Draft

PPC Surrender Remediation Action Plan

ALCOA Manufacturing (GB) Ltd,

Waunarlwydd, Swansea, UK

ENVIRON UK Limited
Hartham Park, Corsham
Wiltshire, SN13 0RR
Tel: +44 (0)1249 700104

8th November 2007 *64-C12564*

Contract/Proposal No:	*64-C12564*
Issue:	*1*
Author (signature):	*Joanne Cutler*
Project Director (signature):	*Andy Goddard*
Date:	*8th November 2007*

This report has been prepared by ENVIRON with all reasonable skill, care and diligence, and taking account of the Services and the Terms agreed between ENVIRON and the Client. This report is confidential to the client, and ENVIRON accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known, unless formally agreed by ENVIRON beforehand. Any such party relies upon the report at their own risk.

ENVIRON disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the Services.

VERSION CONTROL RECORD

ISSUE	DESCRIPTION OF STATUS	DATE	REVIEWER INITIALS	AUTHORS INITIALS
A	First Draft	5.11.07	-	JC
B	Second Draft	7.11.07	-	JC
1	Draft Version Issued to Client	8.11.07	AG	JC

CONTENTS

Page

1.0 INTRODUCTION 5

1.1 BACKGROUND 5

1.2 PRELIMINARY WORKS INFORMATION 5

1.3 CONTRACTORS RESPONSIBILITIES 6

1.4 ENVIRONMENTAL CONSULTANT 6

1.5 CLIENT 7

1.6 LIMITATIONS OF THE REPORT 7

2.0 BACKGROUND INFORMATION 8

2.1 SITE LOCATION AND GENERAL SETTING 8

2.2 SITE LAYOUT AND ACTIVITIES 8

2.3 OVERVIEW OF SITE INVESTIGATION 10

2.4 CRITERIA AND METHOD OF ASSESSEMNT OF SURRENDER DATA ANALYTICAL RESULTS 12

2.5 SUMMARY OF AREAS REQUIRING REMEDIATION 14

3.0 GENERAL INFORMATION ON REMEDIATION WORKS 17

3.1 INTRODUCTION 17

3.2 GENERAL REQUIREMENTS 17

4.0 DETAILED REMEDIAL REQUIREMENTS TO ADDRESS PPC CONTAMINATION 29

4.1 ZONE 1 – INGOT PLANT DROSS SHELTER 29

4.2 ZONE 2 – INGOT PLANT TANK FARM 31

4.3 ZONE 7 – HOT MILL SUB-STATION 31

4.4 ZONE 8 – COMPRESSOR DRAINAGE 33

4.5 ZONE 9 - IBC STORAGE AREA. 34

4.6 ZONE 10 – COLD MILL SUB-STATION 36

4.7 ZONE 12 – COLD MILL TANK FARM EMBANKMENT 38

4.8 ZONE 13 – EFFLUENT TREATMENT PLANT CHEMICAL BASEMENT 39

4.9 ZONE 13 – LOCALISED OIL LEAK 43

4.10 ZONE 15 – LACQUER STORAGE 44

4.11 ZONE 16 – WASTE DRUM STORAGE COMPOUND 46

4.12 ZONE 17 - DISUSED COOLING TOWER AREA TO THE EAST OF THE ROLL SHOP 48

4.13 PROVISION OF INFORMATION 50

APPENDIX A: FIGURES

APPENDIX B: EXPLORATORY HOLE LOGS

APPENDIX C: GROUNDWATER MONITORING DATA

APPENDIX D: CERTIFICATES OF LABORAOTORY ANALYSIS

1.0 INTRODUCTION

1.1 BACKGROUND

ENVIRON UK Limited ("ENVIRON") has been commissioned by Alcoa Manufacturing (GB) Limited ("Alcoa") to produce a Remediation Action Plan (RAP) to address soil and groundwater contamination associated with PPC Permitted operations at its former Aluminium Rolling Mill, Waunarlwydd, Swansea, SA1 1XH.

Since 2004 Alcoa has operated under a Pollution Prevention and Control (PPC) Permit (BM1377). However, aluminium rolling operations ceased at the site in March 2007 and Alcoa wishes to surrender the PPC Permit. As part of the surrender process, surrender data was collected by ENVIRON for the installation in order to determine if pollution had occurred from permitted activities. Full details on the collection and interpretation of the surrender data is provided in the report entitled 'PPC Site Surrender Report Part 2: Surrender Data, ALCOA Manufacturing (GB) Ltd, Waunarlwydd, Swansea, Permit No: BM1377 (ENVIRON reference 64-C11647, July 2007)'.

The scope of the remedial recommendations included in this RAP is designed to meet the site surrender requirements of the PPC regulations i.e. to remediate areas where contamination has been identified which is considered likely to have occurred during the lifetime of the PPC Permit. The PPC regulations require that the contamination is remediated to a 'satisfactory state', which, according to Technical Guidance Note H8 Site Surrender Report (published by the Environment Agency) is the condition the site was in before the issue of the PPC Permit.

This RAP is not designed to address contamination in the context of risks to current or future site users or risks to Controlled Waters.

1.2 PRELIMINARY WORKS INFORMATION

The objectives of this RAP are to outline to the remediation contractors the proposed remediation approach to deal with the identified PPC related contamination at the site.

1.3 CONTRACTORS RESPONSIBILITIES

The Principal Contractor will be responsible for undertaking the works presented in this document. This is likely to include employing a suitably experienced specialist remediation contractor for some aspects of the work.

The remedial work design responsibilities are the responsibility of the Principle Contractor, conferred by Contract and the Construction (Design and Management) Regulations 2007. They are to include:

- all final Works designs;
- all temporary design;
- all relevant permits, licenses exemption etc. required to implement the works; and all relevant Health and Safety and best practice guidance in executing the works.

1.4 ENVIRONMENTAL CONSULTANT

ENVIRON will act as Environmental Consultant on behalf of Alcoa during the Works. The Environmental Consultants responsibilities will include:

- verification that the Works are free from defect and are in accordance with the Works Information and Contractors Design (albeit that the Contractor has the primary responsibility to ensure that the works are free from defects and in accordance with the Works Information);
- monitoring the Contractors works throughout the duration of the project in order to ensure works are undertaken in accordance with the Contract and achieve the remediation criteria.
- undertake all liaison with the Regulatory Authorities (with the exception of obtaining appropriate permits, and licenses required to undertake the works, unless where stated in this document that the task will be carried out by ENVIRON).

Following completion of the Works, ENVIRON will compile a validation/completion report (including plans, analytical results, monitoring data, waste transfer notes etc. as provided by the Principal Contractor).

1.5 CLIENT

The Client for the works will be ALCOA Manufacturing (GB) Limited ("Alcoa").

1.6 LIMITATIONS OF THE REPORT

This report has been prepared under the express instructions and solely for the use of ALCOA Manufacturing (GB) Limited and its representatives. All work carried out in preparing this report has utilised and is based upon ENVIRON UK Limited's current professional judgement and understanding of current relevant UK standards and legislation. Changes in legislation may occur in the future and affect the conclusion and recommendations of this report. The recommendations in this report represent the professional opinion of ENVIRON and do not represent legal advice

Environmental sampling of soil, groundwater and gases provide only a general indication of contaminants present at the site and different concentrations of contaminants and different types of contaminants compared to samples may be present in areas of the site not investigated.

This Remediation Action Plan is designed to reduce contamination identified as relating to PPC permitted activities to a satisfactory state, in line with the requirements of the Pollution Prevention and Control (PPC) Regulations 2000. It is important to note that this does not entail the removal of all contaminants from the site, and additional risk based remedial measures will be required to address non-PPC related contamination to make sure that the site is suitable for it's intended end-use.

2.0 BACKGROUND INFORMATION

2.1 SITE LOCATION AND GENERAL SETTING

The ALCOA Waunarlwydd site is located approximately 5km north west of Swansea City centre. The site location is shown on Figure 1 in Appendix A. The National Grid Reference for the centre of the site is SS600960 and the site lies at an elevation of between approximately 33m above Ordnance Datum (AOD) (adjacent to the southern site boundary) to approximately 17m AOD (in the north of the site adjacent to the River Llan).

The entire site comprises an area of approximately 22 hectares, with approximately 10 hectares of the total area being occupied by the former rolling mill and ancillary buildings. The remaining 12 hectares is occupied predominantly by a mixture of agricultural grazing land, undeveloped scrubland and car parking facilities.

The surrounding land uses comprise:

- to the north: TIMET Limited (a Titanium Plant), Aleris (an aluminium recycling company) and open ground, beyond which lies the westerly flowing River Llan and its flood plain;
- to the south: the Swansea to Llanelli railway line with residential development (Waunarlwydd village) beyond;
- to the east: mixed scrub, woodland and open land with commercial/industrial development beyond; and
- to the west: farmland used for pasture and a west-flowing stream (Gors Fawr Brook).

2.2 SITE LAYOUT AND ACTIVITIES

The layout of the site and is shown in Figures 2 and 3 in Appendix A (aerial photograph and site plan respectively). The site is now non-operational, with the exception of the annealing ovens. For the purpose of the PPC Site Surrender Report, the installation was zoned on the basis of the potential for pollution to occur from a Permitted activity. These 'Zones' are described in Table 2.1 on the following page and are shown on Figure 3 in Appendix A. The justification for the delineation of these Zones was discussed with the Environment Agency

prior to the investigation to collect Surrender Data at on-site meetings with the Environment Agency (EA) on the 22nd February and 14th May 2007.

Table 2.1: Summary of PPC Zones where the Potential for Pollution to Occur was Identified during Prior to the Collection of the Site Surrender Data

Zone	Activity	Potential Contaminants Relating to Permitted Activities
1 – Ingot Plant Dross Shelter	Undercover storage of aluminium dross prior to removal for off site processing.	Metals, hydrocarbons and ammonia from the dross.
2 – Ingot Plant Tank Farm	Historical storage of oils in 3 No. above ground bunded storage tanks (ASTs). During the life of the Permit, only one AST has been in use, for the storage of red diesel.	Red diesel.
3 – Scalping Mill (scalper)	Machines the aluminium ingot to produce a surface finish suitable for rolling. Lubricant and coolant oils and swarf were collected in a concrete cellar approximately 6m deep beneath the scalper.	Metals, lubricants and hydraulic oils from the cellar.
4 – Engineering Workshop	Maintenance of mill rollers and other equipment.	Lubricants, hydraulic oils, solvents and degreasers.
5 – Hot Mill Cellars	Concrete cellars and sumps are present under the hot mill, up to approximately 9m deep, for the collection of lubricant and cooling oils for recirculation around the cold mill.	Water and vegetable based oil emulsions with proprietary chemical additives.
6 – Hot Mill Waste Oil Tank Farm and Coolant Filter House	Filtration and storage of water and vegetable based lubricant and cooling oils for the hot mill.	Water and vegetable based oil emulsions with proprietary chemical additives collecting in the cellars.
7 – Hot Mill Sub-station	Electrical transformers.	Transformer oils.
8 – Compressor Drainage	A very localised area of unsurfaced ground has been observed to be impacted by oily compressor drainage.	Hydrocarbons.
9 –Stores & IBC Storage Area	Chemical storage building within a dedicated bunded compound, including fuel oils, white spirits, acids and alkalis. This Zone also includes a large covered oil/water drainage interceptor and a smaller uncovered oil/water drainage interceptor.	Hydrocarbons, volatile organic compounds, acids and alkalis.
10 – Cold Mill Sub-stations and Transformers	Electrical transformers. Zone 10 also includes a localised area of hydrocarbon staining on an earth embankment between the sub-station and the cold mill building.	Transformer oils within the electrical sub-station and hydrocarbons on the embankment between the sub-station and mill building.
11 – Cold	Concrete cellars and sumps are	Water and vegetable based oil emulsions

Mill Cellars	present under the hot mill, up to approximately 9m deep, for the collection of lubricant and cooling oils for recirculation around the cold mill.	with proprietary chemical additives collecting within the cellars.
12 – Cold Mill Tank Farm	Filtration and storage of lubricant and cooling oils for the cold mill. Zone 12 also includes an area of hydrocarbon staining on an unsurfaced earth embankment below a vent stack, between the mill building and the tank farm,	Water and vegetable based oil emulsions with proprietary chemical additives.
13 – Effluent Treatment Plant and (ETP) Filter House and Localised oil leak.	Effluent treatment within a dedicated plant, including filtration, neutralisation and settlement. Zone 13 also includes a localised area of hydrocarbon staining on the embankment between the cold mill building and the ETP, believed to be related to a short length of underground pipework transporting oil from a small AST to the cold mill building	Acids, alkalis, metals (including chromium and hexavalent chromium) and hydrocarbons.
14 – Solvent and MEK Storage	Bunded storage of solvents in 2 No. ASTs, used as part of the aluminium coil coating process.	Volatile organic compounds including methyl ethyl ketone (MEK) and hydrocarbons.
15 – Lacquer Storage	Bunded storage of lacquers in 6 No. ASTs, used as part of the aluminium coil coating process.	Lacquers containing volatile and semi-volatile organic compounds and petroleum hydrocarbons.
16 – Waste Drum Storage Compound	Storage of waste chemicals in drums and IBC, including oils and antifreeze within a dedicated bunded compound.	Hydrocarbons, glycols, solvents, acids, alkali's.
17 –Disused Cooling Tower to East of Roll Shop and skip storage area.	External skip storage area, with skips accepting waste from the engineering workshop (Zone 4).	Hydrocarbons, metals and solvents.
18 – Coil Preparation Line	The coil preparation line is separated into two sections; cleaning and acid etching of aluminium coils and chrome plating.	Acids, alkali's, metals (including hexavalent chromium), and solvents.

2.3 OVERVIEW OF SITE INVESTIGATION

2.3.1 Scope of Site Investigations

The approach used within the site investigation was in general accordance with the Environment Agency (EA) IPPC H8 Guidance and Template, the Environment Agency published guidance Model Procedures for the Management of Land Contamination

(September 2004) and the Requirements for Land Contamination Reports (Version 1 July 2005).

The investigation to collect Surrender Data was undertaken under the supervision of ENVIRON between the 5th and 22nd March 2007 and the 11th April and 18th May 2007.

The positions of all exploratory locations are presented on Figure 3, Appendix A.

2.3.2 Ground Conditions

A summary of the geological conditions encountered underlying the site are summarised below. Exploratory hole logs are presented in Appendix B.

Detailed descriptions of the ground condition encountered at each sampling location are provided in Section 2.5 of the Surrender Data Report.

- **Made Ground** (i.e. fill materials) of a variable thickness was encountered at all exploratory locations and typically comprised sandy gravelly clay containing varying proportions of construction type materials (generally brick and concrete). Made Ground comprising slag and clinker (Swansea Valley Fill) was present in four locations towards western area of the installation.

- Recent **Alluvium Deposits** were present beneath the Made ground mainly in the northern half of the site. The Alluvium deposits generally comprised horizons of clayey gravelly sands, sandy gravelly clay and sand and gravel. The alluvium is likely to be associated with the Gors Fawr Brook, now partially culverted along the boundary of the installation with Titanium Road, and with the Afon Llan to the north of the installation.

- **Glacial Deposits (Boulder Clay)** was predominately found to underlie the Made Ground in the central area of the installation or beneath the Alluvium in the north of the installation. The Boulder Clay generally comprised stiff sandy clay with varying proportions of sandstone and mudstone gravels, locally tending to clayey sand and gravel.

- The solid geology underlying the superficial deposits across the entire site was the Swansea Beds (part of the **Carboniferous Coal Measures**). The Coal Measures

comprised mudstones with occasional sandstone horizons. Thin coal seams are present underlying the south of the installation.

2.3.3 Groundwater

Rest groundwater levels obtained during the Surrender Data investigation are presented in Appendix C. Groundwater conditions are summarised below.

Shallow groundwater was encountered within the clayey alluvial deposits close to the Gors Fawr Brook. Groundwater was also generally encountered as a moderate to rapid ingress in the alluvium during excavation and as a slow seepage towards the base of the Boulder Clay. Groundwater was also encountered within the Coal Measures, generally as a slow seepage within the mudstone, considered to be influenced by fissures within the mudstone. Ingress was more rapid within the more highly fractured sandstone horizons. The groundwater in the Coal Measures was generally confined beneath the superficials, however, where Coal measures are directly overlain by Made Ground the groundwater was generally unconfined.

Groundwater within the alluvium in the PPC zones flows to the north west towards the Gors Fawr Brook. Groundwater within the Boulder Clay in the east of the site appears to be flowing in a westerly direction, gradually becoming more north westerly in the west of the site.

In the south of the site groundwater in the Coal Measures appears to flow in a northerly direction, influenced by topography and the shallow depth of the Coal Measures. Towards the north of the site, groundwater flows to the north west, likely to be influenced by the Coal Measures syncline beneath Titanium Road. The groundwater within the Coal Measures does not appear to be strongly influenced by the Gors Fawr Brook or the River Llan and does not appear to be in significant hydraulic continuity with these surface water courses.

2.4 CRITERIA AND METHOD OF ASSESSEMNT OF SURRENDER DATA ANALYTICAL RESULTS

Full details on the assessment of laboratory results are presented in Section 2.7 of the PPC Site Surrender Report Part 2: Surrender Data (July 2007). Relevant information is summarised below.

As discussed previously, in order to assess the potential for pollution to have occurred from permitted activities, the site was 'zoned'. These 'Zones' are referenced throughout the Surrender Data Report and have also been used for reference in this document.

In line with the Environment Agency guidance, data gathered from each Zone as part of the Site Surrender Investigation was compared to Reference Data gathered in previous Site Condition Reports (SCR) undertaken in 2001 and 2003 as part of the PPC Permit Application. In Zones where data was not collected during the SCR, the results have been compared against 'Baseline Data' generated for the site using statistical analysis. The treatment of the Reference Data and generation of Baseline Data is described below:

- **Reference Data:** In the first instance, data collected from the Site Condition Reports; 'Application for a Permit to Operate a Part A1 Installation under Pollution Prevention and Control Regulations 2000' (produced by ENVIRON in November 2001) and the further supplementary report entitled 'Addendum to the ENVIRON Site Condition Report' (produced by Natural Solutions Ltd in April 2003), has been used to provide Reference Data on the condition of the site prior to the PPC Permit commencing. As the SCR investigations were not 'Zoned', the location of the SCR boreholes together with the analytical suite have been compared to the location of current PPC source Zones, to determine if they are a suitable comparison for the current Zones. For each Source Zone, the minimum, maximum, measured mean and the 95% confidence limits of the measured mean have been calculated from the available SCR Reference Data. The upper 95% confidence limits of the Reference Data generally indicated a relatively high degree of uncertainty in mean contaminant concentrations. To provide a more appropriate screening value, the maximum contaminant concentrations identified in this investigation (2007 surrender data) have been screened against the maximum contaminant concentrations identified in the 2001/2003 Reference Data. Exceedances of the Reference Data have then been considered to determine if they represent an increase in pollution as a result of Permitted activities.

- **Baseline Data**: Several Zones of the site have been identified where there is no suitable 2001/2003 Reference Data to compare surrender data against. In this case, 'Baseline Data' has been established for each determinand by calculating the minimum, maximum, measured mean and the 95% confidence limits from the PPC investigation soil and groundwater surrender data gathered across the whole installation. The maximum concentration of each contaminant from each Zone has been screened against the 95%

confidence limit of the measured mean for the installation ("the Baseline") as it is considered that the number of samples was sufficient to provide a representative mean contaminant concentration. Maximum concentrations which exceed the Baseline have then been considered further to determine if they are considered to represent an increase in pollution as a result of Permitted activities, for example, whether the contaminants exceeding the Baseline Data have been used in the Zone during the lifetime of the Permit.

Where a combination of 2001/2003 Reference Data and 2007 Baseline Data was available, the Reference Data was used preferentially.

Exceedances of the soil and groundwater Reference Data or Baseline Data were considered in terms of the permitted activities which had taken place on site. Based on this, several Zones were identified where PPC permitted processes were considered likely to have resulted in pollution occurring during the lifetime of the permit.

2.5 SUMMARY OF AREAS REQUIRING REMEDIATION

Based on the statistical analysis of data as part of the PPC Site Surrender Report, concentrations of contaminants have been identified which exceed either pre-PPC 'reference' data concentrations or Baseline concentrations for the site (based on the upper 95th percentile of the average concentrations), and are required to be remediated to Reference Data or background conditions prior to Permit surrender.

A summary figure showing the principal areas requiring remediation are shown in Figure 4 in Appendix A.

2.5.2 Areas Requiring Remediation due to PPC Permit Surrender Requirements

A summary of the Zones identified as requiring remediation as part of the PPC Permit Surrender are summarised in Table 2.2 on the following page:

Table 2.2: Summary of PPC Zones which Require Remediation as part of the PPC permit Surrender

PPC Zone	Pollutant and Likely Permitted Source	Remedial Action Summary
Zone 1 **Ingot Plant Dross Shelter**	Given the relatively poor condition of the concrete hardstanding underlying the dross shelter, the increase of ammonia, metals (cadmium, nickel, zinc, beryllium and boron), sulphate and phenanthrene in shallow soil since the Reference Data collection may have occurred during the operation of the Permit.	Excavation of the shallow soils underlying the dross shelter.
Zone 2 **Ingot Plant Tank Farm**	Dissolved phase hydrocarbons in BH2_03 are consistent with a mixture of heavily biodegraded diesel and lubrication oil standards. Therefore there is the potential for the localised hydrocarbon contamination in BH2_03 to relate to the above ground storage of fuel oil.	Bioremediation/chemical oxidation of hydrocarbon contaminated groundwater using ORC or similar.
Zone 7 **Hot Mill Sub-Stations**	Hydrocarbon contamination of shallow soil correlating with observations of hydrocarbon staining adjacent to transformer bases. Likely to relate to leaks during the life of the Permit.	Excavation of the contaminated shallow soils in the hot mill sub-station.
Zone 8 **Compressor Drainage**	Localised hydrocarbons in shallow soils correlating with hydrocarbon staining directly underlying the compressor drainage.	Excavation of contaminated shallow soils.
Zone 9 **Stores and IBC Storage**	EPH concentrations exceeded Baseline Data in a limited number of soil samples adjacent to the open oil/water drainage interceptor in the east of the Zone. Given the potential for spillages to occur from the open interceptor, it is considered that the localised elevated hydrocarbons may relate to Permitted activities.	Excavation of contaminated shallow soils.
Zone 10 **Cold Mill Sub-Stations**	Localised hydrocarbons in shallow soils in an area impacted by a localised transformer oil leak which occurred approximately 2 years ago, during Permitted operations.	Excavation of the contaminated shallow soils in the cold mill sub-station.
	Localised hydrocarbon in shallow soils on the bank to the south of the substation outside switching yard, is likely to relate to contaminated water runoff from the hardstanding at the top of the bank during Permitted operations.	Excavation of contaminated shallow soils.
Zone 12 **Cold Mill Tank Farm**	Shallow hydrocarbon contamination of the earth embankment to the south of the Cold Mill Tank Farm. Contamination originates from the Cold Mill fume extraction stack.	Cleaning of oil stained hardstanding and excavation of contaminated shallow soils.
Zone 13 **Effluent Treatment Plant, Chemical Basement and**	Chromium and hexavalent chromium in soils underlying the ETP building. The ETP accepts effluent from the Coil Preparation Line. Chromium and hexavalent chromium are both used during the coil preparation process and it is likely that the chromium contamination has occurred during the life of the Permit.	Excavation or treatment of the chromium contaminated soils underlying the ETP.

Table 2.2: Summary of PPC Zones which Require Remediation as part of the PPC permit Surrender

PPC Zone	Pollutant and Likely Permitted Source	Remedial Action Summary
Localised Oil Leak	Localised hydrocarbon contamination in the shallow soil on an earth embankment between the coil preparation line building and the ETP, correlating with an area of hydrocarbon staining, believed to relate to leaks from a short length of underground pipe, connecting an AST to the coil preparation building.	Excavation of contaminated shallow soils.
	Localised dissolved phase hydrocarbons in groundwater in BH13_03, consistent with lubrication oil.	Excavation of contaminated shallow soils and removal of free phase hydrocarbons (if encountered).
Zone 15 **Lacquer Storage**	Localised surface soil contamination with hydrocarbons, VOCs and SVOCs correlating with observations of localised lacquer spillages on gravel to the south of the tank bund, likely to have occurred during Permit operation.	Excavation of contaminated shallow soils.
Zone 16 **Waste Drum Storage Compound**	Hydrocarbons and VOCs in shallow soil correlating with observations of staining on open ground adjacent to the bunded compound, likely to have occurred during the lifetime of the Permit.	Excavation of contaminated shallow soils.
Zone 17 **Disused Cooling Tower to East of Roll Shop.**	Localised hydrocarbons in shallow soils correlating with hydrocarbon staining on gravel dressed ground, likely to relate to run-off from the skips which accepted waste from the engineering workshop (Zone 4).	Excavation of contaminated shallow soils.

3.0 GENERAL INFORMATION ON REMEDIATION WORKS

3.1 INTRODUCTION

The remedial requirements for each of the areas in Tables 2.2 are presented in the following sections. The final detailed design responsibilities are the responsibility of the Principal Contractor. It is envisaged that for some of the requirements, the Principal Contractor will employ a suitably qualified specialist remediation contractor.

Following the completion of the design works, the Principal Contractor will need to submit an excavation and remediation schedule (which may be presented to the relevant Regulatory Authorities if required) and obtain the approval of the Environmental Consultant and Client (and regulatory authorities, if required) prior to commencing work.

3.2 GENERAL REQUIREMENTS

3.2.1 Health and Safety

The remediation works on site will fall under the Construction (Design and Management) Regulations 2007 (CDM 2007).

The Principle Contractor will be responsible for co-ordinating and managing the construction phase (including remediation) to ensure the Health and Safety of all persons and companies carrying out the work or who could be affected by the work. The Principal Contractor will be required to develop a construction phase Health and Safety Plan and arrange for appropriate resources, including welfare facilities, to be available when work commences on site.

During the remediation works construction workers could be exposed to concentrations of contaminants which are likely to present a risk to human health. These risks will need to be considered by the Principal Contractor in the construction phase Health and Safety Plan in order to ensure that construction workers and third parties who may be affected by the works are adequately protected in accordance with relevant legislation and best practice.

The Principal Contractor shall supply a Method Statement and associated risk assessments for each activity of the Works, together with an activity schedule, programme of works and methodologies for further investigations for soil excavation and removal, contaminated groundwater abstraction. Temporary stockpiling of materials on site, re-use of materials on site and the removal and disposal of wastes.

Details of all temporary works, specialist contractors, including waste operators, and landfill operators and any other supporting documentation required to undertake the ground remediation works or requested by the Environmental Consultant or Client shall be provided.

3.2.2 Facilities for Other Team Personnel

Facilities such as office space and welfare facilities are likely to be available at the site through negotiation with the client. Details of this will be provided at a later date.

3.2.3 Permits and Licences

The Principal Contractor will be responsible for obtaining all applicable permits, licences or exemptions (e.g. Mobile Treatment Licences, Discharge Consents, Exemptions under the Waste Management Regulations) prior to beginning any work. Estimated timings, based upon realistic assumptions, should be shown in the programme / activity schedule.

The Principal Contractor shall comply with and give all notices required by any regulation or bye-law applicable to the Works.

Where required, the Principal Contractor will be responsible for contacting the Local Authority and gaining approval, including permits for all equipment in terms of potential nuisance (e.g. noise and odour) and working hours.

3.2.4 Security of the Work Areas

In addition to the security measures required by Alcoa for other phases of the construction work, the Principal Contractor shall ensure that areas where remedial works are being undertaken, including access routes and entrances, will be made secure during the operation of the remedial works programme ensuring, so far as is reasonably practicable, the Health,

Safety of Welfare of all those involved in the works and third parties who may be affected by the works.

All appropriate Health and Safety signage and contact details shall be clearly displayed at the entrance of the working area during the works.

3.2.5 Underground Services

The remedial works will be carried out in areas where underground services are known, or likely, to be present. The Principle Contractor will make arrangements for the location and marking out of underground services in each of the remediation areas.

If underground services will potentially be affected by the remedial works, the Principal Contractor will be responsible for ensuring that appropriate measures are taken to either:

- protect underground services where the continued use of the service is required throughout and following the remedial works;
- temporarily isolate services if those services are not required during the remedial works but are required following the remedial works; or
- appropriately decommission redundant services if they are no longer required.

The Principal Contractor will need to discuss the appropriate action for the services in each remediation area with Alcoa prior to any remedial works commencing.

It should be noted that an important service corridor lies under the grass verge in the north of the site, running parallel with Titanium Road. This corridor contains the main underground services (including high voltage electricity, a gas main and fire water main) not only for the Alcoa site, but for the Aleris Recycling Facility and Timet Limited. Both Aleris and Timet will be operational during the remedial works and it is essential that the services are not disrupted or damaged as a result of the remedial works. The Principal Contractor will be required to give careful consideration to the protection of this service corridor during works in the vicinity of Titanium Road. Proposed control measures and working methods must be agreed with Alcoa before works commence.

Damage or loss caused to underground services during the remedial works will be the responsibility of the Principal Contractor.

3.2.6 Demolition of Site Infrastructure

Some of the areas requiring remediation can only be completed following demolition of site infrastructure, such as buildings, tanks and bunds. For the purposes of this document, the demolition of such infrastructure is not considered to be part of the remedial works, and the relevant requirements for demolition should be discussed between the Principal Contractor and Project Manager/Client.

3.2.7 Excavation of Contaminated Soils

The majority of remediation can be achieved through the excavation of relatively localised areas of contaminated soils, followed by reinstatement with clean validated backfill materials.

Before excavation commences, a comprehensive assessment of the potential risks to health, safety and the environment, and development of suitable and sufficient control measures shall be implemented by the Principal Contractor. This will include ensuring that the excavation methods do not represent a risk to existing services or buildings. The Principal Contractor will be required to ensure that all works are undertaken in accordance with the control measures and to monitor the support and stability of all excavations and temporary works.

Based on information provided from the Surrender Data report and this document, the areas requiring soil excavation will be marked out by the remediation contractor and agreed with the Environmental Consultant. Should engineering control, such as batters, be required, this should be taken into account by the Principal Contractor when sizing the excavation/area of works to ensure that sufficient area is available for the removal of the contaminated soils.

The soils will be excavated by the contractor to a depth and width such that all impacted soils have been removed. The Environmental Consultant will be present on site to observe the excavation of the Made Ground in each of these areas. The initial determination of the extent of the excavation will be determined in agreement with Environmental Consultant using olfactory and visual observations of contamination.

On completion of the initial excavation the Principal Contractor will collect soil validation samples from the sides and the base of the excavation at locations agreed with the Environmental Consultant. The Principal Contractor will submit the samples to an MCERTS accredited laboratory for analysis for the contaminants of concern (CoCs).

The principal Contractor will provide the Environmental Consultant with the results of the validation analysis. The Environmental Consultant will consider the results of the validation analysis against remedial targets to determine if significant contamination has been removed (further details on the remedial targets are provided in Sections 3.2.12 and in Section 4.0). Provided that the analytical results for the soil validation samples are considered to be suitable by the Environmental Consultant, the excavation can be backfilled following agreement with the Environmental Consultant. If significant contamination remains, the Environmental Consultant will request additional excavation until laboratory analysis indicates that the results of the validation samples are suitable.

The excavation will not be backfilled until agreed with the Environmental Consultant. In some cases, excavations may require backfilling prior to receipt of the validation samples due to Health and Safety considerations. The remediation contractor will agree this with the Environmental Consultant before the excavation in backfilled, and will be responsible for re-excavating if the Environmental Consultant considered that significant contamination remains.

If, through the operations of the remediation contractor, any excavation surface is damaged by traffic, softened or otherwise made unsuitable, the remediation contractor shall, at his own expense, re-excavate, fill up with approved material and consolidate the required levels.

3.2.8 Temporary Stockpiling of Excavated Soils

The excavated contaminated materials are likely to require temporary stockpiling on site prior to on-site treatment, segregation or disposal at a suitable licensed landfill facility.

The locations of stockpiles will be agreed with Alcoa prior to works commencing. The contaminated soil will be placed on hardstanding, or, if hardstanding is not available, a non-permeable membrane, to prevent the leaching of contaminants. Each stockpile will also be covered and labelled with a specific ID code. Where appropriate, leachate control measures will be provided to control leachate and surface run-off.

In order to assist with reducing waste disposal costs, the soils will be segregated based on visual and olfactory observations of contamination. Contaminated and non-contaminated materials should not be mixed.

The Principal Contractor will be responsible for the appropriate segregation of waste materials arising from the remedial works, appropriate stockpiling and the classification of waste materials.

3.2.9 Re-Use of Excavated Materials

Wherever possible, consideration should be given to the re-use of excavated materials. The Principal Contractor should make arrangements for the appropriate validation of materials intended for re-use on site, including demolition materials such as concrete.

Consideration should also be given to the on-site treatment of materials in order to make them suitable for use. The Principal Contractor may need to employ a suitably experienced remediation contractor to undertake the on-site treatment of soils.

In order for materials to be re-used on site, they must meet relevant remedial targets.

The Principal Contractor will be responsible for obtaining all relevant permits, licenses and exemptions for the on-site treatment and re-use of the materials.

3.2.10 Disposal of Contaminated Soils

Where waste materials require off-site disposal, the remediation contractor will be responsible for ensuring that the relevant Duty of Care obligations under Waste Management legislation are adhered to, including obtaining any licenses, the appropriate classification of waste soils, the selection of a suitably licensed landfill or waste management facility and the maintenance of all waste transfer documentation tracing the disposal route from source to destination. In some instances, the Principal Contractor may be required to make arrangements for the pre-treatment of the waste on-site before the materials can be accepted at landfill.

The Principal Contractor will also be required to ensure that all vehicles removing waste soils from the site are sheeted to prevent the release of contaminated particulates during transport, and that vehicles leaving and entering the site are clean, to prevent the spread of contaminated materials. The route taken by vehicles containing waste shall be specified in advance of the works and all waste leaving the site shall follow the agreed route, to minimise impact on the surrounding communities.

3.2.11 Dewatering of Excavations and Control of Water Run-Off

The Principal Contractor will be required to ensure that groundwater ingress into excavations and surface water run off from the works area (including any stockpile areas) is controlled during the works.

Soils will not be excavated 'wet'; groundwater and surface water collecting in the open excavation will be abstracted from the excavations in order that the excavated material can be removed 'dry'. Water removed from the excavations and potentially surface water run off from the works area and any stockpile areas is likely to require treatment prior to consented discharge.

The Principal Contractor will also be required to ensure that hydrocarbon product collecting within the excavations will be appropriately recovered and stored (e.g. in a bunded tank) and disposed of in accordance with the relevant regulations, including the Duty of Care regulations.

The Principal Contractor will be responsible for:

- undertaking a comprehensive assessment of the potential risks to health and safety and to the environment from the recovery of contaminated water or free phase product from excavations, and development and implementation of suitable and sufficient control measures;
- obtaining discharge consents from the relevant regulators (or the Client where applicable);
- the recovery of water and product from chambers and excavations, in accordance with relevant guidance;
- the implementation of a suitable treatment process and monitoring program in order that the treated water complies with any consents;
- ensuring that the relevant Duty of Care obligations under Waste Management legislation are adhered to, including the appropriate classification of oils or product, the selection of a suitably licensed treatment or disposal facility and the maintenance of all waste transfer documentation tracing the disposal route from source to destination.
- the appropriate disposal of any waste treatment material from the water treatment system, in full compliance with all current legislation.

3.2.12 Soil Validation Sampling

Validation samples will be collected by the Principal Contractor at the base and sides of the excavations to ensure the contaminated soils have been removed.

In larger excavations, validation sampling will be at the rate of one sample per 100m^2 of an excavation face and one sample per 100m^2 of the excavation base. In smaller isolated excavations, at least one validation sample will be taken from the base and sides of the excavation or as directed by the Environmental Consultant

The validation samples will be stored in containers appropriate for the type of analysis to be undertaken, maintained at low temperature and couriered to the laboratory with chain of custody documentation. The laboratory will be MCERTS accredited.

Validation samples will be analysed for contaminants of concern (CoCs) which were found to exceed the PPC reference data or baseline concentrations during the Site Surrender Investigation, or as directed by the Environmental Consultant.

The results of the validation analysis will be compared to remedial targets where possible. The remedial targets for each area will be primarily based on the reference data or baseline data concentrations presented in PPC Surrender Data Report. The Environmental Consultant will compare the results of the validation samples against the remedial targets and determine if sufficient contamination has been removed during the excavations.

The excavation can be backfilled following agreement with the Environmental Consultant. If significant contamination remains, the Environmental Consultant will request additional excavation.

In some cases, excavations may require backfilling prior to receipt of the validation samples due to Health and Safety considerations. The remediation contractor will agree this with the Environmental Consultant before the excavation in backfilled, and will be responsible for re-excavating if the Environmental Consultant considered that significant contamination remains.

3.2.13 Backfilling Excavations

Excavations will be required to be backfilled with materials of similar physical properties to those excavated ('like for like').

It is envisaged that the backfill materials will be site derived where possible, obtained from clean demolition materials, treated soil and potentially an area of previously tipped soils ('large tipped area') which lies to the north of the Aleris Recycling Facility.

The large tipped area covers approximately 1 hectare and comprises predominantly firm to stiff sandy gravelly clay with sandstone cobbles. Demolition type materials (fragments of concrete slabs, brick and masonry and to a lesser extent plastic sheet, metal wire and cables and reinforcing bars) are present, making up approximately 10% of the total volume of material in the tipped area. The average thickness of the tipped materials is 3.5m, and the material appears to have been places directly on the former ground surface. The approximate volume of the large tipped area is 35,000m^3.

The Principal Contractor will be required to obtain any relevant exemptions under the Waste Management Licensing (England and Wales) Regulations 2005 in relation to use of this material. The materials will also require chemical characterisation prior to use as backfill to ensure that it meets the appropriate remediation target criteria. Representative samples shall be taken, based on a rate of at least 1 sample per 20 tonnes of soil for analysis.

The remediation contractor will be required to segregate the materials with suitable physical properties for backfill from those which do not meet physical criteria. The Principal Contractor will also be required to determine the physical properties of the material, if necessary.

The chemical target criteria for backfill materials are based primarily on the 95%ile of the measured mean for the whole site, based on the chemical analysis carried out as part of the ENVIRON Surrender Data investigation. It should be noted that these 95%ile mean criteria also meet the generic CLEA Soil Guideline Values (SGVs, where available), for residential end use for the majority of contaminants.

For zinc, the zinc Reference Data concentrations for Zone 1 has been selected as the appropriate backfill criteria, primarily to meet the remedial requirements for Zone 1 (discussed further in Section 4.1). This is lower the 95th percentile of the measured mean for the site of 306mg/kg, and for Zones other than Zone 1, ENVIRONs professional judgement will also be used to determine if zinc concentrations within the backfill material are suitable.

Similarly, for hexavalent chromium, the Reference Data concentrations for Zone 13 have been selected as the appropriate backfill criteria, primarily to meet the remedial requirements for Zone 13 (discussed further in Section 4.8). This is lower the 95th percentile of the measured mean for the site of 78.7mg/kg.

The remedial target for beryllium has been selected based on the maximum concentration of beryllium (1.5mg/kg) detected in the natural soils during the PPC investigation.

For petroleum hydrocarbons (EPH C10-40), the 95%ile of the measured mean for the whole site is 7,712mg/kg. However, a target criteria of 1,000mg/kg has instead been selected for backfill material, based on professional judgement.

The criteria for asbestos (i.e. no detection) and pH range are also based on ENVIRON's professional judgement.

Table 3.1 : Summary of Targets for Backfill Material

Determinand	Target for Backfill (mg/kg)	Reference
Asbestos Screen	No Detect	Subjective[1]
pH	Range 6-8 pH units	Subjective[1]
Arsenic	20 mg/kg	CLEA SGV
Barium	107.5 mg/kg	95%ile measured mean
Beryllium	1.5 mg/kg	Maximum[6]
Boron (water soluble)	0.68 mg/kg	95%ile measured mean
Cadmium	0.74 mg/kg	95%ile measured mean
Total Chromium	367 mg/kg	95%ile measured mean[5]
Hexavalent Chromium	1.1 mg/kg	Reference Data, Zone 13
Copper	167 mg/kg	95%ile measured mean
Lead	168 mg/kg	95%ile measured mean
Mercury	0.74 mg/kg	95%ile measured mean
Nickel	29.8 mg/kg	95%ile measured mean
Selenium	2.76 mg/kg	95%ile measured mean
Vanadium	21.7 mg/kg	95%ile measured mean
Zinc	135 mg/kg	Reference Data, Zone 1
EPH C10-40	1,000 mg/kg	Subjective[1]

Table 3.1 : Summary of Targets for Backfill Material

Determinand	Target for Backfill (mg/kg)	Reference
VPH C5-10	58 mg/kg	95%ile measured mean
Total PAHs (SUM of USEPA 16)	0.1 mg/kg	95%ile measured mean[2]
Total BTEX	0.01 mg/kg	95%ile measured mean[3]
Total Monohydric Phenols	1 mg/kg	95%ile measured mean[4]

Notes:
[1] Target value based on professional judgement
[2] Lowest 95%ile of measured mean for an individual PAH
[3] Lowest 95%ile of measured mean for an individual BTEX compound
[4] Lowest 95%ile of measured mean for an individual Phenol compound
[5] Below CLEA SGV for commercial/industrial use
[6] Maximum beryllium concentration detected across the site in natural soils during the PPC Surrender data Investigation.

Following receipt of the laboratory analysis, the Environmental Consultant will determine if the materials are suitable for use as backfill, in terms of chemical composition. The Principal Contractor may also need to seek agreement from a structural or geotechnical engineer on the physical suitability of the material prior to use of the material as backfill in certain locations.

Should additional materials require importing from an off-site source, representative samples will also need to undergo validation to ensure that they are suitable for use as backfill and meet the appropriate remediation target criteria. The Principal Contractor will be responsible for sourcing suitable material and shall provide appropriate documentation demonstrating the source and suitability of the material.

If the clean backfill material is to be temporarily stockpiled in the remediation area, the Principal Contractor will ensure that measures are put in place to prevent cross contamination.

Excavations will be backfilled and reinstated by the Principal Contractor to specifications provided by Alcoa (or their structural or geotechnical engineers) where provided.

3.2.14 Geotechnical Requirements

Placement of backfill shall be carried out to an engineering specification. At present, suitable specifications are unknown and the relevant engineering requirements for backfilling should be discussed between the Principal Contractor and Client.

3.2.15 Other Remediation Methods

A small number of areas have been identified where methods other than excavation of contaminated soil is considered to be more appropriate to address the risks posed by the identified contamination. These include in-situ bioremediation/oxidation using Oxygen Release Compound (ORC) or similar to reduce hydrocarbon concentrations and possible reduction of hexavalent chromium to trivalent chromium. These are discussed further in Section 4.0.

3.2.16 Record of Works

The Environmental Consultant will maintain a photographic record of the works, including the pre-remediation conditions, excavations, stockpiles, backfill materials and backfill operations and post-remediation conditions, which will form part of the validation report for the works.

The Principal Contractor will be required to provide the Environmental Consultants with copies of licenses, results of testing and analysis, permits, consents, exemptions, waste documentation and documentation demonstrating the source and suitability of the backfilled material. These documents will form part of the validation report.

4.0 DETAILED REMEDIAL REQUIREMENTS TO ADDRESS PPC CONTAMINATION

The following sections provide more detail on the individual remedial requirements envisaged for each of the Zones identified in Table 2.2, where remediation is required under PPC Site Surrender Requirements.

4.1 ZONE 1 – INGOT PLANT DROSS SHELTER

Ammonia (150 mg/kg), nickel (69 mg/kg) and zinc (190 mg/kg) in soils exceed Reference Data while beryllium (1.2 mg/kg), boron (0.8 mg/kg), sulphate (650mg/kg) and phenanthrene (0.32mg/kg) exceed the Baseline Data in the soils underlying the ingot plant dross shelter. Olfactory observations of ammonia contamination were noted in top 1m of soil underlying the hardstanding.

The ingot plant dross shelter covers and area of approximately 520m^2. It comprises an area of hardstanding covered with a canopy with concrete walls.

Before work commences, the Principal Contractor will be required to follow the general requirements regarding Health and Safety (Section 3.2.1) and underground services (Section 3.2.5). The Principal Contractor will also be required to assess risks and develop suitable control measures to deal with ammonia vapours, including continued vapour monitoring in the area of excavation, preventing of vapours accumulating in the excavation and the potentially the use of RPE.

The above ground structure of the shelter may require removal prior to works commencing. For the purposes of this document, the demolition of such infrastructure is not considered to be part of the remedial works, and the relevant requirements for demolition should be discussed between the Principal Contractor and Project Manager/Client.

The upper surface of the concrete is pitted due to attack from dross leachate and is likely to be unsuitable for re-use on site. The deeper concrete may be suitable for validation for re-use on site.

The lateral extent of the contamination is unknown, however, it is likely to extend beneath the majority of the dross shelter. Under the supervision of the Environmental Consultant, delineation trial pits will be excavated to determine the extent of the ammonia contamination, based on the use of a portable detection instrument and confirmed by laboratory analysis. Following delineation, the Environmental Consultant will provide details on the volume of contaminated soils and the Principal Contractor will mark out the area for excavation.

The Environmental Consultant will inspect the excavation during the works to determine when significant contamination has been removed (again based on the use of a portable detection instrument.). Validation samples will then be collected, based on at least one sample per 100m^2 in the base and sides of the excavation. Validation samples will be analysed in an MCERTS accredited laboratory for the determinands shown in Table 4.1:

Table 4.1: Summary of Remedial Targets for Zone 1 Ingot Plant Dross Shelter

Determinand	Remedial Target (mg/kg)
Ammonia	10.85[1]
Nickel	51[1]
Zinc	135[1]
Beryllium	0.849[2]
Boron	0.684[2]
Sulphate	414[2]
Phenanthrene	0.27[2]

[1] Zone 1 PPC Reference Data concentration
[2] PPC Baseline Concentration

The remedial targets are based on Reference Data concentrations (where available) and PPC Baseline concentrations. The Environmental Consultant will determine if significant contamination is removed.

Following the approval of the validation analysis by the Environmental Consultant, the excavation can be backfilled, in accordance with the general requirements in Section 3.2.13. The backfill material will be required to meet the targets presented in Table 3.1.

The treatment or disposal of waste soil will be in accordance with the general requirements set out in Section 3.2.9 and 3.2.10.

4.2 ZONE 2 – INGOT PLANT TANK FARM

Groundwater from BH2_03 exceeds PPC Reference Data for total petroleum hydrocarbons (TPH) at 4.51 mg/l, and Baseline Data for phenanthrene at 0.0071 mg/l and anthracene at 0.0058 mg/l). The dissolved phase hydrocarbons in BH2_03 are consistent with a mixture of heavily biodegraded diesel and lubrication oil standards and may have occurred during the life of the PPC Permit.

Although the actual lateral extent is unknown, the contamination is localised in the vicinity of BH2_03. In order to reduce the hydrocarbon concentrations to those of the reference data concentrations (1mg/l for TPH), in-situ bioremediation/oxidation will be undertaken.

The Principal Contractor will be required to employ a specialist Contractor who, with the agreement of the Environmental Consultant, can provide a detailed design for the remediation. However, it is likely to comprise of the direct injection of oxygen release compounds, in order to accelerate the breakdown of the hydrocarbons. This will be followed by a series of monitoring rounds to ensure that concentrations within groundwater are decreasing.

A detailed design for the remediation will be produced under separate cover following discussions with specialist Contractors.

4.3 ZONE 7 – HOT MILL SUB-STATION

Visual hydrocarbon contamination of the limestone ballast is present close to the base of several electrical transformers in the sub-station compound. Laboratory analysis indicates a maximum hydrocarbon concentration of 32,000mg/kg. PCBs or volatile organic compounds were not detected.

For the purposes of this document, the area of contamination is estimated to be approximately 175m^2. It is anticipated that the ballast will require excavation to depth of 0.5m bgl.

In addition to the general requirements regarding Health and Safety (Section 3.2.1) and underground services (Section 3.2.5), the Principal Contractor will be required to:

- arrange for the safe isolation of the sub-station with Alcoa (the sub-station is currently in use);
- provide Alcoa with the anticipated timescale for the work;
- locate and mark the position of underground electricity services within the sub-station.

After the completion of the above, the Principle Contractor will mark out the visual extent of the contaminated soils prior to excavation commencing. The Principle Contractor will seek agreement from the Environmental Consultant on the area to be excavated before work commences.

The contaminated soils will require careful hand excavation in order to avoid damage to underground services and structural damage to the transformers. It is anticipated that the excavation will continue until visually hydrocarbon impacted materials have been removed. The Environmental Consultant will inspect the excavation to determine if significant contamination has been removed.

Contaminated soils will be removed from the sub-station and temporarily stockpiled in a suitable area, in accordance with the general requirements set out in Section 3.2.8.

Following excavation, the Principal Contactor will collect validation samples from the base and sides of the excavation. Based on the approximate area of the excavation, at least one sample will be collected from the base and each face.

The Principal Contractor will submit the validation samples to an MCERTS accredited laboratory for analysis for the following compounds:

- EPH C10-40

The remedial target for this area is based on the PPC Baseline concentration:

- EPH C10-40: 7,713mg/kg

The excavated materials will be temporarily stockpiled in accordance with the general requirements set out in Section3.2.8.

The treatment or disposal of waste soil will be in accordance with the general requirements set out in Section 3.2.9 and 3.2.10.

Excavations will be backfilled in accordance with the general requirements set out in Section 3.2.13.

Following the completion of the remediation work, the Principal Contractor will inform Alcoa and arrange for the re-activation of the sub-station.

4.4 ZONE 8 – COMPRESSOR DRAINAGE

Hydrocarbons (16,000 mg/kg) and a range of PAHs exceed the soil PPC Baseline Data in the shallow gravel dressed Made Ground in a localised area beneath a compressor drainage pipe. For the purposes of this document, the area of contaminated soils is estimated to be approximately $15m^{2.}$ The impacted soils are anticipated to extend to a depth of approximately 0.2m bgl.

The contamination lies adjacent to a building wall and there are several drainage services in the area of the staining. However, given the shallow depth of impact and the adjacent building wall, the soils will be hand excavated.

During the site investigation, this upper layer of soils was found to contain oily water from the compressor drainage. This will require removal from the excavation and suitable disposal.

The Environmental Consultant will inspect the excavation to determine if significant contamination has been removed. Validation samples will be collected and analysed at an MCERTS laboratory for the range of determinands in Table 4.2.

Table4.2: Summary of Remediation Targets for Zone 8, Compressor Drainage	
Determinand	**Remediation Target (mg/kg)**
EPH C10-40	7,713
Acenapthene	0.1
Fluorene	0.127
Phenanthrene	0.274
Anthracene	0.123
Fluoranthene	0.23
Pyrene	0.2
Benzo(a)anthracene	0.149
Chrysene	0.157
Benzo(b)flouranthene	0.155
Benzo(k)flouranthene	0.127
Benzo(a)pyrene	0.14
Dibenzo(a,h)anthracene	0.1
Indeno (1,2,3-cd)pyrene	0.124
Benzo(g,h,i)perylene	0.127

The remedial targets are based on PPC Baseline Concentrations. During the site investigation, fragments of slag (i.e. not related to PPC Permitted activities) were noted within the Mae Ground, which may influence PAH concentration. Therefore, the Environmental Consultant will take ground conditions into account when assessing if the validation samples are suitable.

Following the approval of the validation analysis by the Environmental Consultant, the excavation can be backfilled, in accordance with the general requirements in Section 3.2.13. The backfill material is likely to comprise a granular sub-base.

The treatment or disposal of waste soil will be in accordance with the general requirements set out in Section 3.2.9 and 3.2.10.

4.5 ZONE 9 - IBC STORAGE AREA.

An open surface water interceptor is located in the grassed area to the east of the IBC storage compound. Elevated concentrations of hydrocarbons and have been detected in the shallow soils immediately adjacent to the interceptor, likely to relate to spillages from the interceptor.

The greatest hydrocarbon concentration detected was 340,000mg/kg (HP09_02, 0-0.1m bgl). Elevated concentrations were also detected at depth (46,000mg/kg at 1-1.2m bgl in HP09_02 and 48,000mg/kg at 0.7m bgl in HP09_01). However, it was noted that the Made Ground adjacent to the interceptor contained fragments of slag, clinker and locally small lenses of a thick oily substance, which are likely to contribute to the elevated concentrations (Swansea Valley Fill was used in this area during the site development).

The depth of the hydrocarbon contamination is unknown, but may potentially be present to the base of the interceptor walls. The contaminated soils in a thin strip around the interceptor (an approximate area of 13m^2), are estimated to require excavation.

Before work commences, the Principal Contractor will be required to follow the general requirements regarding Health and Safety (Section 3.2.1) and underground services (Section 3.2.5). In addition with the drainage associated with the interceptor, it is known that the Alcoa fire water main and hi-voltage electricity cables are present in the area. Following a service location survey, theses services will be marked out and protected from the works.

The Principal Contractor will also ensure that suitable control measures and working methods are put in place to ensure that the interceptor and associated drainage infrastructure, and other underground services which could potentially be impacted by the work are not damaged during the works. This will need to be discussed and agreed between the Principal Contractor and Project Manager/Client before works commence.

The excavation area will be marked out and agreed with the Environmental Consultant before excavation. The soils will be excavated carefully around the interceptor chamber and the excavations will be inspected by the Environmental Consultant for visual and olfactory signs of contamination.

Once field observations of significant contamination have been removed, the Environmental Consultant will collect validation samples from the base and face of the excavation. Samples will be analysed at an MCERTS accredited laboratory for EPH C10-40.

A remedial target based on PPC baseline concentrations has been selected:

- EPH C10-40 7,713mg/kg

However, when assessing the validation samples, the composition of the Made Ground in this area of the site (Swansea Valley Fill) will also be taken into account by the Environmental Consultant.

Excavations will be backfilled in accordance with the general requirements set out in Section 3.2.13. This is likely to require a surface dressing of sub-base type material. The backfill material will be required to meet the targets in Table 3.1.

The treatment or disposal of waste soil will be in accordance with the general requirements set out in Section 3.2.9 and 3.2.10.

4.6 ZONE 10 – COLD MILL SUB-STATION

Concentrations of EPH exceed soil Baseline Data in shallow samples of the ballast gravel in the Cold Mill sub-station (S10_01 and SS10_02). These were taken from an area reported to have been impacted by a localised transformer oil leak which occurred approximately 2 years ago. The area estimated to be impacted by the leak is approximately 175m^2. The depth of the impacted soils is unknown, but is likely to extend to approximately 0.5m bgl.

Soil samples (SS10_04 and SS10_06) also exceeded Baseline concentrations for hydrocarbons and were taken from an earth embankment south of the substation outside switching yard. Localised evidence of hydrocarbon staining was noted on the bank and it is considered that the hydrocarbons relate to contaminated water runoff from the hardstanding at the top of the bank. For the purposes of this document, it is estimated that impacted soils cover an area of approximately 220m^2. The depth of the impacted soils is not known, but it is expected to approximately 0.2m.

The soil samples require excavating by hand to reduce concentrations to Baseline levels.

In addition to the general requirements regarding Health and Safety (Section 3.2.1) and underground services (Section 3.2.5), the Principal Contractor will be required to:

- arrange for the safe isolation of the sub-station with Alcoa (the sub-station is currently in use);
- provide Alcoa with the anticipated timescale for the work;
- locate and mark the position of underground electricity services within the sub-station.

After the completion of the above, the Principle Contractor will mark out the visual extent of the contaminated soils prior to excavation commencing. The Principle Contractor will seek agreement from the Environmental Consultant on the area to be excavated before work commences.

The contaminated soils will require careful hand excavation in order to avoid damage to underground services and structural damage to the transformers. It is anticipated that the excavation will continue until visually and olfactory hydrocarbon impacted soils have been removed. The Environmental Consultant will inspect the excavation to determine if significant contamination has been removed.

Contaminated soils will be removed from the sub-station and temporarily stockpiled in a suitable area, in accordance with the general requirements set out in Section 3.2.8.

Following excavation, the Principal Contractor will collect validation samples from the base and sides of the excavation. Based on the approximate area of the excavation, at least one sample will be collected from the base and each face.

The Principal Contractor will submit the validation samples to an MCERTS accredited laboratory for analysis for the following compounds:

- EPH C10-40

The remedial target for this area is:

- EPH C10-40: 7,713mg/kg

The results of the validation samples will be compared against the remedial targets. The excavation can be backfilled following authorisation from the Environmental Consultant.

Excavations will be backfilled in accordance with the general requirements set out in Section 3.2.13. The backfill material is likely to be a granular sub-base and will be required to meet the targets Table 3.1.

The treatment or disposal of waste soil will be in accordance with the general requirements set out in Section 3.2.9 and 3.2.10.

Following the completion of the remediation work, the Principal Contractor will inform Alcoa and arrange for the re-activation of the sub-station.

4.7 ZONE 12 – COLD MILL TANK FARM EMBANKMENT

The shallow soils in the earth embankment between the cold mill tank farm and the cold mill building are visibly impacted by hydrocarbons. A maximum hydrocarbon concentration of 43,000mg/kg was detected in SS12_02 at 0.2m bgl. In addition, the concrete hardstanding at the top of the embankment has an oily surface residue.

The impacted soils are estimated to cover an area of approximately 46m^2 and are expected to extend to a depth of approximately 0.3m bgl. The soils will require excavating and a surface dressing reinstated.

Before work commences, the Principal Contractor will be required to follow the general requirements regarding Health and Safety (Section 3.2.1) and underground services (Section 3.2.5).

Prior to the excavation of the embankment soils, the concrete hardstanding will require cleaning to remove surface residues.

The impacted soils can be scraped off until visual evidence of contamination is removed. The Environmental Consultant will inspect the remaining soils and collect suitable validation samples. The soils removed from the embankment can be handled with the soils removed during the excavation under the cold mill tank farm.

Soil validation samples will be submitted to an MCERTS accredited laboratory and will be analysed for EPH C10-40.

The results of the analysis will be compared against PPC baseline data concentrations of:

- EPH C10-40 7,713mgkg.

Excavations will be backfilled in accordance with the general requirements set out in Section 3.2.13. This is likely to require a surface dressing of sub-base type material. The backfill material will be required to meet the targets in Table 3.1.

The treatment or disposal of waste soil will be in accordance with the general requirements set out in Section 3.2.9 and 3.2.10.

4.8 ZONE 13 – EFFLUENT TREATMENT PLANT CHEMICAL BASEMENT

Elevated total chromium (maximum concentration of 10,000mg/kg) and hexavalent chromium (maximum concentration of 430mg/kg) has been identified in soils in the vicinity and underlying the effluent treatment plant (ETP).

The ETP is located close to the northern site boundary with Titanium Road. At present, the ETP comprises a two story building housing a dedicated plant, including filtration, neutralisation and settlement processes. The footprint of the ETP covers an area of approximately 760m$^{2.}$.

Window samples within the ETP encountered moist to wet granular Made Ground underlying the concrete floor of the ETP. The thickness of the Made Ground was only able to be proved in one location, WS13_03, where it was proved to 1.2m bgl (underlain by alluvial silt/clay). The remaining window sample locations terminated within this layer of Made Ground at between 1.4m and 2.6m bgl.

Chromium and hexavalent chromium contamination was present in the Made Ground in each of these window sample holes, and was also present within the top of the natural alluvial material encountered in WS13_03. The full vertical extent of the chromium contamination is currently unknown. However, the lateral extent appears to be contained within the footprint of the building.

There are two potential options for the remediation of the chromium contaminated soils. The first is the excavation and disposal of the contaminated soils, the second is possibly reducing the hexavalent chromium to trivalent chromium through the use of in-situ chemical remediation techniques. Both methods are discussed below.

In addition to the chromium contamination within the footprint of the ETP, the shallow groundwater in the vicinity of BH13_03 (adjacent to the south west corner of the ETP) was found to be contaminated by hydrocarbons. During an initial round of groundwater monitoring, BH13_03 was found to contain a thin (approximately 11.6cm thick) layer of free phase hydrocarbons. However, a second round of monitoring in this well did not identify the free phase hydrocarbons. Laboratory analysis detected a maximum dissolved phase groundwater concentration of 35.70mg/l (during the second round of monitoring). For the purposes of this document, the estimated extent of the contamination is approximately 305m^2 (although this is considered to partially overlap the chromium contaminated soils). It is envisaged that this contamination can be addressed at the same time as the chromium contamination.

4.8.1 Excavation of Contaminated Soils

The following protocols will be followed if the chromium contaminated soils require excavation.

Health and Safety Considerations

The effluent treatment plant (ETP) is a two storey building. The excavation of the contaminated soils will require the demolition of the ETP and the adjacent clarifier tank. For the purposes of this document, the demolition of such infrastructure is not considered to be part of the remedial works, and the relevant requirements for demolition should be discussed between the Principal Contractor and Project Manager/Client.

Prior to works commencing, the Principal Contractor will ensure that suitable risk assessments are carried out for the works and control measures and safe working methods developed. These will need to include suitable control measures to reduce the risks posed by chromium and hexavalent chromium contamination.

There will be the potential for hydrocarbon vapours to collect in the excavation, especially within the south west corner close to BH13_01. It will be necessary for the Principal Contractor to undertake continued vapour monitoring in the area of excavation in order to address Health and Safety concerns, along with additional precautions, including; elimination of potential sources of ignition from the area, preventing discharge of static electricity and preventing the accumulation of vapours in the excavation.

A combustible gas indicator (LEL meter, calibrated for the relevant VOCs) should be used to check for hazardous vapour concentrations. Should concentrations exceed LEL limits, all spark producing equipment should be shut down and the area vented (by air displacement if necessary).

If at any time there is a requirement for entry into the excavations, appropriate vapour/gas monitoring will be required and suitable Health and Safety procedures adopted.

In addition, control measures and safe working methods will need to be put in place to protect the remaining site infrastructure in the vicinity of the excavation.

Following demolition, the Principal Contractor can undertake service tracing and mark out the location of underground services. The floor slab of the ETP can then be removed and validated to determine if it is suitable for re-use on site.

Delineation will be required following the removal of the floor slab to determine the depth of the chromium contamination. Trial pits will be excavated within the footprint of the ETP under the supervision of the Environmental Consultant. The depth of contamination will be confirmed by the Environmental Consultant following the receipt of laboratory analysis.

It is considered likely that the excavation will require dewatering and that shallow groundwater will be contaminated with chromium, hexavalent chromium and also hydrocarbons (in the south west corner). The Principal Contractor will be required to make arrangements for the dewatering of the excavation, together with appropriate storage, treatment and disposal of treated water (and free phase hydrocarbons, if encountered), in accordance with relevant discharge consents and Duty of Care requirements.

The Principal Contractor will collect soil samples from the base and sides of the excavation, based on a rate of at least one sample per $100m^2$ of excavation face.

Soil samples will be submitted to an MCERTS accredited laboratory and will be analysed for chromium and hexavalent chromium.

The results of the analysis will be compared against PPC Reference Data concentrations to determine if significant chromium contamination remains:

- total chromium: 392mg/kg
- hexavalent chromium: 1.1mg/kg

Excavations will be backfilled in accordance with the general requirements set out in Section 3.2.13. The backfill material will be required to meet the targets in Table 3.1.

The excavated materials will be temporarily stockpiled in accordance with the general requirements set out in Section 3.2.8.

The disposal of waste soil will be in accordance with the general requirements set out in Section 3.2.10. It is likely that due to the high levels of chromium contamination, the soils will be unsuitable for re-use on site and will require disposal at a licensed landfill facility. The waste may require pre-treatment on site in order for it to be accepted at a suitable landfill site.

4.8.2 In-Situ Chemical Treatment

In-situ chemical treatment would avoid the need to demolish the ETP. Should this method be used, it is envisaged that the Principal Contractor will need to employ a specialist remediation contractor, with experience of using in-situ chemical techniques, to undertake the work. The use of this technique to address the chromium in this area will require prior agreement with the Environment Agency and the Principal Contractor will need to work with the client and consultant to gain this approval.

Should this method be considered, a detailed design for the remediation will need to be produced under separate cover following discussions with specialist Contractors.

It should be noted that if in-situ methods were to be used to remediate the chromium contamination, the hydrocarbon contaminated groundwater in the vicinity of BH13_03 will still require remediation. Should the ETP and clarifier structures remain, there is the potential that this may also be undertaken using an in-situ remediation technique (again through the employment of a specialist remediation contractor and in agreement with the Environment Agency) to reduce hydrocarbon concentrations in the shallow groundwater to acceptable levels.

4.9 ZONE 13 – LOCALISED OIL LEAK

A localised area of hydrocarbon contamination (11,000mg/kg) is apparent on the grass embankment between the cold mill house and ETP. The contamination is believed to relate to leaks from a short length of underground pipe connecting an AST to the coil preparation line building and as such, is considered to relate to Permitted activities. The soil hydrocarbon concentrations are expected to reduce to below PPC Baseline concentrations at a depth of 0.5m bgl.

For the purposes of this document, the impacted soils are estimated to cover an area of approximately 36m^2, extending part of the way down the embankment. The soils will require careful excavation by hand to remove the contamination to a depth of approximately 0.5m bgl.

The Principle Contractor will mark out the extent of the contaminated soils and will seek agreement from the Environmental Consultant on the area to be excavated before work commences. The contaminated soils will be hand excavated to a depth of approximately 0.5mbg and the Environmental Consultant will inspect the excavation to determine if significant visual and olfactory observations of contamination have been removed.

Contaminated soils will be temporarily stockpiled in a suitable area, in accordance with the general requirements set out in Section 3.2.8.

Following excavation, the Principal Contractor will collect validation samples from the base and sides of the excavation. Based on the approximate area of the excavation, at least one sample will be collected from the base and each face.

The Principal Contractor will submit the validation samples to an MCERTS accredited laboratory for analysis for the following compounds:

- EPH C10-40.

The remedial target for this area is:

- EPH C10-40: 7,713mg/kg.

The results of the validation samples will be compared against the remedial targets. The excavation can be backfilled following authorisation from the Environmental Consultant.

Excavations will be backfilled in accordance with the general requirements set out in Section 3.2.13. The backfill material will be required to meet the targets Table 3.1.

The treatment or disposal of waste soil will be in accordance with the general requirements set out in Section 3.2.9 and 3.2.10.

4.10 ZONE 15 – LACQUER STORAGE

Localised hydrocarbons, PAHs, SVOCs and VOCs have been detected in the shallow gravel dressing adjacent to the south of the lacquer storage tanks, including naphthalene and chloroaniline, ethylbenzene, xylenes, isopropylbenzene, propylbenzene, trimethylbenzene, butylbenzene and isopropyltoluene and a range of TPH fractions, predominantly in the lower carbon fractions (C5 to 12). Various tentatively identified VOCs were also detected.

Data from the Surrender Data investigation indicates that the contamination is predominantly associated with localised surface spillages of lacquer, identified as an off-white 'crust' with a solvent odour. The spillages are generally located within an area estimated to be approximately 39m long and 5.75m wide (approximately 224m^2) however, it is unlikely that the soils will require excavation across the entire area.

A slightly deeper impact was noted in WS15_01 (south west corner), at approximately 1.0m bgl. The lateral extent of the deeper is unknown, but is likely to be localised.

Prior to work commencing, the Principal Contractor will be required to follow the general requirements regarding Health and Safety (Section 3.2.1) and underground services (Section 3.2.5). The lacquer tanks and bund are required to remain in-situ and the Principal Contractor will ensure that the structural integrity of the bund or tanks is not adversely affected by the works.

The Principal Contractor will identify areas where visual evidence of lacquer spillages is present. Following agreement with the Environmental Consultant, the ballast and visually or olfactory impacted shallow soils will be removed. Given that the lacquers are relatively immobile, the depth of the soil requiring removal is not expected to exceed 0.3m bgl where

surface impacts have been identified. The Environmental Consultant will visually inspect the excavation to determine if significant lateral and vertical evidence (visual and olfactory) of contamination has been removed.

The soils close to the south east corner of the bund, in the vicinity of a small drainage sump, have been impacted at a depth of approximately 1m bgl. The soils in this area will require deeper excavation, potentially around the sump. The Principal Contractor will be required to ensure that the working methods do not damage the structural integrity of the sump. The area of deeper excavation will be marked out by the Principal Contractor and agreed with the Environmental Consultant. The Environmental Consultant will visually inspect the excavation to determine if significant lateral and vertical evidence (visual and olfactory) of contamination has been removed.

The Principal Contractor will collect soil samples from the bases of each area of excavation, and, depending on the depth of the excavation, from the sides or from adjacent surface soils.

Samples will be submitted to an MCERTS accredited laboratory and will be analysed for the determinands in Table 4.3:

Table 4.3: Summary of Remedial Targets for Lacquer Storage Tanks

Determinand	Remedial Target for Backfill (mg/kg)
Aromatics $C_6 – C_7$	1,759
Aromatics $>C_7 – C_8$	0.01
Aromatic $>C_8 – C_{10}$	64.99
Aromatic $>C_{10} – C_{12}$	226.09
Aromatic $>C_{12} – C_{16}$	268.84
Aromatic $>C_{16} – C_{21}$	463.59
Aromatic $>C_{21} – C_{35}$	627.98
Aliphatic $C_5 – C_6$	0.472
Aliphatic $>C_6 – C_8$	3.404
Aliphatic $>C_8 – C_{10}$	38.76
Aliphatic $>C_{10} – C_{12}$	147.3
Aliphatic $>C_{12} – C_{16}$	1,986
Aliphatic $>C_{16} – C_{21}$	2,670
Aliphatic $>C_{21} – C_{35}$	2,424
Total Aromatics	1,451
Volatile Hydrocarbons (C5-12)	712.5
Napthalene	6.139
Chloroaniline	2.99

Table 4.3: Summary of Remedial Targets for Lacquer Storage Tanks

Determinand	Remedial Target for Backfill (mg/kg)
Ethylbenzene	0.128
M,p Xylenes	0.1205
o-Xylenes	0.122
1,3,5 trimethylbenzene	16.7
1,2,4 trimethylbenzene	18
Isopropyl Benzene	2.383
n-propylbenzene	0.64

Excavations will be backfilled in accordance with the general requirements set out in Section 3.2.13. The backfill material will be required to meet the targets in Table 3.1.

The excavated materials will be temporarily stockpiled in accordance with the general requirements set out in Section 3.2.8. The treatment or disposal of waste soil will be in accordance with the general requirements set out in Section 3.2.9 and 3.2.10.

4.11 ZONE 16 – WASTE DRUM STORAGE COMPOUND

Localised hydrocarbon and chlorinated solvent contamination is present adjacent to the waste chemical compound. The shallow unsurfaced soils are visibly impacted in the immediate vicinity of the waste drum storage compound (particularly to the north and south) and a maximum hydrocarbon concentration of 30,000mg/kg was detected. Shallow soils underlying the concrete hardstanding immediately adjacent to the west of the compound are also impacted.

In addition, aliphatic and aromatic hydrocarbons in the ranges C8-10, C10-12 and C21-35, together with MTBE, ethylbenzene, trichloroethene, cis-1,2, dichloroethene and sec butylbenzene exceed PPC Baseline data and require remediation.

It is proposed that the shallow soils immediately adjacent to the compound are excavated. It is unlikely that soils underlying the bunded compound or the concrete access road to the west will be significantly impacted.

The compound itself measures approximately 25m by 15m. The area of impacted soils is estimated to be approximately 232m^2, in a strip which runs around the wall of the bunded compound.

The weathered mudstones and sandstone of the Coal Measures are present at shallow depth underlying the waste drum compound (between 0.3m and 1.4m bgl) and during the investigation, hydrocarbon contamination was observed locally within fractures. Given that contamination can migrate along the fractures, the vertical extent of the contamination is unknown. The excavation may need to be extended to varying depths to 'chase' contamination in sub-vertical fractures. However, significant contamination is not expected to extend in excess of 0.5 to 1m below ground level.

In addition to the general requirements regarding Health and Safety (Section 3.2.1) and underground services (Section 3.2.5), the Principal Contractor will be required to put control measures in place to maintain the structural integrity of the bunded compound and the concrete access road, e.g. the excavation of contaminated soils in sections and backfill of excavations in sections along the length and width of the bunded compound. Control measures should be discussed between the Principal Contractor and Project Manager/Client before excavation commences.

Once visual observations indicate that significantly contaminated soils/weathered rock have been excavated, the Principal Contractor will collect validation samples from the base and sides of the excavation. Given that the excavation will form a long strip, samples will be collected every 10m along the strip.

The Principal Contractor will submit the validation samples to an MCERTS accredited laboratory. The determinands to be analysed for, and the appropriate remedial targets are presented in Table 4.4:

Table 4.4: Summary of Contaminants of Concern and Remedial Targets, Waste Chemical Storage Compound	
Determinand	**Remedial Target for Backfill (mg/kg)**
TPH CWG Suite	
Aromatics $C_6 – C_7$	1,759
Aromatics $>C_7 – C_8$	0.01
Aromatic $>C_8 – C_{10}$	64.99
Aromatic $>C_{10} – C_{12}$	226.09
Aromatic $>C_{12} – C_{16}$	268.84
Aromatic $>C_{16} – C_{21}$	463.59
Aromatic $>C_{21} – C_{35}$	627.98
Aliphatic $C_5 – C_6$	0.472
Aliphatic $>C_6 – C_8$	3.404
Aliphatic $>C_8 – C_{10}$	38.76
Aliphatic $>C_{10} – C_{12}$	147.3
Aliphatic $>C_{12} – C_{16}$	1,986
Aliphatic $>C_{16} – C_{21}$	2,670
Aliphatic $>C_{21} – C_{35}$	2,424
MTBE	0.012
Ethylbenzene	0.12
Trichloroethene	0.033
Cis 1,2, dichloroethene	0.045
Sec-butyl benzene	0.0369

Excavations will be backfilled in accordance with the general requirements set out in Section 3.2.13. The backfill material will be required to meet the targets in Table 3.1.

The excavated materials will be temporarily stockpiled in accordance with the general requirements set out in Section 3.2.8.

The treatment or disposal of waste soil will be in accordance with the general requirements set out in Section 3.2.9 and 3.2.10.

4.12 ZONE 17 - DISUSED COOLING TOWER AREA TO THE EAST OF THE ROLL SHOP

Localised elevated hydrocarbons have been identified in a area of gravel dressed ground which is visibly impacted by hydrocarbons. A maximum hydrocarbon concentration of 2,800mg/kg was detected, and several of the hydrocarbon fractions exceed PPC baseline data for the site. For the purposes of this document, the area of impacted soils is estimated to be

approximately 23m^2. The data from the site investigation suggests that soils are impacted to a depth of approximately 0.6m bgl.

It is understood that a water main runs underneath the impacted area. The location of the water main will be marked out prior to work commencing and the soils will be hand excavated to prevent damage to the water main. The area for excavation will be marked out by the Principal Contractor and agreed with the Environmental Consultant before excavation commences.

The Environmental Consultant will inspect the excavation to determine if significant contamination has been removed. The Principal Contractor will collect validation samples for analysis at an MCERTS laboratory for the range of determinands in Table 4.5:

Table 4.5: Summary of Remediation Targets for Zone 17, Disused Cooling Tower to the East of the Roll Shop

Determinand	Remediation Target (mg/kg)
Speciated TPH	
Aromatics $C_6 – C_7$	1,759
Aromatics $>C_7 – C_8$	0.01
Aromatic $>C_8 – C_{10}$	64.99
Aromatic $>C_{10} – C_{12}$	226.09
Aromatic $>C_{12} – C_{16}$	268.84
Aromatic $>C_{16} – C_{21}$	463.59
Aromatic $>C_{21} – C_{35}$	627.98
Aliphatic $C_5 – C_6$	0.472
Aliphatic $>C_6 – C_8$	3.404
Aliphatic $>C_8 – C_{10}$	38.76
Aliphatic $>C_{10} – C_{12}$	147.3
Aliphatic $>C_{12} – C_{16}$	1,986
Aliphatic $>C_{16} – C_{21}$	2,670
Aliphatic $>C_{21} – C_{35}$	2,424

The Principal Contractor will provide the results of the validation analysis to the Environmental Consultant. The Environmental Consultant will determine if significant contamination is removed and following the approval of the validation analysis by the Environmental Consultant, the excavation can be backfilled, in accordance with the general requirements in Section 3.2.13. The backfill material is likely to comprise a granular sub-base. The backfill material will be required to meet the targets in Table 3.1.

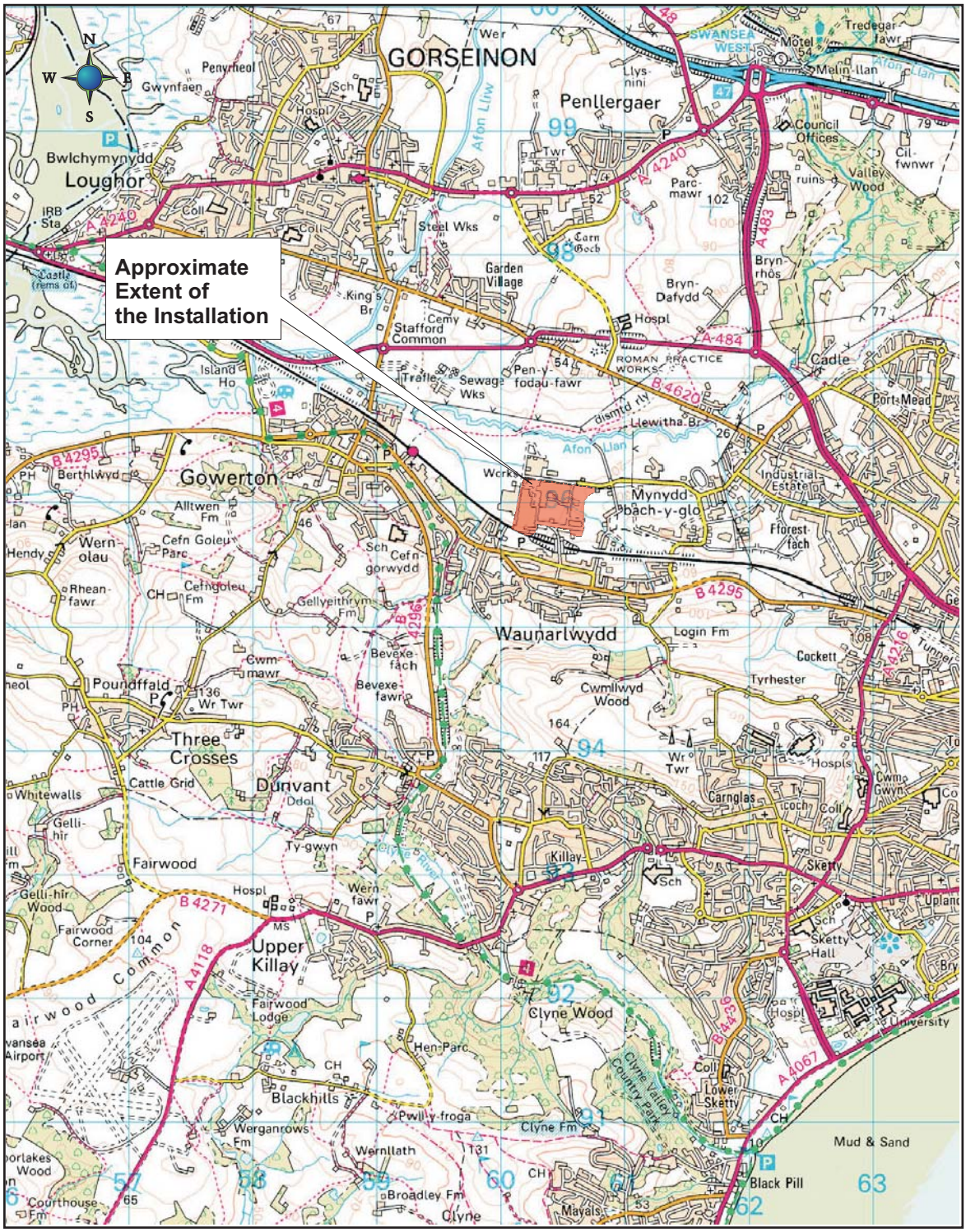
The treatment or disposal of waste soil will be in accordance with the general requirements set out in Section 3.2.9 and 3.2.10.

4.13 PROVISION OF INFORMATION

During the remedial works, the Principal Contractor will be required to provide the Environmental Consultant with the results of the validation analysis to allow the Environmental Consultant to consider the results of the validation analysis against remedial targets.

Following completion of the Works, ENVIRON will compile a validation/completion report as provided by the Principal Contractor). Following the remedial works in each Zone, the Principal Contractor will be required to provide the Environmental Consultant with information to allow the completion of the validation report (including plans, analytical results, monitoring data, waste transfer notes etc), and other information the Environmental Consultant may request This will be required within two weeks of completing the remedial works.

APPENDIX A: FIGURES



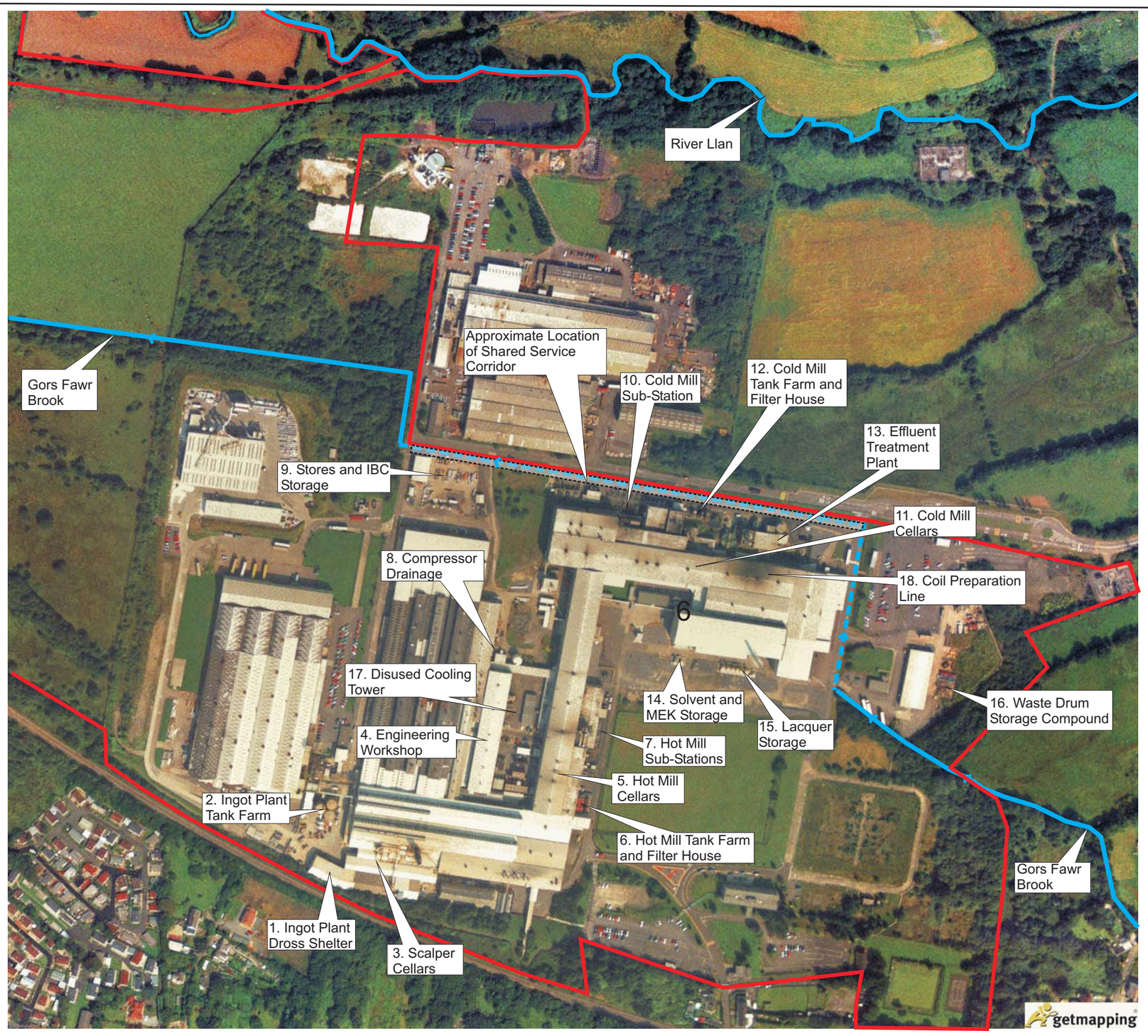
Reproduced from the Ordnance Survey Map with the permission of the controller HMSO. Crown Copyright Reserved.

ENVIRON

Figure 1

Site Location Plan

Client: ALCOA	Project No.: 64-C12564
Scale: 1:50,000	Date: November 2007



KEY

Site Boundary

Approximate Route of the River Llan and the Gors Fawr Brook

Approximate Route of culverted Gors Fawr Brook

ENVIRON

Alcoa Mill Products, Swansea PPC Remediation Action Plan

Figure 2

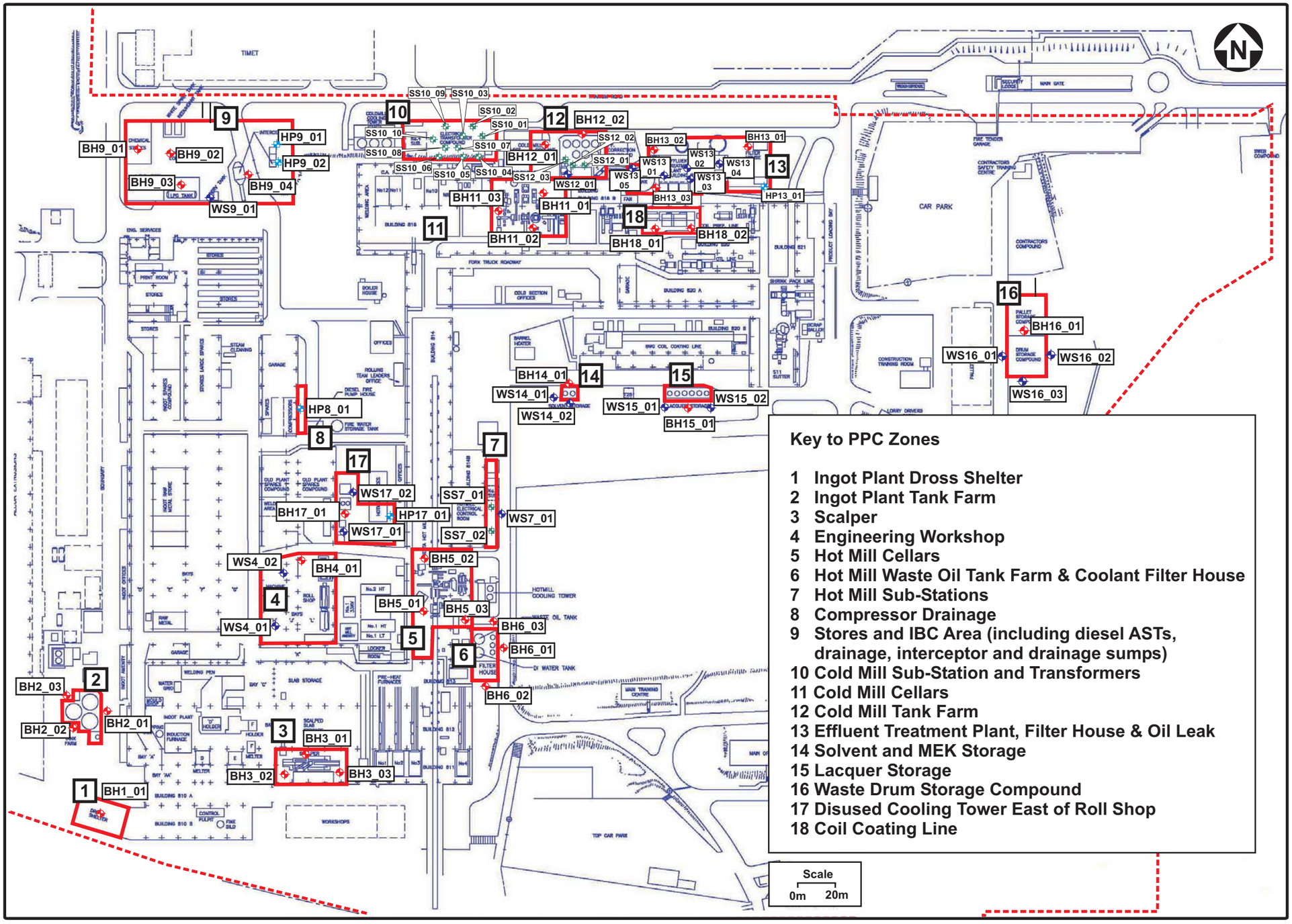
Site Layout
Aerial Photograph

Client: Alcoa

Scale: 1:4,500

Project No: 64-C12564

Date: November 2007



Key to PPC Zones

1 Ingot Plant Dross Shelter
2 Ingot Plant Tank Farm
3 Scalper
4 Engineering Workshop
5 Hot Mill Cellars
6 Hot Mill Waste Oil Tank Farm & Coolant Filter House
7 Hot Mill Sub-Stations
8 Compressor Drainage
9 Stores and IBC Area (including diesel ASTs, drainage, interceptor and drainage sumps)
10 Cold Mill Sub-Station and Transformers
11 Cold Mill Cellars
12 Cold Mill Tank Farm
13 Effluent Treatment Plant, Filter House & Oil Leak
14 Solvent and MEK Storage
15 Lacquer Storage
16 Waste Drum Storage Compound
17 Disused Cooling Tower East of Roll Shop
18 Coil Coating Line

Key

- ALCOA Site Boundary
- PPC Zone Boundaries
- Rotary Borehole
- Window Sample Borehole
- Surface Soil Sample
- Hand Excavated Trial Pit

ENVIRON

Alcoa Mill Products, Swansea PPC Remediation Action Plan

Figure 3

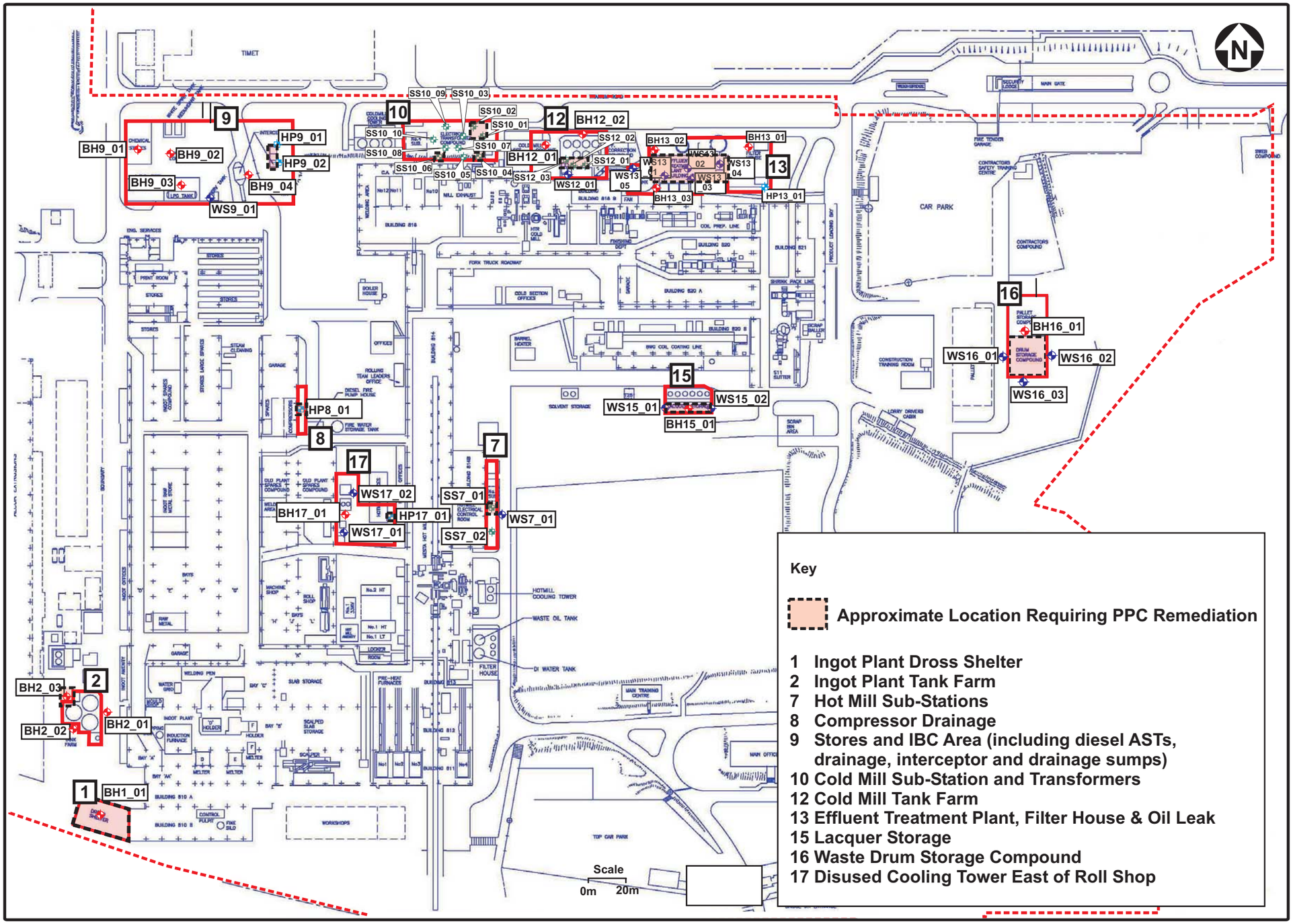
Surrender Data Investigation PPC Zones and Sample Locations

Client: ALCOA

Scale: Refer to Scale Bar

Project No.: 64-C12564

Date: September 2007



Key

Approximate Location Requiring PPC Remediation

1 Ingot Plant Dross Shelter
2 Ingot Plant Tank Farm
7 Hot Mill Sub-Stations
8 Compressor Drainage
9 Stores and IBC Area (including diesel ASTs, drainage, interceptor and drainage sumps)
10 Cold Mill Sub-Station and Transformers
12 Cold Mill Tank Farm
13 Effluent Treatment Plant, Filter House & Oil Leak
15 Lacquer Storage
16 Waste Drum Storage Compound
17 Disused Cooling Tower East of Roll Shop

Key

ALCOA Site Boundary

PPC Zone Boundaries

Rotary Borehole

Window Sample Borehole

Surface Soil Sample

Hand Excavated Trial Pit

ENVIRON

Alcoa Mill Products, Swansea PPC Remediation Action Plan

Figure 4

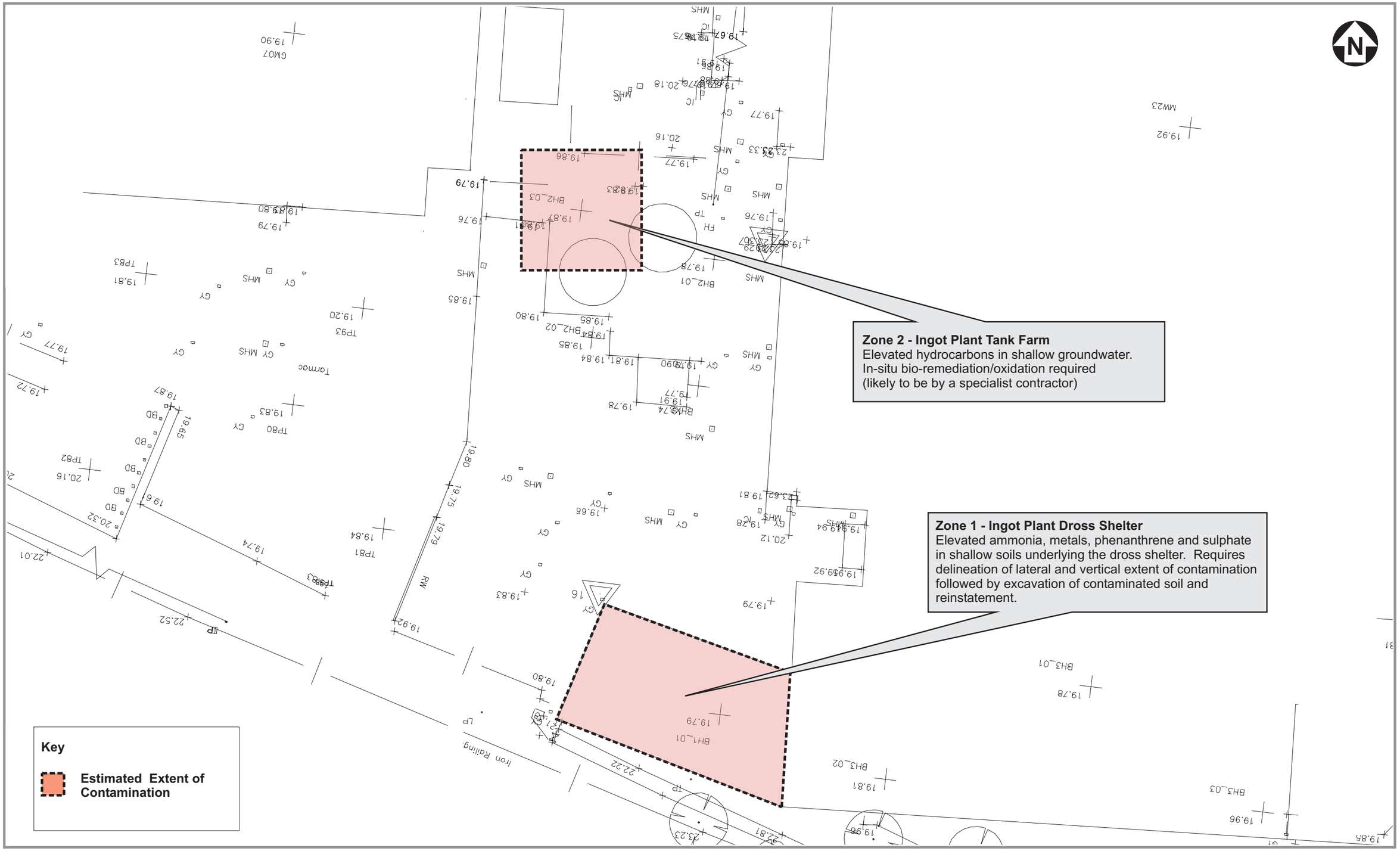
Summary of Zones Requiring PPC Remediation

Client: ALCOA

Scale: Refer to Scale Bar

Project No.: 64-C12564

Date: November 2007

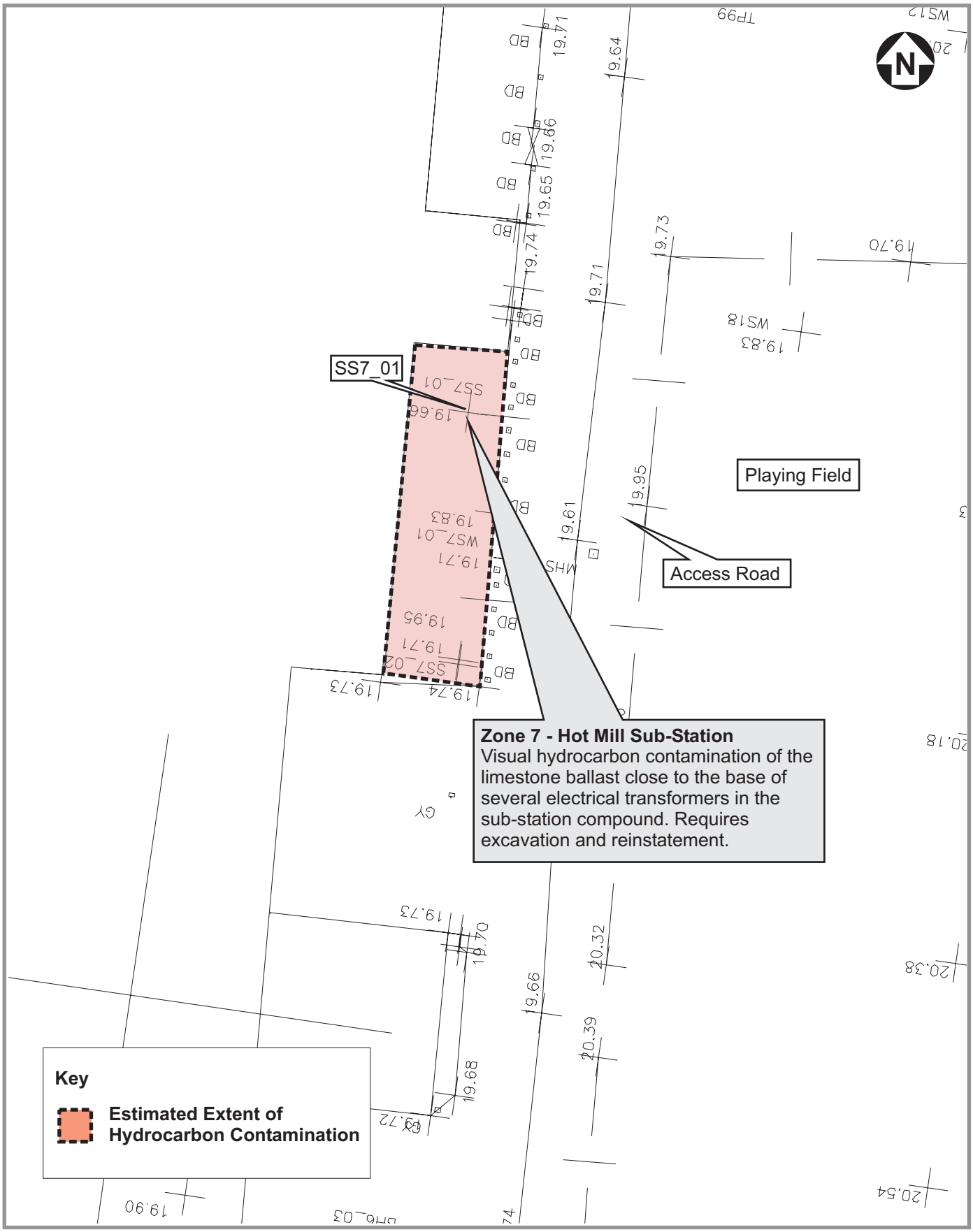


ENVIRON
ENVIRON UK Limited
Hartham Park, Corsham
Wiltshire, SN13 0RR
Tel. +44(0)1249 700104
Fax.+44(0)1249 700105

Figure 5
Areas Requiring Remediation
Zone 1 - Ingot Plant Dross Shelter and
Zone 2 - Ingot Plant Tank Farm

Client	Alcoa Manufacturing (GB) Ltd		
Scale	1:5	Date	November 2007
Project No	64-C12564	Drawn by	JC

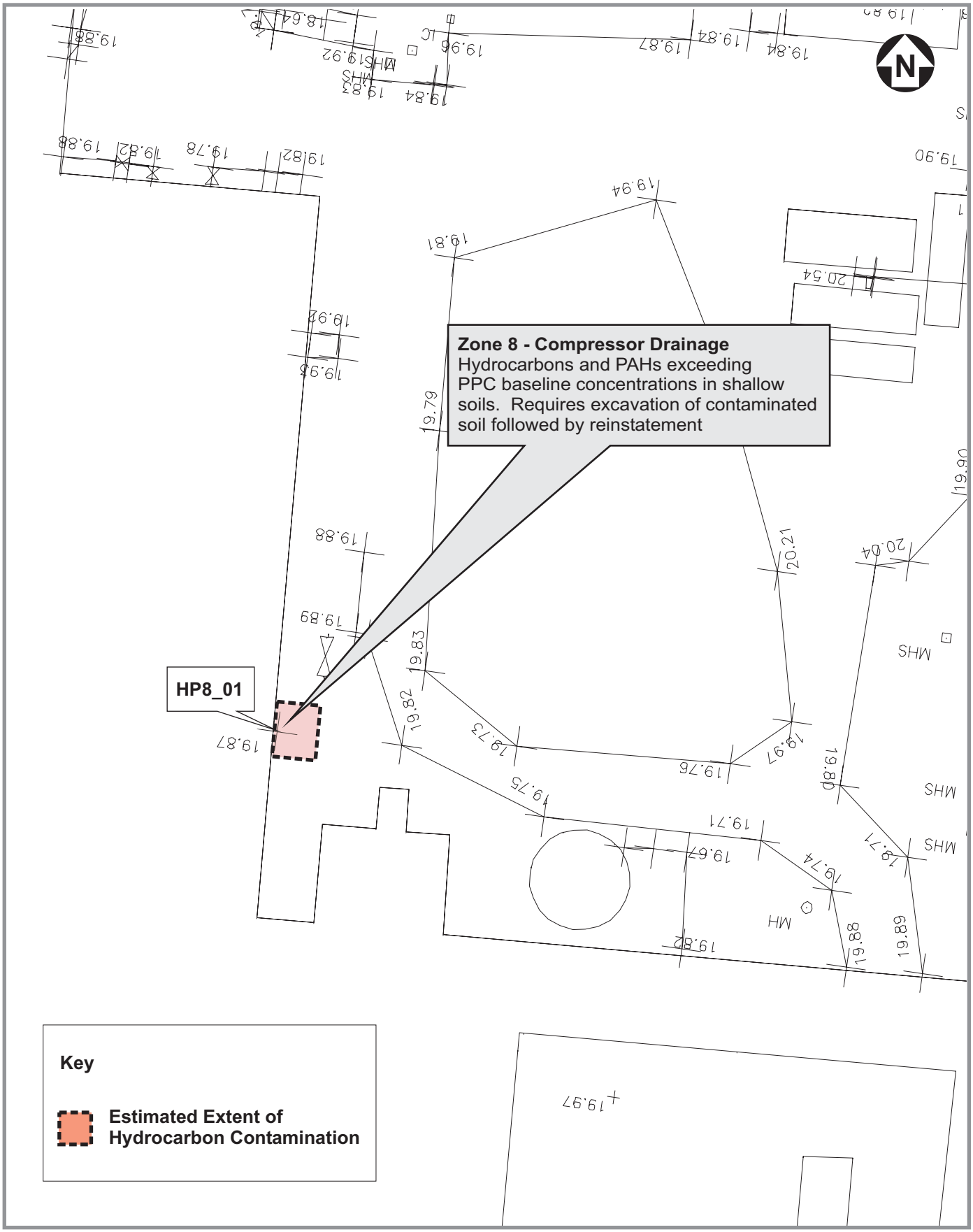
Figure 6
Areas Requiring Remediation
Zone 7 - Hot Mill Sub-Station



ENVIRON
ENVIRON UK Limited
Hartham Park, Corsham
Wiltshire, SN13 0RR
Tel. +44(0)1249 700104
Fax.+44(0)1249 100105

Client	Alcoa Manufacturing (GB) Ltd		
Scale	1:4	Date	November 2007
Project No	61-C	Drawn by	JC

Figure 7
Areas Requiring Remediation
Zone 8 - Compressor Drainage

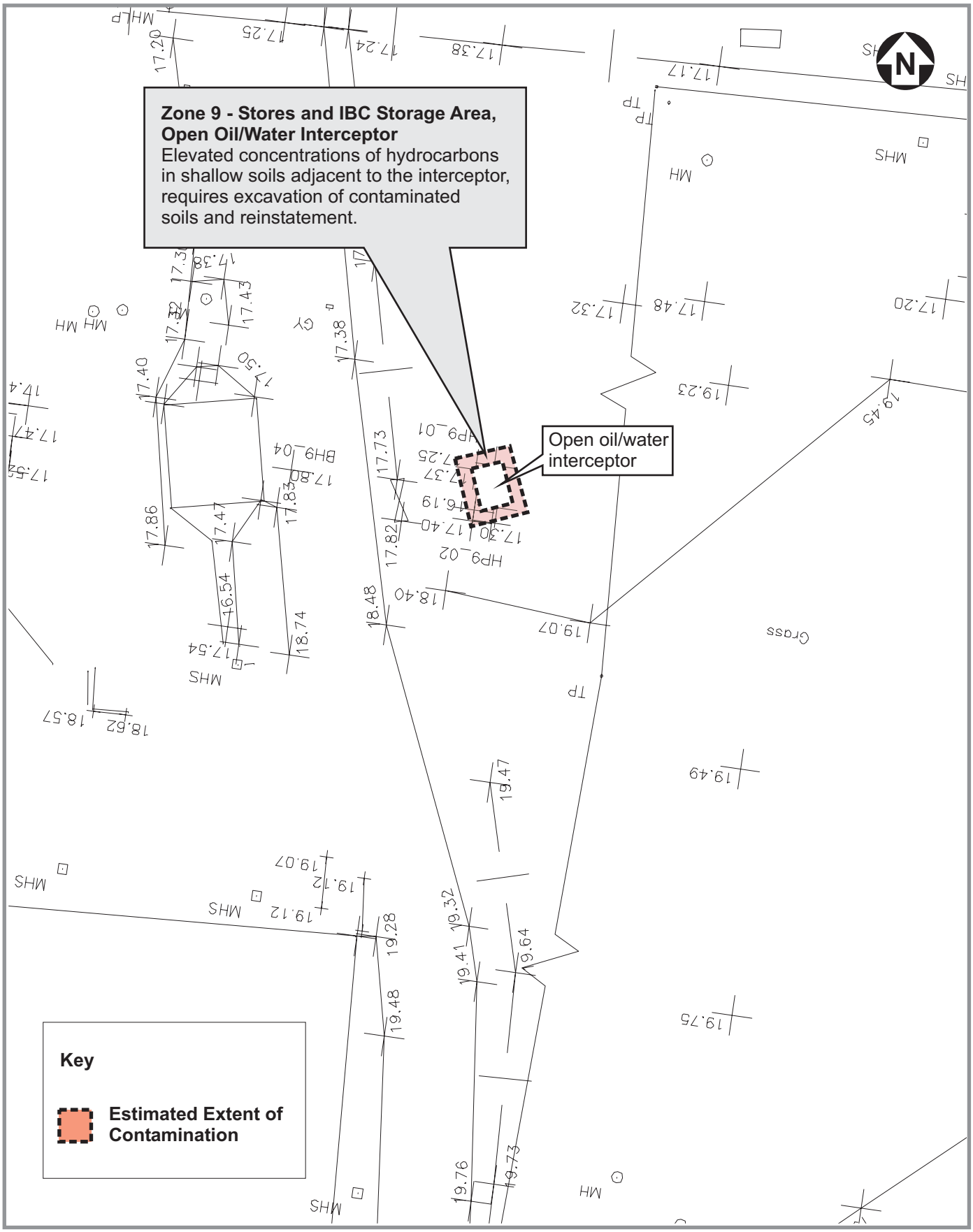


ENVIRON
ENVIRON UK Limited

Hartham Park, Corsham
Wiltshire, SN13 0RR
Tel. +44(0)1249 700104
Fax.+44(0)1249 100105

Client	Alcoa Manufacturing (GB) Ltd		
Scale	1:4	Date	November 2007
Project No	61-C	Drawn by	JC

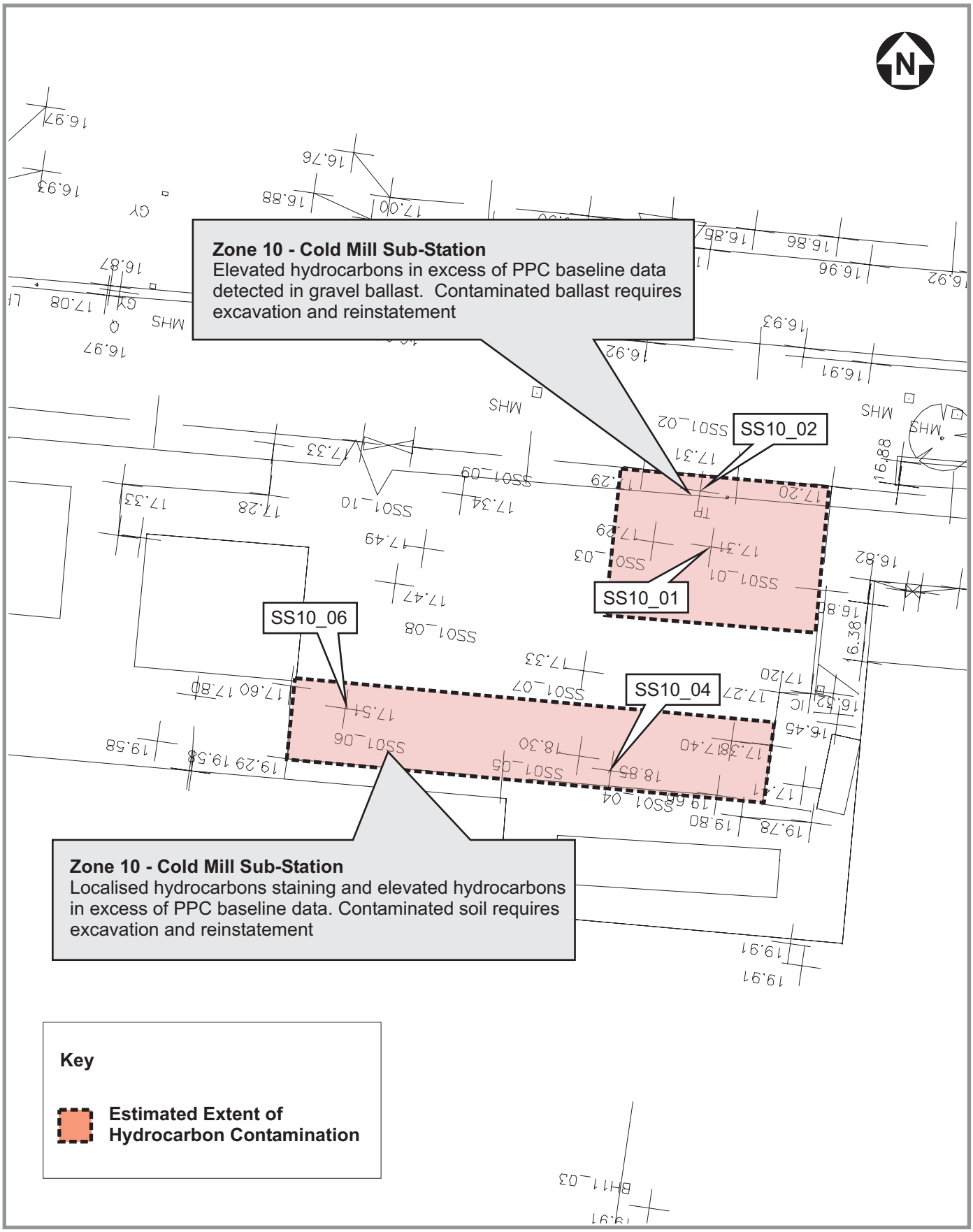
Figure 8
Areas Requiring Remediation
Zone 9 - Stores and IBC Storage, Open Oil/Water Interceptor



ENVIRON
ENVIRON UK Limited
Hartham Park, Corsham
Wiltshire, SN13 0RR
Tel. +44(0)1249 700104
Fax.+44(0)1249 100105

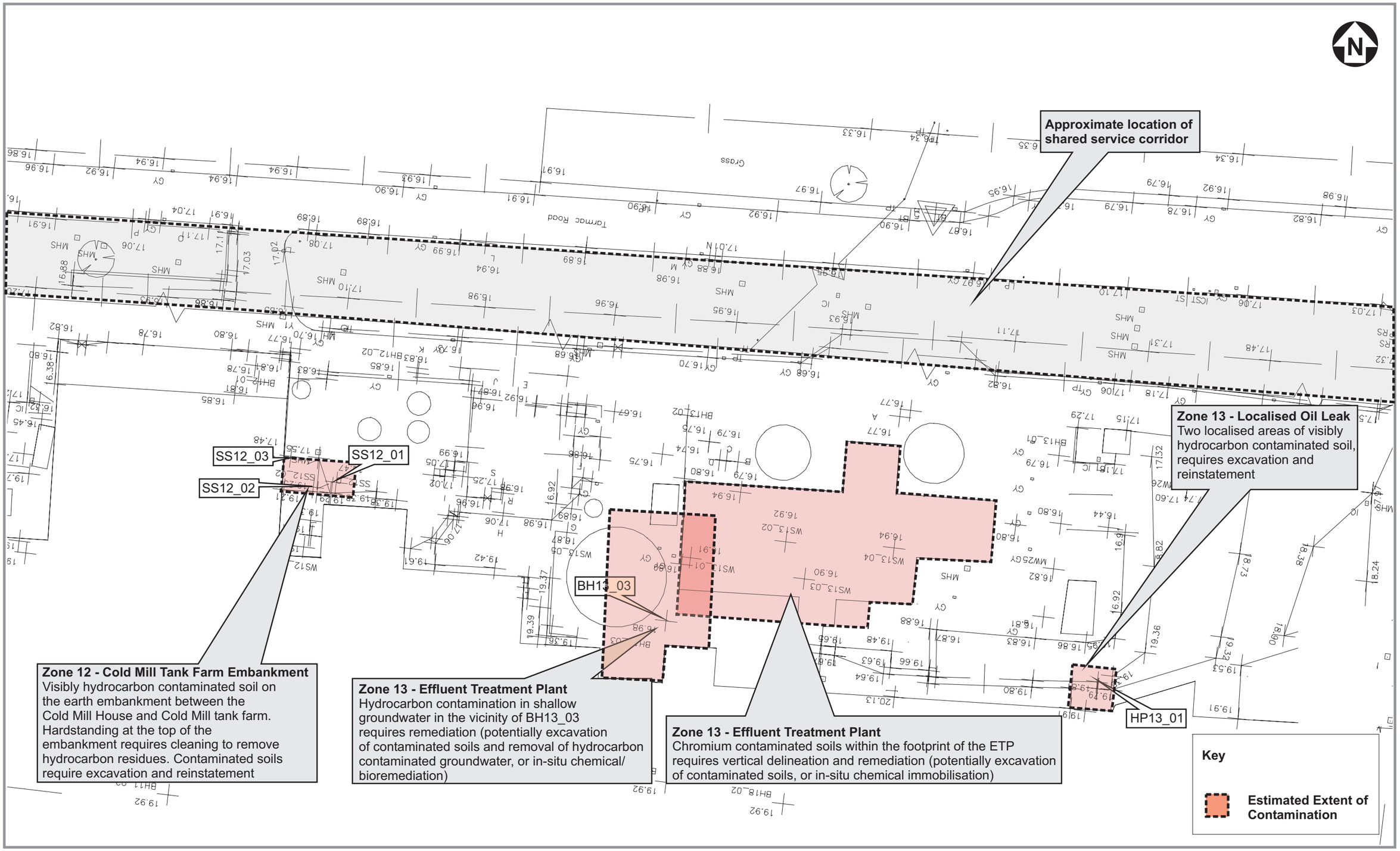
Client	Alcoa Manufacturing (GB) Ltd		
Scale	1:4	Date	November 2007
Project No	61-C	Drawn by	JC

Figure 9
Areas Requiring Remediation
Zone 10 - Cold Mill Sub-Station



ENVIRON
ENVIRON UK Limited
Hartham Park, Corsham
Wiltshire, SN13 0RR
Tel. +44(0)1249 700104
Fax.+44(0)1249 100105

Client	Alcoa Manufacturing (GB) Ltd		
Scale	1:4	Date	November 2007
Project No	61-C	Drawn by	JC



ENVIRON

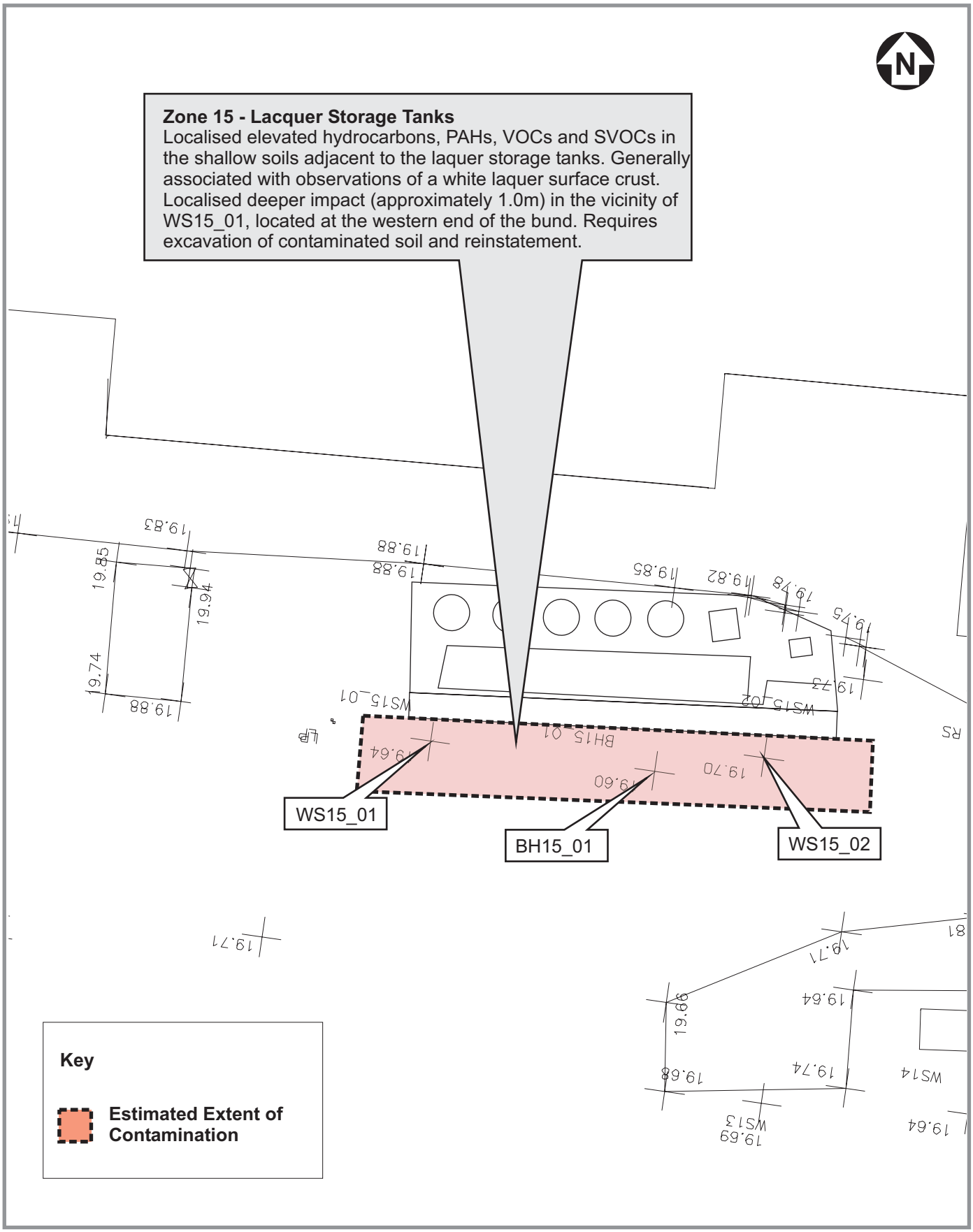
ENVIRON UK Limited

Hartham Park, Corsham
Wiltshire, SN13 0RR
Tel. +44(0)1249 700104
Fax.+44(0)1249 700105

Figure 10
Areas Requiring Remediation
Zone 12 - Cold Mill Tank Farm Embankment and
Zone 13 - Effluent Treatment Plant

Client	Alcoa Manufacturing (GB) Ltd		
Scale	1:5	Date	November 2007
Project No	64-C12564	Drawn by	JC

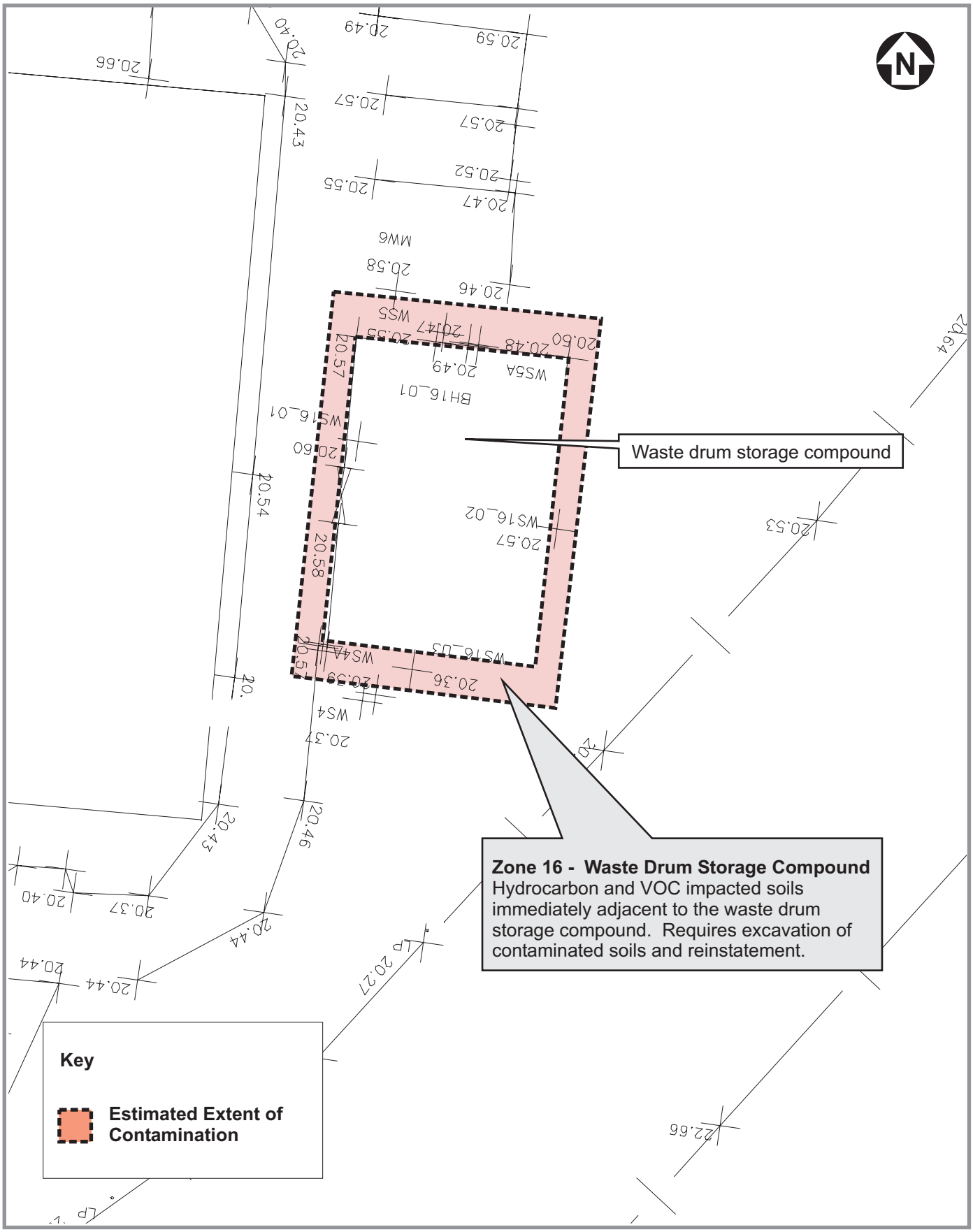
Figure 11
Areas Requiring Remediation
Zone 15 - Lacquer Storage



ENVIRON
ENVIRON UK Limited
Hartham Park, Corsham
Wiltshire, SN13 0RR
Tel. +44(0)1249 700104
Fax.+44(0)1249 100105

Client	Alcoa Manufacturing (GB) Ltd		
Scale	1:4	Date	November 2007
Project No	61-C	Drawn by	JC

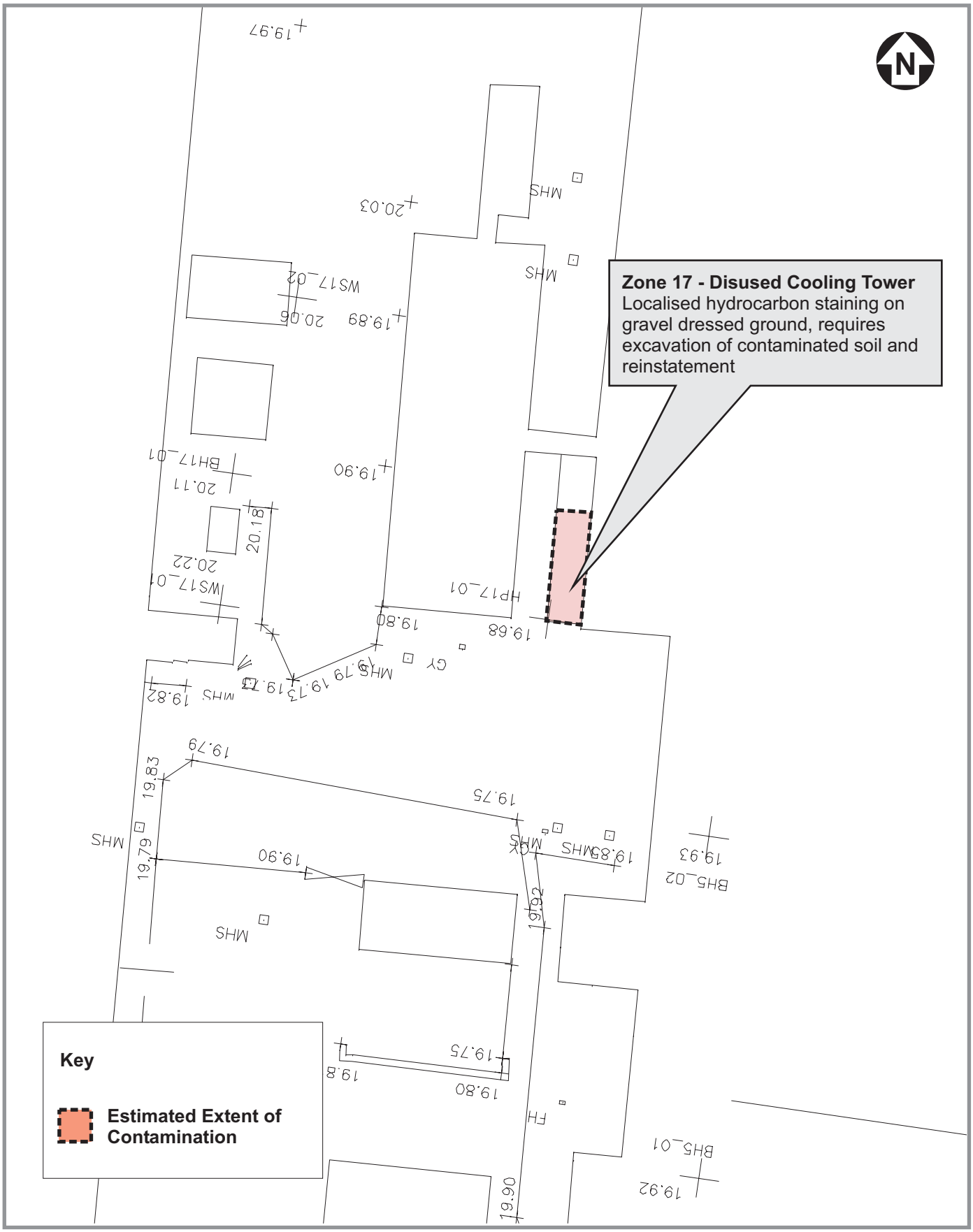
Figure 12
Areas Requiring Remediation
Zone 16 - Waste Drum Storage Compound



ENVIRON
ENVIRON UK Limited
Hartham Park, Corsham
Wiltshire, SN13 0RR
Tel. +44(0)1249 700104
Fax.+44(0)1249 100105

Client	Alcoa Manufacturing (GB) Ltd		
Scale	1:4	Date	November 2007
Project No	61-C	Drawn by	JC

Figure 13
Areas Requiring Remediation
Zone 17 - Disused Cooling Tower



ENVIRON
ENVIRON UK Limited
Hartham Park, Corsham
Wiltshire, SN13 0RR
Tel. +44(0)1249 700104
Fax.+44(0)1249 100105

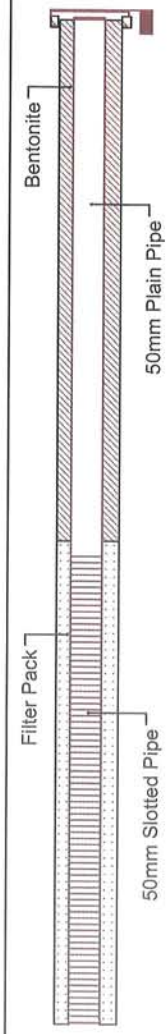
Client	Alcoa Manufacturing (GB) Ltd		
Scale	1:4	Date	November 2007
Project No	61-C	Drawn by	JC

APPENDIX B: EXPLORATORY HOLE LOGS

Project No: 64C11647	***Borehole: BH1_01***
Client: Alcoa	***Date:*** 05/03/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Rough concrete	-0.4	0.5-1.0		
1.0		**MADE GROUND** Recovered as dry friable dark grey SILT with strong ammonia odour.	-1.0		RWL 0.785m bgl	
		MADE GROUND Obstruction at 1.0m bgl - very hard grinding sand.	-1.5	1.5-2.0		
2.0		**COAL MEASURES** Mudstone with faint ammonia odour	-2.0			
		NO RECOVERY	-2.5	2.5-3.0		
3.0		**COAL MEASURES** Recovered as very fine fragments of dry mudstone.	-3.0			
4.0		**COAL MEASURES** Dry mudstone with thin sandstone horizons.				
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						
11.0						
12.0						
13.0		13 m bgl	-13.0			
14.0						



Remarks: Borehole terminated at 13m bgl.
No groundwater strike encountered.
RWL of 0.785m bgl on 16.03.07.

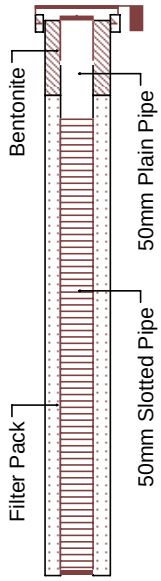
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH2_01***
Client: ALCOA	***Date:*** 6th March 2007
Location: Waunarlwydd	***Plant Used:*** Berretta T25
Datum:	***Logged by:*** RB

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
		Ground Surface	0.0			
0.0		**Made Ground** Concrete.	-0.2			
		Made Ground Gravel (sub-base).	-0.7	0.6	GW Strike - 2m bgl; RWL 1.18m bgl	
1.0		**Weathered Coal Measures** Orange brown sandy SILT with grey mottled appearance.	-1.5			
		Weathered Coal Measures Orange brown sandy SILTwith grey mottled appearance and occasional fragments of sandstone, becoming more frequent with depth.				
2.0		**Coal Measures** Recovered as angular gravel size fragments of weathered orange brown SANDSTONE, interpretted as Coal Measures.				
3.0						
4.0			-4.5			
		Coal Measures Recovered as friable fine fragments of weak dark grey MUDSTONE.	-5.0			
5.0		5 m bgl				
6.0						
7.0						
8.0						
9.0						
10.0						



Remarks:

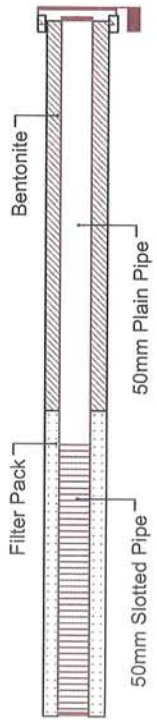
Checked by: JC

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH2_02***
Client: Alcoa	***Date:*** 06/03/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0		RWL 1.26m bgl	
		MADE GROUND Concrete	-0.3			
		MADE GROUND Moist grey brown firm sandy CLAY with a little fine to medium sub-base gravel.	-0.8	0.5-1.0		
1.0		**WEATHERED COAL MEASURES** Firm stiff dark grey thinly laminated CLAY, locally orange brown discoloration.	-1.0	1.5-2.0		
2.0		**WEATHERED COAL MEASURES** Recovered as rounded fragments of grey brown CLAY in a silty matrix - dry weathered mudstone.	-2.0	2.5-3.0		
3.0		**WEATHERED COAL MEASURES** Recovered as friable brown SILT with fragments of fine to medium sub-rounded and sub-angular sandstone and weak dark grey mudstone.				
4.0		**COAL MEASURES** Recovered as a dark grey friable silty matrix with some fine to medium angular fragments of strong dark grey very fine grained mudstone.	-4.0			
5.0		**COAL MEASURES** A little paler grey with fine to medium weak fragments of mudstone. Becoming a little sandy at 6.5m bgl.	-5.0			
6.0			-6.5			
		6.5 m bgl				
7.0						
8.0						
9.0						
10.0						



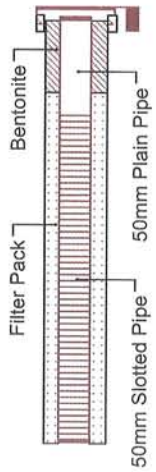
Remarks: Borehole drilled with auger and terminated at 6.5m bgl.
0.8m of water at base after 20 minutes standing.
RWL of 1.26m bgl on 16.03.07.

Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH2_03***
Client: ALCOA	***Date:*** 6th March 2007
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** RB

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Concrete.	-0.2			
		Made Ground Brown CLAY with quatzite fragments.	-1.2	0.6		
1.0		**Weathered Coal Measures** Grey clayey SAND with occasional fine to medium gravel size fragments of weathered sandstone. Slight sweet hydrocarbon odour. Groundwater Strike with hydrocarbon and odour at 2.5m bgl.			RWL 3.23m bgl GW Strike - 2.5m bgl	
2.0				2.5		
3.0						
4.0			-4.0	3.5 - 4.0		
		4 m bgl				
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						

Remarks: Solid stem auger to 4.0mbgl.
Moderate to strong hydrocarbon odour.
Sheen on groundwater.
Groundwater encountered at 2.5m bgl
RWL of 3.23m bgl on 16.03.07

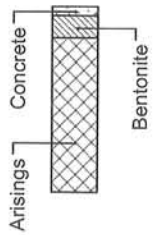
Checked by: JC

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH3_01***
Client: Alcoa	***Date:*** 19/03/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JE

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Concrete	-0.4			
		Made Ground Sand and gravel sub-base	-1.5			
		Made Ground Concrete	-1.7			
1.0						
2.0		1.7 m bgl				
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Remarks: Solid stem auger to 1.7m bgl. No groundwater encountered.

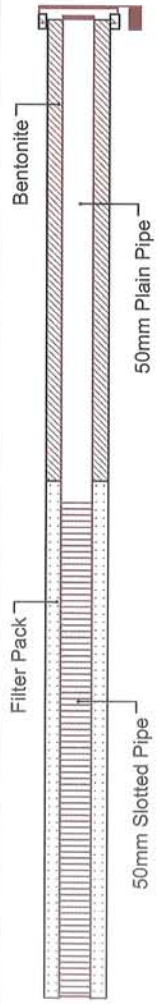
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH3_02***
Client: Alcoa	***Date:*** 16/03/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JE

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Concrete	-0.4			
		Made Ground Fragmented coal seam with piece of metal strip recovered at 0.7m and occasional pockets of soft brown clay, and small sandstone and concrete fragments.	-1.0	0.5	RWL 1.54m bgl	
1.0		**Coal Measures** Weathered MUDSTONE. Recovered as very soft and unconsoildated mudstone with occasional fragments of clayey mudstone.				
2.0						
3.0				3.0		
4.0			-4.6			
		Coal COAL recovered as black dust with occasional fragments of black bituminous coal.	-5.5			
5.0		**Coal Measures** MUDSTONE- Recoverd as grey dust with occasional fragments of grey mudstone.				
6.0		**Coal** Black bituminous COAL recovered as grey dust.				
		Coal Measures Fine grained grey MUDSTONE- with occasional thin bands of sandstone recovered as fragments. Soft and dry as drilled.				
7.0						
8.0						
9.0						
10.0		10 m bgl	-10.0			
11.0						



Remarks: Solid stem auger to 3.0m bgl. ODEX from 3.0mbgl to 10.0m bgl.
No groundwater encountered.
RWL 1.54m bgl on 01.06.07.

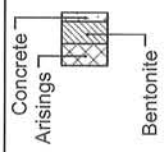
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH3_03***
Client: Alcoa	***Date:*** 16/03/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JE

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Concrete	-0.3 -0.5			
1.0		**Made Ground** Soft brown sandy gravel sub-base with occasional brick and concrete fragments.				
		Terminated at 0.5m Concrete obstruction				
2.0		0.5 m bgl				
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Remarks: Solid stem auger to 0.5m. BH Terminated at 0.5m bgl.

Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH3_03***
Client: Alcoa	***Date:*** 24/04/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Concrete	-0.3			
		Coal Measures Weathered soft pale grey MUDSTONE. Becoming darker with depth.			RWL 1.55m bgl	
			-5.7			
6.0		5.7 m bgl				
7.0						
8.0						
9.0						
10.0						

Remarks: Groundwater encountered at 6.0m bgl.
RWL of 1.55m bgl on 09.05.07

Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH04_01***
Client: Alcoa	***Date:*** 03/05/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** ES

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete	-0.4			
1.0		**MADE GROUND** Black ash and sand with frequent small angular gravel and fine red brick fragments	-2.0	1.0		
2.0		**NO RETURNS** No returns	-2.5			
		MADE GROUND Black, ashy, coarse sand and gravel	-3.0	2.5		
3.0		**GLACIAL DEPOSITS ?** Grey, medium, gravelly SAND	-4.0	3.0		
4.0		**GLACIAL DEPOSITS ?** Mid-brown clayey SAND with frequent gravels	-5.0	4.0		Backfilled
5.0		**GLACIAL DEPOSITS ?** Moist silty SAND matrix with fragments of sandstone gravel.	-7.0	5.0		
6.0						
7.0		**GLACIAL DEPOSITS ?** Recovered as a moist brown sandy SILT matrix with fragments of sandstone and quartzite.	-8.0			
8.0		8 m bgl				
9.0						
10.0						

Remarks: No groundwater strike encountered.
Borehole left open for Alcoa to investigate further and backfill.

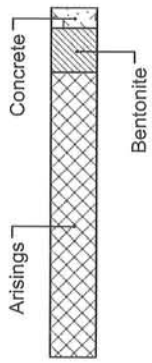
Checked by: JC

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS04_01***
Client: Alcoa	***Date:*** 08/03/07
Location: Waunarlwydd	***Plant Used:*** Terrier Rig
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete.	-0.4	0.4 - 0.6		
1.0		**GLACIAL DEPOSITS** Stiff brown mottled orange brown sandy gravelly CLAY. Locally, poorly, thinly laminated. Gravel is predominantly medium Sandstone with occasional cobble size fragments of sandstone. Becoming slightly friable but stiff/very stiff below 1.0m.	-1.6	1.3		
		1.6 m bgl				
2.0						
3.0						
4.0						
5.0						



Remarks: 1.6m Refusal

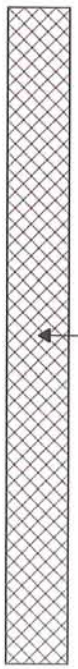
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS4_02***
Client: Alcoa	***Date:*** 18/04/07
Location: Swansea	***Plant Used:*** Terrier Rig
Datum:	***Logged by:*** JE

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Concrete	-0.2			
		Silty Clay Orange-green silty CLAY with occasional sandstone and mudstone pebbles.	-0.5			
1.0		**Clay** Green-grey CLAY with occasional mudstone and sandstone pebbles. Small fragments of coal and sandstone cobble at 1.1m bgl.	-1.2			
		Clay Firm green CLAY with slight black staining and strong organic odour.	-1.6			
2.0		**Silty Clay** Soft green silty CLAY with occasional angular sandstone gravels. Some grey pockets of CLAY.	-2.0			
		Clay Firm green CLAY with occasional fragments of mudstone and sandstone.	-2.4			
		Clay Dense firm green CLAY with occasional fragments of mudstone, sandstone and coal fragments	-2.9			
3.0		**Mudstone** Grey weathered mudstone.	-3.0			
		3 m bgl				
4.0						
5.0						



Remarks: Groundwater was not encountered

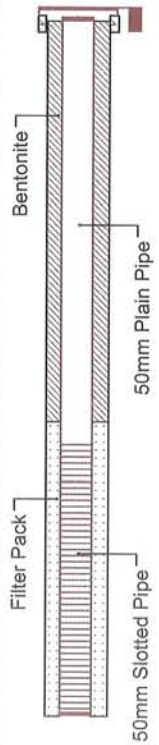
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH5_01***
Client: Alcoa	***Date:*** 14/03/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JE

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Soft brown clay with fragments of concrete (<60mm), flint gravel (<50mm) and sandstone pebbles (<25mm) and wood fragments. A solvent odour was noted throughout.	-0.5	0.5	RWL 1.4m bgl	
1.0		**Made Ground** Soft brown clay with ccassional flint gravels and sandstone fragments.	-1.0	1.0		
2.0		**Made Ground** Soft brown silty clay with occassional sandstone pebbles with much gravel encountered between 3.0m and 5.0m bgl.		2.0		
3.0						
4.0				4.0	GW Strike - 6.0m bgl	
5.0		**Made Ground** Angular gravels of sandstone, mudstone with occasional flint, ranging in size from 1.0mm to 40mm. Saturated at 6.0m.	-5.0			
6.0		**Made Ground** Silty water recovered with occasional gravel fragments. Grinding at 6.5m on large boulder.	-6.0			
		Terminated at 6.5m bgl.	-6.5			
7.0		6.5 m bgl				
8.0						
9.0						
10.0						



Remarks: Solid stem to 4.0m bgl. ODEX from 4.0m bgl - 6.5m bgl.
GW encountered at 6.0m bgl
RWL of 1.4m bgl on 21.03.07

Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH5_02***
Client: Alcoa	***Date:*** 15/03/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JE

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Concrete	-0.3			
1.0		**Made Ground** Gravel and soft brown clay with occasional fragments of brick.	-1.0	1.0		
2.0		**Made Ground** Brown clay with occasional fine angular gravels of sandstone. Saturated at 3.5m and becomes dry at 3.5m		2.0	RWL 3.07	Bentonite; 50mm Plain Pipe
3.0						
4.0						
5.0		**Boulder Clay** Soft brown silty CLAY with occasional fine sandstone and mudstone gravels. Damp throughout but not saturated.	-5.0			
6.0						
7.0					GW Strike - 8.0m bgl	
8.0		**Coal Measures** Brown sand. Fine to medium grained with occasional fragments of coal and becomes slightly silty towards base.	-8.0			
9.0			-9.5			
10.0		**Coal Measures** Saturated clay with occasional sandstone fragments.	-10.0			Filter Pack
11.0		**Coal Measures** Mudstone-recovered as fragments of fine grained soft grey/red mudstone. Easily fragmented and appears clayey and weathered.	-11.0			
12.0		**Coal Measures** Sandstone-recovered as fragments of fine grey sandstone. Soft saturated layer at 12.0m bgl becoming harder from 12.5m bgl.	-13.0			Bentonite; 50mm Slotted Pipe
13.0		13 m bgl				
14.0						

Remarks: Solid stem auger to 2.5m bgl. ODEX from 2.5m bgl to 13.0m bgl.
Groundwater encounteredat 8.0m bgl.
RWL of 3.07m bgl on 21.03.07

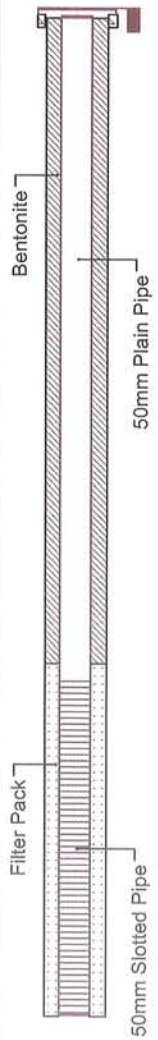
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH5_03***
Client: Alcoa	***Date:*** 16/03/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JE

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0		RWL 1.4m bgl	
		Made Ground Concrete	-0.3	0.5		
1.0		**Made Ground** Gravel sub-base.				
		Alluvium SANDY GRAVELS- soft grey sand and angular coarse sandstone and mudstone gravel. Slight diesel odour becomes stronger with depth. Strong odour between 1.6-2.0m. Saturated at 3.0m.		1.5		
2.0						
3.0			-3.0			
		Alluvium SANDY CLAY- firm green alluvial clay with orange sandy patches and a mild diesel odour.	-3.3	3.2		
4.0		**Coal Measures** SANDSTONE-recovered as fine grain grey sandstone fragments. Appears slightly weathered and dry.	-4.3			
5.0		**Coal Measures** SILTSTONE- recovered as fragments of fine grain grey, slightly fissile, siltstone. Dry to base with occasional thin bands of softer fine grained sandstone.				
6.0						
7.0						
8.0						
9.0						
10.0						
11.0						
12.0			-12.0			
		12 m bgl				
13.0						



Remarks: Solid stem auger to 3.3m bgl and ODEX from 3.3m bgl to 12.0m bgl.
Groundwater not encountered during drilling.
RWL of 1.4m bgl on 19.3.07.

Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH06_01***
Client: Alcoa	***Date:*** 18/04/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:***

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Asphalt	-0.3			
		MADE GROUND Grey, moist, sand and angular gravels. Strong hydrocarbon odour noted.	-1.0	0.5 1.0		Backfilled
1.0		**MADE GROUND** Mid brown, firm, sandy, friable clay with frequent angular gravels				
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						

Remarks: Refusal at 1.2 m - concrete. No groundwater encountered.

Checked by: JC

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH06_02***
Client: Alcoa	***Date:*** 18/04/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** ES

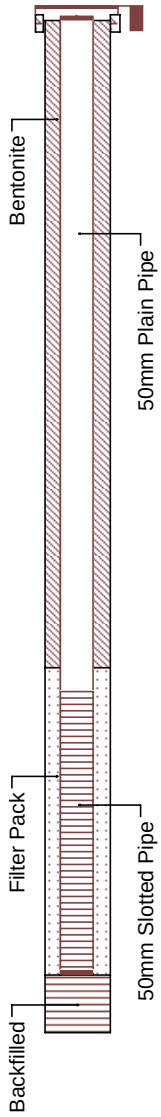
SUBSURFACE PROFILE

Depth (m bgl)	Description	Elevation (m bgl)	Sample Depth (m bgl)
	Ground Surface	0.0	
0.0	**MADE GROUND** Asphalt	-0.5	0.5
	MADE GROUND Grey limestone chippings	-1.0	
1.0	**MADE GROUND** Mid-brown, medium SAND with frequent sub-rounded gravel		1.0
	GLACIAL DEPOSITS Mid-brown, firm, friable CLAY with frequent sub-rounded gravels		
2.0		-2.5	2.0
	GLACIAL DEPOSITS Coarse, angular GRAVEL in a firm clayey matrix	-3.0	
3.0	**GLACIAL DEPOSITS** Grey/brown firm/stiff friable CLAY with frequent fine gravel		3.0
4.0			4.0
5.0			5.0
6.0		-6.0	6.0
	COAL MEASURES Grey, stiff WEATHERED MUDSTONE		
7.0			
8.0			
9.0		-9.0	9.0
	9 m bgl		
10.0			

Groundwater Data

RWL 1.35m bgl

Well Installation



Remarks: Borehole backfilled to 8.5m.
No groundwater strike encountered during drilling.
RWL of 1.35m bgl

Checked by: JC

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH06_03***
Client: Alcoa	***Date:*** 19/04/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** ES

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Asphalt	-0.3			
		MADE GROUND Dark grey, firm, friable, slightly sandy clay with frequent gravels and angular sandstone fragments. Slight hydrocarbon odour noted.	-1.0	0.5 1.0	RWL 0.45m bgl	Bentonite 50mm Plain Pipe
1.0		**GLACIAL DEPOSITS** Dark brown, firm, friable CLAY with frequent gravels. Becoming less friable with depth.				
2.0				2.0	GW Strike - 4.0m bgl.	
3.0				3.0		Filter Pack 50mm Slotted Pipe
4.0		**GLACIAL DEPOSITS** Dark grey, moist, soft SILTY CLAY with frequent small, angular gravels. Becoming lighter grey in colour with depth	-4.0	4.0 4.3		
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						

Remarks: BH terminated at 4.3m bgl.
Groundwater encountered at 4.0m bgl.
RWL of 0.45m bgl on 03.05.07

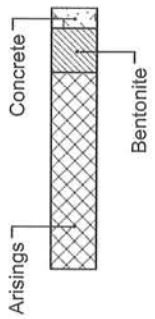
Checked by: JC

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS07_01***
Client: Alcoa	***Date:*** 08/03/07
Location: Waunarlwydd	***Plant Used:*** Terrier
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete.	-0.1			
		MADE GROUND Recovered as wet silty sandy fine to coarse angular GRAVEL.	-0.6	0.5		
		MADE GROUND Recovered as black limestone gravels and cobbles.	-1.2			
1.0		1.2 m bgl				
2.0						
3.0						
4.0						
5.0						



Remarks: WS terminated at 1.2m bgl due to refusal.

Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Hand Pit: HP8_01***
Client: Alcoa	***Date:*** 09/03/07
Location: Waunarlwydd	***Plant Used:*** Hand-dug
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Black stained chippings and dead vegetation		0.05 - 0.15		
		MADE GROUND Chippings with a little yellow brown silty matrix. Oily water in hole and green residue on chippings just below the surface. Becoming grey below 0.2m. Becoming sandy gravelly clayey below 0.3m with cobble sized fragments of slag.	-0.6	0.3 - 0.5		Chippings Bentonite Arisings
1.0		0.6 m bgl				
2.0						
3.0						
4.0						
5.0						

Remarks: Hand pit terminated at 0.6m - water seapage and collapse.

Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole:*** ***BH9_01***
Client: ALCOA	***Date:*** 8th March 2007
Location: Waunarlwydd	***Plant Used:*** Berretta T25
Datum:	***Logged by:*** RB

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Concrete	-0.2			
1.0		**Made Ground** Dense grey gravel with frequent fine brick fragments and occasional fragments of concrete.		1.0	RWL 2.63m bgl	Bentonite
2.0		**Alluvium** Firm dark brown black silty CLAY with frequent fibrous natural organic matter and organic odour.	-2.1 / -2.3	2.0 / 2.2		50mm Plain Pipe
3.0		**Alluvium** Light brown silty CLAY with a little black organic material. Slight natural organic odour.		3.0	GW Strike - 4.8m bgl	
4.0			-4.5	4.3 - 4.5		Filter Pack
5.0		**Glacial Deposits** Brown clayey fine to medium sub angular GRAVEL and brown clayey SAND.				50mm Slotted Pipe
6.0						
7.0		7 m bgl	-7.0			
8.0						
9.0						
10.0						

Remarks: Solid stem auger to 7.0m bgl.
Groundwater encountered at 4.8m bgl.
RWL of 2.63m bgl 06.03.07

Checked by: JC

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH9_02***
Client: ALCOA	***Date:*** 7th March 2007
Location: Waunarlwydd	***Plant Used:*** Berretta T25
Datum:	***Logged by:*** RB

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Concrete	-0.2			
1.0		**Made Ground** Dense grey GRAVEL with cobbles below 0.5m bgl and occasional fine brick fragments. Brick becoming more frequent below 1.6m.	-1.8	0.6	RWL 2.21m bgl GW Strike - 4.5m bgl.	Bentonite 50mm Plain Pipe Filter Pack 50mm Slotted Pipe
2.0		**Alluvium** Dark brown/ black silty CLAY with frequent fibrous organic matter and a natural organic odour.	-2.2			
3.0		**Alluvium** Light brown mottled orange silty CLAY with occasional black organic material and a faint natural organic odour.	-3.0			
4.0		**Alluvium** Brown CLAY wiith occasional black organic material.	-4.3	3.5 - 3.8		
5.0		**GLACIAL DEPOSITS** Brown clayey fine to medium subangular GRAVEL and SAND.	-5.5			
		5.5 m bgl				
6.0						
7.0						
8.0						
9.0						
10.0						

Remarks: Solid stem auger to 0.8m bgl and ODEX from 0.8m bgl to 5.5m bgl.
Groundwater encountered at 4.5m bgl.
RWL of 2.21m bgl on 06.03.07.

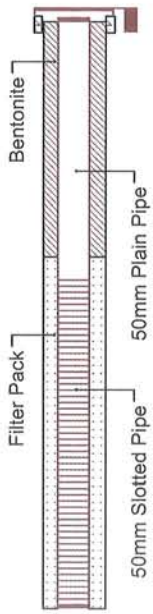
Checked by: JC

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH9_03***
Client: ALCOA	***Date:*** 7th March 2007
Location: Waunarlwydd	***Plant Used:*** Berretta T25
Datum:	***Logged by:*** RB

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Dense grey GRAVEL with occasional fine brick fragments	-2.5	0.8 - 1.2	GW Strike - 2.5m bgl RWL 2.3m bgl	Bentonite 50mm Plain Pipe
		Alluvium Firm dark brown/ black silty CLAY with frequent organic matter and natural organic odour.	-2.8	3.0		Filter Pack
		Alluvium Firm light brown silty CLAY with occasional black organic material. Slight natural organic odour.	-4.2			50mm Slotted Pipe
		Glacial Deposits Brown clayey fine to medium subangular GRAVEL and SAND.	-5.5			
		5.5 m bgl				



Remarks: Groundwater encountered at 2.5m bgl
RWL of 2.3m bgl on 16.03.07

Checked by: JC

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH9_04***
Client: ALCOA	***Date:*** 8th March 2007
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** RB

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Tarmac	-0.2			
		Made Ground Concrete				
1.0		**Made Ground** Dense grey GRAVEL with cobbles at 0.5m bgl and occasional fine brick fragments becoming more frequent below 1.6m bgl.	-1.8	0.8 - 1.0		
2.0		**Alluvium** Dark brown/ black silty CLAY with frequent fine organic material. Natural organic odour.	-2.5	2.0 - 2.5	GW Strike - 4.2m bgl. RWL 2.63m bgl	Bentonite, Filter Pack, 50mm Plain Pipe, 50mm Slotted Pipe
		Alluvium Dark brown/ black silty CLAY	-3.0			
3.0		**Alluvium** Light brown/ orange silty CLAY with occasional black organic material. Slight natural organic odour.	-4.0	3.0		
4.0		**Glacial Deposits** Brown clayey gravelly SAND. Gravel is fine to medium subangular sandstone.				
5.0						
6.0		6 m bgl	-6.0			
7.0						
8.0						
9.0						
10.0						

Remarks:

Groundwater encountered at 4.2m bgl.
RWL at 2.63m bgl on 19.03.07.

Checked by: JC

Sheet: 1 of 1

Project No: 64C11647	***Hand Pit: HP9_01***
Client: Alcoa	***Date:*** 09/03/07
Location: Waunarlwydd	***Plant Used:*** Hand-dug
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Grass over brown sandy CLAY topsoil	-0.1			
		MADE GROUND Dark brown sandy gravelly CLAY with occasional brick, concrete and sandstone cobbles. Occasional medium slag at 0.5-0.6m (adjacent to wall of interceptor).	-1.0			Backfilled
1.0		**MADE GROUND** Masonary walls of interceptor	-1.2			
		1.2 m bgl				
2.0						
3.0						
4.0						
5.0						

Remarks: Hand pit terminated at 1.2m.

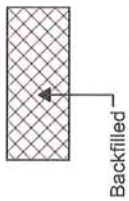
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Hand Pit: HP9_02***
Client: Alcoa	***Date:*** 09/03/07
Location: Waunarlwydd	***Plant Used:*** Hand-dug
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Black stained SILT and CLAY overlying orange brown gravelly SAND, with fragments of material, plastic bags and occasional fragments of slag.	-0.1			
		MADE GROUND Ashy layer.	-0.7			
1.0		**MADE GROUND** Brown sandy SILT and CLAY. Faint unidentifiable odour between 0.4-0.5m bgl. Metal pin below 0.6m. Frequent fragments of coal and occasional lenses of black oil.				
		0.7 m bgl				
2.0						
3.0						
4.0						
5.0						



Remarks: Hand pit terminated at 0.7m.

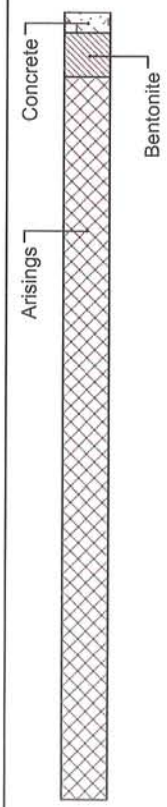
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS9_01***
Client: Alcoa	***Date:*** 08/03/07
Location: Waunarlwydd	***Plant Used:*** Terrier
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete	-0.3			
		MADE GROUND Firm grey mottled orange brown sandy gravelly CLAY. Gravels are fine to medium. Moderate, sweet, possible hydrocarbon odour.	-0.5	0.3 - 0.4		
1.0		**MADE GROUND** Firm slightly sandy slighty gravelly grey mottled olive CLAY. Occasional silty black lenses and occasional sandstone cobbles and medium brick fragments. Moderate organic odour. Becoming moist with occasional lenses of fine coal below 1.5m. Becoming firm/stiff below 2.5m with occasional clinker.		1.5 - 1.6		
2.0						
3.0			-3.2			
		ALLUVIUM Firm friable dark brown slightly sandy SILT with a spongy texture and organic odour.	-3.3	3.2 - 3.3		
		ALLUVIUM Soft-firm grey mottled orange brown very thinly laminated slightly sandy CLAY.	-3.6			
4.0		3.6 m bgl				
5.0						



Remarks: Window sample terminated at 3.6m bgl.
No groundwater encountered.

Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH11_01***
Client: Alcoa	***Date:*** 13/03/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete	-0.5			
1.0		**MADE GROUND** Dark grey brown silty sandy medium to coarse subangular limestone and sandstone GRAVEL sub-base. Becoming siltier with depth.	-1.5	1.5-2.0	GW Strike - 4.5-5.5m bgl. RWL 3.93m bgl	Bentonite 50mm Plain Pipe
2.0 3.0 4.0		**MADE GROUND** Recovered as fine to medium subangular fragments of mudstone with occasional sandstone and rare fine brick.	-4.5	4.5-5.0		
5.0		**ALLUVIUM?** Recovered as orange-brown to brown slightly sandy SILT/CLAY .	-5.5			
6.0		**COAL MEASURES** Recovered as fine to medium fragments of strong sandstone and occasional mudstone in a silty matrix. Possible faint hydrocarbon odour.	-6.0			
7.0 8.0		**COAL MEASURES** Recovered as dust and fragments of dry weak MUDSTONE.	-8.5			
9.0 10.0		**COAL MEASURES** Recovered as fragments of fine grained SANDSTONE.	-11.0		GW Strike - 10.7m bgl.	Filter Pack 50mm Slotted Pipe
11.0 12.0		11 m bgl				

Remarks: Borehole terminated at 11.0m bgl.
Groundwater encountered at 4.5 - 5.5m bgl and 10.7m bgl.
RWL at 3.93m bgl on 19.03.07.

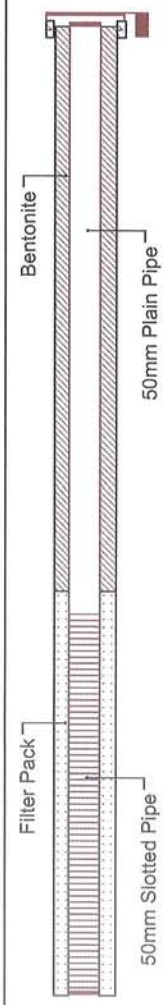
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH11_02***
Client: Alcoa	***Date:*** 13/03/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JE

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Concrete	-0.4			
1.0		**Made Ground** Clay with frequent flint, sandstone and mudstone gravels (up to 50mm). Small fragments of concrete recovered between 1.0m and 2.0m bgl.		1.0		
2.0				2.0		
			-2.9			
3.0		**Made Ground** Recovered as soft silty brown clay with occasional cream/orange sandy pockets that becomes less silty from 4.0m. Appears disturbed.		3.0	RWL 4.48m bgl	
4.0				4.0		
5.0			-5.3	5.0	GW Strike - 7.0m bgl.	
		Coal Measures Recovered as fine grey dust with occasional fragments of grey mudstone.	-6.0			
6.0		**Coal Measures** Recovered as hard grey fragments of fine grained mudstone.				
7.0						
8.0						
9.0			-9.0			
		9 m bgl				
10.0						



Remarks: Solid stem auger to 5.3m bgl. ODEX from 5.3m bgl to 9.0m bgl.
Groundwater encountered at 7.0m bgl.
RWL of 4.48m bgl on 19.03.07.

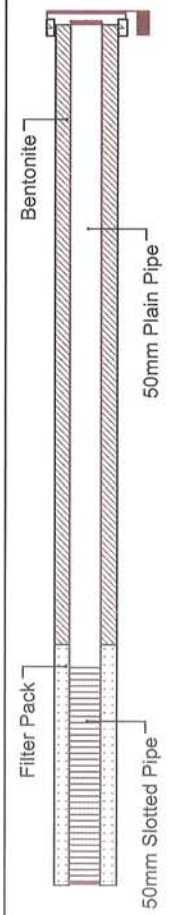
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH11_03***
Client: Alcoa	***Date:*** 14/03/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete	-0.5			
1.0 2.0 3.0		**MADE GROUND** Dark grey silty sandy medium to coarse angular limestone and sandstone GRAVEL - sub base	-4.0	1.5-2.5		
4.0 5.0 6.0		**ALLUVIUM** Recovered as 'blobs' of firm green brown slightly sandy CLAY. Becoming orange-brown with depth.	-7.0	4.0-5.0	RWL 4.54m bgl GW Strike - 7.0 - 8.0m bgl.	
7.0 8.0		**COAL MEASURES** Recovered as gravel size fragments of strong grey fine to medium grained sandstone - water strike.	-8.0			
9.0 10.0		8 m bgl				



Remarks: Solid stem auger to 3.0m and ODEX to 8.0m bgl.
Groundwater encountered between 7.0 - 8.0 m bgl.
RWL at 4.54m bgl on 19.03.07.

Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH11_04***
Client: Alcoa	***Date:*** 14/03/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete	-0.5			
		MADE GROUND Sub-base	-0.8			
		0.75 m bgl				
1.0						
2.0						
3.0						
4.0						
5.0						

Backfilled

Remarks: Refused on a 2nd concrete surface - possibly basement / electricity control room roof.

Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH12_01***
Client: Alcoa	***Date:*** 25/04/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** LC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete				
		MADE GROUND Dark brown black slightly sandy slightly clayey angular to sub-angular fine to coarse GRAVEL. Very little recovery from 2.0-4.2m		1.0 2.0	GW Strike - 3.0m bgl RWL 1.46m bgl	Bentonite Filter Pack 50mm Plain Pipe 50mm Slotted Pipe
4.0			-4.2			
		POSSIBLE MADE GROUND Grey brown slightly sandy slightly gravelly CLAY. Gravel is angular to sub rounded, fine to coarse sandstone.	-4.6	4.5		
5.0		4.6 m bgl				
6.0						
7.0						
8.0						
9.0						
10.0						

Remarks: BH terminated at 4.5m bgl.
Groundwater encountered at 3.0m bgl.
RWL of 1.46m bgl on 08.05.07

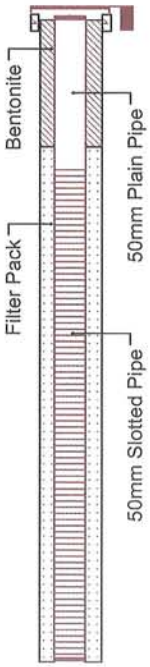
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH12_02***
Client: Alcoa	***Date:*** 08/05/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete	-0.3			
		MADE GROUND Limestone sub-base	-0.7			
1.0		**MADE GROUND** Recovered as dark grey damp orange gravel size fragments of limestone.	-1.3	1.3-1.5 1.5-2.0	GW Strike - 2.5m bgl. RWL 1.34m bgl	Bentonite 50mm Plain Pipe
2.0		**ALLUVIUM** Recovered as firm green brown slightly sandy CLAY.	-2.0			Filter Pack
		ALLUVIUM Recovered as orange-brown sandy clayey fine to medium sub-angular GRAVEL	-3.0			
3.0		**ALLUVIUM** Recovered as clayey sandy fine to medium sub-rounded gravel. Becoming denser and more angular below 4.0m bgl suggesting larger cobbles. Layer of clayey sand at 5.7m bgl.		3.0		50mm Slotted Pipe
4.0						
5.0						
6.0			-6.0			
		6 m bgl				
7.0						
8.0						
9.0						
10.0						



Remarks: Borehole terminated at 6.0m bgl.
Sheen on water from hole.
Groundwater encountered at 2.5m bgl.
RWL of 1.34m bgl on 8.03.07 and 1.12m bgl on 15.03.07

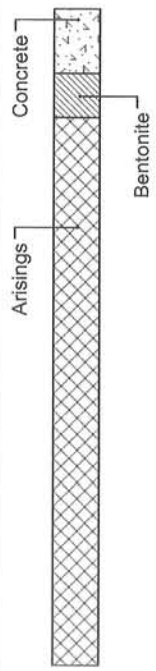
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS12_01***
Client: Alcoa	***Date:*** 12/03/07
Location: Waunarlwydd	***Plant Used:*** Terrier
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete	-0.3			
		MADE GROUND Grey, very silty sandy fine to coarse sub-angular sandstone GRAVEL with occasional cobbles.		0.5 1.5-1.6 2.8-3.0		
1.0						
2.0						
3.0		3 m bgl	-3.0			
4.0						
5.0						



Remarks: Window sample refused and terminated at 3.0m bgl.
No groundwater strike encountered.

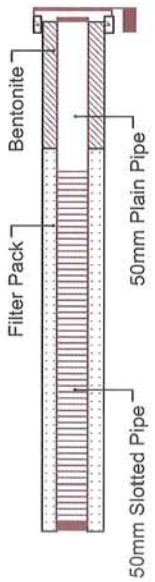
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH13_01***
Client: ALCOA	***Date:*** 8th March 2007
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** RB

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Concrete.	-0.2			
		Made Ground Grey/black sandy GRAVEL.	-0.7	0.5	GW Strike - 2.2m bgl; RWL of 0.57m bgl on 19.03.07	
1.0		**Alluvium** Dark brown silty CLAY with sand lenses and frequent rootlets	-1.5	1.0		
		Alluvium Brown/grey CLAY with orange/grey sand and silt lenses.	-2.2	1.5		
2.0		**Alluvium** Brown sandy CLAY with a little to medium gravel.		2.0		
3.0						
4.0			-4.8			
5.0		4.8 m bgl				
6.0						
7.0						
8.0						
9.0						
10.0						



Remarks: Solid stem auger to 4.8m bgl.
Groundwater encountered at 2.2m bgl.
RWL of 0.57m bgl on 19.03.07.

Checked by: JC

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH13_02***
Client: ALCOA	***Date:*** 8th March 2007
Location: Waunarlwydd	***Plant Used:*** Berretta T25
Datum:	***Logged by:*** RB

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Concrete.	-0.3			
		Made Ground Grey SAND and GRAVEL with frequent concrete fragments.	-1.3	0.5 - 0.8	GW Strike - 1.6m bgl; RWL 0.5m bgl	Bentonite; 50mm Plain Pipe
1.0		**Alluvium** Dark brown silty clay with frequent rootlets and small fragments of wood. Slight hydrocarbon odour.	-1.8	1.0 - 1.5		
2.0		**Alluvium** Brown/grey CLAY with orange/grey sand and silt lenses. No apparent hydrocarbon odour.	-2.5	2.0		
3.0		**Alluvium** Dark brown silty CLAY with occasional fine to medium gravel.		3.0 - 3.5		Filter Pack; 50mm Slotted Pipe
4.0			-4.8			
5.0		4.8 m bgl				
6.0						
7.0						
8.0						
9.0						
10.0						

Remarks: Solid stem auger to 4.2m bgl.
Groudwater encountered at 1.6m bgl.
RWL of 0.5m bgl on 19.03.07

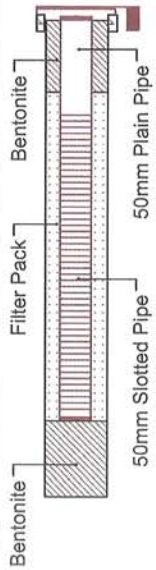
Checked by: JC

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH13_03***
Client: ALCOA	***Date:*** 8th March 2007
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** RB

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Sandy clayey GRAVEL with black staining. Very faint hydrocarbon odour.	-0.5	0.5		
1.0		**Made Ground** Dark brown/ black silty gravelly CLAY with occasional medium to coarse fragments of red roofing tile.	-1.5		GW Strike 1.5m bgl; RWL 1.05m bgl	
2.0		**Made Ground** Dark brown CLAY with frequent small lenses of angular gravel.	-2.5	2.5		
3.0		**Alluvium** Brown gravelly CLAY. Gravel is fine to medium sandstone.	-4.0			
4.0		**Weathered Coal Measures** Recovered as angular fragments of weathered SANDSTONE	-4.2			
		Weathered Coal Measures Recovered as fragments of weak grey MUDSTONE	-4.5			
5.0		4.5 m bgl				
6.0						
7.0						
8.0						
9.0						
10.0						



Remarks: Solid stem auger to 2.8m bgl, ODEX follow on to 4.5m bgl.
Bentonite seal placed at the bottom to 3.8m bgl.
Groundwater encountered at 1.5m bgl.
RWL of 1.05 on 19.03.07

Checked by: JC

Sheet: 1 of 1

Project No: 64C11647	***Hand Pit: HP13_01***
Client: Alcoa	***Date:*** 09/03/07
Location: Waunarlwydd	***Plant Used:*** Hand-dug
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
		Ground Surface	0.0			
0.0		**MADE GROUND** Red brown silty sandy GRAVEL. Gravel is fine to coarse tabular angular mudstone. Faint unidentifiable odour between 0.2-0.4m. Becoming wetter at 0.5m with black/grey moisture. Moderate unidentifiable odour at 0.5m.	-0.6			Backfilled
		ALLUVIUM Very stiff dark grey mottled brown slightly friable SILT and CLAY. Faint unidentifiable odour at 0.6m bgl.	-0.7			
1.0		0.7 m bgl				
2.0						
3.0						
4.0						
5.0						

Remarks: Hand pit terminated at 0.7m.

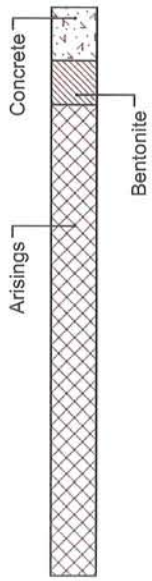
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS13_01***
Client: Alcoa	***Date:*** 12/03/07
Location: Waunarlwydd	***Plant Used:*** Terrier
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete	-0.3			
		MADE GROUND Red brown mottled grey brown very silty sandy GRAVEL of fine to coarse sandstone and sub-base. Moist and stained dark grey at 0.8-1.0m bgl with a moderate hydrocarbon odour.	-1.0			
1.0		**MADE GROUND** Wet dark grey silty sandy fine to coarse subangular GRAVEL. Becoming more clayey with black staining, sheen on water and a moderate hydrocarbon odour between 2.2-2.5m bgl.	-2.6			
2.0						
		2.6 m bgl				
3.0						
4.0						
5.0						



Remarks: Window sample terminated at 2.6m bgl.

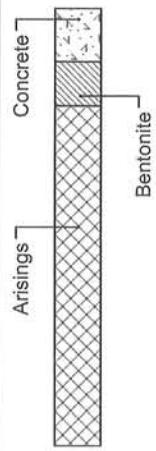
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS13_02***
Client: Alcoa	***Date:*** 12/03/07
Location: Waunarlwydd	***Plant Used:*** Terrier
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete	-0.3			
1.0		**MADE GROUND** Grey wet silty sandy fine to coarse angular GRAVEL. Black staining and strong unidentifiable odour below 1.8m bgl.	-2.0			
2.0		2 m bgl				
3.0						
4.0						
5.0						



Remarks: Window sample collapsing from 0.5m bgl and terminated at 2.0m bgl.

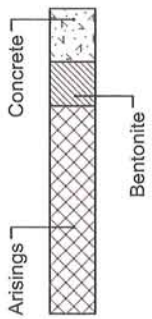
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS13_03***
Client: Alcoa	***Date:*** 12/03/07
Location: Waunarlwydd	***Plant Used:*** Terrier
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete	-0.3			
		MADE GROUND Grey brown silty sandy fine to coarse subangular limestone and sandstone GRAVEL. Becoming moist below 0.8m	-1.2			
1.0		**ALLUVIUM** Very stiff slightly friable grey moist orange to brown SILT and CLAY. Poorly and very thinly laminated texture.	-1.4			
		1.4 m bgl				
2.0						
3.0						
4.0						
5.0						



Remarks: Window sample refused and terminated at 1.4m bgl.

Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS13_04***
Client: Alcoa	***Date:*** 12/03/07
Location: Waunarlwydd	***Plant Used:*** Terrier
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete	-0.3			
1.0		**MADE GROUND** Grey wet sandy clayey fine to medium subangular limstone and sandstone GRAVEL. Becoming grey brown and predominantly fine to medium gravel below 0.8m.	-1.4			Arisings
		1.4 m bgl				
2.0						
3.0						
4.0						
5.0						

Remarks: Window sample refused and terminated at 1.4m bgl.

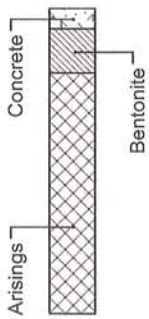
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS13_05***
Client: Alcoa	***Date:*** 12/03/07
Location: Waunarlwydd	***Plant Used:*** Terrier
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Black staining on gravel chippings underlain by membrane.				
		MADE GROUND Black/grey/brown sandy very clayey fine to medium GRAVEL.	-0.6	0.3		
		ALLUVIUM Firm dark brown slightly sandy SILT/CLAY with a moderate organic odour.	-0.7			
1.0		**ALLUVIUM** Firm grey mottled dark brown slightly sandy CLAY. Very thinly laminated texture. Becoming soft and sandy below 1.0m bgl.	-1.4	1.2		
		1.4 m bgl				
2.0						
3.0						
4.0						
5.0						



Remarks: Window sample terminated at 1.4m bgl.
Collapsing from 0.3m - Water rising from made ground.

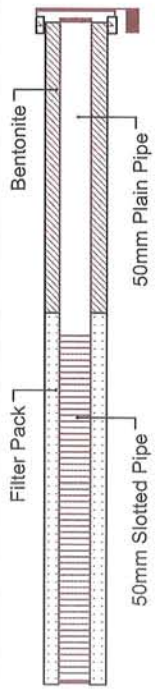
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH14_01***
Client: Alcoa	***Date:*** 16/04/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** ES

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete	-0.3			
		MADE GROUND Grey/black, moist, sub-angular gravels with occasional angular pebbles. Slight sheen and strong hydrocarbon odour noted.	-1.0	0.5 1.0		
1.0		**ALLUVIUM** Soft/firm grey friable, slightly sandy CLAY with frequent fine angular gravel, occasional black partings and fragments of organic matter. Faint hydrocarbon odour.		2.0 3.0	GW Strike - 3.0m bgl RWL 1.32m bgl	
2.0						
3.0						
4.0		**ALLUVIUM** Very soft, damp. grey/brown sandy CLAY with frequent sub-angular gravel, pebbles and fragments of organic matter. Occasional pockets of dark red sandy CLAY. Faint hydrocarbon odour. Becoming more brown in colour with depth.	-4.0	4.0 5.0		
5.0						
6.0		**ALLUVIUM** Soft/firm grey/brown CLAY with frequent gravel. 6.2 m bgl	-6.0 -6.2	6.0		
7.0						
8.0						
9.0						
10.0						



Remarks: Groundwater encountered at 3.0m bgl.
RWL of 1.32m bgl on 03.05.07.

Checked by: JC

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS14_01***
Client: Alcoa	***Date:*** 08/03/07
Location: Waunarlwydd	***Plant Used:*** Terrier
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Chippings	-0.3	0-0.2		Backfilled
		MADE GROUND Grey silty sandy fine to coarse subangular limestone GRAVEL. Faint hydrocarbon odour.				
		REFUSAL Refusal on large sandstone cobbles.				
		0.3 m bgl				
1.0						
2.0						
3.0						
4.0						
5.0						

Remarks: Window sample refused and terminated at 0.3m bgl.

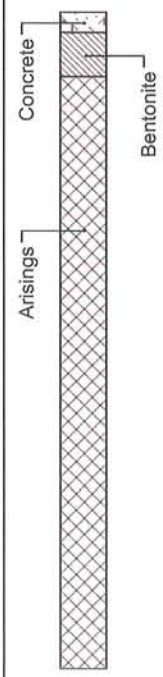
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS14_02***
Client: Alcoa	***Date:*** 16/04/07
Location: Waunarlwydd	***Plant Used:*** Terrier Rig
Datum:	***Logged by:*** JE

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Gravel with crushed brick and slightly sandy clay matrix.	-0.4	0.4 - 0.6		
		Made Ground Green-grey clay containing concrete cobbles >100mm, wood at 0.8m and rootlets in clay.	-1.2	1.0 - 1.2		
1.0		**Made Ground** Firm brown clay with organic rootlets and wood at 1.3m.	-2.0			
2.0		**No recovery** Cobble of mudstone in base of window sample barrel.	-3.0	2.5 - 2.8		
3.0		3 m bgl				
4.0						
5.0						



Remarks:

Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH15_01***
Client: Alcoa	***Date:*** 16/04/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** ES

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Limestone hardcore coated in hardened white lacquer	-0.4	0.1		
		MADE GROUND Red bricks and grey coarse sand, gravel and metal fragments	-1.0	0.5		
1.0		**MADE GROUND** Very soft, mois, blackt sandy CLAY with frequent angular gravel and pebbles and red brick fragments. Occasional fragments of organic matter	-1.5	1.0		
		MADE GROUND Soft, damp, grey/brown, silty CLAY with frequent sub-angular gravel and red brick fragment. Occasional fragments of organic matter.	-2.0	1.5		
2.0		**MADE GROUND** Soft moist orange/brown, silty CLAY with occasional grey and orange mottling and occasional gravels	-3.0	2.5		
3.0		**MADE GROUND** Very soft, moist dark brown, silty clay with frequent red brick fragments		3.0	GW Strike - 3.0m bgl; RWL 0.93m bgl	Bentonite; 50mm Plain Pipe; Filter Pack; 50mm Slotted Pipe; Backfilled
4.0		**ALLUVIUM** Very wet dark brown medium/fine SAND	-5.0			
5.0		**ALLUVIUM** Dark brown, moist, soft CLAY with frequent coarse angular gravels	-6.0			
6.0		**ALLUVIUM** SAND and GRAVEL in a soft dark grey clayey matrix	-7.0			
7.0		**ALLUVIUM** Dark grey firm, friable CLAY	-7.4	7.4		
		7.4 m bgl				
8.0						
9.0						
10.0						

Remarks: Groundwater encountered at 3.0m bgl.
RWL of 0.93m bgl on 0.305.07.

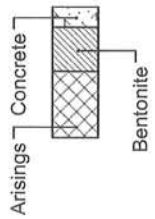
Checked by: JC

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS15_01***
Client: Alcoa	***Date:*** 16/04/07
Location: Waunarlwydd	***Plant Used:*** Terrier Rig
Datum:	***Logged by:*** JE

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Crushed concrete and flint gravel.	-0.3	0.3 - 0.6		
		Made Ground Crushed concrete, flint gravel and grey reworked clay with a slight lacquer odour between 0.5m and 0.6m bgl.	-0.6			
		Terminated at 0.6m Concrete obstruction				
1.0		0.6 m bgl				
2.0						
3.0						
4.0						
5.0						



Remarks:

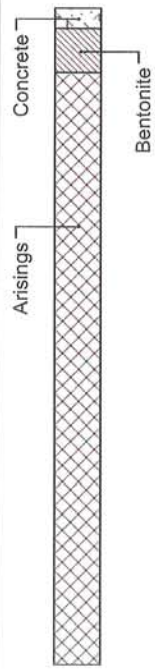
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS15_02***
Client: Alcoa	***Date:*** 16/04/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JE

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Soft brown clay with occasional flint gravel and brick fragments with a slight hydrocarbon odour becoming strong between 0.5m and 0.8m bgl	-0.8	0.5 - 0.8		
1.0		**Alluvium** Firm dense brown CLAY with occasional angular gravels. Organic matter (rootlets) throughout.	-1.1	0.8 - 1.0		
		Alluvium Firm brown CLAY with occasional organic fragments.	-1.8	1.7 - 2.0		
2.0		**Alluvium** Firm silty brown CLAY becoming slightly sandy and saturated at base.	-2.8	2.7 - 3.0		
3.0		**Alluvium** Firm brown CLAY with coal fragments embedded, possible coal seam at 3.0m.	-3.0			
		3 m bgl				
4.0						
5.0						



Remarks: Groundwater not encountered

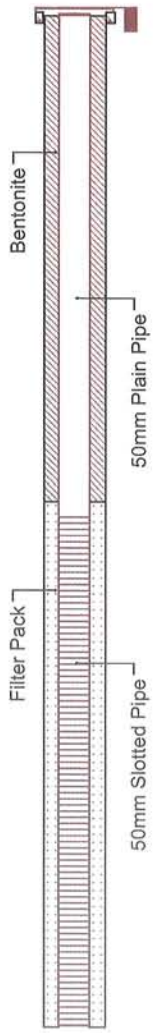
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH16_01***
Client: Alcoa	***Date:*** 14/03/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JE

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Topsoil with occasional flint gravel and concrete fragments. Mild solvent odour and black staining in top 0.2m.	-0.5	0.5		
1.0		**Coal Measures** Light grey weathered MUDSTONE. Very soft weathered mud grains becoming clayey with depth.	-2.0	1.0		
2.0		**Coal Measures** Dark grey clayey MUDSTONE with occasional fragments of brown fine grained mudstone.	-3.0	2.0	RWL 3.65m bgl	
3.0		**Coal Measures** Soft weathered MUDSTONE with occasional fragments of hard brown fine grained mudstone. Crystalline shell in one fragment.		3.0		
4.0				4.0		
5.0				5.0		
6.0		**Coal Measures** Very fine grained grey MUDSTONE.	-5.8	5.8		
7.0						
8.0						
9.0		**Coal Measures** Very fine grained grey MUSTONE with interlayered pink-red fine grain SANDSTONE. Recovered as pink and grey dust and fragments.	-9.0		GW Strike - 11.2m bgl	
10.0		**Coal Measures** Fine grained grey MUDSTONE.	-10.0			
11.0						
12.0						
13.0						
14.0		14 m bgl	-14.0			
15.0						



Remarks: Solid stem auger to 5.3m bgl. ODEX from 5.3m bgl to 14.0m bgl.
Groundwater encountered at 11.2m bgl.
RWL of 3.65m bgl on 19.03.07.

Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS16_01***
Client: Alcoa	***Date:*** 08/03/07
Location: Waunarlwydd	***Plant Used:*** Terrier
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete underlain by membrane	-0.3			
		MADE GROUND Grey clayey SAND with medium to coarse subangular gravel (sub-base)	-0.5 -0.6	0.5 - 0.6		
		MADE GROUND Stiff dark grey brown sandy gravelly CLAY - ground is weathered red brown tabular				
1.0		**POSSIBLE MADE GROUND** Stiff friable grey green mottled grey sandy SILT with some fine to medium angular mudstone gravel.	-1.3	1.1 - 1.3		
		Possible made ground / possible weathered mudstone	-1.4			
		POSSIBLE MADE GROUND Red brown - as above				
		Coal Measures Very stiff grey green sandy SILT matrix with frequent fine angular deposits of weak mudstone	-2.0	1.8 - 1.9		
2.0		2 m bgl				
3.0						
4.0						
5.0						

Remarks: Refusal at 2.0m bgl.
Window sample filled with water after 5 minutes from gravel under concrete.

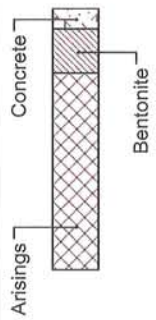
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS16_02***
Client: Alcoa	***Date:*** 08/03/07
Location: Waunarlwydd	***Plant Used:*** Terrier
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Vegetation over dark brown sandy SILT with occasional rootlets, fine brick fragments and grey clayey lenses.	-0.2	0.1 - 0.2		
		MADE GROUND Grey wet sandy CLAY with medium to coarse sub-angular gravel. Dark grey staining and a moderate hydrocarbon odour.	-0.6	0.4 - 0.6		
1.0		**COAL MEASURES** Weathered mudstone asprenous. Faint hydrocarbon odour.	-1.2	0.7 - 0.8		
		1.2 m bgl				
2.0						
3.0						
4.0						
5.0						



Remarks: 1.2m Refusal
Window sample filled with water from gravel under concrete.

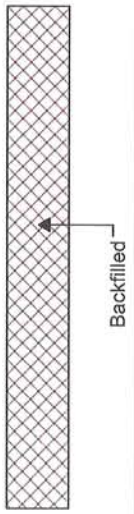
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS16_03***
Client: Alcoa	***Date:*** 17/04/07
Location: Swansea	***Plant Used:*** Terrier Rig
Datum:	***Logged by:*** JE

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Crushed and fragmented red brick.	-0.3			
		Coal Measures Band of heavily weathered fine grained SANDSTONE recovered as fragments with black stain and slight solvent odour within fractures.	-0.6			
		Coal Measures Heavily weathered fractured SILTSTONE with black stains in fractures and strong solvent odour.	-0.8 -1.0			
1.0		**Coal Measures** Fractured sandstone as before with black stains in fractures.				
		Coal Measures Fractured sandstone. No evidence of staining. Becomes damp at 1.4-1.5m bgl.	-1.5			
		Coal Measures Weathered grey fine grained MUDSTONE becoming firmer with depth.				
2.0			-2.3			
		2.3 m bgl				
3.0						
4.0						
5.0						



Remarks:

Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH17_01***
Client: Alcoa	***Date:*** 15/03/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JE

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Soft brown clay with mudstone fragments flint gravel and occasional brick fragments.	-2.0	0.5 1.0 2.0	GW Strike - 2.0m bgl RWL 1.16m bgl	Bentonite 50mm Plain Pipe Filter Pack 50mm Slotted Pipe Bentonite
		Alluvium Saturated soft silty brown CLAY with strong natural odour.	-3.0			
		Coal Measures Medium grained grey sandstone.	-3.6			
		3.6 m bgl				

1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0

Remarks: Solid stem auger to 3.6m bgl.
Groundwater encountered at 2.0m bgl.
RWL of 1.16m bgl on 21.03.07

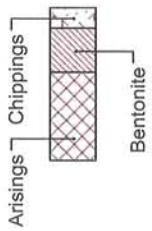
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Hand Pit: HP17_01***
Client: Alcoa	***Date:*** 08/03/07
Location: Waunarlwydd	***Plant Used:*** Hand-dug
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Chippings with black staining	-0.2	0.1 - 0.2 0.2 - 0.35		
		MADE GROUND Brown clayey sandy medium to coarse angular GRAVEL with soil in it.	-0.4			
		MADE GROUND Grey very clayey sandy medium to coarse angular GRAVEL with a moderate hydrocarbon odour.	-0.7	0.6 - 0.7		
1.0		**MADE GROUND** Stiff orange brown mottled dark grey and brown sandy gravelly CLAY with occasional sandstone cobbles and fine to medium brick and slag fragments. No apparent hydrocarbon odour.				
		0.7 m bgl				
2.0						
3.0						
4.0						
5.0						



Remarks: Hand pit terminated at 0.7m.

Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS17_01***
Client: Alcoa	***Date:*** 08/03/07
Location: Waunarlwydd	***Plant Used:*** Terrier
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Concrete	-0.4			
		MADE GROUND Wet silty sandy medium to coarse angular sub-base GRAVELS. Stained black with strong hydrocarbon odour. 0.5 m bgl	-0.5	0.4 - 0.5		Backfilled
1.0						
2.0						
3.0						
4.0						
5.0						

Remarks: Window sample terminated at 0.5m bgl.
Refusal on concrete surface.

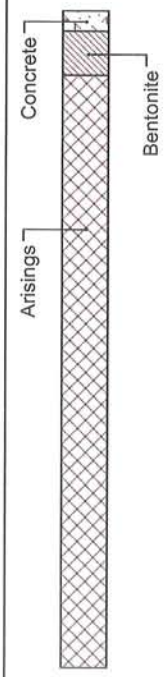
Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Window Sample: WS17_02***
Client: Alcoa	***Date:*** 08/03/07
Location: Waunarlwydd	***Plant Used:*** Terrier
Datum:	***Logged by:*** JC

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		MADE GROUND Scalpings	-0.1			
		MADE GROUND Concrete	-0.2			
		MADE GROUND Firm grey brown sandy gravelly CLAY. Gravels are fine to medium and angular.	-0.8	0.6		
1.0		**MADE GROUND** Firm grey brown sandy slightly gravelly CLAY with occasional fine to medium brick and grey lenses of wet fine clayey GRAVEL.	-1.0			
		MADE GROUND Firm grey brown sandy slightly gravelly CLAY with occasional black lenses and an unidentifiable odour below 1.5m.		1.6		
2.0		**ALLUVIUM** Firm orange brown mottled brown grey slightly sandy slightly gravelly CLAY with a faint organic odour.	-2.0	2.5		
3.0		3 m bgl	-3.0			
4.0						
5.0						



Remarks: Window sample terminated at 3.0m.
Collapsing and water ingress from ~2.0m.
Groundwater not encountered.

Checked by:

Sheet: 1 of 1

Project No: 64C11647	***Borehole: BH18_01***
Client: Alcoa	***Date:*** 12/03/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JE

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Reinforced concrete	-0.3			
1.0		**Made Ground** Soft brown clay with rounded to angular flint gravels up to 50mm	-1.5	1.2 - 1.5		
2.0		**Alluvium** Recovered as soft brown clay with occasional mudstone and sandstone gravel.	-2.0	2.0	RWL 3.11m bgl	Bentonite; 50mm Plain Pipe
3.0		**Glacial Deposits** Recovered as soft brown CLAY with frequent subangular mudstone and sandstone gravels.				
4.0				4.5	GW Strike - 6.0m bgl	
5.0			-5.5			Filter Pack
6.0		**Coal Measures** Recovered as fine grained grey-brown angular fragments of mudstone.				50mm Slotted Pipe
7.0			-7.0	7.0		
		7 m bgl				
8.0						
9.0						
10.0						

Remarks: Solid Stem Auger to 3.0m and ODEX (air flush) from 3.0m to 7.0m bgl.

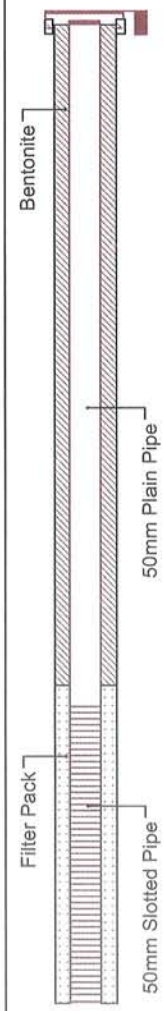
Checked by:

Sheet: 1 of 1

Project No: 61C11647	***Borehole: BH18_02***
Client: Alcoa	***Date:*** 14/03/07
Location: Waunarlwydd	***Plant Used:*** Beretta T25
Datum:	***Logged by:*** JE

SUBSURFACE PROFILE

Depth (m bgl)	Symbol	Description	Elevation (m bgl)	Sample Depth (m bgl)	Groundwater Data	Well Installation
0.0		Ground Surface	0.0			
		Made Ground Concrete	-0.3			
		Made Ground Brown-green clay with occasional flint gravel and crushed brick.	-1.0			
1.0		**Glacial Deposits** Brown soft CLAY with occasional angular flint gravels up to 50mm. Becomes slightly damp at 5.5m.		1.0		
2.0				2.0		
3.0				3.0	RWL 3.83m bgl	
4.0						
5.0						
6.0						
7.0			-7.0			
		Coal Measures Recovered as fragments of slightly fine grained grey mudstone becoming harder and less fragmented from 8.0m. Saturated at 9.0m bgl.			GW Strike - 9.0m bgl	
8.0						
9.0						
10.0			-10.0			
		10 m bgl				
11.0						



Remarks: Solid stem auger to 3.0m bgl. ODEX from 3.0m bgl to 10.0m bgl.
Groundwater encountered at 9.0m bgl.
RWL of 3.83m bgl on 19.03.07.

Checked by:

Sheet: 1 of 1

APPENDIX C: GROUNDWATER MONITORING DATA

PPC Site Surrender Groundwater Monitoring Data

Position	RWL	Well depth	Free Phase Hydrocarbons Detected?	Date	Notes
BH01_01	0.785	12.650	No	16/03/2007	
BH02_01	1.810	4.710	No	16/03/2007	
BH02_02	1.260	6.540	No	16/03/2007	
BH02_03	2.200	3.230	no	16/03/2007	Moderate hydrocarbon odour.
BH03_01	-	-	-	-	Not installed
BH03_02	1.540	10.120	No	01/06/2007	
BH03_03	1.550	5.760	No	09/05/2007	
BH04_01	-	-	-	-	Borehole not installed
BH05_01	1.400	6.760	No	21/03/2007	
BH05_02	3.070	10.030	No	21/03/2007	
BH05_03	1.400	12.160	No	19/03/2007	
BH06_01	-	-	-	-	Borehole not installed
BH06_02	1.350	8.730	No	03/05/2007	
BH06_03	0.450	3.730	No	03/05/2007	
BH09_01	2.630	6.980	No	06/03/2007	
BH09_02	2.210	5.520	No	19/03/2007	
BH09_03	2.300	5.620	No	16/03/2007	
BH09_04	2.630	5.950	No	19/03/2007	
BH11_01	3.930	10.900	No	19/03/2007	
BH11_02	4.480	9.100	No	19/03/2007	
BH11_03	4.540	8.050	No	19/03/2007	
BH12_01	1.460	4.320	No	08/05/2007	
BH12_01	1.420	-	1.40 - 1.42m bgl (20mm)	31/05/2007	Golden brown free phase hydrocarbons detected, low viscosity
BH12_02	1.340	6.140	No	10/05/2007	
BH12_02	1.120	6.100	No	15/05/2007	
BH12_02	1.330	-	No	31/05/2007	
BH13_01	0.570	3.750	No	19/03/2007	
BH13_02	0.500	2.790	No	19/03/2007	
BH13_03	1.050	4.220	0.934 - 1.05m bgl (116mm)	19/03/2007	Strong hydrocarbon odour, viscous off yellow free phase hydrocarbon product with a jelly like consistency.
BH13_03	0.730	-	No	31/05/2007	No free phase hydrocarbons detected. Heavy rainbow sheen and strong hydrocarbon odour.
BH14_01	1.320	5.800	No	03/05/2007	
BH15_01	0.930	7.030	No	03/05/2007	
BH16_01	3.650	14.430	No	19/03/2007	
BH17_01	1.160	3.510	No	21/03/2007	
BH18_01	3.110	6.860	No	19/03/2007	
BH18_02	3.830	9.680	No	19/03/2007	

RWL - Rest Groundwater Level (m bgl)

APPENDIX D: LABORATORY CERTIFICATES

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

21 March 2007

TEST REPORT

Our Report Number: 07-28407

Your Order Reference: Instructions of 08/03/2007

15 soil samples submitted for analysis on 08/03/2007

Project Name: ALCOA

Project Code: 64C11647

Laboratory analysis started on 09/03/2007
All laboratory analysis completed by 21 March 2007

pp. Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

Sharon Googh
Project Co-Ordinator
ALCONTROL TECHNICHEM

Test methods are documented in house procedures or where appropriate standard methods. Non accredited tests (if applicable) are identified on each page. Procedures for sampling are outside the scope of the laboratory UKAS accreditation. Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation. All samples connected with this report , including any 'on hold', will be stored and disposed of according to company policy. A copy of this policy is available on request.

ALcontrol Technichem
Sample Description

Job Number: 07-28407
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soil
Project Name: ALCOA

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	Sample Description
211505	BH1-01	0.50-1.00	05/03/07	Grey sand with gravel
211506	BH1-01	1.50-2.00	05/03/07	Brown sand with gravel
211507	BH1-01	2.50-3.00	05/03/07	*Grey gravel with sand
211508	BH2-01	0.6	06/03/07	Brown clay with gravel
211509	BH2-02	0.6	06/03/07	*Brown gravel
211510	BH2-02	1.0	06/03/07	Brown sandy clay with gravel
211511	BH2-02	2.0	06/03/07	Brown sand with sand
211512	BH2-02	5.0	06/03/07	Brown sand with rubble
211513	BH2-03	0.6	06/03/07	Brown clay with gravel
211514	BH2-03	2.5	06/03/07	Green sandy clay
211515	BH2-03	3.50-4.00	06/03/07	Brown sandy clay with gravel
211516	BH9-02	0.6	07/03/07	*Brown gravel
211517	BH9-02	3.50-3.80	07/03/07	Brown sandy clay with gravel
211518	BH9-03	0.80-1.20	07/03/07	Brown sand
211519	BH9-03	3.0	07/03/07	Brown clay

*Denotes outside the scope of MCERTS accreditation since matrix not included in method validation.

ALcontrol Technichem
Table Of Results

Job Number : 07-28407
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH1-01	BH1-01	BH1-01	BH2-01	BH2-02	Method No	Units	LOD
Sample Depth (m)	**0.50-1.00**	**1.50-2.00**	**2.50-3.00**	**0.60**	**0.60**			
Date Sampled	**05/03/07**	**05/03/07**	**05/03/07**	**05/03/07**	**05/03/07**			
Date Scheduled	**08/03/07**	**08/03/07**	**08/03/07**	**08/03/07**	**08/03/07**			
Laboratory Reference No	**211505**	**211506**	**211507**	**211508**	**211509**			
Analysis								
Moisture Content (Dry Weight)	7.3	5.4	4.9	17.5	2.0		%	0.1
Moisture Content (Wet Weight)	6.8	5.2	4.7	14.9	2.0		%	0.1
Arsenic	14	-	4.7	13	-	069S[IM]	mg/kg	3
Barium	50	-	98	31	-	069S[IM]	mg/kg	10
Beryllium	1.0	-	1.2	0.5	-	069S[IM]	mg/kg	0.5
Boron (W/S)	< 0.5	-	0.8	< 0.5	-	016S[IM]	mg/kg	0.5
Cadmium	< 0.5	-	0.5	< 0.5	-	069S[IM]	mg/kg	0.5
Chromium	18	-	14	< 10	-	069S[IM]	mg/kg	10
Copper	35	-	50	28	-	069S[IM]	mg/kg	5
Lead	22	-	53	27	-	069S[IM]	mg/kg	10
Mercury	< 0.6	-	< 0.6	< 0.6	-	069S[IM]	mg/kg	0.6
Nickel	34	-	69	12	-	069S[IM]	mg/kg	4
Selenium	< 2.5	-	< 2.5	< 2.5	-	069S[IM]	mg/kg	2.5
Sulphate (Total Acid Soluble) as SO4	650	500	-	-	-	025a[IM]	mg/kg	200
Vanadium	18	-	16	10	-	069S[IM]	mg/kg	3
Zinc	95	-	190	35	-	069S[IM]	mg/kg	10
Exchangeable Ammonium as N	150	42	52	-	-	018[IM]	mg/kg	40
W/S Chloride	-	-	-	-	-	073S[IM]	mg/kg	10
pH	8.4	8.0	7.6	7.9	9.7	009S[IM]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	20	83	97	13	16	070S[IM]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28407
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH2-02	BH2-02	BH2-02	BH2-03	BH2-03	Method No	Units	LOD
Sample Depth (m)	**1.00**	**2.00**	**5.00**	**0.60**	**2.50**			
Date Sampled	**05/03/07**	**05/03/07**	**05/03/07**	**05/03/07**	**05/03/07**			
Date Scheduled	**08/03/07**	**08/03/07**	**08/03/07**	**08/03/07**	**08/03/07**			
Laboratory Reference No	**211510**	**211511**	**211512**	**211513**	**211514**			
Analysis								
Moisture Content (Dry Weight)	22.4	13.5	5.5	20.8	14.0		%	0.1
Moisture Content (Wet Weight)	18.3	11.9	5.2	17.2	12.3		%	0.1
Arsenic	4.6	5.9	-	-	-	069S[I,M]	mg/kg	3
Barium	82	120	-	-	-	069S[I,M]	mg/kg	10
Beryllium	1.2	1.3	-	-	-	069S[I,M]	mg/kg	0.5
Boron (W/S)	< 0.5	< 0.5	-	-	-	016S[I,M]	mg/kg	0.5
Cadmium	< 0.5	< 0.5	-	-	-	069S[I,M]	mg/kg	0.5
Chromium	25	24	-	-	-	069S[I,M]	mg/kg	10
Copper	33	39	-	-	-	069S[I,M]	mg/kg	5
Lead	24	37	-	-	-	069S[I,M]	mg/kg	10
Mercury	< 0.6	< 0.6	-	-	-	069S[I,M]	mg/kg	0.6
Nickel	36	52	-	-	-	069S[I,M]	mg/kg	4
Selenium	< 2.5	< 2.5	-	-	-	069S[I,M]	mg/kg	2.5
Sulphate (Total Acid Soluble) as SO4	-	< 200	-	470	-	025a[I,M]	mg/kg	200
Vanadium	21	24	-	-	-	069S[I,M]	mg/kg	3
Zinc	77	110	-	-	-	069S[I,M]	mg/kg	10
Exchangeable Ammonium as N	-	-	-	-	-	018[I,M]	mg/kg	40
W/S Chloride	-	-	-	-	-	073S[I,M]	mg/kg	10
pH	-	7.0	7.2	6.5	6.1	009S[I,M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	-	13	22	8	5	070S[I,M]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28407
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH2-03	BH9-02	BH9-02	BH9-03	BH9-03	Method No	Units	LOD
Sample Depth (m)	**3.50-4.00**	**0.60**	**3.50-3.80**	**0.80-1.20**	**3.00**			
Date Sampled	**05/03/07**	**05/03/07**	**05/03/07**	**05/03/07**	**05/03/07**			
Date Scheduled	**08/03/07**	**08/03/07**	**08/03/07**	**08/03/07**	**08/03/07**			
Laboratory Reference No	**211515**	**211516**	**211517**	**211518**	**211519**			
Analysis								
Moisture Content (Dry Weight)	16.1	4.0	15.2	4.3	23.8		%	0.1
Moisture Content (Wet Weight)	13.9	3.8	13.2	4.1	19.2		%	0.1
Arsenic	3.7	-	16	240	-	069S[I,M]	mg/kg	3
Barium	23	-	89	190	-	069S[I,M]	mg/kg	10
Beryllium	< 0.5	-	0.7	1.2	-	069S[I,M]	mg/kg	0.5
Boron (W/S)	< 0.5	-	< 0.5	0.9	-	016S[I,M]	mg/kg	0.5
Cadmium	< 0.5	-	< 0.5	1.2	-	069S[I,M]	mg/kg	0.5
Chromium	16	-	16	25	-	069S[I,M]	mg/kg	10
Copper	8.6	-	34	680	-	069S[I,M]	mg/kg	5
Lead	< 10	-	26	260	-	069S[I,M]	mg/kg	10
Mercury	< 0.6	-	< 0.6	1.5	-	069S[I,M]	mg/kg	0.6
Nickel	22	-	20	36	-	069S[I,M]	mg/kg	4
Selenium	< 2.5	-	< 2.5	4.2	-	069S[I,M]	mg/kg	2.5
Sulphate (Total Acid Soluble) as SO4	-	-	-	-	-	025a[I,M]	mg/kg	200
Vanadium	14	-	20	32	-	069S[I,M]	mg/kg	3
Zinc	73	-	64	770	-	069S[I,M]	mg/kg	10
Exchangeable Ammonium as N	-	< 40	-	-	< 40	018[I,M]	mg/kg	40
W/S Chloride	-	59	-	24	-	073S[I,M]	mg/kg	10
pH	7.1	7.9	5.9	7.6	7.0	009S[I,M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	390	-	-	-	-	070S[I,M]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28407
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH1-01	BH2-01	BH2-02	BH2-02	BH2-02	Method No	Units	LOD
Sample Depth (m)	1.50-2.00	0.60	0.60	2.00	5.00			
Date Sampled	05/03/07	05/03/07	05/03/07	05/03/07	05/03/07			
Date Scheduled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Laboratory Reference No	211506	211508	211509	211511	211512			
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Acenaphthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Fluorene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Phenanthrene	0.32	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(a)anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Chrysene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(a)pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
PAH (Sum of Dutch 10)	0.32	ND	ND	ND	ND	022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	0.32	ND	ND	ND	ND	022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28407
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH2-03	BH2-03	BH9-02	BH9-02	BH9-03	Method No	Units	LOD
Sample Depth (m)	0.60	2.50	0.60	3.50-3.80	0.80-1.20			
Date Sampled	05/03/07	05/03/07	05/03/07	05/03/07	05/03/07			
Date Scheduled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Laboratory Reference No	211513	211514	211516	211517	211518			
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Acenaphthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Fluorene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Phenanthrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Benzo(a)anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Chrysene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Benzo(a)pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
PAH (Sum of Dutch 10)	ND	ND	ND	ND	ND	022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	ND	ND	ND	ND	ND	022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28407
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH9-03					Method No	Units	LOD
Sample Depth (m)	3.00							
Date Sampled	05/03/07							
Date Scheduled	08/03/07							
Laboratory Reference No	211519							
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1					022S[M]	mg/kg	0.1
Acenaphthylene	< 0.1					022S[M]	mg/kg	0.1
Acenaphthene	< 0.1					022S[M]	mg/kg	0.1
Fluorene	< 0.1					022S[M]	mg/kg	0.1
Phenanthrene	< 0.1					022S[M]	mg/kg	0.1
Anthracene	< 0.1					022S[M]	mg/kg	0.1
Fluoranthene	< 0.1					022S[M]	mg/kg	0.1
Pyrene	< 0.1					022S[M]	mg/kg	0.1
Benzo(a)anthracene	< 0.1					022S[M]	mg/kg	0.1
Chrysene	< 0.1					022S[M]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1					022S[M]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1					022S[M]	mg/kg	0.1
Benzo(a)pyrene	< 0.1					022S[M]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1					022S[M]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1					022S[M]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1					022S[M]	mg/kg	0.1
PAH (Sum of Dutch 10)	ND					022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	ND					022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28407
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH1-01	BH2-03				Method No	Units	LOD
Sample Depth (m)	0.50-1.00	3.50-4.00						
Date Sampled	05/03/07	05/03/07						
Date Scheduled	08/03/07	08/03/07						
Laboratory Reference No	211505	211515						
Analysis								
* * SVOC SUITE * *								
Naphthalene	< 150	< 150				053S[IM]	ug/kg	150
2-Chloronaphthalene	< 150	< 150				053S[I]	ug/kg	150
Acenaphthylene	< 150	< 150				053S[I]	ug/kg	150
Acenaphthene	< 150	< 150				053S[I]	ug/kg	150
Fluorene	< 150	< 150				053S[I]	ug/kg	150
Phenanthrene	< 150	< 150				053S[I]	ug/kg	150
Anthracene	< 150	< 150				053S[I]	ug/kg	150
Fluoranthene	< 150	< 150				053S[I]	ug/kg	150
Pyrene	< 150	< 150				053S[IM]	ug/kg	150
Benz(a)anthracene	< 150	< 150				053S	ug/kg	150
Chrysene	< 150	< 150				053S[I]	ug/kg	150
Benzo(b)fluoranthene	< 150	< 150				053S[I]	ug/kg	150
Benzo(k)fluoranthene	< 150	< 150				053S[I]	ug/kg	150
Benzo(a)pyrene	< 150	< 150				053S	ug/kg	150
Dibenzo(a,h)anthracene	< 150	< 150				053S[IM]	ug/kg	150
Indeno(1,2,3-cd)pyrene	< 150	< 150				053S[I]	ug/kg	150
Benzo(g,h,i)perylene	< 150	< 150				053S[I]	ug/kg	150
Phenol	< 150	< 150				053S[I]	ug/kg	150
2-Chlorophenol	< 150	< 150				053S[IM]	ug/kg	150
2-Methylphenol	< 200	< 200				053S[I]	ug/kg	200
4-Methylphenol	< 200	< 200				053S[IM]	ug/kg	200
2-Nitrophenol	< 300	< 300				053S[I]	ug/kg	300
2,4-Dimethylphenol	< 250	< 250				053S[IM]	ug/kg	250
2,4-Dichlorophenol	< 200	< 200				053S[IM]	ug/kg	200
2,6-Dichlorophenol	< 200	< 200				053S[IM]	ug/kg	200
4-Chloro-3-methyl phenol	< 150	< 150				053S[IM]	ug/kg	150
2,4,6-Trichlorophenol	< 150	< 150				053S[I]	ug/kg	150
2,4,5-Trichlorophenol	< 200	< 200				053S[IM]	ug/kg	200
4-Nitrophenol	< 300	< 300				053S	ug/kg	300

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28407
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH1-01	BH2-03				Method No	Units	LOD
Sample Depth (m)	0.50-1.00	3.50-4.00						
Date Sampled	05/03/07	05/03/07						
Date Scheduled	08/03/07	08/03/07						
Laboratory Reference No	211505	211515						
Analysis								
* * SVOC SUITE Cont.. * *								
2,3,4,6-Tetrachlorophenol	< 250	< 250				053S	ug/kg	250
Pentachlorophenol	< 250	< 250				053S	ug/kg	250
Dimethyl Phthalate	< 200	< 200				053S[IM]	ug/kg	200
Diethyl Phthalate	< 200	< 200				053S[I]	ug/kg	200
Di-n-butyl phthalate	< 150	< 150				053S[I]	ug/kg	150
Butyl benzyl phthalate	< 150	< 150				053S[IM]	ug/kg	150
Bis(2-chloroethyl)ether	< 150	< 150				053S[IM]	ug/kg	150
Bis(2-chloroisopropyl)ether	< 200	< 200				053S[I]	ug/kg	200
4-Chlorophenyl phenyl ether	< 150	< 150				053S[I]	ug/kg	150
Bromo phenyl phenyl ether	< 200	< 200				053S[IM]	ug/kg	200
1,3-Dichlorobenzene	< 200	< 200				053S[IM]	ug/kg	200
1,2-Dichlorobenzene	< 150	< 150				053S[IM]	ug/kg	150
1,4-Dichlorobenzene	< 200	< 200				053S[I]	ug/kg	200
Nitrobenzene	< 150	< 150				053S[IM]	ug/kg	150
1,2,4-Trichlorobenzene	< 200	< 200				053S[IM]	ug/kg	200
2,6-Dinitrotoluene	< 200	< 200				053S	ug/kg	200
2,4-Dinitrotoluene	< 200	< 200				053S	ug/kg	200
Azobenzene	< 200	< 200				053S[I]	ug/kg	200
Hexachlorobenzene	< 200	< 200				053S[IM]	ug/kg	200
Hexachloroethane	< 150	< 150				053S[I]	ug/kg	150
n-Nitro-n-propyl-1-propanamine	< 200	< 200				053S[I]	ug/kg	200
Isophorone	< 200	< 200				053S[IM]	ug/kg	200
Bis(2-chloroethoxy)methane	< 150	< 150				053S[I]	ug/kg	150
Hexachlorobutadiene	< 150	< 150				053S[IM]	ug/kg	150
Anthraquinone	< 150	< 150				053S	ug/kg	150
Aniline	< 150	< 150				053S[I]	ug/kg	150
Di-n-octyl phthalate	< 150	< 150				053S[I]	ug/kg	150
Hexachlorocyclopentadiene	< 300	< 300				053S	ug/kg	300
2-Methylnapthalene	< 150	< 150				053S[I]	ug/kg	150

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28407
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH1-01	BH2-03				Method No	Units	LOD
Sample Depth (m)	0.50-1.00	3.50-4.00						
Date Sampled	05/03/07	05/03/07						
Date Scheduled	08/03/07	08/03/07						
Laboratory Reference No	211505	211515						
Analysis								
2-nitroaniline	< 250	< 250				053S[I]	ug/kg	250
3-nitroaniline	< 200	< 200				053S	ug/kg	200
4-Chloroaniline	< 200	< 200				053S	ug/kg	200
4-nitroaniline	< 250	< 250				053S	ug/kg	250
Bis (2-ethylhexyl) phthalate	< 300	< 300				053S	ug/kg	300
Carbazole	< 100	< 100				053S[I]	ug/kg	100
Dibenzofuran	< 150	< 150				053S[IM]	ug/kg	150
Biphenyl	< 150	< 150				053S	ug/kg	150

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28407
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH1-01	BH2-01	BH2-02	BH2-02	BH2-02	Method No	Units	LOD
Sample Depth (m)	0.50-1.00	0.60	0.60	2.00	5.00			
Date Sampled	05/03/07	05/03/07	05/03/07	05/03/07	05/03/07			
Date Scheduled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Laboratory Reference No	211505	211508	211509	211511	211512			
Analysis								
* * VOC SUITE * *								
MTBE	-	-	-	-	< 0.025	071S[I]	mg/kg	0.025
Benzene	-	-	-	-	< 0.025	071S[I]	mg/kg	0.025
Toluene	-	-	-	-	< 0.025	071S[I]	mg/kg	0.025
Ethylbenzene	-	-	-	-	< 0.025	071S[I]	mg/kg	0.025
m,p-Xylenes	-	-	-	-	< 0.05	071S[I]	mg/kg	0.05
o-Xylene	-	-	-	-	< 0.025	071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	-	-	-	-	< 0.025	071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	-	-	-	-	< 0.025	071S[I]	mg/kg	0.025
Dichlorodifluoromethane	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Chloromethane	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Vinyl Chloride	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
Bromomethane	< 25	< 25	< 25	< 25	-	071S[I]	ug/kg	25
Chloroethane	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Trichlorofluoromethane	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
1,1-Dichloroethene	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	< 25	< 25	< 25	< 25	-	071S[I]	ug/kg	25
Dichloromethane	< 50	< 50	< 50	< 50	-	071S	ug/kg	50
Carbon Disulfide	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
MTBE	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
1,1 -Dichloroethane	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
Cis-1,2 Dichloroethene	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Bromochloromethane	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Chloroform	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
2,2-Dichloropropane	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
1,1,1-Trichloroethane	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
1,2-Dichloroethane	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
1,1-Dichloropropene	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Benzene	< 25	< 25	< 25	< 25	-	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡Denotes detection limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28407
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH1-01	BH2-01	BH2-02	BH2-02	BH2-02	Method No	Units	LOD
Sample Depth (m)	0.50-1.00	0.60	0.60	2.00	5.00			
Date Sampled	05/03/07	05/03/07	05/03/07	05/03/07	05/03/07			
Date Scheduled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Laboratory Reference No	211505	211508	211509	211511	211512			
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Dibromomethane	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
1,2-Dichloropropane	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Trichloroethene	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Bromodichloromethane	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Cis-1,3 Dichloropropene	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Trans-1,3 Dichloropropene	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
1,1,2-Trichloroethane	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Toluene	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
1,3 -Dichloropropane	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Dibromochloromethane	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
1,2-Dibromoethane	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Tetrachloroethene	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
1,1,1,2-Tetrachloroethane	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
Chlorobenzene	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Ethyl Benzene	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
m,p-Xylenes	< 50	< 50	< 50	< 50	-	071S	ug/kg	50
Bromoform	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Styrene	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
o-Xylene	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
1,1,2,2 Tetrachloroethane	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
1,2,3-Trichloropropane	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Isopropylbenzene	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
Bromobenzene	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
n-propylbenzene	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
2-Chlorotoluene	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
4-Chlorotoluene	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
1,3,5 Trimethylbenzene	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
tert-butylbenzene	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡Denotes detection limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28407
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH1-01	BH2-01	BH2-02	BH2-02	BH2-02	Method No	Units	LOD
Sample Depth (m)	0.50-1.00	0.60	0.60	2.00	5.00			
Date Sampled	05/03/07	05/03/07	05/03/07	05/03/07	05/03/07			
Date Scheduled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Laboratory Reference No	211505	211508	211509	211511	211512			
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
sec-butylbenzene	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
1,3 Dichlorobenzene	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
1,4 Dichlorobenzene	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
4-Isopropyltoluene	< 25	< 25	< 25	< 25	-	071S[IM]	ug/kg	25
1,2 Dichlorobenzene	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
n-butylbenzene	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
1,2,4-Trichlorobenzene	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	< 25	< 25	< 25	< 25	-	071S	ug/kg	25
Hexachlorobutadiene	< 50	< 50	< 50	< 50	-	071S	ug/kg	50
1,2,3-Trichlorobenzene	< 25	< 25	< 25	< 25	-	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡Denotes detection limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28407
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH2-03	BH2-03	BH2-03	BH9-02	BH9-03	Method No	Units	LOD
Sample Depth (m)	0.60	2.50	3.50-4.00	0.60	0.80-1.20			
Date Sampled	05/03/07	05/03/07	05/03/07	05/03/07	05/03/07			
Date Scheduled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Laboratory Reference No	211513	211514	211515	211516	211518‡			
Analysis								
* * VOC SUITE * *								
MTBE	< 0.025	-	-	-	-	071S[I]	mg/kg	0.025
Benzene	< 0.025	-	-	-	-	071S[I]	mg/kg	0.025
Toluene	< 0.025	-	-	-	-	071S[I]	mg/kg	0.025
Ethylbenzene	< 0.025	-	-	-	-	071S[I]	mg/kg	0.025
m,p-Xylenes	< 0.05	-	-	-	-	071S[I]	mg/kg	0.05
o-Xylene	< 0.025	-	-	-	-	071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	< 0.025	-	-	-	-	071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	< 0.025	-	-	-	-	071S[I]	mg/kg	0.025
Dichlorodifluoromethane	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
Chloromethane	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
Vinyl Chloride	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
Bromomethane	-	< 25	< 25	< 25	< 250	071S[I]	ug/kg	25
Chloroethane	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
Trichlorofluoromethane	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
1,1-Dichloroethene	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	-	< 25	< 25	< 25	< 250	071S[I]	ug/kg	25
Dichloromethane	-	< 50	< 50	< 50	< 500	071S	ug/kg	50
Carbon Disulfide	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
MTBE	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
1,1 -Dichloroethane	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
Cis-1,2 Dichloroethene	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
Bromochloromethane	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
Chloroform	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
2,2-Dichloropropane	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
1,1,1-Trichloroethane	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
1,2-Dichloroethane	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
1,1-Dichloropropene	-	< 25	< 25	< 25	390	071S[IM]	ug/kg	25
Benzene	-	< 25	< 25	< 25	< 250	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡Denotes detection limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28407
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH2-03	BH2-03	BH2-03	BH9-02	BH9-03	Method No	Units	LOD
Sample Depth (m)	0.60	2.50	3.50-4.00	0.60	0.80-1.20			
Date Sampled	05/03/07	05/03/07	05/03/07	05/03/07	05/03/07			
Date Scheduled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Laboratory Reference No	211513	211514	211515	211516	211518‡			
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	-	< 25	< 25	< 25	450	071S[IM]	ug/kg	25
Dibromomethane	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
1,2-Dichloropropane	-	< 25	< 25	< 25	300	071S[IM]	ug/kg	25
Trichloroethene	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
Bromodichloromethane	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
Cis-1,3 Dichloropropene	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
Trans-1,3 Dichloropropene	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
1,1,2-Trichloroethane	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
Toluene	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
1,3 -Dichloropropane	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
Dibromochloromethane	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
1,2-Dibromoethane	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
Tetrachloroethene	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
1,1,1,2-Tetrachloroethane	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
Chlorobenzene	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
Ethyl Benzene	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
m,p-Xylenes	-	< 50	< 50	< 50	< 500	071S	ug/kg	50
Bromoform	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
Styrene	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
o-Xylene	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
1,1,2,2 Tetrachloroethane	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
1,2,3-Trichloropropane	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
Isopropylbenzene	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
Bromobenzene	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
n-propylbenzene	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
2-Chlorotoluene	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
4-Chlorotoluene	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
1,3,5 Trimethylbenzene	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
tert-butylbenzene	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡Denotes detection limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28407
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH2-03	BH2-03	BH2-03	BH9-02	BH9-03	Method No	Units	LOD
Sample Depth (m)	0.60	2.50	3.50-4.00	0.60	0.80-1.20			
Date Sampled	05/03/07	05/03/07	05/03/07	05/03/07	05/03/07			
Date Scheduled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Laboratory Reference No	211513	211514	211515	211516	211518‡			
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
sec-butylbenzene	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
1,3 Dichlorobenzene	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
1,4 Dichlorobenzene	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
4-Isopropyltoluene	-	< 25	< 25	< 25	< 250	071S[IM]	ug/kg	25
1,2 Dichlorobenzene	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
n-butylbenzene	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
1,2,4-Trichlorobenzene	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	-	< 25	< 25	< 25	< 250	071S	ug/kg	25
Hexachlorobutadiene	-	< 50	< 50	< 50	< 500	071S	ug/kg	50
1,2,3-Trichlorobenzene	-	< 25	< 25	< 25	< 250	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡Denotes detection limits raised due to matrix interference.

ALcontrol Technichem
EPH Description

Job Number: 07-28407
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soils
Project Name: ALCOA

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
211505	BH1-01	0.50-1.00	05/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to C40.
211506	BH1-01	1.50-2.00	05/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from before C10 to beyond C40.
211507	BH1-01	2.50-3.00	05/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from before C10 to beyond C40.
211508	BH2-01	0.6	05/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C14 to C40.
211509	BH2-02	0.6	05/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to C40.
211511	BH2-02	2.0	05/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to C40.
211512	BH2-02	5.0	05/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to C40.
211513	BH2-03	0.6	05/03/07	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.

ALcontrol Technichem
EPH Description

Job Number: 07-28407
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soils
Project Name: ALCOA

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
211514	BH2-03	2.5	05/03/07	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.
211515	BH2-03	3.50-4.00	05/03/07	The sample chromatogram exhibits a trace primarily consistent with a mixture of degraded diesel and lubrication oil standards.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-28407

Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
070S	In-house method	Determination of hexane/acetone extractable hydrocarbons in soil by gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	W
053S	In-house method	Determination of semi-volatile organic compounds in soil samples by dichloromethane extraction and GC-MS detection	W
022S	In-house method	Determination of PAH compounds in soil samples by hexane / acetone extraction followed by GC-MS detection	W
018	In-house method based on Method 17.13 "Environmental Assessment Guidance" Version 3, Second Site Property, March 2003	Determination of exchangeable ammonium in soil samples (potassium chloride extraction)	W
009S	In-house method referencing BS1377: Part 3: 1990 and Second Site Property: Environmental Assessment Guidance Version 3: March 2003	Determination of pH by addition of water followed by electrometric measurement	W
071S	In-house method	Determination of volatile organic compounds in soil samples by headspace GC-MS analysis	W
073S	In-house method based on BS1377 Part 3, "Chemical and Electrochemical Tests", 1990	Determination of water soluble anion content in soils using a 2:1 water:soil extration ratio followed by ion chromatographic determination with electrical conductivity detector	D
069S	In-house method based on MEWAM "Methods for the Determination of Metals in Soil", HMSO, 1986	Determination of metals in soil samples by aqua-regia digestion followed by ICP-OES detection	D
025a	In-house method based on BS1377 Part 3, "Chemical and Electrochemical Tests", 1990	Determination of hydrochloric acid soluble sulphate in soil samples by Inductively Coupled Plasma - Optical Emission Spectrometry (ICP-OES)	D

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-28407

Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
016S	In-house method	Determination of water soluble boron by 2:1 extraction in hot water followed by ICP-OES detection	D

Soil results are expressed on a dry weight basis. Where the test uses as-received sample, a moisture correction factor is applied to the wet weight result. This factor is determined gravimetrically using weight loss on drying at 30º (+/-5) C.

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

27 March 2007

TEST REPORT

Our Report Number: 07-28651

Your Order Reference: Instructions of 14/03/2007

7 soil samples submitted for analysis on 14/03/2007

Project Name: Alcoa

Project Code: 64-C11647

l s started on 14/03/2007
sis completed by 27 March 2007

Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

Rhys Ashton
Project Co-ordinator
ALCONTROL TECHNICHEM

ALcontrol Technichem
Sample Description

Matrix: Soil
Project Name: Alcoa

Job Number: 07-28651
Client: Environ UK Ltd
Project Code: 64-C11647

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	Sample Description
212888	BH18-01	1.2-1.5	12/03/07	Brown sandy clay with gravel
212889	BH18-01	2.0	12/03/07	Brown sandy clay with gravel
212890	BH18-01	4.5	12/03/07	Brown top soil with gravel
212891	BH18-01	7.0	12/03/07	*Brown sludge with gravel
212892	BH18-02	2.0	12/03/07	Brown sandy clay with gravel
212893	BH18-02	3.0	12/03/07	Brown sandy clay with gravel
212894	BH18-02	5.0	12/03/07	Brown top soil with gravel

*Denotes outside the scope of MCERTS accreditation since matrix not included in method validation.

ALcontrol Technichem
Table Of Results

Project Name: Alcoa
Client : Environ UK Ltd

Job Number : 07-28651
Matrix : Soil
Project Code: 64-C11647

Sample Reference	**BH18-01**	**BH18-01**	**BH18-01**	**BH18-01**	**BH18-02**	**Method No**	**Units**	**LOD**
Sample Depth (m)	**1.2-1.5**	**2.0**	**4.5**	**7.0**	**2.0**			
Date Sampled	**12/03/07**	**12/03/07**	**12/03/07**	**12/03/07**	**12/03/07**			
Date Scheduled	**14/03/07**	**14/03/07**	**14/03/07**	**14/03/07**	**14/03/07**			
Laboratory Reference No	**212888**	**212889**	**212890**	**212891**	**212892**			
Analysis								
Moisture Content (Wet Weight)	3.0	10.1	10.8	16.5	8.8		%	0.1
Moisture Content (Dry Weight)	3.1	11.2	12.0	19.8	9.6		%	0.1
Arsenic	18	8.6	8.5	-	8.9	069S[I M]	mg/kg	3
Barium	68	140	100	-	88	069S[I M]	mg/kg	10
Beryllium	0.6	1.2	1.0	-	1.0	069S[I M]	mg/kg	0.5
Boron (W/S)	0.5	< 0.5	< 0.5	-	< 0.5	016S[I M]	mg/kg	0.5
Cadmium	< 0.5	< 0.5	< 0.5	-	< 0.5	069S[I M]	mg/kg	0.5
Chromium	16	29	28	22	24	069S[I M]	mg/kg	10
Chromium (Hexavalent)	< 5	< 5	< 5	< 5	< 5	007S	mg/kg	5
Copper	44	31	61	-	23	069S[I M]	mg/kg	5
Lead	42	24	44	-	21	069S[I M]	mg/kg	10
Mercury	< 0.6	< 0.6	< 0.6	-	< 0.6	069S[I M]	mg/kg	0.6
Nickel	13	31	25	-	24	069S[I M]	mg/kg	4
Selenium	< 2.5	< 2.5	< 2.5	-	< 2.5	069S[I M]	mg/kg	2.5
Sulphate (Total Acid Soluble) as SO4	2200	-	220	-	420	025a[I M]	mg/kg	200
Vanadium	14	22	18	-	21	069S[I M]	mg/kg	3
Zinc	98	76	73	-	57	069S[I M]	mg/kg	10
Organic Carbon	-	0.93	-	-	-	092[I M]	%	0.1
pH	8.1	7.7	5.5	6.2	7.6	009S[I M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	110	-	72	-	22	070S[I M]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Project Name: Alcoa
Client : Environ UK Ltd

Job Number : 07-28651
Matrix : Soil
Project Code: 64-C11647

Sample Reference	**BH18-02**	**BH18-02**				**Method No**	**Units**	**LOD**
Sample Depth (m)	**3.0**	**5.0**						
Date Sampled	**12/03/07**	**12/03/07**						
Date Scheduled	**14/03/07**	**14/03/07**						
Laboratory Reference No	**212893**	**212894**						
Analysis								
Moisture Content (Wet Weight)	8.9	6.8					%	0.1
Moisture Content (Dry Weight)	9.8	7.3					%	0.1
Arsenic	7.9	11				069S[IM]	mg/kg	3
Barium	65	70				069S[IM]	mg/kg	10
Beryllium	0.9	0.8				069S[IM]	mg/kg	0.5
Boron (W/S)	< 0.5	< 0.5				016S[IM]	mg/kg	0.5
Cadmium	< 0.5	< 0.5				069S[IM]	mg/kg	0.5
Chromium	37	35				069S[IM]	mg/kg	10
Chromium (Hexavalent)	< 5	< 5				007S	mg/kg	5
Copper	22	120				069S[IM]	mg/kg	5
Lead	21	24				069S[IM]	mg/kg	10
Mercury	< 0.6	< 0.6				069S[IM]	mg/kg	0.6
Nickel	21	29				069S[IM]	mg/kg	4
Selenium	< 2.5	< 2.5				069S[IM]	mg/kg	2.5
Sulphate (Total Acid Soluble) as SO4	290	-				025a[IM]	mg/kg	200
Vanadium	18	16				069S[IM]	mg/kg	3
Zinc	53	82				069S[IM]	mg/kg	10
Organic Carbon	-	-				092[IM]	%	0.1
pH	7.5	7.6				009S[IM]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	25	-				070S[IM]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Project Name: Alcoa
Client : Environ UK Ltd

Job Number : 07-28651
Matrix : Soil
Project Code: 64-C11647

Sample Reference	**BH18-01**	**BH18-02**				**Method No**	**Units**	**LOD**
Sample Depth (m)	**1.2-1.5**	**2.0**						
Date Sampled	**12/03/07**	**12/03/07**						
Date Scheduled	**14/03/07**	**14/03/07**						
Laboratory Reference No	**212888**	**212892**						
Analysis								
*** * PAH SUITE * ***								
Naphthalene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Acenaphthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Fluorene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Phenanthrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Pyrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(a)anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Chrysene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(a)pyrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
PAH (Sum of Dutch 10)	ND	ND				022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	ND	ND				022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Project Name: Alcoa
Client : Environ UK Ltd

Job Number : 07-28651
Matrix : Soil
Project Code: 64-C11647

Sample Reference	**BH18-01**	**BH18-02**				**Method No**	**Units**	**LOD**
Sample Depth (m)	**1.2-1.5**	**2.0**						
Date Sampled	**12/03/07**	**12/03/07**						
Date Scheduled	**14/03/07**	**14/03/07**						
Laboratory Reference No	**212888**	**212892**						
Analysis								
*** * VOC SUITE * ***								
Dichlorodifluoromethane	< 25	< 25				071S[IM]	ug/kg	25
Chloromethane	< 25	< 25				071S[IM]	ug/kg	25
Vinyl Chloride	< 25	< 25				071S	ug/kg	25
Bromomethane	< 25	< 25				071S[I]	ug/kg	25
Chloroethane	< 25	< 25				071S[IM]	ug/kg	25
Trichlorofluoromethane	< 25	< 25				071S[IM]	ug/kg	25
1,1-Dichloroethene	< 25	< 25				071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	< 25	< 25				071S[I]	ug/kg	25
Dichloromethane	< 50	< 50				071S	ug/kg	50
Carbon Disulfide	< 25	< 25				071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	< 25	< 25				071S	ug/kg	25
MTBE	< 25	< 25				071S	ug/kg	25
1,1 -Dichloroethane	< 25	< 25				071S	ug/kg	25
Cis-1,2 Dichloroethene	< 25	< 25				071S[IM]	ug/kg	25
Bromochloromethane	< 25	< 25				071S[IM]	ug/kg	25
Chloroform	< 25	< 25				071S[IM]	ug/kg	25
2,2-Dichloropropane	< 25	< 25				071S[IM]	ug/kg	25
1,1,1-Trichloroethane	< 25	< 25				071S	ug/kg	25
1,2-Dichloroethane	< 25	< 25				071S	ug/kg	25
1,1-Dichloropropene	< 25	< 25				071S[IM]	ug/kg	25
Benzene	< 25	< 25				071S	ug/kg	25
Carbon Tetrachloride	< 25	< 25				071S[IM]	ug/kg	25
Dibromomethane	< 25	< 25				071S[IM]	ug/kg	25
1,2-Dichloropropane	< 25	< 25				071S[IM]	ug/kg	25
Trichloroethene	< 25	< 25				071S[IM]	ug/kg	25
Bromodichloromethane	< 25	< 25				071S[IM]	ug/kg	25
Cis-1,3 Dichloropropene	< 25	< 25				071S[IM]	ug/kg	25
Trans-1,3 Dichloropropene	< 25	< 25				071S[IM]	ug/kg	25
1,1,2-Trichloroethane	< 25	< 25				071S[IM]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Project Name: Alcoa
Client : Environ UK Ltd

Job Number : 07-28651
Matrix : Soil
Project Code: 64-C11647

Sample Reference	**BH18-01**	**BH18-02**				**Method No**	**Units**	**LOD**
Sample Depth (m)	**1.2-1.5**	**2.0**						
Date Sampled	**12/03/07**	**12/03/07**						
Date Scheduled	**14/03/07**	**14/03/07**						
Laboratory Reference No	**212888**	**212892**						
Analysis								
* * VOC SUITE Cont.. * *								
Toluene	< 25	< 25				071S	ug/kg	25
1,3 -Dichloropropane	< 25	< 25				071S[IM]	ug/kg	25
Dibromochloromethane	< 25	< 25				071S[IM]	ug/kg	25
1,2-Dibromoethane	< 25	< 25				071S[IM]	ug/kg	25
Tetrachloroethene	< 25	< 25				071S	ug/kg	25
1,1,1,2-Tetrachloroethane	< 25	< 25				071S	ug/kg	25
Chlorobenzene	< 25	< 25				071S[IM]	ug/kg	25
Ethyl Benzene	< 25	< 25				071S	ug/kg	25
m,p-Xylenes	< 50	< 50				071S	ug/kg	50
Bromoform	< 25	< 25				071S[IM]	ug/kg	25
Styrene	< 25	< 25				071S[IM]	ug/kg	25
o-Xylene	< 25	< 25				071S	ug/kg	25
1,1,2,2 Tetrachloroethane	< 25	< 25				071S	ug/kg	25
1,2,3-Trichloropropane	< 25	< 25				071S[IM]	ug/kg	25
Isopropylbenzene	< 25	< 25				071S[IM]	ug/kg	25
Bromobenzene	< 25	< 25				071S[IM]	ug/kg	25
n-propylbenzene	< 25	< 25				071S[IM]	ug/kg	25
2-Chlorotoluene	< 25	< 25				071S[IM]	ug/kg	25
4-Chlorotoluene	< 25	< 25				071S[IM]	ug/kg	25
1,3,5 Trimethylbenzene	< 25	< 25				071S	ug/kg	25
tert-butylbenzene	< 25	< 25				071S[IM]	ug/kg	25
1,2,4 Trimethylbenzene	< 25	< 25				071S	ug/kg	25
sec-butylbenzene	< 25	< 25				071S[IM]	ug/kg	25
1,3 Dichlorobenzene	< 25	< 25				071S	ug/kg	25
1,4 Dichlorobenzene	< 25	< 25				071S	ug/kg	25
4-Isopropyltoluene	< 25	< 25				071S[IM]	ug/kg	25
1,2 Dichlorobenzene	< 25	< 25				071S	ug/kg	25
n-butylbenzene	< 25	< 25				071S	ug/kg	25
1,2,4-Trichlorobenzene	< 25	< 25				071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Project Name: Alcoa
Client : Environ UK Ltd

Job Number : 07-28651
Matrix : Soil
Project Code: 64-C11647

Sample Reference	**BH18-01**	**BH18-02**				**Method No**	**Units**	**LOD**
Sample Depth (m)	**1.2-1.5**	**2.0**						
Date Sampled	**12/03/07**	**12/03/07**						
Date Scheduled	**14/03/07**	**14/03/07**						
Laboratory Reference No	**212888**	**212892**						
Analysis								
* * VOC SUITE Cont.. * *								
1,2-Dibromo-3-Chloropropane	< 25	< 25				071S	ug/kg	25
Hexachlorobutadiene	< 50	< 50				071S	ug/kg	50
1,2,3-Trichlorobenzene	< 25	< 25				071S	ug/kg	25

I ISO 17025 accredited.
M MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
EPH Description

Matrix: Soils
Project Name: Alcoa

Job Number: 07-28651
Client: Environ UK Ltd
Project Code: 64-C11647

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
212888	BH18-01	1.2-1.5	12/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40.
212890	BH18-01	4.5	12/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C14 to beyond C40.
212892	BH18-02	2.0	12/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to C38.
212893	BH18-02	3.0	12/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to C38.

ALcontrol Technichem
Table Of Results - Appendix

Project Name: Alcoa
Client : Environ UK Ltd

Job Number : 07-28651

Project Code: 64-C11647

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
071S	In-house method based on EPA624 "Volatile Organic Compounds in Soils/Sludges"	Determination of volatile organic compounds in soil samples by headspace GC-MS	W
070S	In-house method	Determination of hexane/acetone extractable hydrocarbons in soil by gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	W
022S	In-house method	Determination of PAH compounds in soil samples by hexane / acetone extraction followed by GC-MS detection	W
009S	In-house method referencing BS1377: Part 3: 1990 and Second Site Property: Environmental Assessment Guidance Version 3: March 2003	Determination of pH by addition of water followed by electrometric measurement	W
092	In-house method	Determination of organic content and organic carbon in soil samples by combustion analyser	D
069S	In-house method based on MEWAM "Methods for the Determination of Metals in Soil", HMSO, 1986	Determination of metals in soil samples by aqua-regia digestion followed by ICP-OES detection	D
025a	In-house method based on BS1377 Part 3, "Chemical and Electrochemical Tests", 1990	Determination of hydrochloric acid soluble sulphate in soil samples by Inductively Coupled Plasma - Optical Emission Spectrometry (ICP-OES)	D
016S	In-house method	Determination of water soluble boron by 2:1 extraction in hot water followed by ICP-OES detection	D
007S	In-house method based on Method 3500-Cr, "Standard Methods for the Examination of Water and Waste Water", APHA AWWA WEF, Edition 18, 1992	Determination of hexavalent chromium in soil samples by water extraction and colorimetric detection	D

Soil results are expressed on a dry weight basis. Where the test uses as-received sample, a moisture correction factor is applied to the wet weight result. This factor is determined gravimetrically using weight loss on drying at 30º (+/-5) C

ALcontrol Technichem
Table Of Results - Appendix

Project Name: Alcoa
Client : Environ UK Ltd

Job Number : 07-28651

Project Code: 64-C11647

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
		determined gravimetrically using weight loss on drying at 30° (+/-5) C.	

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

26 March 2007

TEST REPORT

Our Report Number: 07-28659

Your Order Reference: Instructions of 14/03/2007

5 soil samples submitted for analysis on 14/03/2007

Project Name: Alcoa

Project Code: 64-C11647

Laboratory analysis started on 14/03/2007
All laboratory analysis completed by 26 March 2007

Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

Sharon Googh
Project Co-Ordinator
ALCONTROL TECHNICHEM

Test methods are documented in house procedures or where appropriate standard methods. Non accredited tests (if applicable) are identified on each page. Procedures for sampling are outside the scope of the laboratory UKAS accreditation. Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation. All samples connected with this report , including any 'on hold', will be stored and disposed of according to company policy. A copy of this policy is available on request.

ALcontrol Technichem
Sample Description

Job Number: 07-28659
Client: Environ UK Ltd
Project Code: 64-C11647

Matrix: Soil
Project Name: Alcoa

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	Sample Description
212925	BH11-01	1.5-2	-	Brown sandy clay
212926	BH11-01	4.5-5	-	Brown sandy clay
212927	BH11-02	1.0	-	Brown sandy clay with gravel
212928	BH11-02	3.0	-	Brown sandy clay
212929	BH11-02	5.0	-	Brown sandy clay

ALcontrol Technichem
Table Of Results

Job Number : 07-28659
Matrix : Soil
Project Code: 64-C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	BH11-01	BH11-01	BH11-02	BH11-02	BH11-02	Method No	Units	LOD
Sample Depth (m)	**1.5-2**	**4.5-5**	**1.0**	**3.0**	**5.0**			
Date Sampled	**-**	**-**	**-**	**-**	**-**			
Date Scheduled	**14/03/07**	**14/03/07**	**14/03/07**	**14/03/07**	**14/03/07**			
Laboratory Reference No	**212925**	**212926**	**212927**	**212928**	**212929**			
Analysis								
Moisture Content (Wet Weight)	5.6	8.9	9.0	15.5	13.4		%	0.1
Moisture Content (Dry Weight)	6.0	9.8	9.8	18.3	15.5		%	0.1
Arsenic	7.7	5.4	7.2	12	10	069S[I,M]	mg/kg	3
Barium	61	76	100	99	77	069S[I,M]	mg/kg	10
Beryllium	0.6	1.0	1.1	1.0	0.9	069S[I,M]	mg/kg	0.5
Boron (W/S)	< 0.5	0.6	< 0.5	< 0.5	< 0.5	016S[I,M]	mg/kg	0.5
Cadmium	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	069S[I,M]	mg/kg	0.5
Chromium	15	30	22	32	32	069S[I,M]	mg/kg	10
Copper	20	20	24	18	20	069S[I,M]	mg/kg	5
Lead	18	23	23	28	22	069S[I,M]	mg/kg	10
Mercury	< 0.6	< 0.6	< 0.6	0.6	< 0.6	069S[I,M]	mg/kg	0.6
Nickel	16	17	30	19	21	069S[I,M]	mg/kg	4
Selenium	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	069S[I,M]	mg/kg	2.5
Vanadium	15	27	19	32	20	069S[I,M]	mg/kg	3
Zinc	42	57	66	78	61	069S[I,M]	mg/kg	10
pH	7.5	4.9	6.3	5.4	5.5	009S[I,M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	43	31	25	9	24	070S[I,M]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28659
Matrix : Soil
Project Code: 64-C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	BH11-01	BH11-02				Method No	Units	LOD
Sample Depth (m)	4.5-5	1.0						
Date Sampled	-	-						
Date Scheduled	14/03/07	14/03/07						
Laboratory Reference No	212926	212927						
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Acenaphthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Fluorene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Phenanthrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Pyrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(a)anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Chrysene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(a)pyrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
PAH (Sum of Dutch 10)	ND	ND				022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	ND	ND				022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28659
Matrix : Soil
Project Code: 64-C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	BH11-01	BH11-01	BH11-02	BH11-02		Method No	Units	LOD
Sample Depth (m)	1.5-2	4.5-5	1.0	3.0				
Date Sampled	-	-	-	-				
Date Scheduled	14/03/07	14/03/07	14/03/07	14/03/07				
Laboratory Reference No	212925	212926	212927	212928				
Analysis								
* * VOC SUITE * *								
MTBE	< 0.025	-	< 0.025	< 0.025		071S[I]	mg/kg	0.025
Benzene	< 0.025	-	< 0.025	< 0.025		071S[I]	mg/kg	0.025
Toluene	< 0.025	-	< 0.025	< 0.025		071S[I]	mg/kg	0.025
Ethylbenzene	< 0.025	-	< 0.025	< 0.025		071S[I]	mg/kg	0.025
m,p-Xylenes	< 0.05	-	< 0.05	< 0.05		071S[I]	mg/kg	0.05
o-Xylene	< 0.025	-	< 0.025	< 0.025		071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	< 0.025	-	< 0.025	< 0.025		071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	< 0.025	-	< 0.025	< 0.025		071S[I]	mg/kg	0.025
Dichlorodifluoromethane	-	< 25	-	-		071S[IM]	ug/kg	25
Chloromethane	-	< 25	-	-		071S[IM]	ug/kg	25
Vinyl Chloride	-	< 25	-	-		071S	ug/kg	25
Bromomethane	-	< 25	-	-		071S[I]	ug/kg	25
Chloroethane	-	< 25	-	-		071S[IM]	ug/kg	25
Trichlorofluoromethane	-	< 25	-	-		071S[IM]	ug/kg	25
1,1-Dichloroethene	-	< 25	-	-		071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	-	< 25	-	-		071S[I]	ug/kg	25
Dichloromethane	-	< 50	-	-		071S	ug/kg	50
Carbon Disulfide	-	< 25	-	-		071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	-	< 25	-	-		071S	ug/kg	25
MTBE	-	< 25	-	-		071S	ug/kg	25
1,1 -Dichloroethane	-	< 25	-	-		071S	ug/kg	25
Cis-1,2 Dichloroethene	-	< 25	-	-		071S[IM]	ug/kg	25
Bromochloromethane	-	< 25	-	-		071S[IM]	ug/kg	25
Chloroform	-	< 25	-	-		071S[IM]	ug/kg	25
2,2-Dichloropropane	-	< 25	-	-		071S[IM]	ug/kg	25
1,1,1-Trichloroethane	-	< 25	-	-		071S	ug/kg	25
1,2-Dichloroethane	-	< 25	-	-		071S	ug/kg	25
1,1-Dichloropropene	-	< 25	-	-		071S[IM]	ug/kg	25
Benzene	-	< 25	-	-		071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28659
Matrix : Soil
Project Code: 64-C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	BH11-01	BH11-01	BH11-02	BH11-02		Method No	Units	LOD
Sample Depth (m)	1.5-2	4.5-5	1.0	3.0				
Date Sampled	-	-	-	-				
Date Scheduled	14/03/07	14/03/07	14/03/07	14/03/07				
Laboratory Reference No	212925	212926	212927	212928				
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	-	< 25	-	-		071S[I,M]	ug/kg	25
Dibromomethane	-	< 25	-	-		071S[I,M]	ug/kg	25
1,2-Dichloropropane	-	< 25	-	-		071S[I,M]	ug/kg	25
Trichloroethene	-	< 25	-	-		071S[I,M]	ug/kg	25
Bromodichloromethane	-	< 25	-	-		071S[I,M]	ug/kg	25
Cis-1,3 Dichloropropene	-	< 25	-	-		071S[I,M]	ug/kg	25
Trans-1,3 Dichloropropene	-	< 25	-	-		071S[I,M]	ug/kg	25
1,1,2-Trichloroethane	-	< 25	-	-		071S[I,M]	ug/kg	25
Toluene	-	< 25	-	-		071S	ug/kg	25
1,3 -Dichloropropane	-	< 25	-	-		071S[I,M]	ug/kg	25
Dibromochloromethane	-	< 25	-	-		071S[I,M]	ug/kg	25
1,2-Dibromoethane	-	< 25	-	-		071S[I,M]	ug/kg	25
Tetrachloroethene	-	< 25	-	-		071S	ug/kg	25
1,1,1,2-Tetrachloroethane	-	< 25	-	-		071S	ug/kg	25
Chlorobenzene	-	< 25	-	-		071S[I,M]	ug/kg	25
Ethyl Benzene	-	< 25	-	-		071S	ug/kg	25
m,p-Xylenes	-	< 50	-	-		071S	ug/kg	50
Bromoform	-	< 25	-	-		071S[I,M]	ug/kg	25
Styrene	-	< 25	-	-		071S[I,M]	ug/kg	25
o-Xylene	-	< 25	-	-		071S	ug/kg	25
1,1,2,2 Tetrachloroethane	-	< 25	-	-		071S	ug/kg	25
1,2,3-Trichloropropane	-	< 25	-	-		071S[I,M]	ug/kg	25
Isopropylbenzene	-	< 25	-	-		071S[I,M]	ug/kg	25
Bromobenzene	-	< 25	-	-		071S[I,M]	ug/kg	25
n-propylbenzene	-	< 25	-	-		071S[I,M]	ug/kg	25
2-Chlorotoluene	-	< 25	-	-		071S[I,M]	ug/kg	25
4-Chlorotoluene	-	< 25	-	-		071S[I,M]	ug/kg	25
1,3,5 Trimethylbenzene	-	< 25	-	-		071S	ug/kg	25
tert-butylbenzene	-	< 25	-	-		071S[I,M]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28659
Matrix : Soil
Project Code: 64-C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	BH11-01	BH11-01	BH11-02	BH11-02		Method No	Units	LOD
Sample Depth (m)	1.5-2	4.5-5	1.0	3.0				
Date Sampled	-	-	-	-				
Date Scheduled	14/03/07	14/03/07	14/03/07	14/03/07				
Laboratory Reference No	212925	212926	212927	212928				
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	-	< 25	-	-		071S	ug/kg	25
sec-butylbenzene	-	< 25	-	-		071S[IM]	ug/kg	25
1,3 Dichlorobenzene	-	< 25	-	-		071S	ug/kg	25
1,4 Dichlorobenzene	-	< 25	-	-		071S	ug/kg	25
4-Isopropyltoluene	-	< 25	-	-		071S[IM]	ug/kg	25
1,2 Dichlorobenzene	-	< 25	-	-		071S	ug/kg	25
n-butylbenzene	-	< 25	-	-		071S	ug/kg	25
1,2,4-Trichlorobenzene	-	< 25	-	-		071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	-	< 25	-	-		071S	ug/kg	25
Hexachlorobutadiene	-	< 50	-	-		071S	ug/kg	50
1,2,3-Trichlorobenzene	-	< 25	-	-		071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
EPH Description

Job Number: 07-28659
Client: Environ UK Ltd
Project Code: 64-C11647

Matrix: Soils
Project Name: Alcoa

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
212925	BH11-01	1.5-2	-	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to C40, overlain by a series of n-alkane peaks eluting through the diesel range.
212926	BH11-01	4.5-5	-	The sample chromatogram exhibits a hump of unresolved complex material eluting from C16 to C40.
212927	BH11-02	1.0	-	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to C40, overlain by a series of n-alkane peaks eluting through the diesel range.
212928	BH11-02	3.0	-	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.
212929	BH11-02	5.0	-	The sample chromatogram exhibits a hump of unresolved complex material eluting from C14 to C40.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-28659

Project Code: 64-C11647

Project Name: Alcoa
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
070S	In-house method	Determination of hexane/acetone extractable hydrocarbons in soil by gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	W
022S	In-house method	Determination of PAH compounds in soil samples by hexane / acetone extraction followed by GC-MS detection	W
009S	In-house method referencing BS1377: Part 3: 1990 and Second Site Property: Environmental Assessment Guidance Version 3: March 2003	Determination of pH by addition of water followed by electrometric measurement	W
071S	In-house method	Determination of volatile organic compounds in soil samples by headspace GC-MS analysis	W
069S	In-house method based on MEWAM "Methods for the Determination of Metals in Soil", HMSO, 1986	Determination of metals in soil samples by aqua-regia digestion followed by ICP-OES detection	D
016S	In-house method	Determination of water soluble boron by 2:1 extraction in hot water followed by ICP-OES detection	D

Soil results are expressed on a dry weight basis. Where the test uses as-received sample, a moisture correction factor is applied to the wet weight result. This factor is determined gravimetrically using weight loss on drying at 30º (+/-5) C.

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

27 March 2007

TEST REPORT

Our Report Number: 07-28668

Your Order Reference: Instructions of 14/03/2007

14 soil samples submitted for analysis on 14/03/2007

Project Name: Alcoa

Project Code: 64C11647

Laboratory analysis started on 14/03/2007
All laboratory analysis completed by 27 March 2007

Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

Sharon Googh
Project Co-Ordinator
ALCONTROL TECHNICHEM

Test methods are documented in house procedures or where appropriate standard methods. Non accredited tests (if applicable) are identified on each page. Procedures for sampling are outside the scope of the laboratory UKAS accreditation. Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation. All samples connected with this report , including any 'on hold', will be stored and disposed of according to company policy. A copy of this policy is available on request.

ALcontrol Technichem
Sample Description

Job Number: 07-28668
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soil
Project Name: Alcoa

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	Sample Description
212965	WS12-01	0.5	12/03/07	*Dark grey gravel with clay
212966	WS12-01	2.8-3	12/03/07	*Grey clinker / ash
212967	WS13-01	0.8-1.0	12/03/07	*Dark grey clinker / ash
212968	WS13-01	2.2-2.5	12/03/07	*Grey clinker / ash with clay
212969	WS13-02	0.5-1	12/03/07	*Black clinker / ash with rubble
212970	WS13-02	1.8-2	12/03/07	*Black clinker / ash
212971	WS13-03	0.3-0.5	12/03/07	*Dark grey clinker / ash
212972	WS13-03	1.2-1.4	12/03/07	Dark brown clay
212973	WS13-04	0.6-0.8	12/03/07	*Dark grey clinker / ash
212974	WS13-04	0.3	12/03/07	*Grey clinker / ash
212975	WS13-04	1-1.4	12/03/07	*Grey clinker / ash
212976	WS13-05	0.3	12/03/07	Dark grey clay with rubble
212977	WS13-05	0.7-0.8	12/03/07	Grey & brown clay
212978	WS13-05	1.2	12/03/07	Dark grey clay

*Denotes outside the scope of MCERTS accreditation since matrix not included in method validation.

ALcontrol Technichem
Table Of Results

Job Number : 07-28668
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS12-01	WS12-01	WS13-01	WS13-01	WS13-02	Method No	Units	LOD
Sample Depth (m)	**0.5**	**2.8-3**	**0.8-1.0**	**2.2-2.5**	**0.5-1**			
Date Sampled	**12/03/07**	**12/03/07**	**12/03/07**	**12/03/07**	**12/03/07**			
Date Scheduled	**14/03/07**	**14/03/07**	**14/03/07**	**14/03/07**	**14/03/07**			
Laboratory Reference No	**212965**	**212966**	**212967**	**212968**	**212969**			
Analysis								
Moisture Content (Wet Weight)	5.6	7.5	7.5	6.8	7.3		%	0.1
Moisture Content (Dry Weight)	6.0	8.1	8.1	7.4	7.9		%	0.1
Arsenic	-	-	14	29	7.1	069S[I,M]	mg/kg	3
Barium	-	-	34	33	25	069S[I,M]	mg/kg	10
Beryllium	-	-	0.5	< 0.5	< 0.5	069S[I,M]	mg/kg	0.5
Boron (W/S)	-	-	< 0.5	1.0	0.5	016S[I,M]	mg/kg	0.5
Cadmium	-	-	< 0.5	< 0.5	< 0.5	069S[I,M]	mg/kg	0.5
Chromium	-	-	780	800	6200	069S[I,M]	mg/kg	10
Chromium (Hexavalent)	-	-	6.5	6.0	14	007S	mg/kg	5
Copper	-	-	48	26	14	069S[I,M]	mg/kg	5
Lead	-	-	51	23	17	069S[I,M]	mg/kg	10
Mercury	-	-	< 0.6	< 0.6	< 0.6	069S[I,M]	mg/kg	0.6
Nickel	-	-	14	5.8	10	069S[I,M]	mg/kg	4
Selenium	-	-	< 2.5	< 2.5	< 2.5	069S[I,M]	mg/kg	2.5
Sulphate (Total Acid Soluble) as SO4	-	-	-	-	-	025a[I,M]	mg/kg	200
Vanadium	-	-	13	9.1	9.8	069S[I,M]	mg/kg	3
Zinc	-	-	44	120	43	069S[I,M]	mg/kg	10
pH	10.3	8.0	7.2	10.2	7.7	009S[I,M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	360	1100	-	370	41	070S[I,M]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28668
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS13-02	WS13-03	WS13-03	WS13-04	WS13-04	Method No	Units	LOD
Sample Depth (m)	1.8-2	0.3-0.5	1.2-1.4	0.6-0.8	0.3			
Date Sampled	12/03/07	12/03/07	12/03/07	12/03/07	12/03/07			
Date Scheduled	14/03/07	14/03/07	14/03/07	14/03/07	14/03/07			
Laboratory Reference No	212970	212971	212972	212973	212974			
Analysis								
Moisture Content (Wet Weight)	10.3	4.2	19.1	5.4	6.2		%	0.1
Moisture Content (Dry Weight)	11.5	4.4	23.6	5.7	6.6		%	0.1
Arsenic	10	13	12	9.6	4.7	069S[I,M]	mg/kg	3
Barium	17	24	94	27	< 10	069S[I,M]	mg/kg	10
Beryllium	< 0.5	< 0.5	0.7	< 0.5	< 0.5	069S[I,M]	mg/kg	0.5
Boron (W/S)	0.9	< 0.5	< 0.5	< 0.5	< 0.5	016S[I,M]	mg/kg	0.5
Cadmium	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	069S[I,M]	mg/kg	0.5
Chromium	10000	3400	1600	1600	1600	069S[I,M]	mg/kg	10
Chromium (Hexavalent)	16	12	18	18	400	007S	mg/kg	5
Copper	8.9	19	11	26	10	069S[I,M]	mg/kg	5
Lead	< 10	16	24	22	< 10	069S[I,M]	mg/kg	10
Mercury	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	069S[I,M]	mg/kg	0.6
Nickel	5.5	4.5	15	5.5	< 4	069S[I,M]	mg/kg	4
Selenium	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	069S[I,M]	mg/kg	2.5
Sulphate (Total Acid Soluble) as SO4	-	-	-	-	-	025a[I,M]	mg/kg	200
Vanadium	13	9.8	35	10	5.2	069S[I,M]	mg/kg	3
Zinc	31	37	39	41	16	069S[I,M]	mg/kg	10
pH	8.4	7.9	8.4	9.0	7.2	009S[I,M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	60	28	59	23	14	070S[I,M]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28668
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS13-04	WS13-05	WS13-05	WS13-05		Method No	Units	LOD
Sample Depth (m)	1-1.4	0.3	0.7-0.8	1.2				
Date Sampled	12/03/07	12/03/07	12/03/07	12/03/07				
Date Scheduled	14/03/07	14/03/07	14/03/07	14/03/07				
Laboratory Reference No	212975	212976	212977	212978				
Analysis								
Moisture Content (Wet Weight)	6.2	9.5	20.0	22.1			%	0.1
Moisture Content (Dry Weight)	6.6	10.5	24.9	28.3			%	0.1
Arsenic	4.9	370	36	6.1		069S[I,M]	mg/kg	3
Barium	10	210	85	64		069S[I,M]	mg/kg	10
Beryllium	< 0.5	2.3	0.7	0.6		069S[I,M]	mg/kg	0.5
Boron (W/S)	< 0.5	0.8	< 0.5	< 0.5		016S[I,M]	mg/kg	0.5
Cadmium	< 0.5	0.7	< 0.5	< 0.5		069S[I,M]	mg/kg	0.5
Chromium	1500	60	38	15		069S[I,M]	mg/kg	10
Chromium (Hexavalent)	430	< 5	< 5	< 5		007S	mg/kg	5
Copper	10	320	14	9.7		069S[I,M]	mg/kg	5
Lead	< 10	250	26	18		069S[I,M]	mg/kg	10
Mercury	< 0.6	1.7	< 0.6	< 0.6		069S[I,M]	mg/kg	0.6
Nickel	< 4	34	16	9.3		069S[I,M]	mg/kg	4
Selenium	< 2.5	5.2	< 2.5	< 2.5		069S[I,M]	mg/kg	2.5
Sulphate (Total Acid Soluble) as SO4	-	-	-	< 200		025a[I,M]	mg/kg	200
Vanadium	5.9	32	29	17		069S[I,M]	mg/kg	3
Zinc	16	1200	67	30		069S[I,M]	mg/kg	10
pH	7.1	7.6	6.4	6.1		009S[I,M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	22	360	27	-		070S[I,M]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28668
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS12-01	WS13-01	WS13-02	WS13-03	WS13-05	Method No	Units	LOD
Sample Depth (m)	0.5	0.8-1.0	1.8-2	1.2-1.4	1.2			
Date Sampled	12/03/07	12/03/07	12/03/07	12/03/07	12/03/07			
Date Scheduled	14/03/07	14/03/07	14/03/07	14/03/07	14/03/07			
Laboratory Reference No	212965	212967	212970	212972	212978			
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1	0.16	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Acenaphthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Fluorene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Phenanthrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(a)anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Chrysene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(a)pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
PAH (Sum of Dutch 10)	ND	0.16	ND	ND	ND	022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	ND	0.16	ND	ND	ND	022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28668
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS13-01	WS13-05				Method No	Units	LOD
Sample Depth (m)	0.8-1.0	1.2						
Date Sampled	12/03/07	12/03/07						
Date Scheduled	14/03/07	14/03/07						
Laboratory Reference No	212967	212978						
Analysis								
* * CWG SUITE * *								
Aliphatic C5-C6	< 0.01	< 0.01				CWGS	mg/kg	0.01
Aliphatic >C6-C8	0.03	0.01				CWGS	mg/kg	0.01
Aliphatic >C8-C10	0.23	< 0.01				CWGS	mg/kg	0.01
Aliphatic >C10-C12	1.7	0.02				CWGS	mg/kg	0.01
Aliphatic >C12-C16	75	52				CWGS[I]	mg/kg	5
Aliphatic >C16-C21	180	54				CWGS[I]	mg/kg	5
Aliphatic >C21-C35	83	28				CWGS[I]	mg/kg	5
Total Aliphatics (C5-C35)	340	130				CWGS	mg/kg	5
Aromatic C6-C7	< 0.01	< 0.01				CWGS	mg/kg	0.01
Aromatic >C7-C8	< 0.01	< 0.01				CWGS	mg/kg	0.01
Aromatic >C8-C10	0.35	0.01				CWGS	mg/kg	0.01
Aromatic >C10-C12	2.6	0.03				CWGS	mg/kg	0.01
Aromatic >C12-C16	42	5.9				CWGS[I]	mg/kg	5
Aromatic >C16-C21	58	13				CWGS[I]	mg/kg	5
Aromatic >C21-C35	29	24				CWGS[I]	mg/kg	5
Total Aromatics (C5-C35)	130	43				CWGS	mg/kg	5
Volatile Hydrocarbons (C5-C12)	4.9	0.08				CWGS	mg/kg	0.01
Extractable Hydrocarbons (C12-C35)	470	180				CWGS	mg/kg	5
Total Hydrocarbons (C5-C35)	470	180				CWGS	mg/kg	5
MTBE	< 0.010	< 0.010				CWGS[IM]	mg/kg	0.01
Benzene	< 0.010	< 0.010				CWGS[IM]	mg/kg	0.01
Toluene	< 0.010	< 0.010				CWGS[IM]	mg/kg	0.01
Ethylbenzene	< 0.010	< 0.010				CWGS[IM]	mg/kg	0.01
m,p-Xylenes	< 0.010	< 0.010				CWGS[IM]	mg/kg	0.01
o-Xylene	< 0.010	< 0.010				CWGS[IM]	mg/kg	0.01
1,3,5-Trimethylbenzene	< 0.010	< 0.010				CWGS[IM]	mg/kg	0.01
1,2,4-Trimethylbenzene	0.035	< 0.010				CWGS[IM]	mg/kg	0.01

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28668
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS13-01	WS13-02	WS13-03	WS13-05		Method No	Units	LOD
Sample Depth (m)	2.2-2.5	1.8-2	1.2-1.4	1.2				
Date Sampled	12/03/07	12/03/07	12/03/07	12/03/07				
Date Scheduled	14/03/07	14/03/07	14/03/07	14/03/07				
Laboratory Reference No	212968	212970	212972	212978				
Analysis								
* * VOC SUITE * *								
MTBE	-	< 0.025	< 0.025	-		071S[I]	mg/kg	0.025
Benzene	-	< 0.025	< 0.025	-		071S[I]	mg/kg	0.025
Toluene	-	< 0.025	< 0.025	-		071S[I]	mg/kg	0.025
Ethylbenzene	-	< 0.025	< 0.025	-		071S[I]	mg/kg	0.025
m,p-Xylenes	-	< 0.05	< 0.05	-		071S[I]	mg/kg	0.05
o-Xylene	-	< 0.025	< 0.025	-		071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	-	< 0.025	< 0.025	-		071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	-	< 0.025	< 0.025	-		071S[I]	mg/kg	0.025
Dichlorodifluoromethane	< 25	-	-	< 25		071S[IM]	ug/kg	25
Chloromethane	< 25	-	-	< 25		071S[IM]	ug/kg	25
Vinyl Chloride	< 25	-	-	< 25		071S	ug/kg	25
Bromomethane	< 25	-	-	< 25		071S[I]	ug/kg	25
Chloroethane	< 25	-	-	< 25		071S[IM]	ug/kg	25
Trichlorofluoromethane	< 25	-	-	< 25		071S[IM]	ug/kg	25
1,1-Dichloroethene	< 25	-	-	< 25		071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	< 25	-	-	< 25		071S[I]	ug/kg	25
Dichloromethane	< 50	-	-	< 50		071S	ug/kg	50
Carbon Disulfide	< 25	-	-	< 25		071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	< 25	-	-	< 25		071S	ug/kg	25
MTBE	< 25	-	-	< 25		071S	ug/kg	25
1,1 -Dichloroethane	< 25	-	-	< 25		071S	ug/kg	25
Cis-1,2 Dichloroethene	< 25	-	-	< 25		071S[IM]	ug/kg	25
Bromochloromethane	< 25	-	-	< 25		071S[IM]	ug/kg	25
Chloroform	< 25	-	-	< 25		071S[IM]	ug/kg	25
2,2-Dichloropropane	< 25	-	-	< 25		071S[IM]	ug/kg	25
1,1,1-Trichloroethane	< 25	-	-	< 25		071S	ug/kg	25
1,2-Dichloroethane	< 25	-	-	< 25		071S	ug/kg	25
1,1-Dichloropropene	< 25	-	-	< 25		071S[IM]	ug/kg	25
Benzene	< 25	-	-	< 25		071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28668
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS13-01	WS13-02	WS13-03	WS13-05		Method No	Units	LOD
Sample Depth (m)	2.2-2.5	1.8-2	1.2-1.4	1.2				
Date Sampled	12/03/07	12/03/07	12/03/07	12/03/07				
Date Scheduled	14/03/07	14/03/07	14/03/07	14/03/07				
Laboratory Reference No	212968	212970	212972	212978				
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	< 25	-	-	< 25		071S[I,M]	ug/kg	25
Dibromomethane	< 25	-	-	< 25		071S[I,M]	ug/kg	25
1,2-Dichloropropane	< 25	-	-	< 25		071S[I,M]	ug/kg	25
Trichloroethene	< 25	-	-	< 25		071S[I,M]	ug/kg	25
Bromodichloromethane	< 25	-	-	< 25		071S[I,M]	ug/kg	25
Cis-1,3 Dichloropropene	< 25	-	-	< 25		071S[I,M]	ug/kg	25
Trans-1,3 Dichloropropene	< 25	-	-	< 25		071S[I,M]	ug/kg	25
1,1,2-Trichloroethane	< 25	-	-	< 25		071S[I,M]	ug/kg	25
Toluene	< 25	-	-	< 25		071S	ug/kg	25
1,3 -Dichloropropane	< 25	-	-	< 25		071S[I,M]	ug/kg	25
Dibromochloromethane	< 25	-	-	< 25		071S[I,M]	ug/kg	25
1,2-Dibromoethane	< 25	-	-	< 25		071S[I,M]	ug/kg	25
Tetrachloroethene	< 25	-	-	< 25		071S	ug/kg	25
1,1,1,2-Tetrachloroethane	< 25	-	-	< 25		071S	ug/kg	25
Chlorobenzene	< 25	-	-	< 25		071S[I,M]	ug/kg	25
Ethyl Benzene	< 25	-	-	< 25		071S	ug/kg	25
m,p-Xylenes	< 50	-	-	< 50		071S	ug/kg	50
Bromoform	< 25	-	-	< 25		071S[I,M]	ug/kg	25
Styrene	< 25	-	-	< 25		071S[I,M]	ug/kg	25
o-Xylene	< 25	-	-	< 25		071S	ug/kg	25
1,1,2,2 Tetrachloroethane	< 25	-	-	< 25		071S	ug/kg	25
1,2,3-Trichloropropane	< 25	-	-	< 25		071S[I,M]	ug/kg	25
Isopropylbenzene	< 25	-	-	< 25		071S[I,M]	ug/kg	25
Bromobenzene	< 25	-	-	< 25		071S[I,M]	ug/kg	25
n-propylbenzene	< 25	-	-	< 25		071S[I,M]	ug/kg	25
2-Chlorotoluene	< 25	-	-	< 25		071S[I,M]	ug/kg	25
4-Chlorotoluene	< 25	-	-	< 25		071S[I,M]	ug/kg	25
1,3,5 Trimethylbenzene	< 25	-	-	< 25		071S	ug/kg	25
tert-butylbenzene	< 25	-	-	< 25		071S[I,M]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28668
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS13-01	WS13-02	WS13-03	WS13-05		Method No	Units	LOD
Sample Depth (m)	2.2-2.5	1.8-2	1.2-1.4	1.2				
Date Sampled	12/03/07	12/03/07	12/03/07	12/03/07				
Date Scheduled	14/03/07	14/03/07	14/03/07	14/03/07				
Laboratory Reference No	212968	212970	212972	212978				
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	< 25	-	-	< 25		071S	ug/kg	25
sec-butylbenzene	< 25	-	-	< 25		071S[IM]	ug/kg	25
1,3 Dichlorobenzene	< 25	-	-	< 25		071S	ug/kg	25
1,4 Dichlorobenzene	< 25	-	-	< 25		071S	ug/kg	25
4-Isopropyltoluene	< 25	-	-	< 25		071S[IM]	ug/kg	25
1,2 Dichlorobenzene	< 25	-	-	< 25		071S	ug/kg	25
n-butylbenzene	< 25	-	-	< 25		071S	ug/kg	25
1,2,4-Trichlorobenzene	< 25	-	-	< 25		071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	< 25	-	-	< 25		071S	ug/kg	25
Hexachlorobutadiene	< 50	-	-	< 50		071S	ug/kg	50
1,2,3-Trichlorobenzene	< 25	-	-	< 25		071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
EPH Description

Job Number: 07-28668
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soils
Project Name: Alcoa

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
212965	WS12-01	0.5	12/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C13 to C40 overlain by a series of n-alkane peaks eluting from C14 to C22.
212966	WS12-01	2.8-3	12/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C11 to beyond C40 overlain by several peaks unidentifiable by this analysis.
212968	WS13-01	2.2-2.5	12/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to beyond C40 overlain by several peaks unidentifiable by this analysis.
212969	WS13-02	0.5-1	12/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to C40.
212970	WS13-02	1.8-2	12/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to C40.
212971	WS13-03	0.3-0.5	12/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C16 to C40.
212972	WS13-03	1.2-1.4	12/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from before C10 to C40, overlain by several peaks unidentifiable by this analysis.
212973	WS13-04	0.6-0.8	12/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C14 to C40.

ALcontrol Technichem
EPH Description

Job Number: 07-28668
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soils
Project Name: Alcoa

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
212974	WS13-04	0.3	12/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to C40.
212975	WS13-04	1-1.4	12/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C14 to C38.
212976	WS13-05	0.3	12/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to beyond C40 overlain by a series of n-alkane peaks eluting through the diesel range.
212977	WS13-05	0.7-0.8	12/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to C40.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-28668

Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
070S	In-house method	Determination of hexane/acetone extractable hydrocarbons in soil by gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	W
022S	In-house method	Determination of PAH compounds in soil samples by hexane / acetone extraction followed by GC-MS detection	W
009S	In-house method referencing BS1377: Part 3: 1990 and Second Site Property: Environmental Assessment Guidance Version 3: March 2003	Determination of pH by addition of water followed by electrometric measurement	W
CWGS	In-house method based on "Total Petroleum Hydrocarbon Criteria Working Group" series, 1998-9	Determination of "CWG" banded petroleum hydrocarbons in soil samples using a combination of headspace GC-FID (C5-C12) and hexane:acetone extraction / silica-alumina aliphatic - aromatic split / GC-FID (C12-C35) techniques with banding by comparison to alkane standards	W
071S	In-house method	Determination of volatile organic compounds in soil samples by headspace GC-MS analysis	W
069S	In-house method based on MEWAM "Methods for the Determination of Metals in Soil", HMSO, 1986	Determination of metals in soil samples by aqua-regia digestion followed by ICP-OES detection	D
025a	In-house method based on BS1377 Part 3, "Chemical and Electrochemical Tests", 1990	Determination of hydrochloric acid soluble sulphate in soil samples by Inductively Coupled Plasma - Optical Emission Spectrometry (ICP-OES)	D
016S	In-house method	Determination of water soluble boron by 2:1 extraction in hot water followed by ICP-OES detection	D
007S	In-house method based on Method 3500-Cr, "Standard Methods for the Examination of Water and Waste Water", APHA AWWA WEF, Edition 18, 1992	Determination of hexavalent chromium in soil samples by water extraction and colorimetric detection	D

Soil results are expressed on a dry weight basis. Where the test uses as-received sample, a moisture correction factor is applied to the wet weight result. This factor is determined gravimetrically using weight loss on drying at 30º (+/-5) C.

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

27 March 2007

TEST REPORT

Our Report Number: 07-28722

Your Order Reference: Instructions of 09/03/2007

33 soil samples submitted for analysis on 09/03/2007

Project Name: Alcoa

Project Code: 64C11649

Laboratory analysis started on 15/03/2007
All laboratory analysis completed by 27 March 2007

Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

Rhys Ashton
Project Co-ordinator
ALCONTROL TECHNICHEM

ALcontrol Technichem
Sample Description

Job Number: 07-28722
Client: Environ UK Ltd
Project Code: 64C11649

Matrix: Soil
Project Name: Alcoa

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	Sample Description
213162	WS16_01	0.5-0.6m	08/03/07	Grey & brown sand with gravel
213163	WS16_01	1.8-1.9m	08/03/07	Grey sand with gravel
213164	WS16_02	0.4-0.6m	08/03/07	Grey sand with gravel and oil / petroleum
213165	WS16_02	0.7-0.8m	08/03/07	Grey sandy clay with gravel
213166	WS14_01	0-0.2m	08/03/07	Grey sand with gravel
213167	WS7_01	0.5m	08/03/07	Grey sand with gravel and oil / petroleum
213168	WS4_01	0.4-0.6m	08/03/07	Brown sandy clay with gravel
213169	WS4_01	1.3m	08/03/07	Brown sandy clay with gravel
213170	WS17_02	0.6m	08/03/07	Grey sandy clay with gravel
213171	WS17_02	2.5m	08/03/07	Brown sandy clay with gravel
213172	WS17_01	0.4-0.5m	08/03/07	Grey sand with gravel and oil / petroleum
213173	HP17_01	0.2-0.35m	08/03/07	Brown sandy clay with gravel
213174	HP17_01	0.6-0.7m	08/03/07	Brown sandy clay with gravel
213175	WS9_01	0.3-0.4m	08/03/07	Brown sandy clay with gravel
213176	WS9_01	1.5-1.6m	08/03/07	Grey sandy clay with gravel
213177	HP9_01	0.5-0.6m	09/03/07	Brown sandy clay with rubble and vegetation
213178	HP9_01	1-1.2m	09/03/07	Brown sandy clay with gravel and vegetation
213179	HP9_02	0-0.1m	09/03/07	Brown sandy clay with gravel and vegetation
213180	HP9_02	0.7m	09/03/07	Brown sandy clay with gravel and oil / petroleum
213181	HP13_01	0.7m	09/03/07	Brown sandy clay with rubble and oil / petroleum

*Denotes outside the scope of MCERTS accreditation since matrix not included in method validation.

ALcontrol Technichem
Sample Description

Job Number: 07-28722
Client: Environ UK Ltd
Project Code: 64C11649

Matrix: Soil
Project Name: Alcoa

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	Sample Description
213182	HP13_01	0.5m	09/03/07	Brown sandy clay with gravel and rubble
213183	BH9_01	1.0m	08/03/07	Brown sand with gravel and brick
213184	BH9_01	2.2m	08/03/07	Grey & brown sandy clay with gravel
213185	BH9_04	0.8-1.0m	08/03/07	Brown sandy clay with gravel
213186	BH9_04	2.0-2.5m	08/03/07	Brown sandy clay with gravel and brick
213187	BH13_02	1.0-1.5m	08/03/07	Grey sandy clay with gravel and oil / petroleum
213188	BH13_02	2.0m	08/03/07	Brown sandy clay with gravel
213189	BH13_03	0.5m	08/03/07	Grey & brown sandy clay with gravel
213190	BH13_03	2.5m	08/03/07	Grey & brown sandy clay with gravel
213191	BH13_01	0.5m	09/03/07	Grey sandy clay with gravel
213192	BH13_01	2.0m	09/03/07	Grey sandy clay with gravel and oil / petroleum
213193	HP8_01	0.05-0.15m	09/03/07	*Grey gravel
213194	HP8_01	0.3-0.5m	09/03/07	Grey sandy clay with gravel

*Denotes outside the scope of MCERTS accreditation since matrix not included in method validation.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS16_01	WS16_01	WS16_02	WS16_02	WS14_01	Method No	Units	LOD
Sample Depth (m)	0.5-0.6m	1.8-1.9m	0.4-0.6m	0.7-0.8m	0-0.2m			
Date Sampled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213162	213163	213164	213165	213166			
Analysis								
Moisture Content (Dry Weight)	5.5	7.4	9.7	7.0	3.9		%	0.1
Moisture Content (Wet Weight)	5.2	6.9	8.8	6.5	3.7		%	0.1
Arsenic	14	< 3	7.2	-	-	069S[IM]	mg/kg	3
Barium	200	210	31	-	-	069S[IM]	mg/kg	10
Beryllium	0.5	1.4	< 0.5	-	-	069S[IM]	mg/kg	0.5
Boron (W/S)	< 0.5	< 0.5	1.2	-	-	016S[IM]	mg/kg	0.5
Cadmium	< 0.5	< 0.5	< 0.5	-	-	069S[IM]	mg/kg	0.5
Chromium	14	27	< 10	-	-	069S[IM]	mg/kg	10
Chromium (Hexavalent)	-	-	-	-	-	007S	mg/kg	5
Copper	57	58	9.9	-	-	069S[IM]	mg/kg	5
Lead	24	19	< 10	-	-	069S[IM]	mg/kg	10
Mercury	< 0.6	< 0.6	< 0.6	-	-	069S[IM]	mg/kg	0.6
Nickel	15	45	8.3	-	-	069S[IM]	mg/kg	4
Selenium	< 2.5	< 2.5	< 2.5	-	-	069S[IM]	mg/kg	2.5
Vanadium	21	21	8.7	-	-	069S[IM]	mg/kg	3
Zinc	44	99	66	-	-	069S[IM]	mg/kg	10
Organic Carbon	-	0.50	-	-	-	092[IM]	%	0.1
pH	7.9	7.7	7.7	7.2	7.6	009S[IM]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	100	9	-	550	150	070S[IM]	mg/kg	5
* * PCB SUITE * *								
PCB Congener 28	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 52	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 101	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 118	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 138	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 153	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 180	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB's (Sum of ICES Congeners)	-	-	-	-	-	039S[I]	mg/kg	0.002
* * PHENOLS SUITE * *								
Phenol	-	-	-	-	-	020S[IM]	mg/kg	0.1
Total Monohydric Phenols	-	-	-	-	-	020S[I]	mg/kg	1
Glycols	-	-	Sub-con	-	-	MISC		

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS7_01	WS4_01	WS4_01	WS17_02	WS17_02	Method No	Units	LOD
Sample Depth (m)	0.5m	0.4-0.6m	1.3m	0.6m	2.5m			
Date Sampled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213167	213168	213169	213170	213171			
Analysis								
Moisture Content (Dry Weight)	4.9	13.4	12.4	7.8	14.6		%	0.1
Moisture Content (Wet Weight)	4.7	11.8	11.1	7.3	12.7		%	0.1
Arsenic	-	9.9	8.1	19	20	069S[IM]	mg/kg	3
Barium	-	77	59	17	84	069S[IM]	mg/kg	10
Beryllium	-	0.8	0.9	1.1	0.8	069S[IM]	mg/kg	0.5
Boron (W/S)	-	0.6	< 0.5	< 0.5	< 0.5	016S[IM]	mg/kg	0.5
Cadmium	-	< 0.5	< 0.5	1.1	< 0.5	069S[IM]	mg/kg	0.5
Chromium	-	23	14	19	17	069S[IM]	mg/kg	10
Chromium (Hexavalent)	-	-	-	-	-	007S	mg/kg	5
Copper	-	44	20	36	56	069S[IM]	mg/kg	5
Lead	-	54	22	29	270	069S[IM]	mg/kg	10
Mercury	-	< 0.6	< 0.6	< 0.6	< 0.6	069S[IM]	mg/kg	0.6
Nickel	-	23	26	32	27	069S[IM]	mg/kg	4
Selenium	-	< 2.5	< 2.5	< 2.5	< 2.5	069S[IM]	mg/kg	2.5
Vanadium	-	27	15	10	18	069S[IM]	mg/kg	3
Zinc	-	69	63	95	530	069S[IM]	mg/kg	10
Organic Carbon	-	-	0.91	-	-	092[IM]	%	0.1
pH	7.8	8.1	6.1	6.4	7.7	009S[IM]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	1000	48	10	8	35	070S[IM]	mg/kg	5
* * PCB SUITE * *								
PCB Congener 28	< 0.002	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 52	< 0.002	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 101	< 0.002	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 118	< 0.002	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 138	< 0.002	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 153	< 0.002	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 180	< 0.002	-	-	-	-	039S[IM]	mg/kg	0.002
PCB's (Sum of ICES Congeners)	ND	-	-	-	-	039S[I]	mg/kg	0.002
* * PHENOLS SUITE * *								
Phenol	-	-	-	-	-	020S[IM]	mg/kg	0.1
Total Monohydric Phenols	-	-	-	-	-	020S[I]	mg/kg	1
Glycols	-	-	-	-	-	MISC		

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS17_01	HP17_01	HP17_01	WS9_01	WS9_01	Method No	Units	LOD
Sample Depth (m)	0.4-0.5m	0.2-0.35m	0.6-0.7m	0.3-0.4m	1.5-1.6m			
Date Sampled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213172	213173	213174	213175	213176			
Analysis								
Moisture Content (Dry Weight)	9.7	8.2	9.4	14.2	10.7		%	0.1
Moisture Content (Wet Weight)	8.8	7.6	8.6	12.4	9.7		%	0.1
Arsenic	-	25	28	-	17	069S[IM]	mg/kg	3
Barium	-	170	110	-	160	069S[IM]	mg/kg	10
Beryllium	-	0.7	1.0	-	1.0	069S[IM]	mg/kg	0.5
Boron (W/S)	-	3.9	0.6	-	0.9	016S[IM]	mg/kg	0.5
Cadmium	-	2.6	< 0.5	-	< 0.5	069S[IM]	mg/kg	0.5
Chromium	-	1000	34	-	27	069S[IM]	mg/kg	10
Chromium (Hexavalent)	-	-	-	-	-	007S	mg/kg	5
Copper	-	360	120	-	130	069S[IM]	mg/kg	5
Lead	-	190	78	-	100	069S[IM]	mg/kg	10
Mercury	-	< 0.6	< 0.6	-	< 0.6	069S[IM]	mg/kg	0.6
Nickel	-	140	42	-	35	069S[IM]	mg/kg	4
Selenium	-	< 2.5	< 2.5	-	< 2.5	069S[IM]	mg/kg	2.5
Vanadium	-	48	27	-	23	069S[IM]	mg/kg	3
Zinc	-	720	190	-	210	069S[IM]	mg/kg	10
Organic Carbon	-	-	-	-	-	092[IM]	%	0.1
pH	8.3	7.1	7.2	6.9	6.5	009S[IM]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	-	-	57	-	1300	070S[IM]	mg/kg	5
* * PCB SUITE * *								
PCB Congener 28	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 52	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 101	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 118	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 138	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 153	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 180	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB's (Sum of ICES Congeners)	-	-	-	-	-	039S[I]	mg/kg	0.002
* * PHENOLS SUITE * *								
Phenol	-	-	-	-	-	020S[IM]	mg/kg	0.1
Total Monohydric Phenols	-	-	-	-	-	020S[I]	mg/kg	1
Glycols	-	-	-	-	-	MISC		

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	HP9_01	HP9_01	HP9_02	HP9_02	HP13_01	Method No	Units	LOD
Sample Depth (m)	0.5-0.6m	1-1.2m	0-0.1m	0.7m	0.7m			
Date Sampled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213177	213178	213179	213180	213181			
Analysis								
Moisture Content (Dry Weight)	30.2	51.2	41.6	33.9	17.3		%	0.1
Moisture Content (Wet Weight)	23.2	33.8	29.4	25.3	14.8		%	0.1
Arsenic	100	-	34	-	-	069S[IM]	mg/kg	3
Barium	430	-	66	-	-	069S[IM]	mg/kg	10
Beryllium	1.0	-	< 0.5	-	-	069S[IM]	mg/kg	0.5
Boron (W/S)	0.7	-	0.9	-	-	016S[IM]	mg/kg	0.5
Cadmium	2.9	-	1.4	-	-	069S[IM]	mg/kg	0.5
Chromium	110	-	92	-	-	069S[IM]	mg/kg	10
Chromium (Hexavalent)	-	-	-	-	-	007S	mg/kg	5
Copper	1600	-	89	-	-	069S[IM]	mg/kg	5
Lead	5800	-	76	-	-	069S[IM]	mg/kg	10
Mercury	0.9	-	< 0.6	-	-	069S[IM]	mg/kg	0.6
Nickel	91	-	20	-	-	069S[IM]	mg/kg	4
Selenium	< 2.5	-	< 2.5	-	-	069S[IM]	mg/kg	2.5
Vanadium	70	-	15	-	-	069S[IM]	mg/kg	3
Zinc	1100	-	630	-	-	069S[IM]	mg/kg	10
Organic Carbon	-	-	-	-	-	092[IM]	%	0.1
pH	7.3	6.8	6.5	7.1	6.6	009S[IM]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	9400	46000	340000	48000	4600	070S[IM]	mg/kg	5
* * PCB SUITE * *								
PCB Congener 28	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 52	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 101	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 118	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 138	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 153	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 180	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB's (Sum of ICES Congeners)	-	-	-	-	-	039S[I]	mg/kg	0.002
* * PHENOLS SUITE * *								
Phenol	-	-	-	-	-	020S[IM]	mg/kg	0.1
Total Monohydric Phenols	-	-	-	-	-	020S[I]	mg/kg	1
Glycols	-	-	-	-	-	MISC		

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	HP13_01	BH9_01	BH9_01	BH9_04	BH9_04	Method No	Units	LOD
Sample Depth (m)	0.5m	1.0m	2.2m	0.8-1.0m	2.0-2.5m			
Date Sampled	09/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213182	213183	213184	213185	213186			
Analysis								
Moisture Content (Dry Weight)	6.6	6.2	36.1	15.1	15.5		%	0.1
Moisture Content (Wet Weight)	6.2	5.8	26.5	13.1	13.4		%	0.1
Arsenic	17	710	160	44	38	069S[M]	mg/kg	3
Barium	200	260	120	570	270	069S[M]	mg/kg	10
Beryllium	1.5	1.0	0.9	1.0	0.9	069S[M]	mg/kg	0.5
Boron (W/S)	0.6	1.0	2.0	1.8	0.9	016S[M]	mg/kg	0.5
Cadmium	< 0.5	2.1	1.3	1.4	0.7	069S[M]	mg/kg	0.5
Chromium	28	57	20	63	32	069S[M]	mg/kg	10
Chromium (Hexavalent)	-	-	-	-	-	007S	mg/kg	5
Copper	51	2900	690	990	530	069S[M]	mg/kg	5
Lead	52	1300	140	550	270	069S[M]	mg/kg	10
Mercury	0.8	8.1	0.8	< 0.6	< 0.6	069S[M]	mg/kg	0.6
Nickel	47	150	24	66	42	069S[M]	mg/kg	4
Selenium	< 2.5	20	2.8	< 2.5	< 2.5	069S[M]	mg/kg	2.5
Vanadium	32	57	28	29	25	069S[M]	mg/kg	3
Zinc	110	680	1200	840	420	069S[M]	mg/kg	10
Organic Carbon	-	-	-	-	6.1	092[M]	%	0.1
pH	6.4	10.1	6.5	6.9	7.2	009S[M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	11000	62	190	1600	1300	070S[M]	mg/kg	5
* * PCB SUITE * *								
PCB Congener 28	-	-	-	-	-	039S[M]	mg/kg	0.002
PCB Congener 52	-	-	-	-	-	039S[M]	mg/kg	0.002
PCB Congener 101	-	-	-	-	-	039S[M]	mg/kg	0.002
PCB Congener 118	-	-	-	-	-	039S[M]	mg/kg	0.002
PCB Congener 138	-	-	-	-	-	039S[M]	mg/kg	0.002
PCB Congener 153	-	-	-	-	-	039S[M]	mg/kg	0.002
PCB Congener 180	-	-	-	-	-	039S[M]	mg/kg	0.002
PCB's (Sum of ICES Congeners)	-	-	-	-	-	039S[I]	mg/kg	0.002
* * PHENOLS SUITE * *								
Phenol	-	< 0.1	-	-	< 0.1	020S[M]	mg/kg	0.1
Total Monohydric Phenols	-	< 1	-	-	< 1	020S[I]	mg/kg	1
Glycols	-	-	-	-	-	MISC		

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	BH13_02	BH13_02	BH13_03	BH13_03	BH13_01	Method No	Units	LOD
Sample Depth (m)	1.0-1.5m	2.0m	0.5m	2.5m	0.5m			
Date Sampled	08/03/07	08/03/07	08/03/07	08/03/07	09/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213187	213188	213189	213190	213191			
Analysis								
Moisture Content (Dry Weight)	42.9	18.9	10.1	56.7	12.5		%	0.1
Moisture Content (Wet Weight)	30.0	15.9	9.2	36.2	11.1		%	0.1
Arsenic	130	21	28	9.8	320	069S[IM]	mg/kg	3
Barium	180	100	130	83	370	069S[IM]	mg/kg	10
Beryllium	1.5	1.1	1.2	0.8	0.9	069S[IM]	mg/kg	0.5
Boron (W/S)	0.6	< 0.5	1.8	< 0.5	1.5	016S[IM]	mg/kg	0.5
Cadmium	0.8	< 0.5	< 0.5	< 0.5	1.0	069S[IM]	mg/kg	0.5
Chromium	17	23	350	19	39	069S[IM]	mg/kg	10
Chromium (Hexavalent)	< 5	< 5	< 5	< 5	< 5	007S	mg/kg	5
Copper	69	45	140	26	1100	069S[IM]	mg/kg	5
Lead	56	85	94	22	260	069S[IM]	mg/kg	10
Mercury	0.6	0.6	< 0.6	< 0.6	1.0	069S[IM]	mg/kg	0.6
Nickel	13	25	30	23	32	069S[IM]	mg/kg	4
Selenium	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	069S[IM]	mg/kg	2.5
Vanadium	25	29	20	15	27	069S[IM]	mg/kg	3
Zinc	68	87	600	68	1100	069S[IM]	mg/kg	10
Organic Carbon	-	-	-	-	-	092[IM]	%	0.1
pH	6.9	6.5	7.3	7.3	7.3	009S[IM]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	410	-	-	72	8200	070S[IM]	mg/kg	5
* * PCB SUITE * *								
PCB Congener 28	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 52	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 101	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 118	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 138	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 153	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 180	-	-	-	-	-	039S[IM]	mg/kg	0.002
PCB's (Sum of ICES Congeners)	-	-	-	-	-	039S[I]	mg/kg	0.002
* * PHENOLS SUITE * *								
Phenol	< 0.1	-	< 0.1	-	< 0.1	020S[IM]	mg/kg	0.1
Total Monohydric Phenols	< 1	-	< 1	-	< 1	020S[I]	mg/kg	1
Glycols	-	-	-	-	-	MISC		

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	BH13_01	HP8_01	HP8_01			Method No	Units	LOD
Sample Depth (m)	2.0m	0.05-0.15m	0.3-0.5m					
Date Sampled	09/03/07	09/03/07	09/03/07					
Date Scheduled	09/03/07	09/03/07	09/03/07					
Laboratory Reference No	213192	213193	213194					
Analysis								
Moisture Content (Dry Weight)	13.4	4.1	19.9				%	0.1
Moisture Content (Wet Weight)	11.8	4.0	16.6				%	0.1
Arsenic	7.8	-	150			069S[IM]	mg/kg	3
Barium	45	-	330			069S[IM]	mg/kg	10
Beryllium	0.6	-	0.8			069S[IM]	mg/kg	0.5
Boron (W/S)	< 0.5	-	< 0.5			016S[IM]	mg/kg	0.5
Cadmium	< 0.5	-	4.5			069S[IM]	mg/kg	0.5
Chromium	15	-	47			069S[IM]	mg/kg	10
Chromium (Hexavalent)	< 5	-	-			007S	mg/kg	5
Copper	19	-	820			069S[IM]	mg/kg	5
Lead	17	-	980			069S[IM]	mg/kg	10
Mercury	< 0.6	-	0.8			069S[IM]	mg/kg	0.6
Nickel	20	-	60			069S[IM]	mg/kg	4
Selenium	< 2.5	-	< 2.5			069S[IM]	mg/kg	2.5
Vanadium	14	-	28			069S[IM]	mg/kg	3
Zinc	57	-	8500			069S[IM]	mg/kg	10
Organic Carbon	-	-	-			092[IM]	%	0.1
pH	5.2	7.2	7.5			009S[IM]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	210	16000	3400			070S[IM]	mg/kg	5
* * PCB SUITE * *								
PCB Congener 28	-	-	-			039S[IM]	mg/kg	0.002
PCB Congener 52	-	-	-			039S[IM]	mg/kg	0.002
PCB Congener 101	-	-	-			039S[IM]	mg/kg	0.002
PCB Congener 118	-	-	-			039S[IM]	mg/kg	0.002
PCB Congener 138	-	-	-			039S[IM]	mg/kg	0.002
PCB Congener 153	-	-	-			039S[IM]	mg/kg	0.002
PCB Congener 180	-	-	-			039S[IM]	mg/kg	0.002
PCB's (Sum of ICES Congeners)	-	-	-			039S[I]	mg/kg	0.002
* * PHENOLS SUITE * *								
Phenol	-	-	-			020S[IM]	mg/kg	0.1
Total Monohydric Phenols	-	-	-			020S[I]	mg/kg	1
Glycols	-	-	-			MISC		

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS16_01	WS16_02	WS4_01	WS4_01	WS17_02	Method No	Units	LOD
Sample Depth (m)	0.5-0.6m	0.4-0.6m	0.4-0.6m	1.3m	2.5m			
Date Sampled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213162	213164	213168	213169	213171			
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Acenaphthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Fluorene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Phenanthrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Benzo(a)anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Chrysene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Benzo(a)pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
PAH (Sum of Dutch 10)	ND	ND	ND	ND	ND	022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	ND	ND	ND	ND	ND	022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS17_01	HP17_01	WS9_01	HP9_01	HP9_02	Method No	Units	LOD
Sample Depth (m)	0.4-0.5m	0.2-0.35m	0.3-0.4m	0.5-0.6m	0-0.1m			
Date Sampled	08/03/07	08/03/07	08/03/07	09/03/07	09/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213172	213173	213175	213177	213179			
Analysis								
* * PAH SUITE * *								
Naphthalene	0.21	0.13	< 0.1	0.18	< 0.1	022S[M]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Acenaphthene	0.11	0.21	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Fluorene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Phenanthrene	0.39	0.55	0.17	0.51	< 0.1	022S[M]	mg/kg	0.1
Anthracene	< 0.1	0.13	< 0.1	< 0.1	< 0.1	022S[M]	mg/kg	0.1
Fluoranthene	0.38	0.63	0.15	0.49	< 0.1	022S[M]	mg/kg	0.1
Pyrene	0.44	0.52	0.14	0.46	0.13	022S[M]	mg/kg	0.1
Benzo(a)anthracene	0.24	0.27	< 0.1	0.31	< 0.1	022S[M]	mg/kg	0.1
Chrysene	0.25	0.35	0.10	0.31	< 0.1	022S[M]	mg/kg	0.1
Benzo(b)fluoranthene	0.29	0.36	< 0.1	0.40	< 0.1	022S[M]	mg/kg	0.1
Benzo(k)fluoranthene	0.20	0.28	< 0.1	0.29	< 0.1	022S[M]	mg/kg	0.1
Benzo(a)pyrene	0.24	0.37	< 0.1	0.39	< 0.1	022S[M]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	0.13	0.22	< 0.1	0.35	< 0.1	022S[M]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1	< 0.1	0.12	< 0.1	022S[M]	mg/kg	0.1
Benzo(g,h,i)perylene	0.15	0.22	< 0.1	0.52	< 0.1	022S[M]	mg/kg	0.1
PAH (Sum of Dutch 10)	2.20	3.14	0.42	3.36	ND	022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	3.04	4.22	0.56	4.34	0.13	022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	HP13_01	BH9_01	BH9_04	BH13_02	BH13_03	Method No	Units	LOD
Sample Depth (m)	0.5m	1.0m	2.0-2.5m	1.0-1.5m	0.5m			
Date Sampled	09/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213182	213183	213186	213187	213189			
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1	< 0.1	0.12	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Acenaphthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Fluorene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Phenanthrene	< 0.1	0.61	0.23	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Anthracene	< 0.1	0.14	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Fluoranthene	< 0.1	1.0	0.17	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Pyrene	< 0.1	0.79	0.18	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(a)anthracene	< 0.1	0.53	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Chrysene	< 0.1	0.61	0.10	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1	0.52	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	0.35	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(a)pyrene	< 0.1	0.45	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	0.27	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	0.25	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
PAH (Sum of Dutch 10)	ND	4.19	0.62	ND	ND	022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	ND	5.50	0.81	ND	ND	022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	BH13_01	HP8_01				Method No	Units	LOD
Sample Depth (m)	0.5m	0.3-0.5m						
Date Sampled	09/03/07	09/03/07						
Date Scheduled	09/03/07	09/03/07						
Laboratory Reference No	213191	213194						
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1	< 0.1				022S[M]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1				022S[M]	mg/kg	0.1
Acenaphthene	0.13	0.14				022S[M]	mg/kg	0.1
Fluorene	0.21	0.11				022S[M]	mg/kg	0.1
Phenanthrene	0.71	1.5				022S[M]	mg/kg	0.1
Anthracene	< 0.1	0.32				022S[M]	mg/kg	0.1
Fluoranthene	0.25	2.5				022S[M]	mg/kg	0.1
Pyrene	0.24	1.8				022S[M]	mg/kg	0.1
Benzo(a)anthracene	0.12	1.3				022S[M]	mg/kg	0.1
Chrysene	0.18	1.4				022S[M]	mg/kg	0.1
Benzo(b)fluoranthene	0.13	1.4				022S[M]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	0.83				022S[M]	mg/kg	0.1
Benzo(a)pyrene	0.10	0.96				022S[M]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	0.84				022S[M]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	0.16				022S[M]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	0.84				022S[M]	mg/kg	0.1
PAH (Sum of Dutch 10)	1.36	10.45				022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	2.08	14.07				022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS16_02	WS17_01	HP17_01	WS9_01	BH13_02	Method No	Units	LOD
Sample Depth (m)	0.4-0.6m	0.4-0.5m	0.2-0.35m	0.3-0.4m	2.0m			
Date Sampled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213164	213172	213173	213175	213188			
Analysis								
* * CWG SUITE * *								
Aliphatic C5-C6	< 0.01	0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aliphatic >C6-C8	1.2	0.27	0.04	0.02	< 0.01	CWGS	mg/kg	0.01
Aliphatic >C8-C10	58	1.9	0.16	0.02	< 0.01	CWGS	mg/kg	0.01
Aliphatic >C10-C12	180	4.9	0.24	0.13	0.01	CWGS	mg/kg	0.01
Aliphatic >C12-C16	220	1300	17	25	< 5	CWGS[I]	mg/kg	5
Aliphatic >C16-C21	300	6200	82	68	6.1	CWGS[I]	mg/kg	5
Aliphatic >C21-C35	2100	8400	2700	83	7.6	CWGS[I]	mg/kg	5
Total Aliphatics (C5-C35)	2800	16000	2800	180	14	CWGS	mg/kg	5
Aromatic C6-C7	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aromatic >C7-C8	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aromatic >C8-C10	88	2.9	0.24	0.03	< 0.01	CWGS	mg/kg	0.01
Aromatic >C10-C12	270	7.3	0.36	0.19	0.02	CWGS	mg/kg	0.01
Aromatic >C12-C16	16	220	7.7	9.7	< 5	CWGS[I]	mg/kg	5
Aromatic >C16-C21	31	930	34	30	< 5	CWGS[I]	mg/kg	5
Aromatic >C21-C35	500	3000	740	46	< 5	CWGS[I]	mg/kg	5
Total Aromatics (C5-C35)	900	4200	780	86	< 5	CWGS	mg/kg	5
Volatile Hydrocarbons (C5-C12)	600	17	1.0	0.39	0.04	CWGS	mg/kg	0.01
Extractable Hydrocarbons (C12-C35)	3100	20000	3600	260	14	CWGS	mg/kg	5
Total Hydrocarbons (C5-C35)	3700	20000	3600	260	14	CWGS	mg/kg	5
MTBE	0.023	< 0.010	< 0.010	< 0.010	< 0.010	CWGS[IM]	mg/kg	0.01
Benzene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS[IM]	mg/kg	0.01
Toluene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS[IM]	mg/kg	0.01
Ethylbenzene	0.46	< 0.010	< 0.010	< 0.010	< 0.010	CWGS[IM]	mg/kg	0.01
m,p-Xylenes	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS[IM]	mg/kg	0.01
o-Xylene	< 0.010	0.028	< 0.010	< 0.010	< 0.010	CWGS[IM]	mg/kg	0.01
1,3,5-Trimethylbenzene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS[IM]	mg/kg	0.01
1,2,4-Trimethylbenzene	< 0.010	0.14	< 0.010	< 0.010	< 0.010	CWGS[IM]	mg/kg	0.01

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	BH13_03					Method No	Units	LOD
Sample Depth (m)	0.5m							
Date Sampled	08/03/07							
Date Scheduled	09/03/07							
Laboratory Reference No	213189							
Analysis								
* * CWG SUITE * *								
Aliphatic C5-C6	< 0.01					CWGS	mg/kg	0.01
Aliphatic >C6-C8	< 0.01					CWGS	mg/kg	0.01
Aliphatic >C8-C10	< 0.01					CWGS	mg/kg	0.01
Aliphatic >C10-C12	< 0.01					CWGS	mg/kg	0.01
Aliphatic >C12-C16	13					CWGS[I]	mg/kg	5
Aliphatic >C16-C21	46					CWGS[I]	mg/kg	5
Aliphatic >C21-C35	130					CWGS[I]	mg/kg	5
Total Aliphatics (C5-C35)	190					CWGS	mg/kg	5
Aromatic C6-C7	< 0.01					CWGS	mg/kg	0.01
Aromatic >C7-C8	< 0.01					CWGS	mg/kg	0.01
Aromatic >C8-C10	< 0.01					CWGS	mg/kg	0.01
Aromatic >C10-C12	< 0.01					CWGS	mg/kg	0.01
Aromatic >C12-C16	< 5					CWGS[I]	mg/kg	5
Aromatic >C16-C21	12					CWGS[I]	mg/kg	5
Aromatic >C21-C35	30					CWGS[I]	mg/kg	5
Total Aromatics (C5-C35)	42					CWGS	mg/kg	5
Volatile Hydrocarbons (C5-C12)	< 0.01					CWGS	mg/kg	0.01
Extractable Hydrocarbons (C12-C35)	230					CWGS	mg/kg	5
Total Hydrocarbons (C5-C35)	230					CWGS	mg/kg	5
MTBE	< 0.010					CWGS[IM]	mg/kg	0.01
Benzene	< 0.010					CWGS[IM]	mg/kg	0.01
Toluene	< 0.010					CWGS[IM]	mg/kg	0.01
Ethylbenzene	< 0.010					CWGS[IM]	mg/kg	0.01
m,p-Xylenes	< 0.010					CWGS[IM]	mg/kg	0.01
o-Xylene	< 0.010					CWGS[IM]	mg/kg	0.01
1,3,5-Trimethylbenzene	< 0.010					CWGS[IM]	mg/kg	0.01
1,2,4-Trimethylbenzene	< 0.010					CWGS[IM]	mg/kg	0.01

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	HP13_01					Method No	Units	LOD
Sample Depth (m)	0.5m							
Date Sampled	09/03/07							
Date Scheduled	09/03/07							
Laboratory Reference No	213182							
Analysis								
* * SVOC SUITE * *								
Naphthalene	< 150					053S[IM]	ug/kg	150
2-Chloronaphthalene	< 150					053S[I]	ug/kg	150
Acenaphthylene	< 150					053S[I]	ug/kg	150
Acenaphthene	< 150					053S[I]	ug/kg	150
Fluorene	< 150					053S[I]	ug/kg	150
Phenanthrene	< 150					053S[I]	ug/kg	150
Anthracene	< 150					053S[I]	ug/kg	150
Fluoranthene	< 150					053S[I]	ug/kg	150
Pyrene	< 150					053S[IM]	ug/kg	150
Benz(a)anthracene	< 150					053S	ug/kg	150
Chrysene	< 150					053S[I]	ug/kg	150
Benzo(b)fluoranthene	< 150					053S[I]	ug/kg	150
Benzo(k)fluoranthene	< 150					053S[I]	ug/kg	150
Benzo(a)pyrene	< 150					053S	ug/kg	150
Dibenzo(a,h)anthracene	< 150					053S[IM]	ug/kg	150
Indeno(1,2,3-cd)pyrene	< 150					053S[I]	ug/kg	150
Benzo(g,h,i)perylene	< 150					053S[I]	ug/kg	150
Phenol	< 150					053S[I]	ug/kg	150
2-Chlorophenol	< 150					053S[IM]	ug/kg	150
2-Methylphenol	< 200					053S[I]	ug/kg	200
4-Methylphenol	< 200					053S[IM]	ug/kg	200
2-Nitrophenol	< 300					053S[I]	ug/kg	300
2,4-Dimethylphenol	< 250					053S[IM]	ug/kg	250
2,4-Dichlorophenol	< 200					053S[IM]	ug/kg	200
2,6-Dichlorophenol	< 200					053S[IM]	ug/kg	200
4-Chloro-3-methyl phenol	< 150					053S[IM]	ug/kg	150
2,4,6-Trichlorophenol	< 150					053S[I]	ug/kg	150
2,4,5-Trichlorophenol	< 200					053S[IM]	ug/kg	200
4-Nitrophenol	< 300					053S	ug/kg	300

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	HP13_01					Method No	Units	LOD
Sample Depth (m)	0.5m							
Date Sampled	09/03/07							
Date Scheduled	09/03/07							
Laboratory Reference No	213182							
Analysis								
* * SVOC SUITE Cont.. * *								
2,3,4,6-Tetrachlorophenol	< 250					053S	ug/kg	250
Pentachlorophenol	< 250					053S	ug/kg	250
Dimethyl Phthalate	< 200					053S[IM]	ug/kg	200
Diethyl Phthalate	< 200					053S[I]	ug/kg	200
Di-n-butyl phthalate	< 150					053S[I]	ug/kg	150
Butyl benzyl phthalate	< 150					053S[IM]	ug/kg	150
Bis(2-chloroethyl)ether	< 150					053S[IM]	ug/kg	150
Bis(2-chloroisopropyl)ether	< 200					053S[I]	ug/kg	200
4-Chlorophenyl phenyl ether	< 150					053S[I]	ug/kg	150
Bromo phenyl phenyl ether	< 200					053S[IM]	ug/kg	200
1,3-Dichlorobenzene	< 200					053S[IM]	ug/kg	200
1,2-Dichlorobenzene	< 150					053S[IM]	ug/kg	150
1,4-Dichlorobenzene	< 200					053S[I]	ug/kg	200
Nitrobenzene	< 150					053S[IM]	ug/kg	150
1,2,4-Trichlorobenzene	< 200					053S[IM]	ug/kg	200
2,6-Dinitrotoluene	< 200					053S	ug/kg	200
2,4-Dinitrotoluene	< 200					053S	ug/kg	200
Azobenzene	< 200					053S[I]	ug/kg	200
Hexachlorobenzene	< 200					053S[IM]	ug/kg	200
Hexachloroethane	< 150					053S[I]	ug/kg	150
n-Nitro-n-propyl-1-propanamine	< 200					053S[I]	ug/kg	200
Isophorone	< 200					053S[IM]	ug/kg	200
Bis(2-chloroethoxy)methane	< 150					053S[I]	ug/kg	150
Hexachlorobutadiene	< 150					053S[IM]	ug/kg	150
Anthraquinone	< 150					053S	ug/kg	150
Dibenzofuran	< 150					053S[IM]	ug/kg	150
Carbazole	< 100					053S[I]	ug/kg	100
Bis (2-ethylhexyl) phthalate	< 300					053S	ug/kg	300
4-nitroaniline	< 250					053S	ug/kg	250

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	HP13_01					Method No	Units	LOD
Sample Depth (m)	0.5m							
Date Sampled	09/03/07							
Date Scheduled	09/03/07							
Laboratory Reference No	213182							
Analysis								
4-Chloroaniline	< 200					053S	ug/kg	200
3-nitroaniline	< 200					053S	ug/kg	200
2-nitroaniline	< 250					053S[I]	ug/kg	250
2-Methylnapthalene	< 150					053S[I]	ug/kg	150
Hexachlorocyclopentadiene	< 300					053S	ug/kg	300
Di-n-octyl phthalate	< 150					053S[I]	ug/kg	150
Aniline	< 150					053S[I]	ug/kg	150
Biphenyl	< 150					053S	ug/kg	150

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS16_01	WS16_02	WS16_02	WS4_01	WS17_02	Method No	Units	LOD
Sample Depth (m)	0.5-0.6m	0.4-0.6m	0.7-0.8m	0.4-0.6m	0.6m			
Date Sampled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213162	213164	213165	213168	213170			
Analysis								
* * VOC SUITE * *								
MTBE	-	-	< 0.025	-	< 0.025	071S[I]	mg/kg	0.025
Benzene	-	-	< 0.025	-	< 0.025	071S[I]	mg/kg	0.025
Toluene	-	-	< 0.025	-	< 0.025	071S[I]	mg/kg	0.025
Ethylbenzene	-	-	< 0.025	-	< 0.025	071S[I]	mg/kg	0.025
m,p-Xylenes	-	-	< 0.05	-	< 0.05	071S[I]	mg/kg	0.05
o-Xylene	-	-	< 0.025	-	< 0.025	071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	-	-	< 0.025	-	< 0.025	071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	-	-	< 0.025	-	< 0.025	071S[I]	mg/kg	0.025
Dichlorodifluoromethane	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
Chloromethane	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
Vinyl Chloride	< 25	< 25	-	< 25	-	071S	ug/kg	25
Bromomethane	< 25	< 25	-	< 25	-	071S[I]	ug/kg	25
Chloroethane	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
Trichlorofluoromethane	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
1,1-Dichloroethene	< 25	< 25	-	< 25	-	071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	< 25	< 25	-	< 25	-	071S[I]	ug/kg	25
Dichloromethane	< 50	< 50	-	< 50	-	071S	ug/kg	50
Carbon Disulfide	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	< 25	< 25	-	< 25	-	071S	ug/kg	25
MTBE	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,1 -Dichloroethane	< 25	< 25	-	< 25	-	071S	ug/kg	25
Cis-1,2 Dichloroethene	250	< 25	-	< 25	-	071S[IM]	ug/kg	25
Bromochloromethane	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
Chloroform	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
2,2-Dichloropropane	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
1,1,1-Trichloroethane	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,2-Dichloroethane	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,1-Dichloropropene	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
Benzene	< 25	< 25	-	< 25	-	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes raised detection limit(s) due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS16_01	WS16_02	WS16_02	WS4_01	WS17_02	Method No	Units	LOD
Sample Depth (m)	0.5-0.6m	0.4-0.6m	0.7-0.8m	0.4-0.6m	0.6m			
Date Sampled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213162	213164	213165	213168	213170			
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Dibromomethane	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
1,2-Dichloropropane	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Trichloroethene	310	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Bromodichloromethane	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Cis-1,3 Dichloropropene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Trans-1,3 Dichloropropene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
1,1,2-Trichloroethane	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Toluene	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,3 -Dichloropropane	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Dibromochloromethane	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
1,2-Dibromoethane	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Tetrachloroethene	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,1,1,2-Tetrachloroethane	< 25	< 25	-	< 25	-	071S	ug/kg	25
Chlorobenzene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Ethyl Benzene	< 25	< 25	-	< 25	-	071S	ug/kg	25
m,p-Xylenes	< 50	< 50	-	< 50	-	071S	ug/kg	50
Bromoform	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Styrene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
o-Xylene	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,1,2,2 Tetrachloroethane	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,2,3-Trichloropropane	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Isopropylbenzene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Bromobenzene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
n-propylbenzene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
2-Chlorotoluene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
4-Chlorotoluene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
1,3,5 Trimethylbenzene	< 25	< 25	-	< 25	-	071S	ug/kg	25
tert-butylbenzene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes raised detection limit(s) due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS16_01	WS16_02	WS16_02	WS4_01	WS17_02	Method No	Units	LOD
Sample Depth (m)	0.5-0.6m	0.4-0.6m	0.7-0.8m	0.4-0.6m	0.6m			
Date Sampled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213162	213164	213165	213168	213170			
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	< 25	< 25	-	< 25	-	071S	ug/kg	25
sec-butylbenzene	< 25	< 25	-	< 25	-	071S[I M]	ug/kg	25
1,3 Dichlorobenzene	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,4 Dichlorobenzene	< 25	< 25	-	< 25	-	071S	ug/kg	25
4-Isopropyltoluene	< 25	< 25	-	< 25	-	071S[I M]	ug/kg	25
1,2 Dichlorobenzene	< 25	< 25	-	< 25	-	071S	ug/kg	25
n-butylbenzene	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,2,4-Trichlorobenzene	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	< 25	< 25	-	< 25	-	071S	ug/kg	25
Hexachlorobutadiene	< 50	< 50	-	< 50	-	071S	ug/kg	50
1,2,3-Trichlorobenzene	< 25	< 25	-	< 25	-	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes raised detection limit(s) due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS17_01	HP17_01	HP17_01	WS9_01	WS9_01	Method No	Units	LOD
Sample Depth (m)	0.4-0.5m	0.2-0.35m	0.6-0.7m	0.3-0.4m	1.5-1.6m			
Date Sampled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213172	213173	213174	213175	213176			
Analysis								
* * VOC SUITE * *								
MTBE	-	-	< 0.025	-	< 0.025	071S[I]	mg/kg	0.025
Benzene	-	-	< 0.025	-	< 0.025	071S[I]	mg/kg	0.025
Toluene	-	-	< 0.025	-	< 0.025	071S[I]	mg/kg	0.025
Ethylbenzene	-	-	< 0.025	-	< 0.025	071S[I]	mg/kg	0.025
m,p-Xylenes	-	-	< 0.05	-	< 0.05	071S[I]	mg/kg	0.05
o-Xylene	-	-	< 0.025	-	< 0.025	071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	-	-	< 0.025	-	< 0.025	071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	-	-	< 0.025	-	< 0.025	071S[I]	mg/kg	0.025
Dichlorodifluoromethane	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
Chloromethane	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
Vinyl Chloride	28	< 25	-	< 25	-	071S	ug/kg	25
Bromomethane	< 25	< 25	-	< 25	-	071S[I]	ug/kg	25
Chloroethane	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
Trichlorofluoromethane	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
1,1-Dichloroethene	< 25	< 25	-	< 25	-	071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	< 25	< 25	-	< 25	-	071S[I]	ug/kg	25
Dichloromethane	< 50	< 50	-	< 50	-	071S	ug/kg	50
Carbon Disulfide	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	< 25	< 25	-	< 25	-	071S	ug/kg	25
MTBE	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,1 -Dichloroethane	< 25	< 25	-	< 25	-	071S	ug/kg	25
Cis-1,2 Dichloroethene	560	< 25	-	< 25	-	071S[IM]	ug/kg	25
Bromochloromethane	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
Chloroform	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
2,2-Dichloropropane	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
1,1,1-Trichloroethane	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,2-Dichloroethane	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,1-Dichloropropene	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
Benzene	< 25	< 25	-	< 25	-	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes raised detection limit(s) due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS17_01	HP17_01	HP17_01	WS9_01	WS9_01	Method No	Units	LOD
Sample Depth (m)	0.4-0.5m	0.2-0.35m	0.6-0.7m	0.3-0.4m	1.5-1.6m			
Date Sampled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213172	213173	213174	213175	213176			
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Dibromomethane	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
1,2-Dichloropropane	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Trichloroethene	400	< 25	-	29	-	071S[I,M]	ug/kg	25
Bromodichloromethane	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Cis-1,3 Dichloropropene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Trans-1,3 Dichloropropene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
1,1,2-Trichloroethane	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Toluene	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,3 -Dichloropropane	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Dibromochloromethane	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
1,2-Dibromoethane	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Tetrachloroethene	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,1,1,2-Tetrachloroethane	< 25	< 25	-	< 25	-	071S	ug/kg	25
Chlorobenzene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Ethyl Benzene	< 25	< 25	-	< 25	-	071S	ug/kg	25
m,p-Xylenes	< 50	< 50	-	< 50	-	071S	ug/kg	50
Bromoform	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Styrene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
o-Xylene	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,1,2,2 Tetrachloroethane	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,2,3-Trichloropropane	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Isopropylbenzene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
Bromobenzene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
n-propylbenzene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
2-Chlorotoluene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
4-Chlorotoluene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25
1,3,5 Trimethylbenzene	130	< 25	-	< 25	-	071S	ug/kg	25
tert-butylbenzene	< 25	< 25	-	< 25	-	071S[I,M]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes raised detection limit(s) due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS17_01	HP17_01	HP17_01	WS9_01	WS9_01	Method No	Units	LOD
Sample Depth (m)	0.4-0.5m	0.2-0.35m	0.6-0.7m	0.3-0.4m	1.5-1.6m			
Date Sampled	08/03/07	08/03/07	08/03/07	08/03/07	08/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213172	213173	213174	213175	213176			
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	210	< 25	-	< 25	-	071S	ug/kg	25
sec-butylbenzene	63	< 25	-	< 25	-	071S[IM]	ug/kg	25
1,3 Dichlorobenzene	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,4 Dichlorobenzene	< 25	< 25	-	< 25	-	071S	ug/kg	25
4-Isopropyltoluene	< 25	< 25	-	< 25	-	071S[IM]	ug/kg	25
1,2 Dichlorobenzene	< 25	< 25	-	< 25	-	071S	ug/kg	25
n-butylbenzene	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,2,4-Trichlorobenzene	< 25	< 25	-	< 25	-	071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	< 25	< 25	-	< 25	-	071S	ug/kg	25
Hexachlorobutadiene	< 50	< 50	-	< 50	-	071S	ug/kg	50
1,2,3-Trichlorobenzene	< 25	< 25	-	< 25	-	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes raised detection limit(s) due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	HP9_01	HP9_02	HP13_01	HP13_01	BH9_01	Method No	Units	LOD
Sample Depth (m)	0.5-0.6m	0-0.1m	0.7m	0.5m	1.0m			
Date Sampled	09/03/07	09/03/07	09/03/07	09/03/07	08/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213177	213179	213181	213182	213183			
Analysis								
* * VOC SUITE * *								
MTBE	< 0.025	< 0.250‡	< 0.025	-	-	071S[I]	mg/kg	0.025
Benzene	< 0.025	< 0.250‡	< 0.025	-	-	071S[I]	mg/kg	0.025
Toluene	< 0.025	< 0.250‡	< 0.025	-	-	071S[I]	mg/kg	0.025
Ethylbenzene	< 0.025	< 0.250‡	< 0.025	-	-	071S[I]	mg/kg	0.025
m,p-Xylenes	< 0.05	< 0.250‡	< 0.05	-	-	071S[I]	mg/kg	0.05
o-Xylene	< 0.025	< 0.250‡	< 0.025	-	-	071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	< 0.025	< 0.250‡	< 0.025	-	-	071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	< 0.025	< 0.250‡	< 0.025	-	-	071S[I]	mg/kg	0.025
Dichlorodifluoromethane	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Chloromethane	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Vinyl Chloride	-	-	-	< 25	< 25	071S	ug/kg	25
Bromomethane	-	-	-	< 25	< 25	071S[I]	ug/kg	25
Chloroethane	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Trichlorofluoromethane	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
1,1-Dichloroethene	-	-	-	< 25	< 25	071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	-	-	-	< 25	< 25	071S[I]	ug/kg	25
Dichloromethane	-	-	-	< 50	< 50	071S	ug/kg	50
Carbon Disulfide	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	-	-	-	< 25	< 25	071S	ug/kg	25
MTBE	-	-	-	< 25	< 25	071S	ug/kg	25
1,1 -Dichloroethane	-	-	-	< 25	< 25	071S	ug/kg	25
Cis-1,2 Dichloroethene	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Bromochloromethane	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Chloroform	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
2,2-Dichloropropane	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
1,1,1-Trichloroethane	-	-	-	< 25	< 25	071S	ug/kg	25
1,2-Dichloroethane	-	-	-	< 25	< 25	071S	ug/kg	25
1,1-Dichloropropene	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Benzene	-	-	-	< 25	< 25	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes raised detection limit(s) due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	HP9_01	HP9_02	HP13_01	HP13_01	BH9_01	Method No	Units	LOD
Sample Depth (m)	0.5-0.6m	0-0.1m	0.7m	0.5m	1.0m			
Date Sampled	09/03/07	09/03/07	09/03/07	09/03/07	08/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213177	213179	213181	213182	213183			
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Dibromomethane	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
1,2-Dichloropropane	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Trichloroethene	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Bromodichloromethane	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Cis-1,3 Dichloropropene	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Trans-1,3 Dichloropropene	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
1,1,2-Trichloroethane	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Toluene	-	-	-	< 25	< 25	071S	ug/kg	25
1,3 -Dichloropropane	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Dibromochloromethane	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
1,2-Dibromoethane	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Tetrachloroethene	-	-	-	< 25	< 25	071S	ug/kg	25
1,1,1,2-Tetrachloroethane	-	-	-	< 25	< 25	071S	ug/kg	25
Chlorobenzene	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Ethyl Benzene	-	-	-	< 25	< 25	071S	ug/kg	25
m,p-Xylenes	-	-	-	< 50	< 50	071S	ug/kg	50
Bromoform	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Styrene	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
o-Xylene	-	-	-	< 25	< 25	071S	ug/kg	25
1,1,2,2 Tetrachloroethane	-	-	-	< 25	< 25	071S	ug/kg	25
1,2,3-Trichloropropane	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Isopropylbenzene	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
Bromobenzene	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
n-propylbenzene	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
2-Chlorotoluene	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
4-Chlorotoluene	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
1,3,5 Trimethylbenzene	-	-	-	< 25	< 25	071S	ug/kg	25
tert-butylbenzene	-	-	-	< 25	< 25	071S[IM]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes raised detection limit(s) due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	HP9_01	HP9_02	HP13_01	HP13_01	BH9_01	Method No	Units	LOD
Sample Depth (m)	0.5-0.6m	0-0.1m	0.7m	0.5m	1.0m			
Date Sampled	09/03/07	09/03/07	09/03/07	09/03/07	08/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213177	213179	213181	213182	213183			
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	-	-	-	< 25	< 25	071S	ug/kg	25
sec-butylbenzene	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
1,3 Dichlorobenzene	-	-	-	< 25	< 25	071S	ug/kg	25
1,4 Dichlorobenzene	-	-	-	< 25	< 25	071S	ug/kg	25
4-Isopropyltoluene	-	-	-	< 25	< 25	071S[IM]	ug/kg	25
1,2 Dichlorobenzene	-	-	-	< 25	< 25	071S	ug/kg	25
n-butylbenzene	-	-	-	< 25	< 25	071S	ug/kg	25
1,2,4-Trichlorobenzene	-	-	-	< 25	< 25	071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	-	-	-	< 25	< 25	071S	ug/kg	25
Hexachlorobutadiene	-	-	-	< 50	< 50	071S	ug/kg	50
1,2,3-Trichlorobenzene	-	-	-	< 25	< 25	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes raised detection limit(s) due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	BH9_04	BH13_02	BH13_03	BH13_03	BH13_01	Method No	Units	LOD
Sample Depth (m)	2.0-2.5m	1.0-1.5m	0.5m	2.5m	0.5m			
Date Sampled	08/03/07	08/03/07	08/03/07	08/03/07	09/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213186	213187	213189	213190	213191			
Analysis								
* * VOC SUITE * *								
MTBE	-	-	-	< 0.025	-	071S[I]	mg/kg	0.025
Benzene	-	-	-	< 0.025	-	071S[I]	mg/kg	0.025
Toluene	-	-	-	< 0.025	-	071S[I]	mg/kg	0.025
Ethylbenzene	-	-	-	< 0.025	-	071S[I]	mg/kg	0.025
m,p-Xylenes	-	-	-	< 0.05	-	071S[I]	mg/kg	0.05
o-Xylene	-	-	-	< 0.025	-	071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	-	-	-	< 0.025	-	071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	-	-	-	< 0.025	-	071S[I]	mg/kg	0.025
Dichlorodifluoromethane	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Chloromethane	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Vinyl Chloride	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
Bromomethane	< 25	< 25	< 25	-	< 25	071S[I]	ug/kg	25
Chloroethane	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Trichlorofluoromethane	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
1,1-Dichloroethene	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	< 25	< 25	< 25	-	< 25	071S[I]	ug/kg	25
Dichloromethane	< 50	< 50	< 50	-	< 50	071S	ug/kg	50
Carbon Disulfide	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
MTBE	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
1,1 -Dichloroethane	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
Cis-1,2 Dichloroethene	36	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Bromochloromethane	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Chloroform	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
2,2-Dichloropropane	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
1,1,1-Trichloroethane	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
1,2-Dichloroethane	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
1,1-Dichloropropene	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Benzene	< 25	< 25	< 25	-	< 25	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes raised detection limit(s) due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	BH9_04	BH13_02	BH13_03	BH13_03	BH13_01	Method No	Units	LOD
Sample Depth (m)	2.0-2.5m	1.0-1.5m	0.5m	2.5m	0.5m			
Date Sampled	08/03/07	08/03/07	08/03/07	08/03/07	09/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213186	213187	213189	213190	213191			
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Dibromomethane	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
1,2-Dichloropropane	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Trichloroethene	34	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Bromodichloromethane	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Cis-1,3 Dichloropropene	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Trans-1,3 Dichloropropene	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
1,1,2-Trichloroethane	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Toluene	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
1,3 -Dichloropropane	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Dibromochloromethane	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
1,2-Dibromoethane	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Tetrachloroethene	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
1,1,1,2-Tetrachloroethane	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
Chlorobenzene	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Ethyl Benzene	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
m,p-Xylenes	< 50	< 50	< 50	-	< 50	071S	ug/kg	50
Bromoform	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Styrene	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
o-Xylene	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
1,1,2,2 Tetrachloroethane	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
1,2,3-Trichloropropane	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Isopropylbenzene	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
Bromobenzene	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
n-propylbenzene	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
2-Chlorotoluene	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
4-Chlorotoluene	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
1,3,5 Trimethylbenzene	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
tert-butylbenzene	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes raised detection limit(s) due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	BH9_04	BH13_02	BH13_03	BH13_03	BH13_01	Method No	Units	LOD
Sample Depth (m)	2.0-2.5m	1.0-1.5m	0.5m	2.5m	0.5m			
Date Sampled	08/03/07	08/03/07	08/03/07	08/03/07	09/03/07			
Date Scheduled	09/03/07	09/03/07	09/03/07	09/03/07	09/03/07			
Laboratory Reference No	213186	213187	213189	213190	213191			
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
sec-butylbenzene	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
1,3 Dichlorobenzene	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
1,4 Dichlorobenzene	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
4-Isopropyltoluene	< 25	< 25	< 25	-	< 25	071S[IM]	ug/kg	25
1,2 Dichlorobenzene	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
n-butylbenzene	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
1,2,4-Trichlorobenzene	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	< 25	< 25	< 25	-	< 25	071S	ug/kg	25
Hexachlorobutadiene	< 50	< 50	< 50	-	< 50	071S	ug/kg	50
1,2,3-Trichlorobenzene	< 25	< 25	< 25	-	< 25	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes raised detection limit(s) due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	BH13_01	HP8_01				Method No	Units	LOD
Sample Depth (m)	2.0m	0.3-0.5m						
Date Sampled	09/03/07	09/03/07						
Date Scheduled	09/03/07	09/03/07						
Laboratory Reference No	213192	213194						
Analysis								
* * VOC SUITE * *								
MTBE	< 0.025	< 0.025				071S[I]	mg/kg	0.025
Benzene	< 0.025	< 0.025				071S[I]	mg/kg	0.025
Toluene	< 0.025	< 0.025				071S[I]	mg/kg	0.025
Ethylbenzene	< 0.025	< 0.025				071S[I]	mg/kg	0.025
m,p-Xylenes	< 0.05	< 0.05				071S[I]	mg/kg	0.05
o-Xylene	< 0.025	< 0.025				071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	< 0.025	< 0.025				071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	< 0.025	< 0.025				071S[I]	mg/kg	0.025
Dichlorodifluoromethane	-	-				071S[IM]	ug/kg	25
Chloromethane	-	-				071S[IM]	ug/kg	25
Vinyl Chloride	-	-				071S	ug/kg	25
Bromomethane	-	-				071S[I]	ug/kg	25
Chloroethane	-	-				071S[IM]	ug/kg	25
Trichlorofluoromethane	-	-				071S[IM]	ug/kg	25
1,1-Dichloroethene	-	-				071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	-	-				071S[I]	ug/kg	25
Dichloromethane	-	-				071S	ug/kg	50
Carbon Disulfide	-	-				071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	-	-				071S	ug/kg	25
MTBE	-	-				071S	ug/kg	25
1,1 -Dichloroethane	-	-				071S	ug/kg	25
Cis-1,2 Dichloroethene	-	-				071S[IM]	ug/kg	25
Bromochloromethane	-	-				071S[IM]	ug/kg	25
Chloroform	-	-				071S[IM]	ug/kg	25
2,2-Dichloropropane	-	-				071S[IM]	ug/kg	25
1,1,1-Trichloroethane	-	-				071S	ug/kg	25
1,2-Dichloroethane	-	-				071S	ug/kg	25
1,1-Dichloropropene	-	-				071S[IM]	ug/kg	25
Benzene	-	-				071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes raised detection limit(s) due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	BH13_01	HP8_01				Method No	Units	LOD
Sample Depth (m)	2.0m	0.3-0.5m						
Date Sampled	09/03/07	09/03/07						
Date Scheduled	09/03/07	09/03/07						
Laboratory Reference No	213192	213194						
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	-	-				071S[IM]	ug/kg	25
Dibromomethane	-	-				071S[IM]	ug/kg	25
1,2-Dichloropropane	-	-				071S[IM]	ug/kg	25
Trichloroethene	-	-				071S[IM]	ug/kg	25
Bromodichloromethane	-	-				071S[IM]	ug/kg	25
Cis-1,3 Dichloropropene	-	-				071S[IM]	ug/kg	25
Trans-1,3 Dichloropropene	-	-				071S[IM]	ug/kg	25
1,1,2-Trichloroethane	-	-				071S[IM]	ug/kg	25
Toluene	-	-				071S	ug/kg	25
1,3 -Dichloropropane	-	-				071S[IM]	ug/kg	25
Dibromochloromethane	-	-				071S[IM]	ug/kg	25
1,2-Dibromoethane	-	-				071S[IM]	ug/kg	25
Tetrachloroethene	-	-				071S	ug/kg	25
1,1,1,2-Tetrachloroethane	-	-				071S	ug/kg	25
Chlorobenzene	-	-				071S[IM]	ug/kg	25
Ethyl Benzene	-	-				071S	ug/kg	25
m,p-Xylenes	-	-				071S	ug/kg	50
Bromoform	-	-				071S[IM]	ug/kg	25
Styrene	-	-				071S[IM]	ug/kg	25
o-Xylene	-	-				071S	ug/kg	25
1,1,2,2 Tetrachloroethane	-	-				071S	ug/kg	25
1,2,3-Trichloropropane	-	-				071S[IM]	ug/kg	25
Isopropylbenzene	-	-				071S[IM]	ug/kg	25
Bromobenzene	-	-				071S[IM]	ug/kg	25
n-propylbenzene	-	-				071S[IM]	ug/kg	25
2-Chlorotoluene	-	-				071S[IM]	ug/kg	25
4-Chlorotoluene	-	-				071S[IM]	ug/kg	25
1,3,5 Trimethylbenzene	-	-				071S	ug/kg	25
tert-butylbenzene	-	-				071S[IM]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes raised detection limit(s) due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-28722
Matrix : Soil
Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	BH13_01	HP8_01				Method No	Units	LOD
Sample Depth (m)	2.0m	0.3-0.5m						
Date Sampled	09/03/07	09/03/07						
Date Scheduled	09/03/07	09/03/07						
Laboratory Reference No	213192	213194						
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	-	-				071S	ug/kg	25
sec-butylbenzene	-	-				071S[IM]	ug/kg	25
1,3 Dichlorobenzene	-	-				071S	ug/kg	25
1,4 Dichlorobenzene	-	-				071S	ug/kg	25
4-Isopropyltoluene	-	-				071S[IM]	ug/kg	25
1,2 Dichlorobenzene	-	-				071S	ug/kg	25
n-butylbenzene	-	-				071S	ug/kg	25
1,2,4-Trichlorobenzene	-	-				071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	-	-				071S	ug/kg	25
Hexachlorobutadiene	-	-				071S	ug/kg	50
1,2,3-Trichlorobenzene	-	-				071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes raised detection limit(s) due to matrix interference.

ALcontrol Technichem
EPH Description

Job Number: 07-28722
Client: Environ UK Ltd
Project Code: 64C11649

Matrix: Soils
Project Name: Alcoa

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
213162	WS16_01	0.5-0.6m	08/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from before C10 to beyond C40.
213163	WS16_01	1.8-1.9m	08/03/07	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.
213165	WS16_02	0.7-0.8m	08/03/07	The sample chromatogram exhibits two humps of unresolved complex material, the smaller eluting from before C10 to C13, and the larger eluting from C13 to beyond C40, overlain by a series of n-alkane peaks eluting from C14 to C17.
213166	WS14_01	0-0.2m	08/03/07	The sample chromatogram exhibits two humps of unresolved complex material, the smaller eluting from before C10 to C13, and the larger eluting from C13 to beyond C40, overlain by a series of n-alkane peaks eluting from C14 to C17.
213167	WS7_01	0.5m	08/03/07	The sample chromatogram exhibits two humps of unresolved complex material, the smaller eluting from before C10 to C12, and the larger eluting from C12 to beyond C40, overlain by a series of n-alkane peaks eluting from C14 to C17.
213168	WS4_01	0.4-0.6m	08/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40.
213169	WS4_01	1.3m	08/03/07	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.
213170	WS17_02	0.6m	08/03/07	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.

ALcontrol Technichem
EPH Description

Job Number: 07-28722
Client: Environ UK Ltd
Project Code: 64C11649

Matrix: Soils
Project Name: Alcoa

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
213171	WS17_02	2.5m	08/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C14 to C40.
213174	HP17_01	0.6-0.7m	08/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C14 to beyond C40.
213176	WS9_01	1.5-1.6m	08/03/07	The sample chromatogram exhibits two overlapping humps of unresolved complex material eluting from C10 to beyond C40, overlain by several peaks unidentifiable by this analysis.
213177	HP9_01	0.5-0.6m	09/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40.
213178	HP9_01	1-1.2m	09/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40, overlain by several peaks unidentifiable by this analysis.
213179	HP9_02	0-0.1m	09/03/07	The sample chromatogram exhibits several overlapping humps of unresolved complex material eluting from C12 to beyond C40, overlain by several peaks unidentifiable by this analysis.
213180	HP9_02	0.7m	09/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40.
213181	HP13_01	0.7m	09/03/07	The sample chromatogram exhibits two overlapping humps of unresolved complex material eluting from C10 to beyond C40, overlain by a series of n-alkane peaks eluting through the diesel range and several peaks unidentifiable by this analysis, including one very large peak eluting between C28 & C29

ALcontrol Technichem
EPH Description

Job Number: 07-28722
Client: Environ UK Ltd
Project Code: 64C11649

Matrix: Soils
Project Name: Alcoa

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
213182	HP13_01	0.5m	09/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting predominantly through the lubrication oil range, overlain by one very large peak eluting between C27 and C28 which requires qualitative analysis by GC-MS for further identification
213183	BH9_01	1.0m	08/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C14 to beyond C40, overlain by a series of peaks consistent with a small amount of PAHs.
213184	BH9_01	2.2m	08/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40, overlain by several peaks unidentifiable by this analysis.
213185	BH9_04	0.8-1.0m	08/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to beyond C40, overlain by a series of n-alkane peaks eluting through the diesel range and several peaks unidentifiable by this analysis.
213186	BH9_04	2.0-2.5m	08/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to beyond C40, overlain by a series of n-alkane peaks eluting through the diesel range and several peaks unidentifiable by this analysis.
213187	BH13_02	1.0-1.5m	08/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to beyond C40, overlain by several peaks unidentifiable by this analysis.
213190	BH13_03	2.5m	08/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to C40.
213191	BH13_01	0.5m	09/03/07	The sample chromatogram exhibits three overlapping humps of unresolved complex material eluting from C10 to beyond C40, overlain by several peaks unidentifiable by this analysis.

ALcontrol Technichem
EPH Description

Job Number: 07-28722
Client: Environ UK Ltd
Project Code: 64C11649

Matrix: Soils
Project Name: Alcoa

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
213192	BH13_01	2.0m	09/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to beyond C40, overlain by several peaks unidentifiable by this analysis.
213193	HP8_01	0.05-0.15m	09/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C14 to beyond C40.
213194	HP8_01	0.3-0.5m	09/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C16 to beyond C40.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-28722

Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
070S	In-house method	Determination of hexane/acetone extractable hydrocarbons in soil by gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	W
053S	In-house method	Determination of semi-volatile organic compounds in soil samples by dichloromethane extraction and GC-MS detection	W
039S	In-house method	Determination of PCB congeners in soil samples by hexane/acetone extraction followed by GC-MS determination	W
022S	In-house method	Determination of PAH compounds in soil samples by hexane / acetone extraction followed by GC-MS detection	W
020S	In-house method based on Second Site Property: Environmental Assessment Guidance Version 3: March 2003	Determination of methanol/water based mobile phase extractable phenols in soil samples by HPLC with electrochemical detection	W
009S	In-house method referencing BS1377: Part 3: 1990 and Second Site Property: Environmental Assessment Guidance Version 3: March 2003	Determination of pH by addition of water followed by electrometric measurement	W
CWGS	In-house method based on "Total Petroleum Hydrocarbon Criteria Working Group" series, 1998-9	Determination of "CWG" banded petroleum hydrocarbons in soil samples using a combination of headspace GC-FID (C5-C12) and hexane:acetone extraction / silica-alumina aliphatic - aromatic split / GC-FID (C12-C35) techniques with banding by comparison to alkane standards	W
071S	In-house method	Determination of volatile organic compounds in soil samples by headspace GC-MS analysis	W
092	In-house method	Determination of organic content and organic carbon in soil samples by combustion analyser	D

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-28722

Project Code: 64C11649

Project Name: Alcoa
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
069S	In-house method based on MEWAM "Methods for the Determination of Metals in Soil", HMSO, 1986	Determination of metals in soil samples by aqua-regia digestion followed by ICP-OES detection	D
016S	In-house method	Determination of water soluble boron by 2:1 extraction in hot water followed by ICP-OES detection	D
007S	In-house method based on Method 3500-Cr, "Standard Methods for the Examination of Water and Waste Water", APHA AWWA WEF, Edition 18, 1992	Determination of hexavalent chromium in soil samples by water extraction and colorimetric detection	D

Soil results are expressed on a dry weight basis. Where the test uses as-received sample, a moisture correction factor is applied to the wet weight result. This factor is determined gravimetrically using weight loss on drying at 30º (+/-5) C.

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

30 March 2007

TEST REPORT

Our Report Number: 07-28888

Your Order Reference: Instructions of 16/03/2007

16 soil samples submitted for analysis on 16/03/2007

Project Name: ALCOA

Project Code: 61-C11647

Laboratory analysis started on 19/03/2007
All laboratory analysis completed by 30 March 2007

Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

Rhys Ashton
Project Co-ordinator
ALCONTROL TECHNICHEM

ALcontrol Technichem
Sample Description

Job Number: 07-28888
Client: Environ UK Ltd
Project Code: 61-C11647

Matrix: Soil
Project Name: ALCOA

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	Sample Description
214168	BH16_01	0.50	14/03/07	Dark grey sandy clay with gravel
214169	BH16_01	1.00	14/03/07	Grey sand with gravel
214170	BH16_01	3.00	14/03/07	Dark grey sand with gravel
214171	BH11_03	1.50-2.50	14/03/07	*Grey gravel
214172	BH11_03	4.00-5.00	14/03/07	Brown clay with gravel
214173	BH5_01	0.50	14/03/07	Dark grey clay with gravel
214174	BH5_01	1.00	14/03/07	Dark grey sand with gravel
214175	BH5_01	4.00	14/03/07	Dark grey sand with gravel
214176	BH5_02	1.00	14/03/07	Dark grey clay with gravel
214177	BH5_02	2.00	14/03/07	Dark grey clay with gravel
214178	BH17_01	0.50	14/03/07	Dark grey sand with gravel
214179	BH17_01	1.00	14/03/07	Dark grey clay with gravel
214180	BH17_01	3.00	14/03/07	Dark grey clay with gravel
214181	BH5_03	0.50	14/03/07	Dark grey sand with gravel
214182	BH5_03	1.50	14/03/07	Dark grey sand with gravel
214183	BH5_03	3.20	14/03/07	Dark grey clay with gravel

*Denotes outside the scope of MCERTS accreditation since matrix not included in method validation.

ALcontrol Technichem
Table Of Results

Job Number : 07-28888
Matrix : Soil
Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH16_01	BH16_01	BH16_01	BH11_03	BH11_03	Method No	Units	LOD
Sample Depth (m)	**0.50**	**1.00**	**3.00**	**1.50-2.50**	**4.00-5.00**			
Date Sampled	**14/03/07**	**14/03/07**	**14/03/07**	**14/03/07**	**14/03/07**			
Date Scheduled	**16/03/07**	**16/03/07**	**16/03/07**	**16/03/07**	**16/03/07**			
Laboratory Reference No	**214168**	**214169**	**214170**	**214171**	**214172**			
Analysis								
Moisture Content (Dry Weight)	8.8	7.0	8.5	0.4	24.7		%	0.1
Moisture Content (Wet Weight)	8.1	6.5	7.8	0.4	19.8		%	0.1
Arsenic	-	-	-	5.5	9.8	069S[I M]	mg/kg	3
Barium	-	-	-	95	99	069S[I M]	mg/kg	10
Beryllium	-	-	-	< 0.5	1.2	069S[I M]	mg/kg	0.5
Boron (W/S)	-	-	-	< 0.5	< 0.5	016S[I M]	mg/kg	0.5
Cadmium	-	-	-	< 0.5	< 0.5	069S[I M]	mg/kg	0.5
Chromium	-	-	-	11	30	069S[I M]	mg/kg	10
Copper	-	-	-	18	17	069S[I M]	mg/kg	5
Lead	-	-	-	15	34	069S[I M]	mg/kg	10
Mercury	-	-	-	< 0.6	< 0.6	069S[I M]	mg/kg	0.6
Nickel	-	-	-	12	22	069S[I M]	mg/kg	4
Selenium	-	-	-	< 2.5	< 2.5	069S[I M]	mg/kg	2.5
Vanadium	-	-	-	13	33	069S[I M]	mg/kg	3
Zinc	-	-	-	30	84	069S[I M]	mg/kg	10
Organic Carbon	-	-	0.26	-	0.74	092[I M]	%	0.1
pH	7.7	8.3	8.9	8.4	7.5	009S[I M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	5200	26	210	25	72	070S[I M]	mg/kg	5
Glycols	Sub-con	-	Sub-con	-	-	MISC		

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28888
Matrix : Soil
Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	**BH5_01**	**BH5_01**	**BH5_01**	**BH5_02**	**BH5_02**	**Method No**	**Units**	**LOD**
Sample Depth (m)	**0.50**	**1.00**	**4.00**	**1.00**	**2.00**			
Date Sampled	**14/03/07**	**14/03/07**	**14/03/07**	**14/03/07**	**14/03/07**			
Date Scheduled	**16/03/07**	**16/03/07**	**16/03/07**	**16/03/07**	**16/03/07**			
Laboratory Reference No	**214173**	**214174**	**214175**	**214176**	**214177**			
Analysis								
Moisture Content (Dry Weight)	8.8	10.4	9.3	4.4	13.5		%	0.1
Moisture Content (Wet Weight)	8.1	9.4	8.5	4.2	11.9		%	0.1
Arsenic	11	7.4	7.0	11	7.8	069S[IM]	mg/kg	3
Barium	74	60	68	36	57	069S[IM]	mg/kg	10
Beryllium	0.8	0.8	0.8	< 0.5	0.7	069S[IM]	mg/kg	0.5
Boron (W/S)	0.6	< 0.5	< 0.5	< 0.5	< 0.5	016S[IM]	mg/kg	0.5
Cadmium	0.8	< 0.5	< 0.5	< 0.5	< 0.5	069S[IM]	mg/kg	0.5
Chromium	25	33	50	< 10	24	069S[IM]	mg/kg	10
Copper	63	27	23	37	25	069S[IM]	mg/kg	5
Lead	38	23	21	29	29	069S[IM]	mg/kg	10
Mercury	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	069S[IM]	mg/kg	0.6
Nickel	25	24	25	11	20	069S[IM]	mg/kg	4
Selenium	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	069S[IM]	mg/kg	2.5
Vanadium	17	16	16	9.5	15	069S[IM]	mg/kg	3
Zinc	200	90	64	77	73	069S[IM]	mg/kg	10
Organic Carbon	-	-	-	-	0.87	092[IM]	%	0.1
pH	8.8	8.7	8.1	8.7	8.5	009S[IM]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	-	120	40	55	13	070S[IM]	mg/kg	5
Glycols	-	-	-	-	-	MISC		

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28888
Matrix : Soil
Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH17_01	BH17_01	BH17_01	BH5_03	BH5_03	Method No	Units	LOD
Sample Depth (m)	**0.50**	**1.00**	**3.00**	**0.50**	**1.50**			
Date Sampled	**14/03/07**	**14/03/07**	**14/03/07**	**14/03/07**	**14/03/07**			
Date Scheduled	**16/03/07**	**16/03/07**	**16/03/07**	**16/03/07**	**16/03/07**			
Laboratory Reference No	**214178**	**214179**	**214180**	**214181**	**214182**			
Analysis								
Moisture Content (Dry Weight)	6.2	10.1	25.1	1.8	3.5		%	0.1
Moisture Content (Wet Weight)	5.8	9.2	20.1	1.8	3.4		%	0.1
Arsenic	52	40	17	9.9	-	069S[IM]	mg/kg	3
Barium	140	130	51	34	-	069S[IM]	mg/kg	10
Beryllium	0.8	0.8	0.5	< 0.5	-	069S[IM]	mg/kg	0.5
Boron (W/S)	0.9	0.8	< 0.5	0.5	-	016S[IM]	mg/kg	0.5
Cadmium	1.1	1.1	< 0.5	< 0.5	-	069S[IM]	mg/kg	0.5
Chromium	24	22	23	15	-	069S[IM]	mg/kg	10
Copper	350	300	60	59	-	069S[IM]	mg/kg	5
Lead	230	190	42	19	-	069S[IM]	mg/kg	10
Mercury	< 0.6	< 0.6	< 0.6	< 0.6	-	069S[IM]	mg/kg	0.6
Nickel	30	30	14	17	-	069S[IM]	mg/kg	4
Selenium	< 2.5	< 2.5	< 2.5	< 2.5	-	069S[IM]	mg/kg	2.5
Vanadium	24	22	32	12	-	069S[IM]	mg/kg	3
Zinc	540	540	84	35	-	069S[IM]	mg/kg	10
Organic Carbon	-	2.9	-	-	-	092[IM]	%	0.1
pH	8.4	7.9	7.2	8.2	8.1	009S[IM]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	200	310	12	6100	-	070S[IM]	mg/kg	5
Glycols	-	-	-	-	-	MISC		

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28888
Matrix : Soil
Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	**BH5_03**					**Method No**	**Units**	**LOD**
Sample Depth (m)	**3.20**							
Date Sampled	**14/03/07**							
Date Scheduled	**16/03/07**							
Laboratory Reference No	**214183**							
Analysis								
Moisture Content (Dry Weight)	13.8						%	0.1
Moisture Content (Wet Weight)	12.1						%	0.1
Arsenic	9.9					069S[I,M]	mg/kg	3
Barium	55					069S[I,M]	mg/kg	10
Beryllium	0.7					069S[I,M]	mg/kg	0.5
Boron (W/S)	< 0.5					016S[I,M]	mg/kg	0.5
Cadmium	< 0.5					069S[I,M]	mg/kg	0.5
Chromium	15					069S[I,M]	mg/kg	10
Copper	33					069S[I,M]	mg/kg	5
Lead	28					069S[I,M]	mg/kg	10
Mercury	< 0.6					069S[I,M]	mg/kg	0.6
Nickel	21					069S[I,M]	mg/kg	4
Selenium	< 2.5					069S[I,M]	mg/kg	2.5
Vanadium	15					069S[I,M]	mg/kg	3
Zinc	72					069S[I,M]	mg/kg	10
Organic Carbon	-					092[I,M]	%	0.1
pH	7.9					009S[I,M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	3000					070S[I,M]	mg/kg	5
Glycols	-					MISC		

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28888
Matrix : Soil
Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH16_01	BH5_01	BH5_01	BH5_02	BH17_01	Method No	Units	LOD
Sample Depth (m)	1.00	1.00	4.00	1.00	0.50			
Date Sampled	14/03/07	14/03/07	14/03/07	14/03/07	14/03/07			
Date Scheduled	16/03/07	16/03/07	16/03/07	16/03/07	16/03/07			
Laboratory Reference No	214169	214174	214175	214176	214178			
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1	0.39	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Acenaphthene	< 0.1	0.70	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Fluorene	< 0.1	0.47	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Phenanthrene	< 0.1	2.9	0.25	< 0.1	0.18	022S[IM]	mg/kg	0.1
Anthracene	< 0.1	0.96	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Fluoranthene	< 0.1	2.5	0.15	< 0.1	0.27	022S[IM]	mg/kg	0.1
Pyrene	< 0.1	1.9	0.13	< 0.1	0.21	022S[IM]	mg/kg	0.1
Benzo(a)anthracene	< 0.1	0.79	< 0.1	< 0.1	0.13	022S[IM]	mg/kg	0.1
Chrysene	< 0.1	0.78	< 0.1	< 0.1	0.15	022S[IM]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1	0.78	< 0.1	< 0.1	0.14	022S[IM]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	0.29	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(a)pyrene	< 0.1	0.55	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	0.24	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	0.26	< 0.1	< 0.1	< 0.1	022S[IM]	mg/kg	0.1
PAH (Sum of Dutch 10)	ND	9.66	0.40	ND	0.72	022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	ND	13.49	0.54	ND	1.07	022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28888
Matrix : Soil
Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH17_01	BH5_03				Method No	Units	LOD
Sample Depth (m)	3.00	1.50						
Date Sampled	14/03/07	14/03/07						
Date Scheduled	16/03/07	16/03/07						
Laboratory Reference No	214180	214182						
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1	< 0.1				022S[M]	mg/kg	0.1
Acenaphthylene	< 0.1	0.12				022S[M]	mg/kg	0.1
Acenaphthene	< 0.1	0.18				022S[M]	mg/kg	0.1
Fluorene	< 0.1	< 0.1				022S[M]	mg/kg	0.1
Phenanthrene	< 0.1	< 0.1				022S[M]	mg/kg	0.1
Anthracene	< 0.1	< 0.1				022S[M]	mg/kg	0.1
Fluoranthene	< 0.1	< 0.1				022S[M]	mg/kg	0.1
Pyrene	< 0.1	< 0.1				022S[M]	mg/kg	0.1
Benzo(a)anthracene	< 0.1	< 0.1				022S[M]	mg/kg	0.1
Chrysene	< 0.1	< 0.1				022S[M]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1	< 0.1				022S[M]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	< 0.1				022S[M]	mg/kg	0.1
Benzo(a)pyrene	< 0.1	< 0.1				022S[M]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1				022S[M]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1				022S[M]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	< 0.1				022S[M]	mg/kg	0.1
PAH (Sum of Dutch 10)	ND	ND				022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	ND	0.30				022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28888
Matrix : Soil
Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH16_01	BH5_03				Method No	Units	LOD
Sample Depth (m)	0.50	1.50						
Date Sampled	14/03/07	14/03/07						
Date Scheduled	16/03/07	16/03/07						
Laboratory Reference No	214168	214182						
Analysis								
* * CWG SUITE * *								
Aliphatic C5-C6	< 0.01	< 0.01				CWGS	mg/kg	0.01
Aliphatic >C6-C8	0.03	0.02				CWGS	mg/kg	0.01
Aliphatic >C8-C10	< 0.01	1.2				CWGS	mg/kg	0.01
Aliphatic >C10-C12	< 0.01	2.7				CWGS	mg/kg	0.01
Aliphatic >C12-C16	5.2	3400				CWGS[I]	mg/kg	5
Aliphatic >C16-C21	89	6600				CWGS[I]	mg/kg	5
Aliphatic >C21-C35	3100	1700				CWGS[I]	mg/kg	5
Total Aliphatics (C5-C35)	3200	12000				CWGS	mg/kg	5
Aromatic C6-C7	< 0.01	< 0.01				CWGS	mg/kg	0.01
Aromatic >C7-C8	< 0.01	< 0.01				CWGS	mg/kg	0.01
Aromatic >C8-C10	0.04	1.8				CWGS	mg/kg	0.01
Aromatic >C10-C12	< 0.01	4.0				CWGS	mg/kg	0.01
Aromatic >C12-C16	< 5	170				CWGS[I]	mg/kg	5
Aromatic >C16-C21	19	530				CWGS[I]	mg/kg	5
Aromatic >C21-C35	650	260				CWGS[I]	mg/kg	5
Total Aromatics (C5-C35)	670	960				CWGS	mg/kg	5
Volatile Hydrocarbons (C5-C12)	0.07	9.8				CWGS	mg/kg	0.01
Extractable Hydrocarbons (C12-C35)	3800	13000				CWGS	mg/kg	5
Total Hydrocarbons (C5-C35)	3800	13000				CWGS	mg/kg	5
MTBE	< 0.010	< 0.010				CWGS[IM]	mg/kg	0.01
Benzene	< 0.010	< 0.010				CWGS[IM]	mg/kg	0.01
Toluene	< 0.010	< 0.010				CWGS[IM]	mg/kg	0.01
Ethylbenzene	< 0.010	< 0.010				CWGS[IM]	mg/kg	0.01
m,p-Xylenes	0.015	< 0.010				CWGS[IM]	mg/kg	0.01
o-Xylene	0.015	< 0.010				CWGS[IM]	mg/kg	0.01
1,3,5-Trimethylbenzene	< 0.010	< 0.010				CWGS[IM]	mg/kg	0.01
1,2,4-Trimethylbenzene	< 0.010	0.043				CWGS[IM]	mg/kg	0.01

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28888
Matrix : Soil
Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH16_01	BH16_01	BH16_01	BH11_03	BH5_01	Method No	Units	LOD
Sample Depth (m)	0.50	1.00	3.00	1.50-2.50	1.00			
Date Sampled	14/03/07	14/03/07	14/03/07	14/03/07	14/03/07			
Date Scheduled	16/03/07	16/03/07	16/03/07	16/03/07	16/03/07			
Laboratory Reference No	214168	214169	214170	214171	214174			
Analysis								
* * VOC SUITE * *								
MTBE	-	< 0.025	-	-	-	071S[I]	mg/kg	0.025
Benzene	-	< 0.025	-	-	-	071S[I]	mg/kg	0.025
Toluene	-	< 0.025	-	-	-	071S[I]	mg/kg	0.025
Ethylbenzene	-	< 0.025	-	-	-	071S[I]	mg/kg	0.025
m,p-Xylenes	-	< 0.05	-	-	-	071S[I]	mg/kg	0.05
o-Xylene	-	< 0.025	-	-	-	071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	-	< 0.025	-	-	-	071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	-	< 0.025	-	-	-	071S[I]	mg/kg	0.025
Dichlorodifluoromethane	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Chloromethane	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Vinyl Chloride	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
Bromomethane	< 25	-	< 25	< 25	< 25	071S[I]	ug/kg	25
Chloroethane	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Trichlorofluoromethane	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
1,1-Dichloroethene	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	< 25	-	< 25	< 25	< 25	071S[I]	ug/kg	25
Dichloromethane	< 50	-	< 50	< 50	< 50	071S	ug/kg	50
Carbon Disulfide	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
MTBE	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
1,1 -Dichloroethane	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
Cis-1,2 Dichloroethene	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Bromochloromethane	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Chloroform	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
2,2-Dichloropropane	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
1,1,1-Trichloroethane	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
1,2-Dichloroethane	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
1,1-Dichloropropene	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Benzene	< 25	-	< 25	< 25	< 25	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28888
Matrix : Soil
Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH16_01	BH16_01	BH16_01	BH11_03	BH5_01	Method No	Units	LOD
Sample Depth (m)	0.50	1.00	3.00	1.50-2.50	1.00			
Date Sampled	14/03/07	14/03/07	14/03/07	14/03/07	14/03/07			
Date Scheduled	16/03/07	16/03/07	16/03/07	16/03/07	16/03/07			
Laboratory Reference No	214168	214169	214170	214171	214174			
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Dibromomethane	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
1,2-Dichloropropane	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Trichloroethene	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Bromodichloromethane	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Cis-1,3 Dichloropropene	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Trans-1,3 Dichloropropene	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
1,1,2-Trichloroethane	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Toluene	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
1,3 -Dichloropropane	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Dibromochloromethane	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
1,2-Dibromoethane	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Tetrachloroethene	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
1,1,1,2-Tetrachloroethane	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
Chlorobenzene	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Ethyl Benzene	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
m,p-Xylenes	< 50	-	< 50	< 50	< 50	071S	ug/kg	50
Bromoform	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Styrene	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
o-Xylene	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
1,1,2,2 Tetrachloroethane	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
1,2,3-Trichloropropane	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Isopropylbenzene	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
Bromobenzene	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
n-propylbenzene	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
2-Chlorotoluene	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
4-Chlorotoluene	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
1,3,5 Trimethylbenzene	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
tert-butylbenzene	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28888
Matrix : Soil
Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH16_01	BH16_01	BH16_01	BH11_03	BH5_01	Method No	Units	LOD
Sample Depth (m)	0.50	1.00	3.00	1.50-2.50	1.00			
Date Sampled	14/03/07	14/03/07	14/03/07	14/03/07	14/03/07			
Date Scheduled	16/03/07	16/03/07	16/03/07	16/03/07	16/03/07			
Laboratory Reference No	214168	214169	214170	214171	214174			
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
sec-butylbenzene	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
1,3 Dichlorobenzene	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
1,4 Dichlorobenzene	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
4-Isopropyltoluene	< 25	-	< 25	< 25	< 25	071S[IM]	ug/kg	25
1,2 Dichlorobenzene	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
n-butylbenzene	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
1,2,4-Trichlorobenzene	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	< 25	-	< 25	< 25	< 25	071S	ug/kg	25
Hexachlorobutadiene	< 50	-	< 50	< 50	< 50	071S	ug/kg	50
1,2,3-Trichlorobenzene	< 25	-	< 25	< 25	< 25	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28888
Matrix : Soil
Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH5_01	BH5_02	BH17_01	BH17_01	BH5_03	Method No	Units	LOD
Sample Depth (m)	4.00	1.00	1.00	3.00	0.50			
Date Sampled	14/03/07	14/03/07	14/03/07	14/03/07	14/03/07			
Date Scheduled	16/03/07	16/03/07	16/03/07	16/03/07	16/03/07			
Laboratory Reference No	214175	214176	214179	214180	214181			
Analysis								
* * VOC SUITE * *								
MTBE	< 0.250	< 0.025	-	< 0.025	< 0.025	071S[I]	mg/kg	0.025
Benzene	< 0.250	< 0.025	-	< 0.025	< 0.025	071S[I]	mg/kg	0.025
Toluene	< 0.250	< 0.025	-	< 0.025	< 0.025	071S[I]	mg/kg	0.025
Ethylbenzene	< 0.250	< 0.025	-	< 0.025	< 0.025	071S[I]	mg/kg	0.025
m,p-Xylenes	< 0.500	< 0.05	-	< 0.05	< 0.05	071S[I]	mg/kg	0.05
o-Xylene	< 0.250	< 0.025	-	< 0.025	< 0.025	071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	< 0.250	< 0.025	-	< 0.025	< 0.025	071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	< 0.250	< 0.025	-	< 0.025	< 0.025	071S[I]	mg/kg	0.025
Dichlorodifluoromethane	-	-	< 25	-	-	071S[IM]	ug/kg	25
Chloromethane	-	-	< 25	-	-	071S[IM]	ug/kg	25
Vinyl Chloride	-	-	< 25	-	-	071S	ug/kg	25
Bromomethane	-	-	< 25	-	-	071S[I]	ug/kg	25
Chloroethane	-	-	< 25	-	-	071S[IM]	ug/kg	25
Trichlorofluoromethane	-	-	< 25	-	-	071S[IM]	ug/kg	25
1,1-Dichloroethene	-	-	< 25	-	-	071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	-	-	< 25	-	-	071S[I]	ug/kg	25
Dichloromethane	-	-	< 50	-	-	071S	ug/kg	50
Carbon Disulfide	-	-	< 25	-	-	071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	-	-	< 25	-	-	071S	ug/kg	25
MTBE	-	-	< 25	-	-	071S	ug/kg	25
1,1 -Dichloroethane	-	-	< 25	-	-	071S	ug/kg	25
Cis-1,2 Dichloroethene	-	-	< 25	-	-	071S[IM]	ug/kg	25
Bromochloromethane	-	-	< 25	-	-	071S[IM]	ug/kg	25
Chloroform	-	-	< 25	-	-	071S[IM]	ug/kg	25
2,2-Dichloropropane	-	-	< 25	-	-	071S[IM]	ug/kg	25
1,1,1-Trichloroethane	-	-	< 25	-	-	071S	ug/kg	25
1,2-Dichloroethane	-	-	< 25	-	-	071S	ug/kg	25
1,1-Dichloropropene	-	-	< 25	-	-	071S[IM]	ug/kg	25
Benzene	-	-	57	-	-	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28888
Matrix : Soil
Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH5_01	BH5_02	BH17_01	BH17_01	BH5_03	Method No	Units	LOD
Sample Depth (m)	4.00	1.00	1.00	3.00	0.50			
Date Sampled	14/03/07	14/03/07	14/03/07	14/03/07	14/03/07			
Date Scheduled	16/03/07	16/03/07	16/03/07	16/03/07	16/03/07			
Laboratory Reference No	214175	214176	214179	214180	214181			
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	-	-	< 25	-	-	071S[IM]	ug/kg	25
Dibromomethane	-	-	< 25	-	-	071S[IM]	ug/kg	25
1,2-Dichloropropane	-	-	< 25	-	-	071S[IM]	ug/kg	25
Trichloroethene	-	-	< 25	-	-	071S[IM]	ug/kg	25
Bromodichloromethane	-	-	< 25	-	-	071S[IM]	ug/kg	25
Cis-1,3 Dichloropropene	-	-	< 25	-	-	071S[IM]	ug/kg	25
Trans-1,3 Dichloropropene	-	-	< 25	-	-	071S[IM]	ug/kg	25
1,1,2-Trichloroethane	-	-	< 25	-	-	071S[IM]	ug/kg	25
Toluene	-	-	< 25	-	-	071S	ug/kg	25
1,3 -Dichloropropane	-	-	< 25	-	-	071S[IM]	ug/kg	25
Dibromochloromethane	-	-	< 25	-	-	071S[IM]	ug/kg	25
1,2-Dibromoethane	-	-	< 25	-	-	071S[IM]	ug/kg	25
Tetrachloroethene	-	-	< 25	-	-	071S	ug/kg	25
1,1,1,2-Tetrachloroethane	-	-	< 25	-	-	071S	ug/kg	25
Chlorobenzene	-	-	< 25	-	-	071S[IM]	ug/kg	25
Ethyl Benzene	-	-	< 25	-	-	071S	ug/kg	25
m,p-Xylenes	-	-	< 50	-	-	071S	ug/kg	50
Bromoform	-	-	< 25	-	-	071S[IM]	ug/kg	25
Styrene	-	-	< 25	-	-	071S[IM]	ug/kg	25
o-Xylene	-	-	< 25	-	-	071S	ug/kg	25
1,1,2,2 Tetrachloroethane	-	-	< 25	-	-	071S	ug/kg	25
1,2,3-Trichloropropane	-	-	< 25	-	-	071S[IM]	ug/kg	25
Isopropylbenzene	-	-	< 25	-	-	071S[IM]	ug/kg	25
Bromobenzene	-	-	< 25	-	-	071S[IM]	ug/kg	25
n-propylbenzene	-	-	< 25	-	-	071S[IM]	ug/kg	25
2-Chlorotoluene	-	-	< 25	-	-	071S[IM]	ug/kg	25
4-Chlorotoluene	-	-	< 25	-	-	071S[IM]	ug/kg	25
1,3,5 Trimethylbenzene	-	-	< 25	-	-	071S	ug/kg	25
tert-butylbenzene	-	-	< 25	-	-	071S[IM]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28888
Matrix : Soil
Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH5_01	BH5_02	BH17_01	BH17_01	BH5_03	Method No	Units	LOD
Sample Depth (m)	4.00	1.00	1.00	3.00	0.50			
Date Sampled	14/03/07	14/03/07	14/03/07	14/03/07	14/03/07			
Date Scheduled	16/03/07	16/03/07	16/03/07	16/03/07	16/03/07			
Laboratory Reference No	214175	214176	214179	214180	214181			
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	-	-	< 25	-	-	071S	ug/kg	25
sec-butylbenzene	-	-	< 25	-	-	071S[IM]	ug/kg	25
1,3 Dichlorobenzene	-	-	< 25	-	-	071S	ug/kg	25
1,4 Dichlorobenzene	-	-	< 25	-	-	071S	ug/kg	25
4-Isopropyltoluene	-	-	< 25	-	-	071S[IM]	ug/kg	25
1,2 Dichlorobenzene	-	-	< 25	-	-	071S	ug/kg	25
n-butylbenzene	-	-	< 25	-	-	071S	ug/kg	25
1,2,4-Trichlorobenzene	-	-	< 25	-	-	071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	-	-	< 25	-	-	071S	ug/kg	25
Hexachlorobutadiene	-	-	< 50	-	-	071S	ug/kg	50
1,2,3-Trichlorobenzene	-	-	< 25	-	-	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28888
Matrix : Soil
Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH5_03	BH5_03				Method No	Units	LOD
Sample Depth (m)	1.50	3.20						
Date Sampled	14/03/07	14/03/07						
Date Scheduled	16/03/07	16/03/07						
Laboratory Reference No	214182	214183						
Analysis								
* * VOC SUITE * *								
MTBE	-	< 0.025				071S[I]	mg/kg	0.025
Benzene	-	< 0.025				071S[I]	mg/kg	0.025
Toluene	-	< 0.025				071S[I]	mg/kg	0.025
Ethylbenzene	-	< 0.025				071S[I]	mg/kg	0.025
m,p-Xylenes	-	< 0.05				071S[I]	mg/kg	0.05
o-Xylene	-	< 0.025				071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	-	< 0.025				071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	-	< 0.025				071S[I]	mg/kg	0.025
Dichlorodifluoromethane	< 25	-				071S[IM]	ug/kg	25
Chloromethane	< 25	-				071S[IM]	ug/kg	25
Vinyl Chloride	< 25	-				071S	ug/kg	25
Bromomethane	< 25	-				071S[I]	ug/kg	25
Chloroethane	< 25	-				071S[IM]	ug/kg	25
Trichlorofluoromethane	< 25	-				071S[IM]	ug/kg	25
1,1-Dichloroethene	< 25	-				071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	< 25	-				071S[I]	ug/kg	25
Dichloromethane	< 50	-				071S	ug/kg	50
Carbon Disulfide	< 25	-				071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	< 25	-				071S	ug/kg	25
MTBE	< 25	-				071S	ug/kg	25
1,1 -Dichloroethane	< 25	-				071S	ug/kg	25
Cis-1,2 Dichloroethene	< 25	-				071S[IM]	ug/kg	25
Bromochloromethane	< 25	-				071S[IM]	ug/kg	25
Chloroform	< 25	-				071S[IM]	ug/kg	25
2,2-Dichloropropane	< 25	-				071S[IM]	ug/kg	25
1,1,1-Trichloroethane	< 25	-				071S	ug/kg	25
1,2-Dichloroethane	< 25	-				071S	ug/kg	25
1,1-Dichloropropene	< 25	-				071S[IM]	ug/kg	25
Benzene	< 25	-				071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28888
Matrix : Soil
Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH5_03	BH5_03				Method No	Units	LOD
Sample Depth (m)	1.50	3.20						
Date Sampled	14/03/07	14/03/07						
Date Scheduled	16/03/07	16/03/07						
Laboratory Reference No	214182	214183						
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	< 25	-				071S[IM]	ug/kg	25
Dibromomethane	< 25	-				071S[IM]	ug/kg	25
1,2-Dichloropropane	< 25	-				071S[IM]	ug/kg	25
Trichloroethene	< 25	-				071S[IM]	ug/kg	25
Bromodichloromethane	< 25	-				071S[IM]	ug/kg	25
Cis-1,3 Dichloropropene	< 25	-				071S[IM]	ug/kg	25
Trans-1,3 Dichloropropene	< 25	-				071S[IM]	ug/kg	25
1,1,2-Trichloroethane	< 25	-				071S[IM]	ug/kg	25
Toluene	< 25	-				071S	ug/kg	25
1,3 -Dichloropropane	< 25	-				071S[IM]	ug/kg	25
Dibromochloromethane	< 25	-				071S[IM]	ug/kg	25
1,2-Dibromoethane	< 25	-				071S[IM]	ug/kg	25
Tetrachloroethene	< 25	-				071S	ug/kg	25
1,1,1,2-Tetrachloroethane	< 25	-				071S	ug/kg	25
Chlorobenzene	< 25	-				071S[IM]	ug/kg	25
Ethyl Benzene	< 25	-				071S	ug/kg	25
m,p-Xylenes	< 50	-				071S	ug/kg	50
Bromoform	< 25	-				071S[IM]	ug/kg	25
Styrene	< 25	-				071S[IM]	ug/kg	25
o-Xylene	< 25	-				071S	ug/kg	25
1,1,2,2 Tetrachloroethane	< 25	-				071S	ug/kg	25
1,2,3-Trichloropropane	< 25	-				071S[IM]	ug/kg	25
Isopropylbenzene	< 25	-				071S[IM]	ug/kg	25
Bromobenzene	< 25	-				071S[IM]	ug/kg	25
n-propylbenzene	< 25	-				071S[IM]	ug/kg	25
2-Chlorotoluene	< 25	-				071S[IM]	ug/kg	25
4-Chlorotoluene	< 25	-				071S[IM]	ug/kg	25
1,3,5 Trimethylbenzene	< 25	-				071S	ug/kg	25
tert-butylbenzene	< 25	-				071S[IM]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-28888
Matrix : Soil
Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	**BH5_03**	**BH5_03**				**Method No**	**Units**	**LOD**
Sample Depth (m)	**1.50**	**3.20**						
Date Sampled	**14/03/07**	**14/03/07**						
Date Scheduled	**16/03/07**	**16/03/07**						
Laboratory Reference No	**214182**	**214183**						
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	< 25	-				071S	ug/kg	25
sec-butylbenzene	< 25	-				071S[I M]	ug/kg	25
1,3 Dichlorobenzene	< 25	-				071S	ug/kg	25
1,4 Dichlorobenzene	< 25	-				071S	ug/kg	25
4-Isopropyltoluene	< 25	-				071S[I M]	ug/kg	25
1,2 Dichlorobenzene	< 25	-				071S	ug/kg	25
n-butylbenzene	< 25	-				071S	ug/kg	25
1,2,4-Trichlorobenzene	< 25	-				071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	< 25	-				071S	ug/kg	25
Hexachlorobutadiene	< 50	-				071S	ug/kg	50
1,2,3-Trichlorobenzene	< 25	-				071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
EPH Description

Job Number: 07-28888
Client: Environ UK Ltd
Project Code: 61-C11647

Matrix: Soils
Project Name: ALCOA

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
214168	BH16_01	0.50	14/03/07	The sample chromatogram exhibits a trace primarily consistent with a lubrication oil standard.
214169	BH16_01	1.00	14/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to C40.
214170	BH16_01	3.00	14/03/07	The sample chromatogram exhibits a trace primarily consistent with a lubrication oil standard.
214171	BH11_03	1.50-2.50	14/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40.
214172	BH11_03	4.00-5.00	14/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40.
214174	BH5_01	1.00	14/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40, overlain by a series of peaks consistent with a small amount of PAHs.
214175	BH5_01	4.00	14/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40.
214176	BH5_02	1.00	14/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40, overlain by a series of small n-alkane peaks eluting through the diesel range.

ALcontrol Technichem
EPH Description

Job Number: 07-28888
Client: Environ UK Ltd
Project Code: 61-C11647

Matrix: Soils
Project Name: ALCOA

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
214177	BH5_02	2.00	14/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C14 to C40.
214178	BH17_01	0.50	14/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to beyond C40.
214179	BH17_01	1.00	14/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to beyond C40.
214180	BH17_01	3.00	14/03/07	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.
214181	BH5_03	0.50	14/03/07	The sample chromatogram exhibits several overlapping humps of unresolved complex material eluting from before C10 to beyond C40, overlain by several peaks unidentifiable by this analysis.
214183	BH5_03	3.20	14/03/07	The sample chromatogram exhibits several overlapping humps of unresolved complex material eluting from C10 to beyond C40, overlain by several peaks unidentifiable by this analysis.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-28888

Project Code: 61-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
070S	In-house method	Determination of hexane/acetone extractable hydrocarbons in soil by gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	W
022S	In-house method	Determination of PAH compounds in soil samples by hexane / acetone extraction followed by GC-MS detection	W
009S	In-house method referencing BS1377: Part 3: 1990 and Second Site Property: Environmental Assessment Guidance Version 3: March 2003	Determination of pH by addition of water followed by electrometric measurement	W
CWGS	In-house method based on "Total Petroleum Hydrocarbon Criteria Working Group" series, 1998-9	Determination of "CWG" banded petroleum hydrocarbons in soil samples using a combination of headspace GC-FID (C5-C12) and hexane:acetone extraction / silica-alumina aliphatic - aromatic split / GC-FID (C12-C35) techniques with banding by comparison to alkane standards	W
071S	In-house method	Determination of volatile organic compounds in soil samples by headspace GC-MS analysis	W
092	In-house method	Determination of organic content and organic carbon in soil samples by combustion analyser	D
069S	In-house method based on MEWAM "Methods for the Determination of Metals in Soil", HMSO, 1986	Determination of metals in soil samples by aqua-regia digestion followed by ICP-OES detection	D
016S	In-house method	Determination of water soluble boron by 2:1 extraction in hot water followed by ICP-OES detection	D

Soil results are expressed on a dry weight basis. Where the test uses as-received sample, a moisture correction factor is applied to the wet weight result. This factor is determined gravimetrically using weight loss on drying at 30º (+/-5) C.

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

10 April 2007

TEST REPORT

Our Report Number: 07-29296

Your Order Reference: Instructions of 26/03/2007

1 product sample and 1 water sample submitted for analysis on 26/03/2007

Project Name: ALCOA

Project Code: 64-C11647

Laboratory analysis started on 27/03/2007
All laboratory analysis completed by 10 April 2007

Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

Rhys Ashton
Project Co-ordinator
ALCONTROL TECHNICHEM

Test methods are documented in house procedures or where appropriate standard methods. Non accredited tests (if applicable) are identified on each page. Procedures for sampling are outside the scope of the laboratory UKAS accreditation. Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation. All samples connected with this report , including any 'on hold', will be stored and disposed of according to company policy. A copy of this policy is available on request.

ALcontrol Technichem
Table Of Results

Job Number : 07-29296
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	**BH13_03**					**Method No**	**Units**	**LOD**
Sample Depth (m)	**-**							
Date Sampled	**22/03/07**							
Date Scheduled	**26/03/07**							
Laboratory Reference No	**215897**							
Analysis								
Arsenic (Dissolved)	0.010					080W[I]	mg/l	0.005
Boron (Dissolved)	0.018					080W[I]	mg/l	0.005
Cadmium (Dissolved)	< 0.001					080W[I]	mg/l	0.001
Chromium (Dissolved)	< 0.005					080W[I]	mg/l	0.005
Chromium (Hexavalent)	< 0.01					007W[I]	mg/l	0.01
Copper (Dissolved)	< 0.005					080W[I]	mg/l	0.005
Lead (Dissolved)	< 0.005					080W[I]	mg/l	0.005
Mercury (Dissolved)	< 0.00005					080W[I]	mg/l	0.00005
Nickel (Dissolved)	< 0.005					080W[I]	mg/l	0.005
Selenium (Dissolved)	< 0.005					080W[I]	mg/l	0.005
Zinc (Dissolved)	< 0.005					080W[I]	mg/l	0.005
pH	7.6					084W[I]	pH Units	

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-29296
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH13_03					Method No	Units	LOD
Sample Depth (m)	-							
Date Sampled	22/03/07							
Date Scheduled	26/03/07							
Laboratory Reference No	215897							
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.0010‡					022W[I]	mg/l	0.0001
Acenaphthalene	< 0.0010‡					022W[I]	mg/l	0.0001
Acenaphthene	< 0.0010‡					022W[I]	mg/l	0.0001
Fluorene	< 0.0010‡					022W[I]	mg/l	0.0001
Phenanthrene	< 0.0010‡					022W[I]	mg/l	0.0001
Anthracene	< 0.0010‡					022W[I]	mg/l	0.0001
Fluoranthene	< 0.0010‡					022W[I]	mg/l	0.0001
Pyrene	< 0.0010‡					022W[I]	mg/l	0.0001
Benzo(a)anthracene	< 0.0010‡					022W[I]	mg/l	0.0001
Chrysene	< 0.0010‡					022W[I]	mg/l	0.0001
Benzo(b)fluoranthene	< 0.0010‡					022W[I]	mg/l	0.0001
Benzo(k)fluoranthene	< 0.0010‡					022W[I]	mg/l	0.0001
Benzo(a)pyrene	< 0.0010‡					022W[I]	mg/l	0.0001
Indeno(1,2,3-cd)pyrene	< 0.0010‡					022W[I]	mg/l	0.0001
Dibenzo(a,h)anthracene	< 0.0010‡					022W[I]	mg/l	0.0001
Benzo(g,h,i)perylene	< 0.0010‡					022W[I]	mg/l	0.0001
PAH (Sum of Dutch 10)	ND					022W[I]	mg/l	0.0001
PAH (Sum of EPA 16)	ND					022W[I]	mg/l	0.0001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes detection limit(s) raised due to nature of sample.

ALcontrol Technichem
Table Of Results

Job Number : 07-29296
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH13_03					Method No	Units	LOD
Sample Depth (m)	-							
Date Sampled	22/03/07							
Date Scheduled	26/03/07							
Laboratory Reference No	215897							
Analysis								
* * CWG SUITE * *								
Aliphatic C5-C6	< 0.01					CWGW	mg/l	0.01
Aliphatic >C6-C8	< 0.01					CWGW	mg/l	0.01
Aliphatic >C8-C10	< 0.01					CWGW	mg/l	0.01
Aliphatic >C10-C12	< 0.01					CWGW	mg/l	0.01
Aliphatic >C12-C16	0.07					CWGW	mg/l	0.01
Aliphatic >C16-C21	0.55					CWGW	mg/l	0.01
Aliphatic >C21-C35	11					CWGW	mg/l	0.01
Total Aliphatics (C5-C35)	11.69					CWGW	mg/l	0.01
Aromatic C6-C7	< 0.01					CWGW	mg/l	0.01
Aromatic >C7-C8	< 0.01					CWGW	mg/l	0.01
Aromatic >C8-C10	< 0.01					CWGW	mg/l	0.01
Aromatic >C10-C12	< 0.01					CWGW	mg/l	0.01
Aromatic >C12-C16	0.02					CWGW	mg/l	0.01
Aromatic >C16-C21	0.11					CWGW	mg/l	0.01
Aromatic >C21-C35	3.0					CWGW	mg/l	0.01
Total Aromatics (C5-C35)	3.11					CWGW	mg/l	0.01
Volatile Hydrocarbons (C5-C12)	< 0.01					CWGW	mg/l	0.01
Extractable Hydrocarbons (C12-C35)	14.8					CWGW	mg/l	0.01
Total Hydrocarbons (C5-C35)	14.8					CWGW	mg/l	0.01
MTBE	< 0.005					CWGW[I]	mg/l	0.005
Benzene	< 0.005					CWGW[I]	mg/l	0.005
Toluene	< 0.005					CWGW[I]	mg/l	0.005
Ethylbenzene	< 0.005					CWGW[I]	mg/l	0.005
m,p-Xylenes	< 0.005					CWGW[I]	mg/l	0.005
o-Xylene	< 0.005					CWGW[I]	mg/l	0.005
1,3,5-Trimethylbenzene	< 0.005					CWGW[I]	mg/l	0.005
1,2,4-Trimethylbenzene	< 0.005					CWGW[I]	mg/l	0.005

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-29296
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH13_03					Method No	Units	LOD
Sample Depth (m)	-							
Date Sampled	22/03/07							
Date Scheduled	26/03/07							
Laboratory Reference No	215897							
Analysis								
* * VOC SUITE * *								
Vinyl Chloride	< 0.01					040W [I]	mg/l	0.01
Chloroethane	< 0.001					040W [I]	mg/l	0.001
Trichlorofluoromethane	< 0.001					040W [I]	mg/l	0.001
1,1-Dichloroethene	< 0.001					040W	mg/l	0.001
112-Trichloro-122-Trifluoroethane	< 0.025					040W [I]	mg/l	0.025
Dichloromethane	< 0.050					040W [I]	mg/l	0.05
Trans-1,2 Dichloroethene	< 0.001					040W [I]	mg/l	0.001
MTBE	< 0.001					040W [I]	mg/l	0.001
1,1 -Dichloroethane	< 0.001					040W [I]	mg/l	0.001
Cis-1,2 Dichloroethene	< 0.001					040W [I]	mg/l	0.001
Chloroform	< 0.001					040W [I]	mg/l	0.001
1,1,1-Trichloroethane	< 0.001					040W [I]	mg/l	0.001
1,2-Dichloroethane	< 0.001					040W [I]	mg/l	0.001
Benzene	< 0.001					040W [I]	mg/l	0.001
Carbon Tetrachloride	< 0.001					040W [I]	mg/l	0.001
Trichloroethene	< 0.001					040W [I]	mg/l	0.001
Bromodichloromethane	< 0.001					040W [I]	mg/l	0.001
Cis-1,3 Dichloropropene	< 0.001					040W [I]	mg/l	0.001
Trans-1,3 Dichloropropene	< 0.001					040W [I]	mg/l	0.001
1,1,2-Trichloroethane	< 0.001					040W [I]	mg/l	0.001
Toluene	< 0.001					040W [I]	mg/l	0.001
Dibromochloromethane	< 0.001					040W [I]	mg/l	0.001
Tetrachloroethene	< 0.001					040W [I]	mg/l	0.001
Chlorobenzene	< 0.001					040W [I]	mg/l	0.001
Ethyl Benzene	< 0.001					040W [I]	mg/l	0.001
m,p-Xylenes	< 0.001					040W [I]	mg/l	0.001
Bromoform	< 0.001					040W [I]	mg/l	0.001
o-Xylene	< 0.001					040W [I]	mg/l	0.001
1,1,2,2 Tetrachloroethane	< 0.001					040W [I]	mg/l	0.001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-29296
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH13_03					Method No	Units	LOD
Sample Depth (m)	-							
Date Sampled	22/03/07							
Date Scheduled	26/03/07							
Laboratory Reference No	215897							
Analysis								
* * VOC SUITE Cont.. * *								
1,3,5 Trimethylbenzene	< 0.001					040W [I]	mg/l	0.001
1,2,4 Trimethylbenzene	< 0.001					040W [I]	mg/l	0.001
1,3 Dichlorobenzene	< 0.001					040W [I]	mg/l	0.001
1,4 Dichlorobenzene	< 0.001					040W [I]	mg/l	0.001
1,2 Dichlorobenzene	< 0.001					040W [I]	mg/l	0.001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-29296
Matrix : Product
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	**BH13_03**		**Method No**	**Units**	**LOD**
Sample Depth (m)	**-**				
Date Sampled	**22/03/07**				
Date Scheduled	**26/03/07**				
Laboratory Reference No	**215898**				
Analysis					
Product ID (visual estimate)	< 1		ProdID	%	
Product ID Description	The sample chromatogram exhibits a trace primarily consistent with a lubrication oil standard.		ProdID		

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-29296

Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
ProdID	In-house method	Product identification by chromatogram comparison with in-house library standard traces	
CWGW	In-house method based on "Total Petroleum Hydrocarbon Criteria Working Group" series, 1998-9	Determination of "CWG" banded petroleum hydrocarbons in aqueous samples using a combination of headspace GC-FID (C5-C12) and pentane extraction / silica-alumina aliphatic - aromatic split / GC-FID (C12-C35) techniques with banding by comparison to alkane standards	
084W	In-house method	Determination of pH in aqueous samples by direct electrometric measurement	
080W	In-house method based on MEWAM "Inductively Coupled Plasma Spectrometry", HMSO, 1996	Determination of metals in aqueous samples by nitric acid digestion followed by Inductively Coupled Plasma - Mass Spectrometry detection (ICP-MS)	
040W	In-house method based on EPA624 "Volatile Organic Compounds in Waste Waters"	Determination of volatile organic compounds in aqueous samples by headspace GC-MS	
022W	In-house method	Determination of PAH compounds in aqueous samples by pentane extraction followed by GC-MS detection	
007W	In-house method based on Method 3500-Cr, "Standard Methods for the Examination of Water and Waste Water", APHA AWWA WEF, Edition 18, 1992	Determination of hexavalent chromium in aqueous samples by ICP-OES screen	

Soil results are expressed on a dry weight basis. Where the test uses as-received sample, a moisture correction factor is applied to the wet weight result. This factor is determined gravimetrically using weight loss on drying at 30º (+/-5) C.

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

10 April 2007

TEST REPORT

Our Report Number: 07-29310

Your Order Reference: Instructions of 26/03/2007

9 water samples submitted for analysis on 26/03/2007

Project Name: ALCOA

Project Code: 64-C11647

Laboratory analysis started on 28/03/2007
All laboratory analysis completed by 10 April 2007

Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

Rhys Ashton
Project Co-ordinator
ALCONTROL TECHNICHEM

ALcontrol Technichem
Table Of Results

Job Number : 07-29310
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH13_01	BH11_01	BH11_02	BH11_03	BH5_01	Method No	Units	LOD
Sample Depth (m)	-	-	-	-	-			
Date Sampled	22/03/07	22/03/07	22/03/07	22/03/07	22/03/07			
Date Scheduled	26/03/07	26/03/07	26/03/07	26/03/07	26/03/07			
Laboratory Reference No	216001	216002	216003	216004	216005			
Analysis								
Arsenic (Dissolved)	< 0.005	< 0.005	-	< 0.005	< 0.005	080W [I]	mg/l	0.005
Boron (Dissolved)	0.036	0.059	-	0.035	0.024	080W [I]	mg/l	0.005
Cadmium (Dissolved)	< 0.001	< 0.001	-	< 0.001	< 0.001	080W [I]	mg/l	0.001
Chromium (Dissolved)	< 0.005	< 0.005	-	< 0.005	< 0.005	080W [I]	mg/l	0.005
Chromium (Hexavalent)	< 0.01	-	-	-	-	007W [I]	mg/l	0.01
Copper (Dissolved)	< 0.005	< 0.005	-	< 0.005	< 0.005	080W [I]	mg/l	0.005
Lead (Dissolved)	< 0.005	< 0.005	-	< 0.005	< 0.005	080W [I]	mg/l	0.005
Mercury (Dissolved)	< 0.00005	< 0.00005	-	< 0.00005	< 0.00005	080W [I]	mg/l	0.00005
Nickel (Dissolved)	0.009	0.006	-	0.008	< 0.005	080W [I]	mg/l	0.005
Selenium (Dissolved)	< 0.005	< 0.005	-	< 0.005	< 0.005	080W [I]	mg/l	0.005
Zinc (Dissolved)	0.007	0.020	-	0.021	< 0.005	080W [I]	mg/l	0.005
pH	6.7	6.7	6.4	6.8	7.4	084W [I]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	0.17	-	0.30	0.09	0.05	072W [I]	mg/l	0.01

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-29310
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH5_02	BH5_03	BH3_02	BH17_01		Method No	Units	LOD
Sample Depth (m)	-	-	-	-				
Date Sampled	22/03/07	22/03/07	22/03/07	22/03/07				
Date Scheduled	26/03/07	26/03/07	26/03/07	26/03/07				
Laboratory Reference No	216006	216007	216008	216009				
Analysis								
Arsenic (Dissolved)	-	< 0.005	< 0.005	0.009		080W[I]	mg/l	0.005
Boron (Dissolved)	-	0.079	0.11	0.046		080W[I]	mg/l	0.005
Cadmium (Dissolved)	-	< 0.001	< 0.001	< 0.001		080W[I]	mg/l	0.001
Chromium (Dissolved)	-	< 0.005	< 0.005	< 0.005		080W[I]	mg/l	0.005
Chromium (Hexavalent)	-	-	-	-		007W[I]	mg/l	0.01
Copper (Dissolved)	-	< 0.005	< 0.005	< 0.005		080W[I]	mg/l	0.005
Lead (Dissolved)	-	< 0.005	< 0.005	< 0.005		080W[I]	mg/l	0.005
Mercury (Dissolved)	-	< 0.00005	< 0.00005	< 0.00005		080W[I]	mg/l	0.00005
Nickel (Dissolved)	-	< 0.005	< 0.005	< 0.005		080W[I]	mg/l	0.005
Selenium (Dissolved)	-	< 0.005	< 0.005	< 0.005		080W[I]	mg/l	0.005
Zinc (Dissolved)	-	0.011	0.011	< 0.005		080W[I]	mg/l	0.005
pH	6.7	7.1	6.9	7.1		084W[I]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	-	5.0	-	-		072W[I]	mg/l	0.01

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-29310
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH13_01	BH11_01	BH11_02	BH11_03	BH5_01	Method No	Units	LOD
Sample Depth (m)	-	-	-	-	-			
Date Sampled	22/03/07	22/03/07	22/03/07	22/03/07	22/03/07			
Date Scheduled	26/03/07	26/03/07	26/03/07	26/03/07	26/03/07			
Laboratory Reference No	216001	216002	216003	216004	216005			
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	022W [I]	mg/l	0.0001
Acenaphthalene	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	022W [I]	mg/l	0.0001
Acenaphthene	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	022W [I]	mg/l	0.0001
Fluorene	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	022W [I]	mg/l	0.0001
Phenanthrene	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	022W [I]	mg/l	0.0001
Anthracene	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	022W [I]	mg/l	0.0001
Fluoranthene	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	022W [I]	mg/l	0.0001
Pyrene	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	022W [I]	mg/l	0.0001
Benzo(a)anthracene	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	022W [I]	mg/l	0.0001
Chrysene	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	022W [I]	mg/l	0.0001
Benzo(b)fluoranthene	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	022W [I]	mg/l	0.0001
Benzo(k)fluoranthene	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	022W [I]	mg/l	0.0001
Benzo(a)pyrene	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	022W [I]	mg/l	0.0001
Indeno(1,2,3-cd)pyrene	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	022W [I]	mg/l	0.0001
Dibenzo(a,h)anthracene	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	022W [I]	mg/l	0.0001
Benzo(g,h,i)perylene	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	022W [I]	mg/l	0.0001
PAH (Sum of Dutch 10)	ND	ND	ND	ND	ND	022W [I]	mg/l	0.0001
PAH (Sum of EPA 16)	ND	ND	ND	ND	ND	022W [I]	mg/l	0.0001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes detection limit(s) raised due to nature of sample.

ALcontrol Technichem
Table Of Results

Job Number : 07-29310
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH5_02	BH5_03	BH3_02	BH17_01		Method No	Units	LOD
Sample Depth (m)	-	-	-	-				
Date Sampled	22/03/07	22/03/07	22/03/07	22/03/07				
Date Scheduled	26/03/07	26/03/07	26/03/07	26/03/07				
Laboratory Reference No	216006	216007	216008	216009				
Analysis								
*** * PAH SUITE * ***								
Naphthalene	< 0.0001	< 0.0010‡	< 0.0001	< 0.0001		022W [I]	mg/l	0.0001
Acenaphthalene	< 0.0001	< 0.0010‡	< 0.0001	< 0.0001		022W [I]	mg/l	0.0001
Acenaphthene	< 0.0001	< 0.0010‡	< 0.0001	< 0.0001		022W [I]	mg/l	0.0001
Fluorene	< 0.0001	< 0.0010‡	< 0.0001	< 0.0001		022W [I]	mg/l	0.0001
Phenanthrene	< 0.0001	< 0.0010‡	< 0.0001	0.0001		022W [I]	mg/l	0.0001
Anthracene	< 0.0001	< 0.0010‡	< 0.0001	< 0.0001		022W [I]	mg/l	0.0001
Fluoranthene	< 0.0001	< 0.0010‡	< 0.0001	< 0.0001		022W [I]	mg/l	0.0001
Pyrene	< 0.0001	< 0.0010‡	< 0.0001	< 0.0001		022W [I]	mg/l	0.0001
Benzo(a)anthracene	< 0.0001	< 0.0010‡	< 0.0001	< 0.0001		022W [I]	mg/l	0.0001
Chrysene	< 0.0001	< 0.0010‡	< 0.0001	< 0.0001		022W [I]	mg/l	0.0001
Benzo(b)fluoranthene	< 0.0001	< 0.0010‡	< 0.0001	< 0.0001		022W [I]	mg/l	0.0001
Benzo(k)fluoranthene	< 0.0001	< 0.0010‡	< 0.0001	< 0.0001		022W [I]	mg/l	0.0001
Benzo(a)pyrene	< 0.0001	< 0.0010‡	< 0.0001	< 0.0001		022W [I]	mg/l	0.0001
Indeno(1,2,3-cd)pyrene	< 0.0001	< 0.0010‡	< 0.0001	< 0.0001		022W [I]	mg/l	0.0001
Dibenzo(a,h)anthracene	< 0.0001	< 0.0010‡	< 0.0001	< 0.0001		022W [I]	mg/l	0.0001
Benzo(g,h,i)perylene	< 0.0001	< 0.0010‡	< 0.0001	< 0.0001		022W [I]	mg/l	0.0001
PAH (Sum of Dutch 10)	ND	ND	ND	0.0001		022W [I]	mg/l	0.0001
PAH (Sum of EPA 16)	ND	ND	ND	0.0001		022W [I]	mg/l	0.0001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ denotes detection limit(s) raised due to nature of sample.

ALcontrol Technichem
Table Of Results

Job Number : 07-29310
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH11_01	BH5_02	BH3_02	BH17_01		Method No	Units	LOD
Sample Depth (m)	-	-	-	-				
Date Sampled	22/03/07	22/03/07	22/03/07	22/03/07				
Date Scheduled	26/03/07	26/03/07	26/03/07	26/03/07				
Laboratory Reference No	216002	216006	216008	216009				
Analysis								
* * CWG SUITE * *								
Aliphatic C5-C6	< 0.01	< 0.01	< 0.01	< 0.01		CWGW	mg/l	0.01
Aliphatic >C6-C8	< 0.01	< 0.01	< 0.01	< 0.01		CWGW	mg/l	0.01
Aliphatic >C8-C10	< 0.01	< 0.01	< 0.01	< 0.01		CWGW	mg/l	0.01
Aliphatic >C10-C12	< 0.01	< 0.01	< 0.01	< 0.01		CWGW	mg/l	0.01
Aliphatic >C12-C16	1.4	0.01	< 0.01	< 0.01		CWGW	mg/l	0.01
Aliphatic >C16-C21	1.6	0.01	< 0.01	< 0.01		CWGW	mg/l	0.01
Aliphatic >C21-C35	0.34	< 0.01	< 0.01	< 0.01		CWGW	mg/l	0.01
Total Aliphatics (C5-C35)	3.35	0.02	< 0.01	< 0.01		CWGW	mg/l	0.01
Aromatic C6-C7	< 0.01	< 0.01	< 0.01	< 0.01		CWGW	mg/l	0.01
Aromatic >C7-C8	< 0.01	< 0.01	< 0.01	< 0.01		CWGW	mg/l	0.01
Aromatic >C8-C10	< 0.01	< 0.01	< 0.01	< 0.01		CWGW	mg/l	0.01
Aromatic >C10-C12	< 0.01	< 0.01	< 0.01	< 0.01		CWGW	mg/l	0.01
Aromatic >C12-C16	0.05	< 0.01	< 0.01	< 0.01		CWGW	mg/l	0.01
Aromatic >C16-C21	0.10	< 0.01	< 0.01	< 0.01		CWGW	mg/l	0.01
Aromatic >C21-C35	< 0.01	< 0.01	< 0.01	< 0.01		CWGW	mg/l	0.01
Total Aromatics (C5-C35)	0.15	< 0.01	< 0.01	< 0.01		CWGW	mg/l	0.01
Volatile Hydrocarbons (C5-C12)	< 0.01	< 0.01	< 0.01	< 0.01		CWGW	mg/l	0.01
Extractable Hydrocarbons (C12-C35)	3.50	0.02	< 0.01	< 0.01		CWGW	mg/l	0.01
Total Hydrocarbons (C5-C35)	3.50	0.02	< 0.01	< 0.01		CWGW	mg/l	0.01
MTBE	< 0.005	< 0.005	< 0.005	< 0.005		CWGW[I]	mg/l	0.005
Benzene	< 0.005	< 0.005	< 0.005	< 0.005		CWGW[I]	mg/l	0.005
Toluene	< 0.005	< 0.005	< 0.005	< 0.005		CWGW[I]	mg/l	0.005
Ethylbenzene	< 0.005	< 0.005	< 0.005	< 0.005		CWGW[I]	mg/l	0.005
m,p-Xylenes	< 0.005	< 0.005	< 0.005	< 0.005		CWGW[I]	mg/l	0.005
o-Xylene	< 0.005	< 0.005	< 0.005	< 0.005		CWGW[I]	mg/l	0.005
1,3,5-Trimethylbenzene	< 0.005	< 0.005	< 0.005	< 0.005		CWGW[I]	mg/l	0.005
1,2,4-Trimethylbenzene	< 0.005	< 0.005	< 0.005	< 0.005		CWGW[I]	mg/l	0.005

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-29310
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH11_02	BH11_03	BH5_01	BH5_02	BH5_03	Method No	Units	LOD
Sample Depth (m)	-	-	-	-	-			
Date Sampled	22/03/07	22/03/07	22/03/07	22/03/07	22/03/07			
Date Scheduled	26/03/07	26/03/07	26/03/07	26/03/07	26/03/07			
Laboratory Reference No	216003	216004	216005	216006	216007			
Analysis								
* * VOC SUITE * *								
Vinyl Chloride	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	040W [I]	mg/l	0.01
Chloroethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
Trichlorofluoromethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
1,1-Dichloroethene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W	mg/l	0.001
112-Trichloro-122-Trifluoroethane	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	040W [I]	mg/l	0.025
Dichloromethane	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	040W [I]	mg/l	0.05
Trans-1,2 Dichloroethene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
MTBE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
1,1 -Dichloroethane	< 0.001	< 0.001	0.002	< 0.001	< 0.001	040W [I]	mg/l	0.001
Cis-1,2 Dichloroethene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
Chloroform	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
1,1,1-Trichloroethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
1,2-Dichloroethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
Benzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
Carbon Tetrachloride	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
Trichloroethene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
Bromodichloromethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
Cis-1,3 Dichloropropene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
Trans-1,3 Dichloropropene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
1,1,2-Trichloroethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
Toluene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
Dibromochloromethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
Tetrachloroethene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
Chlorobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
Ethyl Benzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
m,p-Xylenes	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
Bromoform	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
o-Xylene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
1,1,2,2 Tetrachloroethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-29310
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH11_02	BH11_03	BH5_01	BH5_02	BH5_03	Method No	Units	LOD
Sample Depth (m)	-	-	-	-	-			
Date Sampled	22/03/07	22/03/07	22/03/07	22/03/07	22/03/07			
Date Scheduled	26/03/07	26/03/07	26/03/07	26/03/07	26/03/07			
Laboratory Reference No	216003	216004	216005	216006	216007			
Analysis								
* * VOC SUITE Cont.. * *								
1,3,5 Trimethylbenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
1,2,4 Trimethylbenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
1,3 Dichlorobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
1,4 Dichlorobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001
1,2 Dichlorobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	040W [I]	mg/l	0.001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-29310
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH3_02	BH17_01				Method No	Units	LOD
Sample Depth (m)	-	-						
Date Sampled	22/03/07	22/03/07						
Date Scheduled	26/03/07	26/03/07						
Laboratory Reference No	216008	216009						
Analysis								
* * VOC SUITE * *								
Vinyl Chloride	< 0.01	< 0.01				040W[I]	mg/l	0.01
Chloroethane	< 0.001	< 0.001				040W[I]	mg/l	0.001
Trichlorofluoromethane	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,1-Dichloroethene	< 0.001	< 0.001				040W	mg/l	0.001
112-Trichloro-122-Trifluoroethane	< 0.025	< 0.025				040W[I]	mg/l	0.025
Dichloromethane	< 0.050	< 0.050				040W[I]	mg/l	0.05
Trans-1,2 Dichloroethene	< 0.001	< 0.001				040W[I]	mg/l	0.001
MTBE	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,1 -Dichloroethane	< 0.001	< 0.001				040W[I]	mg/l	0.001
Cis-1,2 Dichloroethene	< 0.001	0.004				040W[I]	mg/l	0.001
Chloroform	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,1,1-Trichloroethane	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,2-Dichloroethane	< 0.001	< 0.001				040W[I]	mg/l	0.001
Benzene	< 0.001	< 0.001				040W[I]	mg/l	0.001
Carbon Tetrachloride	< 0.001	< 0.001				040W[I]	mg/l	0.001
Trichloroethene	< 0.001	< 0.001				040W[I]	mg/l	0.001
Bromodichloromethane	< 0.001	< 0.001				040W[I]	mg/l	0.001
Cis-1,3 Dichloropropene	< 0.001	< 0.001				040W[I]	mg/l	0.001
Trans-1,3 Dichloropropene	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,1,2-Trichloroethane	< 0.001	< 0.001				040W[I]	mg/l	0.001
Toluene	< 0.001	< 0.001				040W[I]	mg/l	0.001
Dibromochloromethane	< 0.001	< 0.001				040W[I]	mg/l	0.001
Tetrachloroethene	< 0.001	< 0.001				040W[I]	mg/l	0.001
Chlorobenzene	< 0.001	< 0.001				040W[I]	mg/l	0.001
Ethyl Benzene	< 0.001	< 0.001				040W[I]	mg/l	0.001
m,p-Xylenes	< 0.001	< 0.001				040W[I]	mg/l	0.001
Bromoform	< 0.001	< 0.001				040W[I]	mg/l	0.001
o-Xylene	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,1,2,2 Tetrachloroethane	< 0.001	< 0.001				040W[I]	mg/l	0.001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-29310
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH3_02	BH17_01				Method No	Units	LOD
Sample Depth (m)	-	-						
Date Sampled	22/03/07	22/03/07						
Date Scheduled	26/03/07	26/03/07						
Laboratory Reference No	216008	216009						
Analysis								
* * VOC SUITE Cont.. * *								
1,3,5 Trimethylbenzene	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,2,4 Trimethylbenzene	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,3 Dichlorobenzene	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,4 Dichlorobenzene	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,2 Dichlorobenzene	< 0.001	< 0.001				040W[I]	mg/l	0.001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
EPH Description

Job Number: 07-29310
Client: Environ UK Ltd
Project Code: 64-C11647

Matrix: Waters
Project Name: ALCOA

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
216001	BH13_01	-	22/03/07	The sample chromatogram exhibits two overlapping humps of unresolved complex material eluting from C12 to beyond C40.
216003	BH11_02	-	22/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40 overlain by several peaks unidentifiable by this analysis.
216004	BH11_03	-	22/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40 overlain by several peaks unidentifiable by this analysis.
216005	BH5_01	-	22/03/07	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.
216007	BH5_03	-	22/03/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to beyond C40 overlain by several peaks unidentifiable by this analysis.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-29310

Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
CWGW	In-house method based on "Total Petroleum Hydrocarbon Criteria Working Group" series, 1998-9	Determination of "CWG" banded petroleum hydrocarbons in aqueous samples using a combination of headspace GC-FID (C5-C12) and pentane extraction / silica-alumina aliphatic - aromatic split / GC-FID (C12-C35) techniques with banding by comparison to alkane standards	
084W	In-house method	Determination of pH in aqueous samples by direct electrometric measurement	
080W	In-house method based on MEWAM "Inductively Coupled Plasma Spectrometry", HMSO, 1996	Determination of metals in aqueous samples by nitric acid digestion followed by Inductively Coupled Plasma - Mass Spectrometry detection (ICP-MS)	
072W	In-house method	Determination of cyclopentane extractable hydrocarbons in aqueous samples by large volume injection gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	
040W	In-house method based on EPA624 "Volatile Organic Compounds in Waste Waters"	Determination of volatile organic compounds in aqueous samples by headspace GC-MS	
022W	In-house method	Determination of PAH compounds in aqueous samples by pentane extraction followed by GC-MS detection	
007W	In-house method based on Method 3500-Cr, "Standard Methods for the Examination of Water and Waste Water", APHA AWWA WEF, Edition 18, 1992	Determination of hexavalent chromium in aqueous samples by ICP-OES screen	

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

04 May 2007

TEST REPORT

Our Report Number: 07-30449

Your Order Reference: Instructions of 18/04/2007

7 soil samples submitted for analysis on 18/04/2007

Project Name: ALCOA

Project Code: 64-C11647

Laboratory analysis started on 20/04/2007
All laboratory analysis completed by 04 May 2007

Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

Rhys Ashton
Project Co-Ordinator
ALCONTROL TECHNICHEM

Test methods are documented in house procedures or where appropriate standard methods. Non accredited tests (if applicable) are identified on each page. Procedures for sampling are outside the scope of the laboratory UKAS accreditation. Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation. All samples connected with this report , including any 'on hold', will be stored and disposed of according to company policy. A copy of this policy is available on request.

ALcontrol Technichem
Sample Description

Job Number: 07-30449
Client: Environ UK Ltd
Project Code: 64-C11647

Matrix: Soil
Project Name: ALCOA

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	Sample Description
221849	BH14-01	1.0	16/04/07	Dark brown clay with gravel
221850	BH14-01	3.0	16/04/07	Dark brown clay with gravel
221851	BH14-01	4.0	16/04/07	Dark brown clay with gravel
221852	BH14-01	6.0	16/04/07	Dark brown clay with gravel
221853	BH15-01	0.1	16/04/07	*Grey rubble with plastic
221854	BH15-01	0.5	16/04/07	Dark brown clay with gravel
221855	BH15-01	1.5	16/04/07	Dark brown clay

*Denotes outside the scope of MCERTS accreditation since matrix not included in method validation.

ALcontrol Technichem
Table Of Results

Job Number : 07-30449
Matrix : Soil
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH14-01	BH14-01	BH14-01	BH14-01	BH15-01	Method No	Units	LOD
Sample Depth (m)	**1.00**	**3.00**	**4.00**	**6.00**	**0.10**			
Date Sampled	**16/04/07**	**16/04/07**	**16/04/07**	**16/04/07**	**16/04/07**			
Date Scheduled	**18/04/07**	**18/04/07**	**18/04/07**	**18/04/07**	**18/04/07**			
Laboratory Reference No	**221849**	**221850**	**221851**	**221852**	**221853**			
Analysis								
Moisture Content (Dry Weight)	11.4	14.1	16.2	14.0	0.6		%	0.1
Moisture Content (Wet Weight)	10.2	12.3	13.9	12.3	0.6		%	0.1
Arsenic	43	43	-	-	-	069S[IM]	mg/kg	3
Barium	87	92	-	-	-	069S[IM]	mg/kg	10
Beryllium	0.8	1.0	-	-	-	069S[IM]	mg/kg	0.5
Boron (W/S)	0.6	< 0.5	-	-	-	016S[IM]	mg/kg	0.5
Cadmium	0.6	< 0.5	-	-	-	069S[IM]	mg/kg	0.5
Chromium	24	30	-	-	-	069S[IM]	mg/kg	10
Copper	110	100	-	-	-	069S[IM]	mg/kg	5
Lead	64	68	-	-	-	069S[IM]	mg/kg	10
Mercury	0.7	0.6	-	-	-	069S[IM]	mg/kg	0.6
Nickel	18	25	-	-	-	069S[IM]	mg/kg	4
Selenium	< 2.5	< 2.5	-	-	-	069S[IM]	mg/kg	2.5
Sulphate (Total Acid Soluble) as SO4	-	440	-	-	-	025a[IM]	mg/kg	200
Vanadium	25	25	-	-	-	069S[IM]	mg/kg	3
Zinc	190	170	-	-	-	069S[IM]	mg/kg	10
Organic Carbon	-	-	1.6	-	-	092[IM]	%	0.1
pH	7.1	6.7	-	5.8	6.9	009S[IM]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	63	43	-	10	-	070S[IM]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30449
Matrix : Soil
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	**BH15-01**	**BH15-01**				**Method No**	**Units**	**LOD**
Sample Depth (m)	**0.50**	**1.50**						
Date Sampled	**16/04/07**	**16/04/07**						
Date Scheduled	**18/04/07**	**18/04/07**						
Laboratory Reference No	**221854**	**221855**						
Analysis								
Moisture Content (Dry Weight)	16.8	35.4					%	0.1
Moisture Content (Wet Weight)	14.4	26.1					%	0.1
Arsenic	72	-				069S[IM]	mg/kg	3
Barium	120	-				069S[IM]	mg/kg	10
Beryllium	0.8	-				069S[IM]	mg/kg	0.5
Boron (W/S)	< 0.5	-				016S[IM]	mg/kg	0.5
Cadmium	0.9	-				069S[IM]	mg/kg	0.5
Chromium	32	-				069S[IM]	mg/kg	10
Copper	120	-				069S[IM]	mg/kg	5
Lead	140	-				069S[IM]	mg/kg	10
Mercury	1.1	-				069S[IM]	mg/kg	0.6
Nickel	14	-				069S[IM]	mg/kg	4
Selenium	< 2.5	-				069S[IM]	mg/kg	2.5
Sulphate (Total Acid Soluble) as SO4	1500	-				025a[IM]	mg/kg	200
Vanadium	27	-				069S[IM]	mg/kg	3
Zinc	180	-				069S[IM]	mg/kg	10
Organic Carbon	2.6	-				092[IM]	%	0.1
pH	7.9	-				009S[IM]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	-	-				070S[IM]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30449
Matrix : Soil
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH14-01	BH15-01				Method No	Units	LOD
Sample Depth (m)	1.00	1.50						
Date Sampled	16/04/07	16/04/07						
Date Scheduled	18/04/07	18/04/07						
Laboratory Reference No	221849	221855						
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Acenaphthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Fluorene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Phenanthrene	0.20	< 0.1				022S[IM]	mg/kg	0.1
Anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Fluoranthene	0.23	< 0.1				022S[IM]	mg/kg	0.1
Pyrene	0.13	< 0.1				022S[IM]	mg/kg	0.1
Benzo(a)anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Chrysene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(a)pyrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
PAH (Sum of Dutch 10)	0.43	ND				022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	0.57	ND				022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30449
Matrix : Soil
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH15-01					Method No	Units	LOD
Sample Depth (m)	0.10							
Date Sampled	16/04/07							
Date Scheduled	18/04/07							
Laboratory Reference No	221853							
Analysis								
* * CWG SUITE * *								
Aliphatic C5-C6	2.4					CWGS	mg/kg	0.01
Aliphatic >C6-C8	19					CWGS	mg/kg	0.01
Aliphatic >C8-C10	200					CWGS	mg/kg	0.01
Aliphatic >C10-C12	780					CWGS	mg/kg	0.01
Aliphatic >C12-C16	< 5					CWGS[I]	mg/kg	5
Aliphatic >C16-C21	< 5					CWGS[I]	mg/kg	5
Aliphatic >C21-C35	19					CWGS[I]	mg/kg	5
Total Aliphatics (C5-C35)	1000					CWGS	mg/kg	5
Aromatic C6-C7	< 0.01					CWGS	mg/kg	0.01
Aromatic >C7-C8	< 0.01					CWGS	mg/kg	0.01
Aromatic >C8-C10	340					CWGS	mg/kg	0.01
Aromatic >C10-C12	1200					CWGS	mg/kg	0.01
Aromatic >C12-C16	62					CWGS[I]	mg/kg	5
Aromatic >C16-C21	< 5					CWGS[I]	mg/kg	5
Aromatic >C21-C35	12					CWGS[I]	mg/kg	5
Total Aromatics (C5-C35)	1600					CWGS	mg/kg	5
Volatile Hydrocarbons (C5-C12)	2500					CWGS	mg/kg	0.01
Extractable Hydrocarbons (C12-C35)	93					CWGS	mg/kg	5
Total Hydrocarbons (C5-C35)	2600					CWGS	mg/kg	5
MTBE	< 0.010					CWGS[IM]	mg/kg	0.01
Benzene	< 0.010					CWGS[IM]	mg/kg	0.01
Toluene	< 0.010					CWGS[IM]	mg/kg	0.01
Ethylbenzene	0.42					CWGS[IM]	mg/kg	0.01
m,p-Xylenes	13					CWGS[IM]	mg/kg	0.01
o-Xylene	18					CWGS[IM]	mg/kg	0.01
1,3,5-Trimethylbenzene	97					CWGS[IM]	mg/kg	0.01
1,2,4-Trimethylbenzene	390					CWGS[IM]	mg/kg	0.01

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30449
Matrix : Soil
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH14-01	BH15-01				Method No	Units	LOD
Sample Depth (m)	3.00	0.10						
Date Sampled	16/04/07	16/04/07						
Date Scheduled	18/04/07	18/04/07						
Laboratory Reference No	221850	221853						
Analysis								
* * SVOC SUITE * *								
Naphthalene	43000	130000				053S[IM]	ug/kg	150
2-Chloronaphthalene	< 150	< 150				053S[I]	ug/kg	150
Acenaphthylene	< 150	< 150				053S[I]	ug/kg	150
Acenaphthene	< 150	< 150				053S[I]	ug/kg	150
Fluorene	< 150	< 150				053S[I]	ug/kg	150
Phenanthrene	< 150	< 150				053S[I]	ug/kg	150
Anthracene	< 150	< 150				053S[I]	ug/kg	150
Fluoranthene	< 150	< 150				053S[I]	ug/kg	150
Pyrene	< 150	< 150				053S[IM]	ug/kg	150
Benz(a)anthracene	< 150	< 150				053S	ug/kg	150
Chrysene	< 150	< 150				053S[I]	ug/kg	150
Benzo(b)fluoranthene	< 150	< 150				053S[I]	ug/kg	150
Benzo(k)fluoranthene	< 150	< 150				053S[I]	ug/kg	150
Benzo(a)pyrene	< 150	< 150				053S	ug/kg	150
Dibenzo(a,h)anthracene	< 150	< 150				053S[IM]	ug/kg	150
Indeno(1,2,3-cd)pyrene	< 150	< 150				053S[I]	ug/kg	150
Benzo(g,h,i)perylene	< 150	< 150				053S[I]	ug/kg	150
Phenol	< 150	< 150				053S[I]	ug/kg	150
2-Chlorophenol	< 150	< 150				053S[IM]	ug/kg	150
2-Methylphenol	< 200	< 200				053S[I]	ug/kg	200
4-Methylphenol	< 200	< 200				053S[IM]	ug/kg	200
2-Nitrophenol	< 300	< 300				053S[I]	ug/kg	300
2,4-Dimethylphenol	< 250	< 250				053S[IM]	ug/kg	250
2,4-Dichlorophenol	< 200	< 200				053S[IM]	ug/kg	200
2,6-Dichlorophenol	< 200	< 200				053S[IM]	ug/kg	200
4-Chloro-3-methyl phenol	< 150	< 150				053S[IM]	ug/kg	150
2,4,6-Trichlorophenol	< 150	< 150				053S[I]	ug/kg	150
2,4,5-Trichlorophenol	< 200	< 200				053S[IM]	ug/kg	200
4-Nitrophenol	< 300	< 300				053S	ug/kg	300

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30449
Matrix : Soil
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH14-01	BH15-01				Method No	Units	LOD
Sample Depth (m)	3.00	0.10						
Date Sampled	16/04/07	16/04/07						
Date Scheduled	18/04/07	18/04/07						
Laboratory Reference No	221850	221853						
Analysis								
* * SVOC SUITE Cont.. * *								
2,3,4,6-Tetrachlorophenol	< 250	< 250				053S	ug/kg	250
Pentachlorophenol	< 250	< 250				053S	ug/kg	250
Dimethyl Phthalate	< 200	< 200				053S[IM]	ug/kg	200
Diethyl Phthalate	< 200	< 200				053S[I]	ug/kg	200
Di-n-butyl phthalate	< 150	< 150				053S[I]	ug/kg	150
Butyl benzyl phthalate	< 150	< 150				053S[IM]	ug/kg	150
Bis(2-chloroethyl)ether	< 150	< 150				053S[IM]	ug/kg	150
Bis(2-chloroisopropyl)ether	< 200	< 200				053S[I]	ug/kg	200
4-Chlorophenyl phenyl ether	< 150	< 150				053S[I]	ug/kg	150
Bromo phenyl phenyl ether	< 200	< 200				053S[IM]	ug/kg	200
1,3-Dichlorobenzene	< 200	< 200				053S[IM]	ug/kg	200
1,2-Dichlorobenzene	< 150	< 150				053S[IM]	ug/kg	150
1,4-Dichlorobenzene	< 200	< 200				053S[I]	ug/kg	200
Nitrobenzene	< 150	< 150				053S[IM]	ug/kg	150
1,2,4-Trichlorobenzene	< 200	< 200				053S[IM]	ug/kg	200
2,6-Dinitrotoluene	< 200	< 200				053S	ug/kg	200
2,4-Dinitrotoluene	< 200	< 200				053S	ug/kg	200
Azobenzene	< 200	< 200				053S[I]	ug/kg	200
Hexachlorobenzene	< 200	< 200				053S[IM]	ug/kg	200
Hexachloroethane	< 150	< 150				053S[I]	ug/kg	150
n-Nitro-n-propyl-1-propanamine	< 200	< 200				053S[I]	ug/kg	200
Isophorone	< 200	< 200				053S[IM]	ug/kg	200
Bis(2-chloroethoxy)methane	< 150	< 150				053S[I]	ug/kg	150
Hexachlorobutadiene	< 150	< 150				053S[IM]	ug/kg	150
Anthraquinone	< 150	< 150				053S	ug/kg	150
2-nitroaniline	< 250	< 250				053S[I]	ug/kg	250
Aniline	< 150	< 150				053S	ug/kg	150
Di-n-octyl phthalate	< 150	< 150				053S	ug/kg	150
Hexachlorocyclopentadiene	< 300	< 300				053S	ug/kg	300

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30449
Matrix : Soil
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH14-01	BH15-01				Method No	Units	LOD
Sample Depth (m)	3.00	0.10						
Date Sampled	16/04/07	16/04/07						
Date Scheduled	18/04/07	18/04/07						
Laboratory Reference No	221850	221853						
Analysis								
2-Methylnapthalene	710	6700				053S[I]	ug/kg	150
3-nitroaniline	< 200	< 200				053S	ug/kg	200
4-Chloroaniline	< 200	< 200				053S	ug/kg	200
4-nitroaniline	< 250	< 250				053S	ug/kg	250
Bis (2-ethylhexyl) phthalate	< 300	< 300				053S	ug/kg	300
Carbazole	< 100	< 100				053S[I]	ug/kg	100
Dibenzofuran	< 150	< 150				053S[IM]	ug/kg	150
Biphenyl	< 150	< 150				053S	ug/kg	150

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30449
Matrix : Soil
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH14-01	BH14-01	BH15-01	BH15-01		Method No	Units	LOD
Sample Depth (m)	1.00	4.00	0.10	1.50				
Date Sampled	16/04/07	16/04/07	16/04/07	16/04/07				
Date Scheduled	18/04/07	18/04/07	18/04/07	18/04/07				
Laboratory Reference No	221849	221851	221853	221855				
Analysis								
* * VOC SUITE * *								
Dichlorodifluoromethane	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
Chloromethane	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
Vinyl Chloride	< 25	< 25	< 25	< 25		071S	ug/kg	25
Bromomethane	< 25	< 25	< 25	< 25		071S[I]	ug/kg	25
Chloroethane	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
Trichlorofluoromethane	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
1,1-Dichloroethene	< 25	< 25	< 25	< 25		071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	< 25	< 25	< 25	< 25		071S[I]	ug/kg	25
Dichloromethane	< 50	< 50	< 50	< 50		071S	ug/kg	50
Carbon Disulfide	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	< 25	< 25	< 25	< 25		071S	ug/kg	25
MTBE	< 25	< 25	< 25	< 25		071S	ug/kg	25
1,1 -Dichloroethane	< 25	< 25	< 25	< 25		071S	ug/kg	25
Cis-1,2 Dichloroethene	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
Bromochloromethane	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
Chloroform	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
2,2-Dichloropropane	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
1,1,1-Trichloroethane	< 25	< 25	< 25	< 25		071S	ug/kg	25
1,2-Dichloroethane	< 25	< 25	< 25	< 25		071S	ug/kg	25
1,1-Dichloropropene	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
Benzene	< 25	< 25	< 25	< 25		071S	ug/kg	25
Carbon Tetrachloride	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
Dibromomethane	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
1,2-Dichloropropane	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
Trichloroethene	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
Bromodichloromethane	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
Cis-1,3 Dichloropropene	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
Trans-1,3 Dichloropropene	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25
1,1,2-Trichloroethane	< 25	< 25	< 25	< 25		071S[IM]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30449
Matrix : Soil
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH14-01	BH14-01	BH15-01	BH15-01		Method No	Units	LOD
Sample Depth (m)	1.00	4.00	0.10	1.50				
Date Sampled	16/04/07	16/04/07	16/04/07	16/04/07				
Date Scheduled	18/04/07	18/04/07	18/04/07	18/04/07				
Laboratory Reference No	221849	221851	221853	221855				
Analysis								
* * VOC SUITE Cont.. * *								
Toluene	< 25	< 25	< 25	< 25		071S	ug/kg	25
1,3 -Dichloropropane	< 25	< 25	< 25	< 25		071S[I M]	ug/kg	25
Dibromochloromethane	< 25	< 25	< 25	< 25		071S[I M]	ug/kg	25
1,2-Dibromoethane	< 25	< 25	< 25	< 25		071S[I M]	ug/kg	25
Tetrachloroethene	< 25	< 25	< 25	< 25		071S	ug/kg	25
1,1,1,2-Tetrachloroethane	< 25	< 25	< 25	< 25		071S	ug/kg	25
Chlorobenzene	< 25	< 25	< 25	< 25		071S[I M]	ug/kg	25
Ethyl Benzene	< 25	< 25	64	< 25		071S	ug/kg	25
m,p-Xylenes	< 50	< 50	2800	< 50		071S	ug/kg	50
Bromoform	< 25	< 25	< 25	< 25		071S[I M]	ug/kg	25
Styrene	< 25	< 25	< 25	< 25		071S[I M]	ug/kg	25
o-Xylene	< 25	< 25	3800	< 25		071S	ug/kg	25
1,1,2,2 Tetrachloroethane	< 25	< 25	< 25	< 25		071S	ug/kg	25
1,2,3-Trichloropropane	< 25	< 25	< 25	< 25		071S[I M]	ug/kg	25
Isopropylbenzene	< 25	< 25	92	< 25		071S[I M]	ug/kg	25
Bromobenzene	< 25	< 25	< 25	< 25		071S[I M]	ug/kg	25
n-propylbenzene	< 25	< 25	640	< 25		071S[I M]	ug/kg	25
2-Chlorotoluene	< 25	< 25	< 25	< 25		071S[I M]	ug/kg	25
4-Chlorotoluene	< 25	< 25	< 25	< 25		071S[I M]	ug/kg	25
1,3,5 Trimethylbenzene	< 25	< 25	11000	< 25		071S	ug/kg	25
tert-butylbenzene	< 25	< 25	< 25	< 25		071S[I M]	ug/kg	25
1,2,4 Trimethylbenzene	< 25	< 25	53000	< 25		071S	ug/kg	25
sec-butylbenzene	< 25	< 25	450	< 25		071S[I M]	ug/kg	25
1,3 Dichlorobenzene	< 25	< 25	< 25	< 25		071S	ug/kg	25
1,4 Dichlorobenzene	< 25	< 25	< 25	< 25		071S	ug/kg	25
4-Isopropyltoluene	< 25	< 25	470	< 25		071S[I M]	ug/kg	25
1,2 Dichlorobenzene	< 25	< 25	< 25	< 25		071S	ug/kg	25
n-butylbenzene	< 25	< 25	< 25	< 25		071S	ug/kg	25
1,2,4-Trichlorobenzene	< 25	< 25	< 25	< 25		071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30449
Matrix : Soil
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH14-01	BH14-01	BH15-01	BH15-01		Method No	Units	LOD
Sample Depth (m)	1.00	4.00	0.10	1.50				
Date Sampled	16/04/07	16/04/07	16/04/07	16/04/07				
Date Scheduled	18/04/07	18/04/07	18/04/07	18/04/07				
Laboratory Reference No	221849	221851	221853	221855				
Analysis								
* * VOC SUITE Cont.. * *								
1,2-Dibromo-3-Chloropropane	< 25	< 25	< 25	< 25		071S	ug/kg	25
Hexachlorobutadiene	< 50	< 50	< 50	< 50		071S	ug/kg	50
1,2,3-Trichlorobenzene	< 25	< 25	< 25	< 25		071S	ug/kg	25
VOC TIC's	ND	ND	see TIC page	ND		071S	mg/kg	1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results
VOC TICs

Job Number : 07-30449
Matrix : Soil
Project Code: 64-C11647

Project Name: ALCOA

Sample Reference	BH15-01			Method No	Units	LOD
Sample Depth (m)	0.10					
Date Sampled	16/04/07					
Date Scheduled	18/04/07					
Laboratory Reference No	221853					
Analysis						
* * VOC TICs * *						
Compound	**Ret. Time (mins)**	**Estimated Concentration**	**Match Quality (%)**			
C3 benzene	8.73	0.072	90	071	mg/kg	-
Allybenzene	9.17	0.885	70	071	mg/kg	-
1,4 dimethyl-2-ethyl benzene	9.21	0.5	95	071	mg/kg	-
2-propyltoluene	9.32	0.162	94	071	mg/kg	-
3-ethyl-o-xylene	9.38	0.519	97	071	mg/kg	-
m-cymene	9.42	0.477	94	071	mg/kg	-
p-cymene	9.6	0.103	90	071	mg/kg	-
2,5 dimethyl styrene	9.93	0.245	86	071	mg/kg	-

Note: -Identifications are Tentative relative to Library Matching,

-Concentrations are calculated relative to the closest internal standard and are estimates only.

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
EPH Description

Job Number: 07-30449
Client: Environ UK Ltd
Project Code: 64-C11647

Matrix: Soils
Project Name: ALCOA

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
221849	BH14-01	1.0	16/04/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to C40 overlain by a series of n-alkane peaks eluting through the diesel range.
221850	BH14-01	3.0	16/04/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to C40 overlain by a series of n-alkane peaks eluting through the diesel range.
221852	BH14-01	6.0	16/04/07	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-30449

Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
071S	In-house method based on EPA624 "Volatile Organic Compounds in Soils/Sludges"	Determination of volatile organic compounds in soil samples by headspace GC-MS	W
070S	In-house method	Determination of hexane/acetone extractable hydrocarbons in soil by gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	W
053S	In-house method	Determination of semi-volatile organic compounds in soil samples by dichloromethane extraction and GC-MS detection	W
022S	In-house method	Determination of PAH compounds in soil samples by hexane / acetone extraction followed by GC-MS detection	W
009S	In-house method referencing BS1377: Part 3: 1990 and Second Site Property: Environmental Assessment Guidance Version 3: March 2003	Determination of pH by addition of water followed by electrometric measurement	W
CWGS	In-house method based on "Total Petroleum Hydrocarbon Criteria Working Group" series, 1998-9	Determination of "CWG" banded petroleum hydrocarbons in soil samples using a combination of headspace GC-FID (C5-C12) and hexane:acetone extraction / silica-alumina aliphatic - aromatic split / GC-FID (C12-C35) techniques with banding by comparison to alkane standards	W
092	In-house method	Determination of organic content and organic carbon in soil samples by combustion analyser	D
069S	In-house method based on MEWAM "Methods for the Determination of Metals in Soil", HMSO, 1986	Determination of metals in soil samples by aqua-regia digestion followed by ICP-OES detection	D
025a	In-house method based on BS1377 Part 3, "Chemical and Electrochemical Tests", 1990	Determination of hydrochloric acid soluble sulphate in soil samples by Inductively Coupled Plasma - Optical Emission Spectrometry (ICP-OES)	D

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-30449

Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
016S	In-house method	Determination of water soluble boron by 2:1 extraction in hot water followed by ICP-OES detection	D

Soil results are expressed on a dry weight basis. Where the test uses as-received sample, a moisture correction factor is applied to the wet weight result. This factor is determined gravimetrically using weight loss on drying at 30º (+/-5) C.

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

02 May 2007

TEST REPORT

Our Report Number: 07-30482

Your Order Reference: Instructions of 20/04/2007

6 soil samples submitted for analysis on 20/04/2007

Project Name: Alcoa

Project Code: 64C11647

Laboratory analysis started on 20/04/2007
All laboratory analysis completed by 02 May 2007

Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

Sharon Googh
Project Co-Ordinator
ALCONTROL TECHNICHEM

ALcontrol Technichem
Sample Description

Job Number: 07-30482
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soil
Project Name: Alcoa

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	Sample Description
222007	WS15_01	0.3-0.6	17/04/07	Grey sandy clay with gravel
222008	WS15_02	0.5-0.8	17/04/07	Brown sandy clay with gravel
222009	WS15_02	0.8-1.0	17/04/07	Grey sandy clay with gravel and oil / petroleum
222010	WS16_03	0.1-0.3	17/04/07	Brown sandy clay with brick
222011	WS16_03	0.6-0.8	17/04/07	*Brown gravel
222012	WS16_03	2.0-2.3	17/04/07	Grey sandy clay with gravel

*Denotes outside the scope of MCERTS accreditation since matrix not included in method validation.

ALcontrol Technichem
Table Of Results

Job Number : 07-30482
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS15_01	WS15_02	WS15_02	WS16_03	WS16_03	Method No	Units	LOD
Sample Depth (m)	**0.3-0.6**	**0.5-0.8**	**0.8-1.0**	**0.1-0.3**	**0.6-0.8**			
Date Sampled	**17/04/07**	**17/04/07**	**17/04/07**	**17/04/07**	**17/04/07**			
Date Scheduled	**20/04/07**	**20/04/07**	**20/04/07**	**20/04/07**	**20/04/07**			
Laboratory Reference No	**222007**	**222008**	**222009**	**222010**	**222011**			
Analysis								
Moisture Content (Wet Weight)	6.6	22.5	10.8	17.0	3.7		%	0.1
Moisture Content (Dry Weight)	7.1	29.0	12.1	20.5	3.9		%	0.1
Arsenic	-	41	-	-	-	069S[I,M]	mg/kg	3
Barium	-	77	-	-	-	069S[I,M]	mg/kg	10
Beryllium	-	0.8	-	-	-	069S[I,M]	mg/kg	0.5
Boron (W/S)	-	1.0	-	-	-	016S[I,M]	mg/kg	0.5
Cadmium	-	0.6	-	-	-	069S[I,M]	mg/kg	0.5
Chromium	-	39	-	-	-	069S[I,M]	mg/kg	10
Copper	-	72	-	-	-	069S[I,M]	mg/kg	5
Lead	-	68	-	-	-	069S[I,M]	mg/kg	10
Mercury	-	< 0.6	-	-	-	069S[I,M]	mg/kg	0.6
Nickel	-	19	-	-	-	069S[I,M]	mg/kg	4
Selenium	-	< 2.5	-	-	-	069S[I,M]	mg/kg	2.5
Sulphate (Total Acid Soluble) as SO4	-	590	-	-	-	025a[I,M]	mg/kg	200
Vanadium	-	35	-	-	-	069S[I,M]	mg/kg	3
Zinc	-	120	-	-	-	069S[I,M]	mg/kg	10
pH	7.1	6.0	8.9	7.2	7.2	009S[I,M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	91	-	2000	33	120	070S[I,M]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30482
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	**WS16_03**					**Method No**	**Units**	**LOD**
Sample Depth (m)	**2.0-2.3**							
Date Sampled	**17/04/07**							
Date Scheduled	**20/04/07**							
Laboratory Reference No	**222012**							
Analysis								
Moisture Content (Wet Weight)	7.9						%	0.1
Moisture Content (Dry Weight)	8.6						%	0.1
Arsenic	-					069S[I M]	mg/kg	3
Barium	-					069S[I M]	mg/kg	10
Beryllium	-					069S[I M]	mg/kg	0.5
Boron (W/S)	-					016S[I M]	mg/kg	0.5
Cadmium	-					069S[I M]	mg/kg	0.5
Chromium	-					069S[I M]	mg/kg	10
Copper	-					069S[I M]	mg/kg	5
Lead	-					069S[I M]	mg/kg	10
Mercury	-					069S[I M]	mg/kg	0.6
Nickel	-					069S[I M]	mg/kg	4
Selenium	-					069S[I M]	mg/kg	2.5
Sulphate (Total Acid Soluble) as SO4	-					025a[I M]	mg/kg	200
Vanadium	-					069S[I M]	mg/kg	3
Zinc	-					069S[I M]	mg/kg	10
pH	-					009S[I M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	29					070S[I M]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30482
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS15_02	WS16_03				Method No	Units	LOD
Sample Depth (m)	0.8-1.0	0.6-0.8						
Date Sampled	17/04/07	17/04/07						
Date Scheduled	20/04/07	20/04/07						
Laboratory Reference No	222009	222011						
Analysis								
* * PAH SUITE * *								
Naphthalene	6.0	< 0.1				022S[IM]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Acenaphthene	0.11	< 0.1				022S[IM]	mg/kg	0.1
Fluorene	0.52	< 0.1				022S[IM]	mg/kg	0.1
Phenanthrene	0.78	< 0.1				022S[IM]	mg/kg	0.1
Anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Pyrene	0.12	< 0.1				022S[IM]	mg/kg	0.1
Benzo(a)anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Chrysene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(a)pyrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
PAH (Sum of Dutch 10)	6.79	ND				022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	7.54	ND				022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30482
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS15_02					Method No	Units	LOD
Sample Depth (m)	0.5-0.8							
Date Sampled	17/04/07							
Date Scheduled	20/04/07							
Laboratory Reference No	222008							
Analysis								
* * CWG SUITE * *								
Aliphatic C5-C6	0.05					CWGS	mg/kg	0.01
Aliphatic >C6-C8	0.01					CWGS	mg/kg	0.01
Aliphatic >C8-C10	0.17					CWGS	mg/kg	0.01
Aliphatic >C10-C12	0.27					CWGS	mg/kg	0.01
Aliphatic >C12-C16	630					CWGS[I]	mg/kg	5
Aliphatic >C16-C21	2200					CWGS[I]	mg/kg	5
Aliphatic >C21-C35	2100					CWGS[I]	mg/kg	5
Total Aliphatics (C5-C35)	4900					CWGS	mg/kg	5
Aromatic C6-C7	< 0.01					CWGS	mg/kg	0.01
Aromatic >C7-C8	< 0.01					CWGS	mg/kg	0.01
Aromatic >C8-C10	0.75					CWGS	mg/kg	0.01
Aromatic >C10-C12	0.40					CWGS	mg/kg	0.01
Aromatic >C12-C16	84					CWGS[I]	mg/kg	5
Aromatic >C16-C21	510					CWGS[I]	mg/kg	5
Aromatic >C21-C35	1100					CWGS[I]	mg/kg	5
Total Aromatics (C5-C35)	1700					CWGS	mg/kg	5
Volatile Hydrocarbons (C5-C12)	1.7					CWGS	mg/kg	0.01
Extractable Hydrocarbons (C12-C35)	6700					CWGS	mg/kg	5
Total Hydrocarbons (C5-C35)	6700					CWGS	mg/kg	5
MTBE	< 0.010					CWGS[IM]	mg/kg	0.01
Benzene	< 0.010					CWGS[IM]	mg/kg	0.01
Toluene	< 0.010					CWGS[IM]	mg/kg	0.01
Ethylbenzene	0.018					CWGS[IM]	mg/kg	0.01
m,p-Xylenes	0.47					CWGS[IM]	mg/kg	0.01
o-Xylene	0.010					CWGS[IM]	mg/kg	0.01
1,3,5-Trimethylbenzene	< 0.010					CWGS[IM]	mg/kg	0.01
1,2,4-Trimethylbenzene	0.036					CWGS[IM]	mg/kg	0.01

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30482
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS15_02					Method No	Units	LOD
Sample Depth (m)	0.5-0.8							
Date Sampled	17/04/07							
Date Scheduled	20/04/07							
Laboratory Reference No	222008							
Analysis								
* * SVOC SUITE * *								
Naphthalene	< 150					053S[IM]	ug/kg	150
2-Chloronaphthalene	< 150					053S[I]	ug/kg	150
Acenaphthylene	< 150					053S[I]	ug/kg	150
Acenaphthene	< 150					053S[I]	ug/kg	150
Fluorene	< 150					053S[I]	ug/kg	150
Phenanthrene	170					053S[I]	ug/kg	150
Anthracene	< 150					053S[I]	ug/kg	150
Fluoranthene	< 150					053S[I]	ug/kg	150
Pyrene	< 150					053S[IM]	ug/kg	150
Benz(a)anthracene	< 150					053S	ug/kg	150
Chrysene	< 150					053S[I]	ug/kg	150
Benzo(b)fluoranthene	< 150					053S[I]	ug/kg	150
Benzo(k)fluoranthene	< 150					053S[I]	ug/kg	150
Benzo(a)pyrene	< 150					053S	ug/kg	150
Dibenzo(a,h)anthracene	< 150					053S[IM]	ug/kg	150
Indeno(1,2,3-cd)pyrene	< 150					053S[I]	ug/kg	150
Benzo(g,h,i)perylene	< 150					053S[I]	ug/kg	150
Phenol	< 150					053S[I]	ug/kg	150
2-Chlorophenol	< 150					053S[IM]	ug/kg	150
2-Methylphenol	< 200					053S[I]	ug/kg	200
4-Methylphenol	< 200					053S[IM]	ug/kg	200
2-Nitrophenol	< 300					053S[I]	ug/kg	300
2,4-Dimethylphenol	< 250					053S[IM]	ug/kg	250
2,4-Dichlorophenol	< 200					053S[IM]	ug/kg	200
2,6-Dichlorophenol	< 200					053S[IM]	ug/kg	200
4-Chloro-3-methyl phenol	< 150					053S[IM]	ug/kg	150
2,4,6-Trichlorophenol	< 150					053S[I]	ug/kg	150
2,4,5-Trichlorophenol	< 200					053S[IM]	ug/kg	200
4-Nitrophenol	< 300					053S	ug/kg	300

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30482
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS15_02					Method No	Units	LOD
Sample Depth (m)	0.5-0.8							
Date Sampled	17/04/07							
Date Scheduled	20/04/07							
Laboratory Reference No	222008							
Analysis								
* * SVOC SUITE Cont.. * *								
2,3,4,6-Tetrachlorophenol	< 250					053S	ug/kg	250
Pentachlorophenol	< 250					053S	ug/kg	250
Dimethyl Phthalate	< 200					053S[IM]	ug/kg	200
Diethyl Phthalate	< 200					053S[I]	ug/kg	200
Di-n-butyl phthalate	< 150					053S[I]	ug/kg	150
Butyl benzyl phthalate	< 150					053S[IM]	ug/kg	150
Bis(2-chloroethyl)ether	< 150					053S[IM]	ug/kg	150
Bis(2-chloroisopropyl)ether	< 200					053S[I]	ug/kg	200
4-Chlorophenyl phenyl ether	< 150					053S[I]	ug/kg	150
Bromo phenyl phenyl ether	< 200					053S[IM]	ug/kg	200
1,3-Dichlorobenzene	< 200					053S[IM]	ug/kg	200
1,2-Dichlorobenzene	< 150					053S[IM]	ug/kg	150
1,4-Dichlorobenzene	< 200					053S[I]	ug/kg	200
Nitrobenzene	< 150					053S[IM]	ug/kg	150
1,2,4-Trichlorobenzene	< 200					053S[IM]	ug/kg	200
2,6-Dinitrotoluene	< 200					053S	ug/kg	200
2,4-Dinitrotoluene	< 200					053S	ug/kg	200
Azobenzene	< 200					053S[I]	ug/kg	200
Hexachlorobenzene	< 200					053S[IM]	ug/kg	200
Hexachloroethane	< 150					053S[I]	ug/kg	150
n-Nitro-n-propyl-1-propanamine	< 200					053S[I]	ug/kg	200
Isophorone	< 200					053S[IM]	ug/kg	200
Bis(2-chloroethoxy)methane	< 150					053S[I]	ug/kg	150
Hexachlorobutadiene	< 150					053S[IM]	ug/kg	150
Anthraquinone	< 150					053S	ug/kg	150
Di-n-octyl phthalate	< 150					053S	ug/kg	150
Hexachlorocyclopentadiene	< 300					053S	ug/kg	300
2-Methylnapthalene	340					053S[I]	ug/kg	150
2-nitroaniline	< 250					053S[I]	ug/kg	250

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30482
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS15_02					Method No	Units	LOD
Sample Depth (m)	0.5-0.8							
Date Sampled	17/04/07							
Date Scheduled	20/04/07							
Laboratory Reference No	222008							
Analysis								
3-nitroaniline	< 200					053S	ug/kg	200
4-Chloroaniline	< 200					053S	ug/kg	200
4-nitroaniline	< 250					053S	ug/kg	250
Dibenzofuran	< 150					053S[IM]	ug/kg	150
Aniline	< 150					053S	ug/kg	150
Bis (2-ethylhexyl) phthalate	< 300					053S	ug/kg	300
Carbazole	< 100					053S[I]	ug/kg	100
Biphenyl	< 150					053S	ug/kg	150

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30482
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS15_01	WS15_02	WS15_02	WS16_03		Method No	Units	LOD
Sample Depth (m)	0.3-0.6	0.5-0.8	0.8-1.0	0.6-0.8				
Date Sampled	17/04/07	17/04/07	17/04/07	17/04/07				
Date Scheduled	20/04/07	20/04/07	20/04/07	20/04/07				
Laboratory Reference No	222007	222008	222009‡	222011				
Analysis								
* * VOC SUITE * *								
Dichlorodifluoromethane	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25
Chloromethane	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25
Vinyl Chloride	< 25	< 25	< 250	< 25		071S	ug/kg	25
Bromomethane	< 25	< 25	< 250	< 25		071S[I]	ug/kg	25
Chloroethane	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25
Trichlorofluoromethane	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25
1,1-Dichloroethene	< 25	< 25	< 250	< 25		071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	< 25	< 25	< 250	< 25		071S[I]	ug/kg	25
Dichloromethane	< 50	< 50	< 500	< 50		071S	ug/kg	50
Carbon Disulfide	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	< 25	< 25	< 250	< 25		071S	ug/kg	25
MTBE	< 25	< 25	< 250	< 25		071S	ug/kg	25
1,1 -Dichloroethane	< 25	< 25	< 250	< 25		071S	ug/kg	25
Cis-1,2 Dichloroethene	< 25	< 25	< 250	26		071S[IM]	ug/kg	25
Bromochloromethane	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25
Chloroform	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25
2,2-Dichloropropane	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25
1,1,1-Trichloroethane	< 25	< 25	< 250	< 25		071S	ug/kg	25
1,2-Dichloroethane	< 25	< 25	< 250	< 25		071S	ug/kg	25
1,1-Dichloropropene	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25
Benzene	< 25	< 25	< 250	< 25		071S	ug/kg	25
Carbon Tetrachloride	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25
Dibromomethane	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25
1,2-Dichloropropane	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25
Trichloroethene	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25
Bromodichloromethane	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25
Cis-1,3 Dichloropropene	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25
Trans-1,3 Dichloropropene	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25
1,1,2-Trichloroethane	< 25	< 25	< 250	< 25		071S[IM]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-30482
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS15_01	WS15_02	WS15_02	WS16_03		Method No	Units	LOD
Sample Depth (m)	0.3-0.6	0.5-0.8	0.8-1.0	0.6-0.8				
Date Sampled	17/04/07	17/04/07	17/04/07	17/04/07				
Date Scheduled	20/04/07	20/04/07	20/04/07	20/04/07				
Laboratory Reference No	222007	222008	222009‡	222011				
Analysis								
* * VOC SUITE Cont.. * *								
Toluene	< 25	< 25	< 250	< 25		071S	ug/kg	25
1,3 -Dichloropropane	< 25	< 25	< 250	< 25		071S[I M]	ug/kg	25
Dibromochloromethane	< 25	< 25	< 250	< 25		071S[I M]	ug/kg	25
1,2-Dibromoethane	< 25	< 25	< 250	< 25		071S[I M]	ug/kg	25
Tetrachloroethene	< 25	< 25	< 250	< 25		071S	ug/kg	25
1,1,1,2-Tetrachloroethane	< 25	< 25	< 250	< 25		071S	ug/kg	25
Chlorobenzene	< 25	< 25	< 250	< 25		071S[I M]	ug/kg	25
Ethyl Benzene	< 25	33	7200	< 25		071S	ug/kg	25
m,p-Xylenes	< 50	1400	75000	56		071S	ug/kg	50
Bromoform	< 25	< 25	< 250	< 25		071S[I M]	ug/kg	25
Styrene	< 25	< 25	< 250	< 25		071S[I M]	ug/kg	25
o-Xylene	< 25	< 25	24000	< 25		071S	ug/kg	25
1,1,2,2 Tetrachloroethane	< 25	< 25	< 250	< 25		071S	ug/kg	25
1,2,3-Trichloropropane	< 25	< 25	< 250	< 25		071S[I M]	ug/kg	25
Isopropylbenzene	< 25	< 25	3600	< 25		071S[I M]	ug/kg	25
Bromobenzene	< 25	< 25	< 250	< 25		071S[I M]	ug/kg	25
n-propylbenzene	< 25	< 25	27000	< 25		071S[I M]	ug/kg	25
2-Chlorotoluene	< 25	< 25	< 250	< 25		071S[I M]	ug/kg	25
4-Chlorotoluene	< 25	< 25	< 250	< 25		071S[I M]	ug/kg	25
1,3,5 Trimethylbenzene	< 25	< 25	82000	< 25		071S	ug/kg	25
tert-butylbenzene	< 25	< 25	< 250	< 25		071S[I M]	ug/kg	25
1,2,4 Trimethylbenzene	< 25	75	300000	27		071S	ug/kg	25
sec-butylbenzene	< 25	< 25	4100	< 25		071S[I M]	ug/kg	25
1,3 Dichlorobenzene	< 25	< 25	< 250	< 25		071S	ug/kg	25
1,4 Dichlorobenzene	< 25	< 25	< 250	< 25		071S	ug/kg	25
4-Isopropyltoluene	< 25	< 25	730	< 25		071S[I M]	ug/kg	25
1,2 Dichlorobenzene	< 25	< 25	< 250	< 25		071S	ug/kg	25
n-butylbenzene	< 25	< 25	< 250	< 25		071S	ug/kg	25
1,2,4-Trichlorobenzene	< 25	< 25	< 250	< 25		071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-30482
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	WS15_01	WS15_02	WS15_02	WS16_03		Method No	Units	LOD
Sample Depth (m)	0.3-0.6	0.5-0.8	0.8-1.0	0.6-0.8				
Date Sampled	17/04/07	17/04/07	17/04/07	17/04/07				
Date Scheduled	20/04/07	20/04/07	20/04/07	20/04/07				
Laboratory Reference No	222007	222008	222009‡	222011				
Analysis								
* * VOC SUITE Cont.. * *								
1,2-Dibromo-3-Chloropropane	< 25	< 25	< 250	< 25		071S	ug/kg	25
Hexachlorobutadiene	< 50	< 50	< 500	< 50		071S	ug/kg	50
1,2,3-Trichlorobenzene	< 25	< 25	< 250	< 25		071S	ug/kg	25
VOC TIC's	see TIC page	see TIC page	see TIC page	-		071S	mg/kg	1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results
VOC TICs

Job Number : 07-30482
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa

Sample Reference	WS15_01			Method No	Units	LOD
Sample Depth (m)	0.3-0.6					
Date Sampled	17/04/07					
Date Scheduled	20/04/07					
Laboratory Reference No	222007					
Analysis						
* * VOC TICs * *						
Compound	**Ret. Time (mins)**	**Estimated Concentration**	**Match Quality (%)**			
4-ethyltoluene	8.56	0.004	72	071	mg/kg	-
benzenesulfoamide	10.07	0.179	87	071	mg/kg	-

Note: -Identifications are Tentative relative to Library Matching,

-Concentrations are calculated relative to the closest internal standard and are estimates only.

I ISO 17025 accredited.
M MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results
VOC TICs

Job Number : 07-30482
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa

Sample Reference	WS15_02			Method No	Units	LOD
Sample Depth (m)	0.5-0.8					
Date Sampled	17/04/07					
Date Scheduled	20/04/07					
Laboratory Reference No	222008					
Analysis						
* * VOC TICs * *						
Compound	**Ret. Time (mins)**	**Estimated Concentration**	**Match Quality (%)**			
m-ethyltoluene	8.72	0.014	93	071	mg/kg	-

Note: -Identifications are Tentative relative to Library Matching,

-Concentrations are calculated relative to the closest internal standard and are estimates only.

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results
VOC TICs

Job Number : 07-30482
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa

Sample Reference	WS15_02			Method No	Units	LOD
Sample Depth (m)	0.8-1.0					
Date Sampled	17/04/07					
Date Scheduled	20/04/07					
Laboratory Reference No	222009‡					
Analysis						
* * VOC TICs * *						
Compound	**Ret. Time (mins)**	**Estimated Concentration**	**Match Quality (%)**			
2-pentanone	6.77	0.011	91	071	mg/kg	-
1-bromo-4flourobenzene	8.37	0.151	95	071	mg/kg	-
2-Octene	8.45	0.014	76	071	mg/kg	-
1-ethyl-3-methylbenzene	8.57	4.025	94	071	mg/kg	-
o-ethyl toluene	8.72	1.417	94	071	mg/kg	-
Allybenzene	9.17	1.31	70	071	mg/kg	-
5-Ethyl-m-xylene	9.21	0.928	90	071	mg/kg	-
m-propyltoluene	9.38	0.766	95	071	mg/kg	-
2-ethyl-1,3 dimethylbenzene	9.42	0.542	94	071	mg/kg	-
prehenitol	9.65	0.317	94	071	mg/kg	-

Note: -Identifications are Tentative relative to Library Matching,

-Concentrations are calculated relative to the closest internal standard and are estimates only.

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
EPH Description

Job Number: 07-30482
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soils
Project Name: Alcoa

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
222007	WS15_01	0.3-0.6	17/04/07	The sample chromatogram exhibits a hump of unresolved complex material eluting predominantly from C16 to beyond C40.
222009	WS15_02	0.8-1.0	17/04/07	The sample chromatogram exhibits a trace primarily consistent with a mixture of petrol and degraded diesel standards.
222010	WS16_03	0.1-0.3	17/04/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from before C10 to C40.
222011	WS16_03	0.6-0.8	17/04/07	The sample chromatogram exhibits three overlapping humps of unresolved complex material eluting from before C10 to beyond C40, with the first hump overlain by several peaks unidentifiable by this analysis.
222012	WS16_03	2.0-2.3	17/04/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to C40.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-30482

Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
071S	In-house method based on EPA624 "Volatile Organic Compounds in Soils/Sludges"	Determination of volatile organic compounds in soil samples by headspace GC-MS	W
070S	In-house method	Determination of hexane/acetone extractable hydrocarbons in soil by gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	W
053S	In-house method	Determination of semi-volatile organic compounds in soil samples by dichloromethane extraction and GC-MS detection	W
022S	In-house method	Determination of PAH compounds in soil samples by hexane / acetone extraction followed by GC-MS detection	W
009S	In-house method referencing BS1377: Part 3: 1990 and Second Site Property: Environmental Assessment Guidance Version 3: March 2003	Determination of pH by addition of water followed by electrometric measurement	W
CWGS	In-house method based on "Total Petroleum Hydrocarbon Criteria Working Group" series, 1998-9	Determination of "CWG" banded petroleum hydrocarbons in soil samples using a combination of headspace GC-FID (C5-C12) and hexane:acetone extraction / silica-alumina aliphatic - aromatic split / GC-FID (C12-C35) techniques with banding by comparison to alkane standards	W
069S	In-house method based on MEWAM "Methods for the Determination of Metals in Soil", HMSO, 1986	Determination of metals in soil samples by aqua-regia digestion followed by ICP OES detection	D
025a	In-house method based on BS1377 Part 3, "Chemical and Electrochemical Tests", 1990	Determination of hydrochloric acid soluble sulphate in soil samples by Inductively Coupled Plasma - Optical Emission Spectrometry (ICP-OES)	D
016S	In-house method	Determination of water soluble boron by 2:1 extraction in hot water followed by ICP-OES detection	D

Soil results are expressed on a dry weight basis. Where the test uses as-received sample, a moisture correction factor is applied to the wet weight result. This factor is determined gravimetrically using weight loss on drying at 30º (+/-5) C.

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

30 April 2007

TEST REPORT

Our Report Number: 07-30486

Your Order Reference: Instructions of 20/04/2007

3 soil samples submitted for analysis on 20/04/2007

Project Name: Alcoa Swansea

Project Code: 64C11647

Laboratory analysis started on 20/04/2007
All laboratory analysis completed by 30 April 2007

Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

Sharon Googh
Project Co-Ordinator
ALCONTROL TECHNICHEM

ALcontrol Technichem
Sample Description

Job Number: 07-30486
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soil
Project Name: Alcoa Swansea

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	Sample Description
222032	BH06_01	0.5	18/04/07	Grey sandy clay with gravel
222033	BH06_02	1.0	18/04/07	Brown sandy clay
222034	BH06_02	5.0	18/04/07	Brown sandy clay

ALcontrol Technichem
Table Of Results

Job Number : 07-30486
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa Swansea
Client : Environ UK Ltd

Sample Reference	**BH06_01**	**BH06_02**	**BH06_02**			**Method No**	**Units**	**LOD**
Sample Depth (m)	**0.5**	**1.0**	**5.0**					
Date Sampled	**18/04/07**	**18/04/07**	**18/04/07**					
Date Scheduled	**20/04/07**	**20/04/07**	**20/04/07**					
Laboratory Reference No	**222032**	**222033**	**222034**					
Analysis								
Moisture Content (Dry Weight)	11.3	10.2	10.1				%	0.1
Moisture Content (Wet Weight)	10.2	9.2	9.2				%	0.1
Arsenic	-	7.0	-			069S[I][M]	mg/kg	3
Barium	-	68	-			069S[I][M]	mg/kg	10
Beryllium	-	1.1	-			069S[I][M]	mg/kg	0.5
Boron (W/S)	-	< 0.5	-			016S[I][M]	mg/kg	0.5
Cadmium	-	< 0.5	-			069S[I][M]	mg/kg	0.5
Chromium	-	28	-			069S[I][M]	mg/kg	10
Copper	-	23	-			069S[I][M]	mg/kg	5
Lead	-	< 10	-			069S[I][M]	mg/kg	10
Mercury	-	< 0.6	-			069S[I][M]	mg/kg	0.6
Nickel	-	33	-			069S[I][M]	mg/kg	4
Selenium	-	< 2.5	-			069S[I][M]	mg/kg	2.5
Vanadium	-	17	-			069S[I][M]	mg/kg	3
Zinc	-	67	-			069S[I][M]	mg/kg	10
pH	7.8	7.5	7.0			009S[I][M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	930	11	20			070S[I][M]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30486
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa Swansea
Client : Environ UK Ltd

Sample Reference	BH06_01	BH06_02	BH06_02			Method No	Units	LOD
Sample Depth (m)	0.5	1.0	5.0					
Date Sampled	18/04/07	18/04/07	18/04/07					
Date Scheduled	20/04/07	20/04/07	20/04/07					
Laboratory Reference No	222032	222033	222034					
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1	< 0.1	< 0.1			022S[IM]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1	< 0.1			022S[IM]	mg/kg	0.1
Acenaphthene	< 0.1	< 0.1	< 0.1			022S[IM]	mg/kg	0.1
Fluorene	< 0.1	< 0.1	< 0.1			022S[IM]	mg/kg	0.1
Phenanthrene	< 0.1	< 0.1	< 0.1			022S[IM]	mg/kg	0.1
Anthracene	< 0.1	< 0.1	< 0.1			022S[IM]	mg/kg	0.1
Fluoranthene	< 0.1	< 0.1	< 0.1			022S[IM]	mg/kg	0.1
Pyrene	< 0.1	< 0.1	< 0.1			022S[IM]	mg/kg	0.1
Benzo(a)anthracene	< 0.1	< 0.1	< 0.1			022S[IM]	mg/kg	0.1
Chrysene	< 0.1	< 0.1	< 0.1			022S[IM]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1	< 0.1	< 0.1			022S[IM]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	< 0.1	< 0.1			022S[IM]	mg/kg	0.1
Benzo(a)pyrene	< 0.1	< 0.1	< 0.1			022S[IM]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1	< 0.1			022S[IM]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1	< 0.1			022S[IM]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	< 0.1	< 0.1			022S[IM]	mg/kg	0.1
PAH (Sum of Dutch 10)	ND	ND	ND			022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	ND	ND	ND			022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30486
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa Swansea
Client : Environ UK Ltd

Sample Reference	BH06_01	BH06_02	BH06_02			Method No	Units	LOD
Sample Depth (m)	0.5	1.0	5.0					
Date Sampled	18/04/07	18/04/07	18/04/07					
Date Scheduled	20/04/07	20/04/07	20/04/07					
Laboratory Reference No	222032	222033	222034					
Analysis								
* * VOC SUITE * *								
MTBE	< 0.250	-	< 0.250			071S[I]	mg/kg	0.025
Benzene	< 0.250	-	< 0.250			071S[I]	mg/kg	0.025
Toluene	< 0.250	-	< 0.250			071S[I]	mg/kg	0.025
Ethylbenzene	< 0.250	-	< 0.250			071S[I]	mg/kg	0.025
m,p-Xylenes	< 0.500	-	< 0.500			071S[I]	mg/kg	0.05
o-Xylene	< 0.250	-	< 0.250			071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	< 0.250	-	< 0.250			071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	< 0.250	-	< 0.250			071S[I]	mg/kg	0.025
Dichlorodifluoromethane	-	< 250	-			071S[IM]	ug/kg	25
Chloromethane	-	< 250	-			071S[IM]	ug/kg	25
Vinyl Chloride	-	< 250	-			071S	ug/kg	25
Bromomethane	-	< 250	-			071S[I]	ug/kg	25
Chloroethane	-	< 250	-			071S[IM]	ug/kg	25
Trichlorofluoromethane	-	< 250	-			071S[IM]	ug/kg	25
1,1-Dichloroethene	-	< 250	-			071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	-	< 250	-			071S[I]	ug/kg	25
Dichloromethane	-	< 500	-			071S	ug/kg	50
Carbon Disulfide	-	< 250	-			071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	-	< 250	-			071S	ug/kg	25
MTBE	-	< 250	-			071S	ug/kg	25
1,1 -Dichloroethane	-	< 250	-			071S	ug/kg	25
Cis-1,2 Dichloroethene	-	< 250	-			071S[IM]	ug/kg	25
Bromochloromethane	-	< 250	-			071S[IM]	ug/kg	25
Chloroform	-	< 250	-			071S[IM]	ug/kg	25
2,2-Dichloropropane	-	< 250	-			071S[IM]	ug/kg	25
1,1,1-Trichloroethane	-	< 250	-			071S	ug/kg	25
1,2-Dichloroethane	-	< 250	-			071S	ug/kg	25
1,1-Dichloropropene	-	< 250	-			071S[IM]	ug/kg	25
Benzene	-	< 250	-			071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-30486
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa Swansea
Client : Environ UK Ltd

Sample Reference	BH06_01	BH06_02	BH06_02			Method No	Units	LOD
Sample Depth (m)	0.5	1.0	5.0					
Date Sampled	18/04/07	18/04/07	18/04/07					
Date Scheduled	20/04/07	20/04/07	20/04/07					
Laboratory Reference No	222032	222033	222034					
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	-	< 250	-			071S[IM]	ug/kg	25
Dibromomethane	-	< 250	-			071S[IM]	ug/kg	25
1,2-Dichloropropane	-	< 250	-			071S[IM]	ug/kg	25
Trichloroethene	-	< 250	-			071S[IM]	ug/kg	25
Bromodichloromethane	-	< 250	-			071S[IM]	ug/kg	25
Cis-1,3 Dichloropropene	-	< 250	-			071S[IM]	ug/kg	25
Trans-1,3 Dichloropropene	-	< 250	-			071S[IM]	ug/kg	25
1,1,2-Trichloroethane	-	< 250	-			071S[IM]	ug/kg	25
Toluene	-	< 250	-			071S	ug/kg	25
1,3 -Dichloropropane	-	< 250	-			071S[IM]	ug/kg	25
Dibromochloromethane	-	< 250	-			071S[IM]	ug/kg	25
1,2-Dibromoethane	-	< 250	-			071S[IM]	ug/kg	25
Tetrachloroethene	-	< 250	-			071S	ug/kg	25
1,1,1,2-Tetrachloroethane	-	< 250	-			071S	ug/kg	25
Chlorobenzene	-	< 250	-			071S[IM]	ug/kg	25
Ethyl Benzene	-	< 250	-			071S	ug/kg	25
m,p-Xylenes	-	< 500	-			071S	ug/kg	50
Bromoform	-	< 250	-			071S[IM]	ug/kg	25
Styrene	-	< 250	-			071S[IM]	ug/kg	25
o-Xylene	-	< 250	-			071S	ug/kg	25
1,1,2,2 Tetrachloroethane	-	< 250	-			071S	ug/kg	25
1,2,3-Trichloropropane	-	< 250	-			071S[IM]	ug/kg	25
Isopropylbenzene	-	< 250	-			071S[IM]	ug/kg	25
Bromobenzene	-	< 250	-			071S[IM]	ug/kg	25
n-propylbenzene	-	< 250	-			071S[IM]	ug/kg	25
2-Chlorotoluene	-	< 250	-			071S[IM]	ug/kg	25
4-Chlorotoluene	-	< 250	-			071S[IM]	ug/kg	25
1,3,5 Trimethylbenzene	-	< 250	-			071S	ug/kg	25
tert-butylbenzene	-	< 250	-			071S[IM]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-30486
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa Swansea
Client : Environ UK Ltd

Sample Reference	BH06_01	BH06_02	BH06_02			Method No	Units	LOD
Sample Depth (m)	0.5	1.0	5.0					
Date Sampled	18/04/07	18/04/07	18/04/07					
Date Scheduled	20/04/07	20/04/07	20/04/07					
Laboratory Reference No	222032	222033	222034					
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	-	< 250	-			071S	ug/kg	25
sec-butylbenzene	-	< 250	-			071S[IM]	ug/kg	25
1,3 Dichlorobenzene	-	< 250	-			071S	ug/kg	25
1,4 Dichlorobenzene	-	< 250	-			071S	ug/kg	25
4-Isopropyltoluene	-	< 250	-			071S[IM]	ug/kg	25
1,2 Dichlorobenzene	-	< 250	-			071S	ug/kg	25
n-butylbenzene	-	< 250	-			071S	ug/kg	25
1,2,4-Trichlorobenzene	-	< 250	-			071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	-	< 250	-			071S	ug/kg	25
Hexachlorobutadiene	-	< 500	-			071S	ug/kg	50
1,2,3-Trichlorobenzene	-	< 250	-			071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
Limits raised due to matrix interference.

ALcontrol Technichem
EPH Description

Job Number: 07-30486
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soils
Project Name: Alcoa Swansea

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
222032	BH06_01	0.5	18/04/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to beyond C40, overlain by several peaks unidentifiable by this analysis.
222033	BH06_02	1.0	18/04/07	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.
222034	BH06_02	5.0	18/04/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C14 to C40.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-30486

Project Code: 64C11647

Project Name: Alcoa Swansea
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
070S	In-house method	Determination of hexane/acetone extractable hydrocarbons in soil by gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	W
022S	In-house method	Determination of PAH compounds in soil samples by hexane / acetone extraction followed by GC-MS detection	W
009S	In-house method referencing BS1377: Part 3: 1990 and Second Site Property: Environmental Assessment Guidance Version 3: March 2003	Determination of pH by addition of water followed by electrometric measurement	W
071S	In-house method	Determination of volatile organic compounds in soil samples by headspace GC-MS analysis	W
069S	In-house method based on MEWAM "Methods for the Determination of Metals in Soil", HMSO, 1986	Determination of metals in soil samples by aqua-regia digestion followed by ICP-OES detection	D
016S	In-house method	Determination of water soluble boron by 2:1 extraction in hot water followed by ICP-OES detection	D

Soil results are expressed on a dry weight basis. Where the test uses as-received sample, a moisture correction factor is applied to the wet weight result. This factor is determined gravimetrically using weight loss on drying at 30º (+/-5) C.

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

04 May 2007

TEST REPORT

Our Report Number: 07-30792

Your Order Reference: Instructions of 23/04/2007

5 soil samples submitted for analysis on 23/04/2007

Project Name: Alcoa Swansea

Project Code: 64C11647

Laboratory analysis started on 25/04/2007
All laboratory analysis completed by 04 May 2007

Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

Rhys Ashton
Project Co-Ordinator
ALCONTROL TECHNICHEM

ALcontrol Technichem
Sample Description

Job Number: 07-30792
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soil
Project Name: Alcoa Swansea

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	Sample Description
223572	BH06_03	0.5	19/04/07	Dark brown clay with gravel
223573	BH06_03	2	19/04/07	Dark brown clay
223574	BH06_03	4	19/04/07	Dark brown clay with gravel
223575	WS4_02	0.2-0.5	19/04/07	Orange / brown clay
223576	WS4_02	2.7-3.0	19/04/07	Dark brown clay with gravel

ALcontrol Technichem
Table Of Results

Job Number : 07-30792
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa Swansea
Client : Environ UK Ltd

Sample Reference	BH06_03	BH06_03	BH06_03	WS4_02	WS4_02	Method No	Units	LOD
Sample Depth (m)	0.5	2.0	4.0	0.2-0.5	2.7-3.0			
Date Sampled	19/04/07	19/04/07	19/04/07	19/04/07	19/04/07			
Date Scheduled	23/04/07	23/04/07	23/04/07	23/04/07	23/04/07			
Laboratory Reference No	223572	223573	223574	223575	223576			
Analysis								
Moisture Content (Dry Weight)	9.5	13.7	8.9	14.5	11.5		%	0.1
Moisture Content (Wet Weight)	8.6	12.0	8.2	12.6	10.3		%	0.1
Asbestos (Screen)	Absent	-	-	Absent	-	001a		
Arsenic	-	6.0	-	9.2	4.0	069S[I,M]	mg/kg	3
Barium	-	79	-	54	69	069S[I,M]	mg/kg	10
Beryllium	-	0.9	-	0.9	0.7	069S[I,M]	mg/kg	0.5
Boron (W/S)	-	< 0.5	-	0.6	< 0.5	016S[I,M]	mg/kg	0.5
Cadmium	-	< 0.5	-	< 0.5	< 0.5	069S[I,M]	mg/kg	0.5
Chromium	-	29	-	17	14	069S[I,M]	mg/kg	10
Copper	-	23	-	27	28	069S[I,M]	mg/kg	5
Lead	-	21	-	38	43	069S[I,M]	mg/kg	10
Mercury	-	< 0.6	-	< 0.6	< 0.6	069S[I,M]	mg/kg	0.6
Nickel	-	24	-	14	25	069S[I,M]	mg/kg	4
Selenium	-	< 2.5	-	< 2.5	< 2.5	069S[I,M]	mg/kg	2.5
Vanadium	-	15	-	19	15	069S[I,M]	mg/kg	3
Zinc	-	72	-	57	59	069S[I,M]	mg/kg	10
pH	7.6	-	7.3	5.3	5.9	009S[I,M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	550	-	-	< 5	6	070S[I,M]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30792
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa Swansea
Client : Environ UK Ltd

Sample Reference	BH06_03	WS4_02	WS4_02			Method No	Units	LOD
Sample Depth (m)	4.0	0.2-0.5	2.7-3.0					
Date Sampled	19/04/07	19/04/07	19/04/07					
Date Scheduled	23/04/07	23/04/07	23/04/07					
Laboratory Reference No	223574	223575	223576					
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Acenaphthene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Fluorene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Phenanthrene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Anthracene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Fluoranthene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Pyrene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Benzo(a)anthracene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Chrysene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Benzo(a)pyrene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
PAH (Sum of Dutch 10)	ND	ND	ND			022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	ND	ND	ND			022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30792
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa Swansea
Client : Environ UK Ltd

Sample Reference	BH06_03					Method No	Units	LOD
Sample Depth (m)	4.0							
Date Sampled	19/04/07							
Date Scheduled	23/04/07							
Laboratory Reference No	223574							
Analysis								
* * CWG SUITE * *								
Aliphatic C5-C6	< 0.01					CWGS	mg/kg	0.01
Aliphatic >C6-C8	< 0.01					CWGS	mg/kg	0.01
Aliphatic >C8-C10	< 0.01					CWGS	mg/kg	0.01
Aliphatic >C10-C12	< 0.01					CWGS	mg/kg	0.01
Aliphatic >C12-C16	< 5					CWGS[I]	mg/kg	5
Aliphatic >C16-C21	8.3					CWGS[I]	mg/kg	5
Aliphatic >C21-C35	16					CWGS[I]	mg/kg	5
Total Aliphatics (C5-C35)	24					CWGS	mg/kg	5
Aromatic C6-C7	< 0.01					CWGS	mg/kg	0.01
Aromatic >C7-C8	< 0.01					CWGS	mg/kg	0.01
Aromatic >C8-C10	< 0.01					CWGS	mg/kg	0.01
Aromatic >C10-C12	0.01					CWGS	mg/kg	0.01
Aromatic >C12-C16	< 5					CWGS[I]	mg/kg	5
Aromatic >C16-C21	< 5					CWGS[I]	mg/kg	5
Aromatic >C21-C35	7.9					CWGS[I]	mg/kg	5
Total Aromatics (C5-C35)	7.9					CWGS	mg/kg	5
Volatile Hydrocarbons (C5-C12)	0.01					CWGS	mg/kg	0.01
Extractable Hydrocarbons (C12-C35)	32					CWGS	mg/kg	5
Total Hydrocarbons (C5-C35)	32					CWGS	mg/kg	5
MTBE	< 0.010					CWGS[IM]	mg/kg	0.01
Benzene	< 0.010					CWGS[IM]	mg/kg	0.01
Toluene	< 0.010					CWGS[IM]	mg/kg	0.01
Ethylbenzene	< 0.010					CWGS[IM]	mg/kg	0.01
m,p-Xylenes	< 0.010					CWGS[IM]	mg/kg	0.01
o-Xylene	< 0.010					CWGS[IM]	mg/kg	0.01
1,3,5-Trimethylbenzene	< 0.010					CWGS[IM]	mg/kg	0.01
1,2,4-Trimethylbenzene	< 0.010					CWGS[IM]	mg/kg	0.01

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30792
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa Swansea
Client : Environ UK Ltd

Sample Reference	BH06_03					Method No	Units	LOD
Sample Depth (m)	0.5							
Date Sampled	19/04/07							
Date Scheduled	23/04/07							
Laboratory Reference No	223572							
Analysis								
* * SVOC SUITE * *								
Naphthalene	< 150					053S[IM]	ug/kg	150
2-Chloronaphthalene	< 150					053S[I]	ug/kg	150
Acenaphthylene	< 150					053S[I]	ug/kg	150
Acenaphthene	< 150					053S[I]	ug/kg	150
Fluorene	< 150					053S[I]	ug/kg	150
Phenanthrene	< 150					053S[I]	ug/kg	150
Anthracene	< 150					053S[I]	ug/kg	150
Fluoranthene	< 150					053S[I]	ug/kg	150
Pyrene	< 150					053S[IM]	ug/kg	150
Benz(a)anthracene	< 150					053S	ug/kg	150
Chrysene	< 150					053S[I]	ug/kg	150
Benzo(b)fluoranthene	< 150					053S[I]	ug/kg	150
Benzo(k)fluoranthene	< 150					053S[I]	ug/kg	150
Benzo(a)pyrene	< 150					053S	ug/kg	150
Dibenzo(a,h)anthracene	< 150					053S[IM]	ug/kg	150
Indeno(1,2,3-cd)pyrene	< 150					053S[I]	ug/kg	150
Benzo(g,h,i)perylene	< 150					053S[I]	ug/kg	150
Phenol	< 150					053S[I]	ug/kg	150
2-Chlorophenol	< 150					053S[IM]	ug/kg	150
2-Methylphenol	< 200					053S[I]	ug/kg	200
4-Methylphenol	< 200					053S[IM]	ug/kg	200
2-Nitrophenol	< 300					053S[I]	ug/kg	300
2,4-Dimethylphenol	< 250					053S[IM]	ug/kg	250
2,4-Dichlorophenol	< 200					053S[IM]	ug/kg	200
2,6-Dichlorophenol	< 200					053S[IM]	ug/kg	200
4-Chloro-3-methyl phenol	< 150					053S[IM]	ug/kg	150
2,4,6-Trichlorophenol	< 150					053S[I]	ug/kg	150
2,4,5-Trichlorophenol	< 200					053S[IM]	ug/kg	200
4-Nitrophenol	< 300					053S	ug/kg	300

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30792
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa Swansea
Client : Environ UK Ltd

Sample Reference	**BH06_03**					**Method No**	**Units**	**LOD**
Sample Depth (m)	**0.5**							
Date Sampled	**19/04/07**							
Date Scheduled	**23/04/07**							
Laboratory Reference No	**223572**							
Analysis								
* * SVOC SUITE Cont.. * *								
2,3,4,6-Tetrachlorophenol	< 250					053S	ug/kg	250
Pentachlorophenol	< 250					053S	ug/kg	250
Dimethyl Phthalate	< 200					053S[IM]	ug/kg	200
Diethyl Phthalate	< 200					053S[I]	ug/kg	200
Di-n-butyl phthalate	< 150					053S[I]	ug/kg	150
Butyl benzyl phthalate	< 150					053S[IM]	ug/kg	150
Bis(2-chloroethyl)ether	< 150					053S[IM]	ug/kg	150
Bis(2-chloroisopropyl)ether	< 200					053S[I]	ug/kg	200
4-Chlorophenyl phenyl ether	< 150					053S[I]	ug/kg	150
Bromo phenyl phenyl ether	< 200					053S[IM]	ug/kg	200
1,3-Dichlorobenzene	< 200					053S[IM]	ug/kg	200
1,2-Dichlorobenzene	< 150					053S[IM]	ug/kg	150
1,4-Dichlorobenzene	< 200					053S[I]	ug/kg	200
Nitrobenzene	< 150					053S[IM]	ug/kg	150
1,2,4-Trichlorobenzene	< 200					053S[IM]	ug/kg	200
2,6-Dinitrotoluene	< 200					053S	ug/kg	200
2,4-Dinitrotoluene	< 200					053S	ug/kg	200
Azobenzene	< 200					053S[I]	ug/kg	200
Hexachlorobenzene	< 200					053S[IM]	ug/kg	200
Hexachloroethane	< 150					053S[I]	ug/kg	150
n-Nitro-n-propyl-1-propanamine	< 200					053S[I]	ug/kg	200
Isophorone	< 200					053S[IM]	ug/kg	200
Bis(2-chloroethoxy)methane	< 150					053S[I]	ug/kg	150
Hexachlorobutadiene	< 150					053S[IM]	ug/kg	150
Anthraquinone	< 150					053S	ug/kg	150
Hexachlorocyclopentadiene	< 300					053S	ug/kg	300
Dibenzofuran	< 150					053S[IM]	ug/kg	150
Carbazole	< 100					053S[I]	ug/kg	100
Bis (2-ethylhexyl) phthalate	< 300					053S	ug/kg	300

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30792
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa Swansea
Client : Environ UK Ltd

Sample Reference	BH06_03					Method No	Units	LOD
Sample Depth (m)	0.5							
Date Sampled	19/04/07							
Date Scheduled	23/04/07							
Laboratory Reference No	223572							
Analysis								
4-nitroaniline	< 250					053S	ug/kg	250
4-Chloroaniline	< 200					053S	ug/kg	200
3-nitroaniline	< 200					053S	ug/kg	200
2-nitroaniline	< 250					053S[I]	ug/kg	250
Aniline	< 150					053S	ug/kg	150
Di-n-octyl phthalate	< 150					053S	ug/kg	150
2-Methylnapthalene	< 150					053S[I]	ug/kg	150
Biphenyl	< 150					053S	ug/kg	150

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-30792
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa Swansea
Client : Environ UK Ltd

Sample Reference	BH06_03	BH06_03	WS4_02			Method No	Units	LOD
Sample Depth (m)	0.5	4.0	0.2-0.5					
Date Sampled	19/04/07	19/04/07	19/04/07					
Date Scheduled	23/04/07	23/04/07	23/04/07					
Laboratory Reference No	223572	223574‡	223575					
Analysis								
* * VOC SUITE * *								
MTBE	< 0.025	-	< 0.025			071S[I]	mg/kg	0.025
Benzene	< 0.025	-	< 0.025			071S[I]	mg/kg	0.025
Toluene	< 0.025	-	< 0.025			071S[I]	mg/kg	0.025
Ethylbenzene	< 0.025	-	< 0.025			071S[I]	mg/kg	0.025
m,p-Xylenes	< 0.05	-	< 0.05			071S[I]	mg/kg	0.05
o-Xylene	< 0.025	-	< 0.025			071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	< 0.025	-	< 0.025			071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	< 0.025	-	< 0.025			071S[I]	mg/kg	0.025
Dichlorodifluoromethane	-	< 250	-			071S[IM]	ug/kg	25
Chloromethane	-	< 250	-			071S[IM]	ug/kg	25
Vinyl Chloride	-	< 250	-			071S	ug/kg	25
Bromomethane	-	< 250	-			071S[I]	ug/kg	25
Chloroethane	-	< 250	-			071S[IM]	ug/kg	25
Trichlorofluoromethane	-	< 250	-			071S[IM]	ug/kg	25
1,1-Dichloroethene	-	< 250	-			071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	-	< 250	-			071S[I]	ug/kg	25
Dichloromethane	-	< 500	-			071S	ug/kg	50
Carbon Disulfide	-	< 250	-			071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	-	< 250	-			071S	ug/kg	25
MTBE	-	< 250	-			071S	ug/kg	25
1,1 -Dichloroethane	-	< 250	-			071S	ug/kg	25
Cis-1,2 Dichloroethene	-	< 250	-			071S[IM]	ug/kg	25
Bromochloromethane	-	< 250	-			071S[IM]	ug/kg	25
Chloroform	-	< 250	-			071S[IM]	ug/kg	25
2,2-Dichloropropane	-	< 250	-			071S[IM]	ug/kg	25
1,1,1-Trichloroethane	-	< 250	-			071S	ug/kg	25
1,2-Dichloroethane	-	< 250	-			071S	ug/kg	25
1,1-Dichloropropene	-	< 250	-			071S[IM]	ug/kg	25
Benzene	-	< 250	-			071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-30792
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa Swansea
Client : Environ UK Ltd

Sample Reference	BH06_03	BH06_03	WS4_02			Method No	Units	LOD
Sample Depth (m)	0.5	4.0	0.2-0.5					
Date Sampled	19/04/07	19/04/07	19/04/07					
Date Scheduled	23/04/07	23/04/07	23/04/07					
Laboratory Reference No	223572	223574‡	223575					
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	-	< 250	-			071S[IM]	ug/kg	25
Dibromomethane	-	< 250	-			071S[IM]	ug/kg	25
1,2-Dichloropropane	-	< 250	-			071S[IM]	ug/kg	25
Trichloroethene	-	< 250	-			071S[IM]	ug/kg	25
Bromodichloromethane	-	< 250	-			071S[IM]	ug/kg	25
Cis-1,3 Dichloropropene	-	< 250	-			071S[IM]	ug/kg	25
Trans-1,3 Dichloropropene	-	< 250	-			071S[IM]	ug/kg	25
1,1,2-Trichloroethane	-	< 250	-			071S[IM]	ug/kg	25
Toluene	-	< 250	-			071S	ug/kg	25
1,3 -Dichloropropane	-	< 250	-			071S[IM]	ug/kg	25
Dibromochloromethane	-	< 250	-			071S[IM]	ug/kg	25
1,2-Dibromoethane	-	< 250	-			071S[IM]	ug/kg	25
Tetrachloroethene	-	< 250	-			071S	ug/kg	25
1,1,1,2-Tetrachloroethane	-	< 250	-			071S	ug/kg	25
Chlorobenzene	-	< 250	-			071S[IM]	ug/kg	25
Ethyl Benzene	-	< 250	-			071S	ug/kg	25
m,p-Xylenes	-	< 500	-			071S	ug/kg	50
Bromoform	-	< 250	-			071S[IM]	ug/kg	25
Styrene	-	< 250	-			071S[IM]	ug/kg	25
o-Xylene	-	< 250	-			071S	ug/kg	25
1,1,2,2 Tetrachloroethane	-	< 250	-			071S	ug/kg	25
1,2,3-Trichloropropane	-	< 250	-			071S[IM]	ug/kg	25
Isopropylbenzene	-	< 250	-			071S[IM]	ug/kg	25
Bromobenzene	-	< 250	-			071S[IM]	ug/kg	25
n-propylbenzene	-	< 250	-			071S[IM]	ug/kg	25
2-Chlorotoluene	-	< 250	-			071S[IM]	ug/kg	25
4-Chlorotoluene	-	< 250	-			071S[IM]	ug/kg	25
1,3,5 Trimethylbenzene	-	< 250	-			071S	ug/kg	25
tert-butylbenzene	-	< 250	-			071S[IM]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-30792
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa Swansea
Client : Environ UK Ltd

Sample Reference	BH06_03	BH06_03	WS4_02			Method No	Units	LOD
Sample Depth (m)	0.5	4.0	0.2-0.5					
Date Sampled	19/04/07	19/04/07	19/04/07					
Date Scheduled	23/04/07	23/04/07	23/04/07					
Laboratory Reference No	223572	223574‡	223575					
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	-	< 250	-			071S	ug/kg	25
sec-butylbenzene	-	< 250	-			071S[IM]	ug/kg	25
1,3 Dichlorobenzene	-	< 250	-			071S	ug/kg	25
1,4 Dichlorobenzene	-	< 250	-			071S	ug/kg	25
4-Isopropyltoluene	-	< 250	-			071S[IM]	ug/kg	25
1,2 Dichlorobenzene	-	< 250	-			071S	ug/kg	25
n-butylbenzene	-	< 250	-			071S	ug/kg	25
1,2,4-Trichlorobenzene	-	< 250	-			071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	-	< 250	-			071S	ug/kg	25
Hexachlorobutadiene	-	< 500	-			071S	ug/kg	50
1,2,3-Trichlorobenzene	-	< 250	-			071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
EPH Description

Job Number: 07-30792
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soils
Project Name: Alcoa Swansea

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
223572	BH06_03	0.5	19/04/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to beyond C40, overlain by several peaks unidentifiable by this analysis.
223575	WS4_02	0.2-0.5	19/04/07	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.
223576	WS4_02	2.7-3.0	19/04/07	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-30792

Project Code: 64C11647

Project Name: Alcoa Swansea
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
070S	In-house method	Determination of hexane/acetone extractable hydrocarbons in soil by gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	W
053S	In-house method	Determination of semi-volatile organic compounds in soil samples by dichloromethane extraction and GC-MS detection	W
022S	In-house method	Determination of PAH compounds in soil samples by hexane / acetone extraction followed by GC-MS detection	W
009S	In-house method referencing BS1377: Part 3: 1990 and Second Site Property: Environmental Assessment Guidance Version 3: March 2003	Determination of pH by addition of water followed by electrometric measurement	W
CWGS	In-house method based on "Total Petroleum Hydrocarbon Criteria Working Group" series, 1998-9	Determination of "CWG" banded petroleum hydrocarbons in soil samples using a combination of headspace GC-FID (C5-C12) and hexane:acetone extraction / silica-alumina aliphatic - aromatic split / GC-FID (C12-C35) techniques with banding by comparison to alkane standards	W
071S	In-house method	Determination of volatile organic compounds in soil samples by headspace GC-MS analysis	W
069S	In-house method based on MEWAM "Methods for the Determination of Metals in Soil", HMSO, 1986	Determination of metals in soil samples by aqua-regia digestion followed by ICP-OES detection	D
016S	In-house method	Determination of water soluble boron by 2:1 extraction in hot water followed by ICP-OES detection	D
001a	In-house method based on HSG 248	Visual screening of soil samples for fibrous material requiring further identification according to method 001 (note for samples > approximately 1kg it may be necessary to sub-sample prior to screening)	

Soil results are expressed on a dry weight basis. Where the test uses as-received sample, a moisture correction factor is applied to the wet weight result. This factor is determined gravimetrically using weight loss on drying at 30º (+/-5) C.

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

11 May 2007

TEST REPORT

Our Report Number: 07-31050

Your Order Reference: Instructions of 27/04/2007

3 soil samples submitted for analysis on 27/04/2007

Project Name: ALCOA

Project Code: 64C11647

Laboratory analysis started on 30/04/2007
All laboratory analysis completed by 11 May 2007

Rhys Ashton
Project Co-Ordinator
ALCONTROL TECHNICHEM

Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

Test methods are documented in house procedures or where appropriate standard methods. Non accredited tests (if applicable) are identified on each page. Procedures for sampling are outside the scope of the laboratory UKAS accreditation. Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation. All samples connected with this report , including any 'on hold', will be stored and disposed of according to company policy. A copy of this policy is available on request.

ALcontrol Technichem
Sample Description

Job Number: 07-31050
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soil
Project Name: ALCOA

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	Sample Description
224977	BH12_01	1.0	25/04/07	*Grey rubble with sand
224978	BH12_01	2.0	25/04/07	*Grey rubble with sand and oil / petroleum
224979	BH12_01	4.5	25/04/07	Grey clay with gravel

*Denotes outside the scope of MCERTS accreditation since matrix not included in method validation.

ALcontrol Technichem
Table Of Results

Job Number : 07-31050
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	**BH12_01**	**BH12_01**	**BH12_01**			**Method No**	**Units**	**LOD**
Sample Depth (m)	**1.0**	**2.0**	**4.5**					
Date Sampled	**25/04/07**	**25/04/07**	**25/04/07**					
Date Scheduled	**27/04/07**	**27/04/07**	**27/04/07**					
Laboratory Reference No	**224977**	**224978**	**224979**					
Analysis								
Moisture Content (Wet Weight)	2.7	3.3	12.1				%	0.1
Moisture Content (Dry Weight)	2.7	3.4	13.8				%	0.1
Asbestos (Screen)	Absent	-	-			001a		
Arsenic	11	-	22			069S[I,M]	mg/kg	3
Barium	22	-	44			069S[I,M]	mg/kg	10
Beryllium	< 0.5	-	1.0			069S[I,M]	mg/kg	0.5
Boron (W/S)	< 0.5	-	0.7			016S[I,M]	mg/kg	0.5
Cadmium	< 0.5	-	< 0.5			069S[I,M]	mg/kg	0.5
Chromium	< 10	-	34			069S[I,M]	mg/kg	10
Copper	26	-	8.2			069S[I,M]	mg/kg	5
Lead	17	-	19			069S[I,M]	mg/kg	10
Mercury	< 0.6	-	< 0.6			069S[I,M]	mg/kg	0.6
Nickel	7.3	-	21			069S[I,M]	mg/kg	4
Selenium	< 2.5	-	< 2.5			069S[I,M]	mg/kg	2.5
Vanadium	6.9	-	60			069S[I,M]	mg/kg	3
Zinc	36	-	45			069S[I,M]	mg/kg	10
pH	8.3	8.1	8.6			009S[I,M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	63000	-	5900			070S[I,M]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31050
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH12_01	BH12_01				Method No	Units	LOD
Sample Depth (m)	2.0	4.5						
Date Sampled	25/04/07	25/04/07						
Date Scheduled	27/04/07	27/04/07						
Laboratory Reference No	224978	224979						
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Acenaphthene	0.69	< 0.1				022S[IM]	mg/kg	0.1
Fluorene	1.2	0.13				022S[IM]	mg/kg	0.1
Phenanthrene	2.2	0.26				022S[IM]	mg/kg	0.1
Anthracene	0.40	< 0.1				022S[IM]	mg/kg	0.1
Fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Pyrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(a)anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Chrysene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(a)pyrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
PAH (Sum of Dutch 10)	2.63	0.26				022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	4.48	0.39				022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31050
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH12_01					Method No	Units	LOD
Sample Depth (m)	2.0							
Date Sampled	25/04/07							
Date Scheduled	27/04/07							
Laboratory Reference No	224978							
Analysis								
* * CWG SUITE * *								
Aliphatic C5-C6	0.04					CWGS	mg/kg	0.01
Aliphatic >C6-C8	0.08					CWGS	mg/kg	0.01
Aliphatic >C8-C10	0.50					CWGS	mg/kg	0.01
Aliphatic >C10-C12	6.4					CWGS	mg/kg	0.01
Aliphatic >C12-C16	8700					CWGS[I]	mg/kg	5
Aliphatic >C16-C21	8200					CWGS[I]	mg/kg	5
Aliphatic >C21-C35	2300					CWGS[I]	mg/kg	5
Total Aliphatics (C5-C35)	19000					CWGS	mg/kg	5
Aromatic C6-C7	< 0.01					CWGS	mg/kg	0.01
Aromatic >C7-C8	< 0.01					CWGS	mg/kg	0.01
Aromatic >C8-C10	0.76					CWGS	mg/kg	0.01
Aromatic >C10-C12	9.7					CWGS	mg/kg	0.01
Aromatic >C12-C16	1300					CWGS[I]	mg/kg	5
Aromatic >C16-C21	2000					CWGS[I]	mg/kg	5
Aromatic >C21-C35	570					CWGS[I]	mg/kg	5
Total Aromatics (C5-C35)	3900					CWGS	mg/kg	5
Volatile Hydrocarbons (C5-C12)	17					CWGS	mg/kg	0.01
Extractable Hydrocarbons (C12-C35)	23000					CWGS	mg/kg	5
Total Hydrocarbons (C5-C35)	23000					CWGS	mg/kg	5
MTBE	< 0.010					CWGS[IM]	mg/kg	0.01
Benzene	< 0.010					CWGS[IM]	mg/kg	0.01
Toluene	< 0.010					CWGS[IM]	mg/kg	0.01
Ethylbenzene	< 0.010					CWGS[IM]	mg/kg	0.01
m,p-Xylenes	< 0.010					CWGS[IM]	mg/kg	0.01
o-Xylene	0.010					CWGS[IM]	mg/kg	0.01
1,3,5-Trimethylbenzene	< 0.010					CWGS[IM]	mg/kg	0.01
1,2,4-Trimethylbenzene	0.029					CWGS[IM]	mg/kg	0.01

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31050
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH12_01	BH12_01	BH12_01			Method No	Units	LOD
Sample Depth (m)	1.0	2.0	4.5					
Date Sampled	25/04/07	25/04/07	25/04/07					
Date Scheduled	27/04/07	27/04/07	27/04/07					
Laboratory Reference No	224977‡	224978‡	224979					
Analysis								
* * VOC SUITE * *								
MTBE	< 0.250	-	< 0.025			071S[I]	mg/kg	0.025
Benzene	< 0.250	-	< 0.025			071S[I]	mg/kg	0.025
Toluene	< 0.250	-	< 0.025			071S[I]	mg/kg	0.025
Ethylbenzene	< 0.250	-	< 0.025			071S[I]	mg/kg	0.025
m,p-Xylenes	< 0.500	-	< 0.05			071S[I]	mg/kg	0.05
o-Xylene	< 0.250	-	< 0.025			071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	< 0.250	-	< 0.025			071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	< 0.250	-	< 0.025			071S[I]	mg/kg	0.025
Dichlorodifluoromethane	-	< 250	-			071S[IM]	ug/kg	25
Chloromethane	-	< 250	-			071S[IM]	ug/kg	25
Vinyl Chloride	-	< 250	-			071S	ug/kg	25
Bromomethane	-	< 250	-			071S[I]	ug/kg	25
Chloroethane	-	< 250	-			071S[IM]	ug/kg	25
Trichlorofluoromethane	-	< 250	-			071S[IM]	ug/kg	25
1,1-Dichloroethene	-	< 250	-			071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	-	< 250	-			071S[I]	ug/kg	25
Dichloromethane	-	< 500	-			071S	ug/kg	50
Carbon Disulfide	-	< 250	-			071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	-	< 250	-			071S	ug/kg	25
MTBE	-	< 250	-			071S	ug/kg	25
1,1 -Dichloroethane	-	< 250	-			071S	ug/kg	25
Cis-1,2 Dichloroethene	-	< 250	-			071S[IM]	ug/kg	25
Bromochloromethane	-	< 250	-			071S[IM]	ug/kg	25
Chloroform	-	< 250	-			071S[IM]	ug/kg	25
2,2-Dichloropropane	-	< 250	-			071S[IM]	ug/kg	25
1,1,1-Trichloroethane	-	< 250	-			071S	ug/kg	25
1,2-Dichloroethane	-	< 250	-			071S	ug/kg	25
1,1-Dichloropropene	-	< 250	-			071S[IM]	ug/kg	25
Benzene	-	< 250	-			071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-31050
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH12_01	BH12_01	BH12_01			Method No	Units	LOD
Sample Depth (m)	1.0	2.0	4.5					
Date Sampled	25/04/07	25/04/07	25/04/07					
Date Scheduled	27/04/07	27/04/07	27/04/07					
Laboratory Reference No	224977‡	224978‡	224979					
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	-	< 250	-			071S[I,M]	ug/kg	25
Dibromomethane	-	< 250	-			071S[I,M]	ug/kg	25
1,2-Dichloropropane	-	< 250	-			071S[I,M]	ug/kg	25
Trichloroethene	-	< 250	-			071S[I,M]	ug/kg	25
Bromodichloromethane	-	< 250	-			071S[I,M]	ug/kg	25
Cis-1,3 Dichloropropene	-	< 250	-			071S[I,M]	ug/kg	25
Trans-1,3 Dichloropropene	-	< 250	-			071S[I,M]	ug/kg	25
1,1,2-Trichloroethane	-	< 250	-			071S[I,M]	ug/kg	25
Toluene	-	< 250	-			071S	ug/kg	25
1,3 -Dichloropropane	-	< 250	-			071S[I,M]	ug/kg	25
Dibromochloromethane	-	< 250	-			071S[I,M]	ug/kg	25
1,2-Dibromoethane	-	< 250	-			071S[I,M]	ug/kg	25
Tetrachloroethene	-	< 250	-			071S	ug/kg	25
1,1,1,2-Tetrachloroethane	-	< 250	-			071S	ug/kg	25
Chlorobenzene	-	< 250	-			071S[I,M]	ug/kg	25
Ethyl Benzene	-	< 250	-			071S	ug/kg	25
m,p-Xylenes	-	< 500	-			071S	ug/kg	50
Bromoform	-	< 250	-			071S[I,M]	ug/kg	25
Styrene	-	< 250	-			071S[I,M]	ug/kg	25
o-Xylene	-	< 250	-			071S	ug/kg	25
1,1,2,2 Tetrachloroethane	-	< 250	-			071S	ug/kg	25
1,2,3-Trichloropropane	-	< 250	-			071S[I,M]	ug/kg	25
Isopropylbenzene	-	< 250	-			071S[I,M]	ug/kg	25
Bromobenzene	-	< 250	-			071S[I,M]	ug/kg	25
n-propylbenzene	-	< 250	-			071S[I,M]	ug/kg	25
2-Chlorotoluene	-	< 250	-			071S[I,M]	ug/kg	25
4-Chlorotoluene	-	< 250	-			071S[I,M]	ug/kg	25
1,3,5 Trimethylbenzene	-	< 250	-			071S	ug/kg	25
tert-butylbenzene	-	< 250	-			071S[I,M]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-31050
Matrix : Soil
Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH12_01	BH12_01	BH12_01			Method No	Units	LOD
Sample Depth (m)	1.0	2.0	4.5					
Date Sampled	25/04/07	25/04/07	25/04/07					
Date Scheduled	27/04/07	27/04/07	27/04/07					
Laboratory Reference No	224977‡	224978‡	224979					
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	-	< 250	-			071S	ug/kg	25
sec-butylbenzene	-	< 250	-			071S[IM]	ug/kg	25
1,3 Dichlorobenzene	-	< 250	-			071S	ug/kg	25
1,4 Dichlorobenzene	-	< 250	-			071S	ug/kg	25
4-Isopropyltoluene	-	< 250	-			071S[IM]	ug/kg	25
1,2 Dichlorobenzene	-	< 250	-			071S	ug/kg	25
n-butylbenzene	-	< 250	-			071S	ug/kg	25
1,2,4-Trichlorobenzene	-	< 250	-			071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	-	< 250	-			071S	ug/kg	25
Hexachlorobutadiene	-	< 500	-			071S	ug/kg	50
1,2,3-Trichlorobenzene	-	< 250	-			071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
EPH Description

Job Number: 07-31050
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soils
Project Name: ALCOA

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
224977	BH12_01	1.0	25/04/07	The sample chromatogram exhibits a hump of unresolved complex material eluting between C10 and C40, overlain by a several peaks which are unidentifiable by this method.
224979	BH12_01	4.5	25/04/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to C40, overlain by a series of n-alkane peaks and a series of peaks unidentifiable by this analysis.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-31050

Project Code: 64C11647

Project Name: ALCOA
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
070S	In-house method	Determination of hexane/acetone extractable hydrocarbons in soil by gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	W
022S	In-house method	Determination of PAH compounds in soil samples by hexane / acetone extraction followed by GC-MS detection	W
009S	In-house method referencing BS1377: Part 3: 1990 and Second Site Property: Environmental Assessment Guidance Version 3: March 2003	Determination of pH by addition of water followed by electrometric measurement	W
CWGS	In-house method based on "Total Petroleum Hydrocarbon Criteria Working Group" series, 1998-9	Determination of "CWG" banded petroleum hydrocarbons in soil samples using a combination of headspace GC-FID (C5-C12) and hexane:acetone extraction / silica-alumina aliphatic - aromatic split / GC-FID (C12-C35) techniques with banding by comparison to alkane standards	W
071S	In-house method	Determination of volatile organic compounds in soil samples by headspace GC-MS analysis	W
069S	In-house method based on MEWAM "Methods for the Determination of Metals in Soil", HMSO, 1986	Determination of metals in soil samples by aqua-regia digestion followed by ICP-OES detection	D
016S	In-house method	Determination of water soluble boron by 2:1 extraction in hot water followed by ICP-OES detection	D
001a	In-house method based on HSG 248	Visual screening of soil samples for fibrous material requiring further identification according to method 001 (note for samples > approximately 1kg it may be necessary to sub-sample prior to screening)	

Soil results are expressed on a dry weight basis. Where the test uses as-received sample, a moisture correction factor is applied to the wet weight result. This factor is determined gravimetrically using weight loss on drying at 30º (+/-5) C.

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

18 May 2007

TEST REPORT

Our Report Number: 07-31598

Your Order Reference: Instructions of 08/05/2007

3 soil samples submitted for analysis on 08/05/2007

Project Code: 64C11647

Laboratory analysis started on 09/05/2007
All laboratory analysis completed by 18 May 2007

Sharon Googh
Project Co-Ordinator
ALCONTROL TECHNICHEM

Rhys Ashton
Project Co-Ordinator
ALCONTROL TECHNICHEM

ALcontrol Technichem
Sample Description

Matrix: Soil

Job Number: 07-31598
Client: Environ UK Ltd
Project Code: 64C11647

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	Sample Description
227941	BH04_01	2.5m	03/05/07	*Grey gravel with sand
227942	BH04_01	6.0m	03/05/07	Brown sand
227943	BH04_01	7.0m	03/05/07	Grey sandy clay

*Denotes outside the scope of MCERTS accreditation since matrix not included in method validation.

ALcontrol Technichem
Table Of Results

Job Number : 07-31598
Matrix : Soil
Project Code: 64C11647

Client : Environ UK Ltd

Sample Reference	**BH04_01**	**BH04_01**	**BH04_01**			**Method No**	**Units**	**LOD**
Sample Depth (m)	**2.5m**	**6.0m**	**7.0m**					
Date Sampled	**03/05/07**	**03/05/07**	**03/05/07**					
Date Scheduled	**08/05/07**	**08/05/07**	**08/05/07**					
Laboratory Reference No	**227941**	**227942**	**227943**					
Analysis								
Moisture Content (Dry Weight)	5.7	7.8	17.5				%	0.1
Moisture Content (Wet Weight)	5.4	7.3	14.9				%	0.1
Asbestos (Screen)	Absent	-	-			001a		
Arsenic	73	8.5	9.0			069S[I M]	mg/kg	3
Barium	320	58	60			069S[I M]	mg/kg	10
Beryllium	1.0	0.8	0.9			069S[I M]	mg/kg	0.5
Boron (W/S)	0.9	< 0.5	< 0.5			016S[I M]	mg/kg	0.5
Cadmium	2.6	< 0.5	< 0.5			069S[I M]	mg/kg	0.5
Chromium	70	16	19			069S[I M]	mg/kg	10
Copper	390	22	25			069S[I M]	mg/kg	5
Lead	630	22	24			069S[I M]	mg/kg	10
Mercury	1.0	< 0.6	< 0.6			069S[I M]	mg/kg	0.6
Nickel	140	27	31			069S[I M]	mg/kg	4
Selenium	< 2.5	< 2.5	< 2.5			069S[I M]	mg/kg	2.5
Vanadium	72	14	15			069S[I M]	mg/kg	3
Zinc	770	61	68			069S[I M]	mg/kg	10
pH	11.2	8.2	-			009S[I M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	930	-	100			070S[I M]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31598
Matrix : Soil
Project Code: 64C11647

Client : Environ UK Ltd

Sample Reference	BH04_01					Method No	Units	LOD
Sample Depth (m)	2.5m							
Date Sampled	03/05/07							
Date Scheduled	08/05/07							
Laboratory Reference No	227941							
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1					022S[IM]	mg/kg	0.1
Acenaphthylene	< 0.1					022S[IM]	mg/kg	0.1
Acenaphthene	< 0.1					022S[IM]	mg/kg	0.1
Fluorene	< 0.1					022S[IM]	mg/kg	0.1
Phenanthrene	0.39					022S[IM]	mg/kg	0.1
Anthracene	< 0.1					022S[IM]	mg/kg	0.1
Fluoranthene	0.52					022S[IM]	mg/kg	0.1
Pyrene	0.38					022S[IM]	mg/kg	0.1
Benzo(a)anthracene	0.26					022S[IM]	mg/kg	0.1
Chrysene	0.34					022S[IM]	mg/kg	0.1
Benzo(b)fluoranthene	0.26					022S[IM]	mg/kg	0.1
Benzo(k)fluoranthene	0.16					022S[IM]	mg/kg	0.1
Benzo(a)pyrene	0.19					022S[IM]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	0.12					022S[IM]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1					022S[IM]	mg/kg	0.1
Benzo(g,h,i)perylene	0.12					022S[IM]	mg/kg	0.1
PAH (Sum of Dutch 10)	2.09					022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	2.74					022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31598
Matrix : Soil
Project Code: 64C11647

Client : Environ UK Ltd

Sample Reference	BH04_01					Method No	Units	LOD
Sample Depth (m)	6.0m							
Date Sampled	03/05/07							
Date Scheduled	08/05/07							
Laboratory Reference No	227942							
Analysis								
* * CWG SUITE * *								
Aliphatic C5-C6	0.01					CWGS	mg/kg	0.01
Aliphatic >C6-C8	0.01					CWGS	mg/kg	0.01
Aliphatic >C8-C10	< 0.01					CWGS	mg/kg	0.01
Aliphatic >C10-C12	< 0.01					CWGS	mg/kg	0.01
Aliphatic >C12-C16	< 5					CWGS[I]	mg/kg	5
Aliphatic >C16-C21	7.5					CWGS[I]	mg/kg	5
Aliphatic >C21-C35	22					CWGS[I]	mg/kg	5
Total Aliphatics (C5-C35)	30					CWGS	mg/kg	5
Aromatic C6-C7	< 0.01					CWGS	mg/kg	0.01
Aromatic >C7-C8	< 0.01					CWGS	mg/kg	0.01
Aromatic >C8-C10	< 0.01					CWGS	mg/kg	0.01
Aromatic >C10-C12	< 0.01					CWGS	mg/kg	0.01
Aromatic >C12-C16	< 5					CWGS[I]	mg/kg	5
Aromatic >C16-C21	< 5					CWGS[I]	mg/kg	5
Aromatic >C21-C35	11					CWGS[I]	mg/kg	5
Total Aromatics (C5-C35)	11					CWGS	mg/kg	5
Volatile Hydrocarbons (C5-C12)	0.03					CWGS	mg/kg	0.01
Extractable Hydrocarbons (C12-C35)	40					CWGS	mg/kg	5
Total Hydrocarbons (C5-C35)	40					CWGS	mg/kg	5
MTBE	< 0.010					CWGS[IM]	mg/kg	0.01
Benzene	< 0.010					CWGS[IM]	mg/kg	0.01
Toluene	< 0.010					CWGS[IM]	mg/kg	0.01
Ethylbenzene	< 0.010					CWGS[IM]	mg/kg	0.01
m,p-Xylenes	< 0.010					CWGS[IM]	mg/kg	0.01
o-Xylene	< 0.010					CWGS[IM]	mg/kg	0.01
1,3,5-Trimethylbenzene	< 0.010					CWGS[IM]	mg/kg	0.01
1,2,4-Trimethylbenzene	< 0.010					CWGS[IM]	mg/kg	0.01

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31598
Matrix : Soil
Project Code: 64C11647

Client : Environ UK Ltd

Sample Reference	BH04_01					Method No	Units	LOD
Sample Depth (m)	6.0m							
Date Sampled	03/05/07							
Date Scheduled	08/05/07							
Laboratory Reference No	227942							
Analysis								
* * SVOC SUITE * *								
Naphthalene	< 150					053S[IM]	ug/kg	150
2-Chloronaphthalene	< 150					053S[I]	ug/kg	150
Acenaphthylene	< 150					053S[I]	ug/kg	150
Acenaphthene	< 150					053S[I]	ug/kg	150
Fluorene	< 150					053S[I]	ug/kg	150
Phenanthrene	< 150					053S[I]	ug/kg	150
Anthracene	< 150					053S[I]	ug/kg	150
Fluoranthene	< 150					053S[I]	ug/kg	150
Pyrene	< 150					053S[IM]	ug/kg	150
Benz(a)anthracene	< 150					053S	ug/kg	150
Chrysene	< 150					053S[I]	ug/kg	150
Benzo(b)fluoranthene	< 150					053S[I]	ug/kg	150
Benzo(k)fluoranthene	< 150					053S[I]	ug/kg	150
Benzo(a)pyrene	< 150					053S	ug/kg	150
Dibenzo(a,h)anthracene	< 150					053S[IM]	ug/kg	150
Indeno(1,2,3-cd)pyrene	< 150					053S[I]	ug/kg	150
Benzo(g,h,i)perylene	< 150					053S[I]	ug/kg	150
Phenol	< 150					053S[I]	ug/kg	150
2-Chlorophenol	< 150					053S[IM]	ug/kg	150
2-Methylphenol	< 200					053S[I]	ug/kg	200
4-Methylphenol	< 200					053S[IM]	ug/kg	200
2-Nitrophenol	< 300					053S[I]	ug/kg	300
2,4-Dimethylphenol	< 250					053S[IM]	ug/kg	250
2,4-Dichlorophenol	< 200					053S[IM]	ug/kg	200
2,6-Dichlorophenol	< 200					053S[IM]	ug/kg	200
4-Chloro-3-methyl phenol	< 150					053S[IM]	ug/kg	150
2,4,6-Trichlorophenol	< 150					053S[I]	ug/kg	150
2,4,5-Trichlorophenol	< 200					053S[IM]	ug/kg	200
4-Nitrophenol	< 300					053S	ug/kg	300

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31598
Matrix : Soil
Project Code: 64C11647

Client : Environ UK Ltd

Sample Reference	**BH04_01**					**Method No**	**Units**	**LOD**
Sample Depth (m)	**6.0m**							
Date Sampled	**03/05/07**							
Date Scheduled	**08/05/07**							
Laboratory Reference No	**227942**							
Analysis								
* * SVOC SUITE Cont.. * *								
2,3,4,6-Tetrachlorophenol	< 250					053S	ug/kg	250
Pentachlorophenol	< 250					053S	ug/kg	250
Dimethyl Phthalate	< 200					053S[IM]	ug/kg	200
Diethyl Phthalate	< 200					053S[I]	ug/kg	200
Di-n-butyl phthalate	< 150					053S[I]	ug/kg	150
Butyl benzyl phthalate	< 150					053S[IM]	ug/kg	150
Bis(2-chloroethyl)ether	< 150					053S[IM]	ug/kg	150
Bis(2-chloroisopropyl)ether	< 200					053S[I]	ug/kg	200
4-Chlorophenyl phenyl ether	< 150					053S[I]	ug/kg	150
Bromo phenyl phenyl ether	< 200					053S[IM]	ug/kg	200
1,3-Dichlorobenzene	< 200					053S[IM]	ug/kg	200
1,2-Dichlorobenzene	< 150					053S[IM]	ug/kg	150
1,4-Dichlorobenzene	< 200					053S[I]	ug/kg	200
Nitrobenzene	< 150					053S[IM]	ug/kg	150
1,2,4-Trichlorobenzene	< 200					053S[IM]	ug/kg	200
2,6-Dinitrotoluene	< 200					053S	ug/kg	200
2,4-Dinitrotoluene	< 200					053S	ug/kg	200
Azobenzene	< 200					053S[I]	ug/kg	200
Hexachlorobenzene	< 200					053S[IM]	ug/kg	200
Hexachloroethane	< 150					053S[I]	ug/kg	150
n-Nitro-n-propyl-1-propanamine	< 200					053S[I]	ug/kg	200
Isophorone	< 200					053S[IM]	ug/kg	200
Bis(2-chloroethoxy)methane	< 150					053S[I]	ug/kg	150
Hexachlorobutadiene	< 150					053S[IM]	ug/kg	150
Anthraquinone	< 150					053S	ug/kg	150
Aniline	< 150					053S	ug/kg	150
Di-n-octyl phthalate	< 150					053S	ug/kg	150
Hexachlorocyclopentadiene	< 300					053S	ug/kg	300
2-Methylnapthalene	< 150					053S[I]	ug/kg	150

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31598
Matrix : Soil
Project Code: 64C11647

Client : Environ UK Ltd

Sample Reference	**BH04_01**					**Method No**	**Units**	**LOD**
Sample Depth (m)	**6.0m**							
Date Sampled	**03/05/07**							
Date Scheduled	**08/05/07**							
Laboratory Reference No	**227942**							
Analysis								
2-nitroaniline	< 250					053S[I]	ug/kg	250
3-nitroaniline	< 200					053S	ug/kg	200
4-Chloroaniline	< 200					053S	ug/kg	200
4-nitroaniline	< 250					053S	ug/kg	250
Bis (2-ethylhexyl) phthalate	< 300					053S	ug/kg	300
Carbazole	< 100					053S[I]	ug/kg	100
Dibenzofuran	< 150					053S[IM]	ug/kg	150
Biphenyl	< 150					053S	ug/kg	150

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
EPH Description

Matrix: Soils

Job Number: 07-31598
Client: Environ UK Ltd
Project Code: 64C11647

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
227941	BH04_01	2.5m	03/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40, overlain by a series of n-alkane peaks eluting from C14 to C22.
227943	BH04_01	7.0m	03/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C14 to beyond C40.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-31598

Client : Environ UK Ltd

Project Code: 64C11647

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
070S	In-house method	Determination of hexane/acetone extractable hydrocarbons in soil by gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	W
053S	In-house method	Determination of semi-volatile organic compounds in soil samples by dichloromethane extraction and GC-MS detection	W
022S	In-house method	Determination of PAH compounds in soil samples by hexane / acetone extraction followed by GC-MS detection	W
009S	In-house method referencing BS1377: Part 3: 1990 and Second Site Property: Environmental Assessment Guidance Version 3: March 2003	Determination of pH by addition of water followed by electrometric measurement	W
CWGS	In-house method based on "Total Petroleum Hydrocarbon Criteria Working Group" series, 1998-9	Determination of "CWG" banded petroleum hydrocarbons in soil samples using a combination of headspace GC-FID (C5-C12) and hexane:acetone extraction / silica-alumina aliphatic - aromatic split / GC-FID (C12-C35) techniques with banding by comparison to alkane standards	W
069S	In-house method based on MEWAM "Methods for the Determination of Metals in Soil", HMSO, 1986	Determination of metals in soil samples by aqua-regia digestion followed by ICP-OES detection	D
016S	In-house method	Determination of water soluble boron by 2:1 extraction in hot water followed by ICP-OES detection	D
001a	In-house method based on HSG 248	Visual screening of soil samples for fibrous material requiring further identification according to method 001 (note for samples > approximately 1kg it may be necessary to sub-sample prior to screening)	

Soil results are expressed on a dry weight basis. Where the test uses as-received sample, a moisture correction factor is applied to the wet weight result. This factor is determined gravimetrically using weight loss on drying at 30º (+/-5) C.

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

25 May 2007

TEST REPORT

Our Report Number: 07-31797

Your Order Reference: Instructions of 11/05/2007

2 water samples submitted for analysis on 11/05/2007

Project Name: ALCOA

Project Code: 64-C11647

Laboratory analysis started on 11/05/2007
All laboratory analysis completed by 25 May 2007

Sharon Googh
Project Co-Ordinator
ALCONTROL TECHNICHEM

Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

Test methods are documented in house procedures or where appropriate standard methods. Non accredited tests (if applicable) are identified on each page. Procedures for sampling are outside the scope of the laboratory UKAS accreditation. Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation. All samples connected with this report , including any 'on hold', will be stored and disposed of according to company policy. A copy of this policy is available on request.

ALcontrol Technichem
Table Of Results

Job Number : 07-31797
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH3-03	BH12-01				Method No	Units	LOD
Sample Depth (m)	-	-						
Date Sampled	10/05/07	10/05/07						
Date Scheduled	11/05/07	11/05/07						
Laboratory Reference No	228901	228902						
Analysis								
Arsenic (Dissolved)	< 0.005	0.076				080W[I]	mg/l	0.005
Barium (Dissolved)	0.046	0.073				080W[I]	mg/l	0.005
Beryllium (Dissolved)	< 0.001	< 0.001				080W[I]	mg/l	0.001
Boron (Dissolved)	0.14	0.16				080W[I]	mg/l	0.005
Cadmium (Dissolved)	< 0.001	< 0.001				080W[I]	mg/l	0.001
Chromium (Dissolved)	< 0.005	< 0.005				080W[I]	mg/l	0.005
Copper (Dissolved)	< 0.005	< 0.005				080W[I]	mg/l	0.005
Lead (Dissolved)	< 0.005	< 0.005				080W[I]	mg/l	0.005
Mercury (Dissolved)	< 0.00005	< 0.00005				080W[I]	mg/l	0.00005
Nickel (Dissolved)	< 0.005	0.005				080W[I]	mg/l	0.005
Selenium (Dissolved)	< 0.005	< 0.005				080W[I]	mg/l	0.005
Vanadium (Dissolved)	< 0.005	< 0.005				080W[I]	mg/l	0.005
Zinc (Dissolved)	0.014	< 0.005				080W[I]	mg/l	0.005
Ammoniacal Nitrogen as N	2.1	-				057W[I]	mg/l	0.05
Ammoniacal Nitrogen as NH4	2.7	-				057W[I]	mg/l	0.05
pH	7.8	7.2				084W[I]	pH Units	
* * VPH/BTEX SUITE * *								
MTBE	-	< 0.005				068W[I]	mg/l	0.005
Benzene	-	< 0.005				068W[I]	mg/l	0.005
Toluene	-	< 0.005				068W[I]	mg/l	0.005
Ethylbenzene	-	< 0.005				068W[I]	mg/l	0.005
m,p-Xylenes	-	< 0.005				068W[I]	mg/l	0.005
o-Xylene	-	0.008				068W[I]	mg/l	0.005
1,3,5-Trimethylbenzene	-	< 0.005				068W[I]	mg/l	0.005
1,2,4-Trimethylbenzene	-	0.029				068W[I]	mg/l	0.005
VPH Compounds (C5-C10)	-	0.75				068W[I]	mg/l	0.01
VPH Compounds (C10-C12)	-	9.0				068W	mg/l	0.01
VPH Compounds (C5-C12)	-	9.8				068W	mg/l	0.01
* * EPH SUITE * *								
EPH (C10-C20)	-	110				072W	mg/l	0.01
EPH (C20-C30)	-	25				072W	mg/l	0.01
EPH (C30-C40)	-	6.3				072W	mg/l	0.01
EPH (C10-C40)	0.07	140				072W[I]	mg/l	0.01

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31797
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH3-03	BH12-01				Method No	Units	LOD
Sample Depth (m)	-	-						
Date Sampled	10/05/07	10/05/07						
Date Scheduled	11/05/07	11/05/07						
Laboratory Reference No	228901	228902						
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.0001	0.0015				022W [I]	mg/l	0.0001
Acenaphthalene	< 0.0001	0.0013				022W [I]	mg/l	0.0001
Acenaphthene	< 0.0001	0.0033				022W [I]	mg/l	0.0001
Fluorene	< 0.0001	0.017				022W [I]	mg/l	0.0001
Phenanthrene	0.0001	0.025				022W [I]	mg/l	0.0001
Anthracene	< 0.0001	0.0098				022W [I]	mg/l	0.0001
Fluoranthene	< 0.0001	0.0003				022W [I]	mg/l	0.0001
Pyrene	< 0.0001	0.0007				022W [I]	mg/l	0.0001
Benzo(a)anthracene	< 0.0001	0.0002				022W [I]	mg/l	0.0001
Chrysene	< 0.0001	0.0001				022W [I]	mg/l	0.0001
Benzo(b)fluoranthene	< 0.0001	0.0001				022W [I]	mg/l	0.0001
Benzo(k)fluoranthene	< 0.0001	0.0001				022W [I]	mg/l	0.0001
Benzo(a)pyrene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Indeno(1,2,3-cd)pyrene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Dibenzo(a,h)anthracene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Benzo(g,h,i)perylene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
PAH (Sum of Dutch 10)	0.0002	0.0367				022W [I]	mg/l	0.0001
PAH (Sum of EPA 16)	0.0002	0.0591				022W [I]	mg/l	0.0001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31797
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH12-01					Method No	Units	LOD
Sample Depth (m)	-							
Date Sampled	10/05/07							
Date Scheduled	11/05/07							
Laboratory Reference No	228902							
Analysis								
* * SVOC SUITE * *								
Naphthalene	< 20					053W [I]	ug/l	20
2-Chloronaphthalene	< 20					053W [I]	ug/l	20
Acenaphthylene	< 20					053W [I]	ug/l	20
Acenaphthene	< 20					053W [I]	ug/l	20
Fluorene	< 20					053W [I]	ug/l	20
Phenanthrene	< 20					053W [I]	ug/l	20
Anthracene	< 20					053W [I]	ug/l	20
Fluoranthene	< 20					053W [I]	ug/l	20
Pyrene	< 20					053W [I]	ug/l	20
Benz(a)anthracene	< 20					053W [I]	ug/l	20
Chrysene	< 20					053W [I]	ug/l	20
Benzo(b)fluoranthene	< 25					053W	ug/l	25
Benzo(k)fluoranthene	< 20					053W [I]	ug/l	20
Benzo(a)pyrene	< 25					053W [I]	ug/l	25
Dibenzo(a,h)anthracene	< 40					053W [I]	ug/l	40
Indeno(1,2,3-cd)pyrene	< 40					053W [I]	ug/l	40
Benzo(g,h,i)perylene	< 40					053W [I]	ug/l	40
Phenol	30					053W [I]	ug/l	20
2-Chlorophenol	< 20					053W [I]	ug/l	20
2-Methylphenol	< 20					053W [I]	ug/l	20
4-Methylphenol	< 20					053W [I]	ug/l	20
2-Nitrophenol	< 20					053W [I]	ug/l	20
2,4-Dimethylphenol	< 20					053W [I]	ug/l	20
2,4-Dichlorophenol	< 20					053W [I]	ug/l	20
2,6-Dichlorophenol	< 20					053W [I]	ug/l	20
4-Chloro-3-methyl phenol	< 20					053W [I]	ug/l	20
2,4,6-Trichlorophenol	< 20					053W [I]	ug/l	20
2,4,5-Trichlorophenol	< 20					053W [I]	ug/l	20
4-Nitrophenol	< 50					053W	ug/l	50

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31797
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH12-01					Method No	Units	LOD
Sample Depth (m)	-							
Date Sampled	10/05/07							
Date Scheduled	11/05/07							
Laboratory Reference No	228902							
Analysis								
* * SVOC SUITE Cont.. * *								
2,3,4,6-Tetrachlorophenol	< 30					053W	ug/l	30
Pentachlorophenol	< 60					053W	ug/l	60
Dimethyl Phthalate	< 20					053W[I]	ug/l	20
Diethyl Phthalate	< 30					053W[I]	ug/l	30
Di-n-butyl phthalate	< 30					053W[I]	ug/l	30
Butyl benzyl phthalate	< 60					053W[I]	ug/l	60
Bis(2-chloroethyl)ether	< 15					053W[I]	ug/l	15
Bis(2-chloroisopropyl)ether	< 10					053W[I]	ug/l	10
4-Chlorophenyl phenyl ether	< 15					053W[I]	ug/l	15
Bromo phenyl phenyl ether	< 30					053W[I]	ug/l	30
1,3-Dichlorobenzene	< 15					053W[I]	ug/l	15
1,2-Dichlorobenzene	< 10					053W[I]	ug/l	10
1,4-Dichlorobenzene	< 10					053W[I]	ug/l	10
Nitrobenzene	< 20					053W[I]	ug/l	20
1,2,4-Trichlorobenzene	< 10					053W[I]	ug/l	10
2,6-Dinitrotoluene	< 30					053W[I]	ug/l	30
2,4-Dinitrotoluene	< 20					053W[I]	ug/l	20
Azobenzene	< 30					053W[I]	ug/l	30
Hexachlorobenzene	< 20					053W[I]	ug/l	20
Hexachloroethane	< 40					053W[I]	ug/l	40
n-Nitro-n-propyl-1-propanamine	< 15					053W[I]	ug/l	15
Isophorone	< 20					053W[I]	ug/l	20
Bis(2-chloroethoxy)methane	< 15					053W[I]	ug/l	15
Hexachlorobutadiene	< 10					053W[I]	ug/l	10
Anthraquinone	< 30					053W	ug/l	30
Hexachlorocyclopentadiene	< 50					053W	ug/l	50
Aniline	< 40					053W	ug/l	40
2-Methylnapthalene	< 50					053W	ug/l	50
4-nitroaniline	< 50					053W	ug/l	50

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31797
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH12-01					Method No	Units	LOD
Sample Depth (m)	-							
Date Sampled	10/05/07							
Date Scheduled	11/05/07							
Laboratory Reference No	228902							
Analysis								
3-nitroaniline	< 50					053W	ug/l	50
2-nitroaniline	< 50					053W	ug/l	50
4-Chloroaniline	< 50					053W	ug/l	50
Bis (2-ethylhexyl) phthalate	< 50					053W	ug/l	50
Dibenzofuran	< 50					053W	ug/l	50
Carbazole	< 50					053W	ug/l	50
Biphenyl	< 40					053W	ug/l	40

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31797
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH3-03	BH12-01				Method No	Units	LOD
Sample Depth (m)	-	-						
Date Sampled	10/05/07	10/05/07						
Date Scheduled	11/05/07	11/05/07						
Laboratory Reference No	228901	228902						
Analysis								
* * VOC SUITE * *								
Vinyl Chloride	< 0.01	< 0.01				040W [I]	mg/l	0.01
Chloroethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Trichlorofluoromethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,1-Dichloroethene	< 0.001	< 0.001				040W	mg/l	0.001
112-Trichloro-122-Trifluoroethane	< 0.025	< 0.025				040W [I]	mg/l	0.025
Dichloromethane	< 0.050	< 0.050				040W [I]	mg/l	0.05
Trans-1,2 Dichloroethene	< 0.001	< 0.001				040W [I]	mg/l	0.001
MTBE	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,1 -Dichloroethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Cis-1,2 Dichloroethene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Chloroform	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,1,1-Trichloroethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,2-Dichloroethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Benzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Carbon Tetrachloride	< 0.001	< 0.001				040W [I]	mg/l	0.001
Trichloroethene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Bromodichloromethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Cis-1,3 Dichloropropene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Trans-1,3 Dichloropropene	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,1,2-Trichloroethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Toluene	< 0.001	0.003				040W [I]	mg/l	0.001
Dibromochloromethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Tetrachloroethene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Chlorobenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Ethyl Benzene	< 0.001	0.004				040W [I]	mg/l	0.001
m,p-Xylenes	< 0.001	0.015				040W [I]	mg/l	0.001
Bromoform	< 0.001	< 0.001				040W [I]	mg/l	0.001
o-Xylene	< 0.001	0.008				040W [I]	mg/l	0.001
1,1,2,2 Tetrachloroethane	< 0.001	< 0.001				040W	mg/l	0.001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31797
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH3-03	BH12-01				Method No	Units	LOD
Sample Depth (m)	-	-						
Date Sampled	10/05/07	10/05/07						
Date Scheduled	11/05/07	11/05/07						
Laboratory Reference No	228901	228902						
Analysis								
* * VOC SUITE Cont.. * *								
1,3,5 Trimethylbenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,2,4 Trimethylbenzene	< 0.001	0.024				040W [I]	mg/l	0.001
1,3 Dichlorobenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,4 Dichlorobenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,2 Dichlorobenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
EPH Description

Job Number: 07-31797
Client: Environ UK Ltd
Project Code: 64-C11647

Matrix: Waters
Project Name: ALCOA

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
228901	BH3-03	-	10/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to C34, overlain by several peaks unidentifiable by this analysis.
228902	BH12-01	-	10/05/07	The sample chromatogram exhibits a trace primarily consistent with a degraded diesel.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-31797

Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
084W	In-house method	Determination of pH in aqueous samples by direct electrometric measurement	
080W	In-house method based on MEWAM "Inductively Coupled Plasma Spectrometry", HMSO, 1996	Determination of metals in aqueous samples by nitric acid digestion followed by Inductively Coupled Plasma - Mass Spectrometry detection (ICP-MS)	
072W	In-house method	Determination of cyclopentane extractable hydrocarbons in aqueous samples by large volume injection gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	
068W	In-house method	Determination of Total Gasoline Range Organics Hydrocarbons (GRO) including BTEX and MTBE compounds by Headspace GC-FID (VPH).	
057W	In-house method based on Method 18.13 "Environmental Assessment Guidance" Version 3, Second Site Property, March 2003	Determination of ammoniacal nitrogen in aqueous samples by ion selective electrode	
053W	In-house method	Determination of semi-volatile organic compounds in aqueous samples by dichloromethane extraction and GC-MS detection	
040W	In-house method based on EPA624 "Volatile Organic Compounds in Waste Waters"	Determination of volatile organic compounds in aqueous samples by headspace GC-MS	
022W	In-house method	Determination of PAH compounds in aqueous samples by pentane extraction followed by GC-MS detection	

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

21 May 2007

TEST REPORT

Our Report Number: 07-31801

Your Order Reference: Instructions of 11/05/2007

3 soil samples and 2 water samples submitted for analysis on 11/05/2007

Project Name: ALCOA

Project Code: 64-C11647

Laboratory analysis started on 11/05/2007
All laboratory analysis completed by 21 May 2007

Sharon Googh
Project Co-Ordinator
ALCONTROL TECHNICHEM

Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

ALcontrol Technichem
Sample Description

Job Number: 07-31801
Client: Environ UK Ltd
Project Code: 64-C11647

Matrix: Soil
Project Name: ALCOA

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	Sample Description
228920	BH12_02	1.30-1.50	09/05/07	Brown sandy clay
228921	BH12_02	1.50-2.00	09/05/07	Brown sandy clay
228922	BH12_02	3.0	09/05/07	Brown sand with clay

ALcontrol Technichem
Table Of Results

Job Number : 07-31801
Matrix : Soil
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	**BH12_02**	**BH12_02**	**BH12_02**			**Method No**	**Units**	**LOD**
Sample Depth (m)	**1.30-1.50**	**1.50-2.00**	**3.00**					
Date Sampled	**09/05/07**	**09/05/07**	**09/05/07**					
Date Scheduled	**11/05/07**	**11/05/07**	**11/05/07**					
Laboratory Reference No	**228920**	**228921**	**228922**					
Analysis								
Moisture Content (Dry Weight)	21.1	20.2	10.1				%	0.1
Moisture Content (Wet Weight)	17.4	16.8	9.2				%	0.1
Arsenic	10	-	10			069S[I M]	mg/kg	3
Barium	68	-	66			069S[I M]	mg/kg	10
Beryllium	0.6	-	0.8			069S[I M]	mg/kg	0.5
Boron (W/S)	< 0.5	-	< 0.5			016S[I M]	mg/kg	0.5
Cadmium	< 0.5	-	1.0			069S[I M]	mg/kg	0.5
Chromium	22	-	38			069S[I M]	mg/kg	10
Copper	45	-	25			069S[I M]	mg/kg	5
Lead	27	-	46			069S[I M]	mg/kg	10
Mercury	< 0.6	-	< 0.6			069S[I M]	mg/kg	0.6
Nickel	16	-	23			069S[I M]	mg/kg	4
Selenium	< 2.5	-	< 2.5			069S[I M]	mg/kg	2.5
Vanadium	25	-	15			069S[I M]	mg/kg	3
Zinc	94	-	73			069S[I M]	mg/kg	10
pH	7.6	-	7.5			009S[I M]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	210	1900	91			070S[I M]	mg/kg	5

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31801
Matrix : Soil
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH12_02	BH12_02				Method No	Units	LOD
Sample Depth (m)	1.50-2.00	3.00						
Date Sampled	09/05/07	09/05/07						
Date Scheduled	11/05/07	11/05/07						
Laboratory Reference No	228921	228922						
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Acenaphthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Fluorene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Phenanthrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Pyrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(a)anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Chrysene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(a)pyrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	< 0.1				022S[IM]	mg/kg	0.1
PAH (Sum of Dutch 10)	ND	ND				022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	ND	ND				022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
EPH Description

Job Number: 07-31801
Client: Environ UK Ltd
Project Code: 64-C11647

Matrix: Soils
Project Name: ALCOA

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
228920	BH12_02	1.30-1.50	09/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to beyond C40, overlain by a series of n-alkane peaks eluting through the diesel range.
228921	BH12_02	1.50-2.00	09/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C10 to beyond C40, overlain by a series of n-alkane peaks eluting through the diesel range.
228922	BH12_02	3.0	09/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40.

ALcontrol Technichem
Table Of Results

Job Number : 07-31801
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	**BH6_02**	**BH6_03**				**Method No**	**Units**	**LOD**
Sample Depth (m)	**-**	**-**						
Date Sampled	**09/05/07**	**09/05/07**						
Date Scheduled	**11/05/07**	**11/05/07**						
Laboratory Reference No	**228918**	**228919**						
Analysis								
Arsenic (Dissolved)	< 0.005	< 0.005				080W [I]	mg/l	0.005
Boron (Dissolved)	0.16	0.056				080W [I]	mg/l	0.005
Cadmium (Dissolved)	< 0.001	< 0.001				080W [I]	mg/l	0.001
Chromium (Dissolved)	< 0.005	< 0.005				080W [I]	mg/l	0.005
Copper (Dissolved)	< 0.005	< 0.005				080W [I]	mg/l	0.005
Lead (Dissolved)	< 0.005	< 0.005				080W [I]	mg/l	0.005
Mercury (Dissolved)	< 0.00005	< 0.00005				080W [I]	mg/l	0.00005
Nickel (Dissolved)	< 0.005	< 0.005				080W [I]	mg/l	0.005
Selenium (Dissolved)	< 0.005	< 0.005				080W [I]	mg/l	0.005
Zinc (Dissolved)	< 0.005	< 0.005				080W [I]	mg/l	0.005
pH	7.4	7.3				084W [I]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	-	< 0.01				072W [I]	mg/l	0.01

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31801
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH6_02	BH6_03				Method No	Units	LOD
Sample Depth (m)	-	-						
Date Sampled	09/05/07	09/05/07						
Date Scheduled	11/05/07	11/05/07						
Laboratory Reference No	228918	228919						
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Acenaphthalene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Acenaphthene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Fluorene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Phenanthrene	0.0001	0.0002				022W [I]	mg/l	0.0001
Anthracene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Fluoranthene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Pyrene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Benzo(a)anthracene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Chrysene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Benzo(b)fluoranthene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Benzo(k)fluoranthene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Benzo(a)pyrene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Indeno(1,2,3-cd)pyrene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Dibenzo(a,h)anthracene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
Benzo(g,h,i)perylene	< 0.0001	< 0.0001				022W [I]	mg/l	0.0001
PAH (Sum of Dutch 10)	0.0001	0.0002				022W [I]	mg/l	0.0001
PAH (Sum of EPA 16)	0.0001	0.0002				022W [I]	mg/l	0.0001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31801
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH6_02					Method No	Units	LOD
Sample Depth (m)	-							
Date Sampled	09/05/07							
Date Scheduled	11/05/07							
Laboratory Reference No	228918							
Analysis								
* * CWG SUITE * *								
Aliphatic C5-C6	< 0.01					CWGW	mg/l	0.01
Aliphatic >C6-C8	< 0.01					CWGW	mg/l	0.01
Aliphatic >C8-C10	< 0.01					CWGW	mg/l	0.01
Aliphatic >C10-C12	< 0.01					CWGW	mg/l	0.01
Aliphatic >C12-C16	< 0.01					CWGW	mg/l	0.01
Aliphatic >C16-C21	< 0.01					CWGW	mg/l	0.01
Aliphatic >C21-C35	< 0.01					CWGW	mg/l	0.01
Total Aliphatics (C5-C35)	< 0.01					CWGW	mg/l	0.01
Aromatic C6-C7	< 0.01					CWGW	mg/l	0.01
Aromatic >C7-C8	< 0.01					CWGW	mg/l	0.01
Aromatic >C8-C10	< 0.01					CWGW	mg/l	0.01
Aromatic >C10-C12	< 0.01					CWGW	mg/l	0.01
Aromatic >C12-C16	< 0.01					CWGW	mg/l	0.01
Aromatic >C16-C21	< 0.01					CWGW	mg/l	0.01
Aromatic >C21-C35	< 0.01					CWGW	mg/l	0.01
Total Aromatics (C5-C35)	< 0.01					CWGW	mg/l	0.01
Volatile Hydrocarbons (C5-C12)	< 0.01					CWGW	mg/l	0.01
Extractable Hydrocarbons (C12-C35)	< 0.01					CWGW	mg/l	0.01
Total Hydrocarbons (C5-C35)	< 0.01					CWGW	mg/l	0.01
MTBE	< 0.005					CWGW[I]	mg/l	0.005
Benzene	< 0.005					CWGW[I]	mg/l	0.005
Toluene	< 0.005					CWGW[I]	mg/l	0.005
Ethylbenzene	< 0.005					CWGW[I]	mg/l	0.005
m,p-Xylenes	< 0.005					CWGW[I]	mg/l	0.005
o-Xylene	< 0.005					CWGW[I]	mg/l	0.005
1,3,5-Trimethylbenzene	< 0.005					CWGW[I]	mg/l	0.005
1,2,4-Trimethylbenzene	< 0.005					CWGW[I]	mg/l	0.005

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31801
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH6_02	BH6_03				Method No	Units	LOD
Sample Depth (m)	-	-						
Date Sampled	09/05/07	09/05/07						
Date Scheduled	11/05/07	11/05/07						
Laboratory Reference No	228918	228919						
Analysis								
* * VOC SUITE * *								
Vinyl Chloride	< 0.01	< 0.01				040W [I]	mg/l	0.01
Chloroethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Trichlorofluoromethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,1-Dichloroethene	< 0.001	< 0.001				040W	mg/l	0.001
112-Trichloro-122-Trifluoroethane	< 0.025	< 0.025				040W [I]	mg/l	0.025
Dichloromethane	< 0.050	< 0.050				040W [I]	mg/l	0.05
Trans-1,2 Dichloroethene	< 0.001	< 0.001				040W [I]	mg/l	0.001
MTBE	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,1 -Dichloroethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Cis-1,2 Dichloroethene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Chloroform	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,1,1-Trichloroethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,2-Dichloroethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Benzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Carbon Tetrachloride	< 0.001	< 0.001				040W [I]	mg/l	0.001
Trichloroethene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Bromodichloromethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Cis-1,3 Dichloropropene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Trans-1,3 Dichloropropene	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,1,2-Trichloroethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Toluene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Dibromochloromethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Tetrachloroethene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Chlorobenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Ethyl Benzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
m,p-Xylenes	< 0.001	< 0.001				040W [I]	mg/l	0.001
Bromoform	< 0.001	< 0.001				040W [I]	mg/l	0.001
o-Xylene	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,1,2,2 Tetrachloroethane	< 0.001	< 0.001				040W	mg/l	0.001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31801
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH6_02	BH6_03				Method No	Units	LOD
Sample Depth (m)	-	-						
Date Sampled	09/05/07	09/05/07						
Date Scheduled	11/05/07	11/05/07						
Laboratory Reference No	228918	228919						
Analysis								
* * VOC SUITE Cont.. * *								
1,3,5 Trimethylbenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,2,4 Trimethylbenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,3 Dichlorobenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,4 Dichlorobenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,2 Dichlorobenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
EPH Description

Job Number: 07-31801
Client: Environ UK Ltd
Project Code: 64-C11647

Matrix: Waters
Project Name: ALCOA

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
228919	BH6_03	-	09/05/07	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-31801

Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
070S	In-house method	Determination of hexane/acetone extractable hydrocarbons in soil by gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	W
022S	In-house method	Determination of PAH compounds in soil samples by hexane / acetone extraction followed by GC-MS detection	W
009S	In-house method referencing BS1377: Part 3: 1990 and Second Site Property: Environmental Assessment Guidance Version 3: March 2003	Determination of pH by addition of water followed by electrometric measurement	W
069S	In-house method based on MEWAM "Methods for the Determination of Metals in Soil", HMSO, 1986	Determination of metals in soil samples by aqua-regia digestion followed by ICP-OES detection	D
016S	In-house method	Determination of water soluble boron by 2:1 extraction in hot water followed by ICP-OES detection	D
CWGW	In-house method based on "Total Petroleum Hydrocarbon Criteria Working Group" series, 1998-9	Determination of "CWG" banded petroleum hydrocarbons in aqueous samples using a combination of headspace GC-FID (C5-C12) and pentane extraction / silica-alumina aliphatic - aromatic split / GC-FID (C12-C35) techniques with banding by comparison to alkane standards	
084W	In-house method	Determination of pH in aqueous samples by direct electrometric measurement	
080W	In-house method based on MEWAM "Inductively Coupled Plasma Spectrometry", HMSO, 1996	Determination of metals in aqueous samples by nitric acid digestion followed by Inductively Coupled Plasma - Mass Spectrometry detection (ICP-MS)	
072W	In-house method	Determination of cyclopentane extractable hydrocarbons in aqueous samples by large volume injection gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-31801

Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
040W	In-house method based on EPA624 "Volatile Organic Compounds in Waste Waters"	Determination of volatile organic compounds in aqueous samples by headspace GC-MS	
022W	In-house method	Determination of PAH compounds in aqueous samples by pentane extraction followed by GC-MS detection	

Soil results are expressed on a dry weight basis. Where the test uses as-received sample, a moisture correction factor is applied to the wet weight result. This factor is determined gravimetrically using weight loss on drying at 30º (+/-5) C.

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

25 May 2007

TEST REPORT

Our Report Number: 07-31964

Your Order Reference: Instructions of 14/05/2007

15 soil samples submitted for analysis on 14/05/2007

Project Name: Alcoa

Project Code: 64C11647

Laboratory analysis started on 16/05/2007
All laboratory analysis completed by 25 May 2007

pp. Sharon Googh
Project Co-Ordinator
ALCONTROL TECHNICHEM

Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

Test methods are documented in house procedures or where appropriate standard methods. Non accredited tests (if applicable) are identified on each page. Procedures for sampling are outside the scope of the laboratory UKAS accreditation. Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation. All samples connected with this report , including any 'on hold', will be stored and disposed of according to company policy. A copy of this policy is available on request.

ALcontrol Technichem
Sample Description

Job Number: 07-31964
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soil
Project Name: Alcoa

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	Sample Description
229870	SS7_01	0-0.1	10/05/07	Grey & brown sandy clay with gravel
229871	SS7_02	0-0.1	10/05/07	Brown sandy clay with gravel
229872	SS10_01	0-0.1	10/05/07	*Dark grey gravel with sand
229873	SS10_02	0.1-0.2	10/05/07	Dark grey sandy clay with gravel
229874	SS10_03	0-0.1	10/05/07	Dark brown sandy clay with gravel
229875	SS10_04	0-0.1	10/05/07	Brown sandy clay with brick and vegetation
229876	SS10_05	0-0.1	10/05/07	Brown sandy clay with brick and gravel
229877	SS10_06	0-0.1	10/05/07	Brown sandy clay with brick and gravel
229878	SS10_07	0-0.1	10/05/07	*Dark grey gravel with sand
229879	SS10_08	0-0.1	10/05/07	*Dark grey gravel with sand
229880	SS10_09	0.1-0.2	10/05/07	*Dark grey gravel with sand
229881	SS10_10	0.1-0.2	10/05/07	*Dark grey gravel with sand
229882	SS12_01	0-0.1	10/05/07	Brown sandy clay with gravel
229883	SS12_02	0.2	10/05/07	Brown sandy clay with gravel
229884	SS12_03	0.2	10/05/07	Brown sandy clay with gravel

*Denotes outside the scope of MCERTS accreditation since matrix not included in method validation.

ALcontrol Technichem
Table Of Results

Job Number : 07-31964
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	SS7_01	SS7_02	SS10_01	SS10_02	SS10_03	Method No	Units	LOD
Sample Depth (m)	0-0.1	0-0.1	0-0.1	0.1-0.2	0-0.1			
Date Sampled	10/05/07	10/05/07	10/05/07	10/05/07	10/05/07			
Date Scheduled	14/05/07	14/05/07	14/05/07	14/05/07	14/05/07			
Laboratory Reference No	229870	229871	229872	229873	229874			
Analysis								
Moisture Content (Dry Weight)	6.1	5.9	4.1	4.3	6.3		%	0.1
Moisture Content (Wet Weight)	5.7	5.5	3.9	4.1	5.9		%	0.1
pH	7.9	-	8.1	-	-	009S[M]	pH Units	
* * VPH/BTEX SUITE * *								
MTBE	-	-	-	-	-	068S[M]	mg/kg	0.01
Benzene	-	-	-	-	-	068S[M]	mg/kg	0.01
Toluene	-	-	-	-	-	068S[M]	mg/kg	0.01
Ethylbenzene	-	-	-	-	-	068S[M]	mg/kg	0.01
m,p-Xylenes	-	-	-	-	-	068S[M]	mg/kg	0.01
o-Xylene	-	-	-	-	-	068S[M]	mg/kg	0.01
1,3,5-Trimethylbenzene	-	-	-	-	-	068S[M]	mg/kg	0.01
1,2,4-Trimethylbenzene	-	-	-	-	-	068S[M]	mg/kg	0.01
VPH Compounds (C5-C10)	-	-	-	-	-	068S[M]	mg/kg	0.01
VPH Compounds (C10-C12)	-	-	-	-	-	068S	mg/kg	0.01
VPH Compounds (C5-C12)	-	-	-	-	-	068S	mg/kg	0.01
* * EPH SUITE * *								
EPH (C10-C20)	-	-	-	-	-	070S	mg/kg	5
EPH (C20-C30)	-	-	-	-	-	070S	mg/kg	5
EPH (C30-C40)	-	-	-	-	-	070S	mg/kg	5
EPH (C10-C40)	32000	500	11000	12000	98	070S[M]	mg/kg	5
* * PCB SUITE * *								
PCB Congener 28	< 0.020‡	< 0.002	< 0.020‡	< 0.020‡	< 0.002	039S[M]	mg/kg	0.002
PCB Congener 52	< 0.020‡	< 0.002	< 0.020‡	< 0.020‡	< 0.002	039S[M]	mg/kg	0.002
PCB Congener 101	< 0.020‡	< 0.002	< 0.020‡	< 0.020‡	< 0.002	039S[M]	mg/kg	0.002
PCB Congener 118	< 0.020‡	< 0.002	< 0.020‡	< 0.020‡	< 0.002	039S[M]	mg/kg	0.002
PCB Congener 138	< 0.020‡	< 0.002	< 0.020‡	< 0.020‡	< 0.002	039S[M]	mg/kg	0.002
PCB Congener 153	< 0.020‡	< 0.002	< 0.020‡	< 0.020‡	< 0.002	039S[M]	mg/kg	0.002
PCB Congener 180	< 0.020‡	< 0.002	< 0.020‡	< 0.020‡	< 0.002	039S[M]	mg/kg	0.002
PCB's (Sum of ICES Congeners)	ND	ND	ND	ND	ND	039S[I]	mg/kg	0.002

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-31964
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	SS10_04	SS10_05	SS10_06	SS10_07	SS10_08	Method No	Units	LOD
Sample Depth (m)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1			
Date Sampled	10/05/07	10/05/07	10/05/07	10/05/07	10/05/07			
Date Scheduled	14/05/07	14/05/07	14/05/07	14/05/07	14/05/07			
Laboratory Reference No	229875	229876	229877	229878	229879			
Analysis								
Moisture Content (Dry Weight)	29.5	20.0	30.8	5.9	4.9		%	0.1
Moisture Content (Wet Weight)	22.8	16.7	23.5	5.6	4.7		%	0.1
pH	7.9	-	-	8.2	-	009S[IM]	pH Units	
* * VPH/BTEX SUITE * *								
MTBE	-	-	-	-	-	068S[IM]	mg/kg	0.01
Benzene	-	-	-	-	-	068S[IM]	mg/kg	0.01
Toluene	-	-	-	-	-	068S[IM]	mg/kg	0.01
Ethylbenzene	-	-	-	-	-	068S[IM]	mg/kg	0.01
m,p-Xylenes	-	-	-	-	-	068S[IM]	mg/kg	0.01
o-Xylene	-	-	-	-	-	068S[IM]	mg/kg	0.01
1,3,5-Trimethylbenzene	-	-	-	-	-	068S[IM]	mg/kg	0.01
1,2,4-Trimethylbenzene	-	-	-	-	-	068S[IM]	mg/kg	0.01
VPH Compounds (C5-C10)	-	-	-	-	-	068S[IM]	mg/kg	0.01
VPH Compounds (C10-C12)	-	-	-	-	-	068S	mg/kg	0.01
VPH Compounds (C5-C12)	-	-	-	-	-	068S	mg/kg	0.01
* * EPH SUITE * *								
EPH (C10-C20)	-	-	-	-	-	070S	mg/kg	5
EPH (C20-C30)	-	-	-	-	-	070S	mg/kg	5
EPH (C30-C40)	-	-	-	-	-	070S	mg/kg	5
EPH (C10-C40)	23000	2500	53000	1900	520	070S[IM]	mg/kg	5
* * PCB SUITE * *								
PCB Congener 28	-	< 0.002	-	< 0.002	< 0.002	039S[IM]	mg/kg	0.002
PCB Congener 52	-	< 0.002	-	< 0.002	< 0.002	039S[IM]	mg/kg	0.002
PCB Congener 101	-	< 0.002	-	< 0.002	< 0.002	039S[IM]	mg/kg	0.002
PCB Congener 118	-	< 0.002	-	< 0.002	< 0.002	039S[IM]	mg/kg	0.002
PCB Congener 138	-	< 0.002	-	< 0.002	0.003	039S[IM]	mg/kg	0.002
PCB Congener 153	-	< 0.002	-	< 0.002	0.003	039S[IM]	mg/kg	0.002
PCB Congener 180	-	< 0.002	-	< 0.002	0.002	039S[IM]	mg/kg	0.002
PCB's (Sum of ICES Congeners)	-	ND	-	ND	0.008	039S[I]	mg/kg	0.002

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-31964
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	SS10_09	SS10_10	SS12_01	SS12_02	SS12_03	Method No	Units	LOD
Sample Depth (m)	**0.1-0.2**	**0.1-0.2**	**0-0.1**	**0.2**	**0.2**			
Date Sampled	**10/05/07**	**10/05/07**	**10/05/07**	**10/05/07**	**10/05/07**			
Date Scheduled	**14/05/07**	**14/05/07**	**14/05/07**	**14/05/07**	**14/05/07**			
Laboratory Reference No	**229880**	**229881**	**229882**	**229883**	**229884**			
Analysis								
Moisture Content (Dry Weight)	2.0	2.7	9.7	12.5	14.9		%	0.1
Moisture Content (Wet Weight)	1.9	2.7	8.9	11.1	13.0		%	0.1
pH	-	-	7.8	-	7.9	009S[IM]	pH Units	
* * VPH/BTEX SUITE * *								
MTBE	-	-	-	< 0.01	< 0.01	068S[IM]	mg/kg	0.01
Benzene	-	-	-	< 0.01	< 0.01	068S[IM]	mg/kg	0.01
Toluene	-	-	-	< 0.01	< 0.01	068S[IM]	mg/kg	0.01
Ethylbenzene	-	-	-	< 0.01	< 0.01	068S[IM]	mg/kg	0.01
m,p-Xylenes	-	-	-	< 0.01	< 0.01	068S[IM]	mg/kg	0.01
o-Xylene	-	-	-	< 0.01	< 0.01	068S[IM]	mg/kg	0.01
1,3,5-Trimethylbenzene	-	-	-	< 0.01	< 0.01	068S[IM]	mg/kg	0.01
1,2,4-Trimethylbenzene	-	-	-	< 0.01	< 0.01	068S[IM]	mg/kg	0.01
VPH Compounds (C5-C10)	-	-	-	0.24	0.19	068S[IM]	mg/kg	0.01
VPH Compounds (C10-C12)	-	-	-	0.70	0.57	068S	mg/kg	0.01
VPH Compounds (C5-C12)	-	-	-	0.94	0.76	068S	mg/kg	0.01
* * EPH SUITE * *								
EPH (C10-C20)	-	-	-	21000	9800	070S	mg/kg	5
EPH (C20-C30)	-	-	-	12000	5500	070S	mg/kg	5
EPH (C30-C40)	-	-	-	10000	4800	070S	mg/kg	5
EPH (C10-C40)	54	7300	-	43000	20000	070S[IM]	mg/kg	5
* * PCB SUITE * *								
PCB Congener 28	< 0.002	< 0.020‡	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 52	< 0.002	< 0.020‡	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 101	< 0.002	< 0.020‡	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 118	< 0.002	< 0.020‡	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 138	< 0.002	< 0.020‡	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 153	< 0.002	< 0.020‡	-	-	-	039S[IM]	mg/kg	0.002
PCB Congener 180	< 0.002	< 0.020‡	-	-	-	039S[IM]	mg/kg	0.002
PCB's (Sum of ICES Congeners)	ND	ND	-	-	-	039S[I]	mg/kg	0.002

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-31964
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	SS12_01	SS12_02	SS12_03			Method No	Units	LOD
Sample Depth (m)	0-0.1	0.2	0.2					
Date Sampled	10/05/07	10/05/07	10/05/07					
Date Scheduled	14/05/07	14/05/07	14/05/07					
Laboratory Reference No	229882	229883	229884					
Analysis								
* * PAH SUITE * *								
Naphthalene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Acenaphthylene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Acenaphthene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Fluorene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Phenanthrene	< 0.1	< 0.1	0.18			022S[M]	mg/kg	0.1
Anthracene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Fluoranthene	< 0.1	< 0.1	0.21			022S[M]	mg/kg	0.1
Pyrene	< 0.1	< 0.1	0.22			022S[M]	mg/kg	0.1
Benzo(a)anthracene	< 0.1	< 0.1	0.10			022S[M]	mg/kg	0.1
Chrysene	< 0.1	< 0.1	0.14			022S[M]	mg/kg	0.1
Benzo(b)fluoranthene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Benzo(k)fluoranthene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Benzo(a)pyrene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Dibenzo(a,h)anthracene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
Benzo(g,h,i)perylene	< 0.1	< 0.1	< 0.1			022S[M]	mg/kg	0.1
PAH (Sum of Dutch 10)	ND	ND	0.63			022S[I]	mg/kg	0.1
PAH (Sum of EPA 16)	ND	ND	0.85			022S[I]	mg/kg	0.1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31964
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	SS12_01					Method No	Units	LOD
Sample Depth (m)	0-0.1							
Date Sampled	10/05/07							
Date Scheduled	14/05/07							
Laboratory Reference No	229882							
Analysis								
* * CWG SUITE * *								
Aliphatic C5-C6	0.40					CWGS	mg/kg	0.01
Aliphatic >C6-C8	0.11					CWGS	mg/kg	0.01
Aliphatic >C8-C10	0.21					CWGS	mg/kg	0.01
Aliphatic >C10-C12	0.18					CWGS	mg/kg	0.01
Aliphatic >C12-C16	2000					CWGS[I]	mg/kg	5
Aliphatic >C16-C21	1200					CWGS[I]	mg/kg	5
Aliphatic >C21-C35	2600					CWGS[I]	mg/kg	5
Total Aliphatics (C5-C35)	5900					CWGS	mg/kg	5
Aromatic C6-C7	< 0.01					CWGS	mg/kg	0.01
Aromatic >C7-C8	< 0.01					CWGS	mg/kg	0.01
Aromatic >C8-C10	0.32					CWGS	mg/kg	0.01
Aromatic >C10-C12	0.26					CWGS	mg/kg	0.01
Aromatic >C12-C16	160					CWGS[I]	mg/kg	5
Aromatic >C16-C21	190					CWGS[I]	mg/kg	5
Aromatic >C21-C35	1300					CWGS[I]	mg/kg	5
Total Aromatics (C5-C35)	1600					CWGS	mg/kg	5
Volatile Hydrocarbons (C5-C12)	1.5					CWGS	mg/kg	0.01
Extractable Hydrocarbons (C12-C35)	7500					CWGS	mg/kg	5
Total Hydrocarbons (C5-C35)	7500					CWGS	mg/kg	5
MTBE	< 0.010					CWGS[IM]	mg/kg	0.01
Benzene	< 0.010					CWGS[IM]	mg/kg	0.01
Toluene	< 0.010					CWGS[IM]	mg/kg	0.01
Ethylbenzene	< 0.010					CWGS[IM]	mg/kg	0.01
m,p-Xylenes	< 0.010					CWGS[IM]	mg/kg	0.01
o-Xylene	< 0.010					CWGS[IM]	mg/kg	0.01
1,3,5-Trimethylbenzene	< 0.010					CWGS[IM]	mg/kg	0.01
1,2,4-Trimethylbenzene	< 0.010					CWGS[IM]	mg/kg	0.01

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-31964
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	SS7_01	SS10_01	SS10_03	SS10_05	SS10_10	Method No	Units	LOD
Sample Depth (m)	0-0.1	0-0.1	0-0.1	0-0.1	0.1-0.2			
Date Sampled	10/05/07	10/05/07	10/05/07	10/05/07	10/05/07			
Date Scheduled	14/05/07	14/05/07	14/05/07	14/05/07	14/05/07			
Laboratory Reference No	229870	229872‡	229874‡	229876	229881‡			
Analysis								
* * VOC SUITE * *								
MTBE	< 0.025	< 0.250	< 0.250	< 0.025	< 0.250	071S[I]	mg/kg	0.025
Benzene	< 0.025	< 0.250	< 0.250	< 0.025	< 0.250	071S[I]	mg/kg	0.025
Toluene	< 0.025	< 0.250	< 0.250	< 0.025	< 0.250	071S[I]	mg/kg	0.025
Ethylbenzene	< 0.025	< 0.250	< 0.250	< 0.025	< 0.250	071S[I]	mg/kg	0.025
m,p-Xylenes	< 0.05	< 0.500	< 0.500	< 0.05	< 0.500	071S[I]	mg/kg	0.05
o-Xylene	< 0.025	< 0.250	< 0.250	< 0.025	< 0.250	071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	< 0.025	< 0.250	< 0.250	< 0.025	< 0.250	071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	< 0.025	< 0.250	< 0.250	< 0.025	< 0.250	071S[I]	mg/kg	0.025
Dichlorodifluoromethane	-	-	-	-	-	071S[IM]	ug/kg	25
Chloromethane	-	-	-	-	-	071S[IM]	ug/kg	25
Vinyl Chloride	-	-	-	-	-	071S	ug/kg	25
Bromomethane	-	-	-	-	-	071S[I]	ug/kg	25
Chloroethane	-	-	-	-	-	071S[IM]	ug/kg	25
Trichlorofluoromethane	-	-	-	-	-	071S[IM]	ug/kg	25
1,1-Dichloroethene	-	-	-	-	-	071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	-	-	-	-	-	071S[I]	ug/kg	25
Dichloromethane	-	-	-	-	-	071S	ug/kg	50
Carbon Disulfide	-	-	-	-	-	071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	-	-	-	-	-	071S	ug/kg	25
MTBE	-	-	-	-	-	071S	ug/kg	25
1,1 -Dichloroethane	-	-	-	-	-	071S	ug/kg	25
Cis-1,2 Dichloroethene	-	-	-	-	-	071S[IM]	ug/kg	25
Bromochloromethane	-	-	-	-	-	071S[IM]	ug/kg	25
Chloroform	-	-	-	-	-	071S[IM]	ug/kg	25
2,2-Dichloropropane	-	-	-	-	-	071S[IM]	ug/kg	25
1,1,1-Trichloroethane	-	-	-	-	-	071S	ug/kg	25
1,2-Dichloroethane	-	-	-	-	-	071S	ug/kg	25
1,1-Dichloropropene	-	-	-	-	-	071S[IM]	ug/kg	25
Benzene	-	-	-	-	-	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-31964
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	SS7_01	SS10_01	SS10_03	SS10_05	SS10_10	Method No	Units	LOD
Sample Depth (m)	0-0.1	0-0.1	0-0.1	0-0.1	0.1-0.2			
Date Sampled	10/05/07	10/05/07	10/05/07	10/05/07	10/05/07			
Date Scheduled	14/05/07	14/05/07	14/05/07	14/05/07	14/05/07			
Laboratory Reference No	229870	229872‡	229874‡	229876	229881‡			
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	-	-	-	-	-	071S[I,M]	ug/kg	25
Dibromomethane	-	-	-	-	-	071S[I,M]	ug/kg	25
1,2-Dichloropropane	-	-	-	-	-	071S[I,M]	ug/kg	25
Trichloroethene	-	-	-	-	-	071S[I,M]	ug/kg	25
Bromodichloromethane	-	-	-	-	-	071S[I,M]	ug/kg	25
Cis-1,3 Dichloropropene	-	-	-	-	-	071S[I,M]	ug/kg	25
Trans-1,3 Dichloropropene	-	-	-	-	-	071S[I,M]	ug/kg	25
1,1,2-Trichloroethane	-	-	-	-	-	071S[I,M]	ug/kg	25
Toluene	-	-	-	-	-	071S	ug/kg	25
1,3 -Dichloropropane	-	-	-	-	-	071S[I,M]	ug/kg	25
Dibromochloromethane	-	-	-	-	-	071S[I,M]	ug/kg	25
1,2-Dibromoethane	-	-	-	-	-	071S[I,M]	ug/kg	25
Tetrachloroethene	-	-	-	-	-	071S	ug/kg	25
1,1,1,2-Tetrachloroethane	-	-	-	-	-	071S	ug/kg	25
Chlorobenzene	-	-	-	-	-	071S[I,M]	ug/kg	25
Ethyl Benzene	-	-	-	-	-	071S	ug/kg	25
m,p-Xylenes	-	-	-	-	-	071S	ug/kg	50
Bromoform	-	-	-	-	-	071S[I,M]	ug/kg	25
Styrene	-	-	-	-	-	071S[I,M]	ug/kg	25
o-Xylene	-	-	-	-	-	071S	ug/kg	25
1,1,2,2 Tetrachloroethane	-	-	-	-	-	071S	ug/kg	25
1,2,3-Trichloropropane	-	-	-	-	-	071S[I,M]	ug/kg	25
Isopropylbenzene	-	-	-	-	-	071S[I,M]	ug/kg	25
Bromobenzene	-	-	-	-	-	071S[I,M]	ug/kg	25
n-propylbenzene	-	-	-	-	-	071S[I,M]	ug/kg	25
2-Chlorotoluene	-	-	-	-	-	071S[I,M]	ug/kg	25
4-Chlorotoluene	-	-	-	-	-	071S[I,M]	ug/kg	25
1,3,5 Trimethylbenzene	-	-	-	-	-	071S	ug/kg	25
tert-butylbenzene	-	-	-	-	-	071S[I,M]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-31964
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	SS7_01	SS10_01	SS10_03	SS10_05	SS10_10	Method No	Units	LOD
Sample Depth (m)	0-0.1	0-0.1	0-0.1	0-0.1	0.1-0.2			
Date Sampled	10/05/07	10/05/07	10/05/07	10/05/07	10/05/07			
Date Scheduled	14/05/07	14/05/07	14/05/07	14/05/07	14/05/07			
Laboratory Reference No	229870	229872‡	229874‡	229876	229881‡			
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	-	-	-	-	-	071S	ug/kg	25
sec-butylbenzene	-	-	-	-	-	071S[IM]	ug/kg	25
1,3 Dichlorobenzene	-	-	-	-	-	071S	ug/kg	25
1,4 Dichlorobenzene	-	-	-	-	-	071S	ug/kg	25
4-Isopropyltoluene	-	-	-	-	-	071S[IM]	ug/kg	25
1,2 Dichlorobenzene	-	-	-	-	-	071S	ug/kg	25
n-butylbenzene	-	-	-	-	-	071S	ug/kg	25
1,2,4-Trichlorobenzene	-	-	-	-	-	071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	-	-	-	-	-	071S	ug/kg	25
Hexachlorobutadiene	-	-	-	-	-	071S	ug/kg	50
1,2,3-Trichlorobenzene	-	-	-	-	-	071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-31964
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	SS12_03					Method No	Units	LOD
Sample Depth (m)	0.2							
Date Sampled	10/05/07							
Date Scheduled	14/05/07							
Laboratory Reference No	229884‡							
Analysis								
* * VOC SUITE * *								
MTBE	-					071S[I]	mg/kg	0.025
Benzene	-					071S[I]	mg/kg	0.025
Toluene	-					071S[I]	mg/kg	0.025
Ethylbenzene	-					071S[I]	mg/kg	0.025
m,p-Xylenes	-					071S[I]	mg/kg	0.05
o-Xylene	-					071S[I]	mg/kg	0.025
1,3,5-Trimethylbenzene	-					071S[I]	mg/kg	0.025
1,2,4-Trimethylbenzene	-					071S[I]	mg/kg	0.025
Dichlorodifluoromethane	< 250					071S[IM]	ug/kg	25
Chloromethane	< 250					071S[IM]	ug/kg	25
Vinyl Chloride	< 250					071S	ug/kg	25
Bromomethane	< 250					071S[I]	ug/kg	25
Chloroethane	< 250					071S[IM]	ug/kg	25
Trichlorofluoromethane	< 250					071S[IM]	ug/kg	25
1,1-Dichloroethene	< 250					071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	< 250					071S[I]	ug/kg	25
Dichloromethane	< 500					071S	ug/kg	50
Carbon Disulfide	< 250					071S[IM]	ug/kg	25
Trans-1,2 Dichloroethene	< 250					071S	ug/kg	25
MTBE	< 250					071S	ug/kg	25
1,1 -Dichloroethane	< 250					071S	ug/kg	25
Cis-1,2 Dichloroethene	< 250					071S[IM]	ug/kg	25
Bromochloromethane	< 250					071S[IM]	ug/kg	25
Chloroform	< 250					071S[IM]	ug/kg	25
2,2-Dichloropropane	< 250					071S[IM]	ug/kg	25
1,1,1-Trichloroethane	< 250					071S	ug/kg	25
1,2-Dichloroethane	< 250					071S	ug/kg	25
1,1-Dichloropropene	< 250					071S[IM]	ug/kg	25
Benzene	< 250					071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-31964
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	**SS12_03**					**Method No**	**Units**	**LOD**
Sample Depth (m)	**0.2**							
Date Sampled	**10/05/07**							
Date Scheduled	**14/05/07**							
Laboratory Reference No	**229884‡**							
Analysis								
* * VOC SUITE Cont.. * *								
Carbon Tetrachloride	< 250					071S[I M]	ug/kg	25
Dibromomethane	< 250					071S[I M]	ug/kg	25
1,2-Dichloropropane	< 250					071S[I M]	ug/kg	25
Trichloroethene	< 250					071S[I M]	ug/kg	25
Bromodichloromethane	< 250					071S[I M]	ug/kg	25
Cis-1,3 Dichloropropene	< 250					071S[I M]	ug/kg	25
Trans-1,3 Dichloropropene	< 250					071S[I M]	ug/kg	25
1,1,2-Trichloroethane	< 250					071S[I M]	ug/kg	25
Toluene	< 250					071S	ug/kg	25
1,3 -Dichloropropane	< 250					071S[I M]	ug/kg	25
Dibromochloromethane	< 250					071S[I M]	ug/kg	25
1,2-Dibromoethane	< 250					071S[I M]	ug/kg	25
Tetrachloroethene	< 250					071S	ug/kg	25
1,1,1,2-Tetrachloroethane	< 250					071S	ug/kg	25
Chlorobenzene	< 250					071S[I M]	ug/kg	25
Ethyl Benzene	< 250					071S	ug/kg	25
m,p-Xylenes	< 500					071S	ug/kg	50
Bromoform	< 250					071S[I M]	ug/kg	25
Styrene	< 250					071S[I M]	ug/kg	25
o-Xylene	< 250					071S	ug/kg	25
1,1,2,2 Tetrachloroethane	< 250					071S	ug/kg	25
1,2,3-Trichloropropane	< 250					071S[I M]	ug/kg	25
Isopropylbenzene	< 250					071S[I M]	ug/kg	25
Bromobenzene	< 250					071S[I M]	ug/kg	25
n-propylbenzene	< 250					071S[I M]	ug/kg	25
2-Chlorotoluene	< 250					071S[I M]	ug/kg	25
4-Chlorotoluene	< 250					071S[I M]	ug/kg	25
1,3,5 Trimethylbenzene	< 250					071S	ug/kg	25
tert-butylbenzene	< 250					071S[I M]	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
Table Of Results

Job Number : 07-31964
Matrix : Soil
Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Sample Reference	**SS12_03**					**Method No**	**Units**	**LOD**
Sample Depth (m)	**0.2**							
Date Sampled	**10/05/07**							
Date Scheduled	**14/05/07**							
Laboratory Reference No	**229884‡**							
Analysis								
* * VOC SUITE Cont.. * *								
1,2,4 Trimethylbenzene	< 250					071S	ug/kg	25
sec-butylbenzene	< 250					071S[IM]	ug/kg	25
1,3 Dichlorobenzene	< 250					071S	ug/kg	25
1,4 Dichlorobenzene	< 250					071S	ug/kg	25
4-Isopropyltoluene	< 250					071S[IM]	ug/kg	25
1,2 Dichlorobenzene	< 250					071S	ug/kg	25
n-butylbenzene	< 250					071S	ug/kg	25
1,2,4-Trichlorobenzene	< 250					071S	ug/kg	25
1,2-Dibromo-3-Chloropropane	< 250					071S	ug/kg	25
Hexachlorobutadiene	< 500					071S	ug/kg	50
1,2,3-Trichlorobenzene	< 250					071S	ug/kg	25

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.
‡ Limits raised due to matrix interference.

ALcontrol Technichem
EPH Description

Job Number: 07-31964
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soils
Project Name: Alcoa

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
229870	SS7_01	0-0.1	10/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C13 to C40.
229871	SS7_02	0-0.1	10/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40, overlain by a series of n-alkane peaks eluting from C13 to C18.
229872	SS10_01	0-0.1	10/05/07	The sample chromatogram exhibits a trace primarily consistent with a transformer oil standard.
229873	SS10_02	0.1-0.2	10/05/07	The sample chromatogram exhibits a trace primarily consistent with a transformer oil standard.
229874	SS10_03	0-0.1	10/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to C40, overlain by a series of n-alkane peaks eluting from C12 to C17.
229875	SS10_04	0-0.1	10/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40, overlain by several peaks unidentifiable by this analysis.
229876	SS10_05	0-0.1	10/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40, overlain by a series of n-alkane peaks eluting from C14 to C18 and several peaks unidentifiable by this analysis.
229877	SS10_06	0-0.1	10/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40, overlain by a series of very large peaks consistent with n-alkanes eluting from C14 to C18, and several peaks unidentifiable by this analysis.

ALcontrol Technichem
EPH Description

Job Number: 07-31964
Client: Environ UK Ltd
Project Code: 64C11647

Matrix: Soils
Project Name: Alcoa

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
229878	SS10_07	0-0.1	10/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40, overlain by a series of n-alkane peaks eluting from C14 to C18.
229879	SS10_08	0-0.1	10/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40.
229880	SS10_09	0.1-0.2	10/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C14 to beyond C40, overlain by a series of n-alkane peaks eluting from C14 to C18.
229881	SS10_10	0.1-0.2	10/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40.
229883	SS12_02	0.2	10/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40, overlain by a series of very large peaks consistent with n-alkanes eluting from C14 to C18.
229884	SS12_03	0.2	10/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from C12 to beyond C40, overlain by a series of very large peaks consistent with n-alkanes eluting from C14 to C18.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-31964

Project Code: 64C11647

Project Name: Alcoa
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
068S	In-house method	Determination of Total Gasoline Range Organics Hydrocarbons (GRO) including BTEX and MTBE compounds by Headspace GC-FID (VPH).	W
039S	In-house method	Determination of PCB congeners in soil samples by hexane/acetone extraction followed by GC-MS determination	W
022S	In-house method	Determination of PAH compounds in soil samples by hexane / acetone extraction followed by GC-MS detection	W
009S	In-house method referencing BS1377: Part 3: 1990 and Second Site Property: Environmental Assessment Guidance Version 3: March 2003	Determination of pH by addition of water followed by electrometric measurement	W
CWGS	In-house method based on "Total Petroleum Hydrocarbon Criteria Working Group" series, 1998-9	Determination of "CWG" banded petroleum hydrocarbons in soil samples using a combination of headspace GC-FID (C5-C12) and hexane:acetone extraction / silica-alumina aliphatic - aromatic split / GC-FID (C12-C35) techniques with banding by comparison to alkane standards	W
071S	In-house method	Determination of volatile organic compounds in soil samples by headspace GC-MS analysis	W
070S	In-house method	Determination of hexane/acetone extractable hydrocarbons in soil by gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	W

Soil results are expressed on a dry weight basis. Where the test uses as-received sample, a moisture correction factor is applied to the wet weight result. This factor is determined gravimetrically using weight loss on drying at 30º (+/-5) C.

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

24 May 2007

TEST REPORT

Our Report Number: 07-32100

Your Order Reference: Instructions of 15/05/2007

2 water samples submitted for analysis on 15/05/2007

Project Name: ALCOA

Project Code: 64-C11647

Laboratory analysis started on 18/05/2007
All laboratory analysis completed by 24 May 2007

Sharon Googh
Project Co-Ordinator
ALCONTROL TECHNICHEM

Rhys Ashton
Project Co-Ordinator
ALCONTROL TECHNICHEM

ALcontrol Technichem
Table Of Results

Job Number : 07-32100
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	**BH14-01**	**BH15-01**				**Method No**	**Units**	**LOD**
Sample Depth (m)	**-**	**-**						
Date Sampled	**14/05/07**	**14/05/07**						
Date Scheduled	**15/05/07**	**15/05/07**						
Laboratory Reference No	**230627**	**230628**						
Analysis								
Arsenic (Dissolved)	< 0.005	< 0.005				080W [I]	mg/l	0.005
Boron (Dissolved)	0.029	0.040				080W [I]	mg/l	0.005
Cadmium (Dissolved)	< 0.001	< 0.001				080W [I]	mg/l	0.001
Chromium (Dissolved)	0.006	0.011				080W [I]	mg/l	0.005
Copper (Dissolved)	< 0.005	< 0.005				080W [I]	mg/l	0.005
Lead (Dissolved)	< 0.005	< 0.005				080W [I]	mg/l	0.005
Mercury (Dissolved)	< 0.00005	< 0.00005				080W [I]	mg/l	0.00005
Nickel (Dissolved)	0.013	0.007				080W [I]	mg/l	0.005
Selenium (Dissolved)	0.038	0.021				080W [I]	mg/l	0.005
Zinc (Dissolved)	0.007	0.008				080W [I]	mg/l	0.005
pH	6.6	6.7				084W [I]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	0.02	0.04				072W [I]	mg/l	0.01

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-32100
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH14-01	BH15-01				Method No	Units	LOD
Sample Depth (m)	-	-						
Date Sampled	14/05/07	14/05/07						
Date Scheduled	15/05/07	15/05/07						
Laboratory Reference No	230627	230628						
Analysis								
* * SVOC SUITE * *								
Naphthalene	< 20	< 20				053W [I]	ug/l	20
2-Chloronaphthalene	< 20	< 20				053W [I]	ug/l	20
Acenaphthylene	< 20	< 20				053W [I]	ug/l	20
Acenaphthene	< 20	< 20				053W [I]	ug/l	20
Fluorene	< 20	< 20				053W [I]	ug/l	20
Phenanthrene	< 20	< 20				053W [I]	ug/l	20
Anthracene	< 20	< 20				053W [I]	ug/l	20
Fluoranthene	< 20	< 20				053W [I]	ug/l	20
Pyrene	< 20	< 20				053W [I]	ug/l	20
Benz(a)anthracene	< 20	< 20				053W [I]	ug/l	20
Chrysene	< 20	< 20				053W [I]	ug/l	20
Benzo(b)fluoranthene	< 25	< 25				053W	ug/l	25
Benzo(k)fluoranthene	< 20	< 20				053W [I]	ug/l	20
Benzo(a)pyrene	< 25	< 25				053W [I]	ug/l	25
Dibenzo(a,h)anthracene	< 40	< 40				053W [I]	ug/l	40
Indeno(1,2,3-cd)pyrene	< 40	< 40				053W [I]	ug/l	40
Benzo(g,h,i)perylene	< 40	< 40				053W [I]	ug/l	40
Phenol	< 20	< 20				053W [I]	ug/l	20
2-Chlorophenol	< 20	< 20				053W [I]	ug/l	20
2-Methylphenol	< 20	< 20				053W [I]	ug/l	20
4-Methylphenol	< 20	< 20				053W [I]	ug/l	20
2-Nitrophenol	< 20	< 20				053W [I]	ug/l	20
2,4-Dimethylphenol	< 20	< 20				053W [I]	ug/l	20
2,4-Dichlorophenol	< 20	< 20				053W [I]	ug/l	20
2,6-Dichlorophenol	< 20	< 20				053W [I]	ug/l	20
4-Chloro-3-methyl phenol	< 20	< 20				053W [I]	ug/l	20
2,4,6-Trichlorophenol	< 20	< 20				053W [I]	ug/l	20
2,4,5-Trichlorophenol	< 20	< 20				053W [I]	ug/l	20
4-Nitrophenol	< 50	< 50				053W	ug/l	50

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-32100
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH14-01	BH15-01				Method No	Units	LOD
Sample Depth (m)	-	-						
Date Sampled	14/05/07	14/05/07						
Date Scheduled	15/05/07	15/05/07						
Laboratory Reference No	230627	230628						
Analysis								
* * SVOC SUITE Cont.. * *								
2,3,4,6-Tetrachlorophenol	< 30	< 30				053W	ug/l	30
Pentachlorophenol	< 60	< 60				053W	ug/l	60
Dimethyl Phthalate	< 20	< 20				053W [I]	ug/l	20
Diethyl Phthalate	< 30	< 30				053W [I]	ug/l	30
Di-n-butyl phthalate	< 30	< 30				053W [I]	ug/l	30
Butyl benzyl phthalate	< 60	< 60				053W [I]	ug/l	60
Bis(2-chloroethyl)ether	< 15	< 15				053W [I]	ug/l	15
Bis(2-chloroisopropyl)ether	< 10	< 10				053W [I]	ug/l	10
4-Chlorophenyl phenyl ether	< 15	< 15				053W [I]	ug/l	15
Bromo phenyl phenyl ether	< 30	< 30				053W [I]	ug/l	30
1,3-Dichlorobenzene	< 15	< 15				053W [I]	ug/l	15
1,2-Dichlorobenzene	< 10	< 10				053W [I]	ug/l	10
1,4-Dichlorobenzene	< 10	< 10				053W [I]	ug/l	10
Nitrobenzene	< 20	< 20				053W [I]	ug/l	20
1,2,4-Trichlorobenzene	< 10	< 10				053W [I]	ug/l	10
2,6-Dinitrotoluene	< 30	< 30				053W [I]	ug/l	30
2,4-Dinitrotoluene	< 20	< 20				053W [I]	ug/l	20
Azobenzene	< 30	< 30				053W [I]	ug/l	30
Hexachlorobenzene	< 20	< 20				053W [I]	ug/l	20
Hexachloroethane	< 40	< 40				053W [I]	ug/l	40
n-Nitro-n-propyl-1-propanamine	< 15	< 15				053W [I]	ug/l	15
Isophorone	< 20	< 20				053W [I]	ug/l	20
Bis(2-chloroethoxy)methane	< 15	< 15				053W [I]	ug/l	15
Hexachlorobutadiene	< 10	< 10				053W [I]	ug/l	10
Anthraquinone	< 30	< 30				053W	ug/l	30
2-nitroaniline	< 50	< 50				053W	ug/l	50
4-nitroaniline	< 50	< 50				053W	ug/l	50
4-Chloroaniline	< 50	< 50				053W	ug/l	50
2-Methylnapthalene	< 50	< 50				053W	ug/l	50

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-32100
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH14-01	BH15-01				Method No	Units	LOD
Sample Depth (m)	-	-						
Date Sampled	14/05/07	14/05/07						
Date Scheduled	15/05/07	15/05/07						
Laboratory Reference No	230627	230628						
Analysis								
Hexachlorocyclopentadiene	< 50	< 50				053W	ug/l	50
Carbazole	< 50	< 50				053W	ug/l	50
3-nitroaniline	< 50	< 50				053W	ug/l	50
Dibenzofuran	< 50	< 50				053W	ug/l	50
Bis (2-ethylhexyl) phthalate	< 50	< 50				053W	ug/l	50
Aniline	< 40	< 40				053W	ug/l	40
Biphenyl	< 40	< 40				053W	ug/l	40
SVOC TIC'S	ND	ND				053W		1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-32100
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH14-01	BH15-01				Method No	Units	LOD
Sample Depth (m)	-	-						
Date Sampled	14/05/07	14/05/07						
Date Scheduled	15/05/07	15/05/07						
Laboratory Reference No	230627	230628						
Analysis								
* * VOC SUITE * *								
Vinyl Chloride	< 0.01	< 0.01				040W [I]	mg/l	0.01
Chloroethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Trichlorofluoromethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,1-Dichloroethene	< 0.001	< 0.001				040W	mg/l	0.001
112-Trichloro-122-Trifluoroethane	< 0.025	< 0.025				040W [I]	mg/l	0.025
Dichloromethane	< 0.050	< 0.050				040W [I]	mg/l	0.05
Trans-1,2 Dichloroethene	< 0.001	< 0.001				040W [I]	mg/l	0.001
MTBE	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,1 -Dichloroethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Cis-1,2 Dichloroethene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Chloroform	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,1,1-Trichloroethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,2-Dichloroethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Benzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Carbon Tetrachloride	< 0.001	< 0.001				040W [I]	mg/l	0.001
Trichloroethene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Bromodichloromethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Cis-1,3 Dichloropropene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Trans-1,3 Dichloropropene	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,1,2-Trichloroethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Toluene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Dibromochloromethane	< 0.001	< 0.001				040W [I]	mg/l	0.001
Tetrachloroethene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Chlorobenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
Ethyl Benzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
m,p-Xylenes	< 0.001	< 0.001				040W [I]	mg/l	0.001
Bromoform	< 0.001	< 0.001				040W [I]	mg/l	0.001
o-Xylene	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,1,2,2 Tetrachloroethane	< 0.001	< 0.001				040W	mg/l	0.001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Job Number : 07-32100
Matrix : Water
Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Sample Reference	BH14-01	BH15-01				Method No	Units	LOD
Sample Depth (m)	-	-						
Date Sampled	14/05/07	14/05/07						
Date Scheduled	15/05/07	15/05/07						
Laboratory Reference No	230627	230628						
Analysis								
* * VOC SUITE Cont.. * *								
1,3,5 Trimethylbenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,2,4 Trimethylbenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,3 Dichlorobenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,4 Dichlorobenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
1,2 Dichlorobenzene	< 0.001	< 0.001				040W [I]	mg/l	0.001
VOC TIC's	ND	ND				040W	mg/l	1

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
EPH Description

Job Number: 07-32100
Client: Environ UK Ltd
Project Code: 64-C11647

Matrix: Waters
Project Name: ALCOA

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
230627	BH14-01	-	14/05/07	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.
230628	BH15-01	-	14/05/07	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.

ALcontrol Technichem
Table Of Results - Appendix

Job Number : 07-32100

Project Code: 64-C11647

Project Name: ALCOA
Client : Environ UK Ltd

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
084W	In-house method	Determination of pH in aqueous samples by direct electrometric measurement	
080W	In-house method based on MEWAM "Inductively Coupled Plasma Spectrometry", HMSO, 1996	Determination of metals in aqueous samples by nitric acid digestion followed by Inductively Coupled Plasma - Mass Spectrometry detection (ICP-MS)	
072W	In-house method	Determination of cyclopentane extractable hydrocarbons in aqueous samples by large volume injection gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	
053W	In-house method	Determination of semi-volatile organic compounds in aqueous samples by dichloromethane extraction and GC-MS detection	
040W	In-house method based on EPA624 "Volatile Organic Compounds in Waste Waters"	Determination of volatile organic compounds in aqueous samples by headspace GC-MS	

Jo Cutler
Environ UK Ltd
Hartham Park
Corsham
Wiltshire
SN13 0RR

30 May 2007

TEST REPORT

Our Report Number: 07-32563

Your Order Reference: Instructions of 21/05/2007

2 water samples submitted for analysis on 21/05/2007

Project Name: ALCOA

Project Code: 64C11647

Laboratory analysis started on 25/05/2007
All laboratory analysis completed by 30 May 2007

Sharon Googh
Project Co-Ordinator
ALCONTROL TECHNICHEM

Rexona Rahman
Analytical Reporting Manager
ALCONTROL TECHNICHEM

ALcontrol Technichem
Table Of Results

Project Name: ALCOA
Client : Environ UK Ltd

Job Number : 07-32563
Matrix : Water
Project Code: 64C11647

Sample Reference	**BH12_02**	**BH13_03**				**Method No**	**Units**	**LOD**
Sample Depth (m)	**-**	**-**						
Date Sampled	**16/05/07**	**16/05/07**						
Date Scheduled	**21/05/07**	**21/05/07**						
Laboratory Reference No	**232782**	**232783**						
Analysis								
pH	6.5	-				084W[I]	pH Units	
* * EPH SUITE * *								
EPH (C10-C40)	7.9	-				072W[I]	mg/l	0.01

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Project Name: ALCOA
Client : Environ UK Ltd

Job Number : 07-32563
Matrix : Water
Project Code: 64C11647

Sample Reference	**BH13_03**					**Method No**	**Units**	**LOD**
Sample Depth (m)	**-**							
Date Sampled	**16/05/07**							
Date Scheduled	**21/05/07**							
Laboratory Reference No	**232783**							
Analysis								
*** * CWG SUITE * ***								
Aliphatic C5-C6	< 0.01					CWGW	mg/l	0.01
Aliphatic >C6-C8	< 0.01					CWGW	mg/l	0.01
Aliphatic >C8-C10	< 0.01					CWGW	mg/l	0.01
Aliphatic >C10-C12	< 0.01					CWGW	mg/l	0.01
Aliphatic >C12-C16	0.29					CWGW	mg/l	0.01
Aliphatic >C16-C21	1.4					CWGW	mg/l	0.01
Aliphatic >C21-C35	28					CWGW	mg/l	0.01
Total Aliphatics (C5-C35)	30.02					CWGW	mg/l	0.01
Aromatic C6-C7	< 0.01					CWGW	mg/l	0.01
Aromatic >C7-C8	< 0.01					CWGW	mg/l	0.01
Aromatic >C8-C10	< 0.01					CWGW	mg/l	0.01
Aromatic >C10-C12	< 0.01					CWGW	mg/l	0.01
Aromatic >C12-C16	0.04					CWGW	mg/l	0.01
Aromatic >C16-C21	0.20					CWGW	mg/l	0.01
Aromatic >C21-C35	5.5					CWGW	mg/l	0.01
Total Aromatics (C5-C35)	5.77					CWGW	mg/l	0.01
Volatile Hydrocarbons (C5-C12)	< 0.01					CWGW	mg/l	0.01
Extractable Hydrocarbons (C12-C35)	35.79					CWGW	mg/l	0.01
Total Hydrocarbons (C5-C35)	35.79					CWGW	mg/l	0.01
MTBE	< 0.005					CWGW[I]	mg/l	0.005
Benzene	< 0.005					CWGW[I]	mg/l	0.005
Toluene	< 0.005					CWGW[I]	mg/l	0.005
Ethylbenzene	< 0.005					CWGW[I]	mg/l	0.005
m,p-Xylenes	< 0.005					CWGW[I]	mg/l	0.005
o-Xylene	< 0.005					CWGW[I]	mg/l	0.005
1,3,5-Trimethylbenzene	< 0.005					CWGW[I]	mg/l	0.005
1,2,4-Trimethylbenzene	< 0.005					CWGW[I]	mg/l	0.005

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Project Name: ALCOA
Client : Environ UK Ltd

Job Number : 07-32563
Matrix : Water
Project Code: 64C11647

Sample Reference	**BH12_02**					**Method No**	**Units**	**LOD**
Sample Depth (m)	**-**							
Date Sampled	**16/05/07**							
Date Scheduled	**21/05/07**							
Laboratory Reference No	**232782**							
Analysis								
*** * SVOC SUITE * ***								
Naphthalene	< 20					053W[I]	ug/l	20
2-Chloronaphthalene	< 20					053W[I]	ug/l	20
Acenaphthylene	< 20					053W[I]	ug/l	20
Acenaphthene	< 20					053W[I]	ug/l	20
Fluorene	< 20					053W[I]	ug/l	20
Phenanthrene	< 20					053W[I]	ug/l	20
Anthracene	< 20					053W[I]	ug/l	20
Fluoranthene	< 20					053W[I]	ug/l	20
Pyrene	< 20					053W[I]	ug/l	20
Benz(a)anthracene	< 20					053W[I]	ug/l	20
Chrysene	< 20					053W[I]	ug/l	20
Benzo(b)fluoranthene	< 25					053W	ug/l	25
Benzo(k)fluoranthene	< 20					053W[I]	ug/l	20
Benzo(a)pyrene	< 25					053W[I]	ug/l	25
Dibenzo(a,h)anthracene	< 40					053W[I]	ug/l	40
Indeno(1,2,3-cd)pyrene	< 40					053W[I]	ug/l	40
Benzo(g,h,i)perylene	< 40					053W[I]	ug/l	40
Phenol	< 20					053W[I]	ug/l	20
2-Chlorophenol	< 20					053W[I]	ug/l	20
2-Methylphenol	< 20					053W[I]	ug/l	20
4-Methylphenol	< 20					053W[I]	ug/l	20
2-Nitrophenol	< 20					053W[I]	ug/l	20
2,4-Dimethylphenol	< 20					053W[I]	ug/l	20
2,4-Dichlorophenol	< 20					053W[I]	ug/l	20
2,6-Dichlorophenol	< 20					053W[I]	ug/l	20
4-Chloro-3-methyl phenol	< 20					053W[I]	ug/l	20
2,4,6-Trichlorophenol	< 20					053W[I]	ug/l	20
2,4,5-Trichlorophenol	< 20					053W[I]	ug/l	20
4-Nitrophenol	< 50					053W	ug/l	50

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Project Name: ALCOA
Client : Environ UK Ltd

Job Number : 07-32563
Matrix : Water
Project Code: 64C11647

Sample Reference	**BH12_02**					**Method No**	**Units**	**LOD**
Sample Depth (m)	**-**							
Date Sampled	**16/05/07**							
Date Scheduled	**21/05/07**							
Laboratory Reference No	**232782**							
Analysis								
* * SVOC SUITE Cont.. * *								
2,3,4,6-Tetrachlorophenol	< 30					053W	ug/l	30
Pentachlorophenol	< 60					053W	ug/l	60
Dimethyl Phthalate	< 20					053W[I]	ug/l	20
Diethyl Phthalate	< 30					053W[I]	ug/l	30
Di-n-butyl phthalate	< 30					053W[I]	ug/l	30
Butyl benzyl phthalate	< 60					053W[I]	ug/l	60
Bis(2-chloroethyl)ether	< 15					053W[I]	ug/l	15
Bis(2-chloroisopropyl)ether	< 10					053W[I]	ug/l	10
4-Chlorophenyl phenyl ether	< 15					053W[I]	ug/l	15
Bromo phenyl phenyl ether	< 30					053W[I]	ug/l	30
1,3-Dichlorobenzene	< 15					053W[I]	ug/l	15
1,2-Dichlorobenzene	< 10					053W[I]	ug/l	10
1,4-Dichlorobenzene	< 10					053W[I]	ug/l	10
Nitrobenzene	< 20					053W[I]	ug/l	20
1,2,4-Trichlorobenzene	< 10					053W[I]	ug/l	10
2,6-Dinitrotoluene	< 30					053W[I]	ug/l	30
2,4-Dinitrotoluene	< 20					053W[I]	ug/l	20
Azobenzene	< 30					053W[I]	ug/l	30
Hexachlorobenzene	< 20					053W[I]	ug/l	20
Hexachloroethane	< 40					053W[I]	ug/l	40
n-Nitro-n-propyl-1-propanamine	< 15					053W[I]	ug/l	15
Isophorone	< 20					053W[I]	ug/l	20
Bis(2-chloroethoxy)methane	< 15					053W[I]	ug/l	15
Hexachlorobutadiene	< 10					053W[I]	ug/l	10
Anthraquinone	< 30					053W	ug/l	30
2-Methylnapthalene	< 50					053W	ug/l	50
Aniline	< 40					053W	ug/l	40
Hexachlorocyclopentadiene	< 50					053W	ug/l	50
Dibenzofuran	< 50					053W	ug/l	50

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Project Name: ALCOA
Client : Environ UK Ltd

Job Number : 07-32563
Matrix : Water
Project Code: 64C11647

Sample Reference	**BH12_02**					**Method No**	**Units**	**LOD**
Sample Depth (m)	**-**							
Date Sampled	**16/05/07**							
Date Scheduled	**21/05/07**							
Laboratory Reference No	**232782**							
Analysis								
Carbazole	< 50					053W	ug/l	50
4-Chloroaniline	< 50					053W	ug/l	50
Bis (2-ethylhexyl) phthalate	< 50					053W	ug/l	50
4-nitroaniline	< 50					053W	ug/l	50
3-nitroaniline	< 50					053W	ug/l	50
2-nitroaniline	< 50					053W	ug/l	50
Biphenyl	< 40					053W	ug/l	40

I ISO 17025 accredited.
M MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Project Name: ALCOA
Client : Environ UK Ltd

Job Number : 07-32563
Matrix : Water
Project Code: 64C11647

Sample Reference	BH12_02	BH13_03				Method No	Units	LOD
Sample Depth (m)	-	-						
Date Sampled	16/05/07	16/05/07						
Date Scheduled	21/05/07	21/05/07						
Laboratory Reference No	232782	232783						
Analysis								
* * VOC SUITE * *								
Vinyl Chloride	< 0.01	< 0.01				040W[I]	mg/l	0.01
Chloroethane	0.006	< 0.001				040W[I]	mg/l	0.001
Trichlorofluoromethane	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,1-Dichloroethene	< 0.001	< 0.001				040W	mg/l	0.001
112-Trichloro-122-Trifluoroethane	< 0.025	< 0.025				040W[I]	mg/l	0.025
Dichloromethane	< 0.050	< 0.050				040W[I]	mg/l	0.05
Trans-1,2 Dichloroethene	< 0.001	< 0.001				040W[I]	mg/l	0.001
MTBE	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,1 -Dichloroethane	< 0.001	< 0.001				040W[I]	mg/l	0.001
Cis-1,2 Dichloroethene	< 0.001	< 0.001				040W[I]	mg/l	0.001
Chloroform	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,1,1-Trichloroethane	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,2-Dichloroethane	< 0.001	< 0.001				040W[I]	mg/l	0.001
Benzene	< 0.001	< 0.001				040W[I]	mg/l	0.001
Carbon Tetrachloride	< 0.001	< 0.001				040W[I]	mg/l	0.001
Trichloroethene	< 0.001	< 0.001				040W[I]	mg/l	0.001
Bromodichloromethane	< 0.001	< 0.001				040W[I]	mg/l	0.001
Cis-1,3 Dichloropropene	< 0.001	< 0.001				040W[I]	mg/l	0.001
Trans-1,3 Dichloropropene	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,1,2-Trichloroethane	< 0.001	< 0.001				040W[I]	mg/l	0.001
Toluene	< 0.001	< 0.001				040W[I]	mg/l	0.001
Dibromochloromethane	< 0.001	< 0.001				040W[I]	mg/l	0.001
Tetrachloroethene	< 0.001	< 0.001				040W[I]	mg/l	0.001
Chlorobenzene	< 0.001	< 0.001				040W[I]	mg/l	0.001
Ethyl Benzene	< 0.001	< 0.001				040W[I]	mg/l	0.001
m,p-Xylenes	< 0.001	< 0.001				040W[I]	mg/l	0.001
Bromoform	< 0.001	< 0.001				040W[I]	mg/l	0.001
o-Xylene	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,1,2,2 Tetrachloroethane	< 0.001	< 0.001				040W	mg/l	0.001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
Table Of Results

Project Name: ALCOA
Client : Environ UK Ltd

Job Number : 07-32563
Matrix : Water
Project Code: 64C11647

Sample Reference	BH12_02	BH13_03				Method No	Units	LOD
Sample Depth (m)	-	-						
Date Sampled	16/05/07	16/05/07						
Date Scheduled	21/05/07	21/05/07						
Laboratory Reference No	232782	232783						
Analysis								
* * VOC SUITE Cont.. * *								
1,3,5 Trimethylbenzene	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,2,4 Trimethylbenzene	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,3 Dichlorobenzene	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,4 Dichlorobenzene	< 0.001	< 0.001				040W[I]	mg/l	0.001
1,2 Dichlorobenzene	< 0.001	< 0.001				040W[I]	mg/l	0.001

[I] ISO 17025 accredited.
[M] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem
EPH Description

Matrix: Waters
Project Name: ALCOA

Job Number: 07-32563
Client: Environ UK Ltd
Project Code: 64C11647

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	EPH Description
232782	BH12_02	-	16/05/07	The sample chromatogram exhibits a hump of unresolved complex material eluting from <C10 to C40, overlain by a series of peaks between C14 and C17 which requires qualitative analysis by GC-MS for further identification.

ALcontrol Technichem
Table Of Results - Appendix

Project Name: ALCOA
Client : Environ UK Ltd

Job Number : 07-32563

Project Code: 64C11647

Summary of methods contained within report :

Method No.	Reference	Description	Wet/Dry Analysis
CWGW	In-house method based on "Total Petroleum Hydrocarbon Criteria Working Group" series, 1998-9	Determination of "CWG" banded petroleum hydrocarbons in aqueous samples using a combination of headspace GC-FID (C5-C12) and pentane extraction / silica-alumina aliphatic - aromatic split / GC-FID (C12-C35) techniques with banding by comparison to alkane standards	
084W	In-house method	Determination of pH in aqueous samples by direct electrometric measurement	
072W	In-house method	Determination of cyclopentane extractable hydrocarbons in aqueous samples by large volume injection gas chromatography with flame ionisation detection. Note: UKAS accreditation only applies to C10-C40 and excludes other carbon banding.	
053W	In-house method	Determination of semi-volatile organic compounds in aqueous samples by dichloromethane extraction and GC-MS detection	
040W	In-house method based on EPA624 "Volatile Organic Compounds in Waste Waters"	Determination of volatile organic compounds in aqueous samples by headspace GC-MS	