010			
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	100726-8 1864700	100726-8 1864863			
	the samples are not corrected							
Compo	for this recovery.	LOD/Units	Method					
	nofluoromethane**	%	TM116	46.8	101			
Toluen	e-d8**	%	TM116	99.8	99.9			
Tolucii	0 00		111110	00.0	00.0			
4-Bron	nofluorobenzene**	%	TM116	138	137			
Dichlor	odifluoromethane	<0.004	TM116	<0.004	<0.04			
01.1		mg/kg	T1440	M	M			
Cnioro	methane	<0.007 mg/kg	TM116	<0.007 #	<0.07 #			
Vinyl C	hloride	<0.01	TM116	<0.01	<0.1			
Bromo	methane	mg/kg <0.013	TM116	<0.013	<b>*</b>			
		mg/kg		M	M			
Chloro	ethane	<0.014	TM116	<0.014 <b>M</b>	<0.14 <b>M</b>			
Trichlo	rofluorormethane	mg/kg <0.006	TM116	<0.006	<0.06			
14.0	hloroothoro	mg/kg	TN4440	M <0.01	M <0.1			
1.1-DIC	chloroethene	<0.01 mg/kg	TM116	<0.01 #	<0.1 #			
Carbor	n Disulphide	<0.007	TM116	<0.007	<0.07			
Dichlor	romethane	mg/kg <0.01	TM116	<b>M</b> <0.01	<b>M</b> <0.1			
Diomoi	omenane	mg/kg		#	#			
Methyl	Tertiary Butyl Ether	<0.011	TM116	<0.011 <b>M</b>	<0.11 <b>M</b>			
trans-1	-2-Dichloroethene	mg/kg <0.011	TM116	<0.011	<0.11			
4.4.50		mg/kg	T1440	M	M			
1.1-Dic	chloroethane	<0.008 mg/kg	TM116	<0.008 <b>M</b>	<0.08 <b>M</b>			
cis-1-2	-Dichloroethene	<0.005	TM116	<0.005	<0.05			
2.2 Dic	chloropropane	mg/kg <0.012	TM116	<0.012	<b>M</b> <0.12			
2.2-010	illoroproparie	mg/kg	TIVITIO	<0.012 M	~0.12 <b>M</b>			
Bromo	chloromethane	<0.014	TM116	<0.014	<0.14			
Chloro	form	mg/kg <0.008	TM116	<b>M</b> <0.008	<b>M</b> <0.08			
		mg/kg		M	М			
1.1.1-1	richloroethane	<0.007 mg/kg	TM116	<0.007 <b>M</b>	<0.07 <b>M</b>			
1.1-Dic	chloropropene	<0.011	TM116	<0.011	<0.11			
Carbor	ntetrachloride	mg/kg <0.014	TM116	<b>M</b> <0.014	<b>M</b> <0.14			
Carboi	netracilionae	mg/kg	TIVITIO	-0.014 M	10.14 M			
1.2-Dic	chloroethane	<0.005	TM116	<0.005	<0.05 <b>M</b>			
Benzei	ne	mg/kg <0.009	TM116	<0.009	<0.09			
		mg/kg		M	М			
irichio	roethene	<0.009 mg/kg	TM116	0.0719 <b>M</b>	0.248 <b>M</b>			
1.2-Dic	chloropropane	<0.012	TM116	<0.012	<0.12			
Dibrom	nomethane	mg/kg <0.009	TM116	<0.009	<b>M</b> <0.09			
		mg/kg		M	М			
Bromo	dichloromethane	<0.007 mg/kg	TM116	<0.007 <b>M</b>	<0.07 <b>M</b>			
cis-1-3	-Dichloropropene	<0.014	TM116	<0.014	<0.14			
Toluen	٥	mg/kg <0.005	TM116	<b>M</b> <0.005	<b>M</b> <0.05			
roluen		<0.005 mg/kg	TIVITIO	<0.005 <b>M</b>	<0.05 <b>M</b>			
trans-1	-3-Dichloropropene	<0.014	TM116	<0.014	<0.14			
1.1.2-T	richloroethane	mg/kg <0.01	TM116	<0.01	<0.1			
		mg/kg		M	М			
1.3-Dic	chloropropane	<0.007 mg/kg	TM116	<0.007 #	<0.07 #			
Tetracl	nloroethene	<0.005	TM116	<0.005	<0.05			
Dibron	nochloromethane	mg/kg <0.013	TM116	<b>M</b> <0.013	<b>M</b> <0.13			
וטוטוטו		mg/kg		M	М			
1.2-Dib	promoethane	<0.012	TM116	<0.012	<0.12			
Chorol	penzene	mg/kg <0.005	TM116	<0.005	<b>M</b> <0.05			
		mg/kg		M	М			
1.1.1.2	-Tetrachloroethane	<0.01 mg/kg	TM116	<0.01 <b>M</b>	<0.1 <b>M</b>			
Ethylbe	enzene	<0.004	TM116	0.00573	<0.04			
		mg/kg		М	М			

# **ALcontrol Laboratories Analytical Services**

Report No:

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley Order No.: 228113

					100	
VOC	MS (S)					
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	WSE 19	WSE 21	
М	mCERTS accredited. Aqueous / settled sample.		Depth (m)	0.60 - 0.70	0.85 - 0.95	
diss.filt	Dissolved / filtered sample.		ample Type	Soil/Solid	Soil/Solid	
*	Total / unfiltered sample. subcontracted test.		te Sampled	22/07/2010	22/07/2010	
	% recovery of the surrogate standard to check the efficiency	Da	te Received SDG Ref	24/07/2010 100726-8	24/07/2010 100726-8	
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1864700	1864863	
	the samples are not corrected for this recovery.					
Compo		LOD/Units	Method			
p/m-Xy		<0.014	TM116	<0.014	<0.14	
o Vulor	20	mg/kg <0.01	TM116	<0.01	<0.1	#
o-Xyler	ie	mg/kg	TIVITIO	<0.01 <b>M</b>		м
Styrene	Э	<0.01	TM116	<0.01	<0.1	
Bromo	form	mg/kg <0.01	TM116	<b>M</b> <0.01	<0.1	М
Diomo	ioiiii	mg/kg	TWITTO	40.01 M		М
Isoprop	oylbenzene	<0.005	TM116	<0.005	<0.05	
1.1 2 2	-Tetrachloroethane	mg/kg <0.01	TM116	<b>M</b> <0.01	<0.1	М
1.1.2.2	. ou domoi ocui di le	mg/kg		#		#
1.2.3-T	richloropropane	<0.017	TM116	<0.017	<0.17	N#
Bromo	benzene	mg/kg <0.01	TM116	<0.01	<0.1	М
		mg/kg		М	ı	М
Propyll	penzene	<0.011	TM116	<0.011 <b>M</b>	<0.11	м
2-Chlor	rotoluene	mg/kg <0.009	TM116	<0.009	<0.09	.vi
		mg/kg		М	ı	М
1.3.5-T	rimethylbenzene	<0.008 mg/kg	TM116	<0.008 #	<0.08	#
4-Chlor	rotoluene	mg/kg <0.012	TM116	<0.012	<0.12	π
		mg/kg		М	I	М
tert-Bu	tylbenzene	<0.012	TM116	<0.012 #	<0.12	#
1.2.4-T	rimethylbenzene	mg/kg <0.009	TM116	<0.009	<0.09	#
	·	mg/kg		#		#
sec-Bu	tylbenzene	<0.01 mg/kg	TM116	<0.01 <b>M</b>	<0.1	м
4-Isopr	opyltoluene	<0.011	TM116	<0.011	<0.11	
		mg/kg		М	ı	М
1.3-Dic	hlorobenzene	<0.006 mg/kg	TM116	<0.006 <b>M</b>	<0.06	м
1.4-Dic	hlorobenzene	<0.005	TM116	<0.005	<0.05	.71
		mg/kg		М	ı	М
n-Butyl	benzene	<0.01 mg/kg	TM116	<0.01 <b>M</b>	<0.1	м
1.2-Dic	hlorobenzene	<0.012	TM116	<0.012	<0.12	
4.5.=:	0.77	mg/kg	T	М		М
1.2-Dib e	oromo-3-chloropropan	<0.014 mg/kg	TM116	<0.014 <b>M</b>	<0.14	м
	nyl methyl ether	<0.015	TM116	<0.015	<0.15	
	· ·	mg/kg				_
1.2.4-T	richlorobenzene	<0.006 mg/kg	TM116	<0.006 #	<0.06	#
Hexach	nlorobutadiene	<0.012	TM116	<0.012	<0.12	
New! (	valene	mg/kg		М		М
Naphth	alene	<0.013 mg/kg	TM116	<0.013	<0.13	м
1.2.3-T	richlorobenzene	<0.006	TM116	<0.006	<0.06	
		mg/kg		М	ı	М
						$\dashv$
						+
						_
						+
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						$\dashv$
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						T
						+

# **ALcontrol Laboratories Analytical Services**

Report No:

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd
Attention: Steve Dooley
Order No.: 228113

Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSE 22	WSE 23	WSE 23	WSE 24	WSE 24	WSE 25
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)	0.40 - 0.60	0.70 - 1.00	1.20 - 1.40	0.30 - 0.50	4.40 - 4.60	0.20 - 0.50
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
* subcontracted test.		ate Sampled ate Received	23/07/2010	23/07/2010	23/07/2010	23/07/2010	23/07/2010	23/07/2010
standard to check the efficiency	,	SDG Ref	24/07/2010 100726-8	24/07/2010 100726-8	24/07/2010 100726-8	24/07/2010 100726-8	24/07/2010 100726-8	24/07/2010 100726-8
of the method. The results of the individual compounds within the samples are not corrected	e Lab Sa	ample No.(s)	1864989	1864982	1864968	1864945	1864958	1865056
for this recovery.  Component	LOD/Units	Method						
Asbestos Containing	-	TM001	No ACM Detected	No ACM Detected				
Material Screen Ammoniacal Nitrogen,	<15 mg/kg	TM024	<15	18.6	<15	<15	<15	18.2
exchangeable as NH4		TM098	0.0842	0.0949		0.0463	<b>M</b> 0.438	0.0161
Sulphate, 2:1 water soluble	<0.003 g/l		0.0642 <b>M</b>	0.0949 M	М	0.0463 M	0.436 <b>M</b>	М
Soil Organic Matter (SOM)	<0.35 %	TM132			3.02			1.16 #
pH	1 pH Units	TM133	8.88 <b>M</b>	7.83 M	7.33 <b>M</b>	6.92 <b>M</b>	8.03 <b>M</b>	7.31 <b>M</b>
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6	<0.6	<1.2	<0.6	<0.6 #	<1.2 #
TPH >C6-C8	<10 mg/kg	TM154	<10	#	<10	<10	<10	#
TPH >C8-C10	<10 mg/kg	TM154	<10		<10	<10	<10	
TPH >C10-C12	<10 mg/kg	TM154	<10		<10	<10	<10	
TPH >C12-C16	<10 mg/kg	TM154	<10		<10	<10	<10	
TPH >C16-C21	<10 mg/kg	TM154	26		12.6	<10	<10	
TPH >C21-C40	<10 mg/kg	TM154	218		147	187	111	
TPH >C6-C40	<10 mg/kg	TM154	249		165	199	119	
Arsenic	<0.6 mg/kg	TM181	12.7	12.9	<b>#</b> 8.47	9.59	7.63	9.21
Cadmium	<0.02	TM181	0.737	0.661	0.339	<b>M</b> 0.297	<b>M</b> 0.207	0.564
	mg/kg		М	М	М	M	М	М
Chromium	<0.9 mg/kg	TM181	19.8 <b>M</b>	27.3 M		29.8 <b>M</b>	12.7 <b>M</b>	30.5 <b>M</b>
Copper	<1.4 mg/kg	TM181	30.4 M	88.8 <b>M</b>	13.9 <b>M</b>	19.4 <b>M</b>	8 <b>M</b>	12.2 <b>M</b>
Lead	<0.7 mg/kg	TM181	51.8 <b>M</b>	113 <b>M</b>	22.9 M	25.8 <b>M</b>	6.59 <b>M</b>	16.7 <b>M</b>
Mercury	<0.14 mg/kg	TM181	<0.14 <b>M</b>	<0.14	<0.14	<0.14 <b>M</b>	<0.14 <b>M</b>	<0.14
Nickel	<0.2 mg/kg	TM181	22.7 <b>M</b>	31.3 <b>M</b>	18.4 <b>M</b>	19 <b>M</b>	19.8 <b>M</b>	37.9 <b>M</b>
Selenium	<1 mg/kg	TM181	<1 #	1.05	<1	1.09	<1 #	1.05
Zinc	<1.9 mg/kg	TM181	270 <b>M</b>	179	64.2	104 <b>M</b>	24.2	77.1
Boron, water soluble	<1 mg/kg	TM222	1.41	1.55	1.32	<1	<b>M</b> 6.61	<b>M</b> <1
			<u>M</u>	M	M	M	M	M

# **ALcontrol Laboratories Analytical Services**

Report No:

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley Order No.: 228113

DALL	hy CCMC						
PAH	by GCMS Results Legend	Customer	Sample Ref.	WSE 23	1		
	ISO17025 accredited.	Customer	Sample Rei.	WSE 23			
aq	mCERTS accredited. Aqueous / settled sample.		Depth (m)				
	Dissolved / filtered sample.  Total / unfiltered sample.		Sample Type ate Sampled	Soil/Solid			
*	subcontracted test. % recovery of the surrogate		ite Received	23/07/2010 24/07/2010			
	standard to check the efficiency		SDG Ref	100726-8			
	of the method. The results of the individual compounds within	Lab Sa	ample No.(s)	1864982			
	the samples are not corrected for this recovery.						
Compo		LOD/Units	Method				
Naphth recover	alene-d8 %	%	TM218	98			
	hthene-d10 %	%	TM218	96.9			
recover	y**						
Phenar	threne-d10 %	%	TM218	96.7			
	ne-d12 % recovery**	%	TM218	97.1			
Dandan	ie-d12 % recovery**	%	TM218	102			
Peryler	le-d 12 % recovery	70	I IVIZ IO	102			
Naphth	alene	<0.009	TM218	0.0621			
Acenar	hthylene	mg/kg <0.012	TM218	0.0721			
, iociiaț	and tylene	mg/kg	TIVIZIO	0.0721 <b>M</b>			
Acenap	hthene	<0.008	TM218	0.0688		 	 
Fluoren	ie	mg/kg <0.01	TM218	0.049			
		mg/kg		М			
Phenar	threne	<0.015	TM218	0.946			
Anthrac	cene	mg/kg <0.016	TM218	0.317			
		mg/kg		М			
Fluoran	thene	<0.017 mg/kg	TM218	3.36 <b>M</b>			
Pyrene		<0.015	TM218	3.04			
		mg/kg		М			
Benz(a	)anthracene	<0.014 mg/kg	TM218	1.9 <b>M</b>			
Chryse	ne	<0.01	TM218	1.78			
D	1.70	mg/kg	T14040	M			
Benzo(	b)fluoranthene	<0.015 mg/kg	TM218	3.28 <b>M</b>			
Benzo(	k)fluoranthene	<0.014	TM218	1.36			
Donzo/	a)pyrene	mg/kg	TM218	2.96			
Delizo(	а)ругене	<0.015 mg/kg	TIVIZIO	2.90 <b>M</b>			
Indeno	(1,2,3-cd)pyrene	<0.018	TM218	2.33			
Dibenzo	o(a,h)anthracene	mg/kg <0.023	TM218	0.503			
DIDCHE	o(u,rr)urrarrarocrio	mg/kg	1111210	М			
Benzo(	g,h,i)perylene	<0.024	TM218	2.7			
Polyaro	matic hydrocarbons,	mg/kg <0.118	TM218	<b>M</b> 24.7			
Total U	SEPA 16	mg/kg	2.10	M			
	-						

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

					3011110. 322		
PCB:	s (vs Aroclor 1254 Results Legend	4)					
	Results Legend	Customer	Sample Ref.	WSE 23			
#	ISO17025 accredited.						
M aq	mCERTS accredited. Aqueous / settled sample.		Depth (m) Sample Type	0.70 - 1.00			
diss.filt	Dissolved / filtered sample.	9	Sample Type	Soil/Solid			
tot.unfilt	Total / unfiltered sample. subcontracted test.	D:	ate Sampled	23/07/2010			
	% recovery of the surrogate	Da	ate Received	24/07/2010			
	standard to check the efficiency		SDG Ref	100726-8			
	of the method. The results of the individual compounds within	Lab Sa	ample No.(s)	1864982			
	the samples are not corrected						
	for this recovery.						
Compo	nent	LOD/Units	Method				
PCBs (	(vs Aroclor 1254)	<0.035	TM070	<0.035			
		mg/kg		#			
				<u> </u>			
			1				
				<u></u>			<u> </u>
	Т						
			-				

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Semi	i Volatile Organic			
	Results Legend ISO17025 accredited.	Customer	Sample Ref.	WSE 23
aq	mCERTS accredited. Aqueous / settled sample.		Depth (m)	0.70 - 1.00
tot.unfilt	Dissolved / filtered sample. Total / unfiltered sample.		ample Type ite Sampled	Soil/Solid 23/07/2010
**	subcontracted test. % recovery of the surrogate		te Received	24/07/2010
	standard to check the efficiency of the method. The results of the individual compounds within	Lab Sa	SDG Ref mple No.(s)	100726-8 1864982
	the samples are not corrected for this recovery.		, ,	
Compo Phenol		LOD/Units <0.1 mg/kg	Method TM157	<0.1
	chlorophenol	<0.1 mg/kg	TM157	<0.1
	so-n-dipropylamine	<0.1 mg/kg	TM157	<0.1
Nitrobe	enzene	<0.1 mg/kg	TM157	<0.1
Isopho	rone	<0.1 mg/kg	TM157	<0.1
Hexach	hloroethane	<0.1 mg/kg	TM157	<0.1
Hexach	hlorocyclopentadiene	<0.1 mg/kg	TM157	<0.1
Hexach	hlorobutadiene	<0.1 mg/kg	TM157	<0.1
Hexacl	hlorobenzene	<0.1 mg/kg	TM157	<0.1
n-Dioc	tyl phthalate	<0.1 mg/kg	TM157	<0.1
Dimeth	nyl phthalate	<0.1 mg/kg	TM157	<0.1
Diethyl	phthalate	<0.1 mg/kg	TM157	<0.1
	tyl phthalate	<0.1 mg/kg	TM157	<0.1
Dibenz		<0.1 mg/kg	TM157	<0.1
Carbaz		<0.1 mg/kg	TM157	0.19
Butylbe	enzyl phthalate	<0.1 mg/kg	TM157	<0.1
bis(2-E	thylhexyl) phthalate	<0.1 mg/kg	TM157	<0.1
bis(2-C	Chloroethoxy)methane	<0.1 mg/kg	TM157	<0.1
bis(2-C	Chloroethyl)ether	<0.1 mg/kg	TM157	<0.1
Azober	nzene	<0.1 mg/kg	TM157	<0.1
4-Nitro	phenol	<0.1 mg/kg	TM157	<0.1
4-Nitro	aniline	<0.1 mg/kg	TM157	<0.1
	ıylphenol	<0.1 mg/kg	TM157	<0.1
	rophenylphenylether	<0.1 mg/kg	TM157	<0.1
	roaniline	<0.1 mg/kg	TM157	<0.1
	ro-3-methylphenol	<0.1 mg/kg	TM157	<0.1
4-Brom	nophenylphenylether	<0.1 mg/kg	TM157	<0.1
3-Nitro	aniline	<0.1 mg/kg	TM157	<0.1
2-Nitro	phenol	<0.1 mg/kg	TM157	<0.1
2-Nitro	aniline	<0.1 mg/kg	TM157	<0.1
2-Meth	ylphenol	<0.1 mg/kg	TM157	<0.1
	richlorobenzene	<0.1 mg/kg	TM157	<0.1
	rophenol	<0.1 mg/kg	TM157	<0.1
	nitrotoluene			<0.1
·		<0.1 mg/kg	TM157	
	nitrotoluene	<0.1 mg/kg	TM157	<0.1
2,4-Din	methylphenol	<0.1 mg/kg	TM157	<0.1
2,4-Dic	chlorophenol	<0.1 mg/kg	TM157	<0.1
2,4,6-T	richlorophenol	<0.1 mg/kg	TM157	<0.1
	richlorophenol	<0.1 mg/kg	TM157	<0.1

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Location.	INLUGUE D	SDC DICE	Jotoi	ivel	JUILING. 9	2200	
Semi Volatile Organi	c Compour	nds					
Results Legend		Sample Ref.	WSE 23				
# ISO17025 accredited. M mCERTS accredited.	- Customer						
aq Aqueous / settled sample.		Depth (m)	0.70 - 1.00				
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Soil/Solid				
<ul> <li>* subcontracted test.</li> </ul>		ate Sampled	23/07/2010				
** % recovery of the surrogate standard to check the efficience		te Received SDG Ref	24/07/2010				
of the method. The results of the		ample No.(s)	100726-8 1864982				
individual compounds within the samples are not corrected			1001002				
for this recovery.	1.00//1.1/	Mathad					
Component 1,4-Dichlorobenzene	LOD/Units <0.1 mg/kg	Method TM157	<0.1				
1,4-Dichioloberizerie	<0.1 mg/kg	TIVITO	<b>~</b> 0.1				
1,3-Dichlorobenzene	<0.1 mg/kg	TM157	<0.1				
1,2-Dichlorobenzene	<0.1 mg/kg	TM157	<0.1				
2-Chloronaphthalene	<0.1 mg/kg	TM157	<0.1				
2 omoromapmananono	0.1gg						
2-Methylnaphthalene	<0.1 mg/kg	TM157	<0.1				
A	40.4 //	TN4457	40.4				
Acenaphthylene	<0.1 mg/kg	TM157	<0.1				
Acenaphthene	<0.1 mg/kg	TM157	<0.1				
Anthracene	<0.1 mg/kg	TM157	0.328				
Benzo(a)anthracene	<0.1 mg/kg	TM157	2.24				
Benzo(b)fluoranthene	<0.1 mg/kg	TM157	3.88				
Ponzo/k)fluorenthe -	-0.1 m/l	TN4457	2.46				
Benzo(k)fluoranthene	<0.1 mg/kg	TM157	∠.40				
Benzo(a)pyrene	<0.1 mg/kg	TM157	4.4				
Benzo(g,h,i)perylene	<0.1 mg/kg	TM157	3.16				
Chrysene	<0.1 mg/kg	TM157	2.77				
Fluoranthene	<0.1 mg/kg	TM157	4.55				
Fluorene	<0.1 mg/kg	TM157	<0.1				
Tidorene	-0.1 mg/kg	1101107	30.1				
Indeno(1,2,3-cd)pyrene	<0.1 mg/kg	TM157	3.27				
Phenanthrene	<0.1 mg/kg	TM457	1.31				
Filenantinene	<0.1 mg/kg	TM157	1.31				
Pyrene	<0.1 mg/kg	TM157	4.39				
March (bod)	20.4 //	T14457	.0.4				
Naphthalene	<0.1 mg/kg	TM157	<0.1				
Dibenzo(a,h)anthracene	<0.1 mg/kg	TM157	0.631				

# **ALcontrol Laboratories Analytical Services**

Report No:

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley Order No.: 228113

трн (	CWG (S)			
	Results Legend	Customer	Sample Ref.	WSE 23
М	ISO17025 accredited. mCERTS accredited.		Depth (m)	
	Aqueous / settled sample. Dissolved / filtered sample.	s	Depth (m) ample Type	0.70 - 1.00 Soil/Solid
*	Total / unfiltered sample. subcontracted test.	Da	te Sampled	23/07/2010
	% recovery of the surrogate standard to check the efficiency	Da	te Received SDG Ref	24/07/2010 100726-8
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1864982
	the samples are not corrected for this recovery.			
Compo		LOD/Units	Method	
recover	urrogate % ry**	%	TM089	34
	C5-C12	<0.044	TM089	0.0943
Benzer	ne	mg/kg <0.01	TM089	<0.01
Ethylbe	anzana	mg/kg <0.003	TM089	<0.003
		mg/kg		М
Toluen	e	<0.002 mg/kg	TM089	<0.002 <b>M</b>
m,p-Xy	lene	<0.006	TM089	<0.006
o-Xyler	ne	mg/kg <0.003	TM089	<0.003
		mg/kg		М
m,p,o->	Cylene	<0.01 mg/kg	TM089	<0.01 <b>M</b>
BTEX,	Total	<0.01	TM089	<0.01
	tertiary butyl ether	mg/kg <0.005	TM089	<0.005
(MTBE	) ics >C5-C6	mg/kg <0.01	TM089	# 0.0117
		mg/kg		
Aliphati	ics >C6-C8	<0.01 mg/kg	TM089	0.0115
Aliphati	ics >C8-C10	<0.01	TM089	<0.01
Aliphati	ics >C10-C12	mg/kg <0.01	TM089	0.0198
		mg/kg		
Aromat	ics >C6-C7	<0.01 mg/kg	TM089	<0.01
Aromat	ics >C7-C8	<0.01	TM089	<0.01
Aromat	ics >EC8-EC10	mg/kg <0.01	TM089	<0.01
Aromat	ics >EC10-EC12	mg/kg <0.01	TM089	0.0297
		mg/kg		
Total A	liphatics >C5-C12	<0.01 mg/kg	TM089	0.0431
Total A	romatics >C6-C12	<0.01	TM089	0.0297
Aliphati	ics >C12-C16	mg/kg <0.1 mg/kg	TM173	6.36
	ics >C16-C21	<0.1 mg/kg	TM173	8.16
Aliphati	ics >C16-C35	<0.1 mg/kg	TM173	69.9
Aliphati	ics >C21-C35	<0.1 mg/kg	TM173	61.8
Alinhati	ics >C35-C44	<0.1 mg/kg	TM173	24.3
Aromat	ics >EC12-EC16	<0.1 mg/kg	TM173	5.36
Aromat	ics >EC16-EC21	<0.1 mg/kg	TM173	31.9
Aromat	tics >EC21-EC35	<0.1 mg/kg	TM173	196
Aromat	ics >EC35-EC44	<0.1 mg/kg	TM173	92
Aromat	ics >EC40-EC44	<0.1 mg/kg	TM173	35.6
Total A	liphatics >C12-C44	<0.1 mg/kg	TM173	101
Total A	romatics	<0.1 mg/kg	TM173	326
>EC12	-EC44			
i otal A	liphatics >C5-35	<0.1 mg/kg	TM173	76.3
Total A	liphatics >C5-C44	<0.1 mg/kg	TM173	101
Total A	romatics >C5-35	<0.1 mg/kg	TM173	234
Total A	romatics >C6-C44		TM173	326
		<0.1 mg/kg		
Total A >C5-35	liphatics & Aromatics	<0.1 mg/kg	TM173	310
Total A	liphatics & Aromatics	<0.1 mg/kg	TM173	426
>C5-C4	14			

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

VOC MS (S)									
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSE 23						
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)	0.70 - 1.00						
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		Sample Type ate Sampled	Soil/Solid						
* subcontracted test.  ** % recovery of the surrogate		te Received	23/07/2010 24/07/2010						
standard to check the efficiency of the method. The results of the		SDG Ref	100726-8						
individual compounds within the samples are not corrected	Lab Sa	ample No.(s)	1864982						
for this recovery.  Component	LOD/Units	Method							
Dibromofluoromethane**	%	TM116	109						
T-1: 10**	%	TM116	101						
Toluene-d8**	70	TIVITIO	101						
4-Bromofluorobenzene**	%	TM116	112						
Dichlorodifluoromethane	<0.004	TM116	<0.08						
Chloromethane	mg/kg <0.007	TM116	<b>M</b> <0.14						
\". \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	mg/kg		#						
Vinyl Chloride	<0.01 mg/kg	TM116	<0.2 #						
Bromomethane	<0.013	TM116	<0.26						
Chloroethane	mg/kg <0.014	TM116	<0.28						
Trichlorofluorormethane	mg/kg <0.006	TM116	<b>M</b> <0.12						
	mg/kg		М						
1.1-Dichloroethene	<0.01 mg/kg	TM116	<0.2 #						
Carbon Disulphide	<0.007	TM116	<0.14						
Dichloromethane	mg/kg <0.01	TM116	<0.2						
Methyl Tertiary Butyl Ether	mg/kg <0.011	TM116	<b>*</b>						
	mg/kg		М						
trans-1-2-Dichloroethene	<0.011 mg/kg	TM116	<0.22 M						
1.1-Dichloroethane	<0.008	TM116	<0.16						
cis-1-2-Dichloroethene	mg/kg <0.005	TM116	<b>M</b> <0.1						
2.2-Dichloropropane	mg/kg <0.012	TM116	<b>M</b> <0.24						
2.2-Diciliotoproparie	mg/kg	TIVITIO	М						
Bromochloromethane	<0.014 mg/kg	TM116	<0.28 M						
Chloroform	<0.008	TM116	<0.16						
1.1.1-Trichloroethane	mg/kg <0.007	TM116	<b>M</b> <0.14						
4.4 Diablement	mg/kg	TNAAAC	M						
1.1-Dichloropropene	<0.011 mg/kg	TM116	<0.22 <b>M</b>						
Carbontetrachloride	<0.014 mg/kg	TM116	<0.28 <b>M</b>						
1.2-Dichloroethane	<0.005	TM116	<0.1						
Benzene	mg/kg <0.009	TM116	<b>M</b> <0.18						
	mg/kg		М						
Trichloroethene	<0.009 mg/kg	TM116	<0.18 <b>M</b>						
1.2-Dichloropropane	<0.012 mg/kg	TM116	<0.24						
Dibromomethane	<0.009	TM116	<0.18						
Bromodichloromethane	mg/kg <0.007	TM116	<b>M</b> <0.14						
	mg/kg		М						
cis-1-3-Dichloropropene	<0.014 mg/kg	TM116	<0.28 <b>M</b>						
Toluene	<0.005 mg/kg	TM116	<0.1 <b>M</b>						
trans-1-3-Dichloropropene	<0.014	TM116	<0.28						
1.1.2-Trichloroethane	mg/kg <0.01	TM116	<0.2						
	mg/kg		<b>M</b> <0.14						
1.3-Dichloropropane	<0.007 mg/kg	TM116	#						
Tetrachloroethene	<0.005 mg/kg	TM116	<0.1 <b>M</b>						
Dibromochloromethane	<0.013	TM116	<0.26						
1.2-Dibromoethane	mg/kg <0.012	TM116	<b>M</b> <0.24						
	mg/kg		М						
Chorobenzene	<0.005 mg/kg	TM116	<0.1 <b>M</b>						
1.1.1.2-Tetrachloroethane	<0.01	TM116	<0.2						
Ethylbenzene	mg/kg <0.004	TM116	<b>M</b> 0.111						
	mg/kg		М						

# **ALcontrol Laboratories Analytical Services**

Report No:

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley Order No.: 228113

VOC	MS (S)			
	Results Legend	Customer	Sample Ref.	WSE 23
M	ISO17025 accredited. mCERTS accredited.		Depth (m)	0.70 1.00
diss.filt	Aqueous / settled sample. Dissolved / filtered sample.		ample Type	0.70 - 1.00 Soil/Solid
*	Total / unfiltered sample. subcontracted test. % recovery of the surrogate		te Sampled te Received	23/07/2010 24/07/2010
	standard to check the efficiency of the method. The results of the		SDG Ref	100726-8
	individual compounds within the samples are not corrected	Lab Sa	mple No.(s)	1864982
	for this recovery.	LOD/Units	Method	
p/m-Xyl		<0.014	TM116	0.552
o-Xylen	ne.	mg/kg <0.01	TM116	0.396
		mg/kg		M
Styrene	2	<0.01 mg/kg	TM116	<0.2
Bromof	orm	<0.01 mg/kg	TM116	<0.2
Isoprop	ylbenzene	<0.005	TM116	<0.1
1.1.2.2-	-Tetrachloroethane	mg/kg <0.01	TM116	<0.2
		mg/kg		#
1.2.3-11	richloropropane	<0.017 mg/kg	TM116	<0.34 <b>M</b>
Bromob	penzene	<0.01 mg/kg	TM116	<0.2
Propylb	enzene	<0.011	TM116	<0.22
2-Chlor	otoluene	mg/kg <0.009	TM116	<0.18
1.3.5-Tr	rimethylbenzene	mg/kg <0.008	TM116	<0.16
	•	mg/kg		#
4-Chion	otoluene	<0.012 mg/kg	TM116	<0.24 <b>M</b>
tert-But	ylbenzene	<0.012 mg/kg	TM116	<0.24 #
1.2.4-Tr	rimethylbenzene	<0.009	TM116	<0.18
sec-But	tylbenzene	mg/kg <0.01	TM116	<b>*</b>
4 leopr	opyltoluene	mg/kg <0.011	TM116	<0.22
		mg/kg		M
1.3-Dicl	hlorobenzene	<0.006 mg/kg	TM116	<0.12
1.4-Dich	hlorobenzene	<0.005	TM116	<0.1
n-Butylt	benzene	mg/kg <0.01	TM116	<0.2
1 2-Dicl	hlorobenzene	mg/kg <0.012	TM116	<0.24
		mg/kg		M
1.2-Dibi e	romo-3-chloropropan	<0.014 mg/kg	TM116	<0.28
Tert-am	nyl methyl ether	<0.015 mg/kg	TM116	<0.3
1.2.4-Tr	richlorobenzene	<0.006	TM116	<0.12
Hexach	llorobutadiene	mg/kg <0.012	TM116	<0.24
Naphtha		mg/kg <0.013	TM116	<0.26
·		mg/kg		M
1.2.3-Tı	richlorobenzene	<0.006 mg/kg	TM116	<0.12
		5 5		

# **ALcontrol Laboratories Analytical Services**

Report No:

SDG:

100726-8 H\_ENTEC\_SHW-24 Job:

Client Reference: 26999

Location: KL056 DSDC Bicester

Entec UK Ltd Steve Dooley Customer: Attention: 228113 Order No.:

	_							
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSE 26	WSE 26	WSE 3	WSE 4	WSE 4	
M mCERTS accredited.		Depth (m)	0.40 0.00	0.00 0.00	0.00 0.50	0.00 0.40	4.00, 4.00	
aq Aqueous / settled sample.  liss.filt Dissolved / filtered sample.		ample Type	0.10 - 0.30	2.00 - 2.30	2.30 - 2.50	0.20 - 0.40	1.60 - 1.80	
ot.unfilt Total / unfiltered sample.		ite Sampled	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	
* subcontracted test.			23/07/2010	23/07/2010	22/07/2010	21/07/2010	22/07/2010	
** % recovery of the surrogate	Da	te Received	24/07/2010	24/07/2010	24/07/2010	24/07/2010	24/07/2010	
standard to check the efficiency of the method. The results of the		SDG Ref	100726-8	100726-8	100726-8	100726-8	100726-8	
individual compounds within	Lab Sa	mple No.(s)	1865078	1864965	1864503	1864528	1864626	
the samples are not corrected for this recovery.								
Component	LOD/Units	Method						
Ammoniacal Nitrogen,	<15 mg/kg	TM024	<15	22.2	<15	<15	<15	
exchangeable as NH4	10 mg/kg	1101024	113 M	M	M	M	M	
Sulphate, 2:1 water soluble	<0.003 g/l	TM098	0.018	1.52	1.86	<0.003	1.76	
, , , , , , , , , , , , , , , , , , , ,	3		M	М	М	М	М	
Soil Organic Matter (SOM)	<0.35 %	TM132		2.24				
				#				
pH	1 pH Units	TM133	7.93	5.28	5.99	7.92	4.92	
	.0.0	T1454	M	M	M	M	M	
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6	<1.2	<0.6	<0.6	<1.2	
TPH >C6-C8	<10 mg/kg	TM154	<b>*</b>	<b>*</b>	<10	#	<b>*</b>	
11 11 200-00	<10 mg/kg	1 IVI 1 34	~10	10	~10		~10	
TPH >C8-C10	<10 mg/kg	TM154	<10	<10	<10		<10	
	99				·-		· <del>·</del>	
ΓPH >C10-C12	<10 mg/kg	TM154	<10	<10	<10		<10	
PH >C12-C16	<10 mg/kg	TM154	<10	<10	<10		<10	
TPH >C16-C21	<10 mg/kg	TM154	<10	<10	<10		<10	
TDLL - 004 040	440 "	T) 145 1	440	450	.40		100	
ΓPH >C21-C40	<10 mg/kg	TM154	119	158	<10		160	
ГРН >C6-C40	<10 mg/kg	TM154	123	170	<10		183	
11 11 200-040	~ 10 mg/kg	1101104	123	170	<10 #		183	
Arsenic	<0.6 mg/kg	TM181	11.8	3.03	5.35	13.5	8.85	
			M	M	M	M	0.00 M	
Cadmium	<0.02	TM181	1.67	0.154	0.341	0.824	0.337	
	mg/kg		М	M	М	M	M	
Chromium	<0.9 mg/kg	TM181	34.4	28.8	27	37	36.8	
			M	M	M	M	M	
Copper	<1.4 mg/kg	TM181	19.3	18.1	18.3	21.5	24.2	
and	z0.7 "	T14404	M	M	M	M	M	
.ead	<0.7 mg/kg	TM181	16.9 <b>M</b>	12.9 <b>M</b>	13 <b>M</b>	25.1 <b>M</b>	12.9 <b>M</b>	
Mercury	<0.14	TM181	<0.14	<0.14	<0.14	<0.14	<0.14	
TIOI OUI y	mg/kg	TIVITOT	<0.14 <b>M</b>	<0.14 M	<0.14 M	<0.14 <b>M</b>	<0.14 <b>M</b>	
Nickel	<0.2 mg/kg	TM181	85.8	10	17.3	33.4	26.6	
	.53		M	М	M	М	_5.5 M	
Selenium	<1 mg/kg	TM181	1.96	1.43	<1	1.24	1.33	
			#	#	#	#	#	
Zinc	<1.9 mg/kg	TM181	116	27.3	68.1	116	76.4	
			M	M	M	M	M	
Boron, water soluble	<1 mg/kg	TM222	<1	1.44	3.11	1.45	3.82	
			M	M	M	M	M	
		ı l						

### **ALcontrol Laboratories Analytical Services**

100726-8 SDG:

H\_ENTEC\_SHW-24 Job:

**Client Reference:** 26999

Location: KL056 DSDC Bicester Customer: Attention:

Entec UK Ltd Steve Dooley Order No.: 228113 92286 **Report No:** 

### **ASSOCIATED AQC DATA**

#### Ammonium Soil by Titration

Component	Method Code	QC 17	QC 16	QC 15
Exchangeable	TM024	<b>97.42</b>	<b>92.29</b>	<b>82.43</b>
Ammonium as NH4		80.84 : 103.27	80.84 : 103.27	80.84 : 103.27

#### **Boron Water Soluble**

Component	Method Code	QC 15	QC 11	QC 14	QC 15
Water Soluble Boron	TM222	<b>94.30</b> 82.59 : 112.64	<b>103.60</b> 82.59 : 112.64	<b>100.80</b> 82.59 : 112.64	<b>105.00</b> 82.59 : 112.64

### EPH CWG (Aliphatic) GC (S)

Component	Method Code	QC 15	QC 14
Total Aliphatics >C12-C35	TM173	<b>78.41</b> 66.13 : 101.56	<b>76.43</b> 58.96 : 117.71

### EPH CWG (Aromatic) GC (S)

Component	Method Code	QC 15	QC 14
Total Aromatic >EC12-EC35		<b>101.74</b> 64.00 : 112.00	<b>90.60</b> 58.79 : 118.66

#### Hexavalent Chromium (s)

Component	Method Code	QC 15	QC 19	QC 12	QC 14
Hexavalent Chromium	TM151	104.40	101.40	108.00	102.20
		76.40 : 131.80	76.40 : 131.80	76.40 : 131.80	76.40 : 131.80

### Metals by iCap-OES (Soil)

Component	Method Code	QC 13	QC 10	QC 18	QC 15	QC 15
Aluminium	TM181	<b>113.27</b> 95.21 : 133.11	<b>121.36</b> 95.21 : 133.11	<b>114.25</b> 95.21 : 133.11	<b>105.19</b> 95.21 : 133.11	<b>108.60</b> 95.21 : 133.11
Antimony	TM181	<b>102.38</b> 63.92 : 138.56	<b>101.68</b> 63.92 : 138.56	<b>103.70</b> 63.92 : 138.56	<b>100.29</b> 63.92 : 138.56	<b>100.04</b> 63.92 : 138.56
Arsenic	TM181	<b>104.48</b> 77.96 : 122.04	<b>105.00</b> 77.96 : 122.04	<b>98.62</b> 77.96 : 122.04	<b>103.70</b> 77.96 : 122.04	<b>96.47</b> 77.96 : 122.04
Barium	TM181	<b>103.28</b> 90.49 : 117.24	<b>107.78</b> 90.49 : 117.24	<b>105.63</b> 90.49 : 117.24	<b>99.07</b> 90.49 : 117.24	<b>101.52</b> 90.49 : 117.24
Beryllium	TM181	<b>100.28</b> 77.50 : 122.50	<b>97.43</b> 77.50 : 122.50	<b>100.28</b> 77.50 : 122.50	<b>94.86</b> 77.50 : 122.50	<b>94.40</b> 77.50 : 122.50
Boron	TM181	<b>118.17</b> 82.46 : 141.11	<b>121.75</b> 82.46 : 141.11	<b>108.06</b> 82.46 : 141.11	<b>102.33</b> 82.46 : 141.11	<b>99.37</b> 82.46 : 141.11

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd Attention: Steve Dooley Order No.: 228113

92286

Report No:

		QC 13	QC 10	QC 18	QC 15	QC 15
Cadmium	TM181	<b>98.81</b> 77.50 : 122.50	<b>96.33</b> 77.50 : 122.50	<b>100.88</b> 77.50 : 122.50	<b>96.53</b> 77.50 : 122.50	<b>96.73</b> 77.50 : 122.50
Chromium	TM181	<b>98.43</b> 82.90 : 117.10	<b>101.48</b> 82.90 : 117.10	<b>98.14</b> 82.90 : 117.10	<b>95.28</b> 82.90 : 117.10	<b>94.37</b> 82.90 : 117.10
Cobalt	TM181	<b>99.02</b> 78.26 : 121.74	<b>97.69</b> 78.26 : 121.74	<b>98.67</b> 78.26 : 121.74	<b>95.56</b> 78.26 : 121.74	<b>95.65</b> 78.26 : 121.74
Copper	TM181	<b>99.54</b> 86.52 : 113.48	<b>102.28</b> 86.52 : 113.48	<b>100.64</b> 86.52 : 113.48	<b>99.20</b> 86.52 : 113.48	<b>100.49</b> 86.52 : 113.48
Iron	TM181	<b>106.93</b> 93.59 : 123.28	<b>106.21</b> 93.59 : 123.28	<b>102.68</b> 93.59 : 123.28	<b>101.14</b> 93.59 : 123.28	<b>101.05</b> 93.59 : 123.28
Lead	TM181	<b>104.33</b> 81.22 : 118.78	<b>98.34</b> 81.22 : 118.78	<b>93.84</b> 81.22 : 118.78	<b>99.00</b> 81.22 : 118.78	<b>94.45</b> 81.22 : 118.78
Manganese	TM181	<b>109.75</b> 87.42 : 112.58	<b>103.52</b> 87.42 : 112.58	<b>92.25</b> 87.42 : 112.58	<b>97.35</b> 87.42 : 112.58	<b>92.43</b> 87.42 : 112.58
Mercury	TM181	<b>104.31</b> 72.27 : 127.73	<b>105.54</b> 72.27 : 127.73	<b>103.08</b> 72.27 : 127.73	<b>102.02</b> 72.27 : 127.73	<b>105.18</b> 72.27 : 127.73
Molybdenum	TM181	<b>99.73</b> 71.12 : 128.88	<b>97.48</b> 71.12 : 128.88	<b>101.32</b> 71.12 : 128.88	<b>98.05</b> 71.12 : 128.88	<b>96.47</b> 71.12 : 128.88
Nickel	TM181	<b>96.03</b> 81.27 : 118.73	<b>100.31</b> 81.27 : 118.73	<b>95.95</b> 81.27 : 118.73	<b>96.56</b> 81.27 : 118.73	<b>95.27</b> 81.27 : 118.73
Phosphorus	TM181	<b>96.92</b> 84.04 : 115.96	<b>99.68</b> 84.04 : 115.96	<b>96.98</b> 84.04 : 115.96	<b>98.78</b> 84.04 : 115.96	<b>96.12</b> 84.04 : 115.96
Selenium	TM181	<b>97.20</b> 72.61 : 127.39	<b>92.89</b> 72.61 : 127.39	<b>102.02</b> 72.61 : 127.39	<b>92.34</b> 72.61 : 127.39	<b>95.70</b> 72.61 : 127.39
Strontium	TM181	<b>102.80</b> 80.21 : 119.79	<b>105.98</b> 80.21 : 119.79	<b>99.18</b> 80.21 : 119.79	<b>97.92</b> 80.21 : 119.79	<b>94.74</b> 80.21 : 119.79
Thallium	TM181	<b>92.08</b> 73.04 : 126.96	<b>90.73</b> 73.04 : 126.96	<b>94.04</b> 73.04 : 126.96	<b>89.94</b> 73.04 : 126.96	<b>88.09</b> 73.04 : 126.96
Tin	TM181	<b>105.28</b> 71.55 : 128.45	<b>95.09</b> 71.55 : 128.45	<b>100.19</b> 71.55 : 128.45	<b>96.16</b> 71.55 : 128.45	<b>93.15</b> 71.55 : 128.45
Titanium	TM181	<b>107.15</b> 78.26 : 121.74	<b>105.35</b> 78.26 : 121.74	<b>95.25</b> 78.26 : 121.74	<b>97.95</b> 78.26 : 121.74	<b>95.43</b> 78.26 : 121.74
Vanadium	TM181	<b>110.34</b> 82.03 : 117.97	<b>106.05</b> 82.03 : 117.97	<b>98.99</b> 82.03 : 117.97	<b>99.41</b> 82.03 : 117.97	<b>97.54</b> 82.03 : 117.97
Zinc	TM181	<b>90.70</b> 77.50 : 122.50	<b>93.94</b> 77.50 : 122.50	<b>90.44</b> 77.50 : 122.50	<b>91.57</b> 77.50 : 122.50	<b>90.72</b> 77.50 : 122.50

### PAH by GCMS

Component	Method Code	QC 11	QC 19	QC 18
Acenaphthene	TM218	<b>95.44</b> 68.10 : 128.67	<b>95.87</b> 74.10 : 124.54	<b>100.53</b> 68.10 : 128.67
Acenaphthylene	TM218	<b>86.91</b> 68.11 : 109.28	<b>88.33</b> 63.62 : 117.79	<b>90.77</b> 68.11 : 109.28
Anthracene	TM218	<b>87.06</b> 61.75 : 122.01	<b>92.09</b> 65.03 : 113.03	<b>93.02</b> 61.75 : 122.01
Benz(a)anthracene	TM218	<b>91.81</b> 79.35 : 115.30	<b>98.97</b> 54.51 : 124.77	<b>97.78</b> 79.35 : 115.30
Benzo(a)pyrene	TM218	<b>93.93</b> 79.80 : 116.48	<b>97.91</b> 63.77 : 127.33	<b>98.88</b> 79.80 : 116.48
Benzo(b)fluoranthene	TM218	<b>95.14</b> 79.51 : 116.19	<b>100.92</b> 65.41 : 130.80	<b>99.82</b> 79.51 : 116.19
Benzo(ghi)perylene	TM218	<b>89.83</b> 80.08 : 114.22	<b>93.73</b> 64.55 : 135.03	<b>97.62</b> 80.08 : 114.22
Benzo(k)fluoranthene	TM218	<b>92.18</b> 65.05 : 129.07	<b>95.96</b> 65.91 : 125.08	<b>93.73</b> 65.05 : 129.07
			D	26 of 42

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# **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H\_ENTEC\_SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd
Attention: Steve Dooley
Order No.: 228113

Report No:

92286

		QC 11	QC 19	QC 18
Chrysene	TM218	<b>91.90</b> 80.14 : 113.92	<b>94.82</b> 64.16 : 127.26	<b>95.01</b> 80.14 : 113.92
Dibenzo(ah)anthracene	TM218	<b>89.88</b> 59.79 : 136.56	<b>92.85</b> 67.86 : 121.75	<b>97.03</b> 59.79 : 136.56
Fluoranthene	TM218	<b>89.78</b> 74.35 : 115.70	<b>94.21</b> 66.40 : 120.99	<b>92.94</b> 74.35 : 115.70
Fluorene	TM218	<b>92.86</b> 75.68 : 111.55	<b>94.28</b> 68.44 : 116.96	<b>98.32</b> 75.68 : 111.55
Indeno(123cd)pyrene	TM218	<b>87.39</b> 74.42 : 114.62	<b>96.66</b> 67.20 : 121.68	<b>98.48</b> 74.42 : 114.62
Naphthalene	TM218	<b>94.10</b> 73.21 : 108.15	<b>92.28</b> 70.10 : 115.11	<b>96.40</b> 73.21 : 108.15
Phenanthrene	TM218	<b>92.76</b> 66.61 : 129.12	<b>95.07</b> 68.54 : 116.99	<b>97.30</b> 66.61 : 129.12
Pyrene	TM218	<b>88.85</b> 74.35 : 111.75	<b>93.68</b> 66.64 : 121.60	<b>92.55</b> 74.35 : 111.75

### PCBs (vs Aroclor 1254)

Component	Method Code	QC 19
PCBs (vs Aroclor 1254)	TM070	<b>105.20</b> 75.18 : 122.16

-		
-01		

Component	Method Code	QC 13	QC 15	QC 13	QC 13	QC 11	QC 17
рН	TM133	<b>99.87</b> 97.90 : 102.35	<b>100.38</b> 97.90 : 102.35	<b>100.00</b> 97.90 : 102.35	<b>100.50</b> 97.90 : 102.35	<b>99.37</b> 97.42 : 102.50	<b>100.13</b> 97.90 : 102.35

Component	Method Code	QC 14
рН	TM133	<b>99.87</b> 97.42 : 102.50

### Semi Volatile Organic Compounds

Component	Method Code	QC 14	QC 10
4-Bromophenylphenyleth er (Soil)	TM157	<b>89.80</b> 30.30 : 139.75	<b>88.42</b> 30.30 : 139.75
Benzo(a)anthracene (Soil)	TM157	<b>94.88</b> 27.20 : 137.40	<b>96.42</b> 27.20 : 137.40
Hexachlorobutadiene (Soil)	TM157	<b>91.91</b> 28.70 : 141.30	<b>89.64</b> 28.70 : 141.30
Naphthalene (Soil)	TM157	<b>93.80</b> 39.23 : 145.41	<b>91.97</b> 39.23 : 145.41
Nitrobenzene (Soil)	TM157	<b>91.73</b> 41.78 : 147.15	<b>88.95</b> 41.78 : 147.15
Phenol (Soil)	TM157	<b>93.40</b> 51.88 : 150.83	<b>92.20</b> 51.88 : 150.83

### Total Organic Carbon

### **ALcontrol Laboratories Analytical Services**

**SDG**: 100726-8

Job: H ENTEC SHW-24

Client Reference: 26999

Location: KL056 DSDC Bicester

Customer: Entec UK Ltd
Attention: Steve Dooley
Order No.: 228113
Report No: 92286

Component	Method Code	QC 16
Total Organic Carbon	TM132	<b>97.07</b> 88.75 : 104.70

#### TPH c6-40 Value of soil

Component	Method Code	QC 16	QC 19
Diesel QC	TM154	92.68	92.36
		87.23 : 113.71	87.23 : 113.71
Lube Oil QC	TM154	94.93	94.43
		88.71 : 110.56	88.71 : 110.56
TPH C6-40 Corrected	TM154	93.80	93.40
		86.39 : 109.99	86.39 : 109.99

#### Water Soluble Sulphate 2:1

Component	Method Code	QC 17	QC 19	QC 15
Soluble SO4	TM098	<b>105.20</b> 76.87 : 120.45	<b>85.12</b> 76.87 : 120.45	<b>85.91</b> 76.87 : 120.45

The above information details the reference name of the analytical quality control sample (AQC) that has been run with the samples contained in this report for the different methods of analysis.

The figure detailed is the percentage recovery result for the AQC.

The subscript numbers below are the percentage recovery lower control limit (LCL) and the upper control limit (UCL). The percentage recovery result for the AQC should be between these limits to be statistically in control.

### **ALcontrol Laboratories Analytical Services**



### **Table of Results - Appendix**

SDG Number: 100726-8 Client: Entec UK Ltd Client Ref: 26999

REPOF	RT KEY			Results	expressed	as (e.g.) 1.03E-07 is equivalent to 1.03x10-7
NDP	No Determination Possible	#	ISO 17025 Accredited	Subcontracted Test	М	MCERTS Accredited
NFD	No Fibres Detected	PFD	Possible Fibres Detected	Result previously reported (Incremental reports only)	EC	Equivalent Carbon (Aromatics C8-C35)
Note: Metho	od detection limits are not always achievable	due to vario	ous circumstances beyond our control			

Method No	not always achievable due to various circumstances beyond o	Description	Wet/Dry Sample <sup>1</sup>
PM001		Preparation of Samples for Metals Analysis	Dry
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material	Wet
TM001	In - house Method	Determination of asbestos containing material by screening on solids	
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids	Wet
TM070	Modified: US EPA Method 8250 & 625	Determination of Total Polychlorinated Biphenyls (PCBÆs) as Aroclor 1254 by GC-MS in Soils	Dry
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)	
TM098	Method 4500E, AWWA/APHA, 20th Ed., 1999	Determination of Sulphate using the Kone Analyser	Dry
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS	
TM132	In - house Method	ELTRA CS800 Operators Guide	Dry
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter	Wet
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser	Wet
TM154	In - house Method	Determination of Petroleum Hydrocarbons by EZ Flash GC-FID in the Carbon range C6- C40	Wet
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone	Wet
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID	Dry
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES	Dry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers	Dry
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546	Wet
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer	Dry

<sup>&</sup>lt;sup>1</sup> Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

### **APPENDIX**

#### **APPENDIX**

- Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following:
   NRA Leach tests, flash point, ammonium as NH<sub>4</sub> by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and
   TOF-MS TICS.
- 2. Samples will be run in duplicate upon request, but an additional charge may be incurred.
- 3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. Alcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.
- 4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
- 5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
- 6. When requested, the individual sub sample scheduled will be screened in house for the presence of large asbestos containing material fragments/pieces. If no asbestos containing material is found this will be reported as 'no asbestos containing material detected'. If asbestos containing material is detected it will be removed and analysed by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If asbestos containing material is present no further analysis will be undertaken. At no point is the fibre content of the soil sample determined.
- 7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.
- 8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.
- 9. NDP No determination possible due to insufficient/unsuitable sample.
- 10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals total metals must be requested separately.
- 11. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.
- 12. Results relate only to the items tested
- 13. **Surrogate recoveries** Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 130 %.
- Product analyses Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.
- 15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).
- 16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 14).
- 17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
- 18. Our MCERTS accreditation for PAHs by GCMS applies to all product types apart from Kerosene, where naphthalene only is not accredited.
- 19. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
- 19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.
- 20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
- 21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
- 22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
- 23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

#### LIQUID MATRICES EXTRACTION SUMMARY

ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAH MS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GS MS
SVOC	DCM	LIQUID/LIQUID SHAKE	GC MS
FREE SULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST OCP/OPP	DCM	LIQUID/LIQUID SHAKE	GC MS
TRIAZINE HERBS	DCM	LIQUID/LIQUID SHAKE	GC MS
PHENOLS MS	DCM	SOLID PHASE EXTRACTION	GC MS
TPH by INFRA RED (IR)	TCE	LIQUID/LIQUID EXTRACTION	HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID EXTRACTION	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GC FID

### SOLID MATRICES EXTRACTION SUMMARY

	OOLID	MATRICES EXTRACTION SUMMARY		
ANALYSIS	D/C OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
Solvent Extractable Matter	D&C	DCM	SOXTHERM	GRAVIMETRIC
Cyclohexane Ext. Matter	D&C	CYCLOHEXANE	SOXTHERM	GRAVIMETRIC
Thin Layer Chromatography	D&C	DCM	SOXTHERM	IATROSCAN
Elemental Sulphur	D&C	DCM	SOXTHERM	HPLC
Phenols by GCMS	WET	DCM	SOXTHERM	GC-MS
Herbicides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
Pesticides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
EPH (DRO)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Min oil)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Cleaned up)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH CWG by GC	D&C	HEXANE:ACETONE	END OVER END	GC-FID
PCB tot / PCB con	D&C	HEXANE:ACETONE	END OVER END	GC-MS
Polyaromatic Hydrocarbons (MS)	WET	HEXANE:ACETONE	Microwave TM218.	GC-MS
C8-C40 (C6-C40)EZ Flash	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Polyaromatic Hydrocarbons Rapid GC	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Semi Volatile Organic Compounds	WET	DCM:ACETONE	SONICATE	GC-MS

#### **Identification of Asbestos in Bulk Materials**

The results for asbestos identification for soil samples are obtained from possible Asbestos Containing Material, removed during the 'Screening of soils for Asbestos Containing Materials', which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

#### **Visual Estimation Of Fibre Content.**

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: -

Trace – Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in MDHS 100.

The identification of asbestos containing materials falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.



Unit 7-8 Hawarden Business Park Manor Road (off Manor Lane) Hawarden

> Deeside CH5 3US Tel: (01244) 528700

Fax: (01244) 528701 email: mkt@alcontrol.com Website: www.alcontrol.com

Attention: Simon Howard

### **CERTIFICATE OF ANALYSIS**

 Date:
 09 August 2010

 Customer:
 H\_ENTEC\_MOD-11

Sample Delivery Group (SDG): 100802-15 Report No.: 92974

**Your Reference:** 

**Location:** KL056 BICESTER

We received 9 samples on Saturday July 31, 2010 and 9 of these samples were scheduled for analysis which was completed on Monday August 09, 2010. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Asbestos testing - we are not accredited for screening soil samples for asbestos fibres. We are only accredited to identify asbestos fibres in bulk material (ACM).

Approved By:



**Iain Swinton** 

Operations Director - Land UK & Ireland



SDG:

Location:

### **ALcontrol Laboratories Analytical Services**

100802-15

Job: H\_ENTEC\_MOD-11

**Client Reference:** 

KL056 BICESTER

Customer: Attention:

Simon Howard

Entec UK - MOD Ltd

Order No.: 228113

Report No: 92974

### Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
1896317	SWA1			29/07/2010
1896305	SWC1			29/07/2010
1896283	SWC2			29/07/2010
1896287	SWC4			29/07/2010
1896313	SWC5			29/07/2010
1896290	SWC8			29/07/2010
1896308	SWD6			29/07/2010
1896296	SWE1			29/07/2010
1896298	SWE5			29/07/2010

Only received samples which have had analysis scheduled will be shown on the following pages.

# **ALcontrol Laboratories Analytical Services**

SDG: 100802-15 Customer: Entec UK - MOD Ltd

Job: H\_ENTEC\_MOD-11 Attention: Simon Howard

Client Reference:Order No.:228113Location:KL056 BICESTERReport No:92974

### LIQUID

Anions by Kone (w) All  All  All  All  All  All  All  Al			_																															
No Determination	Results Legend	Lab Sample No(s)			1896283		0000	1896287			1896290			9679691	100000		1896298				1896305				1896308			1896313				1896317		
Ammonium  All  All  All  BPH CWG (Aliphatic) Aqueous GC (W)  All  BPH CWG (Aliphatic) Aqueous GC (W)  All  All  All  All  All  All  All  A	No Determination				SWC2		(	SWC4			SWC8			G V V	CWE 1		SWE5				SWC1				SWD6			SWC5				SWA1		
Ammonium  All  All  All  All  All  All  All  A	i ossible	AGS Ref.						T							T																			
Ammonium  All  X X X X X X X X X X X X X X X X X		Depth (m)																															lotal	1
Anions by Kone (w)  All  X X X X X X X X X X X X X X X X X		Container	1l green glass bottle	500ml Plastic	H2SO4	1l green glass bottle	500ml Plastic	H2SO4	SOOIII Flassic	H2SO4	Vial	1l green glass bottle	500ml Plastic	H2SO4	Vial	11 groon glass bottle	FOOm! Plastic	11 green glass bottle	500ml Plastic	HZSU4	Vial	11 green glass bottle	500ml Plastic	H2SO4	Vial	1l green glass bottle	500ml Plastic	H2SO4	1l green glass bottle	500ml Plastic	H2SO4	Vial		
Note	Ammonium	All	П		X			X	t	X				X	t		X	(		×	(	l	t	X				X			X			
EPH (DRO) (C10-C40) Aqueous (W) All  EPH CWG (Aliphatic) Aqueous GC (W) All  EPH CWG (Aromatic) Aqueous GC (W) All  EPH CWG (W)  All  EPH CWG (W) All  EPH CWG (	Anions by Kone (w)	All	П	X			X		×	(			X	1	Ť	×	(		X			İ	X				X			X				
EPH CWG (Aliphatic) Aqueous GC (W)  All  EPH CWG (Aromatic) Aqueous GC (W)  All  All  All  All  All  All  All  A	Dissolved Metals by ICP-MS	All	П	X			X	T	×	(	T		X	1	Ť	×	(		X		T	Ī	X				X			X				1
EPH CWG (Aromatic) Aqueous GC (W)  All  All  X X X X X X X X X X X X X X X X X X	EPH (DRO) (C10-C40) Aqueous (W)	All	П					X	(	Ī		X		T	T		Ī	X			Ī	X							X					Ī
GRO by GC-FID (W)  All  X X X X X X X X X X X X X X X X X	EPH CWG (Aliphatic) Aqueous GC (W)	All	П							T		X		T	T	T	T	X		T		Ī												
Mercury Dissolved  All  X  X  X  X  X  X  X  X  X  X  X  X	EPH CWG (Aromatic) Aqueous GC (W	) All										X			T			X																
PAH Spec MS - Aqueous (W)       All       X	GRO by GC-FID (W)	All							Ī	T	X			)	×		T				X				X							X		Ī
pH Value       All       X	Mercury Dissolved	All	X			X		X	(			X			>	(		X				X				X			X					
X   X   X   X   X   X   X   X   X   X	PAH Spec MS - Aqueous (W)	All																X								X								
X         X         X         X         2           TPH CWG (W)         All         X         X         X         2           VOC MS (W)         All         0 <td>pH Value</td> <td>All</td> <td></td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td>×</td> <td>(</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td>×</td> <td><b>(</b></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td>	pH Value	All		X			X		×	(			X			×	<b>(</b>		X				X				X			X				
X         X         X         2           VOC MS (W)         All         0	SVOC MS (W) - Aqueous											X						X															2	
	TPH CWG (W)											X						X															2	
	VOC MS (W)	All												)	X						X													

# **ALcontrol Laboratories Analytical Services**

SDG: 100802-15 Customer: Entec UK - MOD Ltd

Job:H\_ENTEC\_MOD-11Attention:Simon Howard

Client Reference:Order No.:228113Location:KL056 BICESTERReport No:92974

### **Test Completion dates**

SDG reference: 100802-15

Lab Sample No(s)	1896283	1896287	1896290	1896296	1896298	1896305	1896308	1896313	1896317
Customer Sample Ref.	SWC2	SWC4	SWC8	SWE1	SWE5	SWC1	SWD6	SWC5	SWA1
Depth									
Туре	LIQUID								
Ammonium	04/08/2010	04/08/2010	03/08/2010	03/08/2010	04/08/2010	04/08/2010	04/08/2010	04/08/2010	04/08/2010
Anions by Kone (w)	04/08/2010	04/08/2010	04/08/2010	04/08/2010	04/08/2010	04/08/2010	04/08/2010	04/08/2010	04/08/2010
Dissolved Metals by ICP-MS	04/08/2010	04/08/2010	04/08/2010	04/08/2010	04/08/2010	04/08/2010	04/08/2010	04/08/2010	04/08/2010
EPH (DRO) (C10-C40) Aqueous (W)			04/08/2010	04/08/2010		04/08/2010	04/08/2010		09/08/2010
EPH CWG (Aliphatic) Aqueous GC				05/08/2010		05/08/2010			
EPH CWG (Aromatic) Aqueous GC				05/08/2010		05/08/2010			
GRO by GC-FID (W)			05/08/2010	05/08/2010		05/08/2010	05/08/2010		05/08/2010
Mercury Dissolved	03/08/2010	03/08/2010	03/08/2010	03/08/2010	03/08/2010	03/08/2010	03/08/2010	03/08/2010	03/08/2010
PAH Spec MS - Aqueous (W)						04/08/2010		04/08/2010	
pH Value	03/08/2010	03/08/2010	03/08/2010	03/08/2010	03/08/2010	03/08/2010	04/08/2010	04/08/2010	03/08/2010
SVOC MS (W) - Aqueous				06/08/2010		06/08/2010			
TPH CWG (W)				06/08/2010		06/08/2010			
VOC MS (W)				04/08/2010		04/08/2010			

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100802-15

Job: H\_ENTEC\_MOD-11

Client Reference:

Location: KL056 BICESTER

Customer: Entec UK - MOD Ltd

Attention: Nick Huyg Order No.: 228113 Report No: 92974

Results Legend # ISO17025 accredited.	Customer	Sample Ref.	SWA1	SWC1	SWC2	SWC4	SWC5	SWC8
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)						
diss.filt Dissolved / filtered sample.		ample Type	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
tot.unfilt Total / unfiltered sample.  * subcontracted test.		ate Sampled	29/07/2010	29/07/2010	29/07/2010	29/07/2010	29/07/2010	29/07/2010
** % recovery of the surrogate standard to check the efficiency		te Received SDG Ref	31/07/2010 100802-15	31/07/2010 100802-15	31/07/2010 100802-15	31/07/2010 100802-15	31/07/2010 100802-15	31/07/2010 100802-15
of the method. The results of the individual compounds within		imple No.(s)	1896317	1896305	1896283	1896287	1896313	1896290
the samples are not corrected for this recovery.	AG	S Reference						
Component	LOD/Units	Method						
Ammoniacal Nitrogen as	<0.3 mg/l	TM099	0.436	<0.3	<0.3	<0.3	<0.3	<0.3
NH4 Arsenic (diss.filt)	<0.00012	TM152	0.00206	0.000702	0.00096	0.00109	0.0019	0.00126
	mg/l		#	#	#	#	#	#
Boron (diss.filt)	<0.0094 mg/l	TM152	0.032 #	0.0963	0.104	0.107 #	0.0921 #	0.105 #
Cadmium (diss.filt)	<0.0001	TM152	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium (diss.filt)	mg/l <0.00022	TM152	0.0068	0.00907	0.00878	0.00877	0.00655	0.00843
<u> </u>	mg/l		#	#	#	#	#	#
Copper (diss.filt)	<0.00085 mg/l	TM152	<0.00085 #	<0.00085 #	<0.00085	<0.00085 #	<0.00085 #	<0.00085 #
Lead (diss.filt)	<0.00002	TM152	0.000183	0.000056	0.000153	0.000082	0.000169	0.000047
Nickel (diss.filt)	mg/l <0.00015	TM152	<b>*</b>	<b>*</b>	<b>*</b>	<b>*</b>	<0.00015	<0.00015
, , ,	mg/l		#	#	#	#	#	#
Selenium (diss.filt)	<0.00039 mg/l	TM152	<0.00039 #	<0.00039 #	0.000605 #	0.0012	0.00502 #	<0.00039 #
Zinc (diss.filt)	<0.00041	TM152	0.00766	0.00849	0.0108	0.0096	0.004	0.0445
EPH Range >C10 - C40	mg/l <0.046 mg/l	TM172	0.39	0.278	#	#	#	<b>*</b> <0.046
(aq)	<0.040 mg/i	TIVITZ	0.59 #	U.270 #				~0.0 <del>4</del> 0
EPH Band >C10-C12 (aq)	<0.01 mg/l	TM172	0.0331	0.0113				<0.01
EPH Band >C12-C16 (aq)	<0.01 mg/l	TM172	0.0647	0.0371				<0.01
EPH Band >C16-C21 (aq)	<0.01 mg/l	TM172	0.0659	0.0465				<0.01
` "								
EPH Band >C21-C28 (aq)	<0.01 mg/l	TM172	0.0621	0.0594				<0.01
EPH Band >C35-C40 (aq)	<0.01 mg/l	TM172	0.0393	0.0281				<0.01
EPH Band >C28-C35 (aq)	<0.01 mg/l	TM172	0.125	0.0956				<0.01
Mercury (diss.filt)	<0.00001	TM183	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sulphate	mg/l <3 mg/l	TM184	7.7	105	105	103	69.2	# 119
	42 mg/l	TM184	<b>#</b>	<b>#</b> 179	# 147	# 145	<b>#</b> 98.3	<b>72.8</b>
Chloride	<2 mg/l	1101104	~Z #	179	#	145	90.3 #	72.0 #
pН	<1 pH Units	TM256	7.4 #	7.97 #	8.09	8.2	8.34 #	8.01 #
			#	#	#	<i>π</i>	π	#

# **ALcontrol Laboratories Analytical Services**

100802-15 Customer: SDG:

Entec UK - MOD Ltd H\_ENTEC\_MOD-11 Job: Attention: Nick Huyg

Client Reference:

228113 Order No.: KL056 BICESTER Report No: 92974 Location:

GRO by GC-FID (W)							
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	SWA1	SWC1	SWC8	 	
M mCERTS accredited. aq Aqueous / settled sample. tot.unfilt Total / unfiltered sample.  * subcontracted test of the surrogate standard to check the officiency of the method. The results of the individual compounds within the samples are not corrected	Da Da Lab Sa	Depth (m) Sample Type ate Sampled ate Received SDG Ref ample No.(s) S Reference	Water(GW/SW) 29/07/2010 31/07/2010 100802-15 1896317	Water(GW/SW) 29/07/2010 31/07/2010 100802-15 1896305	Water(GW/SW) 29/07/2010 31/07/2010 100802-15 1896290		
for this recovery.  Component	LOD/Units	Method					
GRO Surrogate %	%	TM245		88			
recovery** Benzene	<0.007 mg/l	TM245	<0.007	<0.007	<0.007		
Toluene	<0.004 mg/l	TM245	<0.004	<0.004	<0.004		
Ethylbenzene	<0.005 mg/l	TM245	<0.005	<0.005	<0.005		
m,p-Xylene	<0.008 mg/l	TM245	<0.008 #	<0.008 #	<0.008 #		
o-Xylene	<0.003 mg/l	TM245	<0.003	<0.003	<0.003		
m,p,o-Xylene	<0.01 mg/l	TM245	<0.01	<0.01	<0.01		
BTEX, Total	<0.01 mg/l	TM245	<0.01	<0.01	<0.01		
Methyl tertiary butyl ether (MTBE)	<0.003 mg/l	TM245	<0.003	<0.003	<0.003		
GRO >C5-C6	<0.01 mg/l	TM245	<0.01	<0.01	<0.01		
GRO >C6-C7	<0.01 mg/l	TM245	<0.01	<0.01	<0.01		
GRO >C7-C8	<0.01 mg/l	TM245	<0.01	<0.01	<0.01		
GRO >C8-C10	<0.01 mg/l	TM245	<0.01	<0.01	<0.01		
GRO >C5-C12	<0.05 mg/l	TM245	<0.05	<0.05	<0.05		
GRO >C10-C12	<0.01 mg/l	TM245	<0.01	<0.01	<0.01		
Aliphatics >C5-C6	<0.01 mg/l	TM245		<0.01			
Aliphatics >C6-C8	<0.01 mg/l	TM245		<0.01			
Aliphatics >C8-C10	<0.01 mg/l	TM245		<0.01			
Aliphatics >C10-C12	<0.01 mg/l	TM245		<0.01			
Total Aliphatics >C5-C12	<0.01 mg/l	TM245		<0.01			
Aromatics >C6-C7	<0.01 mg/l	TM245		<0.01			
Aromatics >C7-C8	<0.01 mg/l	TM245		<0.01			
Aromatics >EC8-EC10	<0.01 mg/l	TM245		<0.01			
Aromatics >EC10-EC12	<0.01 mg/l	TM245		<0.01			
Total Aromatics >C6-C12	<0.01 mg/l	TM245		<0.01			

# **ALcontrol Laboratories Analytical Services**

100802-15 Customer: SDG:

Entec UK - MOD Ltd H\_ENTEC\_MOD-11 Job: Attention: Nick Huyg

Client Reference:

228113 Order No.: Location: KL056 BICESTER Report No: 92974

PAH Spec MS - Aque	PAH Spec MS - Aqueous (W)										
Results Legend # ISO17025 accredited.		Sample Ref.	SWC1	SWC5							
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)									
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type ate Sampled	Water(GW/SW)	Water(GW/SW)							
* subcontracted test.  ** % recovery of the surrogate		te Received	29/07/2010 31/07/2010	29/07/2010 31/07/2010							
standard to check the efficiency of the method. The results of the	y	SDG Ref	100802-15	100802-15							
individual compounds within the samples are not corrected	Lab Sa	mple No.(s) S Reference	1896305	1896313							
for this recovery.  Component	LOD/Units	Method									
Naphthalene (aq)	<0.0001	TM178	<0.0001	<0.0001							
Acenaphthene (aq)	mg/l <0.000015	TM178	<b>*</b> <0.000015	<b>*</b> <0.000015							
	mg/l <0.000011		#	#							
Acenaphthylene (aq)	mg/l	TM178	<0.000011 #	<0.000011 #							
Fluoranthene (aq)	<0.000014 mg/l	TM178	0.000311 #	0.000215 #							
Anthracene (aq)	<0.000015	TM178	0.000025 #	<0.000015 #							
Phenanthrene (aq)	mg/l <0.000022	TM178	0.000101	0.00007							
Fluorene (aq)	mg/l <0.000014	TM178	<0.00014	<b>*</b> <0.000014							
Chrysene (aq)	mg/l <0.000013	TM178	0.00024	0.00012							
Pyrene (aq)	mg/l <0.000015	TM178	0.0003	0.000204							
, , , , , , , , , , , , , , , , , , ,	mg/l		#	#							
Benzo(a)anthracene (aq)	<0.000017 mg/l	TM178	0.000148 #	0.0001 #							
Benzo(b)fluoranthene (aq)	<0.000023 mg/l	TM178	0.000166 #	0.000145 #							
Benzo(k)fluoranthene (aq)	<0.000027 mg/l	TM178	0.000195 #	0.00014							
Benzo(a)pyrene (aq)	<0.000009	TM178	0.000215	0.000155							
Dibenzo(a,h)anthracene	mg/l <0.000016	TM178	0.000044	0.000037							
(aq) Benzo(g,h,i)perylene (aq)	mg/l <0.000016	TM178	0.000179	# 0.000141							
Indeno(1,2,3-cd)pyrene (aq)	mg/l <0.000014	TM178	0.000148	# 0.000112							
	mg/l		#	#							
Polyaromatic hydrocarbons, Total USEPA 16 (aq)	<0.0001 mg/l	TM178	0.00189 #	0.00131 #							
Naphthalene-d8	%	TM178	100	100							
Acenaphthene-d10	%	TM178	100	100							
Phenanthrene-d10	%	TM178	100	100							
Chrysene-d12	%	TM178	100	100							
Perylene-d12	%	TM178	100	100							
					•		-				

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100802-15

Job: H\_ENTEC\_MOD-11

Client Reference:

Location: KL056 BICESTER

Customer: Entec UK - MOD Ltd Attention: Nick Huyg

Attention: Nick Hu Order No.: 228113 Report No: 92974

SVOC MS (W) - Aqueous									
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	SWC1						
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)							
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Water(GW/SW)						
* subcontracted test.  ** % recovery of the surrogate		te Sampled te Received	29/07/2010 31/07/2010						
standard to check the efficiency of the method. The results of the		SDG Ref	100802-15						
individual compounds within the samples are not corrected	Lab Sa	mple No.(s) Reference	1896305						
for this recovery.									
Component 1,2,4-Trichlorobenzene (aq)	LOD/Units <0.001 mg/l	Method TM176	<0.001						
1,2-Dichlorobenzene (aq)	<0.001 mg/l	TM176	<0.001						
1,3-Dichlorobenzene (aq)	<0.001 mg/l	TM176	<0.001						
1,4-Dichlorobenzene (aq)	<0.001 mg/l	TM176	<0.001						
2,4,5-Trichlorophenol (aq)	<0.001 mg/l	TM176	<0.001						
2,4,6-Trichlorophenol (aq)	<0.001 mg/l	TM176	<0.001						
2,4-Dichlorophenol (aq)	<0.001 mg/l	TM176	<0.001						
2,4-Dimethylphenol (aq)	<0.001 mg/l	TM176	<0.001						
2,4-Dinitrotoluene (aq)	<0.001 mg/l	TM176	<0.001						
2,6-Dinitrotoluene (aq)	<0.001 mg/l	TM176	<0.001						
2-Chloronaphthalene (aq)	<0.001 mg/l	TM176	<0.001						
2-Chlorophenol (aq)	<0.001 mg/l	TM176	<0.001						
2-Methylnaphthalene (aq)	<0.001 mg/l	TM176	<0.001						
2-Methylphenol (aq)	<0.001 mg/l	TM176	<0.001						
2-Nitroaniline (aq)	<0.001 mg/l	TM176	<0.001						
2-Nitrophenol (aq)	<0.001 mg/l	TM176	<0.001						
3-Nitroaniline (aq)	<0.001 mg/l	TM176	<0.001						
4-Bromophenylphenylether	<0.001 mg/l	TM176	<0.001						
(aq) 4-Chloro-3-methylphenol	<0.001 mg/l	TM176	<0.001						
(aq) 4-Chloroaniline (aq)	<0.001 mg/l	TM176	<0.001						
4-Chlorophenylphenylether	<0.001 mg/l	TM176	<0.001						
(aq)									
4-Methylphenol (aq)	<0.001 mg/l	TM176	<0.001						
4-Nitrophenol (aq)	<0.001 mg/l	TM176	<0.001						
4-Nitroaniline (aq)	<0.001 mg/l	TM176	<0.001						
Azobenzene (aq)	<0.001 mg/l	TM176	<0.001						
Acenaphthylene (aq)	<0.001 mg/l	TM176	<0.001						
Acenaphthene (aq)	<0.001 mg/l	TM176	<0.001						
Anthracene (aq)	<0.001 mg/l	TM176	<0.001						
bis(2-Chloroethyl)ether (aq)	<0.001 mg/l	TM176	<0.001						
bis(2-Chloroethoxy)methane	<0.001 mg/l	TM176	<0.001						
(aq) bis(2-Ethylhexyl) phthalate	<0.002 mg/l	TM176	<0.002						
(aq)									
Benzo(a)anthracene (aq)	<0.001 mg/l	TM176	<0.001						
Butylbenzyl phthalate (aq)	<0.001 mg/l	TM176	<0.001						
Benzo(b)fluoranthene (aq)	<0.001 mg/l	TM176	<0.001						
Benzo(k)fluoranthene (aq)	<0.001 mg/l	TM176	<0.001						
Benzo(a)pyrene (aq)	<0.001 mg/l	TM176	<0.001						
Benzo(g,h,i)perylene (aq)	<0.001 mg/l	TM176	<0.001						
Carbazole (aq)	<0.001 mg/l	TM176	<0.001						
Chrysene (aq)	<0.001 mg/l	TM176	<0.001						

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100802-15

Job: H\_ENTEC\_MOD-11

Client Reference:

Location: KL056 BICESTER

Customer: Entec UK - MOD Ltd

Attention: Nick Huyg Order No.: 228113 Report No: 92974

SVOC MS (W) - Aqued	SVOC MS (W) - Aqueous									
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	SWC1							
M mCERTS accredited. aq Aqueous / settled sample.		Depth (m)								
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Water(GW/SW)							
* subcontracted test. ** % recovery of the surrogate		te Received	29/07/2010 31/07/2010							
standard to check the efficiency		SDG Ref	100802-15							
of the method. The results of the individual compounds within	Lab Sa	mple No.(s) S Reference	1896305							
the samples are not corrected for this recovery.										
Component	LOD/Units	Method	-0.004							
Dibenzofuran (aq)	<0.001 mg/l	TM176	<0.001							
n-Dibutyl phthalate (aq)	<0.001 mg/l	TM176	<0.001							
Diethyl phthalate (aq)	<0.001 mg/l	TM176	<0.001							
Dibenzo(a,h)anthracene (aq)	<0.001 mg/l	TM176	<0.001							
Dimethyl phthalate (aq)	<0.001 mg/l	TM176	<0.001							
n-Dioctyl phthalate (aq)	<0.005 mg/l	TM176	<0.005							
Fluoranthene (aq)	<0.001 mg/l	TM176	<0.001							
Fluorene (aq)	<0.001 mg/l	TM176	<0.001							
Hexachlorobenzene (aq)	<0.001 mg/l	TM176	<0.001							
Hexachlorobutadiene (aq)	<0.001 mg/l	TM176	<0.001							
Pentachlorophenol (aq)	<0.001 mg/l	TM176	<0.001							
Phenol (aq)	<0.001 mg/l	TM176	<0.001							
n-Nitroso-n-dipropylamine (aq)	<0.001 mg/l	TM176	<0.001							
Hexachloroethane (aq)	<0.001 mg/l	TM176	<0.001							
Nitrobenzene (aq)	<0.001 mg/l	TM176	<0.001							
Nitroperizerie (aq)	<0.001 mg/l	TIVITTO	<b>~0.001</b>							
Naphthalene (aq)	<0.001 mg/l	TM176	<0.001							
Isophorone (aq)	<0.001 mg/l	TM176	<0.001							
Hexachlorocyclopentadiene	10.004 //	TM176	10.004							
(aq)	<0.001 mg/l	TIVITO	<0.001							
Phenanthrene (aq)	<0.001 mg/l	TM176	<0.001							
Indeno(1,2,3-cd)pyrene (aq)	<0.001 mg/l	TM176	<0.001							
Directo (ag)	<0.001 mg/l	TM176	<0.001							
Pyrene (aq)	<0.001 mg/i	TIVITO	<b>~</b> 0.001							
								-		

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100802-15

Job: H\_ENTEC\_MOD-11

Client Reference:

Location: KL056 BICESTER

Customer: Entec UK - MOD Ltd

Attention: Nick Huyg
Order No.: 228113
Report No: 92974

TPH CWG (W)										
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	SWC1							
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)								
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.	S	ample Type								
* subcontracted test.		ate Sampled								
** % recovery of the surrogate standard to check the efficiency		te Received SDG Ref								
of the method. The results of the		imple No.(s)	100802-15 1896305							
individual compounds within the samples are not corrected	AG	S Reference	1030303							
for this recovery.  Component	LOD/Units	Method								
Total Aliphatics >C5-C35	<0.01 mg/l	TM174	<0.01							
(aq)										
Total Aromatics >C6-C35	<0.01 mg/l	TM174	0.013							
(aq) Total Aliphatics & Aromatics	<0.01 mg/l	TM174	0.013							
>C5-35 (aq)										
Aliphatics >C12-C16 (aq)	<0.01 mg/l	TM174	<0.01							
Aromatics >EC12-EC16	<0.01 mg/l	TM174	<0.01							
(aq)										
Aliphatics >C16-C21 (aq)	<0.01 mg/l	TM174	<0.01							
Aromatics >EC16-EC21	<0.01 mg/l	TM174	<0.01							
(aq)										
Aliphatics >C21-C35 (aq)	<0.01 mg/l	TM174	<0.01							
Aromatics >EC21-EC35	<0.01 mg/l	TM174	0.013							
(aq)										
Total Aliphatics >C12-C35	<0.01 mg/l	TM174	<0.01							
(aq) Total Aromatics	<0.01 mg/l	TM174	0.013							
>EC12-EC35 (aq)										
Total Aliphatics & Aromatics >C12-C35 (Aqueous)	<0.01 mg/l	TM174	0.013							
1 0 12 000 (/ (queous)										
	<u></u>									
		_	_			-				

# **ALcontrol Laboratories Analytical Services**

Attention:

100802-15 Customer: Entec UK - MOD Ltd SDG: Nick Huyg

H\_ENTEC\_MOD-11 Job: Client Reference:

Location:

228113 Order No.: KL056 BICESTER Report No: 92974

					•	01010. 020		
voc	MS (W)							
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	SWC1				
М	mCERTS accredited.		Depth (m)					
diss.filt	Aqueous / settled sample.  Dissolved / filtered sample.	S	ample Type	Water(GW/SW)				
*	Total / unfiltered sample. subcontracted test.		te Sampled	29/07/2010				
**	% recovery of the surrogate standard to check the efficiency	Da	te Received SDG Ref	31/07/2010 100802-15				
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1896305				
	the samples are not corrected for this recovery.	AGS	Reference					
Compo		LOD/Units	Method					
Dibrom	ofluoromethane**	%	TM208	99.3				
Toluen	e-d8**	%	TM208	98.1				
4-Brom	ofluorobenzene**	%	TM208	96.4				
Dichlor	odifluoromethane	<0.007 mg/l	TM208	<0.007				
Chloro	nethane	<0.009 mg/l	TM208	<b>*</b>				
Vinyl cl	nloride	<0.0012	TM208	<b>*</b>				
		mg/l		#				
	nethane	<0.002 mg/l	TM208	<0.002 #				
Chloro		<0.0025 mg/l	TM208	<0.0025 #				
Trichlo	ofluoromethane	<0.0013 mg/l	TM208	<0.0013 #				
1,1-Dic	hloroethene	<0.0012 mg/l	TM208	<0.0012 #				
Carbon	disulphide	<0.0013	TM208	<0.0013 #				
Dichlor	omethane	mg/l <0.0037	TM208	<0.0037				
Methyl	tertiary butyl ether	mg/l <0.0016	TM208	<b>*</b>				
(MTBE trans-1	) ,2-Dichloroethene	mg/l <0.0019	TM208	<b>*</b>				
1.1-Dic	hloroethane	mg/l <0.0012	TM208	<b>*</b> <0.0012				
	Dichloroethene	mg/l <0.0023	TM208	<0.0023				
		mg/l		#				
	hloropropane	<0.0038 mg/l	TM208	<0.0038				
	chloromethane	<0.0019 mg/l	TM208	<0.0019 #				
Chlorof		<0.0018 mg/l	TM208	<0.0018 #				
1,1,1-T	richloroethane	<0.0013 mg/l	TM208	<0.0013 #				
1,1-Dic	hloropropene	<0.0013 mg/l	TM208	<0.0013				
Carbon	tetrachloride	<0.0014 mg/l	TM208	<0.0014 #				
1,2-Dic	hloroethane	<0.0033	TM208	<0.0033				
Benzer	ne	mg/l <0.0013	TM208	<0.0013				
Trichlo	roethene	mg/l <0.0025	TM208	<b>*</b>				
	hloropropane	mg/l <0.003 mg/l	TM208	<b>*</b>				
	omethane	<0.003 mg/l	TM208	<0.003				
		mg/l		#				
	dichloromethane	<0.0009 mg/l	TM208	<0.0009 #				
	Dichloropropene	<0.0019 mg/l	TM208	<0.0019 #				
Toluen	e	<0.0014 mg/l	TM208	<0.0014 #				
trans-1	,3-Dichloropropene	<0.0035 mg/l	TM208	<0.0035				
1,1,2-T	richloroethane	<0.0022	TM208	<0.0022				
1,3-Dic	hloropropane	mg/l <0.0022	TM208	<0.0022				
Tetrach	lloroethene	mg/l <0.0015	TM208	<0.0015				
Dibrom	ochloromethane	mg/l <0.0017	TM208	<b>*</b> <0.0017				
1,2-Dib	romoethane	mg/l <0.0023	TM208	<b>*</b> <0.0023				
	penzene	mg/l <0.0035	TM208	<0.0035				
		mg/l		#				
	-Tetrachloroethane	<0.0013 mg/l	TM208	<0.0013				
Ethylbe	enzene	<0.0025 mg/l	TM208	<0.0025 #				

# **ALcontrol Laboratories Analytical Services**

100802-15 SDG:

Job:

H\_ENTEC\_MOD-11 Client Reference:

KL056 BICESTER Location:

Entec UK - MOD Ltd Customer:

Nick Huyg Attention: 228113 Order No.: Report No: 92974

VOC MS (W)								
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	SWC1					
M mCERTS accredited. aq Aqueous / settled sample.		Depth (m)						
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Water(GW/SW)					
* subcontracted test.		te Sampled te Received	29/07/2010					
** % recovery of the surrogate standard to check the efficiency		SDG Ref	31/07/2010 100802-15					
of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1896305					
the samples are not corrected	AGS	Reference						
for this recovery.  Component	LOD/Units	Method						
m,p-Xylene	<0.0025	TM208	<0.0025					
	mg/l	71,1000	#					
o-Xylene	<0.0017 mg/l	TM208	<0.0017 #					
Styrene	<0.0012	TM208	<0.0012					
D	mg/l	T14000	#					
Bromoform	<0.003 mg/l	TM208	<0.003 #					
Isopropylbenzene	<0.0014	TM208	<0.0014					
1,1,2,2-Tetrachloroethane	mg/l <0.0052	TM208	<b>*</b>					
	mg/l	1111200	10.0002					
1,2,3-Trichloropropane	<0.0078	TM208	<0.0078 #					
Bromobenzene	mg/l <0.002 mg/l	TM208	<0.002					
			#					
Propylbenzene	<0.0026 mg/l	TM208	<0.0026 #					
2-Chlorotoluene	<0.0019	TM208	<0.0019					
1,3,5-Trimethylbenzene	mg/l <0.0018	TM208	<b>*</b>					
1,0,0-11linetrybenzene	<0.0018 mg/l	I IVIZUO	<0.0018 #					
4-Chlorotoluene	<0.0019	TM208	<0.0019					
tert-Butylbenzene	mg/l <0.002 mg/l	TM208	<b>*</b>					
-	_		#					
1,2,4-Trimethylbenzene	<0.0017 mg/l	TM208	<0.0017 #					
sec-Butylbenzene	<0.0017	TM208	<0.0017					
	mg/l		#					
4-iso-Propyltoluene	<0.0026 mg/l	TM208	<0.0026 #					
1,3-Dichlorobenzene	<0.0022	TM208	<0.0022					
1,4-Dichlorobenzene	mg/l <0.0027	TM208	<b>*</b>					
1,4-Dicilioroperizerie	mg/l	1101200	<0.0027 #					
n-Butylbenzene	<0.002 mg/l	TM208	<0.002					
1,2-Dichlorobenzene	<0.0037	TM208	<b>*</b>					
·	mg/l							
1,2-Dibromo-3-chloropropan e	<0.0098	TM208	<0.0098					
1,2,4-Trichlorobenzene	mg/l <0.0023	TM208	<0.0023					
	mg/l	71,1000	#					
Hexachlorobutadiene	<0.0025 mg/l	TM208	<0.0025 #					
tert-Amyl methyl ether	<0.001 mg/l	TM208	<0.001					
(TAME) Naphthalene	<0.0035	TM208	<b>*</b>					
raphilialone	<0.0035 mg/l	I IVIZUO	<0.0035 #					
1,2,3-Trichlorobenzene	<0.0031	TM208	<0.0031					
1,3,5-Trichlorobenzene	mg/l <0.01 mg/l	TM208	<b>*</b>					

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100802-15 **Cust** 

Job: H\_ENTEC\_MOD-11

Client Reference:

Location: KL056 BICESTER

Customer: Entec UK - MOD Ltd Attention: Nick Huyg

Attention: Nick Huy Order No.: 228113 Report No: 92974

Section   Sect								
Depth (m)   Sample Pose Sample Control (m)   Sample Pose Sample Control (m)   Sample Contro		Customer	Sample Ref.	SWD6	SWE1	SWE5		
Sample Type   Date Sample Type	mCERTS accredited.		Depth (m)					
Date Recolvered State   Section	filt Dissolved / filtered sample.		ample Type	Water(GW/SW)	Water(GW/SW)			
Sociation   Soci	subcontracted test.							
Sample   Market   M	70 Tecovery of the Surrogate							
Table   Component   Componen		Lab Sa						
Component   CoDUINTS   Method	the samples are not corrected	AG	S Reference					
NH4		LOD/Units	Method					
Asenic (diss.filt)		<0.3 mg/l	TM099					
Boron (diss.filt)		<0.00012	TM152		0.00115	0.00119		
Cadmium (diss.filt)	on (diss.filt)		TM152					
Chromium (diss.filt)	mium (diss.filt)		TM152					
Copper (diss.filt)	omium (diss.filt)		TM152					
Lead (diss.filt)	per (diss.filt)		TM152					
Mickel (diss.filt)		mg/l		#	#	#		
Selenium (diss.filt)		mg/l		#	#	#		
Marcury (diss.filt)		mg/l		#	#	#		
BPH Range > C10 - C40		mg/l		#	#	#		
EPH Range >C10 - C40 (aq)       <0.046 mg/l	(diss.filt)		TM152					
EPH Band >C10-C12 (aq)       <0.01 mg/l	-		TM172	0.914	0.243			
EPH Band >C16-C21 (aq)		<0.01 mg/l	TM172					
EPH Band >C21-C28 (aq)	I Band >C12-C16 (aq)	<0.01 mg/l	TM172	0.083	0.0316			
EPH Band >C35-C40 (aq)	I Band >C16-C21 (aq)	<0.01 mg/l	TM172	0.217	0.041			
EPH Band >C28-C35 (aq)	I Band >C21-C28 (aq)	<0.01 mg/l	TM172	0.267	0.0558			
Mercury (diss.filt)	I Band >C35-C40 (aq)	<0.01 mg/l	TM172	0.133	0.0379			
mg/l     #     #     #       Sulphate     <3 mg/l	l Band >C28-C35 (aq)	<0.01 mg/l	TM172	0.166	0.0761			
Sulphate     <3 mg/l	cury (diss.filt)		TM183					
Chloride     <2 mg/l	hate		TM184		158			
pH <1 pH Units TM256 8.2 7.71 7.35	oride	<2 mg/l	TM184	65.6	51.4	143		
		<1 pH Units	TM256	8.2	7.71	7.35		
	,			#	#	#		
		1						

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100802-15 **Cust** 

Job: 100802-15 Gustomer: Entec

H\_ENTEC\_MOD-11 Attention: Nick F

Client Reference:

Location: KL056 BICESTER

Customer: Entec UK - MOD Ltd Attention: Nick Huyg

Order No.: 228113

Report No: 92974

GRO by GC-FID (W)										
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	SWD6	SWE1						
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)								
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type ate Sampled	Water(GW/SW) 29/07/2010	Water(GW/SW) 29/07/2010						
* subcontracted test.  ** % recovery of the surrogate		te Received	31/07/2010	31/07/2010						
standard to check the efficiency of the method. The results of the		SDG Ref	100802-15	100802-15						
individual compounds within the samples are not corrected		mple No.(s) S Reference	1896308	1896296						
for this recovery.  Component	LOD/Units	Method								
GRO Surrogate %	%	TM245		85						
recovery** Benzene	<0.007 mg/l	TM245	<0.007	<0.007						
Toluene	<0.004 mg/l	TM245	<0.004	<b>*</b>						
			#	#						
Ethylbenzene	<0.005 mg/l	TM245	<0.005 #	<0.005 #						
m,p-Xylene	<0.008 mg/l	TM245	<0.008 #	<0.008						
o-Xylene	<0.003 mg/l	TM245	<0.003	<0.003						
m,p,o-Xylene	<0.01 mg/l	TM245	<0.01	<0.01						
BTEX, Total	<0.01 mg/l	TM245	<0.01	<0.01						
Methyl tertiary butyl ether	<0.003 mg/l	TM245	<0.003	<0.003						
(MTBE) GRO >C5-C6	<0.01 mg/l	TM245	<b>*</b>	<b>*</b>						
GRO >C6-C7	<0.01 mg/l	TM245	<0.01	<0.01						
GRO >C7-C8	<0.01 mg/l	TM245	<0.01	<0.01						
GRO >C8-C10	<0.01 mg/l	TM245	<0.01	<0.01						
GRO >C5-C12	<0.05 mg/l	TM245	<0.05 #	<0.05						
GRO >C10-C12	<0.01 mg/l	TM245	<0.01	<0.01						
Aliphatics >C5-C6	<0.01 mg/l	TM245		<0.01						
Aliphatics >C6-C8	<0.01 mg/l	TM245		<0.01						
Aliphatics >C8-C10	<0.01 mg/l	TM245		<0.01						
Aliphatics >C10-C12	<0.01 mg/l	TM245		<0.01						
Total Aliphatics >C5-C12	<0.01 mg/l	TM245		<0.01						
Aromatics >C6-C7	<0.01 mg/l	TM245		<0.01						
Aromatics >C7-C8	<0.01 mg/l			<0.01						
Aromatics >EC8-EC10	<0.01 mg/l	TM245		<0.01						
	_									
Aromatics >EC10-EC12	<0.01 mg/l	TM245		<0.01						
Total Aromatics >C6-C12	<0.01 mg/l	TM245		<0.01						

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100802-15

Job: H\_ENTEC\_MOD-11

Client Reference:

Location: KL056 BICESTER

Customer: Entec UK - MOD Ltd Attention: Nick Huyg

Attention: Nick Hu Order No.: 228113 Report No: 92974

SVOC MS (W) - Aqueous								
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	SWE1					
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)						
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Water(GW/SW)					
* subcontracted test.		te Sampled te Received	29/07/2010					
standard to check the efficiency		SDG Ref	31/07/2010 100802-15					
of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1896296					
the samples are not corrected for this recovery.	AGS	Reference						
Component	LOD/Units	Method						
1,2,4-Trichlorobenzene (aq)	<0.001 mg/l	TM176	<0.001					
1,2-Dichlorobenzene (aq)	<0.001 mg/l	TM176	<0.001					
1,3-Dichlorobenzene (aq)	<0.001 mg/l	TM176	<0.001					
1,4-Dichlorobenzene (aq)	<0.001 mg/l	TM176	<0.001					
2,4,5-Trichlorophenol (aq)	<0.001 mg/l	TM176	<0.001					
2,4,6-Trichlorophenol (aq)	<0.001 mg/l	TM176	<0.001					
2,4-Dichlorophenol (aq)	<0.001 mg/l	TM176	<0.001					
<u> </u>								
2,4-Dimethylphenol (aq)	<0.001 mg/l	TM176	<0.001					
2,4-Dinitrotoluene (aq)	<0.001 mg/l	TM176	<0.001					
2,6-Dinitrotoluene (aq)	<0.001 mg/l	TM176	<0.001					
		TM176	<0.004					
2-Chloronaphthalene (aq)	<0.001 mg/l		<0.001					
2-Chlorophenol (aq)	<0.001 mg/l	TM176	<0.001					
2-Methylnaphthalene (aq)	<0.001 mg/l	TM176	<0.001					
2-Methylphenol (aq)	<0.001 mg/l	TM176	<0.001					
2-Nitroaniline (aq)	<0.001 mg/l	TM176	<0.001					
2-Nitrophenol (aq)	<0.001 mg/l	TM176	<0.001					
3-Nitroaniline (aq)	<0.001 mg/l	TM176	<0.001					
4-Bromophenylphenylether	<0.001 mg/l	TM176	<0.001					
(aq)								
4-Chloro-3-methylphenol (aq)	<0.001 mg/l	TM176	<0.001					
4-Chloroaniline (aq)	<0.001 mg/l	TM176	<0.001					
4-Chlorophenylphenylether	<0.001 mg/l	TM176	<0.001					
(aq)								
4-Methylphenol (aq)	<0.001 mg/l	TM176	<0.001					
4-Nitrophenol (aq)	<0.001 mg/l	TM176	<0.001					
4-Nitroaniline (aq)	<0.001 mg/l	TM176	<0.001					
Azobenzene (aq)	<0.001 mg/l	TM176	<0.001					
Acenaphthylene (aq)	<0.001 mg/l	TM176	<0.001					
Acenaphthene (aq)	<0.001 mg/l	TM176	<0.001					
Anthracene (aq)	<0.001 mg/l	TM176	<0.001					
bis(2-Chloroethyl)ether (aq)	<0.001 mg/l	TM176	<0.001					
bis(2-Chloroethoxy)methane (aq)	<0.001 mg/l	TM176	<0.001					
bis(2-Ethylhexyl) phthalate	<0.002 mg/l	TM176	<0.002					
(aq) Benzo(a)anthracene (aq)	<0.001 mg/l	TM176	<0.001					
Butylbenzyl phthalate (aq)	<0.001 mg/l	TM176	<0.001					
Benzo(b)fluoranthene (aq)	<0.001 mg/l	TM176	<0.001					
Benzo(k)fluoranthene (aq)	<0.001 mg/l	TM176	<0.001					
Benzo(a)pyrene (aq)	<0.001 mg/l	TM176	<0.001					
Benzo(g,h,i)perylene (aq)	<0.001 mg/l	TM176	<0.001					
Carbazole (aq)	<0.001 mg/l	TM176	<0.001					
Chrysene (aq)	<0.001 mg/l	TM176	<0.001					
. "	J.							

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100802-15

Job: H\_ENTEC\_MOD-11

Client Reference:

Location: KL056 BICESTER

Customer: Entec UK - MOD Ltd

Attention: Nick Huyg
Order No.: 228113
Report No: 92974

SVOC MS (W) - Aqueous									
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	SWE1						
M mCERTS accredited. aq Aqueous / settled sample.		Depth (m)							
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Water(GW/SW)						
* subcontracted test. ** % recovery of the surrogate		te Received	29/07/2010 31/07/2010						
standard to check the efficiency		SDG Ref	100802-15						
of the method. The results of the individual compounds within	Lab Sa	mple No.(s) S Reference	1896296						
the samples are not corrected for this recovery.									
Component Dibenzofuran (aq)	LOD/Units	Method TM176	<0.001						
Diberizolulari (aq)	<0.001 mg/l	TIVITA	<b>\0.001</b>						
n-Dibutyl phthalate (aq)	<0.001 mg/l	TM176	<0.001						
Diethyl phthalate (aq)	<0.001 mg/l	TM176	<0.001						
	10.004	TM470	-0.004						
Dibenzo(a,h)anthracene (aq)	<0.001 mg/l	TM176	<0.001						
Dimethyl phthalate (aq)	<0.001 mg/l	TM176	<0.001						
n-Dioctyl phthalate (aq)	<0.005 mg/l	TM176	<0.005						
Fluoranthene (aq)	<0.001 mg/l	TM176	<0.001						
Fluorene (aq)	<0.001 mg/l	TM176	<0.001						
Hexachlorobenzene (aq)	<0.001 mg/l	TM176	<0.001						
Hexachlorobutadiene (aq)	<0.001 mg/l	TM176	<0.001						
Pentachlorophenol (aq)	<0.001 mg/l	TM176	<0.001						
Phenol (aq)	<0.001 mg/l	TM176	<0.001						
n-Nitroso-n-dipropylamine (aq)	<0.001 mg/l	TM176	<0.001						
Hexachloroethane (aq)	<0.001 mg/l	TM176	<0.001						
Nitrobenzene (aq)	<0.001 mg/l	TM176	<0.001						
THRODONZONE (aq)	10.00 T High	TWITTO							
Naphthalene (aq)	<0.001 mg/l	TM176	<0.001						
Isophorone (aq)	<0.001 mg/l	TM176	<0.001						
Hexachlorocyclopentadiene	<0.001 mg/l	TM176	<0.001						
(aq)	<0.001 mg/i	TIVITTO							
Phenanthrene (aq)	<0.001 mg/l	TM176	<0.001						
Indeno(1,2,3-cd)pyrene (aq)	<0.001 mg/l	TM176	<0.001						
Pyrene (aq)	<0.001 mg/l	TM176	<0.001						
r yrene (aq)	<0.001 mg/i	TIVITTO	<b>~</b> 0.001						
								<del>-</del>	

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100802-15

Job: H\_ENTEC\_MOD-11

Client Reference:

Location: KL056 BICESTER

Customer: Entec UK - MOD Ltd Attention: Nick Huyg

Attention: Nick Huy Order No.: 228113 Report No: 92974

TPH CWG (W)									
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	SWE1						
M mCERTS accredited. aq Aqueous / settled sample.		Depth (m)							
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type ate Sampled	Water(GW/SW) 29/07/2010						
* subcontracted test.  ** % recovery of the surrogate	Da	te Received	31/07/2010						
standard to check the efficiency of the method. The results of the		SDG Ref ample No.(s)							
individual compounds within the samples are not corrected	AG	S Reference	1896296						
for this recovery.  Component	LOD/Units	Method							
Total Aliphatics >C5-C35	<0.01 mg/l	TM174	<0.01						
(aq) Total Aromatics >C6-C35	<0.01 mg/l	TM174	0.023						
(aq)	, and the second								
Total Aliphatics & Aromatics >C5-35 (aq)	<0.01 mg/l	TM174	0.023						
Aliphatics >C12-C16 (aq)	<0.01 mg/l	TM174	<0.01						
Aromatics >EC12-EC16	<0.01 mg/l	TM174	<0.01						
(aq) Aliphatics >C16-C21 (aq)	<0.01 mg/l	TM174	<0.01						
Aromatics >EC16-EC21 (aq)	<0.01 mg/l	TM174	<0.01						
Aliphatics >C21-C35 (aq)	<0.01 mg/l	TM174	<0.01						
Aromatics >EC21-EC35	<0.01 mg/l	TM174	0.023						
(aq) Total Aliphatics >C12-C35	<0.01 mg/l	TM174	<0.01						
(aq)									
Total Aromatics >EC12-EC35 (aq)	<0.01 mg/l	TM174	0.023						
Total Aliphatics & Aromatics >C12-C35 (Aqueous)	<0.01 mg/l	TM174	0.023						
>012-035 (Aqueous)									

# **ALcontrol Laboratories Analytical Services**

100802-15 **Customer:** SDG:

Entec UK - MOD Ltd Nick Huyg H\_ENTEC\_MOD-11 Job: Attention:

Client Reference:

228113 Order No.: KL056 BICESTER Report No: 92974 Location:

VOC MS (W)	/OC MS (W)								
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	SWE1						
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)							
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type ite Sampled	Water(GW/SW)						
* subcontracted test.  ** % recovery of the surrogate		te Received	29/07/2010 31/07/2010						
standard to check the efficiency of the method. The results of the		SDG Ref	100802-15						
individual compounds within the samples are not corrected		mple No.(s) Reference	1896296						
for this recovery.  Component	LOD/Units	Method							
Dibromofluoromethane**	%	TM208	102						
Toluene-d8**	%	TM208	98.7						
4-Bromofluorobenzene**	%	TM208	95.2						
Dichlorodifluoromethane	<0.007 mg/l	TM208	<0.007 #						
Chloromethane	<0.009 mg/l	TM208	<0.009						
Vinyl chloride	<0.0012	TM208	<b>*</b>						
Bromomethane	mg/l <0.002 mg/l	TM208	<b>*</b>						
			#						
Chloroethane	<0.0025 mg/l	TM208	<0.0025 #						
Trichlorofluoromethane	<0.0013 mg/l	TM208	<0.0013 #						
1,1-Dichloroethene	<0.0012	TM208	<0.0012 #						
Carbon disulphide	mg/l <0.0013	TM208	<0.0013						
Dichloromethane	mg/l <0.0037	TM208	<b>*</b>						
Methyl tertiary butyl ether	mg/l <0.0016	TM208	<b>*</b>						
(MTBE)	mg/l	TM208	#						
trans-1,2-Dichloroethene	<0.0019 mg/l		<0.0019 #						
1,1-Dichloroethane	<0.0012 mg/l	TM208	<0.0012 #						
cis-1,2-Dichloroethene	<0.0023 mg/l	TM208	<0.0023 #						
2,2-Dichloropropane	<0.0038	TM208	<0.0038						
Bromochloromethane	mg/l <0.0019	TM208	<0.0019						
Chloroform	mg/l <0.0018	TM208	<b>*</b>						
1,1,1-Trichloroethane	mg/l <0.0013	TM208	<b>*</b>						
1,1-Dichloropropene	mg/l <0.0013	TM208	<b>*</b> <0.0013						
	mg/l		#						
Carbontetrachloride	<0.0014 mg/l	TM208	<0.0014 #						
1,2-Dichloroethane	<0.0033 mg/l	TM208	<0.0033						
Benzene	<0.0013 mg/l	TM208	<0.0013 #						
Trichloroethene	<0.0025	TM208	<0.0025						
1,2-Dichloropropane	mg/l <0.003 mg/l	TM208	<0.003						
Dibromomethane	<0.0027	TM208	<b>*</b>						
Bromodichloromethane	mg/l <0.0009	TM208	<0.0009						
	mg/l		#						
cis-1,3-Dichloropropene	<0.0019 mg/l	TM208	<0.0019 #						
Toluene	<0.0014 mg/l	TM208	<0.0014 #						
trans-1,3-Dichloropropene	<0.0035 mg/l	TM208	<0.0035 #						
1,1,2-Trichloroethane	<0.0022	TM208	<0.0022						
1,3-Dichloropropane	mg/l <0.0022	TM208	<0.0022						
Tetrachloroethene	mg/l <0.0015	TM208	<b>*</b> <0.0015						
Dibromochloromethane	mg/l <0.0017	TM208	<b>*</b>						
1,2-Dibromoethane	mg/l <0.0023	TM208	<0.0023						
	mg/l		#						
Chlorobenzene	<0.0035 mg/l	TM208	<0.0035 #						
1,1,1,2-Tetrachloroethane	<0.0013 mg/l	TM208	<0.0013 #						
Ethylbenzene	<0.0025	TM208	<0.0025						
	mg/l		#						

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100802-15

Job: H\_ENTEC\_MOD-11

Client Reference:

Location: KL056 BICESTER

Customer: Entec UK - MOD Ltd

Attention: Nick Huyg Order No.: 228113 Report No: 92974

VOC MS (W)						
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	SWE1			
M mCERTS accredited. aq Aqueous / settled sample.		Depth (m)				
diss.filt Dissolved / filtered sample.		ample Type	Water(GW/SW)			
tot.unfilt Total / unfiltered sample.  * subcontracted test.		te Sampled te Received	29/07/2010			
** % recovery of the surrogate standard to check the efficiency		SDG Ref	31/07/2010 100802-15			
of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1896296			
the samples are not corrected for this recovery.	AGS	S Reference				
Component	LOD/Units	Method				
m,p-Xylene	<0.0025	TM208	<0.0025			
o-Xylene	mg/l <0.0017	TM208	<b>*</b>			
	mg/l		#			
Styrene	<0.0012 mg/l	TM208	<0.0012 #			
Bromoform	<0.003 mg/l	TM208	<0.003			
Isopropylbenzene	<0.0014	TM208	<b>*</b>			
зоргорушениене	mg/l	TIVIZOO	4.0014			
1,1,2,2-Tetrachloroethane	<0.0052	TM208	<0.0052			
1,2,3-Trichloropropane	mg/l <0.0078	TM208	<0.0078			
	mg/l		#			
Bromobenzene	<0.002 mg/l	TM208	<0.002 #			
Propylbenzene	<0.0026	TM208	<0.0026			
2-Chlorotoluene	mg/l <0.0019	TM208	<b>*</b>			
	mg/l		#			
1,3,5-Trimethylbenzene	<0.0018 mg/l	TM208	<0.0018 #			
4-Chlorotoluene	<0.0019	TM208	<0.0019			
tert-Butylbenzene	mg/l <0.002 mg/l	TM208	<b>*</b>			
tert-butyiberizerie	<0.002 mg/i	1101200	40.002			
1,2,4-Trimethylbenzene	<0.0017	TM208	<0.0017			
sec-Butylbenzene	mg/l <0.0017	TM208	<b>*</b>			
	mg/l	T1.1000	#			
4-iso-Propyltoluene	<0.0026 mg/l	TM208	<0.0026 #			
1,3-Dichlorobenzene	<0.0022	TM208	<0.0022			
1,4-Dichlorobenzene	mg/l <0.0027	TM208	<b>*</b>			
	mg/l		#			
n-Butylbenzene	<0.002 mg/l	TM208	<0.002 #			
1,2-Dichlorobenzene	<0.0037	TM208	<0.0037			
1,2-Dibromo-3-chloropropan	mg/l <0.0098	TM208	<0.0098			
е	mg/l	1101200	<b>~</b> 0.0090			
1,2,4-Trichlorobenzene	<0.0023	TM208	<0.0023			
Hexachlorobutadiene	mg/l <0.0025	TM208	<b>*</b>			
	mg/l		#			
tert-Amyl methyl ether (TAME)	<0.001 mg/l	TM208	<0.001 #			
Naphthalene	<0.0035	TM208	<0.0035			
1,2,3-Trichlorobenzene	mg/l <0.0031	TM208	<b>*</b>			
	mg/l		#			
1,3,5-Trichlorobenzene	<0.01 mg/l	TM208	<0.01			

### **ALcontrol Laboratories Analytical Services**



### **Table of Results - Appendix**

Client: Entec UK - MOD Ltd 100802-15 SDG Number: Client Ref: **REPORT KEY** Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03x10-7 No Determination Possible NDP ISO 17025 Accredited Subcontracted Test MCERTS Accredited М Result previously reported NFD No Fibres Detected Possible Fibres Detected Equivalent Carbon

NI D	110	" (Incremental reports only)	(Aromatics C8-C35)
Note: Method detection limits	are not always achievable due to various circumstances beyond o	ur control	Wet/Dry
Method No	Reference	Description	Sample <sup>1</sup>
TM061	Method for the Determination of EPH,Massachusetts Dept.of EP, 1998	Determination of Extractable Petroleum Hydrocarbons by GC-FID (C10-C40)	
TM099	BS 2690: Part 7:1968 / BS 6068: Part2.11:1984	Determination of Ammonium in Water Samples using the Kone Analyser	
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS	
TM172	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	EPH in Waters	
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID	
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS	
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters	
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry	
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers	
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters	
TM245	By GC-FID	Determination of GRO by Headspace in waters	
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978.	Determination of pH in Water and Leachate using the GLpH pH Meter	

<sup>&</sup>lt;sup>1</sup> Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

ISBN 011 751428 4.

### **APPENDIX**

#### **APPENDIX**

- Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following:
   NRA Leach tests, flash point, ammonium as NH<sub>4</sub> by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and
   TOF-MS TICS.
- 2. Samples will be run in duplicate upon request, but an additional charge may be incurred.
- 3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. Alcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.
- 4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
- 5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
- 6. When requested, the individual sub sample scheduled will be screened in house for the presence of large asbestos containing material fragments/pieces. If no asbestos containing material is found this will be reported as 'no asbestos containing material detected'. If asbestos containing material is detected it will be removed and analysed by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If asbestos containing material is present no further analysis will be undertaken. At no point is the fibre content of the soil sample determined.
- 7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.
- 8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.
- 9. NDP No determination possible due to insufficient/unsuitable sample.
- 10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals total metals must be requested separately.
- 11. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.
- 12. Results relate only to the items tested
- 13. **Surrogate recoveries** Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 130 %.
- Product analyses Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.
- 15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).
- 16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 14).
- 17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
- 18. Our MCERTS accreditation for PAHs by GCMS applies to all product types apart from Kerosene, where naphthalene only is not accredited.
- 19. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
- 19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.
- 20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
- 21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
- 22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
- 23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

#### LIQUID MATRICES EXTRACTION SUMMARY

ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAH MS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GS MS
SVOC	DCM	LIQUID/LIQUID SHAKE	GC MS
FREE SULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST OCP/OPP	DCM	LIQUID/LIQUID SHAKE	GC MS
TRIAZINE HERBS	DCM	LIQUID/LIQUID SHAKE	GC MS
PHENOLS MS TPH by INFRA RED (IR)	DCM TCE	SOLID PHASE EXTRACTION LIQUID/LIQUID EXTRACTION	GC MS HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID EXTRACTION	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GC FID

#### **SOLID MATRICES EXTRACTION SUMMARY**

		WATRICES EXTRACTION SUMMART		
ANALYSIS	D/C OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
Solvent Extractable Matter	D&C	DCM	SOXTHERM	GRAVIMETRIC
Cyclohexane Ext. Matter	D&C	CYCLOHEXANE	SOXTHERM	GRAVIMETRIC
Thin Layer Chromatography	D&C	DCM	SOXTHERM	IATROSCAN
Elemental Sulphur	D&C	DCM	SOXTHERM	HPLC
Phenols by GCMS	WET	DCM	SOXTHERM	GC-MS
Herbicides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
Pesticides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
EPH (DRO)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Min oil)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Cleaned up)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH CWG by GC	D&C	HEXANE:ACETONE	END OVER END	GC-FID
PCB tot / PCB con	D&C	HEXANE:ACETONE	END OVER END	GC-MS
Polyaromatic Hydrocarbons (MS)	WET	HEXANE:ACETONE	Microwave TM218.	GC-MS
C8-C40 (C6-C40)EZ Flash	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Polyaromatic Hydrocarbons Rapid GC	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Semi Volatile Organic Compounds	WET	DCM:ACETONE	SONICATE	GC-MS

#### **Identification of Asbestos in Bulk Materials**

The results for asbestos identification for soil samples are obtained from possible Asbestos Containing Material, removed during the 'Screening of soils for Asbestos Containing Materials', which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

#### **Visual Estimation Of Fibre Content.**

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: -

Trace – Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in MDHS 100.

The identification of asbestos containing materials falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

#### 



Unit 7-8 Hawarden Business Park Manor Road (off Manor Lane) Hawarden

> Deeside CH5 3US Tel: (01244) 528700

Fax: (01244) 528701 email: mkt@alcontrol.com Website: www.alcontrol.com

Attention: Simon Howard

#### **CERTIFICATE OF ANALYSIS**

 Date:
 13 August 2010

 Customer:
 H\_ENTEC\_MOD-12

Sample Delivery Group (SDG): 100809-24 Report No.: 93535

Your Reference: 26999

Location:

We received 24 samples on Saturday August 07, 2010 and 24 of these samples were scheduled for analysis which was completed on Friday August 13, 2010. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Asbestos testing - we are not accredited for screening soil samples for asbestos fibres. We are only accredited to identify asbestos fibres in bulk material (ACM).

Approved By:



**Iain Swinton** 

Operations Director - Land UK & Ireland



### **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

 Client Reference:
 26999
 Order No.:
 228113

 Location:
 Report No:
 93535

### Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
1924902	BHC 3			04/08/2010
1925483	BHD 01			05/08/2010
1925026	SWA 01			04/08/2010
1925083	SWC 1			04/08/2010
1925514	SWC 2			04/08/2010
1924965	SWC 4			04/08/2010
1924991	SWC 5			04/08/2010
1924938	SWC 8			04/08/2010
1925346	SWD 06			04/08/2010
1925307	SWD 09			05/08/2010
1924811	SWE 1			04/08/2010
1924861	SWE 5			04/08/2010
1925590	WSA 01			04/08/2010
1925581	WSA 03			04/08/2010
1924763	WSC 04			04/08/2010
1925540	WSC 08			04/08/2010
1925192	WSD 03			05/08/2010
1925289	WSD 07			05/08/2010
1925384	WSD 09			05/08/2010
1925610	WSD 10			05/08/2010
1925633	WSE 10			04/08/2010
1924790	WSE 17			04/08/2010
1925602	WSE 25			04/08/2010
1925110	WSE 26			04/08/2010

Only received samples which have had analysis scheduled will be shown on the following pages.

# **ALcontrol Laboratories Analytical Services**

**SDG**: 100809-24 **Customer**: Entec UK - MOD Ltd

Job: H\_ENTEC\_MOD-12 Attention: Simon Howard

 Client Reference:
 26999
 Order No.:
 228113

 Location:
 Report No:
 93535

#### LIQUID

LIQUID																																												
Results Legend	Lab Sample No(s)				1924763				1924790			1924811			1924861				1924902				1924938			1924965			1864761	1004001			0200261	2000			1920000	1925083				1925110		
X Test  No Determination Possible	Customer Sample Ref.				WSC 04				WSE 17			OWE	2001		SWES	) i			BHC 3				SWC			SWC 4			2	r OWS				SWA 04			0	SWC 1				WSE 26		
i ossible	AGS Ref.												Ī			T								T						T				Ī										
	Depth (m)																																											
	Container	1l green glass bottle	500ml Plastic	H2SO4	Vial	1l green glass bottle	500ml Plastic	H2SO4	Vial	1l green glass bottle	500ml Plastic	H2SO4	Vial	11 green glass bottle	500ml Plastic	HOSCH George	1 green glass bottle	500ml Plactic	Vial	11 green glass bottle	500ml Plastic	HZSO4	L SON	i green grass bottle	300iii riasuc	FOOM Blocks	HOSCH Hospitals nome	di groon glass bo#lo	500ml Plastic	H2SO4	1l green glass bottle	500ml Plastic	H2SO4	Via	1l green glass bottle	500ml Plastic	H2SO4	Vial	1l green glass bottle	500ml Plastic	H2SO4	Vial	1l green glass bottle	500ml Plastic
Ammonium	All	Ť		X				X	1	Ť	,	X	Ť	Ť	>	(	Ť	×	(	T	T	×	<b>(</b>	Ť	t	<b>&gt;</b>	<b>(</b>	Ť	,	X	1		X	Ť	Ť	<b>†</b>	X				X		Ť	1
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Dissolved Metals by ICP-MS	All		X				X		1	,	X	Ť	Ť	>	(	Ť	×	(	Ī		X	(	T	Ť	>	(	Ī	>	<b>(</b>	T	,	X	Ť	Ť	Ţ	X	T			X			Ţ	K
EPH (DRO) (C10-C40) Aqueous (W)	All	X							1	1	Ī	T	Ī	T		Ī	T	Ī		X			T	T	Ī	Ī	Ī	Ī			X	1	T	Ī	1	Ī	1						T	1
EPH CWG (Aliphatic) Aqueous GC (W	) All					X				X	1		T	T	T	>	<b>(</b>	T	Ī		Ī	Ī	T	T	Ī	T	T	T	T	Ī	Ī	1	T	)	X	T	T		X				X	1
EPH CWG (Aromatic) Aqueous GC (W	/) All					X				X	T			T		>	<b>(</b>	Ī								Ī			Ī					)	X	T	Ī		X				X	1
GRO by GC-FID (W)	All				X				X		T	>	<b>(</b>	T				Ī	X				>	(		Ī			T				,	<b>&lt;</b>	Ī	T	Ī	X				X	T	1
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PAH Spec MS - Aqueous (W)	All					X				X						>	<b>(</b>										>	<b>(</b>						)	X	I			X				X	]
pH Value	All		X				X			2	X			<b>&gt;</b>	<b>(</b>		×	<b>(</b>			X	(			×	(		>	<b>&lt;</b>		2	X				X				X			ļ	K
SVOC MS (W) - Aqueous	All					X				X						>	<b>(</b>																	)	X				X				X	
TPH CWG (W)	All					X				X						>	<b>(</b>																	)	X				X				X	
VOC MS (W)	All								X			>	<b>(</b>						X																			X				X		

					1925289				1925307				1925346				1925384				1925483			1925514				1925540		1925581		1925590		1925602		1925610				1925633		
					WSD 07				SWD 09				SWD 06				WSD 09				BHD 01			SWC 2				WSC 08		WSA 03		WSA 01		WSE 25		WSD 10				WSE 10		
																																										Total
_																																										
H2SO4	Vial	1l green glass bottle	500ml Plastic	H2SO4	Vial	1l green glass bottle	500ml Plastic	H2SO4	Vial	1l green glass bottle	500ml Plastic	H2SO4	Vial	1l green glass bottle	500ml Plastic	H2SO4	Vial	11 green glass bottle	500ml Plastic	H2SO4	vai	1l green glass bottle	500mi Plastic	H2SO4	1l green glass bottle	500ml Plastic	H2SO4	Vial	500ml Plastic	H2SO4	500ml Plastic	H2SO4	500ml Plastic	H2SO4	500ml Plastic	H2SO4	1l green glass bottle	500ml Plastic	H2SO4	Vial		
×				X				X				X				X				X				X			X			X		X		X		X			X		2	4
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### **ALcontrol Laboratories Analytical Services**

SDG: 100809-24 Customer: Entec UK - MOD Ltd

Job:H\_ENTEC\_MOD-12Attention:Simon Howard

 Client Reference:
 26999
 Order No.:
 228113

 Location:
 Report No:
 93535

### **Test Completion dates**

SDG reference: 100809-24

Lab Sample No(s)	1924763	1924790	1924811	1924861	1924902	1924938	1924965	1924991	1925026	1925083	1925110	1925192
Customer Sample Ref.	WSC 04	WSE 17	SWE 1	SWE 5	BHC 3	SWC 8	SWC 4	SWC 5	SWA 01	SWC 1	WSE 26	WSD 03
Depth												
Туре	LIQUID											
Ammonium	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010
Anions by Kone (w)	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010
Dissolved Metals by ICP-MS	11/08/2010	11/08/2010	12/08/2010	11/08/2010	11/08/2010	12/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010
EPH (DRO) (C10-C40) Aqueous (W)	12/08/2010					12/08/2010			12/08/2010			
EPH CWG (Aliphatic) Aqueous GC		12/08/2010	12/08/2010		12/08/2010					12/08/2010	12/08/2010	12/08/2010
EPH CWG (Aromatic) Aqueous GC		12/08/2010	12/08/2010		12/08/2010					12/08/2010	12/08/2010	12/08/2010
GRO by GC-FID (W)	11/08/2010	11/08/2010	11/08/2010		11/08/2010	11/08/2010			11/08/2010	11/08/2010	11/08/2010	11/08/2010
Mercury Dissolved	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010
PAH Spec MS - Aqueous (W)		12/08/2010	12/08/2010		12/08/2010			12/08/2010		12/08/2010	12/08/2010	12/08/2010
pH Value	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010
SVOC MS (W) - Aqueous		12/08/2010	12/08/2010		12/08/2010					12/08/2010	12/08/2010	12/08/2010
TPH CWG (W)		13/08/2010	13/08/2010		13/08/2010					13/08/2010	13/08/2010	13/08/2010
VOC MS (W)		11/08/2010	11/08/2010		11/08/2010					11/08/2010	11/08/2010	11/08/2010

1925289	1925307	1925346	1925384	1925483	1925514	1925540	1925581	1925590	1925602	1925610	1925633
WSD 07	SWD 09	SWD 06	WSD 09	BHD 01	SWC 2	WSC 08	WSA 03	WSA 01	WSE 25	WSD 10	WSE 10
LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID
11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010
11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010
11/08/2010	11/08/2010	12/08/2010	11/08/2010	13/08/2010	13/08/2010	13/08/2010	13/08/2010	12/08/2010	11/08/2010	13/08/2010	12/08/2010
11/08/2010		12/08/2010	12/08/2010								12/08/2010
	12/08/2010			12/08/2010		12/08/2010					
	12/08/2010			12/08/2010		12/08/2010					
11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010		11/08/2010					11/08/2010
10/08/2010	11/08/2010	11/08/2010	11/08/2010	10/08/2010	10/08/2010	10/08/2010	10/08/2010	11/08/2010	11/08/2010	10/08/2010	11/08/2010
	12/08/2010			11/08/2010		11/08/2010					
11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	11/08/2010	10/08/2010	11/08/2010	11/08/2010	11/08/2010	10/08/2010	11/08/2010
	12/08/2010			12/08/2010		12/08/2010					
	13/08/2010			13/08/2010		13/08/2010					
	11/08/2010			11/08/2010		11/08/2010					

# **ALcontrol Laboratories Analytical Services**

SDG: 100809-24 Customer: Entec UK - MOD Ltd

Job: H ENTEC MOD-12 Attention: Simon Howard

Job:H\_ENTEC\_MOD-12Attention:Simon HowClient Reference:26999Order No.:228113Location:Report No:93535

Results Legend # ISO17025 accredited.	Customer	Sample Ref.	BHC 3	BHD 01	SWA 01	SWC 1	SWC 2	SWC 4
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)						
diss.filt Dissolved / filtered sample.		Sample Type	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
tot.unfilt  * subcontracted test.  ** % recovery of the surrogate		ate Sampled ate Received	04/08/2010	05/08/2010	04/08/2010	04/08/2010	04/08/2010	04/08/2010
** % recovery of the surrogate standard to check the efficiency		SDG Ref	07/08/2010 100809-24	07/08/2010 100809-24	07/08/2010 100809-24	07/08/2010 100809-24	07/08/2010 100809-24	07/08/2010 100809-24
of the method. The results of the individual compounds within	Lab Sa	ample No.(s)	1924902	1925483	1925026	1925083	1925514	1924965
the samples are not corrected for this recovery.	AG	S Reference						
Component	LOD/Units	Method		1.00	0.750		2 222	
Ammoniacal Nitrogen as NH4	<0.3 mg/l	TM099	<0.3 #	1.83	0.753	<0.3	0.369	0.333
Arsenic (diss.filt)	<0.00012	TM152	0.00186	0.00462	0.00156	0.00149	0.00162	0.000874
Boron (diss.filt)	mg/l <0.0094	TM152	0.308	0.948	0.0344	0.105	0.105	0.0671
Boron (disc.iiit)	mg/l		#	#	#	#	#	#
Cadmium (diss.filt)	<0.0001 mg/l	TM152	<0.0001 #	0.000295 #	<0.0001	<0.0001 #	<0.0001 #	<0.0001 #
Chromium (diss.filt)	<0.00022	TM152	0.00886	0.0211	0.00553	0.00669	0.00666	0.00417
Onner (din Ell)	mg/l	TN4450	# 0.00144	#	#	# 40,00005	# 40,00005	#
Copper (diss.filt)	<0.00085 mg/l	TM152	0.00144 #	0.00613	<0.00085	<0.00085 #	<0.00085 #	0.00178 #
Lead (diss.filt)	<0.00002	TM152	0.00009	0.000346	0.000028	0.000124	0.000092	0.000135
Nickel (diss.filt)	mg/l <0.00015	TM152	<b>*</b> <0.00015	0.129	<0.00015	<b>*</b> <0.00015	<b>*</b> <0.00015	<0.00015
	mg/l		#	#	#	#	#	#
Selenium (diss.filt)	<0.00039 mg/l	TM152	0.00527 #	0.00922	0.000793	0.0012	0.000893 #	0.000881 #
Zinc (diss.filt)	<0.00041	TM152	0.00217	0.039	0.00172	0.00452	0.00311	0.0647
EPH Range >C10 - C40	mg/l <0.046 mg/l	TM172	#	#	2.22	#	#	#
(aq)					#			
EPH Band >C10-C12 (aq)	<0.01 mg/l	TM172			0.0653			
EPH Band >C12-C16 (aq)	<0.01 mg/l	TM172			0.093			
EDH Bond >C16 C21 (og)	<0.01 mg/l	TM172			0.618			
EPH Band >C16-C21 (aq)	<0.01 mg/l	I IVI I / Z			0.010			
EPH Band >C21-C28 (aq)	<0.01 mg/l	TM172			0.455			
EPH Band >C35-C40 (aq)	<0.01 mg/l	TM172			0.229			
EPH Band >C28-C35 (aq)	<0.01 mg/l	TM172			0.759			
Mercury (diss.filt)	<0.00001	TM183	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sulphate	mg/l <3 mg/l	TM184	# 163	2140	<3	<b>#</b> 85.7	73.3	47.4
·			#	#	#	#	#	#
Chloride	<2 mg/l	TM184	45.5 #	66.7	2.7	170 #	154 #	92.4 #
pН	<1 pH Units	TM256	7.83	7.99	7.6	8.55	8.31	8.37
			#	#	#	#	#	#

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

GRO by GC-FID (W)						
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	SWA 01			
M mCERTS accredited. aq Aqueous / settled sample.		Depth (m)				
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.	S	ample Type ite Sampled	Water(GW/SW) 04/08/2010			
* subcontracted test.  ** % recovery of the surrogate		te Received				
standard to check the efficiency of the method. The results of the		SDG Ref	100809-24			
individual compounds within the samples are not corrected	Lab Sa	mple No.(s) Reference	1925026			
for this recovery.		Method				
Component Benzene	LOD/Units <0.007 mg/l	TM245	<0.007			
			#			
Toluene	<0.004 mg/l	TM245	<0.004 #			
Ethylbenzene	<0.005 mg/l	TM245	<0.005			
m,p-Xylene	<0.008 mg/l	TM245	<b>*</b>			
			#			
o-Xylene	<0.003 mg/l	TM245	<0.003 #			
m,p,o-Xylene	<0.01 mg/l	TM245	<0.01			
BTEX, Total	<0.01 mg/l	TM245	<b>*</b>			
			#			
Methyl tertiary butyl ether (MTBE)	<0.003 mg/l	TM245	<0.003 #			
GRO >C5-C6	<0.01 mg/l	TM245	<0.01			
GRO >C6-C7	<0.01 mg/l	TM245	<0.01			
GRO >C7-C8	<0.01 mg/l	TM245	<0.01			
GRO >C8-C10	<0.01 mg/l	TM245	<0.01			
GRO >C5-C12	<0.05 mg/l	TM245	<0.05			
	_		#			
GRO >C10-C12	<0.01 mg/l	TM245	<0.01			

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

PAH Spec MS - Aque	ous (W)						
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	BHC 3	BHD 01	SWC 1		
M mCERTS accredited.  Aqueous / settled sample.  tot.unfilt Total / unfiltered sample.  subcontracted test.  " recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Da Da Lab Sa AGS	Depth (m) ample Type ate Sampled te Received SDG Ref imple No.(s) S Reference	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1924902	Water(GW/SW) 05/08/2010 07/08/2010 100809-24 1925483	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1925083		
Component Naphthalene (aq)	<b>LOD/Units</b> <0.0001	Method TM178	<0.0001	0.000134	<0.0001		
	mg/l		#	#	#		
Acenaphthene (aq)	<0.000015 mg/l	TM178	<0.000015 #	0.000082 #	<0.000015 #		
Acenaphthylene (aq)	<0.000011 mg/l	TM178	<0.000011 #	<0.00011	<0.00011		
Fluoranthene (aq)	<0.000014 mg/l	TM178	0.00002	0.000181 #	0.000022		
Anthracene (aq)	<0.000015 mg/l	TM178	<0.000015 #	0.000039	<0.000015 #		
Phenanthrene (aq)	<0.000022	TM178	<0.000022	0.000131	<0.000022		
Fluorene (aq)	mg/l <0.000014	TM178	<0.000014	0.000041	<0.000014		
Chrysene (aq)	mg/l <0.000013	TM178	0.000018	0.000035	0.000017		
Pyrene (aq)	mg/l <0.000015	TM178	0.000023	0.000155	0.000021		
Benzo(a)anthracene (aq)	mg/l <0.000017	TM178	0.000023	0.000083	0.000021		
Benzo(b)fluoranthene (aq)	mg/l <0.000023	TM178	<b>*</b>	# 0.000101	<b>*</b> <0.000023		
Benzo(k)fluoranthene (aq)	mg/l <0.000027	TM178	<b>*</b>	# 0.000105	<b>*</b>		
Benzo(a)pyrene (aq)	mg/l <0.000009	TM178	0.000014	0.000125	0.00001		
Dibenzo(a,h)anthracene	mg/l <0.000016	TM178	<0.00016	0.000019	<0.00016		
(aq) Benzo(g,h,i)perylene (aq)	mg/l <0.000016	TM178	<0.000016	0.000065	<0.000016		
	mg/l		#	#	#		
Indeno(1,2,3-cd)pyrene (aq)	<0.000014 mg/l	TM178	<0.000014 #	0.000055 #	<0.000014 #		
Polyaromatic hydrocarbons, Total USEPA 16 (aq)	<0.0001 mg/l	TM178	<0.0001 #	0.00135 #	<0.0001 #		
Naphthalene-d8	%	TM178	100	100	100		
Acenaphthene-d10	%	TM178	100	100	100		
Phenanthrene-d10	%	TM178	100	100	100		
Chrysene-d12	%	TM178	100	100	100		
Perylene-d12	%	TM178	100	100	100		

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

SVOC MS (W) - Aque	ous						
Results Legend # ISO17025 accredited.		Sample Ref.	BHC 3	BHD 01	SWC 1		
M mCERTS accredited.  aq diss.filt Dissolved / filtered sample. tot.unfilt tot.unfilt tot.unfilt subcontracted test. "recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Da Da Lab Sa AG	Depth (m) cample Type ate Sampled ate Received SDG Ref ample No.(s) S Reference	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1924902	Water(GW/SW) 05/08/2010 07/08/2010 100809-24 1925483	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1925083		
Component 1,2,4-Trichlorobenzene (aq)	LOD/Units <0.001 mg/l	Method TM176	<0.001	<0.001	<0.001		
1,2-Dichlorobenzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
1,3-Dichlorobenzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
1,4-Dichlorobenzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
. "							
2,4,5-Trichlorophenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
2,4,6-Trichlorophenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
2,4-Dichlorophenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
2,4-Dimethylphenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
2,4-Dinitrotoluene (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
2,6-Dinitrotoluene (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
2-Chloronaphthalene (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
2-Chlorophenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
2-Methylnaphthalene (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
2-Methylphenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
2-Nitroaniline (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
2-Nitrophenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
3-Nitroaniline (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
4-Bromophenylphenylether	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
(aq) 4-Chloro-3-methylphenol	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
(aq) 4-Chloroaniline (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
4-Chlorophenylphenylether	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
(aq) 4-Methylphenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
4-Nitrophenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
4-Nitroaniline (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
Azobenzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
bis(2-Chloroethyl)ether (aq)	, and the second						
bis(2-Chloroethoxy)methane (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
bis(2-Ethylhexyl) phthalate (aq)	<0.002 mg/l	TM176	<0.002	<0.002	<0.002		
Butylbenzyl phthalate (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
Carbazole (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
Dibenzofuran (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
n-Dibutyl phthalate (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
Diethyl phthalate (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
Dimethyl phthalate (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
n-Dioctyl phthalate (aq)	<0.005 mg/l	TM176	<0.005	<0.005	<0.005		
Hexachlorobenzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
Hexachlorobutadiene (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
Pentachlorophenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		
Phenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001		

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

SVOC MS (W) - Aque	ous				
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	BHC 3	BHD 01	SWC 1
M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.  * ubcontracted test.  * " recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Da Da Lab Sa AG	Depth (m) sample Type ate Sampled te Received SDG Ref ample No.(s) S Reference	Water(GW/SW) 04/08/2010 07/08/2010	Water(GW/SW) 05/08/2010 07/08/2010 100809-24 1925483	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1925083
Component n-Nitroso-n-dipropylamine	LOD/Units <0.001 mg/l	Method TM176	<0.001	<0.001	<0.001
(aq)					
Hexachloroethane (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001
Nitrobenzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001
Isophorone (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001
Hexachlorocyclopentadiene (aq)	<0.001 mg/l	TM176	<0.002	<0.001	<0.002
Indeno(1,2,3-cd)pyrene (aq)	<0.001 mg/l	TM176	<0.001	<0.001	<0.001

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

 Client Reference:
 26999

 Location:
 Report No:
 93535

TPH C	CWG (W)							
	Results Legend SO17025 accredited.	Customer	Sample Ref.	BHC 3	BHD 01	SWC 1		
M n aq A diss.filt tot.unfilt T * s * %	nCERTS accredited.  queous / settled sample.  issolved / filtered sample.  otal / unfiltered sample.  ubcontracted test.  for ecovery of the surrogate  tandard to check the efficiency  ff the method. The results of the  ndividual compounds within  he samples are not corrected  or this recovery.	Da Da Lab Sa AGS	Depth (m) ample Type ate Sampled te Received SDG Ref ample No.(s) S Reference	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1924902	Water(GW/SW) 05/08/2010 07/08/2010 100809-24 1925483	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1925083		
Compon	phatics >C5-C35	LOD/Units <0.01 mg/l	Method TM174	0.134	<0.01	<0.01		
(aq)								
Total Ard	omatics >C6-C35	<0.01 mg/l	TM174	<0.01	<0.01	<0.01		
Total Ali >C5-35	phatics & Aromatics (aq)	<0.01 mg/l	TM174	0.134	<0.01	<0.01		
Aliphatic	cs >C12-C16 (aq)	<0.01 mg/l	TM174	<0.01	<0.01	<0.01		
Aromatio	cs >EC12-EC16	<0.01 mg/l	TM174	<0.01	<0.01	<0.01		
	cs >C16-C21 (aq)	<0.01 mg/l	TM174	<0.01	<0.01	<0.01		
	cs >EC16-EC21	<0.01 mg/l	TM174	<0.01	<0.01	<0.01		
(aq) Aliphatic	cs >C21-C35 (aq)	<0.01 mg/l	TM174	<0.01	<0.01	<0.01		
	cs >EC21-EC35	<0.01 mg/l	TM174	<0.01	<0.01	<0.01		
(aq) Total Ali	phatics >C12-C35	<0.01 mg/l	TM174	<0.01	<0.01	<0.01		
(aq) Total Ard	omatics	<0.01 mg/l	TM174	<0.01	<0.01	<0.01		
>EC12-E	EC35 (aq) phatics & Aromatics	<0.01 mg/l	TM174	<0.01	<0.01	<0.01		
>C12-C	35 (Aqueous) irrogate %	%	TM245	108	96	114		
recovery	/**							
Benzene		<0.007 mg/l	TM245	<0.007 #	<0.007 #	<0.007 #		
Toluene		<0.004 mg/l	TM245	<0.004 #	<0.004 #	<0.004 #		
Ethylber	nzene	<0.005 mg/l	TM245	<0.005 #	<0.005 #	<0.005 #		
m,p-Xyle	ene	<0.008 mg/l	TM245	<0.008	<0.008	<0.008		
o-Xylene	e	<0.003 mg/l	TM245	<0.003 #	<0.003	<0.003		
m,p,o-X	ylene	<0.01 mg/l	TM245	<0.01	<0.01	<0.01		
ВТЕХ, Т	otal	<0.01 mg/l	TM245	<0.01	<0.01	<0.01		
	ertiary butyl ether	<0.003 mg/l	TM245	0.029	<0.003	<0.003		
(MTBE) GRO >C	C5-C12	<0.05 mg/l	TM245	0.17	<0.05	<b>*</b>		
Aliphatic	cs >C5-C6	<0.01 mg/l	TM245	<b>*</b>	<0.01	<b>*</b>		
Aliphatic	cs >C6-C8	<0.01 mg/l	TM245	0.134	<0.01	<0.01		
Aliphatic	cs >C8-C10	<0.01 mg/l	TM245	<0.01	<0.01	<0.01		
	cs >C10-C12	<0.01 mg/l	TM245	<0.01	<0.01	<0.01		
•	phatics >C5-C12							
		<0.01 mg/l	TM245	0.134	<0.01	<0.01		
	cs >C6-C7	<0.01 mg/l	TM245	<0.01	<0.01	<0.01		
	cs >C7-C8	<0.01 mg/l	TM245	<0.01	<0.01	<0.01		
Aromatio	cs >EC8-EC10	<0.01 mg/l	TM245	<0.01	<0.01	<0.01		
Aromatio	cs >EC10-EC12	<0.01 mg/l	TM245	<0.01	<0.01	<0.01		
Total Are	omatics >C6-C12	<0.01 mg/l	TM245	<0.01	<0.01	<0.01		

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

voc	MS (W)							
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	BHC 3	BHD 01	SWC 1		
M aq diss.filt tot.unfilt *	mCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample. Total / unfiltered sample. subcontracted test. % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Da Da Lab Sa	Depth (m) sample Type ate Sampled te Received SDG Ref ample No.(s) S Reference	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1924902	Water(GW/SW) 05/08/2010 07/08/2010 100809-24 1925483	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1925083		
Compo		LOD/Units	Method TM208	93.8	96.4	96		
Toluen		%	TM208	97.3	96.9	97.3		
	nofluorobenzene**	%	TM208	95	95.3	95.7		
	odifluoromethane	<0.007 mg/l	TM208	<0.007 #	<0.007 #	<0.007 #		
Chloro	methane	<0.009 mg/l	TM208	<0.009 #	<0.009 #	<0.009 #		
Vinyl c	hloride	<0.0012 mg/l	TM208	0.028 #	<0.0012 #	<0.0012 #		
Bromo	methane	<0.002 mg/l	TM208	<0.002 #	<0.002 #	<0.002 #		
Chloro	ethane	<0.0025 mg/l	TM208	<0.0025 #	<0.0025 #	<0.0025 #		
Trichlo	rofluoromethane	<0.0013 mg/l	TM208	<0.0013 #	<0.0013	<0.0013		
1,1-Dic	chloroethene	<0.0012 mg/l	TM208	<0.0012	<0.0012	<0.0012		
Carbor	n disulphide	<0.0013 mg/l	TM208	<0.0013	<0.0013	<0.0013		
Dichlor	omethane	<0.0037 mg/l	TM208	<0.0037 #	<0.0037	<0.0037		
Methyl (MTBE	tertiary butyl ether	<0.0016	TM208	0.0241	<0.0016	<0.0016		
_	,2-Dichloroethene	mg/l <0.0019	TM208	0.00744	<0.0019	<0.0019		
1,1-Dic	chloroethane	mg/l <0.0012	TM208	<0.0012	<0.0012	<0.0012		
cis-1,2	-Dichloroethene	mg/l <0.0023	TM208	0.523	<0.0023	<0.0023		
2,2-Dic	chloropropane	mg/l <0.0038	TM208	<0.0038	<0.0038	<0.0038		
Bromo	chloromethane	mg/l <0.0019	TM208	<0.0019	<0.0019	<0.0019		
Chloro	form	mg/l <0.0018	TM208	<b>*</b> <0.0018	<0.0018	<0.0018		
1,1,1-T	richloroethane	mg/l <0.0013	TM208	<0.0013	<0.0013	<0.0013		
1,1-Dic	chloropropene	mg/l <0.0013	TM208	<0.0013	<0.0013	<0.0013		
Carbor	ntetrachloride	mg/l <0.0014	TM208	<0.0014	<0.0014	<0.0014		
1,2-Dic	chloroethane	mg/l <0.0033	TM208	<b>*</b>	<0.0033	<0.0033		
Benzei	ne	mg/l <0.0013	TM208	<0.0013	<0.0013	<0.0013		
Trichlo	roethene	mg/l <0.0025	TM208	0.00318	<b>*</b> <0.0025	<b>*</b> <0.0025		
1,2-Dic	chloropropane	mg/l <0.003 mg/l	TM208	<0.003	<0.003	<b>*</b>		
	nomethane	<0.0027	TM208	<b>*</b>	<0.0027	<b>*</b> <0.0027		
	dichloromethane	mg/l <0.0009	TM208	<0.0009	<0.0009	<0.0009		
	-Dichloropropene	mg/l <0.0019	TM208	<0.0019	<0.0019	<0.0019		
Toluen		mg/l <0.0014	TM208	<0.0019 # <0.0014	<0.0019	<0.0019 # <0.0014		
	,3-Dichloropropene	mg/l <0.0035	TM208	<0.0014 # <0.0035	<0.0014	<0.0014 # <0.0035		
	richloroethane	mg/l <0.0022	TM208	<0.0035 # <0.0022	<0.0035	<0.0035 # <0.0022		
		mg/l		#	#	#		
	chloropropane	<0.0022 mg/l	TM208	<0.0022 #	<0.0022	<0.0022 #		
	nloroethene	<0.0015 mg/l	TM208	<0.0015 #	<0.0015	<0.0015		
	nochloromethane	<0.0017 mg/l	TM208	<0.0017 #	<0.0017	<0.0017		
	promoethane	<0.0023 mg/l	TM208	<0.0023 #	<0.0023 #	<0.0023 #		
	benzene	<0.0035 mg/l	TM208	<0.0035 #	<0.0035 #	<0.0035 #		
1,1,1,2	-Tetrachloroethane	<0.0013 mg/l	TM208	<0.0013 #	<0.0013 #	<0.0013 #		
Ethylbe	enzene	<0.0025 mg/l	TM208	<0.0025 #	<0.0025 #	<0.0025 #		

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

voc	MS (W)							
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	BHC 3	BHD 01	SWC 1		
M aq diss.filt	mCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample. Total / unfiltered sample. subcontracted test.		Depth (m) ample Type ite Sampled	Water(GW/SW) 04/08/2010	Water(GW/SW) 05/08/2010	Water(GW/SW) 04/08/2010		
**	% recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Lab Sa AGS	te Received SDG Ref mple No.(s) Reference	07/08/2010 100809-24 1924902	07/08/2010 100809-24 1925483	07/08/2010 100809-24 1925083		
Compo		<b>LOD/Units</b> <0.0025	Method TM208	<0.0025	<0.0025	<0.0025		
m,p-Xy	rierie	<0.0025 mg/l	I IVIZUO	<0.0025 #	<0.0025 #	<0.0025 #		
o-Xyle	ne	<0.0017 mg/l	TM208	<0.0017 #	<0.0017 #	<0.0017 #		
Styren	e	<0.0012	TM208	<0.0012	<0.0012	<0.0012		
Bromo	form	mg/l <0.003 mg/l	TM208	<0.003 #	<0.003 #	<0.003 #		
Isopro	pylbenzene	<0.0014	TM208	<0.0014	<0.0014	<0.0014		
1,1,2,2	-Tetrachloroethane	mg/l <0.0052	TM208	<b>*</b>	<b>*</b>	<b>*</b>		
1227	richloropropane	mg/l <0.0078	TM208	<0.0078	<0.0078	<0.0078		
		mg/l		#	#	#		
Bromo	benzene	<0.002 mg/l	TM208	<0.002 #	<0.002 #	<0.002 #		
Propyl	benzene	<0.0026 mg/l	TM208	<0.0026 #	<0.0026 #	<0.0026 #		
2-Chlo	rotoluene	<0.0019	TM208	<0.0019	<0.0019	<0.0019		
1,3,5-1	rimethylbenzene	mg/l <0.0018	TM208	<b>*</b>	<b>*</b> <0.0018	<b>*</b> <0.0018		
4-Chlo	rotoluene	mg/l <0.0019	TM208	<b>*</b>	<b>*</b>	<b>*</b>		
	tylbenzene	mg/l <0.002 mg/l	TM208	<b>*</b>	<b>*</b>	<0.002		
				#	#	#		
1,2,4-1	rimethylbenzene	<0.0017 mg/l	TM208	<0.0017 #	<0.0017 #	<0.0017 #		
sec-Bu	itylbenzene	<0.0017 mg/l	TM208	<0.0017 #	<0.0017 #	<0.0017 #		
4-iso-F	Propyltoluene	<0.0026	TM208	<0.0026	<0.0026	<0.0026		
1,3-Dio	chlorobenzene	mg/l <0.0022	TM208	<0.0022	<b>*</b>	<0.0022		
1 4-Dic	chlorobenzene	mg/l <0.0027	TM208	<b>*</b>	<b>*</b>	<b>*</b>		
		mg/l		#	#	#		
	lbenzene	<0.002 mg/l	TM208	<0.002 #	<0.002 #	<0.002 #		
1,2-Dio	chlorobenzene	<0.0037 mg/l	TM208	<0.0037	<0.0037	<0.0037		
1,2-Dib e	promo-3-chloropropan	<0.0098 mg/l	TM208	<0.0098	<0.0098	<0.0098		
1,2,4-T	richlorobenzene	<0.0023 mg/l	TM208	<0.0023 #	<0.0023	<0.0023		
Hexac	hlorobutadiene	<0.0025	TM208	<0.0025	<0.0025	<0.0025		
tert-An	nyl methyl ether	mg/l <0.001 mg/l	TM208	<b>*</b>	<b>*</b>	<0.001		
(TAME Naphth		<0.0035	TM208	<b>*</b>	<b>*</b>	<b>*</b>		
		mg/l		#	#	#		
1,2,3-1	richlorobenzene	<0.0031 mg/l	TM208	<0.0031 #	<0.0031 #	<0.0031 #		
1,3,5-1	richlorobenzene	<0.01 mg/l	TM208	<0.01	<0.01	<0.01		

# **ALcontrol Laboratories Analytical Services**

Customer:

Attention:

Entec UK - MOD Ltd

Simon Howard

**SDG**: 100809-24

Job: H\_ENTEC\_MOD-12

			_						
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	SWC 5	SWC 8	SWD 06	SWD 09	SWE 1	SWE 5
M aq	mCERTS accredited. Aqueous / settled sample.		Depth (m)						
diss.filt	Dissolved / filtered sample.		ample Type	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
*	Total / unfiltered sample. subcontracted test.		te Sampled	04/08/2010	04/08/2010	04/08/2010	05/08/2010	04/08/2010	04/08/2010
**	% recovery of the surrogate standard to check the efficiency	Da	te Received SDG Ref	07/08/2010	07/08/2010	07/08/2010	07/08/2010	07/08/2010	07/08/2010
	of the method. The results of the	Lab Sa	mple No.(s)	100809-24 1924991	100809-24 1924938	100809-24 1925346	100809-24 1925307	100809-24 1924811	100809-24 1924861
	individual compounds within the samples are not corrected		S Reference	1021001	1021000	1020010	1020001	1021011	.02.00.
Compo	for this recovery.	LOD/Units	Method						
	niacal Nitrogen as	<0.3 mg/l	TM099	0.468	0.477	12.7	<0.3	<0.3	0.374
NH4	_			#	#		#	#	#
Arsenio	(diss.filt)	<0.00012 mg/l	TM152	0.000664 #	0.00125 #	0.00181	0.000871 #	0.00323 #	0.000599 #
Boron (	diss.filt)	<0.0094	TM152	0.0208	0.0404	0.0674	0.0352	0.121	0.0355
0.1	(P CIO	mg/l	T1450	#	#		#	#	#
Cadmit	ım (diss.filt)	<0.0001 mg/l	TM152	<0.0001 #	<0.0001 #	<0.0001	<0.0001 #	<0.0001 #	<0.0001 #
Chromi	um (diss.filt)	<0.00022	TM152	0.00134	0.00259	0.0065	0.00196	0.0055	0.00173
0	(-li £14)	mg/l	TMACO	4	#		#	4	0.00054
Copper	(diss.filt)	<0.00085 mg/l	TM152	0.00285 #	0.00408	0.00101	0.00129 #	0.000967 #	0.00251 #
Lead (d	diss.filt)	<0.00002	TM152	0.000124	0.00015	<0.00002	0.000505	0.000055	0.00011
Minkal	(diag filt)	mg/l	TM450	# <0.00015	<0.00015		# <0.00015	# <0.00015	<0.00015
INICKEI	(diss.filt)	<0.00015 mg/l	TM152	<0.00015 #	<0.00015	0.00938	<0.00015 #	<0.00015 #	<0.00015 #
Seleniu	ım (diss.filt)	<0.00039	TM152	0.00039	0.000996	0.00122	0.000881	0.00151	<0.00039
Zine (d	ice filt)	mg/l	TM152	0.0213	0.0328	0.00316	# 0.111	0.00267	0.0318
Zinc (d	135.IIIL)	<0.00041 mg/l	11VI152	0.0213 #	0.0328		0.111 #	0.00267 #	0.0318 #
	ange >C10 - C40	<0.046 mg/l	TM172	"	0.137	0.114	"	"	
(aq)	and >C10 C12 (c=)	<0.01 mg/l	TM172		<0.01	<0.01			
EPHB	and >C10-C12 (aq)	<0.01 mg/l	TIVITZ		<0.01	<0.01			
EPH B	and >C12-C16 (aq)	<0.01 mg/l	TM172		0.0104	<0.01			
EDU D	and >C16-C21 (aq)	<0.01 mg/l	TM172		0.0363	0.0195			
CFH B	and >010-021 (aq)	<0.01 mg/i	1101172		0.0303	0.0195			
EPH B	and >C21-C28 (aq)	<0.01 mg/l	TM172		0.0388	0.0182			
EPH B	and >C35-C40 (aq)	<0.01 mg/l	TM172		<0.01	<0.01			
EPH B	and >C28-C35 (aq)	<0.01 mg/l	TM172		0.0451	0.0705			
Mercur	y (diss.filt)	<0.00001	TM183	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001
Outstan	-	mg/l	TM404	45.0	47.0		#	#	#
Sulpha	te	<3 mg/l	TM184	15.6 #	47.9 #	85.9	39.4 #	145 #	34.4 #
Chlorid	е	<2 mg/l	TM184	15.3	37.6	56.2	26.2	67.9	22.5
pН		<1 pH Units	TM256	7.7	8.1	8.44	7.68	<b>#</b> 8.24	# 7.97
Pii		vi pri onito	TIVIZOU	#	#		#	#	7.57 #

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

GRO by GC-FID (W)						
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	SWC 8	SWD 06		
M mCERTS accredited.  aq Aqueous / settled sample.	_	Depth (m)				
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		Sample Type ate Sampled	Water(GW/SW) 04/08/2010	Water(GW/SW)		
* subcontracted test.  ** % recovery of the surrogate		te Received	07/08/2010	04/08/2010 07/08/2010		
standard to check the efficiency of the method. The results of the		SDG Ref	100809-24	100809-24		
individual compounds within the samples are not corrected	Lab Sa	ample No.(s) S Reference	1924938	1925346		
for this recovery.		Method				
Component Benzene	LOD/Units <0.007 mg/l		<0.007	<0.007		
			#	#		
Toluene	<0.004 mg/l	TM245	<0.004 #	<0.004 #		
Ethylbenzene	<0.005 mg/l	TM245	<0.005	<0.005		
m,p-Xylene	<0.008 mg/l	TM245	<0.008	<b>*</b>		
			#	# 40,000		
o-Xylene	<0.003 mg/l	TM245	<0.003 #	<0.003 #		
m,p,o-Xylene	<0.01 mg/l	TM245	<0.01 #	<0.01		
BTEX, Total	<0.01 mg/l	TM245	<0.01	<0.01		
Methyl tertiary butyl ether	<0.003 mg/l	TM245	<0.003	<b>*</b>		
(MTBE)			#	#		
GRO >C5-C6	<0.01 mg/l	TM245	<0.01	<0.01		
GRO >C6-C7	<0.01 mg/l	TM245	<0.01	<0.01		
GRO >C7-C8	<0.01 mg/l	TM245	<0.01	<0.01		
GRO >C8-C10	<0.01 mg/l	TM245	<0.01	<0.01		
GRO >C5-C12	<0.05 mg/l	TM245	<0.05	<0.05		
GRO >C10-C12	<0.01 mg/l	TM245	<b>*</b>	<b>*</b>		
						<del>                                     </del>

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

PAH Spec MS - Aque	ous (W)						
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	SWC 5	SWD 09	SWE 1		
M mCERTS accredited.		Depth (m)					
aq Aqueous / settled sample. diss.filt Dissolved / filtered sample.	s	ample Type	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)		
tot.unfilt Total / unfiltered sample.		ate Sampled	04/08/2010	05/08/2010	04/08/2010		
* subcontracted test.  ** % recovery of the surrogate	Da	te Received	07/08/2010	07/08/2010	07/08/2010		
standard to check the efficiency of the method. The results of the		SDG Ref	100809-24	100809-24	100809-24		
individual compounds within	Lab Sa	imple No.(s)	1924991	1925307	1924811		
the samples are not corrected for this recovery.	AGS	S Reference					
Component	LOD/Units	Method	2 222 /	2 222 4	0.0004		
Naphthalene (aq)	<0.0001 mg/l	TM178	<0.0001 #	<0.0001 #	<0.0001		
Acenaphthene (aq)	<0.000015	TM178	<0.000015	<0.000015	<0.000015		
Acenaphthylene (aq)	mg/l <0.000011	TM178	<b>*</b>	<b>*</b>	<0.00011		
Accrepitifyione (aq)	mg/l	TWITTO	4	#	#		
Fluoranthene (aq)	<0.000014	TM178	0.000015	0.000016	0.000106		
Anthracene (aq)	mg/l <0.000015	TM178	<b>*</b>	<0.000015	<0.000015		
51 11 ( )	mg/l	T144 T0	#	#	#		
Phenanthrene (aq)	<0.000022 mg/l	TM178	<0.000022 #	<0.000022 #	0.000031		
Fluorene (aq)	<0.000014	TM178	<0.000014	<0.000014	<0.000014		
Chrysene (aq)	mg/l <0.000013	TM178	<0.00013	<0.000013	0.000071		
	mg/l		#	#	#		
Pyrene (aq)	<0.000015	TM178	<0.000015	0.000015	0.000095		
Benzo(a)anthracene (aq)	mg/l <0.000017	TM178	<0.00017	0.00002	0.000055		
	mg/l		#	#	#		
Benzo(b)fluoranthene (aq)	<0.000023 mg/l	TM178	<0.000023 #	<0.000023 #	0.00005		
Benzo(k)fluoranthene (aq)	<0.000027	TM178	<0.000027	<0.000027	0.000049		
Benzo(a)pyrene (aq)	mg/l <0.000009	TM178	<0.00009	0.000009	0.00006		
Donzo(a)pyrone (aq)	mg/l		<0.000009 #	#	#		
Dibenzo(a,h)anthracene	<0.000016	TM178	<0.000016	<0.000016	<0.000016		
(aq) Benzo(g,h,i)perylene (aq)	mg/l <0.000016	TM178	<b>*</b>	<b>*</b>	0.000053		
	mg/l		#	#	#		
Indeno(1,2,3-cd)pyrene (aq)	<0.000014 mg/l	TM178	<0.000014 #	<0.000014 #	0.000037		
Polyaromatic hydrocarbons,	<0.0001	TM178	<0.0001	<0.0001	0.000563		
Total USEPA 16 (aq)	mg/l %	TM178	100	#	#		
Naphthalene-d8	/0	TIVITO	100	100	100		
Acenaphthene-d10	%	TM178	100	100	100		
Phenanthrene-d10	%	TM178	100	100	100		
Chrysene-d12	%	TM178	100	100	100		
Perylene-d12	%	TM178	100	100	100		
							<u> </u>

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

svo	C MS (W) - Aqued	ous			
#	Results Legend ISO17025 accredited.		Sample Ref.	SWD 09	SWE 1
M aq	mCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample.		Depth (m) Sample Type	Water(CM/CM)	Mater(CM/CM/
tot.unfilt *	Total / unfiltered sample. subcontracted test.	Da	ate Sampled	Water(GW/SW) 05/08/2010	Water(GW/SW) 04/08/2010
**	% recovery of the surrogate standard to check the efficiency of the method. The results of the		te Received SDG Ref	07/08/2010 100809-24	07/08/2010 100809-24
	individual compounds within the samples are not corrected	Lab Sa	ample No.(s) S Reference	1925307	1924811
Compo		LOD/Units	Method		
1,2,4-T	richlorobenzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001
1,2-Dio	chlorobenzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001
1,3-Dio	chlorobenzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001
1,4-Dio	chlorobenzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001
2,4,5-1	richlorophenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001
2,4,6-1	richlorophenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001
2,4-Dio	chlorophenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001
2,4-Dir	nethylphenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001
2,4-Dir	nitrotoluene (aq)	<0.001 mg/l	TM176	<0.001	<0.001
2,6-Dir	nitrotoluene (aq)	<0.001 mg/l	TM176	<0.001	<0.001
2-Chlo	ronaphthalene (aq)	<0.001 mg/l	TM176	<0.001	<0.001
	rophenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001
	ylnaphthalene (aq)	<0.001 mg/l	TM176	<0.001	<0.001
	ylphenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001
	aniline (aq)	<0.001 mg/l	TM176	<0.001	<0.001
		<0.001 mg/l	TM176	<0.001	<0.001
	phenol (aq)				
	aniline (aq)	<0.001 mg/l	TM176	<0.001	<0.001
(aq)	nophenylphenylether	<0.001 mg/l	TM176	<0.001	<0.001
(aq)	ro-3-methylphenol	<0.001 mg/l	TM176	<0.001	<0.001
	roaniline (aq)	<0.001 mg/l	TM176	<0.001	<0.001
4-Chlo (aq)	rophenylphenylether	<0.001 mg/l	TM176	<0.001	<0.001
	ylphenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001
4-Nitro	phenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001
4-Nitro	aniline (aq)	<0.001 mg/l	TM176	<0.001	<0.001
Azobe	nzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001
bis(2-C	Chloroethyl)ether (aq)	<0.001 mg/l	TM176	<0.001	<0.001
	Chloroethoxy)methane	<0.001 mg/l	TM176	<0.001	<0.001
,	thylhexyl) phthalate	<0.002 mg/l	TM176	<0.002	<0.002
(aq) Butylbe	enzyl phthalate (aq)	<0.001 mg/l	TM176	<0.001	<0.001
Carbaz	zole (aq)	<0.001 mg/l	TM176	<0.001	<0.001
Dibenz	ofuran (aq)	<0.001 mg/l	TM176	<0.001	<0.001
n-Dibu	tyl phthalate (aq)	<0.001 mg/l	TM176	<0.001	<0.001
	phthalate (aq)	<0.001 mg/l	TM176	<0.001	<0.001
	yl phthalate (aq)	<0.001 mg/l	TM176	<0.001	<0.001
		<0.001 mg/l	TM176	<0.001	<0.001
	tyl phthalate (aq)				
	nlorobenzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001
	nlorobutadiene (aq)	<0.001 mg/l	TM176	<0.001	<0.001
Pentac	hlorophenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001
Pheno	(aq)	<0.001 mg/l	TM176	<0.001	<0.001

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

SVOC MS (W) - Aqueo	SVOC MS (W) - Aqueous										
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	SWD 09	SWE 1							
M mCERTS accredited.  aq Aqueous / settled sample.  bissolved / filtered sample.  tot.unfilt Total / unfiltered sample.  subcontracted test.  recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Da Da Lab Sa AG	Depth (m) cample Type ate Sampled te Received SDG Ref ample No.(s) S Reference	Water(GW/SW) 05/08/2010 07/08/2010	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1924811							
Component	LOD/Units	Method	<0.001	<b>~0.001</b>							
n-Nitroso-n-dipropylamine (aq)	<0.001 mg/l	TM176	<0.001	<0.001							
Hexachloroethane (aq)	<0.001 mg/l	TM176	<0.001	<0.001							
Nitrobenzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001							
Isophorone (aq)	<0.001 mg/l	TM176	<0.001	<0.001							
Hexachlorocyclopentadiene (aq)	<0.001 mg/l	TM176	<0.002	<0.002							
Indeno(1,2,3-cd)pyrene (aq)	<0.001 mg/l	TM176	<0.001	<0.001							

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

Loca						ort ivo.	70000	
TPH	CWG (W)							
	Results Legend ISO17025 accredited.	Customer	Sample Ref.	SWD 09	SWE 1			
M aq liss.filt ot.unfilt *	mCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample. Total / unfiltered sample. subcontracted test. % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected	Da Da Lab Sa	Depth (m) ample Type ate Sampled te Received SDG Ref imple No.(s) S Reference	Water(GW/SW) 05/08/2010 07/08/2010 100809-24 1925307	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1924811			
Compo	for this recovery.	LOD/Units	Method					
	liphatics >C5-C35	<0.01 mg/l	TM174	0.012	0.016			
q) stal A	romatics >C6-C35	<0.01 mg/l	TM174	0.018	0.052			
q)								
otal A C5-35	liphatics & Aromatics (aq)	<0.01 mg/l	TM174	0.03	0.068			
liphat	ics >C12-C16 (aq)	<0.01 mg/l	TM174	<0.01	<0.01			
omat	ics >EC12-EC16	<0.01 mg/l	TM174	<0.01	<0.01			
	ics >C16-C21 (aq)	<0.01 mg/l	TM174	<0.01	<0.01			
	ics >EC16-EC21	<0.01 mg/l	TM174	<0.01	<0.01			
q) iphat	ics >C21-C35 (aq)	<0.01 mg/l	TM174	0.012	0.016			
romat	ics >EC21-EC35	<0.01 mg/l	TM174	0.018	0.052			
ıq) otal A	liphatics >C12-C35	<0.01 mg/l	TM174	0.012	0.016			
aq)			TM174	0.018	0.052			
C12	romatics -EC35 (aq)	<0.01 mg/l						
C12-0	liphatics & Aromatics C35 (Aqueous)	<0.01 mg/l	TM174	0.03	0.068			
RO S cove	urrogate % 'y**	%	TM245	113	97			
enzer	ne	<0.007 mg/l	TM245	<0.007 #	<0.007			
luen	е	<0.004 mg/l	TM245	<0.004	<0.004			
nylbe	enzene	<0.005 mg/l	TM245	<0.005	<0.005			
o-Xy	lene	<0.008 mg/l	TM245	<0.008	<0.008			
(yler	ne	<0.003 mg/l	TM245	<b>*</b>	<0.003			
p,o->	(ylene	<0.01 mg/l	TM245	<b>*</b>	<0.01			
	Total	<0.01 mg/l	TM245	<b>*</b>	<0.01			
	tertiary butyl ether	<0.003 mg/l	TM245	<0.003	<0.003			
TBE	)			#	#			
	C5-C12	<0.05 mg/l	TM245	<0.05	<0.05			
	cs >C5-C6	<0.01 mg/l	TM245	<0.01	<0.01			
phat	ics >C6-C8	<0.01 mg/l	TM245	<0.01	<0.01			
iphat	ics >C8-C10	<0.01 mg/l	TM245	<0.01	<0.01			
phat	ics >C10-C12	<0.01 mg/l	TM245	<0.01	<0.01			
tal A	liphatics >C5-C12	<0.01 mg/l	TM245	<0.01	<0.01			
oma	ics >C6-C7	<0.01 mg/l	TM245	<0.01	<0.01			
omat	ics >C7-C8	<0.01 mg/l	TM245	<0.01	<0.01			
omat	ics >EC8-EC10	<0.01 mg/l	TM245	<0.01	<0.01			
	ics >EC10-EC12	<0.01 mg/l	TM245	<0.01	<0.01			
	romatics >C6-C12	<0.01 mg/l	TM245	<0.01	<0.01			
ıaı A	Tomatics /CU-CTZ	~0.01 /11g/l	I IVIZ43	<b>\U.U1</b>	<b>~</b> 0.01			

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

voc	MS (W)						
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	SWD 09	SWE 1		
diss.filt tot.unfilt * **	mCERTs accredited. Aqueous / settled sample. Dissolved / filtered sample. Total / unfiltered sample. subcontracted test. % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Da Da Lab Sa AGS	Depth (m) ample Type ite Sampled te Received SDG Ref mple No.(s) S Reference	Water(GW/SW) 05/08/2010 07/08/2010 100809-24 1925307	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1924811		
Compo Dibrom	ofluoromethane**	LOD/Units %	TM208	96.3	95.8		
Toluen	e-d8**	%	TM208	97.1	97.5		
4-Brom	ofluorobenzene**	%	TM208	95.6	96.4		
Dichlor	odifluoromethane	<0.007 mg/l	TM208	<0.007	<0.007		
Chloro	nethane	<0.009 mg/l	TM208	<0.009	<0.009		
Vinyl cl	nloride	<0.0012	TM208	<0.0012	<0.0012		
Bromo	methane	mg/l <0.002 mg/l	TM208	<0.002	<0.002		
Chloro	ethane	<0.0025	TM208	<0.0025	<0.0025		
Trichlo	rofluoromethane	mg/l <0.0013	TM208	<0.0013	<0.0013		
1,1-Dic	hloroethene	mg/l <0.0012	TM208	<0.0012	<0.0012		
Carbor	disulphide	mg/l <0.0013	TM208	<0.0013	<0.0013		
Dichlor	omethane	mg/l <0.0037	TM208	<0.0037	<0.0037		
	tertiary butyl ether	mg/l <0.0016	TM208	<0.0016	<0.0016		
MTBE rans-1	) ,2-Dichloroethene	mg/l <0.0019	TM208	<0.0019	<0.0019		
1,1-Dic	hloroethane	mg/l <0.0012	TM208	<b>*</b> <0.0012	<0.0012		
cis-1,2	Dichloroethene	mg/l <0.0023	TM208	<0.0023	<0.0023		
2,2-Dic	hloropropane	mg/l <0.0038	TM208	<0.0038	<0.0038		
Bromo	chloromethane	mg/l <0.0019	TM208	<b>*</b> <0.0019	<b>*</b> <0.0019		
Chloro	orm	mg/l <0.0018	TM208	<0.0018	<0.0018		
1,1,1-T	richloroethane	mg/l <0.0013	TM208	<0.0013	<0.0013		
1,1-Dic	hloropropene	mg/l <0.0013	TM208	<0.0013 #	<0.0013 #		
Carbor	tetrachloride	mg/l <0.0014	TM208	<0.0014	<0.0014		
1,2-Dic	hloroethane	mg/l <0.0033	TM208	<0.0033	<0.0033		
Benzer	ne	mg/l <0.0013	TM208	<0.0013	<0.0013		
Trichlo	oethene	mg/l <0.0025	TM208	<0.0025	* <0.0025 *		
1,2-Dic	hloropropane	mg/l <0.003 mg/l	TM208	<0.003	<0.003		
Dibrom	omethane	<0.0027	TM208	<0.0027	<0.0027		
Bromo	dichloromethane	mg/l <0.0009	TM208	<0.0009 #	<0.0009 #		
cis-1,3	Dichloropropene	mg/l <0.0019 mg/l	TM208	<0.0019 #	<0.0019		
Toluen	е	<0.0014	TM208	<0.0014 #	<0.0014 #		
rans-1	,3-Dichloropropene	mg/l <0.0035 mg/l	TM208	<0.0035	<0.0035		
1,1,2-T	richloroethane	<0.0022	TM208	<0.0022	<0.0022		
1,3-Dic	hloropropane	mg/l <0.0022	TM208	* <0.0022 *	<0.0022 #		
Tetrach	loroethene	mg/l <0.0015	TM208	<0.0015 #	<0.0015 #		
Dibrom	ochloromethane	mg/l <0.0017	TM208	<0.0017 #	<0.0017 #		
1,2-Dib	romoethane	mg/l <0.0023	TM208	<0.0023	<0.0023 #		
Chlorol	penzene	mg/l <0.0035	TM208	<0.0035 #	<0.0035		
1,1,1,2	-Tetrachloroethane	mg/l <0.0013	TM208	<0.0013 #	<0.0013		
Ethylbe	nzene	mg/l <0.0025 mg/l	TM208	<0.0025 #	<0.0025 #		

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

Loca					itoj
voc	MS (W)				
#	Results Legend ISO17025 accredited.	Custom	er Sample Ref.	SWD 09	SWE 1
М	mCERTS accredited. Aqueous / settled sample.		Depth (m)		
diss.filt	Dissolved / filtered sample. Total / unfiltered sample.		Sample Type Date Sampled	Water(GW/SW)	Water(GW/SW)
*	subcontracted test. % recovery of the surrogate		Date Received	05/08/2010 07/08/2010	04/08/2010 07/08/2010
	standard to check the efficiency of the method. The results of the	l ah	SDG Ref Sample No.(s)	100809-24 1925307	100809-24 1924811
	individual compounds within the samples are not corrected		GS Reference	1920001	1924011
Compo	for this recovery.	LOD/Units	Method		
m,p-Xy	rlene	<0.0025	TM208	<0.0025	<0.0025 #
o-Xyler	ne	mg/l <0.0017	TM208	<0.0017	<0.0017
Styrene	e	mg/l <0.0012	TM208	<0.0012	<0.0012
Bromo	form	mg/l <0.003 mg	/I TM208	<0.003	<0.003
Isopror	pylbenzene	<0.0014	TM208	<b>*</b>	<b>*</b>
		mg/l <0.0052	TM208	<0.0052	<0.0052
	-Tetrachloroethane	mg/l			
1,2,3-T	richloropropane	<0.0078 mg/l	TM208	<0.0078 #	<0.0078 #
Bromol	benzene	<0.002 mg	/I TM208	<0.002 #	<0.002
Propyll	oenzene	<0.0026 mg/l	TM208	<0.0026 #	<0.0026
2-Chlo	rotoluene	<0.0019	TM208	<0.0019 #	<0.0019
1,3,5-T	rimethylbenzene	mg/l <0.0018	TM208	<0.0018	<0.0018
4-Chlo	rotoluene	mg/l <0.0019	TM208	<0.0019	<0.0019
tert-Bu	tylbenzene	mg/l <0.002 mg	/I TM208	<0.002	<0.002
	rimethylbenzene	<0.0017	TM208	<b>*</b> <0.0017	<b>*</b> <0.0017
		mg/l		#	#
sec-Bu	itylbenzene	<0.0017 mg/l	TM208	<0.0017 #	<0.0017 #
4-iso-P	ropyltoluene	<0.0026 mg/l	TM208	<0.0026 #	<0.0026 #
1,3-Dic	chlorobenzene	<0.0022 mg/l	TM208	<0.0022 #	<0.0022
1,4-Dic	chlorobenzene	<0.0027	TM208	<0.0027	<0.0027
n-Butyl	benzene	mg/l <0.002 mg	/I TM208	<0.002	<0.002
1,2-Dic	chlorobenzene	<0.0037	TM208	<0.0037	<0.0037
1,2-Dib	promo-3-chloropropan	mg/l <0.0098	TM208	<0.0098	<0.0098
е	richlorobenzene	mg/l <0.0023	TM208	<0.0023	<0.0023
		mg/l		#	#
	nlorobutadiene	<0.0025 mg/l	TM208	<0.0025 #	<0.0025 #
tert-Am (TAME	nyl methyl ether	<0.001 mg	/I TM208	<0.001 #	<0.001
Naphth		<0.0035 mg/l	TM208	<0.0035	<0.0035
1,2,3-T	richlorobenzene	<0.0031	TM208	<0.0031	<0.0031
1,3,5-T	richlorobenzene	mg/l <0.01 mg/	TM208	<0.01	<0.01
			+		
			+		
			+		

# **ALcontrol Laboratories Analytical Services**

Entec UK - MOD Ltd

**SDG**: 100809-24 **Customer**:

Job:H\_ENTEC\_MOD-12Attention:Simon HowardClient Reference:26999Order No.:228113Location:Report No:93535

Ammonizaci Nitrogen as N142									
Component   Comp		Customer	Sample Ref.	WSA 01	WSA 03	WSC 04	WSC 08	WSD 03	WSD 07
Sample Type   Date Sample Type	M mCERTS accredited.		Depth (m)						
Date Sampled   Date Sampled   Date Sampled   Date Sampled   Date Sampled   Date Received   O7/08/2010   O7/	diss.filt Dissolved / filtered sample.	S		Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
SOC Ref   Lab Samples No. (2)   Lab Samples No. (2)   100809-24	* subcontracted test.			04/08/2010	04/08/2010	04/08/2010	04/08/2010	05/08/2010	05/08/2010
Common									
Component   Comp	of the method. The results of th								
Component   Comp	the samples are not corrected								
NH4	Component	LOD/Units	Method						
Assenic (diss.filt)	Ammoniacal Nitrogen as	<0.3 mg/l	TM099						
Born (diss, filt)		<0.00012	TM152						0.00103
Cadmium (diss filt)		mg/l		#	#	#	#	#	#
Cadmium (diss.filt)	Boron (diss.filt)		TM152						0.355
Chromium (diss.filt)	Cadmium (diss.filt)	<0.0001	TM152	0.000126	<0.0001	<0.0001	0.00012	<0.0001	0.000176
Copper (diss.filt)	Chromium (diss filt)		TM152						0.0102
Lead (diss.filt)		mg/l		#	#	#	#	#	#
Lead (diss.filt)	Copper (diss.filt)		TM152						0.00407 #
Nickel (diss.filt)	Lead (diss.filt)		TM152						
Selenium (diss.filt)	Niekal (dies filt)		TM450						0.0594
Selenium (diss.filit)       <0.00039 mg/l       TM152 mg/l       0.00575 mg/l       0.000907 mg/l       0.013 mg/l       0.00543 mg/l       0.00345 mg/l       0.00171 mg/l         Zinc (diss.filit)       <0.00041 mg/l	NICKEI (UISS.IIII)		1101102						0.0584 #
Zinc (diss.filt)	Selenium (diss.filt)	<0.00039	TM152	0.00575	0.000907	0.013	0.00543	0.00345	0.00171
BPH Range > C10 - C40	Zinc (diss.filt)		TM152						0.0152
(aq)       #       4		mg/l				#			#
EPH Band >C10-C12 (aq)         <0.01 mg/l	•	<0.046 mg/l	TM172						<0.046 #
EPH Band >C16-C21 (aq)	EPH Band >C10-C12 (aq)	<0.01 mg/l	TM172						
EPH Band >C21-C28 (aq)	EPH Band >C12-C16 (aq)	<0.01 mg/l	TM172			<0.01			<0.01
EPH Band >C28-C35 (aq)	EPH Band >C16-C21 (aq)	<0.01 mg/l	TM172			0.111			<0.01
EPH Band >C28-C35 (aq)	EPH Band >C21-C28 (aq)	<0.01 mg/l	TM172			0.0565			<0.01
Mercury (diss.filt)	EPH Band >C35-C40 (aq)	<0.01 mg/l	TM172			0.011			<0.01
mg/l         #	EPH Band >C28-C35 (aq)	<0.01 mg/l	TM172			0.054			<0.01
mg/l         #	Mercury (diss.filt)	<0.00001	TM183	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
# # # # # # # Chloride			T14404						#
Chloride     <2 mg/l     TM184     138     62.7     79.5     213     65.1     27.7       pH     <1 pH Units	Sulpnate	<3 mg/l	1M184						1490
pH <1 pH Units TM256 7.84 7.94 7.85 7.52 6.74 7.57	Chloride	<2 mg/l	TM184	138	62.7	79.5	213	65.1	
	pН	<1 pH Units	TM256						
		<u> </u>		#	#	#	#	#	#

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

000	h 00 FID (M)							
GRO	by GC-FID (W) Results Legend	Customer	Sample Ref.	WSC 04	WSD 07	I		
M aq diss.filt tot.unfilt * **	ISO/17025 accredited. mCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample. Total / unfiltered sample. subcontracted test. % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	S Di Da Lab Si AG	Depth (m) Sample Type ate Sampled ate Received SDG Ref ample No.(s) S Reference	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1924763	Water(GW/SW) 05/08/2010 07/08/2010 100809-24 1925289			
Compo Benzer		<0.007 mg/l	Method TM245	<0.007	<0.007			
Toluen	e	<0.004 mg/l	TM245	<0.004	<b>*</b>			
Ethylbe	enzene	<0.005 mg/l	TM245	<b>*</b>	<b>*</b>			
m,p-Xy	rlene	<0.008 mg/l	TM245	<0.008	<0.008			
o-Xyler	ne	<0.003 mg/l	TM245	<0.003	<0.003			
m,p,o-X	Xylene	<0.01 mg/l	TM245	<0.01	<0.01			
BTEX,	Total	<0.01 mg/l	TM245	<0.01	<0.01			
	tertiary butyl ether	<0.003 mg/l	TM245	<0.003	<0.003			
(MTBE GRO >		<0.01 mg/l	TM245	0.0524	<0.01			
GRO >	•C6-C7	<0.01 mg/l	TM245	0.645	<0.01			
GRO >	·C7-C8	<0.01 mg/l	TM245	0.142	<0.01			
GRO >	·C8-C10	<0.01 mg/l	TM245	<0.01	<0.01			
GRO >	·C5-C12	<0.05 mg/l	TM245	0.839	<0.05			
GRO >	·C10-C12	<0.01 mg/l	TM245	<0.01	<0.01			

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

PAH Spec MS - Aqueous (W)  Results Legend Customer Sample Ref. WSC 08 WSD 03											
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSC 08	WSD 03							
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)									
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Water(GW/SW)	Water(GW/SW)							
* subcontracted test.		ate Sampled te Received	04/08/2010	05/08/2010							
** % recovery of the surrogate standard to check the efficiency	Ба	SDG Ref	07/08/2010 100809-24	07/08/2010 100809-24							
of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1925540	1925192							
the samples are not corrected for this recovery.	AGS	S Reference									
Component	LOD/Units	Method									
Naphthalene (aq)	<0.0001	TM178	<0.0001 #	0.000103							
Acenaphthene (aq)	mg/l <0.000015	TM178	0.000022	<0.00015							
Assaulthylene (ag)	mg/l	TM470	# <0.000011	# <0.000011							
Acenaphthylene (aq)	<0.000011 mg/l	TM178	<0.000011 #	<0.000011							
Fluoranthene (aq)	<0.000014	TM178	0.001 #	<0.000014							
Anthracene (aq)	mg/l <0.000015	TM178	0.000064	<0.00015							
Dhonanthrono (ag)	mg/l <0.000022	TM178	0.000136	0.000033							
Phenanthrene (aq)	~0.000022 mg/l	TIVITO	0.000130 #	0.000033							
Fluorene (aq)	<0.000014 mg/l	TM178	0.00002 #	<0.00014							
Chrysene (aq)	<0.000013	TM178	0.000329	<0.000013							
Pyrene (aq)	mg/l <0.000015	TM178	0.00149	<b>*</b>							
	mg/l		#	#							
Benzo(a)anthracene (aq)	<0.000017 mg/l	TM178	0.000422 #	0.000018 #							
Benzo(b)fluoranthene (aq)	<0.000023	TM178	0.000461 #	<0.000023							
Benzo(k)fluoranthene (aq)	mg/l <0.000027	TM178	0.000436	<0.000027							
Benzo(a)pyrene (aq)	mg/l <0.000009	TM178	0.000568	<0.000009							
	mg/l		#	#							
Dibenzo(a,h)anthracene (aq)	<0.000016 mg/l	TM178	0.000031 #	<0.000016 #							
Benzo(g,h,i)perylene (aq)	<0.000016	TM178	0.000359	<0.000016							
Indeno(1,2,3-cd)pyrene (aq)	mg/l <0.000014	TM178	0.000311	<b>*</b>							
	mg/l		#	#							
Polyaromatic hydrocarbons, Total USEPA 16 (aq)	<0.0001 mg/l	TM178	0.00566 #	0.000161							
Naphthalene-d8	%	TM178	100	100							
Acenaphthene-d10	%	TM178	100	100							
Phenanthrene-d10	%	TM178	100	100							
Chrysene-d12	%	TM178	100	100							
·											
Perylene-d12	%	TM178	100	100							
1											

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

svoc	MS (W) - Aqueo				
	Results Legend SO17025 accredited.	Custome	r Sample Ref.	WSC 08	WSD 03
aq /	nCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample.		Depth (m) Sample Type	Water(GW/SW)	Water(GW/SW)
tot.unfilt 1	Total / unfiltered sample.	D	ate Sampled	04/08/2010	05/08/2010
5	% recovery of the surrogate standard to check the efficiency of the method. The results of the		ate Received SDG Ref	07/08/2010 100809-24	07/08/2010 100809-24
i	ndividual compounds within he samples are not corrected		ample No.(s) S Reference	1925540	1925192
Compor	or this recovery.	LOD/Units	Method		
1,2,4-Tr	ichlorobenzene (aq)	<0.001 mg/	TM176	<0.001	<0.001
1,2-Dich	ilorobenzene (aq)	<0.001 mg/	TM176	<0.001	<0.001
1,3-Dich	lorobenzene (aq)	<0.001 mg/	TM176	<0.001	<0.001
1,4-Dich	llorobenzene (aq)	<0.001 mg/	TM176	<0.001	<0.001
2,4,5-Tr	ichlorophenol (aq)	<0.001 mg/	TM176	<0.001	<0.001
2,4,6-Tr	ichlorophenol (aq)	<0.001 mg/	TM176	<0.001	<0.001
2,4-Dich	ılorophenol (aq)	<0.001 mg/	TM176	<0.001	<0.001
	ethylphenol (aq)	<0.001 mg/	TM176	<0.001	<0.001
·	trotoluene (aq)	<0.001 mg/		<0.001	<0.001
	trotoluene (aq)	<0.001 mg/l	TM176	<0.001	<0.001
	` "				
	onaphthalene (aq)	<0.001 mg/l		<0.001	<0.001
	ophenol (aq)	<0.001 mg/l		<0.001	<0.001
2-Methy	Inaphthalene (aq)	<0.001 mg/	TM176	<0.001	<0.001
2-Methy	lphenol (aq)	<0.001 mg/	TM176	<0.001	<0.001
2-Nitroa	niline (aq)	<0.001 mg/	TM176	<0.001	<0.001
2-Nitrop	henol (aq)	<0.001 mg/	TM176	<0.001	<0.001
3-Nitroa	niline (aq)	<0.001 mg/	TM176	<0.001	<0.001
4-Bromo	phenylphenylether	<0.001 mg/	TM176	<0.001	<0.001
(aq) 4-Chloro	o-3-methylphenol	<0.001 mg/	TM176	<0.001	<0.001
(aq) 4-Chloro	paniline (aq)	<0.001 mg/	TM176	<0.001	<0.001
	phenylphenylether	<0.001 mg/		<0.001	<0.001
(aq)	Iphenol (aq)	<0.001 mg/l		<0.001	<0.001
	henol (aq)	<0.001 mg/	TM176	<0.001	<0.001
	niline (aq)	<0.001 mg/l		<0.001	<0.001
Azoben	zene (aq)	<0.001 mg/	TM176	<0.001	<0.001
bis(2-Ch	nloroethyl)ether (aq)	<0.001 mg/	TM176	<0.001	<0.001
bis(2-Ch	nloroethoxy)methane	<0.001 mg/	TM176	<0.001	<0.001
bis(2-Et	hylhexyl) phthalate	<0.002 mg/	TM176	<0.002	<0.002
(aq) Butylbei	nzyl phthalate (aq)	<0.001 mg/	TM176	<0.001	<0.001
Carbazo	ole (aq)	<0.001 mg/	TM176	<0.001	<0.001
Dibenzo	furan (aq)	<0.001 mg/	TM176	<0.001	<0.001
	rl phthalate (aq)	<0.001 mg/		<0.001	<0.001
	ohthalate (aq)	<0.001 mg/l		<0.001	<0.001
	l phthalate (aq)	<0.001 mg/		<0.001	<0.001
	l phthalate (aq)	<0.005 mg/		<0.005	<0.005
Hexach	orobenzene (aq)	<0.001 mg/	TM176	<0.001	<0.001
Hexach	orobutadiene (aq)	<0.001 mg/	TM176	<0.001	<0.001
Pentach	lorophenol (aq)	<0.001 mg/	TM176	<0.001	<0.001
Phenol	(aq)	<0.001 mg/	TM176	<0.001	<0.001

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

SVO	C MS (W) - Aqueo	nie.			
	Results Legend		Sample Ref.	WSC 08	WSD 03
aq diss.filt tot.unfilt *	ISO17025 accredited. mCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample. Total / unfiltered sample. subcontracted test. % recovery of the surrogate standard to check the efficiency	Da Da	Depth (m) cample Type ate Sampled te Received SDG Ref	Water(GW/SW) 04/08/2010 07/08/2010	Water(GW/SW) 05/08/2010 07/08/2010 100809-24
	of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Lab Sa AG	mple No.(s) S Reference		1925192
	nent so-n-dipropylamine	LOD/Units <0.001 mg/l	Method TM176	<0.001	<0.001
(aq) Hexacl	nloroethane (aq)	<0.001 mg/l	TM176	<0.001	<0.001
	enzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001
			TM176		<0.001
	rone (aq)	<0.001 mg/l		<0.001	
(aq)	nlorocyclopentadiene	<0.001 mg/l	TM176	<0.002	<0.002
Indeno	(1,2,3-cd)pyrene (aq)	<0.001 mg/l	TM176	<0.001	<0.001

# **ALcontrol Laboratories Analytical Services**

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TPH	CWG (W)				
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	WSC 08	WSD 03
M aq	mCERTS accredited. Aqueous / settled sample.		Depth (m)		
diss.filt	Dissolved / filtered sample. Total / unfiltered sample.		ample Type ate Sampled	Water(GW/SW)	Water(GW/SW)
*	subcontracted test. % recovery of the surrogate		ite Received	04/08/2010 07/08/2010	05/08/2010 07/08/2010
	standard to check the efficiency of the method. The results of the		SDG Ref	100809-24	100809-24
	individual compounds within the samples are not corrected		mple No.(s) S Reference	1925540	1925192
0	for this recovery.		Method		
Total A	Aliphatics >C5-C35	<0.01 mg/l	TM174	<0.01	<0.01
(aq)	·				
Total A	romatics >C6-C35	<0.01 mg/l	TM174	<0.01	<0.01
Total A	liphatics & Aromatics	<0.01 mg/l	TM174	<0.01	<0.01
>C5-3	5 (aq) tics >C12-C16 (aq)	<0.01 mg/l	TM174	<0.01	<0.01
Aroma (aq)	tics >EC12-EC16	<0.01 mg/l	TM174	<0.01	<0.01
	tics >C16-C21 (aq)	<0.01 mg/l	TM174	<0.01	<0.01
Δroma	tics >EC16-EC21	<0.01 mg/l	TM174	<0.01	<0.01
(aq)		-0.01 mg/i			
Alipha	tics >C21-C35 (aq)	<0.01 mg/l	TM174	<0.01	<0.01
Aroma	tics >EC21-EC35	<0.01 mg/l	TM174	<0.01	<0.01
(aq)	Aliphatics >C12-C35	<0.01 mg/l	TM174	<0.01	<0.01
(aq)	dipriatics >C12-C33	<0.01 mg/i	1101174	<b>\0.01</b>	<b>~0.01</b>
	romatics	<0.01 mg/l	TM174	<0.01	<0.01
	l-EC35 (aq) diphatics & Aromatics	<0.01 mg/l	TM174	<0.01	<0.01
>C12-	C35 (Aqueous)				
GRO S recove	Surrogate % ry**	%	TM245	110	96
Benze		<0.007 mg/l	TM245	<0.007	<0.007
Toluer	e	<0.004 mg/l	TM245	<0.004	<0.004
				#	#
Ethylb	enzene	<0.005 mg/l	TM245	<0.005 #	<0.005 #
m,p-Xy	/lene	<0.008 mg/l	TM245	<0.008	<0.008
o Vulo	20	<0.003 mg/l	TM245	<0.003	<0.003
o-Xyle	ile .	<0.003 mg/i	1 IVI245	<0.003 #	<0.003
m,p,o-	Xylene	<0.01 mg/l	TM245	<0.01 #	<0.01
BTEX,	Total	<0.01 mg/l	TM245	<0.01	<0.01
5.4 . (I) I	1. 6	-0.000	T14045	#	#
Methyl (MTBE	tertiary butyl ether	<0.003 mg/l	TM245	<0.003 #	<0.003
	C5-C12	<0.05 mg/l	TM245	<0.05	<0.05
Alipha	tics >C5-C6	<0.01 mg/l	TM245	<0.01	<b>*</b>
Alipha	tics >C6-C8	<0.01 mg/l	TM245	<0.01	<0.01
Alipha	tics >C8-C10	<0.01 mg/l	TM245	<0.01	<0.01
Alinha	tics >C10-C12	<0.01 mg/l	TM245	<0.01	<0.01
Total A	liphatics >C5-C12	<0.01 mg/l	TM245	<0.01	<0.01
Aroma	tics >C6-C7	<0.01 mg/l	TM245	<0.01	<0.01
Aromo	tics >C7-C8	<0.01 mg/l	TM245	<0.01	<0.01
Aroma	tics >EC8-EC10	<0.01 mg/l	TM245	<0.01	<0.01
Aroma	tics >EC10-EC12	<0.01 mg/l	TM245	<0.01	<0.01
rotal A	aromatics >C6-C12	<0.01 mg/l	TM245	<0.01	<0.01

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voc	MS (W)						
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	WSC 08	WSD 03		
tot.unfilt * **	mCERTs accredited. Aqueous / settled sample. Dissolved / filtered sample. Total / unfiltered sample. subcontracted test. % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within	Da Da Lab Sa	Depth (m) ample Type ite Sampled te Received SDG Ref mple No.(s)	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1925540	Water(GW/SW) 05/08/2010 07/08/2010 100809-24 1925192		
	the samples are not corrected for this recovery.		Reference				
Compo Dibrom	nent nofluoromethane**	LOD/Units %	Method TM208	96.1	96		
Toluen	e-d8**	%	TM208	96.8	96.3		
	nofluorobenzene**	%	TM208	96.3	95.8		
	odifluoromethane	<0.007 mg/l	TM208	<0.007	<0.007		
	methane	<0.009 mg/l	TM208	<0.009	<0.009		
Vinyl cl		<0.0012	TM208	<0.0012	<b>*</b> <0.0012		
	methane	mg/l <0.002 mg/l	TM208	<0.0012 #	<0.0012		
	ethane	<0.002 mg/i	TM208	<0.002 # <0.0025	<0.002 #		
		mg/l		#	#		
	rofluoromethane	<0.0013 mg/l	TM208	<0.0013 #	<0.0013 #		
	chloroethene	<0.0012 mg/l	TM208	<0.0012 #	<0.0012 #		
	n disulphide	<0.0013 mg/l	TM208	<0.0013 #	<0.0013 #		
	omethane	<0.0037 mg/l	TM208	<0.0037 #	<0.0037 #		
Methyl (MTBE	tertiary butyl ether	<0.0016 mg/l	TM208	<0.0016 #	<0.0016 #		
trans-1	,2-Dichloroethene	<0.0019 mg/l	TM208	<0.0019 #	<0.0019 #		
1,1-Dic	chloroethane	<0.0012 mg/l	TM208	<0.0012 #	<0.0012 #		
cis-1,2	-Dichloroethene	<0.0023 mg/l	TM208	<0.0023	<0.0023 #		
2,2-Dic	chloropropane	<0.0038 mg/l	TM208	<0.0038	<0.0038		
Bromo	chloromethane	<0.0019 mg/l	TM208	<0.0019	<0.0019		
Chloro	form	<0.0018 mg/l	TM208	<0.0018 #	<0.0018 #		
1,1,1-T	richloroethane	<0.0013 mg/l	TM208	<0.0013	<0.0013		
1,1-Dic	chloropropene	<0.0013 mg/l	TM208	<0.0013	<0.0013		
Carbor	ntetrachloride	<0.0014	TM208	<0.0014 #	<0.0014		
1,2-Dic	chloroethane	mg/l <0.0033	TM208	<0.0033	<0.0033		
Benzer	ne	mg/l <0.0013	TM208	<0.0013	<0.0013		
Trichlo	roethene	mg/l <0.0025	TM208	<0.0025	<0.0025		
1,2-Dic	chloropropane	mg/l <0.003 mg/l	TM208	<0.003	<0.003		
Dibrom	nomethane	<0.0027	TM208	<0.0027	<0.0027		
Bromo	dichloromethane	mg/l <0.0009	TM208	<0.0009	<0.0009		
cis-1,3	-Dichloropropene	mg/l <0.0019	TM208	<0.0019	<0.0019		
Toluen	e	mg/l <0.0014	TM208	<b>*</b>	<b>*</b> <0.0014		
trans-1	,3-Dichloropropene	mg/l <0.0035	TM208	<0.0035	<0.0035		
1,1,2-T	richloroethane	mg/l <0.0022	TM208	<0.0022	<0.0022		
1,3-Dic	chloropropane	mg/l <0.0022	TM208	<0.0022	<0.0022		
Tetrach	nloroethene	mg/l <0.0015	TM208	<b>*</b> <0.0015	<b>*</b> <0.0015		
Dibrom	nochloromethane	mg/l <0.0017	TM208	<b>*</b>	<b>*</b> <0.0017		
1,2-Dib	promoethane	mg/l <0.0023	TM208	<b>*</b>	<b>*</b>		
	benzene	mg/l <0.0035	TM208	<b>#</b> <0.0035	<b>*</b>		
	-Tetrachloroethane	mg/l <0.0013	TM208	<0.0013	<0.0013		
	enzene	mg/l <0.0025	TM208	<0.0025	<0.0025		
_arylot		mg/l		<0.0025 #	4.0023		

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
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 Attention:
 Simon Howard

VOC MS (W)  Results Legend Customer Sample Ref. WSC 08 WSD 03											
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSC 08	WSD 03							
M mCERTS accredited. aq Aqueous / settled sample.		Depth (m)									
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Water(GW/SW)	Water(GW/SW)							
* subcontracted test.		te Sampled	04/08/2010	05/08/2010							
** % recovery of the surrogate standard to check the efficiency		te Received SDG Ref	07/08/2010 100809-24	07/08/2010 100809-24							
of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1925540	1925192							
the samples are not corrected	AGS	S Reference									
for this recovery.  Component	LOD/Units	Method									
m,p-Xylene	<0.0025	TM208	<0.0025	<0.0025							
o-Xylene	mg/l <0.0017	TM208	<b>*</b>	<b>*</b>							
0-Aylerie	mg/l	1101200	~0.0017 #	~0.0017 #							
Styrene	<0.0012	TM208	<0.0012	<0.0012							
Bromoform	mg/l <0.003 mg/l	TM208	<b>*</b>	<0.003							
			#	#							
Isopropylbenzene	<0.0014 mg/l	TM208	<0.0014 #	<0.0014 #							
1,1,2,2-Tetrachloroethane	<0.0052	TM208	<0.0052	<0.0052							
	mg/l										
1,2,3-Trichloropropane	<0.0078 mg/l	TM208	<0.0078 #	<0.0078 #							
Bromobenzene	<0.002 mg/l	TM208	<0.002	<0.002							
Propylhenzono	<0.0006	TM208	# <0.0026	# <0.0026							
Propylbenzene	<0.0026 mg/l	I IVI∠Uδ	<0.0026 #	<0.0026 #							
2-Chlorotoluene	<0.0019	TM208	<0.0019	<0.0019							
1,3,5-Trimethylbenzene	mg/l <0.0018	TM208	<b>*</b>	<b>*</b>							
1,0,0-11iiiiGuiyibGiiZelle	<0.0016 mg/l	TIVIZUO	<0.0016 #	<0.0016 #							
4-Chlorotoluene	<0.0019	TM208	<0.0019	<0.0019							
tert-Butylbenzene	mg/l <0.002 mg/l	TM208	<b>*</b>	<b>*</b>							
-			#	#							
1,2,4-Trimethylbenzene	<0.0017	TM208	<0.0017	<0.0017							
sec-Butylbenzene	mg/l <0.0017	TM208	<0.0017	<b>*</b>							
	mg/l		#	#							
4-iso-Propyltoluene	<0.0026 mg/l	TM208	<0.0026 #	<0.0026 #							
1,3-Dichlorobenzene	<0.0022	TM208	<0.0022	<0.0022							
	mg/l		#	#							
1,4-Dichlorobenzene	<0.0027 mg/l	TM208	<0.0027 #	<0.0027 #							
n-Butylbenzene	<0.002 mg/l	TM208	<0.002	<0.002							
1.2 Diablarahanzana	<0.0027	TMOOO	# <0.0037	# <0.0037							
1,2-Dichlorobenzene	<0.0037 mg/l	TM208	<0.0037	<0.0037							
1,2-Dibromo-3-chloropropan	<0.0098	TM208	<0.0098	<0.0098							
e 1,2,4-Trichlorobenzene	mg/l <0.0023	TM208	<0.0023	<0.0023							
1,2,4-111011010001120110	mg/l	TIVIZOO	40.0020	40.0023							
Hexachlorobutadiene	<0.0025	TM208	<0.0025	<0.0025							
tert-Amyl methyl ether	mg/l <0.001 mg/l	TM208	<b>*</b>	<b>*</b>							
(TAME)			#	#							
Naphthalene	<0.0035 mg/l	TM208	<0.0035 #	<0.0035 #							
1,2,3-Trichlorobenzene	<0.0031	TM208	<0.0031	<0.0031							
	mg/l		#	#							
1,3,5-Trichlorobenzene	<0.01 mg/l	TM208	<0.01	<0.01							

# **ALcontrol Laboratories Analytical Services**

100809-24 Customer: SDG:

Entec UK - MOD Ltd H\_ENTEC\_MOD-12 Job: Attention: Simon Howard

Client Reference: 26999 Order No.: 228113 Location: Report No: 93535

#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	WSD 09	WSD 10	WSE 10	WSE 17	WSE 25	WSE 26
M aq diss.filt tot.unfilt *	mCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample. Total / unfiltered sample. subcontracted test. % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Da Da Lab Sa AGS	Depth (m) ample Type ate Sampled te Received SDG Ref imple No.(s) S Reference	Water(GW/SW) 05/08/2010 07/08/2010 100809-24 1925384	Water(GW/SW) 05/08/2010 07/08/2010 100809-24 1925610	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1925633	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1924790	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1925602	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1925110
Ammo	nent niacal Nitrogen as	<0.3 mg/l	Method TM099	2.46	1.62	<0.3	1.95	2.15	0.867
NH4				#	#	#	#	#	#
	c (diss.filt)	<0.00012 mg/l	TM152	0.00207 #	0.00279 #	0.000947 #	0.00377 #	0.000343	0.000495 #
Boron	(diss.filt)	<0.0094 mg/l	TM152	0.444 #	1.06 #	0.444 #	0.255 #	3.6 #	2.51 #
Cadmi	um (diss.filt)	<0.0001 mg/l	TM152	<0.0001 #	<0.0001 #	<0.0001	0.000261	<0.0001	<0.0001 #
Chrom	ium (diss.filt)	<0.00022 mg/l	TM152	0.0151 #	0.0135 #	0.00985 #	0.015	0.0127	0.0108 #
Coppe	r (diss.filt)	<0.00085 mg/l	TM152	0.00364	0.00413	0.000907	0.00613 #	0.00438 #	0.00543
Lead (	diss.filt)	<0.00002	TM152	<0.00002	0.000121	0.000035	0.000109	0.000053	0.000051
Nickel	(diss.filt)	mg/l <0.00015	TM152	0.0556	0.0977	0.00528	0.0549	0.0224	0.00819
Seleniu	ım (diss.filt)	mg/l <0.00039	TM152	0.00501	0.0113	0.00247	0.0063	0.00122	# 0.00105
Zinc (d	iss.filt)	mg/l <0.00041	TM152	0.017	0.0144	0.004	0.0141	0.0328	# 0.00617
EPH R	ange >C10 - C40	mg/l <0.046 mg/l	TM172	# 0.268	#	1.23	#	#	#
(aq) EPH B	and >C10-C12 (ag)	<0.01 mg/l	TM172	<b>#</b>		<0.01			
	and >C12-C16 (aq)	<0.01 mg/l	TM172	0.0514		0.0268			
			TM172	0.0314		0.84			
	and >C16-C21 (aq)	<0.01 mg/l							
	and >C21-C28 (aq)	<0.01 mg/l	TM172	0.0522		0.247			
EPH B	and >C35-C40 (aq)	<0.01 mg/l	TM172	0.0171		0.038			
EPH B	and >C28-C35 (aq)	<0.01 mg/l	TM172	0.0252		0.0775			
Mercur	y (diss.filt)	<0.00001 mg/l	TM183	0.000016 #	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001 #
Sulpha	te	<3 mg/l	TM184	1770 #	2150	91.8	1170	2400	2160
Chloric	e	<2 mg/l	TM184	28.7	118	67.5	119	64.9	62.2
pН		<1 pH Units	TM256	6.81	6.67	7.74	7.76	8.31	<b>#</b> 7.67
				#	#	#	#	#	#

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

GRO by GC-FID (W)										
Results Legend Customer Sample Ref. # ISO17025 accredited.		WSD 09	WSE 10							
M mCERTS accredited.  aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		Depth (m) ample Type ate Sampled	Water(GW/SW)	Water(GW/SW)						
* subcontracted test.  ** % recovery of the surrogate		te Received	05/08/2010 07/08/2010	05/08/2010 04/08/2010 07/08/2010 07/08/2010						
standard to check the efficiency of the method. The results of the		SDG Ref imple No.(s)	100809-24 1925384	100809-24 1925633						
individual compounds within the samples are not corrected for this recovery.		S Reference	1020004	1020000						
Component	LOD/Units	Method								
Benzene	<0.007 mg/l	TM245	<0.007 #	<0.007 #						
Toluene	<0.004 mg/l	TM245	<0.004 #	<0.004 #						
Ethylbenzene	<0.005 mg/l	TM245	<0.005 #	<0.005 #						
m,p-Xylene	<0.008 mg/l	TM245	<0.008	<0.008						
o-Xylene	<0.003 mg/l	TM245	<0.003	<0.003						
m,p,o-Xylene	<0.01 mg/l	TM245	<0.01	<0.01						
BTEX, Total	<0.01 mg/l	TM245	<0.01	<0.01						
Methyl tertiary butyl ether	<0.003 mg/l	TM245	<0.003	<0.003						
(MTBE) GRO >C5-C6	<0.01 mg/l	TM245	<b>*</b>	<b>*</b>						
GRO >C6-C7	<0.01 mg/l	TM245	<0.01	<0.01						
GRO >C7-C8	<0.01 mg/l	TM245	<0.01	<0.01						
GRO >C8-C10	<0.01 mg/l	TM245	<0.01	<0.01						
GRO >C5-C12	<0.05 mg/l	TM245	<0.05 #	<0.05 #						
GRO >C10-C12	<0.01 mg/l	TM245	<0.01	<0.01						

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

PAH Spec MS - Aqueous (W)										
Results Legend Customer Sample Ref. # ISO17025 accredited.			WSE 17	WSE 26						
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)								
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Water(GW/SW)	Water(GW/SW)						
* subcontracted test.		ate Sampled te Received	04/08/2010	04/08/2010						
** % recovery of the surrogate standard to check the efficiency		SDG Ref	07/08/2010 100809-24	07/08/2010 100809-24						
of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1924790	1925110						
the samples are not corrected for this recovery.	AG	S Reference								
Component	LOD/Units	Method								
Naphthalene (aq)	<0.0001	TM178	<0.0001	<0.0001						
Acenaphthene (aq)	mg/l <0.000015	TM178	<b>*</b>	<b>*</b> <0.000015						
A I (I . I / )	mg/l	T14470	#	#						
Acenaphthylene (aq)	<0.000011 mg/l	TM178	<0.000011 #	<0.000011						
Fluoranthene (aq)	<0.000014	TM178	0.000045	0.000068						
Anthracene (aq)	mg/l <0.000015	TM178	<b>*</b>	<b>*</b>						
Diameter (co.)	mg/l	T14470	#	#						
Phenanthrene (aq)	<0.000022 mg/l	TM178	<0.000022 #	0.000036						
Fluorene (aq)	<0.000014	TM178	<0.00014	<0.000014						
Chrysene (aq)	mg/l <0.000013	TM178	0.00004	0.000075						
, , , , ,	mg/l		#	#						
Pyrene (aq)	<0.000015 mg/l	TM178	0.000047 #	0.000079						
Benzo(a)anthracene (aq)	<0.000017	TM178	0.000033	0.000043						
Benzo(b)fluoranthene (aq)	mg/l <0.000023	TM178	0.000049	0.000069						
	mg/l		#	#						
Benzo(k)fluoranthene (aq)	<0.000027 mg/l	TM178	0.000032 #	0.000058 #						
Benzo(a)pyrene (aq)	<0.000009	TM178	0.000065	0.00008						
Dibenzo(a,h)anthracene	mg/l <0.000016	TM178	<b>*</b>	<b>*</b> <0.000016						
(aq)	mg/l	TIVITO	<0.000016 #	~0.000010 #						
Benzo(g,h,i)perylene (aq)	<0.000016	TM178	0.000059 #	0.00007						
Indeno(1,2,3-cd)pyrene (aq)	mg/l <0.000014	TM178	0.000037	0.000049						
Dalumana et a bundan andra an	mg/l	TM470	#	#						
Polyaromatic hydrocarbons, Total USEPA 16 (aq)	<0.0001 mg/l	TM178	0.000381 #	0.000577 #						
Naphthalene-d8	%	TM178	100	100						
Acenaphthene-d10	%	TM178	100	100						
·	0/	T14470	400	400						
Phenanthrene-d10	%	TM178	100	100						
Chrysene-d12	%	TM178	100	100						
Perylene-d12	%	TM178	100	100						

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

SVOC MS (W) - Aqueous									
	Results Legend ISO17025 accredited.	Custo	mer Sample I	Ref.	WSE 17	WSE 26			
aq diss.filt tot.unfilt * **	mCERTs accredited. Aqueous / settled sample. Dissolved / filtered sample. Total / unfiltered sample. subcontracted test. % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Lab	Depth Sample 1 Date Sam Date Rece SDG Sample No	ype oled ived Ref o.(s)	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1924790	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1925110			
Compo	nent	LOD/Unit		_	<0.001	<b>40.001</b>			
	richlorobenzene (aq)	<0.001 m			<0.001	<0.001			
	hlorobenzene (aq)	<0.001 m			<0.001	<0.001			
1,3-Dic	hlorobenzene (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
1,4-Dic	hlorobenzene (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
2,4,5-T	richlorophenol (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
2,4,6-T	richlorophenol (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
2,4-Dic	hlorophenol (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
2,4-Dim	nethylphenol (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
2,4-Din	itrotoluene (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
2,6-Din	itrotoluene (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
2-Chlor	onaphthalene (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
2-Chlor	ophenol (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
2-Meth	ylnaphthalene (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
2-Methylphenol (aq)		<0.001 m	g/l TM1	76	<0.001	<0.001			
2-Nitroa	aniline (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
2-Nitrop	ohenol (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
3-Nitroa	aniline (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
	ophenylphenylether	<0.001 m	g/l TM1	76	<0.001	<0.001			
	ro-3-methylphenol	<0.001 m	g/l TM1	76	<0.001	<0.001			
(aq) 4-Chlor	roaniline (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
4-Chlor	ophenylphenylether	<0.001 m	g/l TM1	76	<0.001	<0.001			
(aq) 4-Meth	ylphenol (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
4-Nitrop	ohenol (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
4-Nitroa	aniline (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
	nzene (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
	hloroethyl)ether (aq)	<0.001 m			<0.001	<0.001			
	hloroethoxy)methane	<0.001 m			<0.001	<0.001			
(aq)	thylhexyl) phthalate	<0.002 m			<0.002	<0.002			
(aq)	enzyl phthalate (aq)	<0.002 m			<0.002	<0.002			
	ole (aq)	<0.001 m			<0.001	<0.001			
			-						
	ofuran (aq)	<0.001 m	-		<0.001	<0.001			
	yl phthalate (aq)	<0.001 m			<0.001	<0.001			
	phthalate (aq)	<0.001 m			<0.001	<0.001			
	yl phthalate (aq)	<0.001 m			<0.001	<0.001			
n-Dioct	yl phthalate (aq)	<0.005 m	g/l TM1	76	<0.005	<0.005			
Hexach	ilorobenzene (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
Hexach	lorobutadiene (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
Pentacl	hlorophenol (aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			
Phenol	(aq)	<0.001 m	g/l TM1	76	<0.001	<0.001			

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

Secretarial Legend   State	
M   Aqueous / settled sample.   Depth (m)   Sample Type   Date Sample tot.unlift even set and and to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.   Date Sample No.(s)   AGS Reference for this recovery.   Date Sample No.(s)   AGS Reference for this recovery.   National Properties of the individual compounds within the samples are not corrected for this recovery.   National Properties of the individual compounds within the samples are not corrected for this recovery.   National Properties of the individual compounds within the samples are not corrected for this recovery.   National Properties of the individual compounds within the samples are not corrected for this recovery.   National Properties of the individual compounds within the samples are not corrected for this recovery.   National Properties of the individual compounds within the samples are not corrected for this recovery.   National Properties of the individual compounds within the samples are not corrected for this recovery.   National Properties of the individual compounds within the samples are not corrected for this recovery.   National Properties of the individual compounds within the samples are not corrected for this recovery.   National Properties of the individual compounds within the samples are not corrected for this recovery.   National Properties of the individual compounds within the samples are not corrected for the method.   National Properties of the individual compounds within the samples are not corrected for the method.   National Properties of the individual compounds within the individual compounds within the individual compounds within the individual compounds within the individual compounds within the individual compounds within the individual compounds within the individual compounds within the individual compounds within the individual compounds within the individual compounds within the individual compounds within the individual compounds	
Sample Type   Dissolved / filtered sample.   Total / unfiltered sample.   Sample Type   Date Sample   Date Samp	
Subcontracted test.   Subcontracted test.	
standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.    Component   LOD/Units   Method	
Lab Sample No.(s)	
n-Nitroso-n-dipropylamine (aq)	
(aq)       Hexachloroethane (aq)     <0.001 mg/l	
Hexachloroethane (aq)         <0.001 mg/l	
Nitrobenzene (aq)	
Isophorone (aq)   <0.001 mg/l	
Hexachlorocyclopentadiene <0.001 mg/l TM176 <0.002 <0.002 (aq)	
(aq)	
(aq)	
Indeno(1,2,3-cd)pyrene (aq)	

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

ТРН	FPH CWG (W)									
	Results Legend	Customer	Sample Ref.	WSE 17	WSE 26					
tot.unfilt * **	ISO17025 accredited.  MCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample. Total / unfiltered sample. subcontracted test. % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Da Da Lab Sa AG:	Depth (m) sample Type ate Sampled te Received SDG Ref imple No.(s) S Reference	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1924790	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1925110					
Compo Total A	liphatics >C5-C35	<0.01 mg/l	Method TM174	0.021	0.071					
(aq)	romatics >C6-C35	<0.01 mg/l	TM174	<0.01	<0.01					
(aq)			TM174	0.021	0.071					
>C5-35		<0.01 mg/l								
Aliphat	ics >C12-C16 (aq)	<0.01 mg/l	TM174	<0.01	<0.01					
Aroma <sup>·</sup> (aq)	tics >EC12-EC16	<0.01 mg/l	TM174	<0.01	<0.01					
	ics >C16-C21 (aq)	<0.01 mg/l	TM174	0.021	0.059					
Aroma (aq)	tics >EC16-EC21	<0.01 mg/l	TM174	<0.01	<0.01					
	ics >C21-C35 (aq)	<0.01 mg/l	TM174	<0.01	0.012					
	tics >EC21-EC35	<0.01 mg/l	TM174	<0.01	<0.01					
	liphatics >C12-C35	<0.01 mg/l	TM174	0.021	0.071					
	romatics	<0.01 mg/l	TM174	<0.01	<0.01					
	-EC35 (aq) liphatics & Aromatics	<0.01 mg/l	TM174	0.021	0.071					
>C12-0	C35 (Aqueous) Surrogate %	%	TM245	98	98					
recove	ry**				<0.007					
Benzei		<0.007 mg/l	TM245	<0.007	#					
Toluen	e	<0.004 mg/l	TM245	<0.004 #	<0.004 #					
Ethylbe	enzene	<0.005 mg/l	TM245	<0.005 #	<0.005 #					
m,p-Xy	rlene	<0.008 mg/l	TM245	<0.008	<0.008					
o-Xyleı	ne	<0.003 mg/l	TM245	<0.003	<0.003					
m,p,o-	Xylene	<0.01 mg/l	TM245	<0.01	<0.01					
BTEX,	Total	<0.01 mg/l	TM245	<0.01	<0.01					
Methyl	tertiary butyl ether	<0.003 mg/l	TM245	<b>*</b>	<b>*</b>					
(MTBE GRO >	:) ·C5-C12	<0.05 mg/l	TM245	<b>*</b>	<b>*</b>					
	ics >C5-C6	<0.01 mg/l	TM245	<b>*</b>	<b>*</b>					
	ics >C6-C8	<0.01 mg/l	TM245	<0.01	<0.01					
	ics >C8-C10	<0.01 mg/l	TM245	<0.01	<0.01					
	ics >C10-C12	<0.01 mg/l	TM245	<0.01	<0.01					
Total A	liphatics >C5-C12	<0.01 mg/l	TM245	<0.01	<0.01					
Aroma	tics >C6-C7	<0.01 mg/l	TM245	<0.01	<0.01					
Aroma	tics >C7-C8	<0.01 mg/l	TM245	<0.01	<0.01					
Aroma	tics >EC8-EC10	<0.01 mg/l	TM245	<0.01	<0.01					
Aroma	tics >EC10-EC12	<0.01 mg/l	TM245	<0.01	<0.01					
Total A	romatics >C6-C12	<0.01 mg/l	TM245	<0.01	<0.01					

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

voc	MS (W)						
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	WSE 17	WSE 26		
M aq diss.filt tot.unfilt * **	mCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample. Total / unfiltered sample. subcontracted test. % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Da Da Lab Sa AGS	Depth (m) sample Type ate Sampled te Received SDG Ref ample No.(s) S Reference	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1924790	Water(GW/SW) 04/08/2010 07/08/2010 100809-24 1925110		
Compo Dibrom	nent ofluoromethane**	LOD/Units	Method TM208	95.4	95.6		
Toluen	e-d8**	%	TM208	97	97.1		
4-Brom	ofluorobenzene**	%	TM208	95.6	95.9		
Dichlor	odifluoromethane	<0.007 mg/l	TM208	<0.007	<0.007		
Chloro	methane	<0.009 mg/l	TM208	<0.009	<b>*</b>		
Vinyl cl	nloride	<0.0012	TM208	<b>*</b> <0.0012	<b>*</b> <0.0012		
	nethane	mg/l <0.002 mg/l	TM208	<0.002	<b>*</b>		
Chloro		<0.0025	TM208	<b>*</b>	<b>*</b> <0.0025		
	rofluoromethane	mg/l <0.0013	TM208	<b>*</b>	<0.0013		
	hloroethene	mg/l <0.0012	TM208	<0.0012	<0.0012		
	ı disulphide	mg/l <0.0013	TM208	<0.0012	<0.0012		
	,	mg/l	TM208	<0.0013 # <0.0037	<0.0013 # <0.0037		
	omethane	<0.0037 mg/l		#	#		
(MTBE	,	<0.0016 mg/l	TM208	<0.0016 #	<0.0016 #		
trans-1,2-Dichloroethene		<0.0019 mg/l	TM208	<0.0019 #	<0.0019 #		
1,1-Dichloroethane		<0.0012 mg/l	TM208	<0.0012 #	<0.0012 #		
cis-1,2-Dichloroethene		<0.0023 mg/l	TM208	<0.0023 #	<0.0023 #		
2,2-Dichloropropane		<0.0038 mg/l	TM208	<0.0038 #	<0.0038 #		
Bromochloromethane		<0.0019 mg/l	TM208	<0.0019 #	<0.0019		
Chloro	form	<0.0018 mg/l	TM208	<0.0018	<0.0018		
1,1,1-T	richloroethane	<0.0013 mg/l	TM208	<0.0013	<0.0013		
1,1-Dic	hloropropene	<0.0013 mg/l	TM208	<0.0013 #	<0.0013		
Carbor	tetrachloride	<0.0014 mg/l	TM208	<0.0014 #	<0.0014		
1,2-Dic	hloroethane	<0.0033 mg/l	TM208	<0.0033	<0.0033		
Benzer	ne	<0.0013	TM208	<0.0013	<0.0013		
Trichlo	roethene	mg/l <0.0025	TM208	<0.0025	<0.0025		
1,2-Dic	hloropropane	mg/l <0.003 mg/l	TM208	<0.003	<0.003		
Dibrom	omethane	<0.0027	TM208	<0.0027	<0.0027		
Bromo	dichloromethane	mg/l <0.0009	TM208	<0.0009	<0.0009		
cis-1,3	-Dichloropropene	mg/l <0.0019	TM208	<b>*</b>	<b>*</b>		
Toluen	e	mg/l <0.0014	TM208	<b>*</b>	<b>*</b>		
trans-1	,3-Dichloropropene	mg/l <0.0035	TM208	<b>*</b>	<b>*</b>		
1,1,2-T	richloroethane	mg/l <0.0022	TM208	<b>*</b>	<b>*</b>		
	hloropropane	mg/l <0.0022	TM208	<0.0022	<0.0022		
	nloroethene	mg/l <0.0015	TM208	<0.0022 # <0.0015	<0.0022 #		
	ochloromethane	mg/l <0.0017	TM208	<0.0013 # <0.0017	<0.0013 # <0.0017		
		mg/l		#	#		
	romoethane	<0.0023 mg/l	TM208	<0.0023 #	<0.0023		
	penzene	<0.0035 mg/l	TM208	<0.0035 #	<0.0035		
	-Tetrachloroethane	<0.0013 mg/l	TM208	<0.0013 #	<0.0013 #		
Ethylbe	enzene	<0.0025 mg/l	TM208	<0.0025 #	<0.0025 #		

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100809-24
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

Loca	<u></u>				i (o)	
voc	MS (W)					
#	Results Legend Customer Sample Ref.		WSE 17	WSE 26		
M aq	mCERTS accredited. Aqueous / settled sample.		Depth (m)			
diss.filt	Dissolved / filtered sample. Total / unfiltered sample.		Sample Type Date Sampled		Water(GW/SW) 04/08/2010	
*	subcontracted test. % recovery of the surrogate		Date Received	07/08/2010	07/08/2010	
	standard to check the efficiency of the method. The results of the	l ah	SDG Ref Sample No.(s)		100809-24 1925110	
	individual compounds within the samples are not corrected		GS Reference	1024730	1020110	
Compo	for this recovery.	LOD/Units	Method			
m,p-Xy	rlene	<0.0025	TM208	<0.0025	<0.0025	
o-Xyler	ne	mg/l <0.0017	TM208	<0.0017	<0.0017	
Styrene	e	mg/l <0.0012	TM208	<0.0012	<0.0012	
Bromo	form	mg/l <0.003 mg	g/I TM208	<0.003	<0.003	
Isopror	pylbenzene	<0.0014	TM208	<b>*</b>	<b>*</b>	
		mg/l <0.0052	TM208	<0.0052	<0.0052	
	-Tetrachloroethane	mg/l				
1,2,3-T	richloropropane	<0.0078 mg/l	TM208	<0.0078 #	<0.0078 #	
Bromol	benzene	<0.002 mg	g/l TM208	<0.002	<0.002	
Propyll	oenzene	<0.0026 mg/l	TM208	<0.0026	<0.0026	
2-Chlor	rotoluene	<0.0019	TM208	<0.0019	<0.0019	
1,3,5-T	rimethylbenzene	mg/l <0.0018	TM208	<0.0018	<0.0018	
4-Chlo	rotoluene	mg/l <0.0019	TM208	<0.0019	<0.0019	
tert-Bu	tylbenzene	mg/l <0.002 mg	ı/l TM208	<b>*</b>	<0.002	
	rimethylbenzene	<0.0017	TM208	<0.0017	<0.0017	
		mg/l		#	#	
sec-Bu	itylbenzene	<0.0017 mg/l	TM208	<0.0017 #	<0.0017 #	
4-iso-P	ropyltoluene	<0.0026 mg/l	TM208	<0.0026 #	<0.0026 #	
1,3-Dic	chlorobenzene	<0.0022 mg/l	TM208	<0.0022	<0.0022	
1,4-Dic	chlorobenzene	<0.0027	TM208	<0.0027	<0.0027	
n-Butyl	benzene	mg/l <0.002 mg	g/l TM208	<0.002	<0.002	
1,2-Dic	chlorobenzene	<0.0037	TM208	<b>*</b> <0.0037	<0.0037	
1,2-Dib	promo-3-chloropropan	mg/l <0.0098	TM208	<0.0098	<0.0098	
е	richlorobenzene	mg/l <0.0023	TM208	<0.0023	<0.0023	
		mg/l		#	#	
	nlorobutadiene	<0.0025 mg/l	TM208	<0.0025 #	<0.0025 #	
(TAME		<0.001 m	ı/l TM208	<0.001 #	<0.001 #	
Naphth		<0.0035 mg/l	TM208	<0.0035	<0.0035	
1,2,3-T	richlorobenzene	<0.0031	TM208	<0.0031	<0.0031	
1,3,5-T	richlorobenzene	mg/l <0.01 mg	/I TM208	<0.01	<0.01	

# **ALcontrol Laboratories Analytical Services**



### **Table of Results - Appendix**

REPO	REPORT KEY  Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03x10-7									
IXEI OI	\				Results	expressed	as (e.g.) 1.03E-07 is equivalent to 1.03x10-7			
NDP	No Determination Possible	#	ISO 17025 Accredited		Subcontracted Test	M	MCERTS Accredited			
NFD	No Fibres Detected	PFD	Possible Fibres Detected		Result previously reported (Incremental reports only)	EC	Equivalent Carbon (Aromatics C8-C35)			

		(Aromanics Co-Coo)
nethod detection limits are	not always achievable due to various circumstances beyond o	
Method No	Reference	Description Wet/Dry Sample 4
TM061	Method for the Determination of EPH,Massachusetts Dept.of EP, 1998	Determination of Extractable Petroleum Hydrocarbons by GC-FID (C10-C40)
TM099	BS 2690: Part 7:1968 / BS 6068: Part2.11:1984	Determination of Ammonium in Water Samples using the Kone Analyser
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM172	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	EPH in Waters
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 0117514284.	Determination of pH in Water and Leachate using the GLpH pH Meter

<sup>&</sup>lt;sup>1</sup> Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

### **APPENDIX**

#### **APPENDIX**

- Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following:
   NRA Leach tests, flash point, ammonium as NH<sub>4</sub> by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and
   TOF-MS TICS.
- 2. Samples will be run in duplicate upon request, but an additional charge may be incurred.
- 3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. Alcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.
- 4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
- 5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
- 6. When requested, the individual sub sample scheduled will be screened in house for the presence of large asbestos containing material fragments/pieces. If no asbestos containing material is found this will be reported as 'no asbestos containing material detected'. If asbestos containing material is detected it will be removed and analysed by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If asbestos containing material is present no further analysis will be undertaken. At no point is the fibre content of the soil sample determined.
- 7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.
- 8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.
- 9. NDP No determination possible due to insufficient/unsuitable sample.
- 10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals total metals must be requested separately.
- 11. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.
- 12. Results relate only to the items tested
- 13. **Surrogate recoveries** Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 130 %.
- Product analyses Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.
- 15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).
- 16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 14).
- 17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
- 18. Our MCERTS accreditation for PAHs by GCMS applies to all product types apart from Kerosene, where naphthalene only is not accredited.
- 19. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
- 19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.
- 20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
- 21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
- 22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
- 23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

#### LIQUID MATRICES EXTRACTION SUMMARY

ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAH MS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GS MS
SVOC	DCM	LIQUID/LIQUID SHAKE	GC MS
FREE SULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST OCP/OPP	DCM	LIQUID/LIQUID SHAKE	GC MS
TRIAZINE HERBS	DCM	LIQUID/LIQUID SHAKE	GC MS
PHENOLS MS	DCM	SOLID PHASE EXTRACTION	GC MS
TPH by INFRA RED (IR)	TCE	LIQUID/LIQUID EXTRACTION	HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID EXTRACTION	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GC FID

### SOLID MATRICES EXTRACTION SUMMARY

	OOLID	MATRICES EXTRACTION SUMMARY		
ANALYSIS	D/C OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
Solvent Extractable Matter	D&C	DCM	SOXTHERM	GRAVIMETRIC
Cyclohexane Ext. Matter	D&C	CYCLOHEXANE	SOXTHERM	GRAVIMETRIC
Thin Layer Chromatography	D&C	DCM	SOXTHERM	IATROSCAN
Elemental Sulphur	D&C	DCM	SOXTHERM	HPLC
Phenols by GCMS	WET	DCM	SOXTHERM	GC-MS
Herbicides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
Pesticides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
EPH (DRO)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Min oil)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Cleaned up)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH CWG by GC	D&C	HEXANE:ACETONE	END OVER END	GC-FID
PCB tot / PCB con	D&C	HEXANE:ACETONE	END OVER END	GC-MS
Polyaromatic Hydrocarbons (MS)	WET	HEXANE:ACETONE	Microwave TM218.	GC-MS
C8-C40 (C6-C40)EZ Flash	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Polyaromatic Hydrocarbons Rapid GC	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Semi Volatile Organic Compounds	WET	DCM:ACETONE	SONICATE	GC-MS

#### **Identification of Asbestos in Bulk Materials**

The results for asbestos identification for soil samples are obtained from possible Asbestos Containing Material, removed during the 'Screening of soils for Asbestos Containing Materials', which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

#### **Visual Estimation Of Fibre Content.**

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: -

Trace – Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in MDHS 100.

The identification of asbestos containing materials falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

#### 



Unit 7-8 Hawarden Business Park Manor Road (off Manor Lane) Hawarden

> Deeside CH5 3US

Tel: (01244) 528700 Fax: (01244) 528701 email: mkt@alcontrol.com Website: www.alcontrol.com

Attention: Simon Howard

### **CERTIFICATE OF ANALYSIS**

 Date:
 21 August 2010

 Customer:
 H\_ENTEC\_MOD-12

Sample Delivery Group (SDG): 100815-12 Report No.: 94296

Your Reference: 26999

Location:

We received 2 samples on Saturday August 14, 2010 and 2 of these samples were scheduled for analysis which was completed on Saturday August 21, 2010. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Asbestos testing - we are not accredited for screening soil samples for asbestos fibres. We are only accredited to identify asbestos fibres in bulk material (ACM).

Approved By:



**Iain Swinton** 

Operations Director - Land UK & Ireland



### **ALcontrol Laboratories Analytical Services**

 SDG:
 100815-12
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

 Client Reference:
 26999
 Order No.:
 228113

 Location:
 Report No:
 94296

### Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
1953190	BHE02			13/08/2010
1953188	WSE24			13/08/2010

Only received samples which have had analysis scheduled will be shown on the following pages.

# **ALcontrol Laboratories Analytical Services**

SDG: 100815-12 Customer: Entec UK - MOD Ltd

Job:H\_ENTEC\_MOD-12Attention:Simon Howard

 Client Reference:
 26999
 Order No.:
 228113

 Location:
 Report No:
 94296

### LIQUID

-1401 <del>2</del>											
Results Legend	La	ab Sample No(s)				1953188				1953190	
X Test  No Determination Possible	С	ustomer Sample Ref.				WSE24				BHE02	
1 oddible		AGS Ref.									
		Depth (m)									Total
		Container	1l green glass bottle	500ml Plastic	H2SO4	Vial	1l green glass bottle	500ml Plastic	H2SO4	Vial	
Ammonium		All			X				X		0 2
Anions by Kone (w)		All		X				X			0 2
Conductivity (at 20 deg.C)		All		X				X			0 2
Dissolved Metals by ICP-MS		All		X				X			0 2
EPH CWG (Aliphatic) Aqueous GC (W)	)	All	X				X				0 2
EPH CWG (Aromatic) Aqueous GC (W	)	All	X				X				0 2
GRO by GC-FID (W)		All	_			X				X	0 2
Mercury Dissolved		All	X				X				0 2
PAH Spec MS - Aqueous (W)		All					X				0
pH Value		All		X				X			0 2
SVOC MS (W) - Aqueous		All					X				0
TPH CWG (W)		All	X				X				0 2
VOC MS (W)		All								X	0
			ш	ш		ш	ш		ш		

# **ALcontrol Laboratories Analytical Services**

Simon Howard

SDG: 100815-12 **Customer:** Entec UK - MOD Ltd Job: H\_ENTEC\_MOD-12 Attention:

**Client Reference:** 26999 Order No.: 228113 Location: Report No: 94296

### **Test Completion dates**

**SDG reference: 100815-12** 

Lab Sample No(s)	1953188	1953190
Customer Sample Ref.	WSE24	BHE02
Depth		
Туре	LIQUID	LIQUID
Ammonium	16/08/2010	16/08/2010
Anions by Kone (w)	17/08/2010	17/08/2010
Conductivity (at 20 deg.C)	17/08/2010	17/08/2010
Dissolved Metals by ICP-MS	18/08/2010	18/08/2010
EPH CWG (Aliphatic) Aqueous GC	19/08/2010	18/08/2010
EPH CWG (Aromatic) Aqueous GC	19/08/2010	18/08/2010
GRO by GC-FID (W)	21/08/2010	20/08/2010
Mercury Dissolved	17/08/2010	17/08/2010
PAH Spec MS - Aqueous (W)		17/08/2010
pH Value	16/08/2010	16/08/2010
SVOC MS (W) - Aqueous		18/08/2010
TPH CWG (W)	21/08/2010	20/08/2010
VOC MS (W)		19/08/2010

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100815-12
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

 Client Reference:
 26999

 Location:
 Report No:
 94296

#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	BHE02	WSE24		
# M	mCERTS accredited.		Danth (m)				
aq diee filt	Aqueous / settled sample. Dissolved / filtered sample.	9	Depth (m) ample Type	\M_++(O\M/(O\M/)	M-4(OM(OM)		
tot.unfilt	Total / unfiltered sample.		ite Sampled	Water(GW/SW) 13/08/2010	Water(GW/SW) 13/08/2010		
*	subcontracted test. % recovery of the surrogate		te Received	14/08/2010	14/08/2010		
	standard to check the efficiency		SDG Ref	100815-12	100815-12		
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1953190	1953188		
	the samples are not corrected	AGS	Reference				
	for this recovery.	I OD/III-it-	Method				
Compo	nent niacal Nitrogen as	LOD/Units <0.3 mg/l	TM099	1.77	1.31		
NH4	ilacai i viii ogcii as	40.5 mg/i	110000	#	#		
	ctivity @ 20 deg.C	<0.014	TM120	2.02	3		
		mS/cm		#	#		
Arsenio	(diss.filt)	<0.00012	TM152	0.00157 #	0.000953 #		
Boron	(diss.filt)	mg/l <0.0094	TM152	0.504	1.22		
	,	mg/l		#	#		
Cadmii	um (diss.filt)	<0.0001	TM152	<0.0001	<0.0001		
01	/ P C10	mg/l	T14450	#	#		
Chrom	ium (diss.filt)	<0.00022 mg/l	TM152	0.0165 #	0.0124 #		
Coppe	(diss.filt)	<0.00085	TM152	0.0062	0.00732		
	<u> </u>	mg/l		#	#		
Lead (d	diss.filt)	<0.00002	TM152	0.000038	0.00006		
Niokal	(dies filt)	mg/l	TM152	0.04	0.0266		
ivickel	(diss.filt)	<0.00015 mg/l	1 IVI 10Z	0.04 #	0.0266 #		
Seleniu	ım (diss.filt)	<0.00039	TM152	0.00269	0.000823		
		mg/l		#	#		
Zinc (d	iss.filt)	<0.00041	TM152	0.01	0.00961		
Mercur	y (diss.filt)	mg/l <0.00001	TM183	<b>*</b>	<b>*</b>		
ci cul	, (aloo.iiit)	_0.00001 mg/l	1101100	<0.00001 #	~0.00001 #		
Sulpha	te	<3 mg/l	TM184	924	1710		
			7711101	#	#		
Chlorid	е	<2 mg/l	TM184	48.2 #	53.9 #		
pН		<1 pH Units	TM256	7.22	7.37		
F		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		#	#		
						<u></u>	

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100815-12
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

PAH Spec MS - Aque	ous (W)					
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	BHE02			
M mCERTS accredited. aq Aqueous / settled sample.		Depth (m)				
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type ite Sampled	Water(GW/SW) 13/08/2010			
* subcontracted test.  ** % recovery of the surrogate	Da	te Received	14/08/2010			
standard to check the efficiency of the method. The results of the		SDG Ref imple No.(s)	100815-12 1953190			
individual compounds within the samples are not corrected for this recovery.		S Reference	1000100			
Component	LOD/Units	Method				
Naphthalene (aq)	<0.0001 mg/l	TM178	0.000134 #			
Acenaphthene (aq)	<0.000015	TM178	0.000937			
Acenaphthylene (aq)	mg/l <0.000011	TM178	0.00288			
Fluoranthene (aq)	mg/l <0.000014	TM178	# 0.0119			
	mg/l		#			
Anthracene (aq)	<0.000015 mg/l	TM178	0.00152 #			
Phenanthrene (aq)	<0.000022 mg/l	TM178	0.00464 #			
Fluorene (aq)	<0.000014	TM178	0.00269			
Chrysene (aq)	mg/l <0.000013	TM178	0.00657			
Pyrene (aq)	mg/l <0.000015	TM178	# 0.00965			
Benzo(a)anthracene (aq)	mg/l <0.000017	TM178	0.00675			
	mg/l		#			
Benzo(b)fluoranthene (aq)	<0.000023 mg/l	TM178	0.0112 #			
Benzo(k)fluoranthene (aq)	<0.000027 mg/l	TM178	0.0113 #			
Benzo(a)pyrene (aq)	<0.000009	TM178	0.0141			
Dibenzo(a,h)anthracene	mg/l <0.000016	TM178	# 0.00276			
(aq) Benzo(g,h,i)perylene (aq)	mg/l <0.000016	TM178	0.00803			
	mg/l		#			
Indeno(1,2,3-cd)pyrene (aq)	<0.000014 mg/l	TM178	0.008 #			
Polyaromatic hydrocarbons, Total USEPA 16 (aq)	<0.0001 mg/l	TM178	0.103 #			
Naphthalene-d8	%	TM178	100			
Acenaphthene-d10	%	TM178	100			
Phenanthrene-d10	%	TM178	100			
Chrysene-d12	%	TM178	100			
Perylene-d12	%	TM178	100			

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100815-12
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

SVOC MS (W) - Aqueo	ous					
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	BHE02			
M mCERTS accredited. aq Aqueous / settled sample.		Depth (m)				
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Water(GW/SW)			
* subcontracted test.  ** % recovery of the surrogate		te Sampled te Received	13/08/2010 14/08/2010			
standard to check the efficiency of the method. The results of the		SDG Ref	100815-12			
individual compounds within the samples are not corrected	Lab Sa	mple No.(s) Reference	1953190			
for this recovery.		Method				
Component 1,2,4-Trichlorobenzene (aq)	LOD/Units <0.001 mg/l	TM176	<0.001			
	10.004//	TM470	-0.004			
1,2-Dichlorobenzene (aq)	<0.001 mg/l	TM176	<0.001			
1,3-Dichlorobenzene (aq)	<0.001 mg/l	TM176	<0.001			
1,4-Dichlorobenzene (aq)	<0.001 mg/l	TM176	<0.001			
2,4,5-Trichlorophenol (aq)	<0.001 mg/l	TM176	<0.001			
2,4,6-Trichlorophenol (aq)	<0.001 mg/l	TM176	<0.001			
2,4-Dichlorophenol (aq)	<0.001 mg/l	TM176	<0.001			
2,4-Dimethylphenol (aq)	<0.001 mg/l	TM176	<0.001			
2,4-Dinitrotoluene (aq)	<0.001 mg/l	TM176	<0.001			
2,6-Dinitrotoluene (aq)	<0.001 mg/l	TM176	<0.001			
2-Chloronaphthalene (aq)	<0.001 mg/l	TM176	<0.001			
2-Chlorophenol (aq)	<0.001 mg/l	TM176	<0.001			
2-Methylnaphthalene (aq)	<0.001 mg/l	TM176	<0.001			
2-Methylphenol (aq)	<0.001 mg/l	TM176	<0.001			
2-Nitroaniline (aq)	<0.001 mg/l	TM176	<0.001			
2-Nitrophenol (aq)	<0.001 mg/l	TM176	<0.001			
3-Nitroaniline (aq)	<0.001 mg/l	TM176	<0.001			
4-Bromophenylphenylether	<0.001 mg/l	TM176	<0.001			
(aq) 4-Chloro-3-methylphenol	<0.001 mg/l	TM176	<0.001			
(aq) 4-Chloroaniline (aq)	<0.001 mg/l	TM176	<0.001			
4-Chlorophenylphenylether	<0.001 mg/l	TM176	<0.001			
(aq) 4-Methylphenol (aq)	<0.001 mg/l	TM176	<0.001			
4-Nitrophenol (aq)	<0.001 mg/l	TM176	<0.001			
4-Nitroaniline (aq)	<0.001 mg/l	TM176	<0.001			
Azobenzene (aq)	<0.001 mg/l	TM176	<0.001			
Acenaphthylene (aq)	<0.001 mg/l	TM176	<0.001			
Acenaphthene (aq)	<0.001 mg/l	TM176	<0.001			
Anthracene (aq)	<0.001 mg/l	TM176	<0.001			
bis(2-Chloroethyl)ether (aq)	<0.001 mg/l	TM176	<0.001			
bis(2-Chloroethoxy)methane (aq)	<0.001 mg/l	TM176	<0.001			
bis(2-Ethylhexyl) phthalate	<0.002 mg/l	TM176	<0.002			
(aq) Benzo(a)anthracene (aq)	<0.001 mg/l	TM176	<0.001			
Butylbenzyl phthalate (aq)	<0.001 mg/l	TM176	<0.001			
Benzo(b)fluoranthene (aq)	<0.001 mg/l	TM176	<0.001			
Benzo(k)fluoranthene (aq)	<0.001 mg/l	TM176	<0.001			
Benzo(a)pyrene (aq)	<0.001 mg/l	TM176	<0.001			
Benzo(g,h,i)perylene (aq)	<0.001 mg/l	TM176	<0.001			
Carbazole (aq)	<0.001 mg/l	TM176	<0.001			
Chrysene (aq)	<0.001 mg/l	TM176	<0.001			
Onlysene (aq)	\0.00 i iiig/i	1101170	\U.UU1			

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100815-12
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

svoc	C MS (W) - Aqueo	ous					
	Results Legend ISO17025 accredited.	Customer	Sample Ref.	BHE02			
aq	mCERTS accredited. Aqueous / settled sample.		Depth (m)				
tot.unfilt	Dissolved / filtered sample.  Total / unfiltered sample. subcontracted test.		ample Type ate Sampled	Water(GW/SW) 13/08/2010			
**	% recovery of the surrogate standard to check the efficiency		te Received	14/08/2010			
	of the method. The results of the individual compounds within		SDG Ref mple No.(s)	100815-12 1953190			
	the samples are not corrected for this recovery.	AG	S Reference				
Compo	nent ofuran (aq)	LOD/Units <0.001 mg/l	Method TM176	<0.001			
n-Dibut	yl phthalate (aq)	<0.001 mg/l	TM176	<0.001			
Diethyl	phthalate (aq)	<0.001 mg/l	TM176	<0.001			
Dibenzo (aq)	o(a,h)anthracene	<0.001 mg/l	TM176	<0.001			
	yl phthalate (aq)	<0.001 mg/l	TM176	<0.001			
n-Dioct	yl phthalate (aq)	<0.005 mg/l	TM176	<0.005			
Fluoran	thene (aq)	<0.001 mg/l	TM176	<0.001			
Fluoren		<0.001 mg/l	TM176	<0.001			
			TM176				
	llorobenzene (aq)	<0.001 mg/l		<0.001			
Hexach	llorobutadiene (aq)	<0.001 mg/l	TM176	<0.001			
Pentacl	hlorophenol (aq)	<0.001 mg/l	TM176	<0.001			
Phenol	(aq)	<0.001 mg/l	TM176	<0.001			
	so-n-dipropylamine	<0.001 mg/l	TM176	<0.001			
(aq) Hexach	lloroethane (aq)	<0.001 mg/l	TM176	<0.001			
Nitrobe	nzene (aq)	<0.001 mg/l	TM176	<0.001			
	alene (aq)	<0.001 mg/l	TM176	<0.001			
Isophor	rone (aq)	<0.001 mg/l	TM176	<0.001			
Hexach (aq)	llorocyclopentadiene	<0.001 mg/l	TM176	<0.001			
	threne (aq)	<0.001 mg/l	TM176	<0.001			
Indeno	(1,2,3-cd)pyrene (aq)	<0.001 mg/l	TM176	<0.001			
Pyrene	(aq)	<0.001 mg/l	TM176	<0.001			

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100815-12
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

TPH CWG (W)						
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	BHE02	WSE24		
M mCERTS accredited.  aq Aqueous / settled sample.	_	Depth (m)				
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		Sample Type ate Sampled	Water(GW/SW) 13/08/2010	Water(GW/SW) 13/08/2010		
* subcontracted test.  ** % recovery of the surrogate	Da	te Received	14/08/2010	14/08/2010		
standard to check the efficiency of the method. The results of the		SDG Ref ample No.(s)	100815-12 1953190	100815-12 1953188		
individual compounds within the samples are not corrected		S Reference	1933190	1933100		
for this recovery.  Component	LOD/Units	Method				
Total Aliphatics >C5-C35	<0.01 mg/l	TM174	1.23	0.07		
(aq) Total Aromatics >C6-C35	<0.01 mg/l	TM174	0.427	<0.01		
(aq) Total Aliphatics & Aromatics	<0.01 mg/l	TM174	1.65	0.07		
>C5-35 (aq) Aliphatics >C12-C16 (aq)	<0.01 mg/l	TM174	0.255	<0.01		
Aromatics >EC12-EC16 (aq)	<0.01 mg/l	TM174	0.028	<0.01		
Aliphatics >C16-C21 (aq)	<0.01 mg/l	TM174	0.569	0.053		
Aromatics >EC16-EC21 (aq)	<0.01 mg/l	TM174	0.131	<0.01		
Aliphatics >C21-C35 (aq)	<0.01 mg/l	TM174	0.401	0.017		
Aromatics >EC21-EC35	<0.01 mg/l	TM174	0.268	<0.01		
(aq) Total Aliphatics >C12-C35	<0.01 mg/l	TM174	1.23	0.07		
(aq) Total Aromatics	<0.01 mg/l	TM174	0.427	<0.01		
>EC12-EC35 (aq)						
Total Aliphatics & Aromatics >C12-C35 (Aqueous)	<0.01 mg/l	TM174	1.65	0.07		
GRO Surrogate % recovery**	%	TM245	78	96		
Benzene	<0.007 mg/l	TM245	<0.007	<0.007		
Toluene	<0.004 mg/l	TM245	<0.004	<0.004		
Ethylbenzene	<0.005 mg/l	TM245	<0.005	<0.005		
m,p-Xylene	<0.008 mg/l	TM245	<0.008	<0.008		
o-Xylene	<0.003 mg/l	TM245	<b>*</b>	<b>*</b>		
m,p,o-Xylene	<0.01 mg/l	TM245	<b>*</b>	<b>*</b>		
BTEX, Total	<0.01 mg/l	TM245	<b>*</b>	<b>*</b>		
	_		#	#		
Methyl tertiary butyl ether (MTBE)	<0.003 mg/l	TM245	<0.003 #	<0.003 #		
GRO >C5-C12	<0.05 mg/l	TM245	<0.05 #	<0.05 #		
Aliphatics >C5-C6	<0.01 mg/l	TM245	<0.01	<0.01		
Aliphatics >C6-C8	<0.01 mg/l	TM245	<0.01	<0.01		
Aliphatics >C8-C10	<0.01 mg/l	TM245	<0.01	<0.01		
Aliphatics >C10-C12	<0.01 mg/l	TM245	<0.01	<0.01		
Total Aliphatics >C5-C12	<0.01 mg/l	TM245	<0.01	<0.01		
Aromatics >C6-C7	<0.01 mg/l	TM245	<0.01	<0.01		
Aromatics >C7-C8	<0.01 mg/l	TM245	<0.01	<0.01		
Aromatics >EC8-EC10	<0.01 mg/l	TM245	<0.01	<0.01		
Aromatics >EC10-EC12	<0.01 mg/l	TM245	<0.01	<0.01		
Total Aromatics >C6-C12	<0.01 mg/l	TM245	<0.01	<0.01		
	_				 	

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100815-12
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

 Client Reference:
 26999

 Location:
 Report No:
 94296

voc	MS (W)						
#	Results Legend ISO17025 accredited.	Customer	Sample Ref.	BHE02			
	mCERTS accredited. Aqueous / settled sample.		Depth (m)				
tot.unfilt	Dissolved / filtered sample. Total / unfiltered sample. subcontracted test.		ample Type ite Sampled	Water(GW/SW) 13/08/2010			
**	% recovery of the surrogate standard to check the efficiency	Da	te Received SDG Ref	14/08/2010 100815-12			
	of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1953190			
	the samples are not corrected for this recovery.		Reference				
Compo	nent ofluoromethane**	LOD/Units	Method TM208	104			
Toluen	e-d8**	%	TM208	99.1			
4-Brom	ofluorobenzene**	%	TM208	97.5			
Dichlor	odifluoromethane	<0.007 mg/l	TM208	<0.007 #			
Chloro	methane	<0.009 mg/l	TM208	<0.009			
Vinyl cl	nloride	<0.0012	TM208	<b>*</b>			
Bromoi	methane	mg/l <0.002 mg/l	TM208	<b>*</b>			
				#			
Chloro		<0.0025 mg/l	TM208	<0.0025			
Trichlo	rofluoromethane	<0.0013 mg/l	TM208	<0.0013 #	 	 	
1,1-Dic	hloroethene	<0.0012 mg/l	TM208	0.00919 #			
Carbon	ı disulphide	<0.0013	TM208	<0.0013			
Dichlor	omethane	mg/l <0.0037	TM208	<0.0037			
Methyl	tertiary butyl ether	mg/l <0.0016	TM208	<b>*</b>			
(MTBE		mg/l <0.0019	TM208	<b>*</b> <0.0019			
		mg/l		#			
1,1-DIC	hloroethane	<0.0012 mg/l	TM208	0.0126 #			
cis-1,2-	-Dichloroethene	<0.0023 mg/l	TM208	<0.0023 #			
2,2-Dic	hloropropane	<0.0038	TM208	<0.0038			
Bromod	chloromethane	mg/l <0.0019	TM208	<0.0019			
Chlorof	form	mg/l <0.0018	TM208	<b>*</b>			
1,1,1-T	richloroethane	mg/l <0.0013	TM208	# 0.021			
	hloropropene	mg/l <0.0013	TM208	<b>*</b> <0.0013			
		mg/l		#			
Carbon	tetrachloride	<0.0014 mg/l	TM208	<0.0014 #			
1,2-Dic	hloroethane	<0.0033 mg/l	TM208	<0.0033			
Benzer	ne	<0.0013 mg/l	TM208	<0.0013 #			
Trichlo	roethene	<0.0025	TM208	<0.0025			
1,2-Dic	hloropropane	mg/l <0.003 mg/l	TM208	<0.003			
Dibrom	omethane	<0.0027	TM208	<b>*</b>			
	dichloromethane	mg/l <0.0009	TM208	<0.0009			
		mg/l		#			
	-Dichloropropene	<0.0019 mg/l	TM208	<0.0019 #			
Toluen	e	<0.0014 mg/l	TM208	<0.0014 #			
trans-1	,3-Dichloropropene	<0.0035 mg/l	TM208	<0.0035 #			
1,1,2-T	richloroethane	<0.0022	TM208	<0.0022			
1,3-Dic	hloropropane	mg/l <0.0022	TM208	<0.0022			
Tetrach	nloroethene	mg/l <0.0015	TM208	<b>*</b>			
	ochloromethane	mg/l <0.0017	TM208	<0.0017			
		mg/l		#			
1,2-Dib	romoethane	<0.0023 mg/l	TM208	<0.0023 #			
Chlorol	penzene	<0.0035 mg/l	TM208	<0.0035 #		 	
1,1,1,2	-Tetrachloroethane	< 0.0013	TM208	<0.0013			
Ethylbe	enzene	mg/l <0.0025	TM208	<0.0025			
		mg/l		#			

# **ALcontrol Laboratories Analytical Services**

 SDG:
 100815-12
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon How Order No.:

 Client Reference:
 26999
 Order No.:
 228113

 Location:
 Report No:
 94296

VOC MS (W)			
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	BHE02
M mCERTS accredited.		Depth (m)	
aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Water(GW/SW)
* subcontracted test.		ate Sampled ite Received	13/08/2010 14/08/2010
standard to check the efficiency		SDG Ref	14/08/2010
of the method. The results of the individual compounds within	Lab Sa	imple No.(s)	1953190
the samples are not corrected for this recovery.		S Reference	
m,p-Xylene	<b>LOD/Units</b> <0.0025	Method TM208	<0.0025
III,p-Aylene	mg/l	1101200	~0.0025 #
o-Xylene	<0.0017 mg/l	TM208	<0.0017 #
Styrene	<0.0012	TM208	<0.0012
Bromoform	mg/l <0.003 mg/l	TM208	<b>*</b>
			#
Isopropylbenzene	<0.0014 mg/l	TM208	<0.0014 #
1,1,2,2-Tetrachloroethane	<0.0052	TM208	<0.0052
1,2,3-Trichloropropane	mg/l <0.0078	TM208	<0.0078
	mg/l		#
Bromobenzene	<0.002 mg/l	TM208	<0.002 #
Propylbenzene	<0.0026	TM208	<0.0026
2-Chlorotoluene	mg/l <0.0019	TM208	<b>*</b>
4.0.5 Trime of the discourse	mg/l	TN4000	#
1,3,5-Trimethylbenzene	<0.0018 mg/l	TM208	<0.0018 #
4-Chlorotoluene	<0.0019	TM208	<0.0019 #
tert-Butylbenzene	mg/l <0.002 mg/l	TM208	<0.002
1,2,4-Trimethylbenzene	<0.0017	TM208	<b>*</b>
1,2,4-11iiiletiiyiberizerie	~0.0017 mg/l	TIVIZUO	#
sec-Butylbenzene	<0.0017	TM208	<0.0017 #
4-iso-Propyltoluene	mg/l <0.0026	TM208	<0.0026
1,3-Dichlorobenzene	mg/l <0.0022	TM208	<b>*</b>
1,3-Dicilioroperizerie	~0.0022 mg/l	TIVIZUO	<0.0022 #
1,4-Dichlorobenzene	<0.0027	TM208	<0.0027 #
n-Butylbenzene	mg/l <0.002 mg/l	TM208	<0.002
1,2-Dichlorobenzene	<0.0037	TM208	<b>*</b> <0.0037
	mg/l		
1,2-Dibromo-3-chloropropan e	<0.0098 mg/l	TM208	<0.0098
1,2,4-Trichlorobenzene	<0.0023	TM208	<0.0023
Hexachlorobutadiene	mg/l <0.0025	TM208	<b>*</b> <0.0025
	mg/l		#
tert-Amyl methyl ether (TAME)	<0.001 mg/l	TM208	<0.001 #
Naphthalene	<0.0035	TM208	<0.0035
1,2,3-Trichlorobenzene	mg/l <0.0031	TM208	<b>*</b>
	mg/l		#
1,3,5-Trichlorobenzene	<0.01 mg/l	TM208	<0.01

#### **ALcontrol Laboratories Analytical Services**



#### **Table of Results - Appendix**

 SDG Number:
 100815-12
 Client:
 Entec UK - MOD Ltd
 Client Ref: 26999

REPOI	RT KEY			Results	expressed	as (e.g.) 1.03E-07 is equivalent to 1.03x10-7
NDP	No Determination Possible	#	ISO 17025 Accredited	Subcontracted Test	М	MCERTS Accredited
NFD	No Fibres Detected	PFD	Possible Fibres Detected	Result previously reported (Incremental reports only)	EC	Equivalent Carbon (Aromatics C8-C35)

Note: Method detection limits are not always achievable due to various circumstances beyond our control Wet/Dry **Method No** Reference **Description** TM061 Method for the Determination of Determination of Extractable Petroleum Hydrocarbons by GC-FID EPH, Massachusetts Dept. of EP, 1998 (C10-C40) TM099 BS 2690: Part 7:1968 / BS 6068: Determination of Ammonium in Water Samples using the Kone Analyser Part 2.11:1984 TM120 Method 2510B, AWWA/APHA, 20th Ed., Determination of Electrical Conductivity using a Conductivity Meter 1999 / BS 2690: Part 9:1970 TM152 Method 3125B, AWWA/APHA, 20th Ed., Analysis of Aqueous Samples by ICP-MS TM174 Analysis of Petroleum Hydrocarbons in Determination of Speciated Extractable Petroleum Hydrocarbons in Environmental Media – Total Petroleum Waters by GC-FID Hydrocarbon Criteria TM176 EPA 8270D Semi-Volatile Organic Determination of SVOCs in Water by GCMS Compounds by Gas Chromatography/Mass Spectrometry (GC/MS) TM178 Modified: US EPA Method 8100 Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters TM183 BS EN 23506:2002, (BS 6068-2.74:2002) Determination of Trace Level Mercury in Waters and Leachates by PSA ISBN 0 580 38924 3 Cold Vapour Atomic Fluorescence Spectrometry TM184 EPA Methods 325.1 & 325.2, The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers TM208 Modified: US EPA Method 8260b & 624 Determination of Volatile Organic Compounds by Headspace / GC-MS in Determination of GRO by Headspace in waters TM245 By GC-FID TM256 Determination of pH in Water and Leachate using the GLpH pH Meter The measurement of Electrical

Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978.

ISBN 011 751428 4.

<sup>&</sup>lt;sup>1</sup> Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

### **APPENDIX**

#### **APPENDIX**

- Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following:
   NRA Leach tests, flash point, ammonium as NH<sub>4</sub> by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and
   TOF-MS TICS.
- 2. Samples will be run in duplicate upon request, but an additional charge may be incurred.
- 3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. Alcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.
- 4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
- 5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
- 6. When requested, the individual sub sample scheduled will be screened in house for the presence of large asbestos containing material fragments/pieces. If no asbestos containing material is found this will be reported as 'no asbestos containing material detected'. If asbestos containing material is detected it will be removed and analysed by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If asbestos containing material is present no further analysis will be undertaken. At no point is the fibre content of the soil sample determined.
- 7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.
- 8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.
- 9. NDP No determination possible due to insufficient/unsuitable sample.
- 10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals total metals must be requested separately.
- 11. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.
- 12. Results relate only to the items tested
- 13. **Surrogate recoveries** Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 130 %.
- Product analyses Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.
- 15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).
- 16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 14).
- 17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
- 18. Our MCERTS accreditation for PAHs by GCMS applies to all product types apart from Kerosene, where naphthalene only is not accredited.
- 19. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
- 19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.
- 20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
- 21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
- 22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
- 23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

#### LIQUID MATRICES EXTRACTION SUMMARY

ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAH MS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GS MS
SVOC	DCM	LIQUID/LIQUID SHAKE	GC MS
FREE SULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST OCP/OPP	DCM	LIQUID/LIQUID SHAKE	GC MS
TRIAZINE HERBS	DCM	LIQUID/LIQUID SHAKE	GC MS
PHENOLS MS	DCM	SOLID PHASE EXTRACTION	GC MS
TPH by INFRA RED (IR)	TCE	LIQUID/LIQUID EXTRACTION	HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID EXTRACTION	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GC FID

#### SOLID MATRICES EXTRACTION SUMMARY

	001.0	MATRICES EXTRACTION SUMMARY		
ANALYSIS	D/C OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	SISATV
Solvent Extractable Matter	D&C	DCM	SOXTHERM	GRAVIMETRIC
Cyclohexane Ext. Matter	D&C	CYCLOHEXANE	SOXTHERM	GRAVIMETRIC
Thin Layer Chromatography	D&C	DCM	SOXTHERM	IATROSCAN
Elemental Sulphur	D&C	DCM	SOXTHERM	HPLC
Phenols by GCMS	WET	DCM	SOXTHERM	GC-MS
Herbicides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
Pesticides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
EPH (DRO)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Min oil)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Cleaned up)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH CWG by GC	D&C	HEXANE:ACETONE	END OVER END	GC-FID
PCB tot / PCB con	D&C	HEXANE:ACETONE	END OVER END	GC-MS
Polyaromatic Hydrocarbons (MS)	WET	HEXANE:ACETONE	Microwave TM218.	GC-MS
C8-C40 (C6-C40)EZ Flash	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Polyaromatic Hydrocarbons Rapid GC	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Semi Volatile Organic Compounds	WET	DCM:ACETONE	SONICATE	GC-MS

#### **Identification of Asbestos in Bulk Materials**

The results for asbestos identification for soil samples are obtained from possible Asbestos Containing Material, removed during the 'Screening of soils for Asbestos Containing Materials', which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

#### **Visual Estimation Of Fibre Content.**

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: -

Trace – Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in MDHS 100.

The identification of asbestos containing materials falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.



Unit 7-8 Hawarden Business Park Manor Road (off Manor Lane) Hawarden

> Deeside CH5 3US Tel: (01244) 528700

Fax: (01244) 528701 email: mkt@alcontrol.com Website: www.alcontrol.com

Attention: Simon Howard

#### **CERTIFICATE OF ANALYSIS**

 Date:
 27 August 2010

 Customer:
 H\_ENTEC\_MOD-12

Sample Delivery Group (SDG): 100820-109 Report No.: 94926

Your Reference: 26999

Location:

We received 12 samples on Friday August 20, 2010 and 12 of these samples were scheduled for analysis which was completed on Friday August 27, 2010. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Asbestos testing - we are not accredited for screening soil samples for asbestos fibres. We are only accredited to identify asbestos fibres in bulk material (ACM).

Approved By:



**Iain Swinton** 

Operations Director - Land UK & Ireland



### **ALcontrol Laboratories Analytical Services**

 SDG:
 100820-109
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

 Client Reference:
 26999
 Order No.:
 228113

 Location:
 Report No:
 94926

#### Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
1985110	BHD01			18/08/2010
1985163	BHE02			18/08/2010
1985072	SWA05			18/08/2010
1984979	SWD08			18/08/2010
1985045	SWD09			18/08/2010
1984939	SWE10			18/08/2010
1985060	WSC04			18/08/2010
1985144	WSC08			18/08/2010
1985024	WSD09			18/08/2010
1984999	WSE10			18/08/2010
1985185	WSE17			18/08/2010
1984905	WSE26			18/08/2010

Only received samples which have had analysis scheduled will be shown on the following pages.

## **ALcontrol Laboratories Analytical Services**

SDG: 100820-109 Customer: Entec UK - MOD Ltd

Job: H\_ENTEC\_MOD-12 Attention: Simon Howard

 Client Reference:
 26999
 Order No.:
 228113

 Location:
 Report No:
 94926

#### LIQUID

LIQUID		_															_						_															
Results Legend	Lab Sample No(s)		1001	1984905			1984939		1804978	1084070		1984999		1985024		0000	1085045			1985060			1985072			1900110	2005			1985144			1000.00	1985163			1985185	
X Test  No Determination Possible	Customer Sample Ref.		0	WSE26			SWE10			SWD08		WSE10		WSD09		0	SWD09			WSC04			SWA05			0	0			WSC08			1	BHE02			WSE17	
	AGS Ref.																																					
	Depth (m)																																					
	Container	1l green glass bottle	500ml Plastic	H2SO4	11 green glass bottle	500ml Plastic	Vial	1l green glass bottle	500ml Plastic	H2SO4	500ml Plastic	H2SO4	1l green glass bottle	H2SO4 500ml Plastic	1l green glass bottle	500ml Plastic	H2SO4	1 green glass bottle	500ml Plastic	Vial	1l green glass bottle	500ml Plastic	H2SO4	1l green glass bottle	500ml Plastic	H2SO4	Vial Vial	500ml Plastic	H2SO4	Vial	1l green glass bottle	500ml Plastic	H2SO4	Vial	11 green glass bottle	500ml Plastic	Vial H2SO4	
Ammonium	All			X	Ť	X	(			X	t	X	T	X			X	Ť	×	(	Ī		X			X	Ť	T	X	Ī	П		X	Ť	T	>	Κ	t
Anions by ion Chromatography	All		H		+				T		t			T				t							X		t	t	f		Н			†	t	Ť	T	T
Anions by Kone (w)	All		X		<b>&gt;</b>	<b>(</b>	t		X	$\dagger$	X			X		X	†	>	<b>(</b>	t	r	X				†	t	X	<u></u>	r	Н	X	+	†	,	X	t	r
Dissolved Metals by ICP-MS	All		X	1	<b>&gt;</b>	<	t		X	$\dagger$	X			X		X	†	>	<	t		X	П		X	†	t	X		r	П	X	1	†	Ť	X	t	T
EPH (DRO) (C10-C40) Aqueous (W)	All	X					İ	X	Т	×	<b>(</b>		X	T	X		Ť	Ť		T	X			X	1	†	×	<u> </u>	T	T	П		1	†	Ť	T	T	T
EPH CWG (Aliphatic) Aqueous GC (W)	All		П	,	X	Ť	İ		П				1	Ť			)	<b>&lt;</b>		T					1	†	T	T	T		X			;	X	Ť	T	T
EPH CWG (Aromatic) Aqueous GC (W)	All		П	7	X	T	İ		П	T	T			Ť			>	<b>&lt;</b>		T					1	1	Ť	T	T		X			,	X	Ť	T	Ī
GRO by GC-FID (W)	All		Π	Ī	T	T	X		П	T	T	П	Ī	T			T	Ī	Ī	X					1	)	<b>&lt;</b>	T	Γ		П			X	Ī	Ť	×	
Mercury Dissolved	All	X		,	X	Ī		X	П	×	<b>(</b>		X		X		)	<b>&lt;</b>	Ī	Ī	X			X		T	×	<u> </u>	Ī		X			,	X	T	T	Ī
PAH Spec MS - Aqueous (W)	All	X		,	X	T			П								)	<b>&lt;</b>	Ī					X	1	T	×	(	Γ		X			,	X	T	T	Ī
pH Value	All		X		<b>&gt;</b>	<b>(</b>			X	T	X			X		X	T	>	<b>(</b>	T		X			X	T	T	X			П	X		Ť	<b>&gt;</b>	X	T	Ī
SVOC MS (W) - Aqueous	All			,	X					1	Ī						>	<		T						†	×	(	Γ	Γ	X		1	†	T	1	T	
TPH CWG (W)	All			7	X	T				1	T	П					>	<b>(</b>					П			1	T	T	Γ		X		1	<b>7</b>	X	T	T	
VOC MS (W)	All			T			X			T				T			Ī	Ī		X			П			1	T	T	Γ	X	П			X	1	T	T	

Page 4 of 25

## **ALcontrol Laboratories Analytical Services**

SDG: 100820-109 Customer: Entec UK - MOD Ltd

Job:H\_ENTEC\_MOD-12Attention:Simon Howard

 Client Reference:
 26999
 Order No.:
 228113

 Location:
 Report No:
 94926

#### **Test Completion dates**

SDG reference: 100820-109

Lab Sample No(s)	1984905	1984939	1984979	1984999	1985024	1985045	1985060	1985072	1985110	1985144	1985163	1985185
Customer Sample Ref.	WSE26	SWE10	SWD08	WSE10	WSD09	SWD09	WSC04	SWA05	BHD01	WSC08	BHE02	WSE17
Depth												
Туре	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID
Ammonium	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	25/08/2010	25/08/2010	24/08/2010	25/08/2010
Anions by ion Chromatography									25/08/2010			
Anions by Kone (w)	25/08/2010	25/08/2010	25/08/2010	25/08/2010	25/08/2010	25/08/2010	25/08/2010	25/08/2010		25/08/2010	25/08/2010	25/08/2010
Dissolved Metals by ICP-MS	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010
EPH (DRO) (C10-C40) Aqueous (W)	25/08/2010		25/08/2010	25/08/2010	25/08/2010	25/08/2010		25/08/2010	25/08/2010	25/08/2010		
EPH CWG (Aliphatic) Aqueous GC		25/08/2010					25/08/2010				25/08/2010	25/08/2010
EPH CWG (Aromatic) Aqueous GC		25/08/2010					25/08/2010				25/08/2010	25/08/2010
GRO by GC-FID (W)		26/08/2010					27/08/2010		26/08/2010		27/08/2010	26/08/2010
Mercury Dissolved	25/08/2010	25/08/2010	24/08/2010	24/08/2010	25/08/2010	25/08/2010	25/08/2010	24/08/2010	25/08/2010	24/08/2010	24/08/2010	25/08/2010
PAH Spec MS - Aqueous (W)	26/08/2010	26/08/2010					26/08/2010		26/08/2010	26/08/2010	26/08/2010	26/08/2010
pH Value	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010	24/08/2010
SVOC MS (W) - Aqueous		25/08/2010					25/08/2010			25/08/2010	25/08/2010	
TPH CWG (W)		26/08/2010					27/08/2010				27/08/2010	26/08/2010
VOC MS (W)		24/08/2010					25/08/2010			24/08/2010	24/08/2010	

## **ALcontrol Laboratories Analytical Services**

Entec UK - MOD Ltd

 SDG:
 100820-109
 Customer:

 Job:
 H\_ENTEC\_MOD-12
 Attention:

Job:H\_ENTEC\_MOD-12Attention:Simon HowardClient Reference:26999Order No.:228113Location:Report No:94926

Results Legend # ISO17025 accredited.	Customer	Sample Ref.	BHD01	BHE02	SWA05	SWD08	SWD09	SWE10
M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. subcontracted test.	D	Depth (m) Sample Type ate Sampled	Water(GW/SW) 18/08/2010	Water(GW/SW) 18/08/2010	Water(GW/SW) 18/08/2010	Water(GW/SW) 18/08/2010	Water(GW/SW) 18/08/2010	Water(GW/SW) 18/08/2010
** % recovery of the surrogate standard to check the efficien of the method. The results of individual compounds within the samples are not corrected	cy the Lab Sa	SDG Ref ample No.(s) S Reference	20/08/2010 100820-109 1985110	20/08/2010 100820-109 1985163	20/08/2010 100820-109 1985072	20/08/2010 100820-109 1984979	20/08/2010 100820-109 1985045	20/08/2010 100820-109 1984939
for this recovery.  Component	LOD/Units	Method						
Ammoniacal Nitrogen as NH4	<0.3 mg/l	TM099	1.48	1.79 #	<0.3	<0.3	<0.3	<0.3
Arsenic (diss.filt)	<0.00012 mg/l	TM152	0.0067	0.0015	0.00179	0.000409	0.000442	0.000645
Boron (diss.filt)	<0.0094	TM152	2.08	0.455	0.108	1.76	0.0463	1.38
Cadmium (diss.filt)	mg/l <0.0001	TM152	0.000151	0.000103	<0.0001	<0.0001	<0.0001	<0.0001
Chromium (diss.filt)	mg/l <0.00022	TM152	0.0263	0.00872	0.00332	0.00506	0.00131	0.00325
Copper (diss.filt)	mg/l <0.00085	TM152	0.00663	0.00649	0.002	0.00134	0.00104	0.00244
Lead (diss.filt)	mg/l <0.00002	TM152	0.000793	<b>*</b>	<b>*</b>	0.000179	0.000206	0.000164
Nickel (diss.filt)	mg/l <0.00015	TM152	0.115	0.0345	0.000976	0.00295	0.000967	0.0024
Selenium (diss.filt)	mg/l <0.00039	TM152	0.0107	0.00186		0.000516	<0.00039	0.000566
Zinc (diss.filt)	mg/l <0.00041	TM152	0.0252	0.0100		0.0233	0.185	0.00914
	mg/l		#	#	#	#	#	0.00914 #
EPH Range >C10 - C40 (aq)	<0.046 mg/l	TM172	<0.046 #		0.183	0.135	<0.046 #	
EPH Band >C10-C12 (aq)	<0.01 mg/l	TM172	<0.01		<0.01	<0.01	<0.01	
EPH Band >C12-C16 (aq)	<0.01 mg/l	TM172	<0.01		<0.01	<0.01	<0.01	
EPH Band >C16-C21 (aq)	<0.01 mg/l	TM172	<0.01		0.0486	0.0286	<0.01	
EPH Band >C21-C28 (aq)	<0.01 mg/l	TM172	<0.01		0.0555	0.0301	<0.01	
EPH Band >C35-C40 (aq)	<0.01 mg/l	TM172	<0.01		0.0118	0.0134	<0.01	
EPH Band >C28-C35 (aq)	<0.01 mg/l	TM172	<0.01		0.0671	0.0629	0.0407	
Mercury (diss.filt)	<0.00001	TM183	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001
Sulphate	mg/l <3 mg/l	TM184	#	785	18.1	112	12.3	74.1
Chloride	<2 mg/l	TM184		42.8	3.9	118	16	116
Chloride	<0.07 mg/l	TM226	46.7	#	#	#	#	#
Sulphate	<0.1 mg/l	TM226	2140 #					
pH	<1 pH Units	TM256	7.63	7.88	8.5	8.43	7.82	8.31
			#	#	#	#	#	#

## **ALcontrol Laboratories Analytical Services**

SDG: 100820-109 Customer: Entec UK - MOD Ltd
Job: H ENTEC MOD-12 Attention: Simon Howard

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Ho

 Client Reference:
 26999
 Order No.:
 228113

 Location:
 Report No:
 94926

GPO	by GC-FID (W)							
	Results Legend	Custome	r Sample Ref.	BHD01				
М	ISO17025 accredited. mCERTS accredited.							
aq	Aqueous / settled sample. Dissolved / filtered sample.		Depth (m) Sample Type					
tot.unfilt	Total / unfiltered sample.		ate Sampled					
**	subcontracted test. % recovery of the surrogate		ate Received	20/08/2010				
	standard to check the efficiency of the method. The results of the		SDG Ref					
	individual compounds within	Lab 5	ample No.(s) S Reference	1985110				
	the samples are not corrected for this recovery.							
Compo		LOD/Units	Method					
Benzer	ie	<0.007 mg/	TM245	<0.007 #				
Toluen	e	<0.004 mg/	TM245	<0.004				
				#				
Ethylbe	nzene	<0.005 mg/	TM245	<0.005				
m,p-Xy	lene	<0.008 mg/	TM245	<b>*</b> <0.008				
				#				
o-Xyler	ie	<0.003 mg/	TM245	<0.003				
m,p,o->	(vlene	<0.01 mg/l	TM245	<b>*</b>				
				#				
BTEX,	Total	<0.01 mg/l	TM245	<0.01				
Methyl	tertiary butyl ether	<0.003 mg/	TM245	<b>*</b>				+
(MTBE	)	5.000 mg/		#				
GRO >		<0.01 mg/l	TM245	<0.01				
GRO >	C6-C7	<0.01 mg/l	TM245	<0.01				-
51107	00.01			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				
GRO >	C7-C8	<0.01 mg/l	TM245	<0.01				
CDO >	C8-C10	<0.01 mg/l	TM245	<0.01				
GRU >	Co-C10	<0.01 mg/i	1101245	<0.01				
GRO >	C5-C12	<0.05 mg/l	TM245	<0.05				
000 -	040 040	40.04 //	TMOAF	#				
GRO >	C10-C12	<0.01 mg/l	TM245	<0.01				
								+
								<del>                                     </del>
								<u> </u>
								+
								-
			•			-	-	4

## **ALcontrol Laboratories Analytical Services**

 SDG:
 100820-109
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

PAH Spec MS - Aque							
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	BHD01	BHE02	SWE10	 	
M mCERTS accredited.  Aqueous / settled sample.  tot.unfilt Total / unfiltered sample.  subcontracted test.  * % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Da Da Lab Sa AG	Depth (m) ample Type ate Sampled te Received SDG Ref imple No.(s) S Reference	Water(GW/SW) 18/08/2010 20/08/2010 100820-109 1985110	Water(GW/SW) 18/08/2010 20/08/2010 100820-109 1985163	Water(GW/SW) 18/08/2010 20/08/2010 100820-109 1984939		
Component	LOD/Units	Method TM178	<0.0001	<0.0001	<0.0001		
Naphthalene (aq)	<0.0001 mg/l		<0.0001 #	#	<0.0001 #		
Acenaphthene (aq)	<0.000015 mg/l	TM178	0.000041 #	0.000553	<0.000015		
Acenaphthylene (aq)	<0.000011 mg/l <0.000014	TM178 TM178	<0.000011 # 0.000031	0.00175 # 0.00375	<0.000011 # <0.000014		
Fluoranthene (aq)  Anthracene (aq)	mg/l <0.000015	TM178	0.000031 #	0.00375	<0.000014 # <0.000015		
	mg/l		#	#	#		
Phenanthrene (aq)	<0.000022 mg/l	TM178	0.000056	0.000928	<0.000022		
Fluorene (aq)	<0.000014 mg/l	TM178	0.000025 #	0.000978 #	<0.000014 #		
Chrysene (aq)	<0.000013 mg/l	TM178	<0.000013 #	0.00135 #	<0.000013 #		
Pyrene (aq)	<0.000015 mg/l	TM178	0.000026 #	0.00309 #	<0.000015 #		
Benzo(a)anthracene (aq)	<0.000017 mg/l	TM178	0.000022	0.00147	0.000019		
Benzo(b)fluoranthene (aq)	<0.000023 mg/l	TM178	<0.000023	0.00204 #	<0.000023		
Benzo(k)fluoranthene (aq)	<0.000027 mg/l	TM178	<0.000027	0.00176	<0.000027 #		
Benzo(a)pyrene (aq)	<0.000009 mg/l	TM178	0.000014 #	0.0023 #	0.000011		
Dibenzo(a,h)anthracene (aq)	<0.000016 mg/l	TM178	<0.000016 #	0.00046 #	<0.000016 #		
Benzo(g,h,i)perylene (aq)	<0.000016 mg/l	TM178	<0.000016 #	0.0013 #	<0.000016 #		
Indeno(1,2,3-cd)pyrene (aq)	<0.000014 mg/l	TM178	<0.000014 #	0.00126 #	<0.00014		
Polyaromatic hydrocarbons, Total USEPA 16 (aq)	<0.0001 mg/l	TM178	0.000237 #	0.0233 #	<0.0001 #		
Naphthalene-d8	%	TM178	100	100	100		
Acenaphthene-d10	%	TM178	100	100	100		
Phenanthrene-d10	%	TM178	100	100	100		
Chrysene-d12	%	TM178	100	100	100		
Perylene-d12	%	TM178	100	100	100		

## **ALcontrol Laboratories Analytical Services**

 SDG:
 100820-109
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

Results Legend	
aq Aquous/settled sample. Depth (m) Ussolved / filtered sample. Sample Type tot.unfilt Total / unfiltered sample. Sample Mater (GW/SW) Water (	
1,2,4-Trichlorobenzene (aq) <0.001 mg/l TM176 <0.001 <0.001	
1,2-Dichlorobenzene (aq) <0.001 mg/l TM176 <0.001 <0.001	
1,3-Dichlorobenzene (aq) <0.001 mg/l TM176 <0.001 <0.001	
1,4-Dichlorobenzene (aq) <0.001 mg/l TM176 <0.001 <0.001	
2,4,5-Trichlorophenol (aq) <0.001 mg/l TM176 <0.001 <0.001	
2,4,6-Trichlorophenol (aq) <0.001 mg/l TM176 <0.001 <0.001	
2,4-Dichlorophenol (aq) <0.001 mg/l TM176 <0.001 <0.001	
2,4-Dimethylphenol (aq) <0.001 mg/l TM176 <0.001 <0.001	
2,4-Dinitrotoluene (aq) <0.001 mg/l TM176 <0.001 <0.001	
2,6-Dinitrotoluene (aq) <0.001 mg/l TM176 <0.001 <0.001	
2-Chloronaphthalene (aq)	
2-Chlorophenol (aq) <0.001 mg/l TM176 <0.001 <0.001	
2-Methylnaphthalene (aq)	
2-Methylphenol (aq)	
2-Nitroaniline (aq) <0.001 mg/l TM176 <0.001 <0.001	
2-Nitrophenol (aq) <0.001 mg/l TM176 <0.001 <0.001	
3-Nitroaniline (aq) <0.001 mg/l TM176 <0.001 <0.001	
4-Bromophenylphenylether <0.001 mg/l TM176 <0.001 <0.001 (aq)	
4-Chloro-3-methylphenol (aq)     <0.001 mg/l	
4-Chlorophenylpheny	
4-Methylphenol (aq)	
4-Nitroaniline (aq)	
Azobenzene (aq)	
Acenaphthylene (aq)	
Acenaphthene (aq) <0.001 mg/l TM176 <0.001 <0.001	
Anthracene (aq) <0.001 mg/l TM176 <0.001 <0.001	
bis(2-Chloroethyl)ether (aq) <0.001 mg/l TM176 <0.001 <0.001	
bis(2-Chloroethoxy)methane <0.001 mg/l TM176 <0.001 <0.001	
(aq)   bis(2-Ethylhexyl) phthalate   <0.002 mg/l   TM176   <0.002   <0.002	
(aq)	
Butylbenzyl phthalate (aq) <0.001 mg/l TM176 <0.001 <0.001	
Benzo(b)fluoranthene (aq) <0.001 mg/l TM176 <0.001 <0.001	
Benzo(k)fluoranthene (aq) <0.001 mg/l TM176 <0.001 <0.001	
Benzo(a)pyrene (aq) <0.001 mg/l TM176 <0.001 <0.001	
Benzo(g,h,i)perylene (aq) <0.001 mg/l TM176 <0.001 <0.001	
Carbazole (aq) <0.001 mg/l TM176 <0.001 <0.001	
Chrysene (aq) <0.001 mg/l TM176 <0.001 <0.001	

## **ALcontrol Laboratories Analytical Services**

 SDG:
 100820-109
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

SVOC MS (W) - Aqueous  Results Legend Customer Sample Ref. BHE02 SWE10												
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	BHE02	SWE10								
M mCERTS accredited. aq Aqueous / settled sample. diss.filt tot.unfilt tot.unfilt * subcontracted test. ** y recovery of the surrogate	Da	Depth (m) sample Type ate Sampled ite Received	Water(GW/SW) 18/08/2010 20/08/2010	Water(GW/SW) 18/08/2010 20/08/2010								
standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Lab Sa AGS	SDG Ref imple No.(s) S Reference	100820-109 1985163	100820-109 1984939								
Component Dibenzofuran (aq)	LOD/Units <0.001 mg/l	Method TM176	<0.001	<0.001								
n-Dibutyl phthalate (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
Diethyl phthalate (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
Dibenzo(a,h)anthracene (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
Dimethyl phthalate (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
n-Dioctyl phthalate (aq)	<0.005 mg/l	TM176	<0.005	<0.005								
Fluoranthene (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
Fluorene (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
Hexachlorobenzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
Hexachlorobutadiene (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
Pentachlorophenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
Phenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
n-Nitroso-n-dipropylamine (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
Hexachloroethane (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
Nitrobenzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
Naphthalene (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
Isophorone (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
Hexachlorocyclopentadiene (aq)	<0.001 mg/l	TM176	<0.002	<0.002								
Phenanthrene (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
Indeno(1,2,3-cd)pyrene (aq)	<0.001 mg/l	TM176	<0.001	<0.001								
Pyrene (aq)	<0.001 mg/l	TM176	<0.001	<0.001								

## **ALcontrol Laboratories Analytical Services**

 SDG:
 100820-109
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

TPH CWG (W)						
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	BHE02	SWE10		
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)				
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Water(GW/SW)	Water(GW/SW)		
* subcontracted test.		ate Sampled te Received	18/08/2010	18/08/2010		
standard to check the efficiency		SDG Ref	20/08/2010 100820-109	20/08/2010 100820-109		
of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1985163	1984939		
the samples are not corrected for this recovery.	AGS	S Reference				
Component	LOD/Units	Method				
Total Aliphatics >C5-C35 (aq)	<0.01 mg/l	TM174	0.566	<0.01		
Total Aromatics >C6-C35	<0.01 mg/l	TM174	0.172	<0.01		
(aq)	40.04//	T1474	0.700	<0.01		
Total Aliphatics & Aromatics >C5-35 (aq)	<0.01 mg/l	TM174	0.738	<0.01		
Aliphatics >C12-C16 (aq)	<0.01 mg/l	TM174	0.127	<0.01		
Aromatics >EC12-EC16	<0.01 mg/l	TM174	<0.01	<0.01		
(aq)						
Aliphatics >C16-C21 (aq)	<0.01 mg/l	TM174	0.26	<0.01		
Aromatics >EC16-EC21	<0.01 mg/l	TM174	0.055	<0.01		
(aq) Aliphatics >C21-C35 (aq)	<0.01 mg/l	TM174	0.179	<0.01		
Aromatics >EC21-EC35	<0.01 mg/l	TM174	0.117	<0.01		
(aq) Total Aliphatics >C12-C35	<0.01 mg/l	TM174	0.566	<0.01		
(aq)	~0.04"	TN4474	0.470	<b>-0.04</b>		
Total Aromatics >EC12-EC35 (aq)	<0.01 mg/l	TM174	0.172	<0.01		
Total Aliphatics & Aromatics	<0.01 mg/l	TM174	0.738	<0.01		
>C12-C35 (Aqueous) GRO Surrogate %	%	TM245	101	106		
recovery**						
Benzene	<0.007 mg/l	TM245	<0.007 #	<0.007 #		
Toluene	<0.004 mg/l	TM245	<0.004	<0.004		
Ethylbenzene	<0.005 mg/l	TM245	<b>*</b>	<b>*</b>		
Lutyiberizerie	40.005 mg/r	TIVIZ-TO	40.005	40.005		
m,p-Xylene	<0.008 mg/l	TM245	<0.008 #	<0.008 #		
o-Xylene	<0.003 mg/l	TM245	<0.003	<0.003		
V	<0.01 mg/l	TMO45	#	<b>*</b>		
m,p,o-Xylene	<0.01 Hig/i	TM245	<0.01 #	~0.01 #		
BTEX, Total	<0.01 mg/l	TM245	<0.01	<0.01		
Methyl tertiary butyl ether	<0.003 mg/l	TM245	<0.003	<b>*</b>		
(MTBE)			#	#		
GRO >C5-C12	<0.05 mg/l	TM245	<0.05 #	<0.05 #		
Aliphatics >C5-C6	<0.01 mg/l	TM245	<0.01	<0.01		
Aliphatics >C6-C8	<0.01 mg/l	TM245	<0.01	<0.01		
Aliphatics >C8-C10	<0.01 mg/l	TM245	<0.01	<0.01		
Aliphatics >C10-C12	<0.01 mg/l	TM245	<0.01	<0.01		
Total Aliphatics >C5-C12	<0.01 mg/l	TM245	<0.01	<0.01		
·	, and the second					
Aromatics >C6-C7	<0.01 mg/l	TM245	<0.01	<0.01		
Aromatics >C7-C8	<0.01 mg/l	TM245	<0.01	<0.01		
Aromatica > F.C.9 F.C.4.0						
Aromatics >EC8-EC10	<0.01 mg/l	TM245	<0.01	<0.01		
Aromatics >EC10-EC12	<0.01 mg/l	TM245	<0.01	<0.01		
Total Aromatics >C6-C12	<0.01 mg/l	TM245	<0.01	<0.01		+

## **ALcontrol Laboratories Analytical Services**

 SDG:
 100820-109
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

voc	MS (W)						
	Results Legend ISO17025 accredited.	Customer	Sample Ref.	BHE02	SWE10		
M aq diss.filt tot.unfilt *	mCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample. Total / unfiltered sample. subcontracted test. % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	Da Da Lab Sa AGS	Depth (m) ample Type ite Sampled te Received SDG Ref mple No.(s) S Reference	Water(GW/SW) 18/08/2010 20/08/2010 100820-109 1985163	Water(GW/SW) 18/08/2010 20/08/2010 100820-109 1984939		
Compo Dibrom	ofluoromethane**	LOD/Units %	TM208	111	109		
Toluene	e-d8**	%	TM208	101	99.6		
4-Brom	ofluorobenzene**	%	TM208	101	102		
Dichlor	odifluoromethane	<0.007 mg/l	TM208	<0.007	<0.007		
Chloror	nethane	<0.009 mg/l	TM208	<b>*</b>	<b>*</b>		
Vinyl ch	nloride	<0.0012	TM208	<b>*</b>	<b>*</b> <0.0012		
Bromor	nethane	mg/l <0.002 mg/l	TM208	<b>#</b> <0.002	<b>*</b>		
Chloroe	ethane	<0.0025	TM208	<b>*</b> <0.0025	<b>*</b> <0.0025		
Trichlor	ofluoromethane	mg/l <0.0013	TM208	<b>#</b> <0.0013	<b>*</b>		
1,1-Dic	hloroethene	mg/l <0.0012	TM208	# 0.00648	<b>*</b>		
Carbon	disulphide	mg/l <0.0013	TM208	<b>*</b> <0.0013	<b>*</b> <0.0013		
	omethane	mg/l <0.0037	TM208	<b>*</b>	<b>*</b>		
Methyl	tertiary butyl ether	mg/l <0.0016	TM208	<b>*</b>	<b>*</b> <0.0016		
(MTBE		mg/l <0.0019	TM208	<b>*</b>	<b>*</b>		
	hloroethane	mg/l <0.0012	TM208	0.00998	<0.0012		
	Dichloroethene	mg/l <0.0023	TM208	<0.0023	<0.0023		
	hloropropane	mg/l <0.0038	TM208	<0.0023 # <0.0038	<0.0023 # <0.0038		
	chloromethane	mg/l <0.0019	TM208	<0.0036 # <0.0019	<0.0038 # <0.0019		
Chlorof		mg/l <0.0018	TM208	<0.0019 # <0.0018	<0.0019 # <0.0018		
	richloroethane	mg/l <0.0013	TM208	0.0147	<0.0018 # <0.0013		
	hloropropene	mg/l <0.0013	TM208	<0.0147 #	<0.0013 # <0.0013		
		mg/l		#	#		
	tetrachloride	<0.0014 mg/l	TM208	<0.0014 #	<0.0014 #		
	hloroethane	<0.0033 mg/l	TM208	<0.0033	<0.0033		
Benzen		<0.0013 mg/l	TM208	<0.0013	<0.0013 #		
	oethene	<0.0025 mg/l	TM208	<0.0025 #	<0.0025 #		
	hloropropane	<0.003 mg/l	TM208	<0.003 #	<0.003 #		
Dibrom	omethane	<0.0027 mg/l	TM208	<0.0027 #	<0.0027 #		
	dichloromethane	<0.0009 mg/l	TM208	<0.0009 #	<0.0009 #		
cis-1,3-	Dichloropropene	<0.0019 mg/l	TM208	<0.0019 #	<0.0019 #		
Toluene	е	<0.0014 mg/l	TM208	<0.0014 #	<0.0014 #		
rans-1	3-Dichloropropene	<0.0035 mg/l	TM208	<0.0035 #	<0.0035 #		
1,1,2-T	richloroethane	<0.0022 mg/l	TM208	<0.0022 #	<0.0022		
1,3-Dic	hloropropane	<0.0022 mg/l	TM208	<0.0022 #	<0.0022		
Гetrach	loroethene	<0.0015 mg/l	TM208	<0.0015	<0.0015		
Dibrom	ochloromethane	<0.0017 mg/l	TM208	<0.0017 #	<0.0017		
1,2-Dib	romoethane	<0.0023	TM208	<0.0023	<0.0023		
Chlorob	penzene	mg/l <0.0035	TM208	<b>*</b> <0.0035	<0.0035		
1,1,1,2-	Tetrachloroethane	mg/l <0.0013	TM208	<0.0013	<0.0013		
Ethylbe	nzene	mg/l <0.0025	TM208	<b>*</b>	<b>*</b>		

## **ALcontrol Laboratories Analytical Services**

 SDG:
 100820-109
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

					1.10
VOC	MS (W)				
	Results Legend ISO17025 accredited.	Customer	Sample Ref.	BHE02	SWE10
aq	mCERTS accredited. Aqueous / settled sample.		Depth (m)		
diss.filt tot.unfilt	Dissolved / filtered sample. Total / unfiltered sample.		ample Type ate Sampled	Water(GW/SW)	Water(GW/SW)
**	subcontracted test. % recovery of the surrogate	Da	te Received		18/08/2010 20/08/2010
	standard to check the efficiency of the method. The results of the		SDG Ref		100820-109
	individual compounds within the samples are not corrected		mple No.(s) S Reference	1985163	1984939
Compo	for this recovery.	LOD/Units	Method		
m,p-Xy		<0.0025	TM208	<0.0025	<0.0025
o-Xyler	ne	mg/l <0.0017	TM208	<b>*</b>	<b>*</b>
Styrene	2	mg/l <0.0012	TM208	<b>*</b>	<b>*</b>
Bromof		mg/l <0.003 mg/l	TM208	<0.003	<0.003
				#	#
Isoprop	pylbenzene	<0.0014 mg/l	TM208	<0.0014 #	<0.0014 #
1,1,2,2	-Tetrachloroethane	<0.0052 mg/l	TM208	<0.0052	<0.0052
1,2,3-T	richloropropane	<0.0078	TM208	<0.0078 #	<0.0078
Bromot	penzene	mg/l <0.002 mg/l	TM208	<0.002	<0.002
Propylb	penzene	<0.0026	TM208	<b>*</b>	<b>*</b>
		mg/l		#	#
2-Chior	rotoluene	<0.0019 mg/l	TM208	<0.0019 #	<0.0019 #
1,3,5-T	rimethylbenzene	<0.0018 mg/l	TM208	<0.0018 #	<0.0018 #
4-Chlor	otoluene	<0.0019	TM208	<0.0019	<0.0019
tert-But	tylbenzene	mg/l <0.002 mg/l	TM208	<0.002	<0.002
1,2.4-T	rimethylbenzene	<0.0017	TM208	<b>*</b>	<b>*</b>
		mg/l		#	#
sec-Bu	tylbenzene	<0.0017 mg/l	TM208	<0.0017 #	<0.0017 #
4-iso-P	ropyltoluene	<0.0026 mg/l	TM208	<0.0026 #	<0.0026 #
1,3-Dic	hlorobenzene	<0.0022	TM208	<0.0022	<0.0022
1,4-Dic	hlorobenzene	mg/l <0.0027	TM208	<0.0027	<b>*</b>
n Dutul	honzono	mg/l		#	#
	benzene	<0.002 mg/l	TM208	<0.002 #	<0.002 #
1,2-Dic	hlorobenzene	<0.0037 mg/l	TM208	<0.0037	<0.0037
	romo-3-chloropropan	<0.0098	TM208	<0.0098	<0.0098
e 1,2,4-T	richlorobenzene	mg/l <0.0023	TM208	<0.0023	<0.0023
	nlorobutadiene	mg/l <0.0025	TM208	<b>*</b>	<b>*</b> <0.0025
		mg/l		#	#
tert-Am (TAME	lyl methyl ether	<0.001 mg/l	TM208	<0.001 #	<0.001 #
Naphth		<0.0035 mg/l	TM208	<0.0035 #	<0.0035 #
1,2,3-T	richlorobenzene	<0.0031	TM208	<0.0031	<0.0031
1,3.5-T	richlorobenzene	mg/l <0.01 mg/l	TM208	<b>*</b>	<b>*</b>
1,0,0-1	TIGHIOTODGHZGHG	-0.01 mg/l	I IVIZUO	<b>\U.U</b> 1	<b>~U.U</b> 1

## **ALcontrol Laboratories Analytical Services**

 SDG:
 100820-109
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSC04	WSC08	WSD09	WSE10	WSE17	WSE26
M mCERTS accredited. aq Aqueous / settled sample.		Depth (m)						
diss.filt Dissolved / filtered sample.		Sample Type	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
tot.unfilt Total / unfiltered sample.  * subcontracted test.		ate Sampled	18/08/2010	18/08/2010	18/08/2010	18/08/2010	18/08/2010	18/08/2010
** % recovery of the surrogate standard to check the efficiency		te Received	20/08/2010	20/08/2010	20/08/2010	20/08/2010	20/08/2010	20/08/2010
of the method. The results of the		SDG Ref ample No.(s)	100820-109 1985060	100820-109 1985144	100820-109 1985024	100820-109 1984999	100820-109 1985185	100820-109 1984905
individual compounds within the samples are not corrected		S Reference	1303000	1303144	1303024	1304333	1303103	1304303
for this recovery.  Component	LOD/Units	Method						
Ammoniacal Nitrogen as	<0.3 mg/l	TM099	0.456	1.66	2.48	<0.3	2.21	0.937
NH4			#	#	#	#	#	#
Arsenic (diss.filt)	<0.00012 mg/l	TM152	0.00277 #	0.00137	0.00181	0.000527	0.00374 #	0.000729 #
Boron (diss.filt)	<0.0094	TM152	0.332	1.93	1.88	1.7	0.272	3.91
0 1 1 (11 511)	mg/l		#	#		#	#	#
Cadmium (diss.filt)	<0.0001 mg/l	TM152	<0.0001 #	0.00012	<0.0001	<0.0001 #	0.000178 #	0.000116 #
Chromium (diss.filt)	<0.00022	TM152	0.00513	0.00874	0.0142	0.0113	0.0108	0.0125
O ( P C10)	mg/l	T14450	#	#	#	#	#	#
Copper (diss.filt)	<0.00085 mg/l	TM152	0.00342 #	0.00784	0.00464	0.00168	0.00825 #	0.00613 #
Lead (diss.filt)	<0.00002	TM152	0.00005	0.0007	0.000168	0.000232	0.000028	0.000156
Nickel (diec filt)	mg/l	TM150	0.00556	0.0171	0.0426	0.00672	0.0512	0.0154
Nickel (diss.filt)	<0.00015 mg/l	TM152	0.00556 #	0.0171	0.0426	0.00672	0.0512 #	0.0154 #
Selenium (diss.filt)	<0.00039	TM152	0.00815	0.00606	0.00418	0.000835	0.00483	0.00163
Zinc (dies filt)	mg/l	TM150	0.00251	0.00808	0.00741	0.00292	0.0102	0.00546
Zinc (diss.filt)	<0.00041 mg/l	TM152	0.00251 #	0.00898	0.00741	0.00292	0.0102 #	0.00546 #
EPH Range >C10 - C40	<0.046 mg/l	TM172		<0.046	0.168	0.0673	"	0.0731
(aq)	<0.01 · "	TM172		# <0.01	0.0192	# <0.01		# <0.01
EPH Band >C10-C12 (aq)	<0.01 mg/l	HVIT72		<0.01	0.0182	<0.01		<0.01
EPH Band >C12-C16 (aq)	<0.01 mg/l	TM172		<0.01	0.0385	<0.01		<0.01
EPH Band >C16-C21 (aq)	<0.01 mg/l	TM172		<0.01	0.0592	0.0454		0.0529
E. 11 Dana > 010-021 (aq)	-0.01 Hig/I	1101172		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	0.0392	0.0404		0.0029
EPH Band >C21-C28 (aq)	<0.01 mg/l	TM172		<0.01	0.0393	0.0155		0.0147
EPH Band >C35-C40 (aq)	<0.01 mg/l	TM172		<0.01	<0.01	<0.01		<0.01
Li 11 Bana 2 000-040 (aq)	-0.01 mg/l	TIVITIZ		-0.01	-0.01	-0.01		-0.01
EPH Band >C28-C35 (aq)	<0.01 mg/l	TM172		<0.01	0.0113	<0.01		<0.01
Mercury (diss.filt)	<0.00001	TM183	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001
	mg/l		#	#	#	#	#	#
Sulphate	<3 mg/l	TM184	352	1660	1650	84	1120	2230
Chloride	<2 mg/l	TM184	90.2	367	23.8	67.1	122	61.7
	,		#	#	#	#	#	#
рH	<1 pH Units	TM256	7.95 #	8 #	7.45	7.66	7.56 #	7.85 #
			#	#	#	#	#	#
					1			

## **ALcontrol Laboratories Analytical Services**

SDG: 100820-109 Customer: Entec UK - MOD Ltd
Job: H ENTEC MOD-12 Attention: Simon Howard

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon F

 Client Reference:
 26999
 Order No.:
 228113

 Location:
 Report No:
 94926

PAH Spec MS - Aqueous (W)								
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSC04	WSC08	WSE17	WSE26		
M mCERTS accredited.  aq Aqueous / settled sample. tot.unfilt tot.unfilt subcontracted test. " % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within	Da Da Lab Sa	Depth (m) sample Type ate Sampled te Received SDG Ref ample No.(s) S Reference	Water(GW/SW) 18/08/2010 20/08/2010 100820-109 1985060	Water(GW/SW) 18/08/2010 20/08/2010 100820-109 1985144	Water(GW/SW) 18/08/2010 20/08/2010 100820-109 1985185	Water(GW/SW) 18/08/2010 20/08/2010 100820-109 1984905		
the samples are not corrected for this recovery.								
Component	<b>LOD/Units</b> <0.0001	Method TM178	<0.0001	0.000423	<0.0001	<0.0001		
Naphthalene (aq)	mg/l	TIVITA	<0.0001 #	0.000423 #	~0.0001 #	~0.0001 #		
Acenaphthene (aq)	<0.000015 mg/l	TM178	<0.000015 #	0.000044 #	<0.000015 #	<0.000015 #		
Acenaphthylene (aq)	<0.000011	TM178	<0.000011	0.000012	<0.000011	<0.000011		
Fluoranthene (aq)	mg/l <0.000014	TM178	<0.000014	0.000026	<0.00014	0.000037		
Anthracene (aq)	mg/l <0.000015	TM178	<b>*</b>	<b>*</b>	<0.00015	<b>*</b>		
Phenanthrene (aq)	mg/l <0.000022	TM178	<b>*</b>	<b>*</b>	<0.000022	<b>*</b>		
	mg/l		#	#	#	#		
Fluorene (aq)	<0.000014 mg/l	TM178	<0.000014 #	<0.000014 #	<0.000014 #	<0.000014 #		
Chrysene (aq)	<0.000013 mg/l	TM178	<0.000013 #	<0.000013 #	<0.000013	0.000034		
Pyrene (aq)	<0.000015	TM178	<0.000015	0.000056	<0.000015	0.000052		
Benzo(a)anthracene (aq)	mg/l <0.000017	TM178	0.000018	<0.000017	0.000021	0.000042		
Benzo(b)fluoranthene (aq)	mg/l <0.000023	TM178	<0.000023	<0.000023	<0.000023	0.000071		
Benzo(k)fluoranthene (aq)	mg/l <0.000027	TM178	<b>*</b>	<b>*</b>	<b>*</b>	# 0.000061		
Benzo(a)pyrene (aq)	mg/l <0.000009	TM178	<b>*</b>	<0.00009		0.000075		
	mg/l		#	#	#	#		
Dibenzo(a,h)anthracene (aq)	<0.000016 mg/l	TM178	<0.000016 #	<0.000016 #	<0.000016 #	0.000027 #		
Benzo(g,h,i)perylene (aq)	<0.000016 mg/l	TM178	<0.000016 #	<0.000016 #	<0.00016	0.000053 #		
Indeno(1,2,3-cd)pyrene (aq)	<0.000014 mg/l	TM178	<0.000014	<0.000014 #	<0.000014	0.000049		
Polyaromatic hydrocarbons,	<0.0001	TM178	<0.0001	0.000561	<0.0001	0.000444		
Total USEPA 16 (aq) Naphthalene-d8	mg/l %	TM178	100	100	100	100		
Acenaphthene-d10	%	TM178	100	100	100	100		
Phenanthrene-d10	%	TM178	100	100	100	100		
Chrysene-d12	%	TM178	100	100	100	100		
Perylene-d12	%	TM178	100	100	100	100		

## **ALcontrol Laboratories Analytical Services**

 SDG:
 100820-109
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

svo	C MS (W) - Aqued				
	Results Legend ISO17025 accredited. mCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample.	Custor	Depth (m Sample Typ	)	WSC08 Water(GW/SW)
**	Total / unfiltered sample. subcontracted test. % recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected	Lab	Date Sample Date Receive SDG Re Sample No.(s GS Referenc	d 18/08/2010 d 20/08/2010 ff 100820-109 1985060	18/08/2010 20/08/2010 100820-109 1985144
Compo	for this recovery.	LOD/Unit			
1,2,4-T	richlorobenzene (aq)	<0.001 m		<0.001	<0.001
1,2-Dic	chlorobenzene (aq)	<0.001 m	g/I TM176	0.00249	<0.001
1,3-Dic	chlorobenzene (aq)	<0.001 m	y/I TM176	<0.001	<0.001
1,4-Dic	chlorobenzene (aq)	<0.001 m	g/I TM176	<0.001	<0.001
2,4,5-T	richlorophenol (aq)	<0.001 m	g/l TM176	<0.001	<0.001
2,4,6-T	richlorophenol (aq)	<0.001 m	<sub>J</sub> /I TM176	<0.001	<0.001
2,4-Dic	chlorophenol (aq)	<0.001 m	g/I TM176	<0.001	<0.001
2,4-Dir	nethylphenol (aq)	<0.001 m	g/I TM176	<0.001	<0.001
2,4-Dir	nitrotoluene (aq)	<0.001 m	y/I TM176	<0.001	<0.001
2,6-Dir	nitrotoluene (aq)	<0.001 m	j/l TM176	<0.001	<0.001
2-Chlo	ronaphthalene (aq)	<0.001 m	ı/l TM176	<0.001	<0.001
2-Chlo	rophenol (aq)	<0.001 m	g/I TM176	<0.001	<0.001
2-Meth	ylnaphthalene (aq)	<0.001 m	g/l TM176	<0.001	<0.001
2-Meth	ylphenol (aq)	<0.001 m	g/I TM176	<0.001	<0.001
2-Nitro	aniline (aq)	<0.001 m	y/I TM176	<0.001	<0.001
2-Nitro	phenol (aq)	<0.001 m	ı/l TM176	<0.001	<0.001
	aniline (aq)	<0.001 m		<0.001	<0.001
	nophenylphenylether	<0.001 m		<0.001	<0.001
(aq)	ro-3-methylphenol	<0.001 m		<0.001	<0.001
(aq)					
	roaniline (aq)	<0.001 m		<0.001	<0.001
(aq)	rophenylphenylether	<0.001 m		<0.001	<0.001
	ylphenol (aq)	<0.001 m		<0.001	<0.001
	phenol (aq)	<0.001 m		<0.001	<0.001
	aniline (aq)	<0.001 m		<0.001	<0.001
	nzene (aq)	<0.001 m		<0.001	<0.001
Acena	ohthylene (aq)	<0.001 m	g/I TM176	<0.001	<0.001
Acena	ohthene (aq)	<0.001 m	J/I TM176	<0.001	<0.001
Anthra	cene (aq)	<0.001 m	ı/I TM176	<0.001	<0.001
bis(2-C	Chloroethyl)ether (aq)	<0.001 m	J/I TM176	<0.001	<0.001
	Chloroethoxy)methane	<0.001 m	y/I TM176	<0.001	<0.001
	thylhexyl) phthalate	<0.002 m	g/I TM176	<0.002	<0.002
(aq) Benzo	(a)anthracene (aq)	<0.001 m	J/I TM176	<0.001	<0.001
Butylbe	enzyl phthalate (aq)	<0.001 m	g/I TM176	<0.001	<0.001
Benzo	(b)fluoranthene (aq)	<0.001 m	ı/l TM176	<0.001	<0.001
Benzo	(k)fluoranthene (aq)	<0.001 m	g/I TM176	<0.001	<0.001
Benzo	(a)pyrene (aq)	<0.001 m	J/I TM176	<0.001	<0.001
	(g,h,i)perylene (aq)	<0.001 m		<0.001	<0.001
	zole (aq)	<0.001 m		<0.001	<0.001
	ene (aq)	<0.001 m		<0.001	<0.001
Ornyse	πο (αγ)	-0.001111	j 1 1V1170	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	NO.001

## **ALcontrol Laboratories Analytical Services**

 SDG:
 100820-109
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

SVOC MS (W) - Aqueo	ous					
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSC04	WSC08		
M mCERTS accredited.  aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. subcontracted test. " recovery of the surrogate	Da	Depth (m) ample Type ate Sampled te Received	Water(GW/SW) 18/08/2010 20/08/2010	Water(GW/SW) 18/08/2010 20/08/2010		
standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.	AGS	SDG Ref imple No.(s) S Reference Method	100820-109 1985060	100820-109 1985144		
Component Dibenzofuran (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
n-Dibutyl phthalate (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
Diethyl phthalate (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
Dibenzo(a,h)anthracene	<0.001 mg/l	TM176	<0.001	<0.001		
(aq) Dimethyl phthalate (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
n-Dioctyl phthalate (aq)	<0.005 mg/l	TM176	<0.005	<0.005		
Fluoranthene (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
Fluorene (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
Hexachlorobenzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
Hexachlorobutadiene (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
Pentachlorophenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
Phenol (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
n-Nitroso-n-dipropylamine (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
Hexachloroethane (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
Nitrobenzene (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
Naphthalene (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
Isophorone (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
Hexachlorocyclopentadiene (aq)	<0.001 mg/l	TM176	<0.002	<0.002		
Phenanthrene (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
Indeno(1,2,3-cd)pyrene (aq)	<0.001 mg/l	TM176	<0.001	<0.001		
Pyrene (aq)	<0.001 mg/l	TM176	<0.001	<0.001		

## **ALcontrol Laboratories Analytical Services**

 SDG:
 100820-109
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

TPH CWG (W)								
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSC04	WSE17				
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)						
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type ate Sampled	Water(GW/SW) 18/08/2010	Water(GW/SW) 18/08/2010				
* subcontracted test.  ** % recovery of the surrogate		te Received	20/08/2010	20/08/2010				
standard to check the efficiency of the method. The results of the		SDG Ref	100820-109	100820-109				
individual compounds within the samples are not corrected	Lab Sa	mple No.(s) S Reference	1985060	1985185				
for this recovery.		Method						
Component Total Aliphatics >C5-C35	<0.01 mg/l	TM174	0.793	<0.01				
(aq)	_							
Total Aromatics >C6-C35 (aq)	<0.01 mg/l	TM174	<0.01	<0.01				
Total Aliphatics & Aromatics >C5-35 (aq)	<0.01 mg/l	TM174	0.793	<0.01				
Aliphatics >C12-C16 (aq)	<0.01 mg/l	TM174	<0.01	<0.01				
Aromatics >EC12-EC16	<0.01 mg/l	TM174	<0.01	<0.01				
(aq) Aliphatics >C16-C21 (aq)	<0.01 mg/l	TM174	<0.01	<0.01				
Aromatics >EC16-EC21	<0.01 mg/l	TM174	<0.01	<0.01				
(aq) Aliphatics >C21-C35 (aq)	<0.01 mg/l	TM174	<0.01	<0.01				
Aromatics >EC21-EC35	<0.01 mg/l	TM174	<0.01	<0.01				
(aq) Total Aliphatics >C12-C35	<0.01 mg/l	TM174	<0.01	<0.01				
(aq)	•							
Total Aromatics >EC12-EC35 (aq)	<0.01 mg/l	TM174	<0.01	<0.01				
Total Aliphatics & Aromatics >C12-C35 (Aqueous)	<0.01 mg/l	TM174	<0.01	<0.01				
GRO Surrogate % recovery**	%	TM245	103	91				
Benzene	<0.007 mg/l	TM245	<0.007	<0.007				
Toluene	<0.004 mg/l	TM245	<0.004	<0.004				
Ethylbenzene	<0.005 mg/l	TM245	<0.005 #	<0.005				
m,p-Xylene	<0.008 mg/l	TM245	<0.008	<0.008				
o-Xylene	<0.003 mg/l	TM245	<0.003	<0.003				
m,p,o-Xylene	<0.01 mg/l	TM245	<0.01	<0.01				
BTEX, Total	<0.01 mg/l	TM245	<0.01	<0.01				
Methyl tertiary butyl ether	<0.003 mg/l	TM245	<0.003	<0.003				
(MTBE) GRO >C5-C12	<0.05 mg/l	TM245	0.809	<0.05				
Aliphatics >C5-C6	<0.01 mg/l	TM245	0.0381	<b>*</b>				
Aliphatics >C6-C8	<0.01 mg/l	TM245	0.755	<0.01				
Aliphatics >C8-C10	<0.01 mg/l	TM245	<0.01	<0.01				
Aliphatics >C10-C12	<0.01 mg/l	TM245	<0.01	<0.01				
Total Aliphatics >C5-C12	<0.01 mg/l	TM245	0.793	<0.01				
Aromatics >C6-C7								
	<0.01 mg/l	TM245	<0.01	<0.01				
Aromatics >C7-C8	<0.01 mg/l	TM245	<0.01	<0.01				
Aromatics >EC8-EC10	<0.01 mg/l	TM245	<0.01	<0.01				
Aromatics >EC10-EC12	<0.01 mg/l	TM245	<0.01	<0.01				
Total Aromatics >C6-C12	<0.01 mg/l	TM245	<0.01	<0.01				

## **ALcontrol Laboratories Analytical Services**

 SDG:
 100820-109
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

VOC MS (W)								
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSC04	WSC08				
M mCERTS accredited.  aq Aqueous / settled sample.		Depth (m)						
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type ite Sampled	Water(GW/SW)	Water(GW/SW)				
* subcontracted test.  ** % recovery of the surrogate		te Received	18/08/2010 20/08/2010	18/08/2010 20/08/2010				
standard to check the efficiency of the method. The results of the	.	SDG Ref	100820-109	100820-109				
individual compounds within the samples are not corrected		mple No.(s) Reference	1985060	1985144				
for this recovery.  Component	LOD/Units	Method						
Dibromofluoromethane**	%	TM208	109	109				
Toluene-d8**	%	TM208	99.9	99.5				
4-Bromofluorobenzene**	%	TM208	103	103				
Dichlorodifluoromethane	<0.007 mg/l	TM208	<0.007	<0.007				
Chloromethane	<0.009 mg/l	TM208	<0.009 #	<0.009 #				
Vinyl chloride	<0.0012 mg/l	TM208	0.126 #	<0.0012 #				
Bromomethane	<0.002 mg/l	TM208	<0.002	<0.002				
Chloroethane	<0.0025 mg/l	TM208	<0.0025 #	<0.0025 #				
Trichlorofluoromethane	<0.0013 mg/l	TM208	<0.0013 #	<0.0013 #				
1,1-Dichloroethene	<0.0012 mg/l	TM208	0.00674	<0.0012				
Carbon disulphide	<0.0013 mg/l	TM208	<0.0013	<0.0013				
Dichloromethane	<0.0037 mg/l	TM208	<0.0037	<0.0037				
Methyl tertiary butyl ether (MTBE)	<0.0016 mg/l	TM208	0.0308	<0.0016				
trans-1,2-Dichloroethene	<0.0019 mg/l	TM208	0.046	<0.0019 #				
1,1-Dichloroethane	<0.0012 mg/l	TM208	<0.0012	<0.0012				
cis-1,2-Dichloroethene	<0.0023 mg/l	TM208	2.36	<0.0023				
2,2-Dichloropropane	<0.0038 mg/l	TM208	<0.0038	<0.0038				
Bromochloromethane	<0.0019 mg/l	TM208	<0.0019	<0.0019				
Chloroform	<0.0018 mg/l	TM208	<0.0018 #	<0.0018 #				
1,1,1-Trichloroethane	<0.0013 mg/l	TM208	<0.0013 #	<0.0013 #				
1,1-Dichloropropene	<0.0013 mg/l	TM208	<0.0013 #	<0.0013				
Carbontetrachloride	<0.0014 mg/l	TM208	<0.0014 #	<0.0014 #				
1,2-Dichloroethane	<0.0033 mg/l	TM208	<0.0033	<0.0033				
Benzene	<0.0013 mg/l	TM208	<0.0013 #	<0.0013 #				
Trichloroethene	<0.0025 mg/l	TM208	0.682 #	<0.0025 #				
1,2-Dichloropropane	<0.003 mg/l	TM208	<0.003 #	<0.003				
Dibromomethane	<0.0027 mg/l	TM208	<0.0027 #	<0.0027 #				
Bromodichloromethane	<0.0009 mg/l	TM208	<0.0009 #	<0.0009 #				
cis-1,3-Dichloropropene	<0.0019 mg/l	TM208	<0.0019 #	<0.0019				
Toluene	<0.0014 mg/l	TM208	<0.0014	<0.0014 #				
trans-1,3-Dichloropropene	<0.0035 mg/l	TM208	<0.0035	<0.0035				
1,1,2-Trichloroethane	<0.0022 mg/l	TM208	<0.0022	<0.0022				
1,3-Dichloropropane	<0.0022 mg/l	TM208	<0.0022	<0.0022				
Tetrachloroethene	<0.0015 mg/l	TM208	<0.0015	<0.0015				
Dibromochloromethane	<0.0017 mg/l	TM208	<0.0017	<0.0017				
1,2-Dibromoethane	<0.0023 mg/l	TM208	<0.0023	<0.0023				
Chlorobenzene	<0.0035 mg/l	TM208	<0.0035 #	<0.0035 #				
1,1,1,2-Tetrachloroethane	<0.0013 mg/l	TM208	<0.0013	<0.0013				
Ethylbenzene	<0.0025 mg/l	TM208	<0.0025 #	<0.0025				
	my/i		#	#				

## **ALcontrol Laboratories Analytical Services**

 SDG:
 100820-109
 Customer:
 Entec UK - MOD Ltd

 Job:
 H\_ENTEC\_MOD-12
 Attention:
 Simon Howard

VOC MS (W)						
Results Legend # ISO17025 accredited.	Customer	Sample Ref.	WSC04	WSC08		
M mCERTS accredited. aq Aqueous / settled sample.		Depth (m)				
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		ample Type	Water(GW/SW)	Water(GW/SW)		
* subcontracted test.		ate Sampled te Received	18/08/2010	18/08/2010		
** % recovery of the surrogate standard to check the efficiency		SDG Ref	20/08/2010 100820-109	20/08/2010 100820-109		
of the method. The results of the individual compounds within	Lab Sa	mple No.(s)	1985060	1985144		
the samples are not corrected	AGS	S Reference				
for this recovery.  Component	LOD/Units	Method				
m,p-Xylene	<0.0025	TM208	<0.0025	<0.0025		
o-Xylene	mg/l <0.0017	TM208	<b>*</b>	<b>*</b>		
	mg/l		#	#		
Styrene	<0.0012 mg/l	TM208	<0.0012 #	<0.0012 #		
Bromoform	<0.003 mg/l	TM208	<0.003	<0.003		
Isopropylbenzene	<0.0014	TM208	<b>*</b>	<0.0014		
1,1,2,2-Tetrachloroethane	mg/l <0.0052	TM208	<b>*</b>	<b>*</b>		
	mg/l					
1,2,3-Trichloropropane	<0.0078 mg/l	TM208	<0.0078	<0.0078		
Bromobenzene	<0.002 mg/l	TM208	<0.002 #	<0.002 #		
Propylbenzene	<0.0026 mg/l	TM208	<0.0026 #	<0.0026 #		
2-Chlorotoluene	<0.0019	TM208	<0.0019 #	<0.0019 #		
1,3,5-Trimethylbenzene	mg/l <0.0018	TM208	<0.0018	<0.0018		
4-Chlorotoluene	mg/l <0.0019	TM208	<0.0019	<0.0019		
tert-Butylbenzene	mg/l <0.002 mg/l	TM208	<b>*</b>	<b>*</b>		
1,2,4-Trimethylbenzene	<0.0017	TM208	<0.0017	<0.0017		
-	mg/l		#	#		
sec-Butylbenzene	<0.0017 mg/l	TM208	<0.0017 #	<0.0017 #		
4-iso-Propyltoluene	<0.0026 mg/l	TM208	<0.0026 #	<0.0026 #		
1,3-Dichlorobenzene	<0.0022 mg/l	TM208	<0.0022 #	<0.0022		
1,4-Dichlorobenzene	<0.0027	TM208	<0.0027	<0.0027		
n-Butylbenzene	mg/l <0.002 mg/l	TM208	<0.002	<0.002		
1,2-Dichlorobenzene	<0.0037	TM208	<b>*</b>	<b>*</b>		
1,2-Dibromo-3-chloropropan	mg/l <0.0098	TM208	<0.0098	<0.0098		
e 1,2,4-Trichlorobenzene	mg/l <0.0023	TM208	<0.0023	<0.0023		
Hexachlorobutadiene	mg/l <0.0025	TM208	<0.0025 #	<0.0025		
	mg/l		#	#		
tert-Amyl methyl ether (TAME)	<0.001 mg/l	TM208	<0.001 #	<0.001 #		
Naphthalene	<0.0035 mg/l	TM208	<0.0035 #	<0.0035 #		
1,2,3-Trichlorobenzene	<0.0031 mg/l	TM208	<0.0031 #	<0.0031 #		
1,3,5-Trichlorobenzene	<0.01 mg/l	TM208	<0.01	<0.01		

## **ALcontrol Laboratories Analytical Services**



### **Table of Results - Appendix**

REPO	RT KEY			Desulte		( ) 4 025 07 in any inclement to 4 02 v40 7
IXEI OI	\			Results	expressed	as (e.g.) 1.03E-07 is equivalent to 1.03x10-7
NDP	No Determination Possible	#	ISO 17025 Accredited	Subcontracted Test	M	MCERTS Accredited
NFD	No Fibres Detected	PFD	Possible Fibres Detected	Result previously reported (Incremental reports only)	EC	Equivalent Carbon (Aromatics C8-C35)

Note: Method detection limits are no	ot always achievable due to various circumstances beyond	our control	(Filemano de dos)
Method No	Reference	Description	Wet/Dry Sample ¹
TM061	Method for the Determination of EPH,Massachusetts Dept.of EP, 1998	Determination of Extractable Petroleum Hydrocarbons by GC-FID (C10-C40)	
TM099	BS 2690: Part 7:1968 / BS 6068: Part2.11:1984	Determination of Ammonium in Water Samples using the Kone Analyser	
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS	
TM172	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	EPH in Waters	
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID	
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS	
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters	
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry	
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers	
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters	
TM226	In-House Method	Determination of Anions in Waters using Ion Chromatography	
TM245	By GC-FID	Determination of GRO by Headspace in waters	
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter	

<sup>&</sup>lt;sup>1</sup> Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

### **APPENDIX**

#### **APPENDIX**

- Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following:
   NRA Leach tests, flash point, ammonium as NH<sub>4</sub> by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and
   TOF-MS TICS.
- 2. Samples will be run in duplicate upon request, but an additional charge may be incurred.
- 3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. Alcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.
- 4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
- 5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
- 6. When requested, the individual sub sample scheduled will be screened in house for the presence of large asbestos containing material fragments/pieces. If no asbestos containing material is found this will be reported as 'no asbestos containing material detected'. If asbestos containing material is detected it will be removed and analysed by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If asbestos containing material is present no further analysis will be undertaken. At no point is the fibre content of the soil sample determined.
- 7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.
- 8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.
- 9. NDP No determination possible due to insufficient/unsuitable sample.
- 10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals total metals must be requested separately.
- 11. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.
- 12. Results relate only to the items tested
- 13. **Surrogate recoveries** Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 130 %.
- Product analyses Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.
- 15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).
- 16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 14).
- 17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
- 18. Our MCERTS accreditation for PAHs by GCMS applies to all product types apart from Kerosene, where naphthalene only is not accredited.
- 19. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
- 19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.
- 20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
- 21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
- 22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
- 23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

#### LIQUID MATRICES EXTRACTION SUMMARY

ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAH MS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GS MS
SVOC	DCM	LIQUID/LIQUID SHAKE	GC MS
FREE SULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST OCP/OPP	DCM	LIQUID/LIQUID SHAKE	GC MS
TRIAZINE HERBS	DCM	LIQUID/LIQUID SHAKE	GC MS
PHENOLS MS	DCM	SOLID PHASE EXTRACTION	GC MS
TPH by INFRA RED (IR)	TCE	LIQUID/LIQUID EXTRACTION	HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID EXTRACTION	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GC FID

#### SOLID MATRICES EXTRACTION SUMMARY

	001.0	MATRICES EXTRACTION SUMMARY		
ANALYSIS	D/C OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	SISATV
Solvent Extractable Matter	D&C	DCM	SOXTHERM	GRAVIMETRIC
Cyclohexane Ext. Matter	D&C	CYCLOHEXANE	SOXTHERM	GRAVIMETRIC
Thin Layer Chromatography	D&C	DCM	SOXTHERM	IATROSCAN
Elemental Sulphur	D&C	DCM	SOXTHERM	HPLC
Phenols by GCMS	WET	DCM	SOXTHERM	GC-MS
Herbicides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
Pesticides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
EPH (DRO)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Min oil)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Cleaned up)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH CWG by GC	D&C	HEXANE:ACETONE	END OVER END	GC-FID
PCB tot / PCB con	D&C	HEXANE:ACETONE	END OVER END	GC-MS
Polyaromatic Hydrocarbons (MS)	WET	HEXANE:ACETONE	Microwave TM218.	GC-MS
C8-C40 (C6-C40)EZ Flash	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Polyaromatic Hydrocarbons Rapid GC	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Semi Volatile Organic Compounds	WET	DCM:ACETONE	SONICATE	GC-MS

#### **Identification of Asbestos in Bulk Materials**

The results for asbestos identification for soil samples are obtained from possible Asbestos Containing Material, removed during the 'Screening of soils for Asbestos Containing Materials', which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

#### **Visual Estimation Of Fibre Content.**

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: -

Trace – Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in MDHS 100.

The identification of asbestos containing materials falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

## Annex E Radiological Trial Pits







	<i>En</i> tec		Trial Pit	H	DPC	R1	
Proje			Sheet	1 of	1		
Clie		26999	Ground	Level		m AOI	—— D
Con	tractor :		Co-Ordi	inates:	E 46	0368.0	 0
	avator : Spade		D / E	. 1		7198.0	
	ensions : 0.3m x 0.3m		Date Ex	cavated:	15/0	7/2010	
Depth lgdm	Trial Pit Log	Legend	(Thick	m AOD	Water	Sam	
mbgl	Strata Description		-ness)		Strikes	Type I	Data
	MADE GROUND: Thin grass over topsoil with a little brick and concrete and rootlets.		(0.05)				
-	MADE GROUND: Light grey slightly ashy sand and gravel. Gravel is fine, medium and coarse of brick, concrete, limestone, tarmac and stone with some wood fragments and						
-0.1	corroded metal pieces.						
	Elevated activity is from ashy material between 0.2 and 0.3m bgl.						
	Excavated material readings = 1000cps Max down hole reading = 5500cps		(0.25)				
-0.2			(0.20)				
-0.3	Brown sandy CLAY.		(0.01)				
_							
,	Hand dug pit completed at 0.3m bgl.						
-0.4							
_							
-0.5							
_							
-0.6							
-							
0.7							
-0.7							
-							
-0.8							
"							
-							
-0.9							
-							
1	Powel Domayles Surface week - 1000				o ang a managan		
All	neral Remarks: Surface readings = 1000cps count readings from 3" NaI detector						
Ap	proximate grid coordinates						
Logs	ged By: MIFFL All Dimensions in M	letres	Scale:	1:5			

# **Annex F Environmental Risk Assessment Tables**







#### 26999 DSDC Bicester

#### Annex F - Table F.1: Environmental Risk Assessment Tables

Iten No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link	Likelihood of Source-Receptor Linkage	•	Comment
1	Former vehicle fuelling areas (A13, SW of C3 and C19/C19A)	Hydrocarbons (fuels, lubricants and PAHs)	Site Visitors/Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: The hardstanding for the two former fuelling areas areas at C Site currently remain and are not close to buildings decreasing the likelihood of this pollutant linkage (PL). Location of A13 is not known but as A Site is not inhabited (outside of a few people in building A1) the potential of a PL is unlikely.
2	Former vehicle fuelling areas (A13, SW of C3 and C19/C19A)	Hydrocarbons (fuels, lubricants and PAHs)	Construction and Maintenance Workers	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Low	Moderate / Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: The risk to construction/maintenance workers from ground contamination is greater due to direct contact with potentially contaminated material. The risk may be mitigated through use of appropriate PPE and control measures.
3	Former vehicle fuelling areas (A13, SW of C3 and C19/C19A)	Hydrocarbons (fuels, lubricants and PAHs)	Future Site Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: The hardstanding for the two former fuelling areas areas at C Site currently remain and are not close to buildings decreasing the likelihood of this pollutant linkage (PL). Location of A13 is not known but as A Site is not inhabited (outside of a few people in building A1) the potential of a PL is unlikely.
4	Former vehicle fuelling areas (A13, SW of C3 and C19/C19A)	Hydrocarbons (fuels, lubricants and PAHs)	Neighbouring Site Users	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to neighbouring site users is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
5	Former vehicle fuelling areas (A13, SW of C3 and C19/C19A)	Hydrocarbons (fuels, lubricants and PAHs)	Groundwater (secondary aquifer and unproductive strata)	Leaching Migration	Groundwater contamination Toxic: chronic toxicity	Medium	Low	Moderate / Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Potential sources in C Site located on negligible permeability strata. The former location of A13 is not known so could potentially be over a secondary aquifer. Given the age of any spillage and the absence of an ongoing source term and the overlying geology there is less likelihood of a PL.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link	Likelihood of Source-Receptor Linkage	- 3	Comment
6	Former vehicle fuelling areas (A13, SW of C3 and C19/C19A)	Hydrocarbons (fuels, lubricants and PAHs)	Surface Water (site drainage ditches, unnamed on-site ponds, brook to east of A Site)	Leaching Migration Runoff	Water pollution Toxic: chronic toxicity	Medium	Low		Not assessed as part of Phase Two LQA therefore comment remains as follows: Potential sources are located (SW of C3) close to drainage ditches however run-off is not possible and given the overlying geology lateral migration to local ditches and surface water receptors is of a low likelihood limiting this pollutant linkage.
7	Former vehicle fuelling areas (A13, SW of C3 and C19/C19A)	Hydrocarbons (fuels, lubricants and PAHs)	Ecological Receptors	Uptake Direct contact	Phytotoxicity Toxic: chronic toxicity	Mild	Unlikely		Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
8	Former vehicle fuelling areas (A13, SW of C3 and C19/C19A)	Hydrocarbons (fuels, lubricants and PAHs)	Agricultural Receptors	Uptake Direct contact	Phytotoxicity Toxic: chronic toxicity	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
9	Former vehicle fuelling areas (A13, SW of C3 and C19/C19A)	Hydrocarbons (fuels, lubricants and PAHs)	Buildings and Buried Services (current and future)	Direct contact Vapour Migration	Degradation Toxic: chronic toxicity	Mild	Low		Not assessed as part of Phase Two LQA therefore comment remains as follows: No buildings in vicinity and location of services in these areas is not known. Design of new structures in this area may need to consider this potential contaminant source.
10	Former demolished buildings (A6, C8 and C26)	Hydrocarbons (fuels, lubricants, PAHs), solvents, hazardous chemicals, asbestos and metals	Site Visitors/Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely		Not assessed as part of Phase Two LQA therefore comment remains as follows: The hardstanding for the three former buildings at A and C Site currently remain and are not close to buildings decreasing the likelihood of this pollutant linkage (PL). Potential of a PL is unlikely.
11	Former demolished buildings (A6, C8 and C26)	Hydrocarbons (fuels, lubricants, PAHs), solvents, hazardous chemicals, asbestos and metals	Construction and Maintenance Workers	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Low	Moderate / Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: The risk to construction/maintenance workers from ground contamination is greater due to direct contact with potentially contaminated material. The risk may be mitigated through use of appropriate PPE and control measures.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link	Likelihood of Source-Receptor Linkage	- 3	Comment
12	Former demolished buildings (A6, C8 and C26)	Hydrocarbons (fuels, lubricants, PAHs), solvents, hazardous chemicals, asbestos and metals	Future Site Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely		Not assessed as part of Phase Two LQA therefore comment remains as follows: If redevelopment to a commercial/industrial end use occurs in the area of these sources then there is higher likelihood of impact from residual contamination. Due to the age and potential volume of any potential contamination, the risk from volatiles/vapours is less due to the weathered nature of the contamination and the risk from asbestos would be mitigated from the hardstanding expected within a commercial/industrial development. There is still considered to be a unlikely likelihood of a PL.
13	Former demolished buildings (A6, C8 and C26)	Hydrocarbons (fuels, lubricants, PAHs), solvents, hazardous chemicals, asbestos and metals	Neighbouring Site Users	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely		Not assessed as part of Phase Two LOA therefore comment remains as follows: Migration of contaminants associated with this potential source to neighbouring site users is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
14	Former demolished buildings (A6, C8 and C26)	Hydrocarbons (fuels, lubricants, PAHs), solvents, hazardous chemicals, asbestos and metals	Groundwater (secondary aquifer and unproductive strata)	Leaching Migration	Groundwater contamination Toxic: chronic toxicity	Mild	Unlikely		Not assessed as part of Phase Two LQA therefore comment remains as follows: Potential sources at C Site located on negligible permeability strata. A6 is on the fringes of the Secondary aquifer but given the expect contaminant volumes, age, hardstanding and geology a PL is considered to be of a low likelihood.
15	Former demolished buildings (A6, C8 and C26)	Hydrocarbons (fuels, lubricants, PAHs), solvents, hazardous chemicals, asbestos and metals	Surface Water (site drainage ditches, unnamed on-site ponds, brook to east of A Site)	Leaching Migration Runoff	Water pollution Toxic: chronic toxicity	Medium	Unlikely		Not assessed as part of Phase Two LQA therefore comment remains as follows: Potential sources are located close to drainage ditches however run-off is no longer credible and given the overlying geology lateral migration to local ditches and surface water receptors is of a low likelihood limiting this pollutant linkage.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard		Likelihood of Source-Receptor Linkage	Significance: Risk Classification	Comment
16	Former demolished buildings (A6, C8 and C26)	Hydrocarbons (fuels, lubricants, PAHs), solvents, hazardous chemicals, asbestos and metals	Ecological Receptors	Uptake Direct contact	Phytotoxicity Toxic: chronic toxicity	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
17	Former demolished buildings (A6, C8 and C26)	Hydrocarbons (fuels, lubricants, PAHs), solvents, hazardous chemicals, asbestos and metals	Agricultural Receptors	Uptake Direct contact	Phytotoxicity Toxic: chronic toxicity	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
18	Former demolished buildings (A6, C8 and C26)	Hydrocarbons (fuels, lubricants, PAHs), solvents, hazardous chemicals, asbestos and metals	Buildings and Buried Services (current and future)	Direct contact Vapour Migration	Degradation Toxic: chronic toxicity	Mild	Low	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: No buildings in vicinity and location of services in these areas is not known. Design of new structures in this area may need to consider this potential contaminant source.
19	Former burning grounds and landfill (C32 [see items 112-120], C33 [see items 121-129] and A33)	lubricants, PAHs), solvents, metals, asbestos	Site Visitors/Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	This potential pollutant not assessed for A33 as part of Phase Two LQA. Risks in the area of C32 burning ground assessed as items 112-120. Risks in the area of C33 landfill assessed as items 121-129. Therefore comment remains as follows for A33 only: These three areas at A and C Site are not located that close to buildings (especially offices) decreasing the likelihood of this pollutant linkage (PL). Potential of a PL is unlikely unless site staff undertake intrusive works or continue operations in the areas.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard		Likelihood of Source-Receptor Linkage	Significance: Risk Classification	Comment
20		Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Construction and Maintenance Workers	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Low	Moderate / Low	This potential pollutant not assessed for A33 as part of Phase Two LOA. Risks in the area of C32 burning ground assessed as items 112-120. Risks in the area of C33 landfill assessed as items 121-129. Therefore comment remains as follows for A33 only: Elevated levels of contaminants have been detected within Phase 2 works in the area and the risk to construction/maintenance workers from ground contamination is greater due to direct contact with potentially contaminated material. The risk may be mitigated through use of appropriate PPE and control measures.
21		Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Future Site Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	This potential pollutant not assessed for A33 as part of Phase Two LQA. Risks in the area of C32 burning ground assessed as items 112-120. Risks in the area of C33 landfill assessed as items 121-129. Therefore comment remains as follows for A33 only: If redevelopment to a commercial/industrial end use occurs in the area of these sources then there is higher likelihood of impact from residual contamination. Due to the age and potential volume of any potential contamination, the risk from volatiles/vapours is less due to the weathered nature (and the results of the Enviros P2) of the contamination and any risk from asbestos would be mitigated from the hardstanding expected within a commercial/industrial development. There is considered to be a unlikely likelihood of a PL with this receptor.
22		Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Neighbouring Site Users	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	This potential pollutant not assessed for A33 as part of Phase Two LQA. Risks in the area of C32 burning ground assessed as items 112-120. Risks in the area of C33 landfill assessed as items 121-129. Therefore comment remains as follows for A33 only: Migration of contaminants associated with this potential source to neighbouring site users (track users and agricultural land) is unlikely, given the vegetated surface cover and the low permeability of the underlying geology.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link		Significance: Risk Classification	Comment
23	Former burning grounds and landfill (C32 [see items 112-120], C33 [see items 121-129] and A33)	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Groundwater (secondary aquifer and unproductive strata)	Leaching Migration	Groundwater contamination Toxic: chronic toxicity	Mild	Unlikely	Negligible	This potential pollutant not assessed for A33 as part of Phase Two LQA. Risks in the area of C32 burning ground assessed as items 112-120. Risks in the area of C33 landfill assessed as items 121-129. Therefore comment remains as follows for A33 only: Potential sources located on unproductive low permeability strata.
24		Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Surface Water (site drainage ditches, unnamed on-site ponds, brook to east of A Site)	Leaching Migration Runoff	Water pollution Toxic: chronic toxicity	Medium	Likely	Moderate	This potential pollutant not assessed for A33 as part of Phase Two LQA. Risks in the area of C32 burning ground assessed as items 112-120. Risks in the area of C33 landfill assessed as items 121-129. Therefore comment remains as follows for A33 only: Run-off entering ditch from this source area is possible as it neighbours a drainage ditch. Likelihood of this pollutant linkage is assessed to be likely given the identification of TPH within surface waters. Risks could be reduced if shown to be a slight, localised elevation.
25		Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Ecological Receptors	Uptake Direct contact	Phytotoxicity Toxic: chronic toxicity	Mild	Low	Low	This potential pollutant not assessed for A33 as part of Phase Two LQA. Risks in the area of C32 burning ground assessed as items 112-120. Risks in the area of C33 landfill assessed as items 121-129. Therefore comment remains as follows for A33 only: Likelihood of migration of contaminants associated with this potential source to nearby receptors is low.
26		Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Agricultural Receptors	Uptake Direct contact	Phytotoxicity Toxic: chronic toxicity	Mild	Unlikely	Negligible	This potential pollutant not assessed for A33 as part of Phase Two LQA. Risks in the area of C32 burning ground assessed as items 112-120. Risks in the area of C33 landfill assessed as items 121-129. Therefore comment remains as follows for A33 only: Likelihood of migration of contaminants associated with this potential source to nearby receptors is low.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard		Likelihood of Source-Receptor Linkage	- 3	Comment
27	١ .	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Buildings and Buried Services (current and future)	Direct contact Vapour Migration	Degradation Toxic: chronic toxicity Explosion	Mild	Low	Low	This potential pollutant not assessed for A33 as part of Phase Two LQA. Risks in the area of C32 burning ground assessed as items 112-120. Risks in the area of C33 landfill assessed as items 121-129. Therefore comment remains as follows for A33 only: No buildings in vicinity and location of services in these areas is not known. A lack of positive hydrocarbon results from Enviros Phase 2 works mitigates risk to any current buried services. Design of new structures in this area may need to consider this potential contaminant source.
28		Radiological Contamination	Site Visitors/Users (Commercial/Industrial)	Ingestion Inhalation Irradiation	Toxic: acute toxicity Toxic: chronic toxicity		Unlikely	Low	These three areas at A and C Site are not located that close to buildings (especially offices) decreasing the likelihood of this pollutant linkage (PL). Potential of a PL is unlikely unless site staff undertake intrusive works or continue operations in the areas. Radiological contamination has been identified during Phase Two LQA and previous investigation works. Nature and activity of radiological contamination deemed to present a medium consequence and hence Low risk.
29		Radiological Contamination	Construction and Maintenance Workers	Ingestion Inhalation Irradiation	Toxic: acute toxicity Toxic: chronic toxicity		Low	Moderate / Low	Radiological contamination has been identified during Phase Two LQA and previous investigation works. The risk to construction/maintenance workers from ground contamination is greater due to direct contact with potentially contaminated material. The risk is assessed as Moderate/Low and may be mitigated further through use of appropriate PPE and control measures.
30	Former burning grounds and landfill (C32, C33 and A33)	Radiological Contamination	Future Site Users (Commercial/Industrial)	Ingestion Inhalation Irradiation	Toxic: acute toxicity Toxic: chronic toxicity		Low	Moderate / Low	If redevelopment to a commercial/industrial end use occurs in the area of these sources then there is higher likelihood of impact from residual contamination. On the basis of results from the Phase Two LQA there is considered to be a low likelihood of a PL with this receptor. Nature and activity of radiological contamination deemed to present a medium consequence and hence Low risk.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link	Likelihood of Source-Receptor Linkage	Significance: Risk Classification	Comment
31	Former burning grounds and landfill (C32, C33 and A33)	Radiological Contamination	Neighbouring Site Users	Ingestion Inhalation Irradiation	Toxic: acute toxicity Toxic: chronic toxicity		Unlikely	Low	Minor amounts of radiological contamination has been identified during Phase Two LQA and previous investigation works. Migration of radiological contamination or radiation associated with this potential source to neighbouring site users (track users and agricultural land) is unlikely, given the nature and activity of radiological contamination identified, vegetated surface cover, distance and the low permeability of the underlying geology.
32	Former burning grounds and landfill (C32, C33 and A33)	Radiological Contamination	Groundwater (secondary aquifer and unproductive strata)		Groundwater contamination Toxic: chronic toxicity	Mild	Unlikely	Negligible	The potential source areas of C32 and C33 are located on unproductive low permeability strata.  A33 is likely to be over a secondary aquifer but given the nature of the overlying soils is unlikely to impact the groundwater. Given the nature and activity of radiological contamination identified a Negligible risk to Groundwater is assessed.
33	Former burning grounds and landfill (C32, C33 and A33)	Radiological Contamination	Surface Water (site drainage ditches, unnamed on-site ponds, brook to east of A Site)	Ingestion Inhalation Irradiation	Water pollution Toxic: chronic toxicity	Medium	Unlikely	Low	Given the nature and activity of radiological contamination identified in the areas of A33, C32 and C33, the potential of run-off entering ditches from these source areas is unlikely.
34	Former burning grounds and landfill (C32, C33 and A33)	Radiological Contamination	Ecological Receptors	Ingestion Inhalation Irradiation	Phytotoxicity Toxic: chronic toxicity	Mild	Unlikely	Negligible	The likelihood of a PL from the identified radiological contamination in the potential source areas around A33, C32 and C33 to nearby receptors is unlikely therefore negligible risk assessed.
35	Former burning grounds and landfill (C32, C33 and A33)	Radiological Contamination	Agricultural Receptors	Ingestion Inhalation Irradiation	Phytotoxicity Toxic: chronic toxicity	Mild	Unlikely	Negligible	The likelihood of a PL from the identified radiological contamination in the potential source areas around A33, C32 and C33 to nearby receptors is unlikely therefore negligible risk assessed.
36	Former burning grounds and landfill (C32, C33 and A33)	Landfill gas	Site Visitors/Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Severe	Unlikely	Moderate / Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: The nature and expected volume of the waste disposed and location with respect to site users means the likelihood of PL is unlikely.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link	Likelihood of Source-Receptor Linkage	Significance: Risk Classification	Comment
37	Former burning grounds and landfill (C32, C33 and A33)	Landfill gas	Construction and Maintenance Workers	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Severe	Unlikely	Moderate / Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: The nature and expected volume of the waste disposed and location with respect to site users means the likelihood of PL is unlikely. Risk could be reduced by mitigation measures and working methods.
38	Former burning grounds and landfill (C32, C33 and A33)	Landfill gas	Future Site Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Severe	Unlikely	Moderate / Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: The nature and expected volume of the waste disposed and location with respect to site users means the likelihood of PL is unlikely.
39	Former burning grounds and landfill (C32, C33 and A33)	Landfill gas	Neighbouring Site Users	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Severe	Unlikely	Moderate / Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: The nature and expected volume of the waste disposed and location with respect to site users means the likelihood of PL is unlikely.
40	Former burning grounds and landfill (C32, C33 and A33)	Landfill gas	Groundwater (secondary aquifer and unproductive strata)	Leaching Migration	Groundwater contamination Toxic: chronic toxicity	Minor	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: Source area is located on negligibly permeable, unproductive strata. Likelihood of PL with significant groundwater is unlikely.
41	Former burning grounds and landfill (C32, C33 and A33)	Landfill gas	Surface Water (site drainage ditches, unnamed on-site ponds, brook to east of A Site)	Leaching Migration Runoff	Water pollution Toxic: chronic toxicity	Minor	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: Drainage ditches run close to both these areas but impact from this contaminant is unlikely.
42	Former burning grounds and landfill (C32, C33 and A33)	Landfill gas	Ecological Receptors	Uptake Direct contact	Phytotoxicity Toxic: chronic toxicity	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: The nature and expected volume of the waste disposed and distance to this receptor means the likelihood of PL is unlikely.
43	Former burning grounds and landfill (C32, C33 and A33)	Landfill gas	Agricultural Receptors	Uptake Direct contact	Phytotoxicity Toxic: chronic toxicity	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: The nature and expected volume of the waste disposed and distance to this receptor means the likelihood of PL is unlikely.
44	Former burning grounds and landfill (C32, C33 and A33)	Landfill gas	Buildings and Buried Services (current and future)	Direct contact Vapour Migration	Degradation Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: The nature and expected volume of the waste disposed and location with respect to services, manholes and building basements etc. means the likelihood of PL is unlikely.

item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link	Likelihood of Source-Receptor Linkage	- 9	Comment
45	Railway lines and associated infrastructure (site wide)	Hydrocarbons (fuels, lubricants, PAHs), metals	Site Visitors/Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely		Not assessed as part of Phase Two LQA therefore comment remains as follows: Presence of limestone dust (to reduce water permeability), grassed over surface cover, a low level exposure scenario and the negligible permeability of the soils encountered across the majority of A and C Sites have been considered to give an unlikely likelihood to this receptor.
46		Hydrocarbons (fuels, lubricants, PAHs), metals	Construction and Maintenance Workers	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Low		Not assessed as part of Phase Two LQA therefore comment remains as follows: The risk to construction/maintenance workers from ground contamination is greater due to direct contact with potentially contaminated material. The risk may be mitigated through use of appropriate PPE and control measures.
47	,	Hydrocarbons (fuels, lubricants, PAHs), metals	Future Site Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely		Not assessed as part of Phase Two LQA therefore comment remains as follows: If redevelopment to a commercial/industrial end use occurs in the area of former track or rail infrastructure, there will be a higher likelihood of impact from any residual contamination. There is currently considered to be a unlikely likelihood of a PL with this receptor.
48		Hydrocarbons (fuels, lubricants, PAHs), metals	Neighbouring Site Users	•	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to neighbouring site users is unlikely, given the distance involved, surface cover and the low permeability of the underlying material and geology.
49		Hydrocarbons (fuels, lubricants, PAHs), metals	Groundwater (secondary aquifer and unproductive strata)		Groundwater contamination Toxic: chronic toxicity	Mild	Unlikely		Not assessed as part of Phase Two LQA therefore comment remains as follows: Presence of limestone dust (to reduce water permeability) and the negligible permeability of the soils encountered across the majority of A and C Sites have been considered to give an unlikely likelihood to this receptor.
50		Hydrocarbons (fuels, lubricants, PAHs), metals	Surface Water (site drainage ditches, unnamed on-site ponds, brook to east of A Site)	0 0	Water pollution Toxic: chronic toxicity	Medium ,	Low		Not assessed as part of Phase Two LQA therefore comment remains as follows: The rail infrastructure is located close to the drainage ditches in many locations. Minor run-off is expected from the tracks but is unlikely to reach the ditches at concentrations that are significant. Dilution would also mitigate any impact.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link	Likelihood of Source-Receptor Linkage	Significance: Risk Classification	Comment
51	Railway lines and associated infrastructure (site wide)	Hydrocarbons (fuels, lubricants, PAHs), metals	Ecological Receptors	Uptake Direct contact	Phytotoxicity Toxic: chronic toxicity	Mild	Low	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
52	Railway lines and associated infrastructure (site wide)	Hydrocarbons (fuels, lubricants, PAHs), metals	Agricultural Receptors	Uptake Direct contact	Phytotoxicity Toxic: chronic toxicity	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
53	Railway lines and associated infrastructure (site wide)	Hydrocarbons (fuels, lubricants, PAHs), metals	Buildings and Buried Services (current and future)	Direct contact Vapour Migration	Degradation Toxic: chronic toxicity	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: It is unlikely that buildings and services would be impacted from any contamination arising from this source. Design of new structures and services in this area may need to consider this potential contaminant source.
54	POL Point (C61)	Hydrocarbons (fuels, lubricants and PAHs)	Site Visitors/Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Previous Phase 2 investigation works have identified hydrocarbon in these areas from minor spillages (C60). However no excedences of appropriate GAC found during Phase 2 LQA investigation.
55	POL Point (C61)	Hydrocarbons (fuels, lubricants and PAHs)	Construction and Maintenance Workers	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Low	Moderate / Low	The risk to construction/maintenance workers from ground contamination is greater due to direct contact with potentially contaminated material. The risk may be mitigated through use of appropriate PPE and control measures.
56	POL Point (C61)	Hydrocarbons (fuels, lubricants and PAHs)	Future Site Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Previous Phase 2 investigation works have identified hydrocarbon in these areas from minor spillages (C60) . However no excedences of appropriate GAC found during Phase 2 LQA investigation.
57	POL Point (C61)	Hydrocarbons (fuels, lubricants and PAHs)	Neighbouring Site Users	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Migration of contaminants associated with this potential source to neighbouring site users is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
58	POL Point (C61)	Hydrocarbons (fuels, lubricants and PAHs)	Groundwater (secondary aquifer and unproductive strata)	Leaching Migration	Groundwater contamination	Mild	Unlikely	Negligible	C60 sources are located on negligibly permeable, unproductive strata. Likelihood of PL with significant groundwater is low. Only marginal exceedence of EQS recorded for ammonium (WSC8), which is not considered likely to be significant

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link	Likelihood of Source-Receptor Linkage	Significance: Risk Classification	Comment
59	POL Point (C61)	Hydrocarbons (fuels, lubricants and PAHs)	Surface Water (site drainage ditches, unnamed on-site ponds, River Ray)	Leaching Migration Runoff	Water pollution	Medium	Unlikely	Low	Drainage ditches run very close to both these areas and the potential for run-off is considered to be likely even given the mitigation/protection afforded by the gullies that lead to OWIs located close to these source areas. Minimal impact of surface waters on site and ground water as discussed above however.
60	POL Point (C61)	Hydrocarbons (fuels, lubricants and PAHs)	Ecological Receptors	Vapour Migration Inhalation Uptake	Phytotoxicity Explosion Toxic	Mild	Unlikely	Negligible	Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
61	POL Point (C61)	Hydrocarbons (fuels, lubricants and PAHs)	Agricultural Receptors	Vapour Migration Inhalation Uptake	Phytotoxicity Explosion Toxic	Mild	Unlikely	Negligible	Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
62	POL Point (C61)	Hydrocarbons (fuels, lubricants and PAHs)	Buildings and Buried Services (current and future)	Direct contact Vapour Migration	Degradation	Mild	Unlikely	Negligible	Elevated concentrations of sulphate suggests that BRE concrete classifications would have to be considered for potential future inground structures.
63	Current site heating oil tanks (site wide)	Hydrocarbons (fuels, lubricants, PAHs), solvents and metals	Site Visitors/Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Given that they are all relatively new, double skinned fuels tanks for which no signs of staining were observed (around the tanks or interconnecting pipework) their recent installation and design suggest that leakage is unlikely but spillage through refilling or leaking connections could be possible. Most are located close to offices but it unlikely that there is a current PL with this receptor.
64	Current site heating oil tanks (site wide)	Hydrocarbons (fuels, lubricants, PAHs), solvents and metals	Construction and Maintenance Workers	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Low	Moderate / Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: The risk to construction/maintenance workers from ground contamination is greater due to direct contact with potentially contaminated material. The risk may be mitigated through use of appropriate PPE and control measures.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard		Likelihood of Source-Receptor Linkage	Significance: Risk Classification	Comment
65	Current site heating oil tanks (site wide)	Hydrocarbons (fuels, lubricants, PAHs), solvents and metals	Future Site Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Given that they are all relatively new, double skinned fuels tanks for which no signs of staining were observed (around the tanks or interconnecting pipework) their recent installation and design suggest that leakage is unlikely but spillage through refilling or leaking connections could be possible. Most are located close to offices but unlikely that there is a current PL and it is likely that future commercial use may use this infrastructure. However, in the case of redevelopment then there could be a higher likelihood (depending on the time elapsed) of a PL if leakage has occurred.
66	Current site heating oil tanks (site wide)	Hydrocarbons (fuels, lubricants, PAHs), solvents and metals	Neighbouring Site Users	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to neighbouring site users is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
67	Current site heating oil tanks (site wide)	Hydrocarbons (fuels, lubricants, PAHs), solvents and metals	Groundwater (secondary aquifer and unproductive strata)	Leaching Migration	Groundwater contamination	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: These tanks are only located at C Site and all are located on negligibly permeable, unproductive strata. Likelihood of PL with significant groundwater is low.
68	Current site heating oil tanks (site wide)	Hydrocarbons (fuels, lubricants, PAHs), solvents and metals	Surface Water (site drainage ditches, unnamed on-site ponds, River Ray)	Leaching Migration Runoff	Water pollution	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: Drainage ditches run very close to both these areas and the potential for run-off is considered to be low even given the mitigation/protection afforded by the gullies that lead to OWIs located close to these source areas.
69	Current site heating oil tanks (site wide)	Hydrocarbons (fuels, lubricants, PAHs), solvents and metals	Ecological Receptors	Uptake Direct contact	Phytotoxicity Toxic	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link	Likelihood of Source-Receptor Linkage	•	Comment
70	Current site heating oil tanks (site wide)	Hydrocarbons (fuels, lubricants, PAHs), solvents and metals	Agricultural Receptors	Uptake Direct contact	Phytotoxicity Toxic	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
71	Current site heating oil tanks (site wide)	Hydrocarbons (fuels, lubricants, PAHs), solvents and metals	Buildings and Buried Services (current and future)		Degradation Vapour Accumulation	Mild	Low	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: It is possible that buildings and services would be impacted from any contamination arising from this source. Design of new structures and services in this area may need to consider any potential contaminant sources identified from intrusive investigation.
72	Defence Fire service (A7)	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Site Visitors/Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Inspection during the site walkover suggested that A7 was used for general storage. Historically, this is highlighted as an MT Store and due to the potential for fire training involving the use of fuels. This building is not believed to be inhabited and so the likelihood of a PL to this receptor is assessed to be unlikely.
73	Defence Fire service (A7)	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Construction and Maintenance Workers	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Low	Moderate / Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: The risk to construction/maintenance workers from ground contamination is greater due to direct contact with potentially contaminated material. The risk may be mitigated through use of appropriate PPE and control measures.
74	Defence Fire service (A7)	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Future Site Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: If redevelopment to a commercial/industrial end use occurs in the area of these sources then there is higher likelihood of impact from residual contamination. Due to the age of any potential contamination, the risk from volatiles/vapours is less due to the weathered nature of the contamination and there is considered to be an unlikely likelihood of a PL with this receptor.
75	Defence Fire service (A7)	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Neighbouring Site Users	•	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to neighbouring site users is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link	Likelihood of Source-Receptor Linkage	Significance: Risk Classification	Comment
76	Defence Fire service (A7)	Hydrocarbons (fuels, lubricants and PAHs)	Groundwater (secondary aquifer and unproductive strata)	Leaching Migration	Groundwater contamination	Medium	Low	Moderate / Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: A7 is on the fringes of the Secondary aquifer but given the expect contaminant volumes, age, hardstanding and geology a PL is considered to be of a low likelihood.
77	Defence Fire service (A7)	Hydrocarbons (fuels, lubricants and PAHs)	Surface Water (site drainage ditches and brook to east of A Site)	Leaching Migration Runoff	Water pollution	Medium	Low	Moderate / Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: A7 is located such that a drainage ditches runs along the rear side of the building.
78	Defence Fire service (A7)	Hydrocarbons (fuels, lubricants and PAHs)	Ecological Receptors	Uptake Direct contact	Phytotoxicity Toxic	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
79	Defence Fire service (A7)	Hydrocarbons (fuels, lubricants and PAHs)	Agricultural Receptors	Uptake Direct contact	Phytotoxicity Toxic	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
80	Defence Fire service (A7)	Hydrocarbons (fuels, lubricants and PAHs)	Buildings and Buried Services (current and future)	Direct contact Vapour Migration	Degradation Vapour Accumulation	Medium	Low	Moderate / Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: It is possible but considered unlikely that buildings and services would be impacted from any contamination arising from this source.
81	Oil/water interceptors (site wide)	Hydrocarbons (fuels and lubricants)	Site Visitors/Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: On the basis that there was no evidence of leakage and interceptors are understood to be regularly maintained, the likelihood of an impact to this receptor is unlikely.
82	Oil/water interceptors (site wide)	Hydrocarbons (fuels and lubricants)	Construction and Maintenance Workers	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Low	Moderate / Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: The risk to construction/maintenance workers from ground contamination is greater due to direct contact with potentially contaminated material. The risk may be mitigated through use of appropriate PPE and control measures.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link	Likelihood of Source-Receptor Linkage	Significance: Risk Classification	Comment
83	Oil/water interceptors (site wide)	Hydrocarbons (fuels and lubricants)	Future Site Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: If redevelopment to a commercial/industrial end use occurs in the area of these sources then there is a higher likelihood of impact from any residual contamination arising from the OWIs. Due to the age and potential volume of any potential contamination, the risk from volatiles/vapours is less due to the weathered nature (and the results of the Enviros P2) of the contamination would be mitigated from the hardstanding expected within a commercial/industrial development. There is considered to be a unlikely likelihood of a PL with this receptor.
84	Oil/water interceptors (site wide)	Hydrocarbons (fuels and lubricants)	Neighbouring Site Users	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants from the OWIs to neighbouring site users is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
85	Oil/water interceptors (site wide)	Hydrocarbons (fuels and lubricants)	Groundwater (secondary aquifer and unproductive strata)	Leaching Migration	Groundwater contamination	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: The OWIs are located on negligibly permeable, unproductive strata. Likelihood of PL with significant groundwater is low.
86	Oil/water interceptors (site wide)	Hydrocarbons (fuels and lubricants)	Surface Water (site drainage ditches, unnamed on-site ponds, River Ray)	Leaching Migration Runoff	Water pollution	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Drainage ditches run very close to some of the OWIs. The likelihood of contaminants passing through the OWI to drainage ditches is considered to be low.
87	Oil/water interceptors (site wide)	Hydrocarbons (fuels and lubricants)	Ecological Receptors	Uptake Direct contact	Phytotoxicity Toxic	Mild	Low	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to nearby receptors is low, given the surface cover, distance involved and the low permeability of the underlying geology.
88	Oil/water interceptors (site wide)	Hydrocarbons (fuels and lubricants)	Agricultural Receptors	Uptake Direct contact	Phytotoxicity Toxic	Mild	Low	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to nearby receptors is low given the surface cover, distance involved and the low permeability of the underlying geology.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link	Likelihood of Source-Receptor Linkage	- 3	Comment
89	Oil/water interceptors (site wide)	Hydrocarbons (fuels and lubricants)	Buildings and Buried Services (current and future)	Direct contact Vapour Migration	Degradation Vapour Accumulation	Mild	Low	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: It is possible that buildings and services would be impacted from any contamination arising from sources via an OWI. Design of new structures and services in this area may need to consider any potential contaminant that may reside close to OWIs.
90	Disturbed ground around buildings (Crane Area A Site, C2, C5, C33, C7, C8 and C32)		Site Visitors/Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Anecdotal information from site staff says this is likely to be surplus 'inert' fill material from site levelling activities when the depot warehouses were originally built, service trenching or ditching spoil. Given the surface cover, geology and location away from buildings, these areas are unlikely to impact this receptor.
91	Disturbed ground around buildings (Crane Area A Site, C2, C5, C33, C7, C8 and C32)	, ,,,	Construction and Maintenance Workers	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Low	Moderate / Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: The risk to construction/maintenance workers from ground contamination is greater due to direct contact with potentially contaminated material. The risk may be mitigated through use of appropriate PPE and control measures.
92	Disturbed ground around buildings (Crane Area A Site, C2, C5, C33, C7, C8 and C32)		Future Site Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Given the surface cover if this area remained following any redevelopment to commercial/industrial end use and the likelihood that any contamination would be addressed during redevelopment in that area, it is unlikely that this receptor would be impacted by residual contamination considering the nature of commercial/industrial developments.
93	Disturbed ground around buildings (Crane Area A Site, C2, C5, C33, C7, C8 and C32)		Neighbouring Site Users	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of potential contaminants associated with this area to neighbouring site users is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link		Significance: Risk Classification	Comment
94	Disturbed ground around buildings (Crane Area A Site, C2, C5, C33, C7, C8 and C32)		Groundwater (secondary aquifer and unproductive strata)	Leaching Migration	Groundwater contamination	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: Potential sources are located on negligibly permeable, unproductive strata. It is considered unlikely that a PL exists. A Site source is assessed to present a mild consequence that is unlikely to occur.
95	Disturbed ground around buildings (Crane Area A Site, C2, C5, C33, C7, C8 and C32)		Surface Water (site drainage ditches, unnamed on-site ponds, brook to east of A Site)	Leaching Migration Runoff	Water pollution	Medium	Low	Moderate / Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Some of the identified areas are located close to drainage ditches however significantly contaminated run-off to drainage ditches is considered unlikely.
96	Disturbed ground around buildings (Crane Area A Site, C2, C5, C33, C7, C8 and C32)		Ecological Receptors	Uptake Direct contact	Phytotoxicity Toxic	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
97	Disturbed ground around buildings (Crane Area A Site, C2, C5, C33, C7, C8 and C32)		Agricultural Receptors	Uptake Direct contact	Phytotoxicity Toxic	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
98	Disturbed ground around buildings (Crane Area A Site, C2, C5, C33, C7, C8 and C32)		Buildings and Buried Services (current and future)	Direct contact Vapour Migration	Degradation Vapour Accumulation	Mild	Unlikely	Negligible	Not assessed as part of Phase Two LQA therefore comment remains as follows: It is possible but considered unlikely that buildings and services would be impacted from any contamination arising from this source.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard		Likelihood of Source-Receptor Linkage	Significance: Risk Classification	Comment
99	ACM around buildings and spoil from former buildings (including ARSs)	Asbestos	Site Visitors/Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Some buildings contain substantial amount of ACM which is labelled and managed using individual building asbestos registers. An asbestos survey is understood to be currently in progress. The risk from this contaminant appears to be managed by the site although fragments of cement-bonded ACM was observed around the sides of some buildings at both A and C Site. Given its location, form and management it is considered that this presents a Moderate/Low risk to this receptor.
100	ACM around buildings and spoil from former buildings (including ARSs)	Asbestos	Construction and Maintenance Workers	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Low	Moderate / Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: The risk to construction/maintenance workers from ground contamination is greater due to direct contact with potentially contaminated material. The risk may be mitigated through use of appropriate PPE and control measures.
101	ACM around buildings and spoil from former buildings (including ARSs)	Asbestos	Future Site Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Given the nature of a commercial/industrial redevelopment and the increased likelihood of hardstanding it is considered that an unlikely likelihood of contact with any residual contamination.
102	ACM around buildings and spoil from former buildings (including ARSs)	Asbestos	Neighbouring Site Users	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Not assessed as part of Phase Two LQA therefore comment remains as follows: Migration of ACM fibres to neighbouring site users is unlikely given the form, amount and distance involved.
103	Site A NW Boundary	Hydrocarbons (PAHs), metals, asbestos	Site Visitors/Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	No exceedences of GAC, therefore risk in this immediate area likely to be low.
104	Site A NW Boundary	Hydrocarbons (PAHs), metals, asbestos	Construction and Maintenance Workers	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	No exceedences of GAC & limited contamination.
105	Site A NW Boundary	Hydrocarbons (PAHs), metals, asbestos	Future Site Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	No exceedences of GAC, therefore risk in this immediate area likely to be low.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link	Likelihood of Source-Receptor Linkage	Significance: Risk Classification	Comment
106	Site A NW Boundary	Hydrocarbons (PAHs), metals, asbestos	Neighbouring Site Users	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Little contamination observed
107	Site A NW Boundary	Hydrocarbons (PAHs), metals, asbestos	Groundwater (secondary aquifer and unproductive strata)		Groundwater contamination	Mild	Unlikely	Negligible	Levels of TPH marginally above LoD in surface waters. No applicable EQS .
108	Site A NW Boundary	Hydrocarbons (PAHs), metals, asbestos	Surface Water (site drainage ditches, unnamed on-site ponds, brook to east of A Site)	Leaching Migration Runoff	Water pollution	Medium	Low	Moderate / Low	Levels of TPH marginally above LoD in surface waters. No applicable EQS .
109	Site A NW Boundary	Hydrocarbons (PAHs), metals, asbestos	Ecological Receptors	Uptake Direct contact	Phytotoxicity Toxic	Mild	Unlikely	Negligible	Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
110	Site A NW Boundary	Hydrocarbons (PAHs), metals, asbestos	Agricultural Receptors	Uptake Direct contact	Phytotoxicity Toxic	Mild	Unlikely	Negligible	Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
111	Site A NW Boundary	Hydrocarbons (PAHs), metals, asbestos	Buildings and Buried Services (current and future)	Vapour Migration Direct contact	Degradation Vapour Accumulation	Mild	Unlikely	Negligible	Elevated concentrations of sulphate suggests that BRE concrete classifications would have to be considered for potential future inground structures.
112	Former burning ground C32	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Site Visitors/Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	No exceedences of GAC, therefore risk in this immediate area likely to be low.
113	Former burning ground C32	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Construction and Maintenance Workers	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	No exceedences of GAC & limited contamination.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard		Likelihood of Source-Receptor Linkage	- 3	Comment
114	Former burning ground C32	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Future Site Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	No exceedences of GAC, therefore risk in this immediate area likely to be low.
115	Former burning ground C32	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	0 0	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Little contamination observed
116	Former burning ground C32	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Groundwater (secondary aquifer and unproductive strata)	Leaching Migration	Groundwater contamination	Mild	Unlikely	Negligible	No groundwater samples taken from area however little eveidence of contamination above EQS evident on wider site or in surface water samples
117	Former burning ground C32	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Surface Water (site drainage ditches, unnamed on-site ponds, brook to east of A Site)	Leaching Migration Runoff	Water pollution	Medium	Unlikely	Low	No eveidence of contamination above EQS evident in surface water samples
118	Former burning ground C32	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Ecological Receptors	Uptake Direct contact	Phytotoxicity Toxic	Mild	Unlikely	Negligible	Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
119	Former burning ground C32	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Agricultural Receptors	Uptake Direct contact	Phytotoxicity Toxic	Mild	Unlikely	Negligible	Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard		Likelihood of Source-Receptor Linkage	Significance: Risk Classification	Comment
120	Former burning ground C32		Buildings and Buried Services (current and future)	Migration	Degradation Vapour Accumulation Explosion	Mild	Unlikely	Negligible	Little organic contamination observed and sulphate within lowest BRE classification.
121	Former Landfill C33	•	Site Visitors/Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Low	Moderate / Low	No exceedences of GAC except lead. It is likely any site visitors will not come into contact with site soils.
122	Former Landfill C33		Construction and Maintenance Workers	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Likely	Moderate	Elevated lead may be an issue from direct contact with groundworkers.
123	Former Landfill C33	,	Future Site Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Low	Moderate / Low	No exceedences of GAC except lead. It is likely any future site development will employ cover systems which would negate risks posed by non-volatile contaminants.
124	Former Landfill C33	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Neighbouring Site Users	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Little contamination observed & generation of dusts or other mechanism by which contaminants could be carried off site is not considered likely.
125	Former Landfill C33		Groundwater (secondary aquifer and unproductive strata)		Groundwater contamination	Mild	Unlikely	Negligible	No groundwater samples taken from area however little eveidence of contamination above EQS evident on wider site or in surface water samples.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link	Likelihood of Source-Receptor Linkage	Significance: Risk Classification	Comment
126	Former Landfill C33	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Surface Water (site drainage ditches, unnamed on-site ponds, brook to east of A Site)	Leaching Migration Runoff	Water pollution	Medium	Unlikely	Low	No eveidence of contamination above EQS evident in surface water samples.
127	Former Landfill C33	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Ecological Receptors	Uptake Direct contact	Phytotoxicity Toxic	Mild	Unlikely		Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
128	Former Landfill C33	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Agricultural Receptors	Uptake Direct contact	Phytotoxicity Toxic	Mild	Unlikely		Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
129	Former Landfill C33	Hydrocarbons (fuels, lubricants, PAHs), solvents, metals, asbestos	Buildings and Buried Services (current and future)	Direct contact Vapour Migration	Degradation Vapour Accumulation Explosion	Mild	Unlikely	Negligible	Little organic contamination observed and sulphate within lowest BRE classification.
130	FFO Tank Area C33	Hydrocarbons (fuels, lubricants and PAHs)	Site Visitors/Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely		Although previous Phase 2 investigation works have identified hydrocarbon in these areas from significant leakages from interconnecting pipework (C33), little evidence of contamination was observed in the recent Phase 2 LQA investigation. Given the levels and condition of hardstanding present and the distance between the tanks and occupied buildings, along with the results of the recent SI it is considered unlikely that a viable pollutant linkage exists.
131	FFO Tank Area C33	Hydrocarbons (fuels, lubricants and PAHs)	Construction and Maintenance Workers	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Low		The risk to construction/maintenance workers from ground contamination is greater due to direct contact with potentially contaminated material. The risk may be mitigated through use of appropriate PPE and control measures.

Item No.	Area/ Building	Potential Pollutant (Source)	Potential Receptor	Potential Pathway to Receptor	Associated Hazard	Potential Consequence of S-R Link	Likelihood of Source-Receptor Linkage	- 9	Comment
132	FFO Tank Area C33	Hydrocarbons (fuels, lubricants and PAHs)	Future Site Users (Commercial/Industrial)	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Although previous Phase 2 investigation works have identified hydrocarbon in these areas from significant leakages from interconnecting pipework (C33), little evidence of contamination was observed in the recent Phase 2 LQA investigation. Given the levels and condition of hardstanding present and the distance between the tanks and occupied buildings, along with the results of the recent SI it is considered unlikely that a viable pollutant linkage exists
133	FFO Tank Area C33	Hydrocarbons (fuels, lubricants and PAHs)	Neighbouring Site Users	Dermal contact Ingestion Inhalation	Toxic: chronic toxicity	Medium	Unlikely	Low	Migration of contaminants associated with this potential source to neighbouring site users is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
134	FFO Tank Area C33	Hydrocarbons (fuels, lubricants and PAHs)	Groundwater (secondary aquifer and unproductive strata)	Leaching Migration	Groundwater contamination	Mild	Unlikely	Negligible	C33 sources are located on negligibly permeable, unproductive strata. Considering this and negligible contamination observed in analysis it is considered unlikely that PL is significant.
135	FFO Tank Area C33	Hydrocarbons (fuels, lubricants and PAHs)	Surface Water (site drainage ditches, unnamed on-site ponds, River Ray)	Leaching Migration Runoff	Water pollution	Medium	Unlikely	Low	Drainage ditches run very close to both these areas and the potential for run-off is considered to be likely even given the mitigation/protection afforded by the gullies that lead to OWIs located close to these source areas. However Considering this and negligible contamination observed in analysis it is considered unlikely that PL is significant.
136	FFO Tank Area C33	Hydrocarbons (fuels, lubricants and PAHs)	Ecological Receptors	Vapour Migration Inhalation Uptake	Phytotoxicity Explosion Toxic	Mild	Unlikely	Negligible	Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
137	FFO Tank Area C33	Hydrocarbons (fuels, lubricants and PAHs)	Agricultural Receptors	Vapour Migration Inhalation Uptake	Phytotoxicity Explosion Toxic	Mild	Unlikely	Negligible	Migration of contaminants associated with this potential source to nearby receptors is unlikely, given the surface cover, distance involved and the low permeability of the underlying geology.
138	FFO Tank Area C33	Hydrocarbons (fuels, lubricants and PAHs)	Buildings and Buried Services (current and future)	Vapour Migration Direct contact	Degradation Vapour Accumulation	Mild	Unlikely	Negligible	Elevated concentrations of sulphate suggests that BRE concrete classifications would have to be considered for potential future inground structures.