

Site Investigation Report
at
Chandlers Garage, Angmering

Client: Barry Ian Vidgeon
Michael John Coates
Group 1 Automotive UK Limited

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SUMMARY

The site, which extends to about 10m x 10m, comprises an area within the forecourt of Chandlers BMW garage. It is understood an underground waste oil tank is located within the site. The object of the investigation was to assess the likely nature and extent of soil and groundwater contamination from the tank.

Geological records indicate the site to be underlain by head over upper chalk.

A historical Ordnance Survey map search undertaken as part of a previous report by URS indicated that the site had a history of use as a garage. A culverted watercourse is situated to the west of the site.

A single phase of intrusive investigation was carried out.

The soils encountered comprised made ground to 0.6/1.7m, over interbedded clays and clay/gravels to 1.7/4.0m, over chalky silts at depth.

Groundwater was encountered at about 0.8-1.8m below ground level.

Low level contamination was identified in the soils in the form of Petroleum Hydrocarbons and Poly Aromatic Hydrocarbons.

There was also evidence of low level groundwater contamination in the form of Total Petroleum Hydrocarbons to the south of the tank, and to a lesser extent in the culverted watercourse. It is not possible, at this stage, to confirm whether these incidences are related. There is also evidence of low levels of groundwater contamination in the form of Total Petroleum Hydrocarbons and Semi Volatile Organic Compounds to the west of the tank. It should be noted, however, that the levels of contamination identified would be considered unlikely to warrant specific remedial action in isolation. Further work would, however, be required to define the extent of the contamination on this and the wider garage site, and any links to the impact on the adjacent water course and the chalk aquifer.

The site investigation was conducted and this report has been prepared for the sole internal use and reliance of Barry Ian Vidgeon, Michael John Coates, Group 1 Automotive UK Limited and their appointed Engineers. This report shall not be relied upon or transferred to any other parties without the express written authorization of Southern Testing Laboratories Limited. If an unauthorised third party comes into possession of this report they rely on it at their peril and the authors owe them no duty of care and skill.

The findings and opinions conveyed via this Site Investigation Report are based on information obtained from a variety of sources as detailed within this report, and which Southern Testing Laboratories Limited believes are reliable. Nevertheless, Southern Testing Laboratories Limited cannot and does not guarantee the authenticity or reliability of the information it has obtained from others.

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For and on behalf of Southern Testing Laboratories Limited

STL : J9299

27 September 2007



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Site Investigation, Geotechnical, Environmental & Remediation

A INTRODUCTION

1 Authority

Our authority for carrying out this work is contained in the Environmental Services Deed between Mr Barry Ian Vidgeon, Mr Michael John Coates, Group 1 Automotive UK Limited and Southern Testing Laboratories Limited, and the associated correspondence from their respective legal representatives.

2 Proposed Construction

There is no proposed development at this stage. The site is currently an operational car sales and maintenance garage, and it is proposed to investigate potential contamination from a decommissioned underground waste oil storage tank in the southern area of the forecourt. It is understood that this tank was also used for fuel storage in the past, when the forecourt was historically used for fuel sales.

For the purposes of the contamination risk assessment, the site is classified as Commercial/Industrial (CLEA model¹).

3 Object

This is a Walkover Survey and Phase II contamination (risk estimation and evaluation) investigation (Tier 1).

The object of the investigation was to assess the (likely) nature and extent of soil and groundwater contamination on the site.

4 Scope

This report presents our desk study findings, exploratory hole logs and test results and our interpretation of these data.

As with any site there may be differences in soil conditions between exploratory hole positions.

This report is not an engineering design and the figures and calculations contained in the report should be used by the Engineer, taking note that variations will apply, according to variations in design loading, in techniques used, and in site conditions. Our figures therefore should not supersede the Engineer's design.

The findings and opinions conveyed via this Site Investigation Report are based on information obtained from a variety of sources as detailed within this report, and which Southern Testing Laboratories Limited believes are reliable. Nevertheless, Southern Testing Laboratories Limited cannot and does not guarantee the authenticity or reliability of the information it has obtained from others.

The site investigation was conducted and this report has been prepared for the sole internal use and reliance of Barry Ian Vidgeon, Michael John Coates, Group 1 Automotive UK Limited and their appointed Engineers. This report shall not be relied upon or transferred to any other parties without the express written authorization of Southern Testing Laboratories Limited. If an unauthorised third party comes into possession of this report they rely on it at their peril and the

¹ Environment Agency R&D Publication CLR 7 to 10 (2002) 'The Contaminated Land Exposure Assessment (CLEA) Model'

authors owe them no duty of care and skill.

B DESK STUDY & WALKOVER SURVEY

5 Location

The site is situated about 8km north-west of Worthing town centre. The approximate National Grid Reference of the site is TQ 069 044.

6 Desk Study

A limited desk study has been carried out. Reference has been made to the following information sources.

- Geological Maps
- Hydrogeological/Groundwater Vulnerability maps
- Previous Reports (Environmental Due Diligence Assessment of Chandlers Garage (Worthing) Ltd, Angmering by URS, dated 15 February 2007)
- BRE Radon Atlas²

6.1 Geology

The British Geological Survey Map No 317 indicates that the site geology consists of Head over Chalk.

6.1.1 Head

Head deposits are drift deposits produced by solifluction, a process in which water acts as a lubricant rather than as an agent of transport. They characteristically comprise sandy silty clay containing randomly oriented fragments of angular materials of local derivation. Stratification, if present, is generally poor and the upper and lower surfaces of the deposits are rarely horizontal.

Near river valleys all gradations between Head and River Deposits may occur so that it is often difficult to draw a precise line between the two. At the present day, downwash and soil creep account for the main types of head being formed.

6.1.2 Upper Chalk

Upper Chalk is a well known soft white friable limestone of organic origin which is composed of shell debris embedded in a fine matrix of microscopic calcareous bodies produced by planktonic algae (coccoliths).

Upper Chalk is frequently highly fractured and highly permeable, when excellent drainage can be achieved via soakaways. On the other hand, Chalk Head and Chalk under a cover of Reading Beds may have very poor soakage characteristics.

Chalk is slightly soluble in water and, while it has excellent bearing properties when unweathered, this solubility leads to deep weathering and softening, producing some undesirable characteristics, as far as a building construction is concerned. It has been estimated that the average level of the upper surface is lowered by 1 mm over 25 years as a result of this solubility, but this is not a uniform process as there is preferential solution leading to the formation of pipes and sink holes.

² BRE 211 (1999) 'Radon: guidance on protective measures for new dwellings'

The chalk itself may be softened by solution to a depth of 5-15 metres and bearing capacities and engineering properties improve with depth. Where there is an outcrop of impermeable soil overlying the chalk there may be a dramatically increased solution effect. Water may collect over the clay and flow in large quantities to the chalk and cause very rapid solution and settlement at the junction.

The upper layers of chalk are often highly weathered, softened and remoulded, and form an irregular boundary with the overlying strata. In addition, solution structures and cavities commonly known as swallow holes can develop. Swallow holes can vary from narrow pipes, several metres in diameter to large depressions up to about 25-30 metres across. In chalk they are frequently infilled with "loose" soils and possibly with weakly bridged cavities.

6.2 Hydrology and Hydrogeology

6.2.1 Groundwater Vulnerability

The Environment Agency Groundwater Vulnerability Map for the area indicates that the site is underlain by a Major Aquifer.

6.2.2 Source Protection Zones

According to the Environment Agency website on the 7th September 2007, the site is not located within a groundwater source protection zone.

6.3 Previous Report – Environmental Due Diligence Assessment of Chandlers Garage (Worthing) Ltd, Angmering by URS Corporation Ltd, dated 15 February 2007, Issue No. 3 44408004/LORP0003.

The Phase 1 URS report was undertaken to identify the potential environmental and key health and safety liabilities associated with the Chandlers Garage sites current and former use for the target company, Group 1 Automotive Inc, and comprised a desk study and walkover survey.

In summary, the report states the garage site was located within a mixed residential and commercial area in the village of Angmering. The site comprised a car showroom area, offices, staff amenities, vehicle servicing workshop, accident repair bodyshop and valeting bay. The site was underlain by Valley Gravels over Chalk, which was classified as a major aquifer. Two groundwater abstraction licenses were listed within a 1km radius of the site. The site was noted to not be located within an EA Source Protection Zone. The nearest surface water feature was noted to be a branch of Black Ditch, reportedly culverted underneath the north of the site, running overland about 180m SW and 330m NE, flowing west.

A historical map survey was undertaken and indicated that the garage site was initially used for agricultural purposes and as allotments, and was subsequently developed with unspecified buildings. By 1971 the site was named as a garage. Chandlers Garage (Worthing) Ltd reportedly began occupation of the site in 1981, refurbished the showroom in 1985 and added the bodyshop in 1990.

The report indicates that there was an underground tank present on site, situated between the showroom and used car sales area. The tank was reportedly most recently used as a waste oil tank of 20,000 litre and was decommissioned by filling with RG22 hard foam.

The report notes several potential off site sources of contamination within 250m radius of the site, including a coal yard, gravel pit and builders yards.

The report includes a detailed survey of other environmental liability issues and concludes that the potential for significant soil and/or groundwater contamination to have occurred as a result of

historic site uses is moderate. The report recommends obtaining any soil/groundwater investigations undertaken in the vicinity of the underground fuel tank prior to its decommissioning to assess the possible requirement for further physical investigation work.

7 Walkover Survey

A walkover survey was carried out on 20 September 2007.

7.1 General Description and Boundaries

It was generally agreed that the intrusive investigations should be scoped to determine whether any contamination had occurred in the vicinity of the decommissioned underground waste oil storage tank.

Therefore, the subject site for this investigation comprised an area approximately 10x10m in the forecourt of Chandlers BMW garage (refer to appended drawing No. STL_9299). The site is covered in block paving and a permanent canopy extends across the central site area. The site is bounded by the garage showroom to the south-west, Water Lane to the north west, the forecourt to the north east, and housing and the garage workshop to the south east.

7.2 Topography . . Local and Regional

The site is relatively flat.

Off site to the north west, there is a slight slope from the forecourt to Water Lane. A brick retaining wall approximately 1m high is situated to the north-east of the subject site at the rear of the adjacent rear gardens.

The garage site is situated at the base of a valley, at the toe of the eastern valley slope.

7.3 Vegetation and Drainage

The subject site is covered by block paving.

The grassed verge of Water Lane is situated to the north-west of the site.

A branch of Black Ditch is reportedly culverted to the north west of the site, running alongside Water Lane. The nearest downstream access to the culvert is reportedly a manhole sited south west of the site in the grassed verge of Water Lane. Upstream the ditch runs overland about 330m north east of the site.

7.4 Buildings and Land Use on Site and Nearby

A permanent canopy extends across the centre of the site.

Various garage buildings are located to the south west and east of the site, including the single storey showroom and workshops. Residential properties are situated to the east and west.

Three interceptor manholes are located about 4m south of the site.

C PRELIMINARY CONCEPTUAL MODEL

8 Introduction

In the context of this report, the conceptual model summarises the potential pollutant linkages identified for the site and forms the basis of the risk assessment for the site. The preliminary

model comprises the potential sources of contamination, receptors that could be harmed and exposure pathways identified from the desk study and walkover survey. These potential linkages form the basis upon which the investigation is designed and reported.

9 Potential Sources of Contamination

The site comprises an area within Chandlers BMW garage. The garage is located within a predominantly residential area.

A full desk study was beyond the scope of works for this particular investigation. However, a number of minor industrial uses have been identified in the previous URS Environmental Due Diligence Assessment, both on site and in the locality.

Potential contaminants associated with these uses have been compiled from DoE industry profiles and our experience of such sites

9.1 On Site Sources

It is understood that there is an underground waste oil tank present on the site. The site comprises an area within Chandlers BMW garage.

Source	Potential Contaminants
Underground Tank	TPHs, VOCs, SVOCs.
Garage	Metals, Polyaromatic Hydrocarbon (PAHs), Oil/Fuel Hydrocarbon (TPHs), Acetone, Chlorinated Aliphatic Hydrocarbons, Organolead Compounds, Volatile Organic Compounds (VOCs), Semivolatile Organic Compounds (SVOCs), Sulphate, Sulphurs, Cyanide, Asbestos.

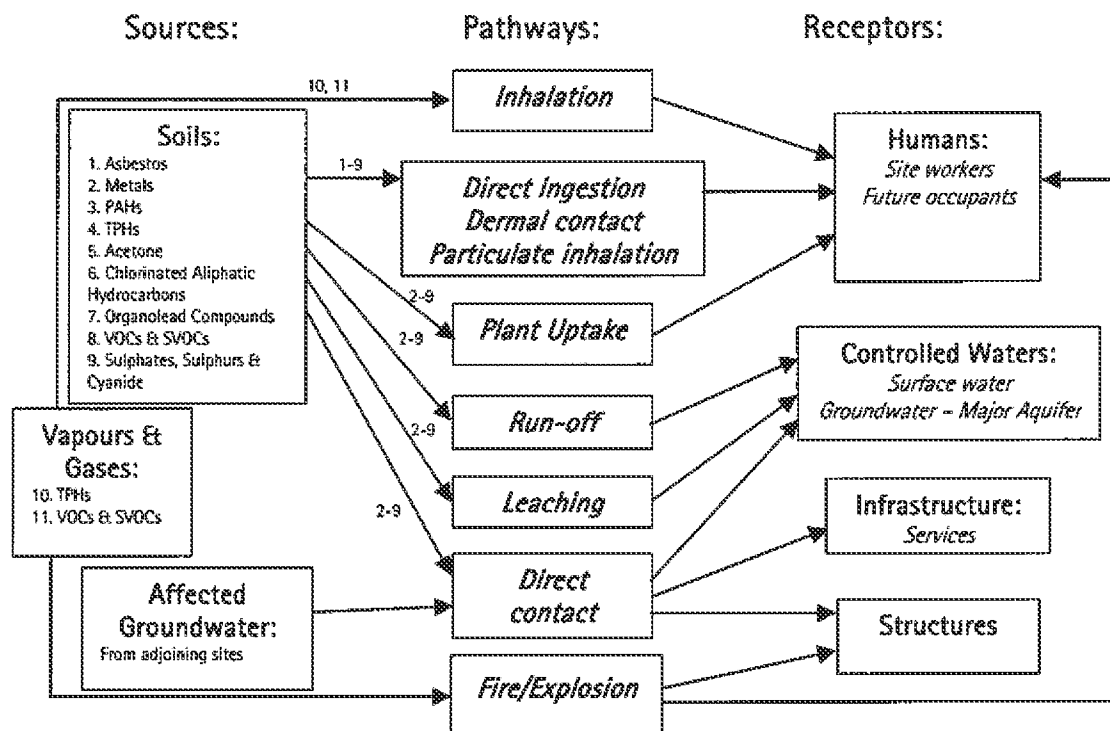
9.2 Off Site Sources

The site may be impacted by contamination migrating from beyond the site boundary. The site is situated within the Chandlers BMW Garage forecourt and as such may be impacted from contamination migrating from other areas of the garage site such as the wash down area or vehicle maintenance areas. In addition, potential sources have been identified in the previous URS report which are beyond the boundaries of the garage. The following potential off-site sources of contamination have therefore been identified.

Source	Potential Contaminants
Garage	Metals, Polyaromatic Hydrocarbon (PAHs), Oil/Fuel Hydrocarbon (TPHs), Acetone, Chlorinated Aliphatic Hydrocarbons, Organolead Compounds, Volatile Organic Compounds (VOCs), Semivolatile Organic Compounds (SVOCs), Sulphate, Sulphurs, Cyanide, Asbestos.
Coal Yard	Metals, PAHs, VOCs, SVOCs, TPHs, Sulphate, Cyanide, Asbestos
Gravel Pit	Metals, PAHs, TPHs, Asbestos
Builders Yard	Metals, PAHs, TPHs, Asbestos

10 Pollutant Linkages and Model Summary

The following diagram shows the potential pollutant linkages identified for the site and summarises the preliminary conceptual model:



D SITE INVESTIGATION

11 Method

The strategy adopted for the intrusive investigation comprised the following:

- 9 No 0.14–0.5m deep rotary cores of forecourt slab.
- 6 No 0.6–4.0m deep windowless sampling holes.
- 2 No 4.0m deep groundwater monitoring wells.
- 2 No. groundwater monitoring visits.
- Limited chemical testing.

12 Weather Conditions

The fieldwork was carried out on 19th and 20th July 2007 at which time the weather was generally overcast and wet.

The rainfall in south of England for the month of July and June was higher than the average, at 237% & 207%, whilst rainfall in May was about 211% of the normal.

13 Soils as Found

The soils encountered are described in detail in the attached trial hole logs (Appendix B), but in general comprised made ground over interbedded clays and clay/gravels, over chalky silt at depth. A condensed summary is given below:

Depth	Soil Type	Description
G.L. – 0.1m	CONCRETE	CONCRETE block paving
- 0.2/0.3m	SUBBASE	Loose brown sandy SUBBASE
- 0.4/0.5m	CONCRETE	CONCRETE slab
- 0.6/1.7m	MADE GROUND	Loose dark grey sandy silty clayey MADE GROUND with occasional brick fragments and flint gravels.
- 1.7/3.8m	CLAY	Stiff becoming firm brown silty CLAY with occasional fine to coarse sub-angular flint gravels and black speckling.
- 3.5m (TH1)	CLAY/GRAVEL	Firm to stiff brown silty CLAY with frequent fine to coarse sub-angular flint GRAVEL.
- 4.0m (TH1)	CLAY	Soft to firm brown silty slightly sandy CLAY with occasional black speckling.
- 4.0m (TH2 & TH6)	SILT	Very soft off white chalky SILT

Three trial hole locations, Core1-3, refused during the concrete coring.

Core 1 refused on a suspected buried gully encountered beneath the block paving.

Core 2 refused on a suspected manhole cover encountered beneath the block paving.

Core 3 encountered the suspected edge of the underlying concrete slab, and refused on lean mix concrete underlying the slab at 0.6m.

Trial holes TH3, TH4 and TH5 refused at 0.6 – 1.0m below ground level, due to the presence of buried concrete obstructions.

Strong hydrocarbon odours were noted in chalky silts in TH2 and TH6 at about 3.8m below ground level. Slight hydrocarbon odours were encountered in trial holes TH1 at 1.1m and TH6 at 1.5m.

13.1 Visual and Olfactory Evidence of Contamination

Evidence of possible contamination in the form of made ground soils and suspected hydrocarbon contamination were recorded on site.

These occurrences are discussed in Section F.

14 Groundwater

Groundwater was encountered as seepages in trial holes TH1 at 3.0m, TH4 at 1.0m and TH6 at 0.76m below ground level during the site investigation.

In addition, 2 No. 4.0m deep monitoring wells were installed in trial holes TH1 and TH2. Two groundwater monitoring visits were subsequently undertaken. The results are appended (Appendix D) and are summarised in the following table:

Trial Hole	Response Zone (mbgl)	Groundwater Monitoring Visits, depth to groundwater level (mbgl)	
		03/08/2007	10/08/2007
TH1	1.0-4.0	0.81	0.82
TH2	1.0-4.0	1.47	1.77

E FIELD TESTING AND SAMPLING

The following in-situ test and sampling methods were employed. Full descriptions are given in Appendix B.

- Windowless Sampler
- Monitoring Well
- Disturbed Samples
- Groundwater Samples
- Photoionization Detector

F LAND QUALITY

15 Analytical Framework

There is no single methodology which covers all the various aspects of the assessment of potentially contaminated land and groundwater. Therefore, the analytical framework adopted for this investigation is made up of a number of procedures, which are outlined below. All of these are based on a Risk Assessment methodology centred on the identification and analysis of Source – Pathway – Receptor linkages.

The CLEA model³ provides a methodology for quantitative assessment of the long term risks posed to human health by exposure to contaminated soils. Toxicological data is used to calculate a Soil Guideline Value (SGV) for an individual contaminant, based on the proposed site use. Soil Guideline Values have been published for a limited number of contaminants, related to four

³ Environment Agency R&D Publication CLR 7 to 10 (2002) The Contaminated Land Exposure Assessment (CLEA) Model¹

specific end uses (residential with and without plant uptake, allotments and commercial/industrial) and these may be used as screening values.

CLEA requires a statistical treatment of the test results to take into account the normal variations in concentration of potential contaminants in the soil and allow comparisons to be made with published guidance.

In the absence of any published SGVs for certain parameters, Southern Testing have derived Tier 1 screening values for initial assessment of the soil, based on available current guidance and our own experience. No specific reference is made to any non-UK guidance, and site-specific assessments are undertaken wherever possible and/or applicable. All assessments are carried out in accordance with the CLEA protocol.

The results of the groundwater analyses are compared to UK Drinking Water Standards, or to other relevant UK standards e.g. the Freshwater EQS.

16 Site Investigation – Soil

16.1 Sampling Regime

The URS Report highlighted land uses that could result in contamination of the soil/groundwater on site, primarily the underground waste oil tank.

The number of sample locations was limited and was based on a targeted investigation of the underground tank.

16.2 Testing

The potential for contamination from the waste oil fuel tank was identified in the URS report and, therefore, the following tests were selected. A more detailed description of the tests is given in Appendix E.

Test Suite	Number of Soil Samples	Number of Water Samples
TPH CWG	16	6
VOCs	6	2
SVOCs	6	2

The test results are presented in full in Appendix C. A summary and discussion of the significance of the results and identified contamination sources is given below.

16.3 Test Results and Identified contamination sources

16.3.1 Petroleum Hydrocarbons

The following tables summarize the results of the analysis for Total Petroleum Hydrocarbons with the aliphatic/aromatic fractions split.

Description	Total Aliphatic (C5-C35) Hydrocarbons, mg/kg	Total Aromatics (C5-C35) Hydrocarbons, mg/kg	Total Petroleum Hydrocarbons (C5-C35), mg/kg
TH1 at 1.1m	11	<5	11
TH1 at 1.5m	<5	<5	<5
TH1 at 3.0m	<5	<5	<5
TH1 at 3.5m	20	<5	20
TH1 at 4.0m	<5	<5	<5
TH2 at 1.0m	13	34	47
TH2 at 2.0m	6.5	5.4	12
TH2 at 3.0m	<5	<5	<5
TH2 at 4.0m	65	19	84
TH3 at 1.0m	280	130	410
TH4 at 1.0m	26	28	54
TH6 at 1.0m	15	56	71
TH6 at 1.5m	<5	6.1	6.1
TH6 at 2.0m	8.5	5.3	14
TH6 at 3.0m	10	8.0	18
TH6 at 4.0m	310	60	370

Sixteen soil samples from TH1, TH2, TH3, TH4 and TH6 were analysed for total petroleum hydrocarbons (TPH) with aliphatic/aromatic fractions split. Marginally elevated levels of TPH contamination, mainly in the heavier C12-C35 aliphatic and aromatic fractions, were encountered in samples TH3 at 1.0m and TH6 at 4.0m. However, comparison of the levels of TPH contamination encountered with the generic assessment criteria recently published by LQM⁴ indicate the levels encountered do not pose a significant risk to human health for the current land use.

The samples were also analysed for MTBE and the BTEX compounds. The samples tested free from any other significant contamination with respect to the determinants tested.

16.3.2 Volatile Organic Compounds (VOCs)

Five soil samples, TH1 at 1.1m, TH1 at 4.0m, TH2 at 4.0m, TH6 at 1.5m and TH6 at 4.0m, were analysed for the Volatile Organic Compounds suite.

The samples tested free of any significant VOC contamination with respect to the determinants tested.

16.3.3 Semi-Volatile Organic Compounds (VOCs)

Six soil samples, TH1 at 1.1m, TH1 at 4.0m, TH2 at 4.0m, TH4 at 1.0m, TH6 at 1.5m and TH6 at 4.0m were analysed for the Semi-Volatile Organic Compounds suite. Slightly elevated levels of polyaromatic hydrocarbons (PAHs) and carbazole were encountered in the sample of made ground in TH4 at 1.0m. However, comparison of the levels of PAH contamination encountered with the

⁴ "Generic Assessment Criteria for Human Health Risk Assessment" by Land Quality Management Limited, November 2006

recently published generic assessment criteria by LQM indicate the levels encountered do not pose a significant risk to human health with respect to the current land use.

17 Site Investigation – Waters

17.1 Sampling Regime

Groundwater samples were taken from the groundwater monitoring wells TH1 Et TH2 on 3rd and 10th August 2007.

In addition two samples of surface water were collected from the culverted watercourse (branch of Black Ditch) adjacent to the site. The upstream sample was obtained from the overland ditch some 300m north east of the site, and the down stream sample from the manhole access to the culvert, located in the verge just south west of the site.

17.2 Testing

The potential for contamination from the underground waste oil tank was identified in the URS report and, therefore, the following tests were selected. A more detailed description of the tests is given in Appendix C.

- Total Petroleum Hydrocarbons with aliphatic/aromatic split. BTEX compounds AND MTBE.
- Volatile Organic Components by GC-MS
- Semi-Volatile Organic Components by GC-MS

The test results are presented in full in Appendix C. A summary and discussion of the significance of the results and identified contamination sources is given below.

17.3 Test Results and Identified Contamination

17.3.1 Petroleum Hydrocarbons

The following tables summarize the results of the analysis for Total Petroleum Hydrocarbons with aliphatic/aromatic fraction split.

Description	Total Aliphatic (C5-C35) Hydrocarbons, mg/l	Total Aromatics (C5-C35) Hydrocarbons, mg/l	Total Petroleum Hydrocarbons (C5-C35), mg/l
Upstream	0.01	<0.01	0.01
Downstream	0.12	<0.01	0.12
TH1 (3/8/07)	0.05	1.15	0.09
TH2 (3/8/07)	0.04	0.27	1.42
TH1 (10/8/07)	0.01	0.01	0.02
TH2 (10/8/07)	0.54	0.12	0.66

The levels of TPH contamination encountered were compared to the UK Drinking Water Standard of 0.01mg/l as a preliminary screening value. Slightly elevated levels of TPH contamination were encountered in the downstream culvert sample and in the two groundwater samples from TH1. More significant TPH contamination was detected in the samples from TH2, although concentrations were still generally low.

The TPH contamination encountered in the groundwater samples from TH1 was characterised as being within the lighter C5-C12 aliphatic and aromatic fractions, but levels were only marginally elevated.

Elevated levels of TPH contamination of 0.66-1.42mg/l were detected in the two groundwater samples from TH2. The TPH contamination encountered was generally characterised as being within the heavier C16-C35 aliphatic and aromatic fractions.

The upstream culvert sample tested free from any significant TPH contamination.

The TPH contamination encountered in the downstream culvert sample was characterised as being within the C21-C35 aliphatic fractions.

All samples were also analysed for MTBE and the BTEX compounds. The samples tested free from any other significant contamination with respect to the determinants tested.

17.3.2 Volatile Organic Compounds (VOCs)

Three groundwater samples, one from each monitoring well and one from the downstream culvert sample point, were analysed for the Volatile Organic Compounds suite.

The samples tested free of any significant VOC contamination with respect to the determinants tested.

17.3.3 Semi-Volatile Organic Compounds (VOCs)

Two groundwater samples, one from each monitoring well, were analysed for the Semi-Volatile Organic Compounds suite. Slightly elevated levels of 4-Methylphenol, Diethyl Phthalate, Di-n-butyl phthalate and aniline were encountered in the groundwater sample from TH1 on 3/8/07.

18 Risk Evaluation

The object of the risk evaluation is to assess the pollution linkages for specific contaminant groups considered in the conceptual model, identify any unacceptable risks and, therefore establish whether there is a need for further investigation and/or remedial action.

18.1 Revised Conceptual Model

SUBSTANCES			PATHWAYS	RECEPTORS
Petroleum Hydrocarbons	VOCs	SVOCs		
N	N	N	Ingestion and inhalation of contaminated soil and dust	Human Health
N	N	N	Uptake into edible fruit and vegetables	
Y	N	Y	Surface water run-off into surface water features	Water Environment
Y	N	Y	Migration through ground into surface water or groundwater	
N	N	N	Vegetation on site growing in contaminated soil	Flora and Fauna
Y	N	Y	Aquatic life in affected waters	
P	N	P	Contact with contaminated soil	Building materials/ buried services
N	N	N	Fire or explosion	

Key:

Y	Pollutant linkage likely
N	Pollutant linkage not likely
P	Pollutant linkage possible

At this stage there is no development proposed at the site. The site is currently part of Chandlers BMW Garage and as such the site has been analysed for the commercial/industrial land use.

From the results of the soil contamination testing to date, slightly elevated levels of TPH, PAH and carbazole contamination have been encountered in the made ground and underlying natural soils. However, considering the current site use and the recently published generic assessment criteria by LQM, such levels are considered unlikely to pose a significant risk to human health given the continued commercial use of the site. In addition, the site is covered by block paving over a concrete slab. At this stage the risk to site users via the direct contact, particle inhalation and ingestion pathways is considered low, as the cover of hardstanding will break the pollutant pathway to the receptor. There is considered a low risk to site users via the vapour inhalation pathway, as there are no enclosed spaces on the subject site. Furthermore, there is also considered to be a slight risk of contamination impacting unprotected services (particularly water supply pipes).

Moderately elevated levels of TPH were encountered in groundwater monitoring well TH2. Slightly elevated levels of TPH contamination were also encountered in the downstream culvert sample. Both samples were characterised as the heavier C16-C35 aliphatic and/or aromatic hydrocarbons, commonly associated with waste oil. Low levels of the lighter C5-C12 fractions were encountered in the water samples from TH1. The groundwater sample from the upstream culvert tested free from any significant TPH contamination. Assuming groundwater flow is in an westerly/south-westerly direction, the results indicate there may be a high risk of the underground waste oil tank contaminating the groundwater (or having already done so).

The primary potential off site source of contamination identified in the preliminary conceptual model comprised the remainder of Chandlers BMW Garage, which bounds the site to the north south and east. Migration of contaminants linked with this land use to the site would be primarily via the groundwater migration pathway. Groundwater flow is assumed at this stage to be in an westerly/south-westerly direction towards the culvert. Groundwater was encountered at about 0.8-1.8m below ground level. Slightly elevated levels of the SVOCs 4-Methylphenol, Diethyl Phthalate, Di-n-butyl phthalate and aniline were encountered in the groundwater sample from TH1 only. These compounds have a wide range of uses, including the productions of plastics, paint, petroleum hydrocarbons, insecticides and glue. The vehicle maintenance workshop, bodyshop, valeting bay and various chemical stores are situated to the south east of the site. In addition, the historic site layout is unknown. There is considered a high risk of contaminants migrating from the surrounding garage areas to the subject site.

Potential off site sources of contamination identified in the URS report and listed in the preliminary conceptual model comprise a gravel pit, coal yard and builders yards. Based on the assumptions above, given the distance of the gravel pit and builders yards from the site (120-230m), and the location of the coal yard to the south, there is considered a low risk of contamination from these off site sources migrating to site, and the potential on site sources remain the primary interest.

18.2 Recommendations

On the basis of the information to date, there is some evidence of contamination from the underground waste oil tank contaminating the groundwater to the south (TH2). Elevated levels of

TPH contamination were recorded in the downstream culvert sample, and the similar characterisation of the TPH fractions of this and the sample from TH2 indicate that contamination from the underground waste oil tank may have impacted on the culverted watercourse. However, it is noted that three interceptor manholes are located between TH2 and the downstream culvert manhole. It is further noted that the outfall of surface water drainage from the garage is not known at this time. Investigation of potential contamination migrating from the interceptors was beyond the scope of works, but it is noted that these may be an ongoing source of TPH contamination which may equally impact on the watercourse and groundwater. Deep boreholes penetrating into the chalk aquifer, and additional groundwater monitoring and testing would be required to establish the groundwater regime and the potential impact of the groundwater contamination identified on the chalk aquifer. It should be noted, however, that it may never be possible to confirm the absolute source of any contamination identified.

Marginally elevated levels of TPH contamination were encountered in the soil samples, but from the results of the groundwater testing to date, higher levels of TPH contamination in the soils surrounding the underground tank could be anticipated.

It is noted that the investigation was severely limited by the presence of buried obstructions. Three core locations refused on a buried manhole, suspected gully and lean mix concrete. In addition three of the boreholes, TH3, TH4 and TH5, encountered buried obstructions at about 0.5-1.0m below ground level. The extent of the underground waste oil tank is unknown, with the location of the access manhole covers providing the only indication of its presence. However, given the site's historic use as a garage, which predates Chandlers BMW garage, and from our experience with such sites it is considered likely that additional buried fuel tanks and ancillary structures will be located on site.

Slightly elevated levels of the lighter C5-C12 hydrocarbon fractions and SVOC's were encountered in the groundwater sample from TH1. Common sources of such contaminants include petroleum hydrocarbons, paints and plastics. At this stage it is assumed groundwater flow is towards the valley base i.e. to the south west/west. The close proximity of the existing wells, and the limited monitoring timeframe mean that this has been impossible to determine to date. The contamination encountered in the groundwater in TH1 may be an indication of contamination sources in the east area of the garage e.g. the, washdown area, bodywork shop and maintenance area.

In conclusion, on the basis of the investigation completed to date, there is some evidence that the underground waste oil tank may have contaminated the groundwater and surrounding soils, although it should be stressed that the contamination identified was generally low level, and would be unlikely to warrant specific remedial action in isolation. Given the site and surrounding area's historic and current land use as a garage, further historic and current contamination sources such as additional unknown buried fuel tanks and ancillary structures (e.g. interceptor manholes), washdown areas, and bodyshop and vehicle maintenance areas may also have attributed to the contamination encountered. A detailed intrusive investigation of the garage site, including assessment of the groundwater regime, would be required to fully assess the extent and nature of contamination on and surrounding the subject site.

G CONSIDERATIONS FOR IMPLEMENTATION AND VALIDATION OF REMEDIATION

19 General Guidance

Allowance should be made for experienced validation of the site works. This is of particular importance when defining the various areas of the site for which different standards apply.

It should be noted that there is potential for inconsistency between various regulatory authorities. It may be, therefore, that specific local requirements apply to this site, of which we are not aware at this time.

A potential hazard which has been identified by this investigation is the presence of contaminated soils underlying the site. In general terms, the workforce and general public should be protected from contact with contaminated material. There is a range of relevant documents published by the Health and Safety Executive, and organisations such as CIRIA, and the BRE.

Different guidelines and charges will apply to different waste classifications. Producers of waste have a duty of care to ensure that their waste is appropriately classified and disposed of at a facility licensed to receive the waste as classified.

Accurate records of all waste classification and transfer must be kept and maintained for potential future regulatory inspection.

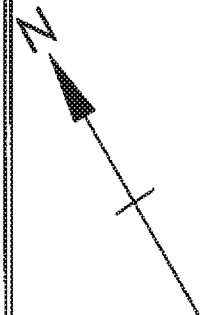
The implementation of new regulations governing waste classification continues and it is expected that the industry will take some time to settle down. In the meantime, there remains a large difference between the cost of disposal of hazardous and non-hazardous wastes.

It should be noted that organic contaminants present in the soils could affect plastic underground service pipes (such as the types used by water and gas supply companies). It may be prudent, therefore, to seek guidance from the relevant companies regarding any plant in this area.

Many water supply companies now require higher specification pipe on contaminated sites, even following remediation.

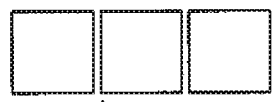
APPENDIX A

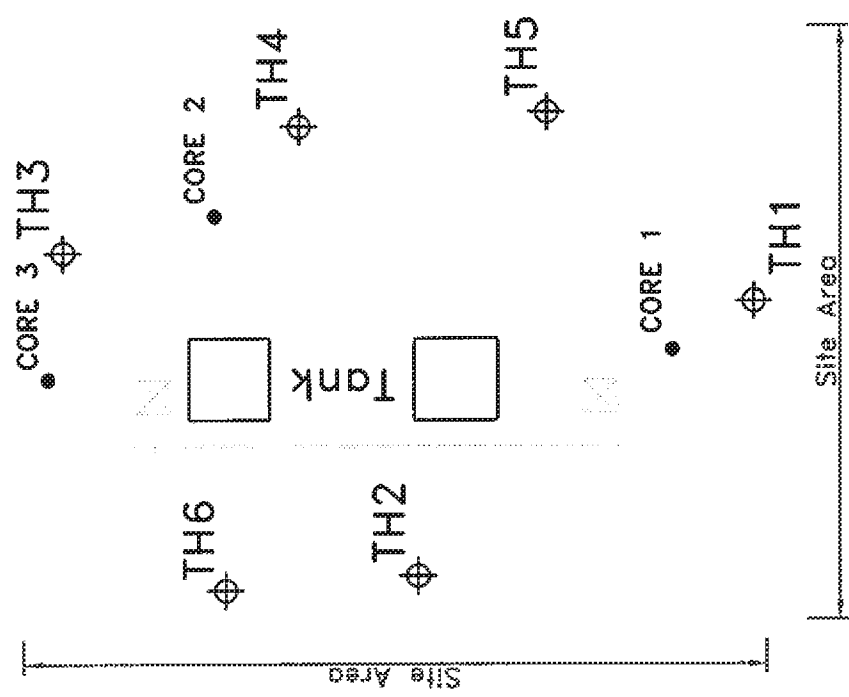
Site Plans and Exploratory Hole Logs



 Culvert Manhole

Showroom & Office

 Interceptor



SOUTHERN TESTING Geotechnical & Foundation Engineering	
Keeble House, Stuart Way, East Grinstead, West Sussex, RH19 4QA. Tel: 01342 333100 Fax: 01342 410321 www.southern-testing.co.uk	
Client:	Chondlers Garage Holding
Job Title:	Angmering
Description:	Site Plan
Drawing No:	STL_J9299
Scale: 1:100	Paper Size: A4
Drawn by: SH	Checked by: GAO
Date: 23/07/2007	

NOTES



Site : Angmering

Client : Chandlers Garage Holdings Ltd

National Grid Reference		TQ 069 044	
Job No	J9299	Date	20/07/2007
Logged by	SH	Engineer	GAD

Excavation Method : Hand Auger & Dart Rig

Hole No TH1			Hole No TH2		
Water strikes: Seepages at 3.0m Water level: Pit sides: Unstable			Water strikes: Water level: Pit sides: Unstable		
Depth m/mm	Sample Type or Test Type & Value	Soil Description	Depth m/mm	Sample Type or Test Type & Value	Soil Description
100	CONCRETE	Block paving	100	CONCRETE	Block paving
200	SUBBASE	Loose brown sandy SUBBASE	260	SUBBASE	Loose brown sandy SUBBASE
500	CONCRETE	CONCRETE slab	500	CONCRETE	CONCRETE slab
650	MADE GROUND	Loose grey brown silty clay	MADE GROUND		Loose dark grey very sandy silty clay
800	MADE GROUND	MADE GROUND with occasional flint gravels and brick fragments	MADE GROUND		MADE GROUND with occasional brick fragments and flint gravels
1.0	CLAY	Soft brown silty CLAY with occasional flint gravels	1.0	CLAY	Stiff brown silty CLAY with occasional fine to coarse sub-angular flint gravels
1.1	CLAY	Soft brown silty CLAY with occasional flint gravels	1.5	CLAY	Stiff brown silty CLAY with occasional black speckling
1.4	CLAY	Soft brown silty CLAY with frequent sub-angular flint gravels	1.8	CLAY	Becoming soft with depth
1.5	CLAY	[slight hydrocarbon odour at 1.1m]	2.0	CLAY	Firm to stiff brown silty CLAY/GRAVEL. Gravel is fine to coarse sub-angular
2.0	CLAY	Stiff brown silty CLAY with occasional black speckling	2.5	CLAY	No recovery from 3.0m
2.3	CLAY/GRAVEL	Becoming soft with depth	2.8	CLAY	Soft to firm brown silty slightly sandy CLAY with occasional black speckling
2.5	CLAY	Firm to stiff brown silty CLAY/GRAVEL. Gravel is fine to coarse sub-angular	3.0	CLAY	Soft to firm brown silty slightly sandy CLAY with occasional black speckling
3.0	CLAY	No recovery from 3.0m	3.5	CLAY	Soft to firm brown silty slightly sandy CLAY with occasional black speckling
3.5	CLAY	Soft to firm brown silty slightly sandy CLAY with occasional black speckling	4.0	CLAY	Soft to firm brown silty slightly sandy CLAY with occasional black speckling
4.0	CLAY	Soft to firm brown silty slightly sandy CLAY with occasional black speckling	4.0	CLAY	Soft to firm brown silty slightly sandy CLAY with occasional black speckling
4m deep monitoring well No recovery from 3-3.5m			4m deep monitoring well		

Hole No TH3			Hole No TH4		
Water strikes: Dry Water level: Pit sides: Stable			Water strikes: Seepages from 1.0m Water level: Pit sides: Stable		
Depth m/mm	Sample Type or Test Type & Value	Soil Description	Depth m/mm	Sample Type or Test Type & Value	Soil Description
100	CONCRETE	Block paving	100	CONCRETE	Block paving
300	SUBBASE	Loose brown sandy SUBBASE	300	SUBBASE	Loose brown sandy SUBBASE
450	CONCRETE	CONCRETE slab	500	CONCRETE	CONCRETE slab
700	MADE GROUND	Loose brown gravelly silty fine to medium sand MADE GROUND.	MADE GROUND		Loose dark grey brown sandy silty clay MADE GROUND with occasional flint gravels and concrete fragments
1.0	MADE GROUND	Gravel is fine to medium sub-angular to sub-rounded	1.0	MADE GROUND	Crushed concrete found at 0.9m. Seepages from 1.0m
1.0	MADE GROUND	Loose dark brown fine to coarse sand MADE GROUND with occasional fine to medium sub-rounded flint gravels			
		Concrete obstructions at 1.0m			
Refused on concrete obstruction at 1.0m			Refused on concrete obstruction at 1.0m		



National Grid Reference		TQ 069 044	
Job No	J9299	Date	20/07/2007
Logged by	SH	Engineer	GAD

Client : Chanders Garage Holdings Ltd

Excavation Method : Hand Auger & Dart Rig

*V: Perth Penetration Test, 'N' value; ** Standard Penetration Test, 'N' values; 1: Unconfined Compression Strength by hand penetrometer, kN/m²;
 V: Shear Vane test, kN/m²; X: CBR by Mexco cone penetrometer, %; D: Disturbed sample; U: Undisturbed sample; B: Bulk sample; W: Water sample

APPENDIX B

Field Sampling and in-situ Test Methods & Results

FIELD TESTING AND SAMPLING

1 Windowless Sampler (Dart Rig)

A windowless sampler is very similar in principle to a window sampler but in this case the sample tube lacks a window, and incorporates a plastic liner that retains the sample. The plastic liner greatly facilitates handling, presentation and preservation of the soil sample and enables a complete ground profile to be presented for subsequent analysis. Windowless samplers range in diameter from nominal 100mm down to nominal 85mm and are generally 1 metre in length. The area ratio of a windowless sampler is somewhat greater than a window sampler of the same diameter, due to the presence of the plastic liner and the thicker cutting shoe required to retain it. Soil samples are disturbed by the driving process and can be regarded as Class 3 samples. The major advantage of using windowless samplers is that the plastic liner greatly reduces the possibility of cross-contamination between successive samples. This is the preferred method of sampling in geo-environmental investigations.

Standard Penetration tests can also be carried out whilst using this rig.

2 Monitoring Well

A "landgas monitoring well" consists of a perforated pipe which is installed in the ground which may be provided with a cover. Readings of methane, carbon dioxide and oxygen concentrations may be taken using an Infra Red gas analyser.

3 Disturbed Samples

Disturbed samples were taken from the trial holes intervals and stored in sealed glass jars and polythene bags, as appropriate.

4 Groundwater Samples

Groundwater samples were taken from trial pits and/or boreholes as indicated, placed in glass or teflon bottles and transferred to the laboratory in cool boxes as appropriate to the proposed laboratory testing.

Monitoring wells were purged prior to sampling, removing 2-3× the volume of water in the well with a clean "Wattera style" pump.

5 Photoionization Detector

A MiniRAE 2000 photoionization detector (PID) has been used in this study.

The PID measures the concentration of photoionizable chemicals in a gas stream. A 10.6eV ultraviolet lamp generates photons which ionize molecules with an ionization potential of 10.6eV or less in the gas stream. Many of the chemicals considered pollutants, including most hydrocarbons are ionized. Substances with an ionization

potential greater than 10.6eV (eg methane) pass through the detector without ionization. The ionized molecules generate an electric current which is proportional to the concentration of ionized molecules in the detector cell.

The PID is calibrated to isobutylene. The detection method cannot distinguish between isobutylene and other ionizable compounds. The reading quoted is in ppm isobutylene equivalent unless otherwise stated. Where the composition of the pollutant gas is known and is a single compound then the instrument may be directly calibrated to provide quantitative results. Alternatively the instrument's own library of calibration values may be used to provide semi quantitative results.

In general where the composition is unknown or is a mixture of compounds then the readings are regarded as qualitative only but can be used effectively to provide a contoured plan highlighting hot spots or migration paths.

Each reading presented in this report represents the peak value recorded over a five minute period unless otherwise stated.

APPENDIX C

Contamination Laboratory Test Results

CONTAMINATION LABORATORY TESTS

1 Total Petroleum Hydrocarbons

This analysis is designed to assess the nature and extent of petroleum hydrocarbon contamination in soils and water, using gas chromatography with a flame ionisation detector (GC-FID).

The test will identify particular forms of hydrocarbon contamination like petrol, diesel, or lube oil, but cannot distinguish between different hydrocarbon compounds. A chromatogram can be supplied detailing the nature of the hydrocarbon compounds.

2 Volatile Organic Compound Test

A total of 39 volatile organic compounds (VOCs) including a variety of common industrial solvents, volatile aromatic compounds (BTEXs) and MTBE are identified by this test. Since the compounds break down in an oxidised environment, great care has to be taken during sampling, and the samples have to be kept cool for transit to the laboratory.

3 Semi-Volatile Organic Compound Test

A total of 69 semi volatile organic compounds (SVOCs) including the 16 priority polycyclic aromatic hydrocarbons (PAHs) and a number of phenols, are identified by this test. The priority PAHs are those identified by the United States' Environmental Protection Act as being the most common. They are as follows:

Napthalene; Acenaphthylene; Acenaphthene; Fluorene; Phenanthrene;
Anthracene; Fluoranthene; Pyrene; Benzo (a) anthracene; Chrysene;
Benzo (b) fluoranthene; Benzo (k) fluoranthene; Benzo (a) pyrene;
Dibenzo (a,h) anthracene; Benzo (g,h,i) perylene; Indeno (1,2,3-cd) pyrene

The SVOCs are first extracted from the sample by a solvent such as Dichloromethane, and then analyzed by Gas Chromatography using a Mass Spectrometer as the detector (GC-MS). The Mass Spectrometer can distinguish between several thousand different compounds, and as such, this method of detection is compound specific.



Steve Hui
Southern Testing
Keeble House
Stuart Way
East Grinstead
West Sussex
RH19 4QA

10 August 2007

TEST REPORT

Our Report Number: 07-35755

Your Order Reference: STL4247C

16 soil samples and 2 water samples submitted for analysis on 26/07/2007

Project Name: Angmering

Project Code: J9299

Laboratory analysis started on 26/07/2007

All laboratory analysis completed by 10 August 2007

[REDACTED]
Rhys Ashton

Project Co-Ordinator

ALCONTROL TECHNICHEM

[REDACTED]
Roxana Roman

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: 07-35755
Client: Southern Testing
Project Code: J9299

Matrix: Soil
Project Name: Angmering

Laboratory Reference No	Sample Reference	Sample Depth (m)	Date Sampled	Sample Description
247964	TH1	1.10	-	Light brown clay
247965	TH1	1.50	-	Brown clay with gravel
247966	TH1	3.00	-	Brown clay with gravel
247967	TH1	3.50	-	Brown sand with gravel
247968	TH1	4.00	-	Light brown clay
247969	TH2	1.00	-	Dark brown sandy clay with gravel
247970	TH2	2.00	-	Brown clay
247971	TH2	3.00	-	Brown clay with gravel
247972	TH2	4.00	-	Light grey clay with chalk
247973	TH3	1.00	-	*Brown gravel with sand
247974	TH4	1.00	-	Brown sandy clay with gravel
247975	TH6	1.00	-	Dark brown sandy clay with gravel and chalk
247976	TH6	1.50	-	Brown sandy clay with gravel
247977	TH6	2.00	-	*Brown gravel with clay
247978	TH6	3.00	-	Brown clay with gravel
247979	TH6	4.00	-	Light grey clay with chalk

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

ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Soil
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

[illegible]

¹ ISO 17025 accredited.

* MCERTS accredited for sand, loam and clay.

8.

ALcontrol Technichem Table Of Results

Matrix : Soil

Project Name: Angmering

Client : Southern Testing

[illegible]

¹ ISO 17025 accredited.

* MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Soil
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

[illegible]

ⁱ ISO 17025 accredited.

¹⁶ MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Soil
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

[illegible]

[†] ISO 17025 accredited.

^H MCERTS accredited for sand, loam and clay.

Q

ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Soil
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	TH1	TH1	TH1	TH1	TH1	Method No	Units	LOD
Sample Depth (m)	1.10	1.50	3.00	3.50	4.00			
Date Sampled	-	-	-	-	-			
Date Scheduled	26/07/07	26/07/07	26/07/07	26/07/07	26/07/07			
Laboratory Reference No	247964	247965	247966	247967	247968			
Analysis								
** CWG SUITE **								
Aliphatic C5-C6	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aliphatic >C6-C8	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aliphatic >C8-C10	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aliphatic >C10-C12	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aliphatic >C12-C16	< 5	< 5	< 5	< 5	< 5	CWGS ¹	mg/kg	5
Aliphatic >C16-C21	< 5	< 5	< 5	< 5	< 5	CWGS ¹	mg/kg	5
Aliphatic >C21-C35	11	< 5	< 5	20	< 5	CWGS ¹	mg/kg	5
Total Aliphatics (C5-C35)	11	< 5	< 5	20	< 5	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	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aromatic >C10-C12	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aromatic >C12-C16	< 5	< 5	< 5	< 5	< 5	CWGS ¹	mg/kg	5
Aromatic >C16-C21	< 5	< 5	< 5	< 5	< 5	CWGS ¹	mg/kg	5
Aromatic >C21-C35	< 5	< 5	< 5	< 5	< 5	CWGS ¹	mg/kg	5
Total Aromatics (C5-C35)	< 5	< 5	< 5	< 5	< 5	CWGS	mg/kg	5
Volatile Hydrocarbons (C5-C12)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Extractable Hydrocarbons (C12-C35)	11	< 5	< 5	20	< 5	CWGS	mg/kg	5
Total Hydrocarbons (C5-C35)	11	< 5	< 5	20	< 5	CWGS	mg/kg	5
MTBE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS TM	mg/kg	0.01
Benzene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS TM	mg/kg	0.01
Toluene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS TM	mg/kg	0.01
Ethylbenzene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS TM	mg/kg	0.01
m,p-Xylenes	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS TM	mg/kg	0.01
o-Xylene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS TM	mg/kg	0.01
1,3,5-Trimethylbenzene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS TM	mg/kg	0.01
1,2,4-Trimethylbenzene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS TM	mg/kg	0.01

¹ ISO 17025 accredited.

^{*} MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Soil
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	TH2	TH2	TH2	TH2	TH3	Method No	Units	LOD
Sample Depth (m)	1.00	2.00	3.00	4.00	1.00			
Date Sampled	-	-	-	-	-			
Date Scheduled	26/07/07	26/07/07	26/07/07	26/07/07	26/07/07			
Laboratory Reference No	247969	247970	247971	247972	247973			
Analysis								
** CWG SUITE **								
Aliphatic C5-C6	< 0.01	< 0.01	< 0.01	< 0.01	0.02	CWGS	mg/kg	0.01
Aliphatic >C6-C8	< 0.01	< 0.01	< 0.01	< 0.01	0.02	CWGS	mg/kg	0.01
Aliphatic >C8-C10	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aliphatic >C10-C12	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aliphatic >C12-C16	< 5	< 5	< 5	< 5	8.3	CWGS ¹	mg/kg	5
Aliphatic >C16-C21	< 5	< 5	< 5	< 5	9.4	CWGS ¹	mg/kg	5
Aliphatic >C21-C35	13	6.5	< 5	65	260	CWGS ¹	mg/kg	5
Total Aliphatics (C5-C35)	13	6.5	< 5	65	280	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	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aromatic >C10-C12	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aromatic >C12-C16	< 5	< 5	< 5	< 5	< 5	CWGS ¹	mg/kg	5
Aromatic >C16-C21	< 5	< 5	< 5	< 5	< 5	CWGS ¹	mg/kg	5
Aromatic >C21-C35	34	5.4	< 5	19	130	CWGS ¹	mg/kg	5
Total Aromatics (C5-C35)	34	5.4	< 5	19	130	CWGS	mg/kg	5
Volatile Hydrocarbons (C5-C12)	< 0.01	< 0.01	< 0.01	< 0.01	0.03	CWGS	mg/kg	0.01
Extractable Hydrocarbons (C12-C35)	47	12	< 5	84	410	CWGS	mg/kg	5
Total Hydrocarbons (C5-C35)	47	12	< 5	84	410	CWGS	mg/kg	5
MTBE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS ^{1H}	mg/kg	0.01
Benzene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS ^{1H}	mg/kg	0.01
Toluene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS ^{1H}	mg/kg	0.01
Ethylbenzene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS ^{1H}	mg/kg	0.01
m,p-Xylenes	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS ^{1H}	mg/kg	0.01
o-Xylene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS ^{1H}	mg/kg	0.01
1,3,5-Trimethylbenzene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS ^{1H}	mg/kg	0.01
1,2,4-Trimethylbenzene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS ^{1H}	mg/kg	0.01

¹ ISO 17025 accredited.

^H MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-36755
Matrix : Soil
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	TH4	TH6	TH6	TH6	TH6	Method No	Units	LOD
Sample Depth (m)	1.00	1.00	1.50	2.00	3.00			
Date Sampled	-	-	-	-	-			
Date Scheduled	26/07/07	26/07/07	26/07/07	26/07/07	26/07/07			
Laboratory Reference No	247974	247975	247976	247977	247978			
Analysis								
** CWG SUITE **								
Aliphatic C5-C6	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aliphatic >C6-C8	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aliphatic >C8-C10	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aliphatic >C10-C12	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aliphatic >C12-C16	< 5	< 5	< 5	< 5	< 5	CWGS ¹	mg/kg	5
Aliphatic >C16-C21	< 5	< 5	< 5	< 5	< 5	CWGS ¹	mg/kg	5
Aliphatic >C21-C35	26	15	< 5	8.5	10	CWGS ¹	mg/kg	5
Total Aliphatics (C5-C35)	26	15	< 5	8.5	10	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	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aromatic >C10-C12	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Aromatic >C12-C16	< 5	< 5	< 5	< 5	< 5	CWGS ¹	mg/kg	5
Aromatic >C16-C21	< 5	5.8	< 5	< 5	< 5	CWGS ¹	mg/kg	5
Aromatic >C21-C35	28	50	6.1	5.3	8.0	CWGS ¹	mg/kg	5
Total Aromatics (C5-C35)	28	56	6.1	5.3	8.0	CWGS	mg/kg	5
Volatile Hydrocarbons (C5-C12)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	CWGS	mg/kg	0.01
Extractable Hydrocarbons (C12-C35)	54	71	6.1	14	18	CWGS	mg/kg	5
Total Hydrocarbons (C5-C35)	54	71	6.1	14	18	CWGS	mg/kg	5
MTBE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS TM	mg/kg	0.01
Benzene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS TM	mg/kg	0.01
Toluene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS TM	mg/kg	0.01
Ethylbenzene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS TM	mg/kg	0.01
m,p-Xylenes	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS TM	mg/kg	0.01
o-Xylene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS TM	mg/kg	0.01
1,3,5-Trimethylbenzene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS TM	mg/kg	0.01
1,2,4-Trimethylbenzene	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	CWGS TM	mg/kg	0.01

¹ ISO 17025 accredited.

TM MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Soil
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	TH6					Method No	Units	LOD
Sample Depth (m)	4.00							
Date Sampled	-							
Date Scheduled	26/07/07							
Laboratory Reference No	247979							
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 ¹	mg/kg	5
Aliphatic >C16-C21	8.8					CWGS ¹	mg/kg	5
Aliphatic >C21-C35	300					CWGS ¹	mg/kg	5
Total Aliphatics (C5-C35)	310					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 ¹	mg/kg	5
Aromatic >C16-C21	5.2					CWGS ¹	mg/kg	5
Aromatic >C21-C35	55					CWGS ¹	mg/kg	5
Total Aromatics (C5-C35)	60					CWGS	mg/kg	5
Volatile Hydrocarbons (C5-C12)	0.03					CWGS	mg/kg	0.01
Extractable Hydrocarbons (C12-C35)	370					CWGS	mg/kg	5
Total Hydrocarbons (C5-C35)	370					CWGS	mg/kg	5
MTBE	< 0.010					CWGS ^{1H}	mg/kg	0.01
Benzene	< 0.010					CWGS ^{1H}	mg/kg	0.01
Toluene	< 0.010					CWGS ^{1H}	mg/kg	0.01
Ethylbenzene	< 0.010					CWGS ^{1H}	mg/kg	0.01
m,p-Xylenes	< 0.010					CWGS ^{1H}	mg/kg	0.01
o-Xylene	< 0.010					CWGS ^{1H}	mg/kg	0.01
1,3,5-Trimethylbenzene	< 0.010					CWGS ^{1H}	mg/kg	0.01
1,2,4-Trimethylbenzene	< 0.010					CWGS ^{1H}	mg/kg	0.01

¹ ISO 17025 accredited.

^H MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Soil
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	TH1	TH1	TH2	TH4	TH6	Method No	Units	LOD
Sample Depth (m)	1.10	4.00	4.00	1.00	1.50			
Date Sampled	-	-	-	-	-			
Date Scheduled	26/07/07	26/07/07	26/07/07	26/07/07	26/07/07			
Laboratory Reference No	247964	247968	247972	247974	247976			
Analysis								
** SVOC SUITE **								
Naphthalene	< 150	< 150	< 150	160	< 150	053S TM	ug/kg	150
2-Chloronaphthalene	< 150	< 150	< 150	< 150	< 150	053S ^I	ug/kg	150
Acenaphthylene	< 150	< 150	< 150	< 150	< 150	053S ^I	ug/kg	150
Acenaphthene	< 150	< 150	< 150	190	< 150	053S ^I	ug/kg	150
Fluorene	< 150	< 150	< 150	210	< 150	053S ^I	ug/kg	150
Phenanthrene	< 150	< 150	< 150	1000	< 150	053S ^I	ug/kg	150
Anthracene	< 150	< 150	< 150	270	< 150	053S ^I	ug/kg	150
Fluoranthene	< 150	< 150	< 150	1100	< 150	053S ^I	ug/kg	150
Pyrene	< 150	< 150	< 150	980	< 150	053S TM	ug/kg	150
Benz(a)anthracene	< 150	< 150	< 150	470	< 150	053S	ug/kg	150
Chrysene	< 150	< 150	< 150	440	< 150	053S ^I	ug/kg	150
Benzo(b)fluoranthene	< 150	< 150	< 150	470	< 150	053S ^I	ug/kg	150
Benzo(k)fluoranthene	< 150	< 150	< 150	460	< 150	053S ^I	ug/kg	150
Benzo(a)pyrene	< 150	< 150	< 150	570	< 150	053S	ug/kg	150
Dibenzo(a,h)anthracene	< 150	< 150	< 150	< 150	< 150	053S TM	ug/kg	150
Indeno(1,2,3-cd)pyrene	< 150	< 150	< 150	260	< 150	053S ^I	ug/kg	150
Benzo(g,h,i)perylene	< 150	< 150	< 150	290	< 150	053S ^I	ug/kg	150
Phenol	< 150	< 150	< 150	< 150	< 150	053S ^I	ug/kg	150
2-Chlorophenol	< 150	< 150	< 150	< 150	< 150	053S TM	ug/kg	150
2-Methylphenol	< 200	< 200	< 200	< 200	< 200	053S ^I	ug/kg	200
4-Methylphenol	< 200	< 200	< 200	< 200	< 200	053S TM	ug/kg	200
2-Nitrophenol	< 300	< 300	< 300	< 300	< 300	053S ^I	ug/kg	300
2,4-Dimethylphenol	< 250	< 250	< 250	< 250	< 250	053S TM	ug/kg	250
2,4-Dichlorophenol	< 200	< 200	< 200	< 200	< 200	053S TM	ug/kg	200
2,6-Dichlorophenol	< 200	< 200	< 200	< 200	< 200	053S TM	ug/kg	200
4-Chloro-3-methyl phenol	< 150	< 150	< 150	< 150	< 150	053S TM	ug/kg	150
2,4,6-Trichlorophenol	< 150	< 150	< 150	< 150	< 150	053S ^I	ug/kg	150
2,4,5-Trichlorophenol	< 200	< 200	< 200	< 200	< 200	053S TM	ug/kg	200
4-Nitrophenol	< 300	< 300	< 300	< 300	< 300	053S	ug/kg	300

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ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Soil
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	TH1	TH1	TH2	TH4	TH6	Method No	Units	LOD
Sample Depth (m)	1.10	4.00	4.00	1.00	1.50			
Date Sampled	-	-	-	-	-			
Date Scheduled	26/07/07	26/07/07	26/07/07	26/07/07	26/07/07			
Laboratory Reference No	247964	247968	247972	247974	247976			
Analysis								
** SVOC SUITE Cont.. **								
2,3,4,6-Tetrachlorophenol	< 250	< 250	< 250	< 250	< 250	053S	ug/kg	250
Pentachlorophenol	< 250	< 250	< 250	< 250	< 250	053S	ug/kg	250
Dimethyl Phthalate	< 200	< 200	< 200	< 200	< 200	053S TM	ug/kg	200
Diethyl Phthalate	< 200	< 200	< 200	< 200	< 200	053S ^I	ug/kg	200
Di-n-butyl phthalate	< 150	< 150	< 150	< 150	< 150	053S ^I	ug/kg	150
Butyl benzyl phthalate	< 150	< 150	< 150	< 150	< 150	053S TM	ug/kg	150
Bis(2-chloroethyl)ether	< 150	< 150	< 150	< 150	< 150	053S TM	ug/kg	150
Bis(2-chloroisopropyl)ether	< 200	< 200	< 200	< 200	< 200	053S ^I	ug/kg	200
4-Chlorophenyl phenyl ether	< 150	< 150	< 150	< 150	< 150	053S ^I	ug/kg	150
Bromo phenyl phenyl ether	< 200	< 200	< 200	< 200	< 200	053S TM	ug/kg	200
1,3-Dichlorobenzene	< 200	< 200	< 200	< 200	< 200	053S TM	ug/kg	200
1,2-Dichlorobenzene	< 150	< 150	< 150	< 150	< 150	053S TM	ug/kg	150
1,4-Dichlorobenzene	< 200	< 200	< 200	< 200	< 200	053S ^I	ug/kg	200
Nitrobenzene	< 150	< 150	< 150	< 150	< 150	053S TM	ug/kg	150
1,2,4-Trichlorobenzene	< 200	< 200	< 200	< 200	< 200	053S TM	ug/kg	200
2,6-Dinitrotoluene	< 200	< 200	< 200	< 200	< 200	053S	ug/kg	200
4-Dinitrotoluene	< 200	< 200	< 200	< 200	< 200	053S	ug/kg	200
Azobenzene	< 200	< 200	< 200	< 200	< 200	053S ^I	ug/kg	200
Hexachlorobenzene	< 200	< 200	< 200	< 200	< 200	053S TM	ug/kg	200
Hexachloroethane	< 150	< 150	< 150	< 150	< 150	053S ^I	ug/kg	150
n-Nitro-n-propyl-1-propanamine	< 200	< 200	< 200	< 200	< 200	053S ^I	ug/kg	200
Isophorone	< 200	< 200	< 200	< 200	< 200	053S TM	ug/kg	200
Bis(2-chloroethoxy)methane	< 150	< 150	< 150	< 150	< 150	053S ^I	ug/kg	150
Hexachlorobutadiene	< 150	< 150	< 150	< 150	< 150	053S TM	ug/kg	150
Anthraquinone	< 150	< 150	< 150	< 150	< 150	053S	ug/kg	150
Hexachlorocyclopentadiene	< 300	< 300	< 300	< 300	< 300	053S	ug/kg	300
Di-n-octyl phthalate	< 150	< 150	< 150	< 150	< 150	053S	ug/kg	150
Aniline	< 150	< 150	< 150	< 150	< 150	053S	ug/kg	150
2-Methylnaphthalene	< 150	< 150	< 150	< 150	< 150	053S ^I	ug/kg	150

¹ ISO 17025 accredited.

TM MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Soil
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

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¹ ISO 17025 accredited.

^N MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Soil
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	TH6					Method No	Units	LOD
Sample Depth (m)	4.00							
Date Sampled	-							
Date Scheduled	26/07/07							
Laboratory Reference No	247979							
Analysis								
** SVOC SUITE **								
Naphthalene	< 150					053S TM	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 TM	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 TM	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 TM	ug/kg	150
2-Methylphenol	< 200					053S ^I	ug/kg	200
4-Methylphenol	< 200					053S TM	ug/kg	200
2-Nitrophenol	< 300					053S ^I	ug/kg	300
2,4-Dimethylphenol	< 250					053S TM	ug/kg	250
2,4-Dichlorophenol	< 200					053S TM	ug/kg	200
2,6-Dichlorophenol	< 200					053S TM	ug/kg	200
4-Chloro-3-methyl phenol	< 150					053S TM	ug/kg	150
2,4,6-Trichlorophenol	< 150					053S ^I	ug/kg	150
2,4,5-Trichlorophenol	< 200					053S TM	ug/kg	200
4-Nitrophenol	< 300					053S	ug/kg	300

^I ISO 17025 accredited.

TM MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Soil
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	TH6					Method No	Units	LOD
Sample Depth (m)	4.00							
Date Sampled	-							
Date Scheduled	26/07/07							
Laboratory Reference No	247979							
Analysis								
** SVOC SUITE Cont.. **								
2,3,4,6-Tetrachlorophenol	< 250					053S	ug/kg	250
Pentachlorophenol	< 250					053S	ug/kg	250
Dimethyl Phthalate	< 200					053S TM	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 TM	ug/kg	150
Bis(2-chloroethyl)ether	< 150					053S TM	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 TM	ug/kg	200
1,3-Dichlorobenzene	< 200					053S TM	ug/kg	200
1,2-Dichlorobenzene	< 150					053S TM	ug/kg	150
1,4-Dichlorobenzene	< 200					053S ^I	ug/kg	200
Nitrobenzene	< 150					053S TM	ug/kg	150
1,2,4-Trichlorobenzene	< 200					053S TM	ug/kg	200
2,6-Dinitrotoluene	< 200					053S	ug/kg	200
4-Dinitrotoluene	< 200					053S	ug/kg	200
Azobenzene	< 200					053S ^I	ug/kg	200
Hexachlorobenzene	< 200					053S TM	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 TM	ug/kg	200
Bis(2-chloroethoxy)methane	< 150					053S ^I	ug/kg	150
Hexachlorobutadiene	< 150					053S TM	ug/kg	150
Anthraquinone	< 150					053S	ug/kg	150
Hexachlorocyclopentadiene	< 300					053S	ug/kg	300
Di-n-octyl phthalate	< 150					053S	ug/kg	150
Aniline	< 150					053S	ug/kg	150
2-Methylnapthalene	< 150					053S ^I	ug/kg	150

^I ISO 17025 accredited.

TM MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Soil
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

[illegible]

[†] ISO 17025 accredited.

¹⁴ MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Soil
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	TH1	TH1	TH2	TH6	TH6	Method No	Units	LOD
Sample Depth (m)	1.10	4.00	4.00	1.50	4.00			
Date Sampled	-	-	-	-	-			
Date Scheduled	26/07/07	26/07/07	26/07/07	26/07/07	26/07/07			
Laboratory Reference No	247964	247968	247972	247976	247979			
Analysis								
** VOC SUITE **								
Dichlorodifluoromethane	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Chloromethane	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Vinyl Chloride	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
Bromomethane	< 25	< 25	< 25	< 25	< 25	071S [†]	ug/kg	25
Chloroethane	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Trichlorofluoromethane	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
1,1-Dichloroethene	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
112-Trichloro-122-Trifluoroethane	< 25	< 25	< 25	< 25	< 25	071S [†]	ug/kg	25
Dichloromethane	< 50	< 50	< 50	< 50	< 50	071S	ug/kg	50
Carbon Disulfide	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Trans-1,2 Dichloroethene	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
MTBE	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
1,1 -Dichloroethane	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
Cis-1,2 Dichloroethene	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Bromochloromethane	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Chloroform	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
2,2-Dichloropropane	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
1,1,1-Trichloroethane	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
1,2-Dichloroethane	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
1,1-Dichloropropene	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Benzene	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
Carbon Tetrachloride	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Dibromomethane	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
1,2-Dichloropropane	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Trichloroethene	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Bromodichloromethane	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Cis-1,3 Dichloropropene	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Trans-1,3 Dichloropropene	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
1,1,2-Trichloroethane	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25

[†] ISO 17025 accredited.

* MCERTS accredited for sand, loam and clay.



ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Soil
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	TH1	TH1	TH2	TH6	TH6	Method No	Units	LOD
Sample Depth (m)	1.10	4.00	4.00	1.50	4.00			
Date Sampled	-	-	-	-	-			
Date Scheduled	26/07/07	26/07/07	26/07/07	26/07/07	26/07/07			
Laboratory Reference No	247964	247968	247972	247976	247979			
Analysis								
** VOC SUITE Cont.. **								
Toluene	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
1,3-Dichloropropane	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Dibromochloromethane	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
1,2-Dibromoethane	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Tetrachloroethene	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
1,1,1,2-Tetrachloroethane	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
Chlorobenzene	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Ethyl Benzene	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
m,p-Xylenes	< 50	< 50	< 50	< 50	< 50	071S	ug/kg	50
Bromoform	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Styrene	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
o-Xylene	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
1,1,2,2 Tetrachloroethane	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
1,2,3-Trichloropropane	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Isopropylbenzene	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
Bromobenzene	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
i-propylbenzene	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
2-Chlorotoluene	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
4-Chlorotoluene	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
1,3,5 Trimethylbenzene	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
tert-butylbenzene	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
1,2,4 Trimethylbenzene	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
sec-butylbenzene	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
1,3 Dichlorobenzene	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
1,4 Dichlorobenzene	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
4-Isopropyltoluene	< 25	< 25	< 25	< 25	< 25	071S TM	ug/kg	25
1,2 Dichlorobenzene	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
n-butylbenzene	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25
1,2,4-Trichlorobenzene	< 25	< 25	< 25	< 25	< 25	071S	ug/kg	25

¹ ISO 17025 accredited.

² MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Soil
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

[illegible]

¹ ISO 17025 accredited.

^k MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Water
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	Downstream	Upstream			Method No	Units	LOD
Sample Depth (m)	-	-					
Date Sampled	-	-					
Date Scheduled	26/07/07	26/07/07					
Laboratory Reference No	247962	247963					
Analysis							
** CWG SUITE **							
Aliphatic C5-C6	< 0.01	< 0.01			CWGW	mg/l	0.01
Aliphatic >C6-C8	< 0.01	< 0.01			CWGW	mg/l	0.01
Aliphatic >C8-C10	< 0.01	< 0.01			CWGW	mg/l	0.01
Aliphatic >C10-C12	< 0.01	< 0.01			CWGW	mg/l	0.01
Aliphatic >C12-C16	< 0.01	< 0.01			CWGW	mg/l	0.01
Aliphatic >C16-C21	< 0.01	< 0.01			CWGW	mg/l	0.01
Aliphatic >C21-C35	0.12	0.01			CWGW	mg/l	0.01
Total Aliphatics (C5-C35)	0.12	0.01			CWGW	mg/l	0.01
Aromatic C6-C7	< 0.01	< 0.01			CWGW	mg/l	0.01
Aromatic >C7-C8	< 0.01	< 0.01			CWGW	mg/l	0.01
Aromatic >C8-C10	< 0.01	< 0.01			CWGW	mg/l	0.01
Aromatic >C10-C12	< 0.01	< 0.01			CWGW	mg/l	0.01
Aromatic >C12-C16	< 0.01	< 0.01			CWGW	mg/l	0.01
Aromatic >C16-C21	< 0.01	< 0.01			CWGW	mg/l	0.01
Aromatic >C21-C35	< 0.01	< 0.01			CWGW	mg/l	0.01
Total Aromatics (C5-C35)	< 0.01	< 0.01			CWGW	mg/l	0.01
Volatile Hydrocarbons (C5-C12)	< 0.01	< 0.01			CWGW	mg/l	0.01
Extractable Hydrocarbons (C12-C35)	0.12	0.01			CWGW	mg/l	0.01
Total Hydrocarbons (C5-C35)	0.12	0.01			CWGW	mg/l	0.01
MTBE	< 0.005	< 0.005			CWGW [†]	mg/l	0.005
Benzene	< 0.005	< 0.005			CWGW [†]	mg/l	0.005
Toluene	< 0.005	< 0.005			CWGW [†]	mg/l	0.005
Ethylbenzene	< 0.005	< 0.005			CWGW [†]	mg/l	0.005
m,p-Xylenes	< 0.005	< 0.005			CWGW [†]	mg/l	0.005
o-Xylene	< 0.005	< 0.005			CWGW [†]	mg/l	0.005
1,3,5-Trimethylbenzene	< 0.005	< 0.005			CWGW [†]	mg/l	0.005
1,2,4-Trimethylbenzene	< 0.005	< 0.005			CWGW [†]	mg/l	0.005

[†] ISO 17025 accredited.

[‡] MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Water
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	Downstream				Method No	Units	LOD
Sample Depth (m)	-						
Date Sampled	-						
Date Scheduled	26/07/07						
Laboratory Reference No	247962						
Analysis							
** VOC SUITE **							
Vinyl Chloride	< 0.01				040W ¹	mg/l	0.01
Chloroethane	< 0.001				040W ¹	mg/l	0.001
Trichlorofluoromethane	< 0.001				040W ¹	mg/l	0.001
1,1-Dichloroethene	< 0.001				040W ¹	mg/l	0.001
112-Trichloro-122-Trifluoroethane	< 0.025				040W ¹	mg/l	0.025
Dichloromethane	< 0.050				040W ¹	mg/l	0.05
Trans-1,2 Dichloroethene	< 0.001				040W ¹	mg/l	0.001
MTBE	< 0.001				040W ¹	mg/l	0.001
1,1 -Dichloroethane	< 0.001				040W ¹	mg/l	0.001
Cis-1,2 Dichloroethene	< 0.001				040W ¹	mg/l	0.001
Chloroform	< 0.001				040W ¹	mg/l	0.001
1,1,1-Trichloroethane	< 0.001				040W ¹	mg/l	0.001
1,2-Dichloroethane	< 0.001				040W ¹	mg/l	0.001
Benzene	< 0.001				040W ¹	mg/l	0.001
Carbon Tetrachloride	< 0.001				040W ¹	mg/l	0.001
Trichloroethene	< 0.001				040W ¹	mg/l	0.001
Bromodichloromethane	< 0.001				040W ¹	mg/l	0.001
Cis-1,3 Dichloropropene	< 0.001				040W ¹	mg/l	0.001
Trans-1,3 Dichloropropene	< 0.001				040W ¹	mg/l	0.001
1,1,2-Trichloroethane	< 0.001				040W ¹	mg/l	0.001
Toluene	< 0.001				040W ¹	mg/l	0.001
Dibromochloromethane	< 0.001				040W ¹	mg/l	0.001
Tetrachloroethene	< 0.001				040W ¹	mg/l	0.001
Chlorobenzene	< 0.001				040W ¹	mg/l	0.001
Ethyl Benzene	< 0.001				040W ¹	mg/l	0.001
m,p-Xylenes	< 0.001				040W ¹	mg/l	0.001
Bromoform	< 0.001				040W ¹	mg/l	0.001
o-Xylene	< 0.001				040W ¹	mg/l	0.001
1,1,2,2 Tetrachloroethane	< 0.001				040W ¹	mg/l	0.001

¹ ISO 17025 accredited.

² MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-35755
Matrix : Water
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

[illegible]

¹ ISO 17025 accredited.

¹¹ MCERTS accredited for sand, loam and clay.

9

ALcontrol Technichem Table Of Results - Appendix

Project Name: Angmering
Client : Southern Testing

Job Number : 07-35755

Project Code: J9299

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
053S	In-house method	Determination of semi-volatile organic compounds in soil samples by dichloromethane extraction and GC-MS detection	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
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	
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	

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 30° (+/-5) C.



Steve Hui
Southern Testing
Keeble House
Stuart Way
East Grinstead
West Sussex
RH19 4QA

21 August 2007

TEST REPORT

Our Report Number: 07-36305

Your Order Reference: STL4289C

2 water samples submitted for analysis on 06/08/2007

Project Name: Angmering

Project Code: J9299

Laboratory analysis started on 06/08/2007

All laboratory analysis completed by 21 August 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 : 07-36305
Matrix : Water
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	TH1	TH2				Method No	Units	LOD
Sample Depth (m)	0.00	0.00						
Date Sampled	-	-						
Date Scheduled	06/08/07	06/08/07						
Laboratory Reference No	250679	250680						
Analysis								
** CWG SUITE **								
Aliphatic C5-C6	0.01	0.01				CWGW	mg/l	0.01
Aliphatic >C6-C8	0.01	< 0.01				CWGW	mg/l	0.01
Aliphatic >C8-C10	0.01	< 0.01				CWGW	mg/l	0.01
Aliphatic >C10-C12	0.01	< 0.01				CWGW	mg/l	0.01
Aliphatic >C12-C16	< 0.01	< 0.01				CWGW	mg/l	0.01
Aliphatic >C16-C21	< 0.01	0.10				CWGW	mg/l	0.01
Aliphatic >C21-C35	< 0.01	1.0				CWGW	mg/l	0.01
Total Aliphatics (C5-C35)	0.05	1.15				CWGW	mg/l	0.01
Aromatic C6-C7	< 0.01	< 0.01				CWGW	mg/l	0.01
Aromatic >C7-C8	< 0.01	< 0.01				CWGW	mg/l	0.01
Aromatic >C8-C10	0.02	< 0.01				CWGW	mg/l	0.01
Aromatic >C10-C12	0.02	< 0.01				CWGW	mg/l	0.01
Aromatic >C12-C16	< 0.01	< 0.01				CWGW	mg/l	0.01
Aromatic >C16-C21	< 0.01	0.01				CWGW	mg/l	0.01
Aromatic >C21-C35	< 0.01	0.26				CWGW	mg/l	0.01
Total Aromatics (C5-C35)	0.04	0.27				CWGW	mg/l	0.01
Volatile Hydrocarbons (C5-C12)	0.09	0.01				CWGW	mg/l	0.01
Extractable Hydrocarbons (C12-C35)	< 0.01	1.41				CWGW	mg/l	0.01
Total Hydrocarbons (C5-C35)	0.09	1.42				CWGW	mg/l	0.01
MTBE	< 0.005	< 0.005				CWGW ¹	mg/l	0.005
Benzene	< 0.005	< 0.005				CWGW ¹	mg/l	0.005
Toluene	< 0.005	< 0.005				CWGW ¹	mg/l	0.005
Ethylbenzene	< 0.005	< 0.005				CWGW ¹	mg/l	0.005
m,p-Xylenes	< 0.005	< 0.005				CWGW ¹	mg/l	0.005
o-Xylene	< 0.005	< 0.005				CWGW ¹	mg/l	0.005
1,3,5-Trimethylbenzene	< 0.005	< 0.005				CWGW ¹	mg/l	0.005
1,2,4-Trimethylbenzene	< 0.005	< 0.005				CWGW ¹	mg/l	0.005

¹ ISO 17025 accredited.

¹ MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-36305
Matrix : Water
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	TH1	TH2				Method No	Units	LOD
Sample Depth (m)	0.00	0.00						
Date Sampled	-	-						
Date Scheduled	06/08/07	06/08/07						
Laboratory Reference No	250679	250680						
Analysis								
** SVOC SUITE **								
Naphthalene	< 20	< 20				053W ¹	ug/l	20
2-Chloronaphthalene	< 20	< 20				053W ¹	ug/l	20
Acenaphthylene	< 20	< 20				053W ¹	ug/l	20
Acenaphthene	< 20	< 20				053W ¹	ug/l	20
Fluorene	< 20	< 20				053W ¹	ug/l	20
Phenanthrene	< 20	< 20				053W ¹	ug/l	20
Anthracene	< 20	< 20				053W ¹	ug/l	20
Fluoranthene	< 20	< 20				053W ¹	ug/l	20
Pyrene	< 20	< 20				053W ¹	ug/l	20
Benz(a)anthracene	< 20	< 20				053W ¹	ug/l	20
Chrysene	< 20	< 20				053W ¹	ug/l	20
Benzo(b)fluoranthene	< 25	< 25				053W	ug/l	25
Benzo(k)fluoranthene	< 20	< 20				053W ¹	ug/l	20
Benzo(a)pyrene	< 25	< 25				053W ¹	ug/l	25
Dibenzo(a,h)anthracene	< 40	< 40				053W ¹	ug/l	40
Indeno(1,2,3-cd)pyrene	< 40	< 40				053W ¹	ug/l	40
Benzo(g,h,i)perylene	< 40	< 40				053W ¹	ug/l	40
Phenol	< 20	< 20				053W ¹	ug/l	20
2-Chlorophenol	< 20	< 20				053W ¹	ug/l	20
2-Methylphenol	< 20	< 20				053W ¹	ug/l	20
4-Methylphenol	21	< 20				053W ¹	ug/l	20
2-Nitrophenol	< 20	< 20				053W	ug/l	20
2,4-Dimethylphenol	< 20	< 20				053W ¹	ug/l	20
2,4-Dichlorophenol	< 20	< 20				053W ¹	ug/l	20
2,6-Dichlorophenol	< 20	< 20				053W ¹	ug/l	20
4-Chloro-3-methyl phenol	< 20	< 20				053W ¹	ug/l	20
2,4,6-Trichlorophenol	< 20	< 20				053W ¹	ug/l	20
2,4,5-Trichlorophenol	< 20	< 20				053W ¹	ug/l	20
4-Nitrophenol	< 50	< 50				053W	ug/l	50

¹ ISO 17025 accredited.

² MCERTS accredited for sand, loam and clay.



ALcontrol Technichem Table Of Results

Job Number : 07-36305
Matrix : Water
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	TH1	TH2				Method No	Units	LOD
Sample Depth (m)	0.00	0.00						
Date Sampled	-	-						
Date Scheduled	06/08/07	06/08/07						
Laboratory Reference No	250679	250680						
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 ¹	ug/l	20
Diethyl Phthalate	190	< 30				053W ¹	ug/l	30
Di-n-butyl phthalate	37	< 30				053W ¹	ug/l	30
Butyl benzyl phthalate	< 60	< 60				053W ¹	ug/l	60
Bis(2-chloroethyl)ether	< 15	< 15				053W ¹	ug/l	15
Bis(2-chloroisopropyl)ether	< 10	< 10				053W ¹	ug/l	10
4-Chlorophenyl phenyl ether	< 15	< 15				053W ¹	ug/l	15
Bromo phenyl phenyl ether	< 30	< 30				053W ¹	ug/l	30
1,3-Dichlorobenzene	< 15	< 15				053W ¹	ug/l	15
1,2-Dichlorobenzene	< 10	< 10				053W ¹	ug/l	10
1,4-Dichlorobenzene	< 10	< 10				053W ¹	ug/l	10
Nitrobenzene	< 20	< 20				053W ¹	ug/l	20
1,2,4-Trichlorobenzene	< 10	< 10				053W ¹	ug/l	10
2,6-Dinitrotoluene	< 30	< 30				053W ¹	ug/l	30
2,4-Dinitrotoluene	< 20	< 20				053W ¹	ug/l	20
Azobenzene	< 30	< 30				053W ¹	ug/l	30
Hexachlorobenzene	< 20	< 20				053W ¹	ug/l	20
Hexachloroethane	< 40	< 40				053W ¹	ug/l	40
n-Nitro-n-propyl-1-propanamine	< 15	< 15				053W ¹	ug/l	15
Isophorone	< 20	< 20				053W ¹	ug/l	20
Bis(2-chloroethoxy)methane	< 15	< 15				053W ¹	ug/l	15
Hexachlorobutadiene	< 10	< 10				053W ¹	ug/l	10
Anthraquinone	< 30	< 30				053W	ug/l	30
3-nitroaniline	< 50	< 50				053W	ug/l	50
4-nitroaniline	< 50	< 50				053W	ug/l	50
4-Chloroaniline	< 50	< 50				053W	ug/l	50
Aniline	46	< 40				053W	ug/l	40

¹ ISO 17025 accredited.

² MCERTS accredited for sand, loam and clay.

ALcontrol Technichem Table Of Results

Job Number : 07-36305
Matrix : Water
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

[illegible]

[†] ISO 17025 accredited.

^N MCERTS accredited for sand, loam and clay.



ALcontrol Technichem Table Of Results

Job Number : 07-36305
Matrix : Water
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	TH1	TH2				Method No	Units	LOD
Sample Depth (m)	0.00	0.00						
Date Sampled	-	-						
Date Scheduled	06/08/07	06/08/07						
Laboratory Reference No	250679	250680						
Analysis								
** VOC SUITE **								
Vinyl Chloride	< 0.01	< 0.01				040W ¹	mg/l	0.01
Chloroethane	< 0.001	< 0.001				040W ¹	mg/l	0.001
Trichlorofluoromethane	< 0.001	< 0.001				040W ¹	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 ¹	mg/l	0.025
Dichloromethane	< 0.050	< 0.050				040W ¹	mg/l	0.05
Trans-1,2 Dichloroethene	< 0.001	< 0.001				040W ¹	mg/l	0.001
MTBE	< 0.001	< 0.001				040W ¹	mg/l	0.001
1,1 -Dichloroethane	< 0.001	< 0.001				040W ¹	mg/l	0.001
Cis-1,2 Dichloroethene	< 0.001	< 0.001				040W ¹	mg/l	0.001
Chloroform	< 0.001	< 0.001				040W ¹	mg/l	0.001
1,1,1-Trichloroethane	< 0.001	< 0.001				040W ¹	mg/l	0.001
1,2-Dichloroethane	< 0.001	< 0.001				040W ¹	mg/l	0.001
Benzene	< 0.001	< 0.001				040W ¹	mg/l	0.001
Carbon Tetrachloride	< 0.001	< 0.001				040W ¹	mg/l	0.001
Trichloroethene	< 0.001	< 0.001				040W ¹	mg/l	0.001
Bromodichloromethane	< 0.001	< 0.001				040W ¹	mg/l	0.001
Cis-1,3 Dichloropropene	< 0.001	< 0.001				040W ¹	mg/l	0.001
Trans-1,3 Dichloropropene	< 0.001	< 0.001				040W ¹	mg/l	0.001
1,1,2-Trichloroethane	< 0.001	< 0.001				040W ¹	mg/l	0.001
Toluene	< 0.001	< 0.001				040W ¹	mg/l	0.001
Dibromochloromethane	< 0.001	< 0.001				040W ¹	mg/l	0.001
Tetrachloroethene	< 0.001	< 0.001				040W ¹	mg/l	0.001
Chlorobenzene	< 0.001	< 0.001				040W ¹	mg/l	0.001
Ethyl Benzene	< 0.001	< 0.001				040W ¹	mg/l	0.001
m,p-Xylenes	< 0.001	< 0.001				040W ¹	mg/l	0.001
Bromoform	< 0.001	< 0.001				040W ¹	mg/l	0.001
o-Xylene	< 0.001	< 0.001				040W ¹	mg/l	0.001
1,1,2,2 Tetrachloroethane	< 0.001	< 0.001				040W	mg/l	0.001

¹ ISO 17025 accredited.

^{*} MCERTS accredited for sand, loam and clay.



ALcontrol Technichem Table Of Results

Job Number : 07-36305
Matrix : Water
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

[illegible]

¹ ISO 17025 accredited.

* MCERTS accredited for sand, loam and clay.



ALcontrol Technichem

Table Of Results - Appendix

Project Name: Angmering
Client : Southern Testing

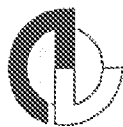
Job Number : 07-36305

Project Code: J9299

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	
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 EPA824 "Volatile Organic Compounds in Waste Waters"	Determination of volatile organic compounds in aqueous samples by headspace GC-MS	

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Steve Hui
Southern Testing
Keeble House
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West Sussex
RH19 4QA

03 September 2007

TEST REPORT

Our Report Number: 07-36919

Your Order Reference: STL4325C

2 water samples submitted for analysis on 16/08/2007

Project Name: Angmering

Project Code: J9299

Laboratory analysis started on 16/08/2007

All laboratory analysis completed by 03 September 2007

Project Co-Ordinator

ALCONTROL TECHNICHEM

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 : 07-36919
Matrix : Water
Project Code: J9299

Project Name: Angmering
Client : Southern Testing

Sample Reference	TP1	TP2				Method No	Units	LOD
Sample Depth (m)	0.00	0.00						
Date Sampled	-	-						
Date Scheduled	16/08/07	16/08/07						
Laboratory Reference No	253716	253717						
Analysis								
** CWG SUITE **								
Project Name: Angmering	< 0.01	< 0.01				CWGW	mg/l	0.01
Aliphatic >C6-C8	0.01	< 0.01				CWGW	mg/l	0.01
Aliphatic >C8-C10	< 0.01	< 0.01				CWGW	mg/l	0.01
Aliphatic >C10-C12	< 0.01	< 0.01				CWGW	mg/l	0.01
Aliphatic >C12-C16	< 0.01	< 0.01				CWGW	mg/l	0.01
Aliphatic >C16-C21	< 0.01	< 0.01				CWGW	mg/l	0.01
Aliphatic >C21-C35	< 0.01	0.54				CWGW	mg/l	0.01
Total Aliphatics (C5-C35)	0.01	0.54				CWGW	mg/l	0.01
Aromatic C6-C7	< 0.01	< 0.01				CWGW	mg/l	0.01
Aromatic >C7-C8	< 0.01	< 0.01				CWGW	mg/l	0.01
Aromatic >C8-C10	< 0.01	< 0.01				CWGW	mg/l	0.01
Aromatic >C10-C12	0.01	< 0.01				CWGW	mg/l	0.01
Aromatic >C12-C16	< 0.01	< 0.01				CWGW	mg/l	0.01
Aromatic >C16-C21	< 0.01	< 0.01				CWGW	mg/l	0.01
Aromatic >C21-C35	< 0.01	0.12				CWGW	mg/l	0.01
Total Aromatics (C5-C35)	0.01	0.12				CWGW	mg/l	0.01
Volatile Hydrocarbons (C5-C12)	0.02	< 0.01				CWGW	mg/l	0.01
Extractable Hydrocarbons (C12-C35)	< 0.01	0.66				CWGW	mg/l	0.01
Total Hydrocarbons (C5-C35)	0.02	0.66				CWGW	mg/l	0.01
MTBE	< 0.005	< 0.005				CWGW ¹	mg/l	0.005
Benzene	< 0.005	< 0.005				CWGW ¹	mg/l	0.005
Toluene	< 0.005	< 0.005				CWGW ¹	mg/l	0.005
Ethylbenzene	< 0.005	< 0.005				CWGW ¹	mg/l	0.005
m,p-Xylenes	< 0.005	< 0.005				CWGW ¹	mg/l	0.005
o-Xylene	< 0.005	< 0.005				CWGW ¹	mg/l	0.005
1,3,5-Trimethylbenzene	< 0.005	< 0.005				CWGW ¹	mg/l	0.005
1,2,4-Trimethylbenzene	< 0.005	< 0.005				CWGW ¹	mg/l	0.005

¹ ISO 17025 accredited.

² MCERTS accredited for sand, loam and clay.

ALcontrol Technichem

Table Of Results - Appendix

Job Number : 07-36919

Project Code: J9299

Project Name: Angmering
Client : Southern Testing

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-C36) techniques with banding by comparison to alkane standards	

APPENDIX D

Monitoring Data

Southern Testing & ST Consult

LANDFILL GAS/GROUNDWATER MONITORING- (Using Analox GA94A, PID Photovac2020, Dip Meter)													
Client		Chandlers Garage Holdings Ltd						ST Engineer		CAD		Job No: J9299	
Location		Angmering						Post Code				Date 3-Aug-07	
								NGR		TQ 069 044		Visit No 1	
Weather Conditions		Sunny.										Read by TC	
		Temperature in °C		20 (Approx)				1022		Falling. 1020		Checked by TC	
TH/BH No	CH ₄ %	CO ₂ %	O ₂ %	H ₂ S (ppm)	BH Pressure (mb)	Flow rate (l/hr)	PID (ppm)	Depth of hole m bgl	Water level m bgl	Water Samples details (if taken)		Notes	
TH1	0.0	0.0	20.7	-	-1	-0.2	0.0	3.80	0.81	1x1L 1xvial -		-	
TH2	0.0	5.0	10.4	-	0	-0.2	0.0	4.00	1.47	1x1L 1xvial -		-	

Note: mb refers to the pressure in millibars (mbar), which is equivalent to the SI unit hectopascal (hPa)

Southern Testing & ST Consult

LANDFILL GAS/GROUNDWATER MONITORING- (Using Analox GA94A, PID Photovac2020, Dip Meter)													
Client		Chandlers Garage Holdings Ltd						ST Engineer		CAD		Job No:	J9299
Location		Angmering						Post Code				Date	10-Aug-07
								NGR		TQ 069 044		Visit No	2
Weather Conditions		Sunny										Read by	TC
		Temperature in °C		22		Ambient Atmospheric pressure in mb		1018		STABLE		Checked by	TC
TH/BH No	CH ₄ %	CO ₂ %	O ₂ %	H ₂ S (ppm)	BH Pressure (mb)	Flow rate (l/hr)	PID (ppm)	Depth of hole m bgl	Water level m bgl	Water Samples details (if taken)		Notes	
TP1	0.0	0.0	20.9	-	0	0.0	0.0	3.80	0.82	1x1L	1xV	-	
TP2	0.0	5.6	8.1	-	0	0.0	0.0	4.00	1.77	1x1L	1xV	-	

Note: mb refers to the pressure in millibars (mbar), which is equivalent to the SI unit hectopascal (hPa)