



Appendix B Site investigation data



Amey

The Dove Way, Uttoxeter

Factual Ground Investigation Report

October 2015

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EXECUTIVE SUMMARY	
Scope	WYG Environment (WYG) were commissioned by Amey to conduct a ground investigation for the Household Waste Recycling Centre, The Dove Way, Uttoxeter.
Site Location	The Site is located approximately 1.5km north east of Uttoxeter Town Centre. To the south of the A50 and west of the River Dove.
Ground investigation	The investigation comprised 4No Cable Percussive boreholes to depths between 8.5m and 10m bgl and 11No window sample boreholes to depths between 2.0m and 5.0m bgl. In-situ SPT N testing and sampling was undertaken in all borehole locations. 22No hand dug trial pits were excavated across the site to 0.4m bgl to enable contamination sampling.
Ground Conditions	The site comprises vegetation cover which has been removed in the phase 1 and preliminary section of the works (phase 2 is still heavily vegetated and overgrown). The site is bounded by trees and hedgerows to all sides and there is a large sewage treatment works to the east. The ground level slopes gently down to the north away from The Dove Way.
Geotechnical Testing	<p>Following the completion of fieldwork, selected samples recovered during the investigation were submitted to a UKAS accredited geotechnical laboratory for testing. All testing was scheduled by Amey.</p> <p>The testing suite undertaken comprised:</p> <ul style="list-style-type: none"> • 5 No. Moisture content tests • 6 No. Atterberg Limits tests • 16 No. PSD tests • 7No. BRE SD1 Suite tests
Contamination Testing	<p>Selected samples from the ground investigations works were scheduled for contamination testing. All testing was scheduled by Amey.</p> <p>34No. Soil screening contamination suites were undertaken, comprising:</p> <ul style="list-style-type: none"> • Metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Se, Zn) • Boron (water soluble) • Chromium (hexavalent) • pH value • Cyanide (free) • Water Soluble Sulphate as SO₄ – 7 samples • Speciated PAHs (US EPA 16 priority pollutants) • Extractable petroleum hydrocarbons (EPH, C8-C40, with carbon banding) – 28 Samples • Extractable petroleum hydrocarbons (with Aliphatic Aromatic Spilt) – 6 Samples • BTEX – 33 Samples • Foc – 33 Samples • Asbestos



	<p>3No. Leachate screening contamination suites were undertaken, comprising:</p> <ul style="list-style-type: none">• Metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Se, Zn)• Boron (water soluble)• Chromium (hexavalent)• pH value• Cyanide (free)• Water Soluble Sulphate as SO₄• Speciated PAHs (US EPA 16 priority pollutants)• Extractable petroleum hydrocarbons (EPH, C8-C40, with carbon banding)• BTEX• Foc
<p><i>This sheet is intended as a summary of the assessment of the site in relation to geotechnical and contamination conditions. It does not provide a definitive engineering analysis.</i></p>	





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1.0 Introduction

1.1 Instruction

WYG Environment (WYG) were commissioned by Amey to conduct a ground investigation for the Household Waste Recycling Centre, The Dove Way, Uttoxeter.

1.2 Scope of Services

The investigation was undertaken to provide factual information on the subsurface geotechnical and chemical conditions at the site.

The site investigation works were completed between the 09th and 11th September 2015. The scope of the ground investigation included:

- Four cable percussive boreholes to a target depth of 10m bgl.
- Nine window sample boreholes to a target depth of 5m bgl.
- Twenty hand dug pits to a target depth of 0.4m bgl.
- Geotechnical testing of selected samples.
- Chemical testing of selected samples.

The site investigation was separated into two phases a preliminary phase incorporating the 22 hand dug trial pits and four of the window sample boreholes. Phase 1 consisted of the four cable percussive boreholes and five window sample boreholes. Phase 2 is to be completed at a later date and is to include four cable percussive boreholes to a target depth of 10m bgl.

All exploratory hole locations were logged in accordance with BS5930 incorporated amendment 2 (2010). The exploratory hole location plan is included as Figure 2.

1.3 Terms and Conditions

Attention is drawn to the report conditions, included in Appendix A, and to the Terms and Conditions of the engagement.



2.0 Site Details

2.1 General

Site location and exploratory hole location plans are included as Figures 1 and 2.

2.2 Site Location

The Site is located approximately 1.5km north east of Uttoxeter Town Centre. To the south of the A50 and west of the River Dove. A site location plan is included as Figure 1.

2.3 Site Description

The site comprises vegetation cover which has been removed in the phase 1 and preliminary section of the works (phase 2 is still heavily vegetated and overgrown). The site is bounded by trees and hedgerows to all sides and there is a large sewage treatment works to the east. The ground level slopes gently down to the north away from The Dove Way.

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3.0 Fieldwork

The ground investigation works were carried out between the 09th and 11th September 2015.

The locations of exploratory holes are shown on the Exploratory Hole Location Plan, included as Figure 2. The exploratory holes were supervised, logged and sampled by a WYG Engineer. Fieldworks were undertaken in accordance with BS5930 incorporating Amendment 2 (2010).

3.1 Cable Percussive Boreholes

Four cable percussive boreholes were advanced through the subsurface strata using cable percussive techniques. The cable percussive boreholes were completed at depths between 8.5m bgl and 10.5m bgl. The boreholes that terminated before the 10mbgl target depth were due to SPT N refusal in the Mercia Mudstone. The Mercia Mudstone was not encountered in BHA by 10.5m bgl and was terminated.

Sampling of the recovered materials was undertaken at discrete intervals and at changes in strata. Standard Penetration Tests (SPTs) were carried out at selected intervals throughout the cable percussive boreholes. Details of the in-situ testing and samples recovered are provided in the borehole logs (Appendix B).

3.2 Window Sample Boreholes

Eleven window sample boreholes were advanced through the subsurface strata using window sample techniques to depths of between 2.0m and the target depth of 5.0m bgl.

Four window sample boreholes P-WS-1 to P-WS-4 were carried out as part of the preliminary phase, and seven window sample boreholes were carried out as part of phase 1 (WS1-WS6)

The boreholes that terminated before the 5m bgl target depth were due to SPT N refusal.

Sampling of the recovered materials was undertaken at discrete intervals and at changes in strata. Standard Penetration Tests (SPTs) were carried out at selected intervals throughout the window sample boreholes. Details of the in-situ testing and samples recovered are provided in the window sample borehole logs (Appendix B).



3.3 Hand Dug Trial Pits

Twenty-two hand dug trial pits were excavated across the site as part of the preliminary phase of the works package to obtain samples for contamination testing. The pits all achieved the target depth of 0.4m bgl.

Details of the samples recovered are provided in the trial pit logs (Appendix B).

3.4 Geotechnical Laboratory testing

Following the completion of fieldwork, selected samples recovered during the investigation were submitted to a UKAS accredited geotechnical laboratory for testing. All testing was scheduled by Amey.

The testing suite undertaken comprised:

- 5 No. Moisture content tests
- 6 No. Atterberg Limits tests
- 16 No. Particle Sized Distribution tests
- 7 No. BRE SD1 Suite tests

The results of the geotechnical classification testing are attached in Appendix C.

3.5 Contamination Laboratory Testing

Selected samples from the ground investigations works were scheduled for contamination testing. All testing was scheduled by Amey.

34No. Soil screening contamination suites were undertaken, comprising:

- Metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Se, Zn)
- Boron (water soluble)
- Chromium (hexavalent)
- pH value
- Cyanide (free)
- Water Soluble Sulphate as SO₄ – 7 samples
- Speciated PAHs (US EPA 16 priority pollutants)
- Extractable petroleum hydrocarbons (EPH, C8-C40, with carbon banding) – 28 Samples
- Extractable petroleum hydrocarbons (with Aliphatic Aromatic Spilt) – 6 Samples
- BTEX – 33 Samples



- Foc – 33 Samples
- Asbestos

3No. Leachate screening contamination suites were undertaken, comprising:

- Metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Se, Zn)
- Boron (water soluble)
- Chromium (hexavalent)
- pH value
- Cyanide (free)
- Water Soluble Sulphate as SO₄
- Speciated PAHs (US EPA 16 priority pollutants)
- Extractable petroleum hydrocarbons (EPH, C8-C40, with carbon banding)
- BTEX
- Foc

The results of the chemical analytical testing are attached in Appendix D.

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4.0 References

1. BS5930 Code of practice for site investigations (Incorporating amendment 2)
2. BS EN 14688 Ground Investigation Eurocode.
3. BS EN ISO 22476-3 Geotechnical Investigation and testing Part 3 Standard Penetration test.

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Appendices

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Figure 1. Site Location Plan



Site location

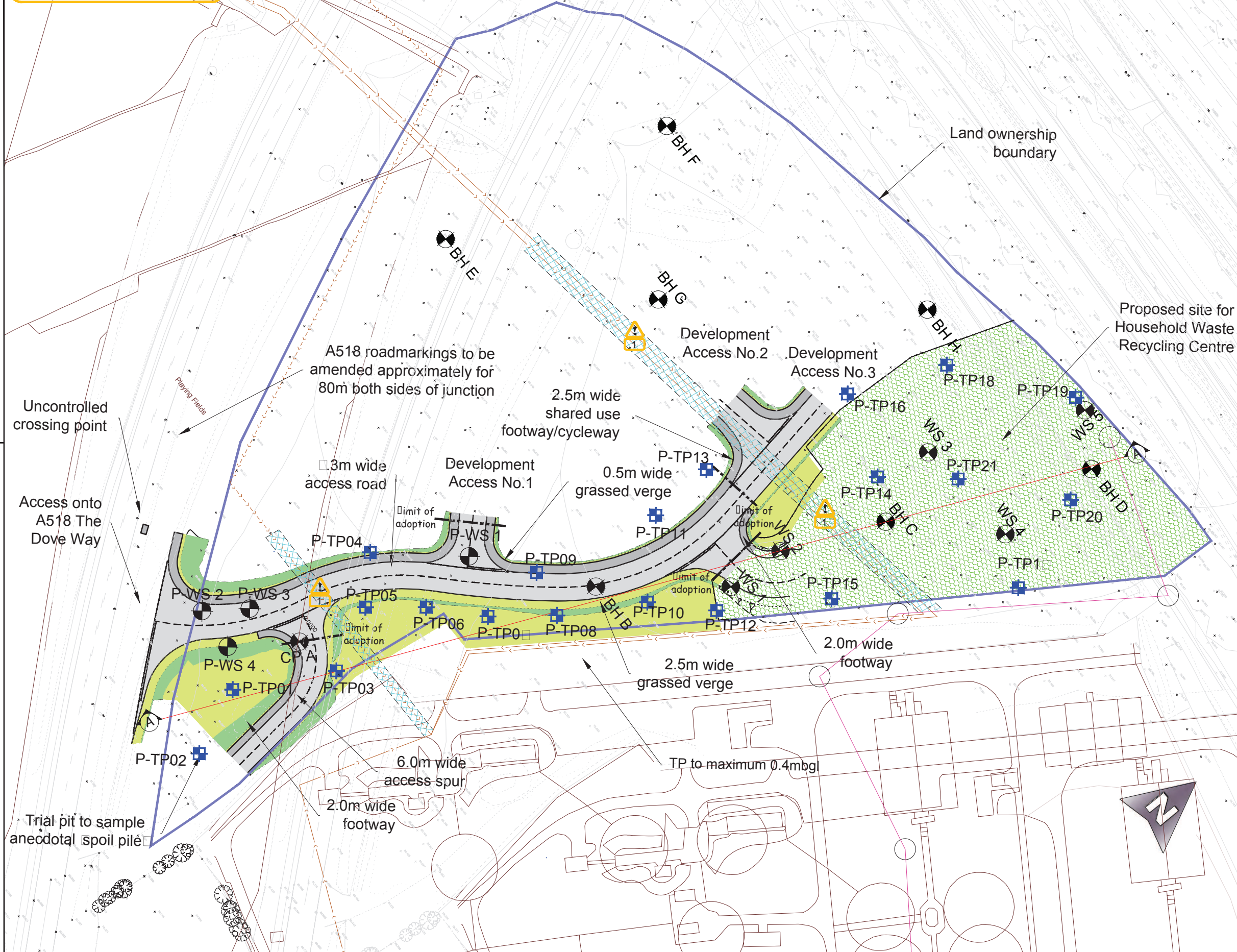


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Figure 2. Exploratory Hole Location Plan



RESIDUAL DESIGN HAZARDS
 (The following information has been collected from Preconstruction Information and the Amey CDM Hazard Management Process)
 1. Buried Services



AB: Exploratory hole location plan

ID	Type	Grid Reference	Grid Reference
TP01	Trial Pit	40921.2	33443.2
TP02	Trial Pit	409285.2	334419.1
TP03	Trial Pit	409291.1	334462.5
TP04	Trial Pit	40921.0	334490.1
TP05	Trial Pit	409282.6	33449.0
TP06	Trial Pit	409292.9	334492.6
TP07	Trial Pit	409305.6	334504.2
TP08	Trial Pit	409311.2	334519.1
TP09	Trial Pit	409304.6	334522.1
TP10	Trial Pit	409329.9	334540.6
TP11	Trial Pit	409312.9	33455.3
TP12	Trial Pit	409343.6	334553.9
TP13	Trial Pit	409311.9	33455.9
TP14	Trial Pit	409342.9	334611.1
TP15	Trial Pit	409360.9	334580.4
TP16	Trial Pit	409320.1	334619
TP17	Trial Pit	409390.0	334622
TP18	Trial Pit	409331	334645.1
TP19	Trial Pit	409360.1	33466
TP20	Trial Pit	409380.9	334648.2
TP21	Trial Pit	40935.2	33462.9
P-WS1	Window Sample	409289.5	334510.5
P-WS2	Window Sample	409255.3	334444.2
P-WS3	Window Sample	409262.9	334454.8
P-WS4	Window Sample	40926.3	334443.5
CPA	CP	40928.5	334459.6
BH B	CP	40931.0	334532.2
BH C	CP	409353.8	334605.1
BH D	CP	40931.8	334658
BH E	CP	409218	334560
BH F	CP	409231.9	334626.5
BH G	CP	409262.4	334594.9
BH H	CP	409315.9	334650.4
WS 1	Window Sample	409341	334561
WS 2	Window Sample	409341.9	33451.0
WS 3	Window Sample	409346	334626
WS 4	Window Sample	4093.0	334628
WS 5	Window Sample	409364	334666

REVISIONS

Rev	Revision details	Chkd	Appd	Date
Designed:	TL			Date: 30.0.2015
Drawn:	AB			Date: 30.0.2015
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Client

Project Name
A518 The Dove Way, Uttoxeter - HWRC

Drawing Title
Preliminary GI exploratory hole location plan

Original Drawing Size: A1 Scale: As Shown
 Dimensions: -

Drawing Status
WORK IN PROGRESS

Suitability
 S0

Drawing No
 0000000000000000

Rev
 P01.1



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Appendix A - Report Conditions





APPENDIX A - REPORT CONDITIONS

GROUND INVESTIGATION

This report is produced solely for the benefit of Amey and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

This report refers, within the limitations stated, to the condition of the site at the time of the inspections. No warranty is given as to the possibility of future changes in the condition of the site.

This report is based on a visual site inspection, reference to accessible referenced historical records, information supplied by those parties referenced in the text and preliminary discussions with local and Statutory Authorities. Some of the opinions are based on unconfirmed data and information and are presented as the best that can be obtained without further extensive research. Where ground contamination is suspected but no physical site test results are available to confirm this, the report must be regarded as initial advice only, and further assessment should be undertaken prior to activities related to the site. Where test results undertaken by others have been made available these can only be regarded as a limited sample. The possibility of the presence of contaminants, perhaps in higher concentrations, elsewhere on the site cannot be discounted.

Whilst confident in the findings detailed within this report because there are no exact UK definitions of these matters, being subject to risk analysis, we are unable to give categoric assurances that they will be accepted by Authorities or Funds etc. without question as such bodies often have unpublished, more stringent objectives. This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to WYGE. In time improved practices or amended legislation may necessitate a re-assessment.

The assessment of ground conditions within this report is based upon the findings of the study undertaken. We have interpreted the ground conditions in between locations on the assumption that conditions do not vary significantly. However, no investigation can inspect each and every part of the site and therefore changes or variances in the physical and chemical site conditions as described in this report cannot be discounted.

The report is limited to those aspects of land contamination specifically reported on and is necessarily restricted and no liability is accepted for any other aspect especially concerning gradual or sudden pollution incidents. The opinions expressed cannot be absolute due to the limitations of time and resources imposed by the agreed brief and the possibility of unrecorded previous use and abuse of the site and adjacent sites. The report concentrates on the site as defined in the report and provides an opinion on surrounding sites. If migrating pollution or contamination (past or present) exists further extensive research will be required before the effects can be better determined.



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Appendix B
Exploratory Hole Records



WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP01



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit.
Co-ordinates : 409227.19E - 334437.19N
Level : 80.326 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Grass over MADE GROUND comprising grey and dark brown very gravelly SAND. Gravel is fine to coarse with occasional cobbles, angular to rounded quartzite, concrete, brick and mortar, with some plastic and ceramic.						0.10-0.40	Ex2	
Geotextile encountered at 0.3m bgl.								
----- End of Trial Pit at 0.40 m		79.93	0.40					

Observations / Remarks

Groundwater not encountered

Hand dug pit to 0.4m bgl. Geotextile encountered at 0.3m bgl.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP02



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409285.19E - 334419.10N
Level : 80.355 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Grass over MADE GROUND comprising light brown sandy GRAVEL of fine to coarse angular to rounded quartzite, concrete, brick and mortar.						0.10-0.40	Ex2	
End of Trial Pit at 0.40 m		79.96	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug pit to 0.4m bgl

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP03.1



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409283.00E - 334465.00N
Level :

Scale 1:5 Sheet 1 of 1

Logged By : SK
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
MADE GROUND comprising grey and brown very gravelly SAND with some pockets of clay. Gravel is fine to coarse sub-angular to sub-rounded quartzite, plastic and brick.						0.10-0.40	Ex2	
End of Trial Pit at 0.40 m			0.40					

Observations / Remarks

Groundwater not encountered

Hand dug pit to 0.4m bgl on top of a spoil heap.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP03.2



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409283.00E - 334467.00N
Level :

Scale 1:5 Sheet 1 of 1

Logged By : SK
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
MADE GROUND comprising grey and light brown very gravelly SAND. Gravel is fine to coarse angular to sub-rounded quartzite, concrete, plastic, brick and clinker.						0.10-0.40	Ex2	
End of Trial Pit at 0.40 m			0.40					

Observations / Remarks Groundwater not encountered Hand dug pit to 0.4m bgl on a spoil heap.	Excavation Information		Groundwater			
	Length : 0.30m Width : 0.30m Orientation : - Stability : Shoring :	Struck	Rising to	Time	Remarks	

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP04



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409271.70E - 334490.10N
Level : 80.304 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Rough grass over TOPSOIL comprising brown slightly gravelly SAND. Gravel is fine to medium rounded quartzite.		80.25	0.05					
MADE GROUND comprising dark brown gravelly SAND. Gravel is fine to coarse rounded to angular quartzite, plastic, glass, ceramic, brick and some foil.						0.10-0.40	Ex2	
End of Trial Pit at 0.40 m		79.90	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug pit to 0.4m bgl.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP05



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409282.64E - 334480.98N
Level : 80.084 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Rough grass over MADE GROUND comprising brown gravelly SAND. Gravel is fine to coarse angular to rounded quartzite, brick, concrete and plastic.						0.10-0.40	Ex2	
End of Trial Pit at 0.40 m		79.68	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug pit to 0.4m bgl.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP06



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409289.05E - 334487.51N
Level : 79.662 mAOD

Scale 1:5 **Sheet** 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Rough grass over MADE GROUND comprising brown gravelly SAND. Gravel is fine to coarse with cobbles of rounded quartzite and fine to coarse angular to sub-rounded concrete, plastic, wire, metal and ceramic.						0.10-0.40	Ex2	
End of Trial Pit at 0.40 m		79.26	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug pit to 0.4m bgl. Geotextile encountered at 0.4m bgl.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP07



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409305.57E - 334504.49N
Level : 79.744 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Grass over TOPSOIL comprising brown gravelly SAND. Gravel is fine to coarse with cobbles, rounded quartzite. With rare plastic fragments.						0.10-0.40	Ex2	
End of Trial Pit at 0.40 m		79.34	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug pit to 0.4m bgl.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP08



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409315.62E - 334519.87N
Level : 79.618 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Grass over TOPSOIL (with many roots) comprising brown slightly gravelly SAND. Gravel is fine to medium rounded quartzite.								
MADE GROUND comprising brown very gravelly SAND. Gravel is fine to coarse rounded to angular quartzite, concrete, brick and mortar.		79.52	0.10			0.10-0.40	Ex2	
End of Trial Pit at 0.40 m		79.22	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug pit to 0.4m bgl

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP09



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409304.60E - 334522.10N
Level : 79.981 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Grass over TOPSOIL (with many roots) comprising brown slightly gravelly SAND. Gravel is fine to medium rounded quartzite.								
MADE GROUND comprising brown and grey gravelly SAND with occasional pockets of red-brown clay. Gravel is fine to coarse rounded to angular quartzite, glass, plastic, brick and ceramic.		79.88	0.10			0.10-0.40	Ex2	
End of Trial Pit at 0.40 m		79.58	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug pit to 0.4m bgl.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP10



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409329.89E - 334540.60N
Level : 79.683 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Grass over TOPSOIL (with many roots) comprising dark brown medium to coarse grained SAND.		79.63	0.05					
MADE GROUND comprising grey-brown gravelly SAND with some red-brown clay pockets. Gravel is fine to coarse angular to rounded quartzite, brick, glass and metal.						0.10-0.40	Ex2	
End of Trial Pit at 0.40 m		79.28	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug pit to 0.4m bgl

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP11



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409312.90E - 334557.30N
Level : 80.258 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Rough grass over TOPSOIL (with many roots) comprising brown gravelly SAND. Gravel is fine to coarse including one cobble rounded quartzite and rare fine sub-angular red-brown mudstone.						0.10-0.40	Ex2	
End of Trial Pit at 0.40 m		79.86	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug pit to 0.4m bgl.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP12



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409339.67E - 334556.26N
Level : 79.949 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Rough grass over TOPSOIL (with many roots) comprising brown gravelly SAND. Gravel is fine to medium rounded quartzite.						0.00-0.15	E1	
MADE GROUND comprising grey gravelly SAND. Gravel is fine to coarse rounded to angular quartzite, flint, plastic, ceramic and brick.		79.80	0.15			0.15-0.40	E2	
End of Trial Pit at 0.40 m		79.55	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug pit to 0.4m bgl.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP13



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409311.89E - 334575.90N
Level : 80.544 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Rough grass over TOPSOIL comprising brown gravelly SAND. Gravel is fine to medium rounded quartzite with occasional coarse rounded quartzite. Some rare brick fragments.						0.10-0.40	Ex2	
End of Trial Pit at 0.40 m		80.14	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug pit to 0.4m bgl.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP14



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand Dug Pit
Co-ordinates : 409342.89E - 334611.08N
Level : 80.416 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Grass over TOPSOIL comprising brown slightly gravelly SAND. Gravel is fine to medium rounded quartzite.						0.10-0.40	E1	
MADE GROUND comprising dark-brown and black gravelly SAND. Gravel is fine to coarse angular to rounded brick, quartzite, metal and glass.		80.27	0.15			0.20-0.40	E2	
End of Trial Pit at 0.40 m		80.02	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug trial pit to 0.4m bgl.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP15



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409385.19E - 334625.42N
Level : 80.094 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Grass over MADE GROUND (with many roots) comprising dark brown gravelly SAND. Gravel is fine to coarse rounded to angular quartzite and brick including a half brick.						0.00-0.20	E1	
MADE GROUND comprising brown mottled cream gravelly SAND. Gravel is fine to coarse rounded to angular quartzite, concrete, brick and mortar.		79.89	0.20				0.20-0.40	E2
End of Trial Pit at 0.40 m		79.69	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug pit to 0.4m bgl. Originally labelled TP17.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP16



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409320.10E - 334619.00N
Level : 80.495 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Grass over TOPSOIL comprising brown gravelly SAND. Gravel is fine to coarse rounded quartzite.						0.10-0.40	Ex2	
End of Trial Pit at 0.40 m		80.10	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug pit to 0.4m bgl.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP17



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand Dug Pit
Co-ordinates : 409357.28E - 334611.08N
Level : 80.416 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/Backfill	Sample Test		Notes / Remarks
						Depth	Type	
MADE GROUND comprising dark-brown and black gravelly SAND with occasional pockets of red-brown clay. Gravel is fine to coarse angular to sub-rounded brick, quartzite, plastic, glass, ceramic and clinker.						0.10-0.40	Ex2	
End of Trial Pit at 0.40 m		80.02	0.40					

Observations / Remarks

Groundwater not encountered

Hand dug pit to 0.4m bgl. Originally labelled TP15.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP18



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409331.11E - 334645.10N
Level : 80.305 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Grass over TOPSOIL comprising brown gravelly SAND. Gravel is fine to medium rounded to sub-rounded quartzite.						0.10-0.40	Ex2	
End of Trial Pit at 0.40 m		79.91	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug pit to 0.4m bgl.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP19



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409360.10E - 334667.00N
Level : 80.075 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Grass over TOPSOIL comprising brown slightly gravelly SAND. Gravel is fine to medium rounded quartzite.						0.10-0.25	E1	
MADE GROUND comprising grey-brown gravelly SAND. Gravel is fine to coarse angular to rounded quartzite, brick, glass and clinker.		79.83	0.25			0.25-0.40	E2	
End of Trial Pit at 0.40 m		79.68	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug pit to 0.4m bgl.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP20



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409380.90E - 334648.20N
Level : 80.181 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Grass over TOPSOIL (with many roots) comprising brown slightly gravelly SAND. Gravel is fine to medium rounded to subrounded quartzite.								
MADE GROUND comprising dark brown very gravelly SAND with some pockets of red-brown clay. Gravel is fine to medium (occasional coarse quartzite) rounded to angular quartzite, brick fragments, plastic, glass, metal and ceramic.		80.08	0.10			0.10-0.40	Ex2	
End of Trial Pit at 0.40 m		79.78	0.40					

Observations / Remarks

Groundwater not encountered.
Hand dug pit to 0.4m bgl.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

TP21



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Hand dug pit
Co-ordinates : 409357.20E - 334627.89N
Level : 80.272 mAOD

Scale 1:5 Sheet 1 of 1

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Water Strike (m)	Installation/ Backfill	Sample Test		Notes / Remarks
						Depth	Type	
Grass over MADE GROUND with many rootlets comprising brown gravelly SAND. Gravel is fine to coarse rounded to sub-angular quartzite, brick and a peice of metal.						0.10-0.40	Ex2	
End of Trial Pit at 0.40 m		79.87	0.40					

Observations / Remarks

Groundwater not encountered
Hand dug pit to 0.4m bgl.

Excavation Information

Length : 0.30m
Width : 0.30m
Orientation : -
Stability :
Shoring :

Groundwater

Struck	Rising to	Time	Remarks

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

P-WS-1



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Window sample rig.
Co-ordinates : 409289.50E - 334510.50N
Level : 80.219 mAOD

Scale 1:30 **Sheet** 1 of 1

Logged By : SK
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Casing (m)	Water Strike (m)	Installation Backfill	Sample Test		Notes / Remarks
							Depth	Type	
TOPSOIL comprising light brown gravelly SAND with pockets of clay. Gravel is fine to coarse sub-angular to sub-rounded quartzite, chert and limestone.									
MADE GROUND comprising dark brown gravelly SAND. Gravel is fine to coarse angular to sub-rounded quartzite, glass, brick and clinker.		79.82	0.40				0.50	E1 E2	
Becoming loose from 1.2mbgl.							1.00	D1	
Becoming very clayey from 1.6mbgl.							1.20	E3 E4	N=6 (1,2/1,2,1,2)
Firm brown mottled orange slightly sandy CLAY. (GLACIOFLUVIAL DEPOSITS)		78.02	2.20		2.40		2.00	E5 E6	N=4 (1,1/1,1,1,1)
Becoming stiff from 2.8mbgl.							2.50	D2	
End of Window Sample at 3.00 m		77.22	3.00				3.00	E7 E8	50 (3,3/8,12,14,16 for 65mm)

Observations / Remarks

Hand dug inspection pit to 1.2mbgl. Groundwater encountered at 2.4mbgl. Terminated due to refusal at 3.0mbgl.



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Window sample rig.
Co-ordinates : 409255.30E - 334444.20N
Level : 80.460 mAOD

Scale 1:30 **Sheet** 1 of 1

Logged By : SK
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Casing (m)	Water Strike (m)	Installation Backfill	Sample Test		Notes / Remarks
							Depth	Type	
<p>TOPSOIL comprising light brown slightly gravelly SAND with pockets of clay. Gravel is fine to coarse sub-angular to sub-rounded quartzite, chert and limestone.</p> <p>MADE GROUND comprising dark brown gravelly SAND with pockets of clay. Gravel is fine to coarse angular to sub-rounded brick, clinker, metal and quartzite with abundant plastic.</p> <p>Becoming very loose from 1.2mbgl. 1.2 - 2.0mbgl only 15% recovery.</p> <p>Becoming clayey from 2.0mbgl. 2.0 - 3.0mbgl only 10% recovery.</p>		80.16	0.30				0.50	E1 E2	
			1.00				D1		
			1.20				E3 E4	N=3 (1,0/1,0,1,1)	
			2.00				E5	N=1 (1,0/0,1,0)	
Stiff brown mottled black slightly sandy CLAY. (ALLUVIUM) 3.0 - 4.0mbgl only 20% recovery		77.46	3.00				3.00	E6	N=14 (1,1/3,3,4,4)
<p>Brown to black gravelly SAND. Gravel of fine to coarse sub-angular to rounded quartzite and chert with occasional cobbles of quartzite. (GLACIOFLUVIAL DEPOSITS)</p> <p>Becoming medium dense from 4.0mbgl. 4.0 - 5.0mbgl only 20% recovery.</p>		76.86	3.60		-4.00		3.70	E7	
			4.00				S	N=16 (3,4/4,4,4,4)	
End of Window Sample at 5.00 m		75.46	5.00				5.00	S	N=20 (2,4/5,5,5,5)

Observations / Remarks

Hand dug inspection pit to 1.2mbgl. Groundwater encountered at 4.0mbgl. Borehole collapsed back to 4.3mbgl.

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

P-WS-3



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Window sample rig.
Co-ordinates : 409262.90E - 334454.75N
Level : 80.461 mAOD

Scale 1:30 **Sheet** 1 of 1

Logged By : SK
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Casing (m)	Water Strike (m)	Installation Backfill	Sample Test		Notes / Remarks
							Depth	Type	
TOPSOIL comprising light brown slightly gravelly SAND with pockets of clay. Gravel is fine to coarse sub-angular to sub-rounded quartzite, chert and limestone.									
MADE GROUND comprising dark brown gravelly SAND. Gravel is fine to coarse angular to sub-rounded quartzite, brick, metal, rubber and plastic. Becoming very loose from 1.2mbgl.		80.06	0.40				0.50 1.00 1.20 2.00	E1 E2 D1 E3 E4 S	N=2 (1,0/1,0,1,0) N=2 (1,0/1,0,1,0)
Firm brown mottled orange slightly sandy CLAY. (GLACIOFLUVIAL DEPOSITS) Becoming slightly gravelly from 2.6mbgl. Gravel is fine to coarse sub-angular to sub-rounded quartzite, limestone and chert. Becoming gravelly from 3.0mbgl.		78.26	2.20				3.00	E5 E6 S	N=8 (2,2/3,3,1,1)
Firm grey sandy CLAY. (GLACIOFLUVIAL DEPOSITS)		77.06	3.40				3.60	E7	
Very dense grey very sandy GRAVEL of fine to coarse sub-angular to rounded quartzite and limestone. (GLACIOFLUVIAL DEPOSITS) End of Window Sample at 4.00 m		76.56 76.46	3.90 4.00				4.00	S	N=50 (3,7/10,13,13,14)

Observations / Remarks

Hand dug inspection pit to 1.2mbgl. Groundwater not encountered. Terminated due to refusal at 4.0mbgl.

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

P-WS-4



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Window sample rig.
Co-ordinates : 409267.29E - 334443.49N
Level : 80.423 mAOD

Scale 1:30 **Sheet** 1 of 1

Logged By : SK
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Casing (m)	Water Strike (m)	Installation Backfill	Sample Test		Notes / Remarks
							Depth	Type	
TOPSOIL comprising light brown slightly gravelly SAND with pockets of clay. Gravel is fine to coarse sub-angular to sub-rounded quartzite, chert and limestone.									
MADE GROUND comprising light grey to light brown gravelly SAND. Gravel is fine to coarse angular to sub-rounded quartzite, limestone, brick, metal and clinker.		80.02	0.40				0.50	E1 E2	
Becoming loose from 1.2mbgl.							1.20	E3 E4	S N=8 (1,1/1,2,1,4)
Becoming very loose from 2.0mbgl.							2.00	E5 E6	S N=3 (1,0/0,1,1,1)
Slight hydrocarbon odour at 2.3mbgl.									
3.0 - 4.0mbgl only 5% recovery. Becoming black and very clayey from 3.0mbgl.							3.00		S N=4 (1,1/1,1,1,1)
Very stiff brown mottled grey slightly sandy CLAY. (GLACIOFLUVIAL DEPOSITS)		76.42	4.00				4.00		S N=33 (4,4/6,8,8,11)
							4.20	E7	
Grey to light brown sandy GRAVEL of fine to coarse sub-angular to rounded quartzite, limestone and chert with occasional cobbles of quartzite. (GLACIOFLUVIAL DEPOSITS)		75.82	4.60						
Becoming dense from 5.0mbgl.							5.00		S N=33 (6,6/7,8,8,10)
End of Window Sample at 5.00 m		75.42	5.00						

Observations / Remarks

Hand dug inspection pit to 1.2mbgl. Groundwater not encountered.

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

WS-1



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Window sample rig.
Co-ordinates : 409341.00E - 334561.00N
Level : 80.210 mAOD

Scale 1:30 **Sheet** 1 of 1

Logged By : SK
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Casing (m)	Water Strike (m)	Installation Backfill	Sample Test		Notes / Remarks
							Depth	Type	
TOPSOIL comprising brown slightly gravelly SAND. Gravel is fine to coarse sub-angular to sub-rounded quartzite and chert with abundant rootlets.									
MADE GROUND comprising gravelly SAND. Gravel is fine to coarse angular to sub-rounded quartzite, limestone, glass, metal and rubber.		79.96	0.25				0.50	E1 E2	
Becoming very loose from 1.2mbgl.							1.20	E3 E4	N=2 (1,3/1,1,0,0)
Becoming clayey from 1.6mbgl.							2.00	E5	N=8 (1,1/2,1,2,3)
Firm brown slightly sandy CLAY. (ALLUVIUM)		78.01	2.20				2.50	E6	
Becoming gravelly from 2.6mbgl. Gravel is fine to coarse sub-angular to sub-rounded quartzite.							3.00	D1	N=27 (2,4/3,8,7,9)
Medium dense light brown slightly clayey very gravelly SAND. Gravel is fine to coarse sub-angular to rounded quartzite, limestone and chert with occasional cobbles of quartzite. (GLACIOFLUVIAL DEPOSITS)		77.41	2.80				4.00	E7	N=21 (7,6/6,5,5,5)
Becoming clayey from 3.6mbgl.							4.50	D2	
Becoming dense from 5.0mbgl.							5.00	C	N=38 (4,5/6,9,11,12)
End of Window Sample at 5.00 m		75.21	5.00						

Observations / Remarks

Hand dug inspection pit to 1.2mbgl. Groundwater not encountered.

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

WS-2



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Window sample rig.
Co-ordinates : 409341.90E - 334577.60N
Level : 80.410 mAOD

Scale 1:30 **Sheet** 1 of 1

Logged By : SK
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Casing (m)	Water Strike (m)	Installation Backfill	Sample Test		Notes / Remarks
							Depth	Type	
TOPSOIL comprising light brown slightly gravelly SAND. Gravel is fine to coarse sub-angular to sub-rounded quartzite and chert.									
MADE GROUND comprising black gravelly ashy SAND. Gravel is fine to coarse angular to sub-rounded quartzite, metal, rubber and brick. Becoming very loose from 1.2mbgl. Becoming clayey with abundant paper and glass from 1.8mbgl. Becoming loose from 2.0mbgl.		80.01	0.40				0.50 E1 E2 1.00 D1 1.20 E3 E4 1.50 D2 2.00 E5 E6	S S S	N=1 (1,1/0,0,0,1) N=7 (1,1/1,2,2,2)
Firm brown mottled black CLAY. (ALLUVIUM) Becoming sandy from 2.6mbgl.		78.21	2.20				2.50 E7 E8		
Dense light brown sandy GRAVEL of fine to coarse sub-angular to rounded quartzite, chert and limestone with occasional cobbles of quartzite. (GLACIOFLUVIAL DEPOSITS) 4.0 - 4.4mbgl no recovery.		77.61	2.80		3.20		3.00 3.50 E10 E9 4.00	S S	N=32 (3,4/7,9,8,8) N=38 (7,11/12,10,8,8)
End of Window Sample at 4.40 m		76.01	4.40						

Observations / Remarks

Hand dug inspection pit to 1.2mbgl. Groundwater encountered at 3.2mbgl. Refusal at 4.4mbgl. Borehole collapsed back to 3.3mbgl.

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

WS-3



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Window sample rig.
Co-ordinates : 409345.99E - 334625.99N
Level : 80.300 mAOD

Scale 1:30 **Sheet** 1 of 1

Logged By : SK
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Casing (m)	Water Strike (m)	Installation Backfill	Sample Test		Notes / Remarks
							Depth	Type	
TOPSOIL comprising brown slightly gravelly SAND. Gravel is fine to coarse sub-angular to sub-rounded quartzite and chert with abundant rootlets.									
MADE GROUND comprising dark brown gravelly SAND. Gravel is fine to coarse angular to sub-rounded brick, quartzite, metal and brick with rare cobbles of brick. Becoming very loose from 1.2mbgl. Becoming very gravelly from 1.4mbgl.		79.95	0.35				0.50	E1 E2	
							1.20	E3 E4	S N=0 (1,0/0,0,0,0)
Very stiff brown mottled black slightly sandy CLAY. (ALLUVIUM)		78.40	1.90				2.00	E5 E6	S N=22 (1,4/5,5,6,6)
Brown clayey sandy GRAVEL of fine to coarse sub-angular to rounded quartzite and chert with occasional cobbles of quartzite. (GLACIOFLUVIAL DEPOSITS) Becoming dense from 3.0mbgl.		77.90	2.40				3.00	E7	S N=45 (8,9/10,13,10,12)
End of Window Sample at 3.40 m		76.90	3.40						

Observations / Remarks

Hand dug inspection pit to 1.3mbgl. Groundwater not encountered. Terminated due to refusal at 3.4mbgl.

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

WS-4



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Window sample rig.
Co-ordinates : 409377.00E - 334628.00N
Level : 80.170 mAOD

Scale 1:30 **Sheet** 1 of 1

Logged By : SK
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Casing (m)	Water Strike (m)	Installation Backfill	Sample Test		Notes / Remarks
							Depth	Type	
TOPSOIL comprising dark brown slightly gravelly SAND with pockets of clay. Gravel is fine to coarse sub-angular to rounded quartzite, limestone and chert with abundant rootlets.									
MADE GROUND comprising loose dark grey to brown gravelly SAND. Gravel is fine to coarse angular to sub-rounded ceramic, brick, plastic, metal and rubber. Becoming very loose from 1.2mbgl. Becoming clayey from 1.7mbgl.		79.67	0.50				0.60 1.00 1.20 1.20-2.00	E1 E2 D1 E3 S E4 E5	N=1 (1,1/1,0,0,0)
Stiff brown mottled black slightly sandy slightly gravelly CLAY. Gravel is fine to medium sub-angular to rounded quartzite and chert. (ALLUVIUM) Becoming very gravelly from 2.3mbgl.		78.17	2.00				2.00 2.50	S E6 E7	N=19 (1,2/3,3,6,7)
Dense light brown mottled black slightly clayey very gravelly SAND. Gravel is fine to coarse sub-angular to rounded quartzite, chert and limestone. (GLACIOFLUVIAL DEPOSITS) Becoming dense from 3.0mbgl. No clay from 3.1mbgl. Occasional cobbles of quartzite from 3.4mbgl. Becoming medium dense from 4.0mbgl.		77.57	2.60				3.00 3.50 4.00 4.00-5.00	S E8 E9 D2 S	N=47 (10,12/12,11,12,12) N=26 (7,7/6,6,7,7)
End of Window Sample at 5.00 m		75.17	5.00				5.00	S	N=22 (4,5/6,6,5,5)



Observations / Remarks

Hand dug pit to 1.2mbgl. Groundwater encountered at 4.26mbgl.

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

WS-5



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Window sample rig.
Co-ordinates : 409363.00E - 334466.00N
Level : 80.080 mAOD

Scale 1:30 **Sheet** 1 of 1

Logged By : SK
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Casing (m)	Water Strike (m)	Installation Backfill	Sample Test		Notes / Remarks
							Depth	Type	
TOPSOIL comprising brown slightly clayey gravelly SAND. Gravel is fine to coarse sub-angular to sub-rounded quartzite, chert and glass.									
MADE GROUND comprising dark brown to black gravelly SAND. Gravel is fine to coarse sub-angular to sub-rounded glass, ceramic, metal. Becoming very loose from 1.2mbgl.		79.68	0.40				0.50 E1 E2 1.00 D1 1.20 E3 E4	C	N=2 (1,0/0,0,1,1)
Firm brown mottled orange slightly gravelly sandy CLAY. Gravel is fine to coarse sub-angular to sub-rounded limestone and coal fragments. (GLACIOFLUVIAL DEPOSITS) No gravel from 1.7mbgl.		78.68	1.40				1.50 E5 E6 2.00 S		N=37 (3,6/6,8,10,13)
Dense light brown sandy GRAVEL with pockets of clay. Gravel is fine to coarse sub-angular to rounded quartzite, chert and limestone with occasional cobbles of quartzite. (GLACIOFLUVIAL DEPOSITS) Becoming very dense from 3.0 mbgl.		77.98	2.10				2.50 D2 E7 E8 3.00 C		N=50 (8,9/10,11,15,14)
End of Window Sample at 3.00 m		77.08	3.00						

Observations / Remarks

Hand dug inspection pit to 1.2mbgl. Groundwater not encountered. Terminated due to refusal at 3.0mbgl. Borehole moved away from perimeter fencing to new co-ordinates.

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

WS-5.1



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Window sample rig.
Co-ordinates : 409363.00E - 334656.00N
Level : 80.080 mAOD

Scale 1:30 **Sheet** 1 of 1

Logged By : SK
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Casing (m)	Water Strike (m)	Installation Backfill	Sample Test		Notes / Remarks
							Depth	Type	
TOPSOIL comprising light brown gravelly SAND. Gravel is fine to coarse sub-angular to sub-rounded quartzite, chert and ceramic with rare cobbles of brick.									
MADE GROUND comprising grey to light brown gravelly SAND. Gravel is fine to coarse angular to sub-rounded brick, paper, ceramic and glass. Becoming very loose from 1.2mbgl.		79.68	0.40				0.50 1.00 1.20	E1 E2 D1 E3 E4	N=1 (1,0/0,0,0,1)
MADE GROUND comprising soft light grey mottled black slightly sandy CLAY with abundant coal fragments. Becoming stiff from 1.8mbgl. No coal fragments from 1.9mbgl.		78.68	1.40				1.50	E5 E6	
End of Window Sample at 2.00 m		78.08	2.00				2.00	S	N=52 (4,11/14,14,14,10)

Observations / Remarks

Hand dug inspection pit to 1.2mbgl. Groundwater not encountered. Terminated due to refusal at 2.0mbgl.

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: 01623 684550

Exploratory Hole Number

WS-6



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Window sample rig.
Co-ordinates : 409307.00E - 334609.00N
Level :

Scale 1:30 **Sheet** 1 of 1

Logged By : SK
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

Strata Description	Legend	Reduced Level (mOD)	Depth (m)	Casing (m)	Water Strike (m)	Installation Backfill	Sample Test		Notes / Remarks
							Depth	Type	
TOPSOIL comprising brown slightly gravelly SAND. Gravel is fine to coarse sub-angular to sub-rounded quartzite and chert with abundant rootlets.									
MADE GROUND comprising dark grey to black gravelly SAND. Gravel is fine to coarse angular to sub-rounded quartzite, brick, glass and metal. Becoming loose from 1.2mbgl.			0.40				0.50	E1 E2	
							1.20	E3 E4	N=4 (1,0/1,1,1,1)
Stiff brown slightly sandy CLAY with rare gravel of coarse sub-rounded quartzite. (ALLUVIUM)			1.80				2.00	E5	N=16 (2,2/3,4,4,5)
							2.20	E6	
Brown sandy GRAVEL of fine to coarse sub-angular to rounded quartzite, limestone and chert. (GLACIOFLUVIAL DEPOSITS) Becoming medium dense from 3.0mbgl. 3.0 - 4.0mbgl only 10% recovery.			2.40				3.00	S	N=14 (2,3/3,3,4,4)
Becoming dense from 4.0mbgl. End of Window Sample at 4.00 m			4.00				4.00	S	N=39 (8,10/10,12,10,7)

3.50

Observations / Remarks

hand dug inspection pit to 1.2mbgl. Groundwater encountered at 3.5mbgl. No level due to added location.



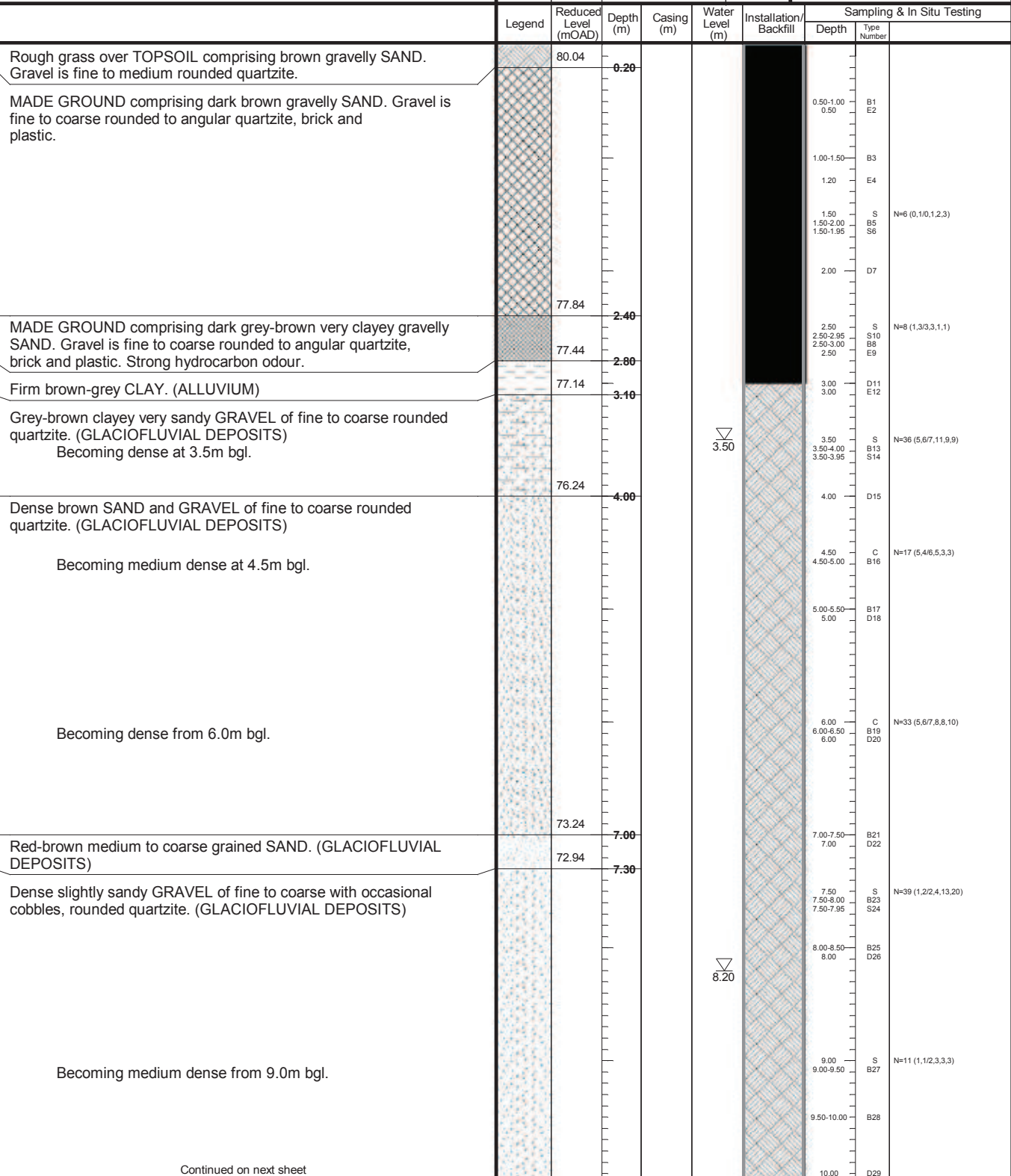
Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Cable Percussive Rig
Co-ordinates : 409274.90E - 334459.90N **Level** : 80.243m AOD

Hole Information

From	To	Method	Diameter
0.00m	10.50m	Cable Percussive Rig	150mm

Scale 1:50 **Sheet** 1 of 2

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15



Continued on next sheet

Observations / Remarks.

Hand Dug pit to 1.2m bgl borehole terminated at 10.5m bgl.

Chiselling

From	To	Time

Groundwater

Struck	Rising to	Time	Remarks
3.50m	-	5mins	
8.20m	-	10mins	

WYG ENVIRONMENT

Ground Engineering Services

Geneva Building, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel 01623 684550

Borehole Number
BHA



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Cable Percussive Rig
Co-ordinates : 409274.90E - 334459.90N **Level** : 80.243mAOD

Hole Information

From	To	Method	Diameter
0.00m	10.50m	Cable Percussive Rig	150mm

Scale 1:50 **Sheet** 2 of 2

Logged By : SM
Checked By : ET
Start Date : 11/09/15
Finish Date : 11/09/15

	Legend	Reduced Level (mOAD)	Depth (m)	Casing (m)	Water Level (m)	Installation/ Backfill	Sampling & In Situ Testing	
							Depth	Type Number
Dense slightly sandy GRAVEL of fine to coarse with occasional cobbles, rounded quartzite. (GLACIOFLUVIAL DEPOSITS)		69.74	10.50	10.50m 150mm			10.50	C N=40 (12,11/15,8,8,9)
Borehole complete at 11.00 m								

Observations / Remarks.

Hand Dug pit to 1.2m bgl borehole terminated at 10.5m bgl.

Chiselling

From	To	Time

Groundwater

Struck	Rising to	Time	Remarks
3.50m	-	5mins	
8.20m	-	10mins	



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Cable Percussive Rig
Co-ordinates : 409317.69E - 334532.20N **Level** : 80.000m AOD

Hole Information

From	To	Method	Diameter
0.00m	8.50m	Cable Percussive Rig	150mm

Scale 1:50 **Sheet** 1 of 1

Logged By : SM
Checked By : ET
Start Date : 10/09/15
Finish Date : 11/09/15

	Legend	Reduced Level (mOAD)	Depth (m)	Casing (m)	Water Level (m)	Installation/ Backfill	Sampling & In Situ Testing	
							Depth	Type Number
Rough Grass over TOPSOIL comprising brown gravelly SAND. Gravel is fine to coarse rounded quartzite and rare mudstone fragments.		79.40	0.60				0.50-1.00 0.50	B1 E2
MADE GROUND comprising black-grey gravelly SAND. Gravel is fine to coarse angular to rounded quartzite, brick, plastic and ceramic.		78.40	1.60				1.00-1.50 1.20	B3 E4
Firm grey-brown CLAY. (ALLUVIUM)		78.10	1.90				1.50-2.00 1.50-1.95 1.60-1.90	S B5 S6 D7
Medium dense brown to red-brown slightly clayey SAND and GRAVEL of fine to coarse rounded quartzite. (GLACIOFLUVIAL DEPOSITS)			1.90				2.00-2.00	D8 E9
From 3.0m bgl no longer clayey.						2.70 3.00	2.50 2.50-3.00 2.50-2.95	S B10 S11
							3.00	D12
							3.50-4.00	C B13
							4.00	D14
							4.50-5.00	B15
							5.00-5.50 5.00	B16 D17
							6.00-6.50 6.00	C B18 D19
		73.00	7.00				7.00-7.50 7.00	B20 D21
Brown to red-brown medium to coarse grained SAND. (GLACIOFLUVIAL DEPOSITS)		72.50	7.50				7.50-8.00 7.50-7.95	S B22 S23
Stiff red-brown (with grey-green reduction spots) slightly silty slightly gravelly CLAY. Gravel IS fine tabular subangular friable mudstone (MERCIA MUDSTONE IVa).							8.00	D24
Borehole complete at 8.50 m		71.50	8.50	8.50m 150mm			8.50-8.95	S S25

Observations / Remarks.

Hand dug pit to 1.2m bgl. Borehole refused at 8.0m bgl.

Chiselling

From	To	Time

Groundwater

Struck	Rising to	Time	Remarks
3.00m	2.70m	5mins	



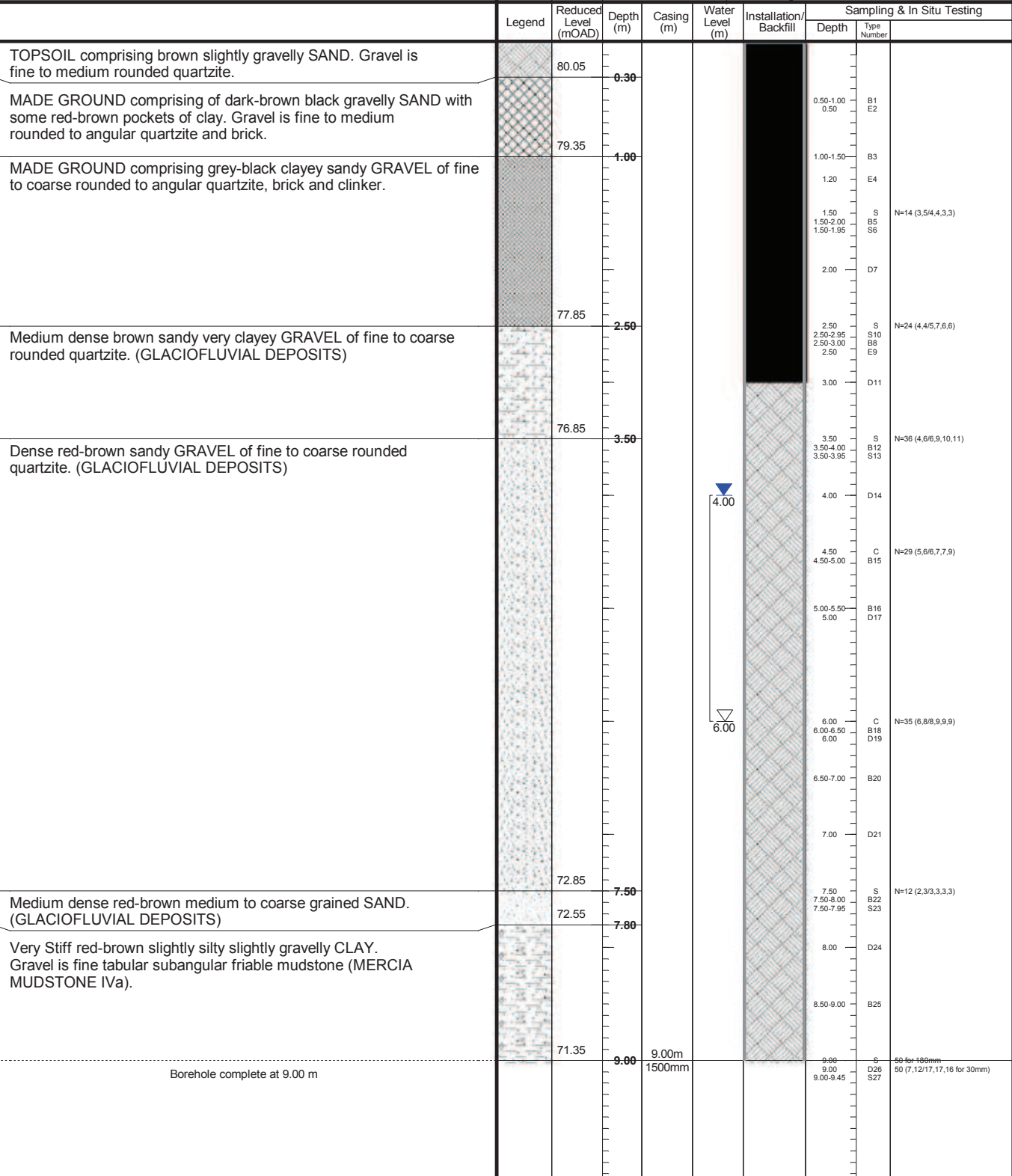
Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Cable Percussive Rig
Co-ordinates : 409353.80E - 334605.09N **Level** : 80.351m AOD

Hole Information

From	To	Method	Diameter
0.00m	9.00m	Cable Percussive Rig	1500mm

Scale 1:50 **Sheet** 1 of 1

Logged By : SM
Checked By : ET
Start Date : 10/09/15
Finish Date : 10/09/15



Observations / Remarks.

Hand dug pit to 1.2m bgl. Borehole refused at 9m bgl.

Chiselling

From	To	Time

Groundwater

Struck	Rising to	Time	Remarks
6.00m	4.00m	20mins	



Project : The Dove Way, Uttoxeter
Project Number : A093275
Client : Amey
Method : Cable percussive Rig
Co-ordinates : 409378.00E - 334658.00N **Level** : 80.132mAOD

Hole Information

From	To	Method	Diameter
0.00m	9.00m	Cable Percussive Rig	1500mm

Scale 1:50 **Sheet** 1 of 1

Logged By : SM
Checked By : ET
Start Date : 09/09/15
Finish Date : 09/09/15

Legend	Reduced Level (mOAD)	Depth (m)	Casing (m)	Water Level (m)	Installation/ Backfill	Sampling & In Situ Testing	
						Depth	Type Number
TOPSOIL comprising brown slightly gravelly SAND. Gravel is fine to medium rounded quartzite.	79.83	0.30				0.50-1.00 0.50	B1 E2
MADE GROUND comprising dark-brown black gravelly SAND with pockets of red-brown clay. Gravel is fine to coarse angular to rounded clinker, glass, quartzite and landfill material.						1.00-1.50 1.20	B3 E4
						1.50 1.50-2.00 1.50-1.95	S B5 S6
						2.00	D7
	77.53	2.60				2.50 2.50-2.95 2.50-3.00	S S10 B8
Firm dark grey-brown CLAY. (ALLUVIUM)	77.33	2.80				2.50 2.80	E9 E11
Dense brown clayey very gravelly SAND. Gravel is fine to coarse rounded quartzite. (GLACIOFLUVIAL DEPOSITS)						3.00	D12
						3.50 3.50-4.00	C B13
Becoming red-brown in colour from 4.0m bgl.						4.00	D14
	75.63	4.50				4.50 4.50-5.00	C B15
Dense red-brown medium to coarse grained SAND and GRAVEL of fine to coarse rounded quartzite. (GLACIOFLUVIAL DEPOSITS)				4.60		5.00-5.50 5.00	B16 D17
				5.50		6.00 6.00-6.50 6.00	C B18 D19
						7.00-7.50 7.00	B20 D21
	72.83	7.30				7.50 7.50-8.00 7.50-7.95	S B22 S23
Red-brown medium to coarse grained SAND (GLACIOFLUVIAL DEPOSITS)	72.53	7.60				8.00	D24
Dense red-brown slightly sandy GRAVEL of fine to coarse rounded quartzite. (GLACIOFLUVIAL DEPOSITS)	72.13	8.00				8.50-9.00	B25
Stiff red-brown slightly silty slightly gravelly CLAY. Gravel is fine tabular subangular friable mudstone (MERCIA MUDSTONE IVa).							
	71.13	9.00	9.00m			9.00	S
Borehole complete at 9.00 m			1500mm			9.00-9.45	S26

Observations / Remarks.

Hand dug pit to 1.2m bgl. Borehole refused at 9.0m bgl.

Chiselling

From	To	Time

Groundwater

Struck	Rising to	Time	Remarks
5.50m	4.60m	20mins	



Appendix C
Geotechnical Laboratory Report

DRAFT



**LABORATORY TEST CERTIFICATE
SOIL AND ROCK TESTING LABORATORY**

Certificate No. **A093275 – PC156146**

To : WYG Ltd
Geneva Building
Lake View Drive
Sherwood Business Park
Annesley
Nottingham
NG15 0ED

LABORATORY TESTING OF SOIL

Introduction

We refer to soil samples taken from The Dove Way and delivered to Geotechnics Limited's UKAS accredited Laboratory (Testing No. 1365). Any descriptions, opinions and interpretations are outside the scope of UKAS accreditation.

Material & Source

Sample References : See Laboratory Results Sheets
Date Sampled : Unknown
Source / Project Name : PC156146 THE DOVE WAY

Test Results : See table below.

Specification	Test No.	Test Description	Number of Tests
BS EN ISO 17892:2014	Part 1 clause 3.0	Water Content.	5
BS1377:1990	Part 2 clause 4.0 and 5.0	Liquid and Plastic Limit.	6
BS1377:1990	Part 2 clause 9.0	Particle Size Distribution.	16
*DETS	N/A	Chemical.	7

* Tests have been sub-contracted out.

Tests are not UKAS accredited.

Test Results Checked and Approved for Issue

Signed for and on behalf of Geotechnics Limited:

Date: 08/10/15


Stephan Schiano (Assistant Supervisor)

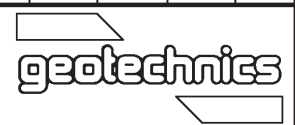
LABORATORY RESULTS - Classification and Strength

Project THE DOVE WAY

Project No: PC156146

Sample					Classification				Strength						
Hole	Depth (Specimen Depth) m	Type	Sample Ref	Description	Symbol	I_p (>425) %	w_L %	w_p %	w (p_d) %	Test	γ_b (γ_d) Mg/m ³	σ_3 kN/m ²	$\sigma_1 - \sigma_3$ kN/m ²	C_u kN/m ²	C_{Avg} kN/m ²
BHB	1.60- 1.90 (1.60)	D	C28649	Brown slightly gravelly sandy CLAY.	CL	14 (7%)	31	17							
BHB	7.50- 8.00 (7.50)	B	C27968	Red brown silty sandy GRAVEL.	CI	16 (52%)	35	19	17.0						
BHC	8.50- 9.00 (8.50)	B	C27984	Red brown and grey gravelly very sandy SILT with siltstones.	CL	9 (21%)	26	17	22.3						
BHD	2.50- 3.00 (2.50)	B	C27986	Brown slightly clayey sandy GRAVEL with many cobbles. Sample mass not to BS1377.	CL	12 (67%)	29	17	11.3						
BHD	8.50- 9.00 (8.50)	B	C27994	Red brown slightly gravelly very sandy SILT with occasional siltstones.	CL	17 (27%)	34	17	21.6						
P-WS-1	2.50 (2.50)	D	C28683	Brown and grey slightly gravelly very sandy CLAY.	CL	8 (7%)	27	19	22.4						

Remarks  NST - Not suitable for Test
 Water Content Test performed in accordance with BS EN ISO 17892 - 1: 2014
 All other Tests performed in accordance with BS1377: 1990

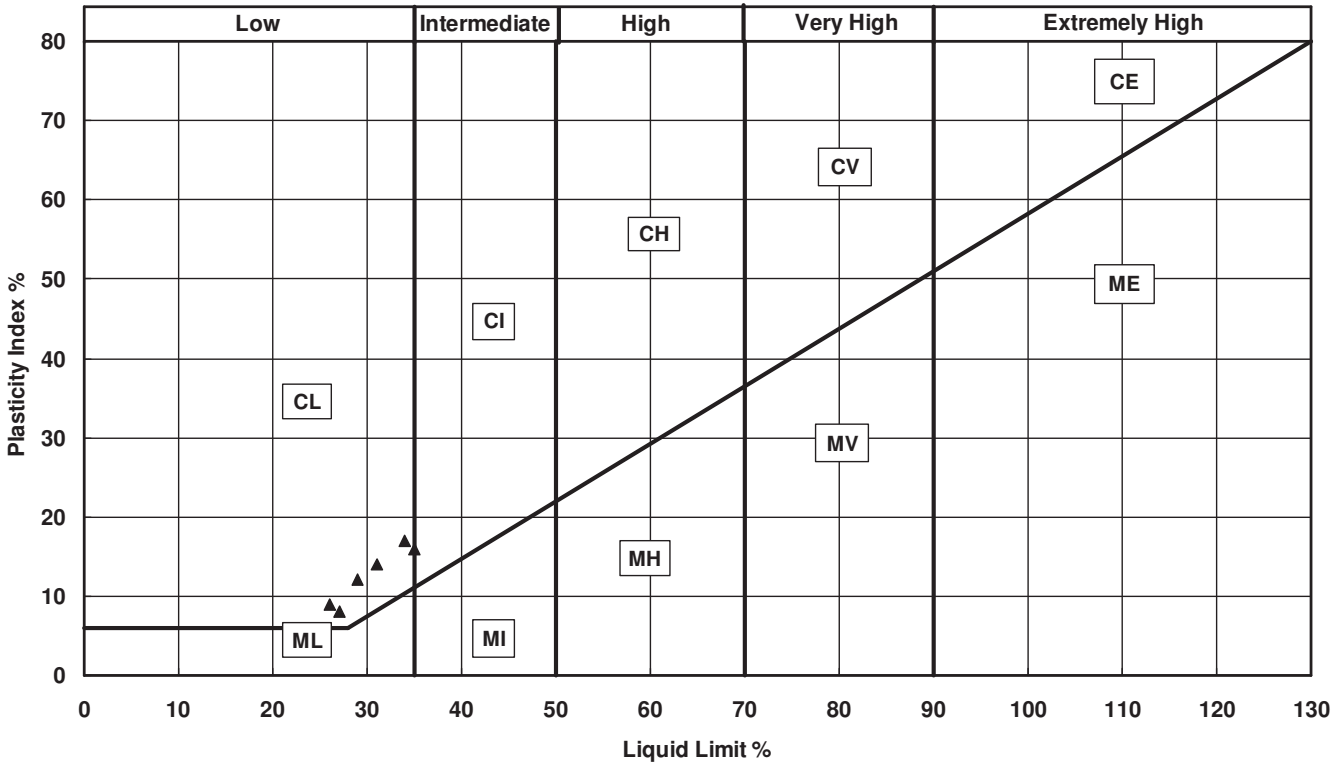


LABORATORY RESULTS - Classification Chart

Project: THE DOVE WAY

Project No: PC156146

PLOT OF PLASTICITY INDEX AGAINST LIQUID LIMIT for all items tested



Soil Type	Plasticity Characteristics
C Clay	L Low I Intermediate
M Silt	H High V Very High E Extremely High

Table of Soil Types and Plasticity Characteristics from BS 5930 : 1999

Remarks

08/10/2015



LABORATORY RESULTS - Particle Size Distribution

Project: THE DOVE WAY

Hole BHA

Sample Depth 3.00m

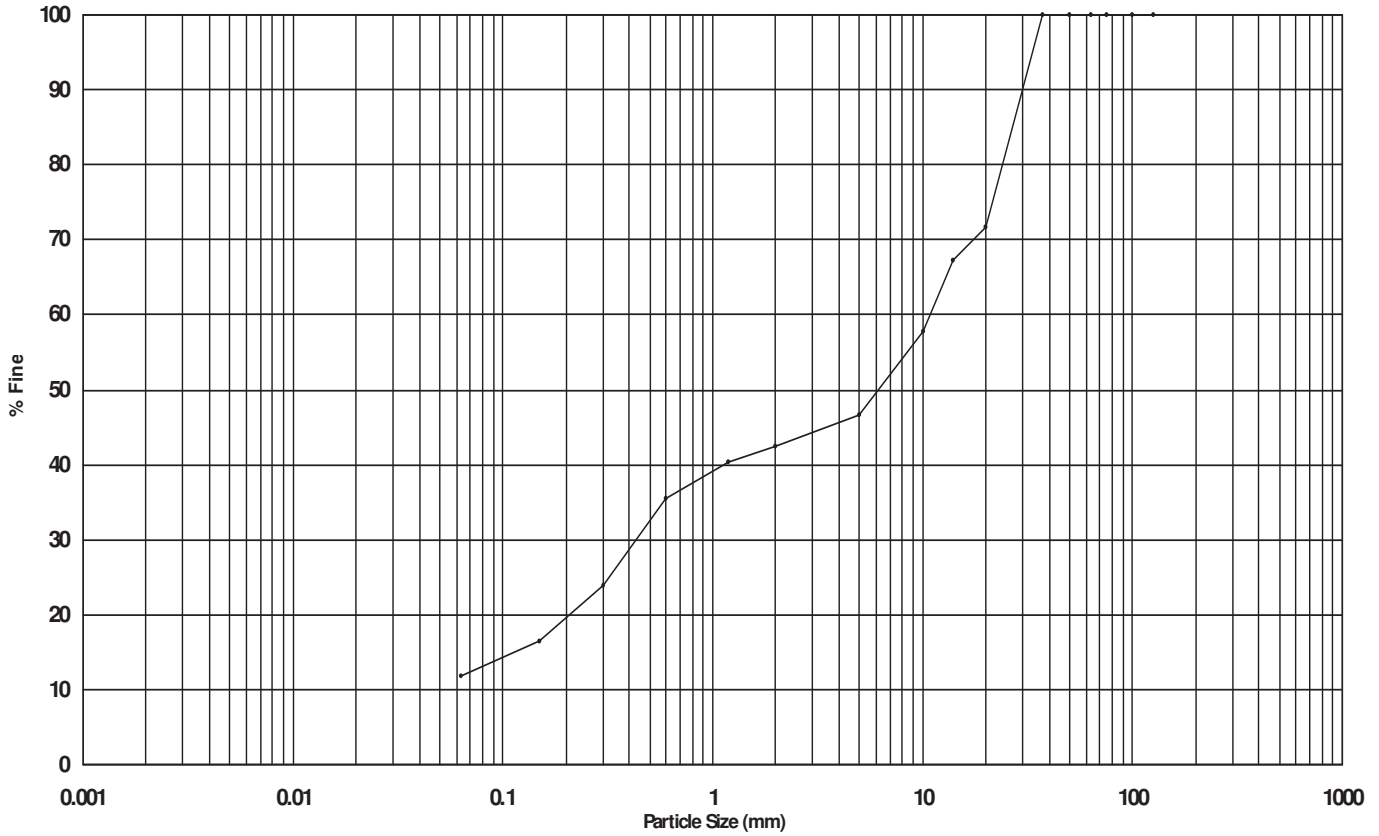
Project No: PC156146

Sample Type D

Sample Ref C28640

Sample Description

Brown clayey very sandy GRAVEL.



Classification	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	Cobbles	Boulders
CLAY	SILT			SAND			Gravel				

Classification	% of each
SILT (including CLAY)	12
SAND	30
GRAVEL	58
COBBLES	0
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	100
63 mm	100
50 mm	100
37.5 mm	100
20 mm	72
14 mm	67
10 mm	58
5 mm	47
2 mm	42
1.18 mm	40
600 μm	36
300 μm	24
150 μm	16
63 μm	12

Size	% Finer

Uniformity Coefficient	
Not Available	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks Test performed in accordance with BS 1377:Part 2:1990

08/10/2015



LABORATORY RESULTS - Particle Size Distribution

Project: THE DOVE WAY

Hole: BHA

Sample Depth: 8.00-8.50m

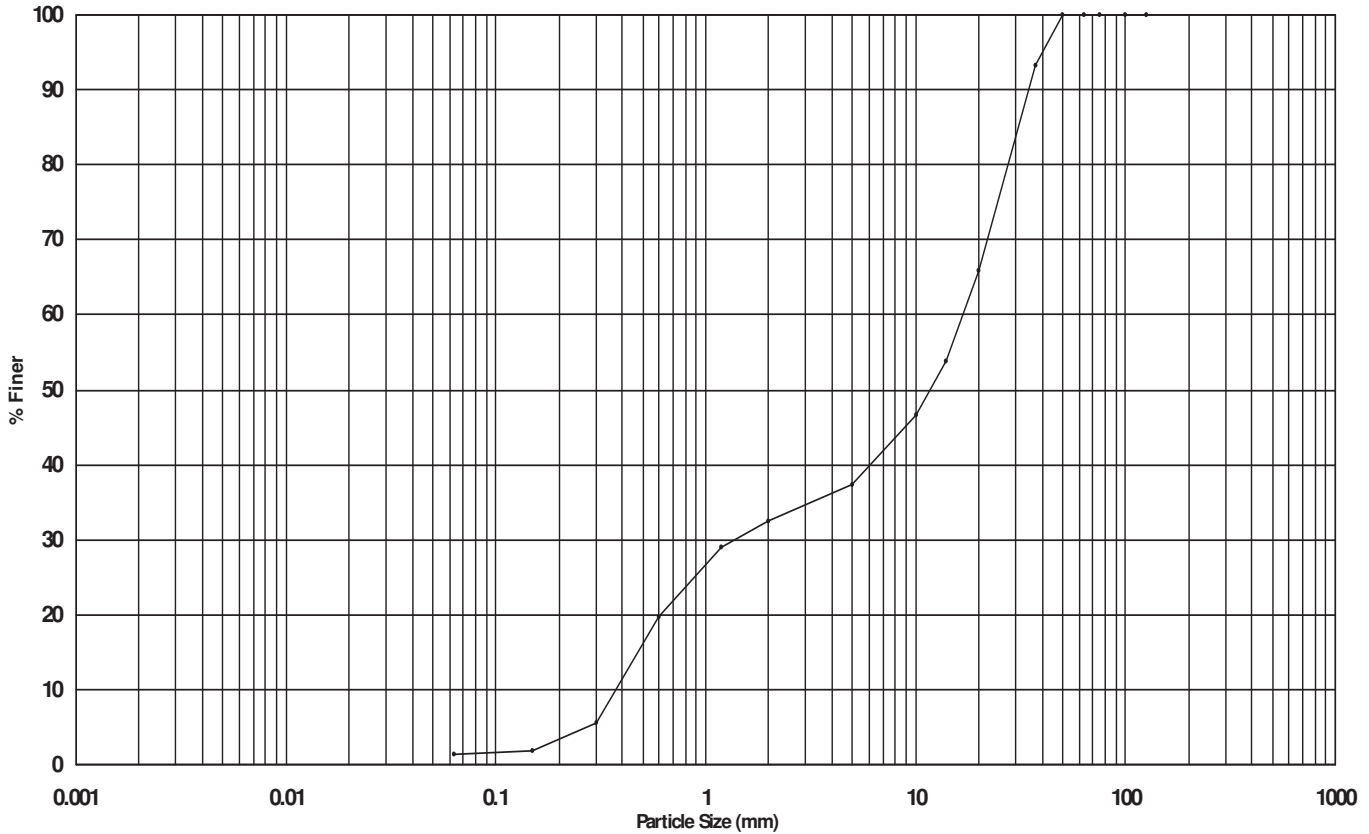
Project No: PC156146

Sample Type: B

Sample Ref: C27952

Sample Description

Brown slightly silty very sandy GRAVEL.



Classification	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	Cobbles	Boulders
	SILT			SAND			Gravel				
	CLAY										

Classification	% of each
SILT (including CLAY)	1
SAND	32
GRAVEL	67
COBBLES	0
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	100
63 mm	100
50 mm	100
37.5 mm	93
20 mm	66
14 mm	54
10 mm	47
5 mm	37
2 mm	33
1.18 mm	29
600 µm	20
300 µm	5
150 µm	2
63 µm	1

Size	% Finer

Uniformity Coefficient	
44.90	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks: Test performed in accordance with BS 1377:Part 2:1990

08/10/2015



LABORATORY RESULTS - Particle Size Distribution

Project: THE DOVE WAY

Hole BHB

Sample Depth 1.00-1.50m

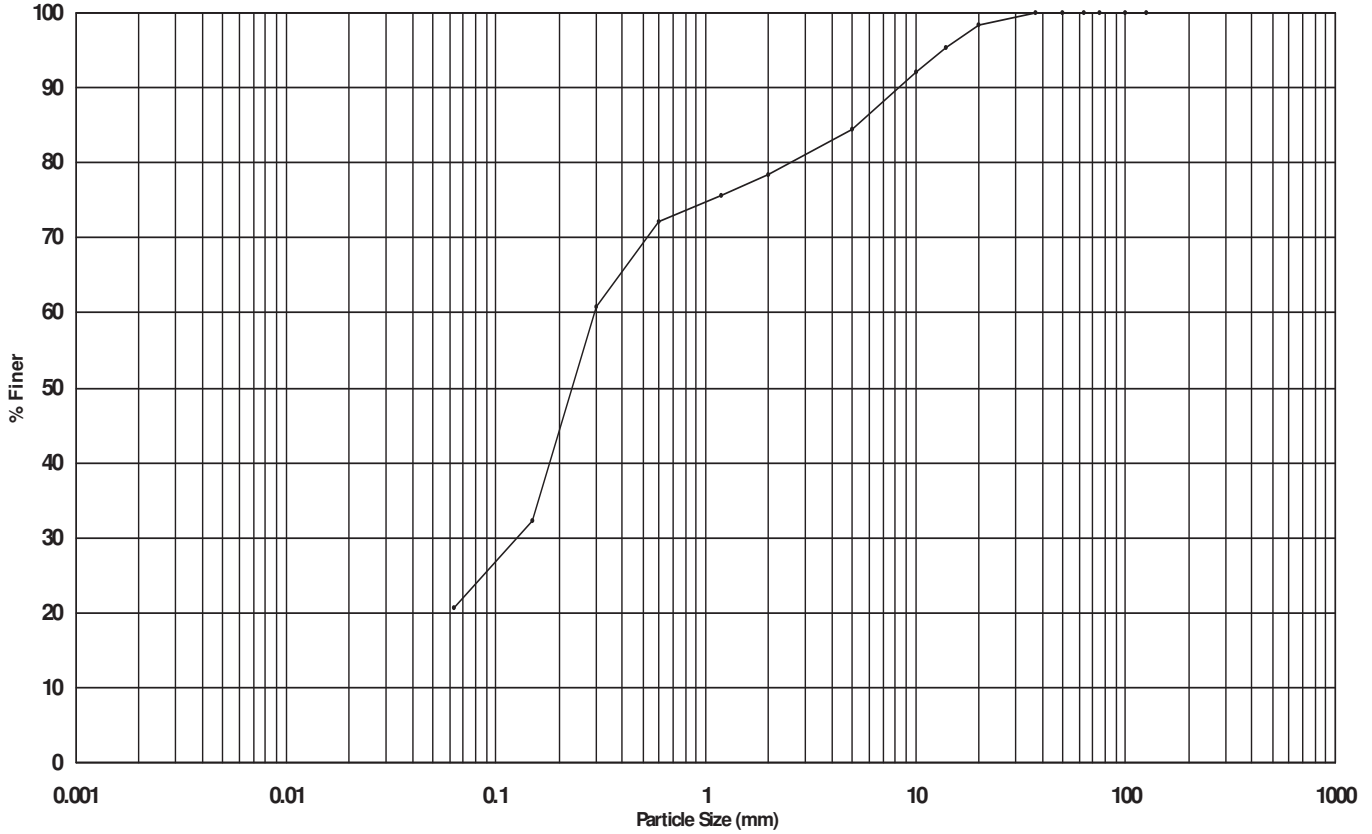
Project No: PC156146

Sample Type B

Sample Ref C27970

Sample Description

Dark brown silty gravelly SAND.



Classification	CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	Cobbles	Boulders
		SILT			SAND			Gravel				

Classification	% of each
SILT (including CLAY)	21
SAND	57
GRAVEL	22
COBBLES	0
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	100
63 mm	100
50 mm	100
37.5 mm	100
20 mm	98
14 mm	95
10 mm	92
5 mm	84
2 mm	78
1.18 mm	76
600 μm	72
300 μm	61
150 μm	32
63 μm	21

Size	% Finer

Uniformity Coefficient	
Not Available	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks Test performed in accordance with BS 1377:Part 2:1990

08/10/2015



LABORATORY RESULTS - Particle Size Distribution

Project: THE DOVE WAY

Hole: BHB

Sample Depth: 5.00-5.50m

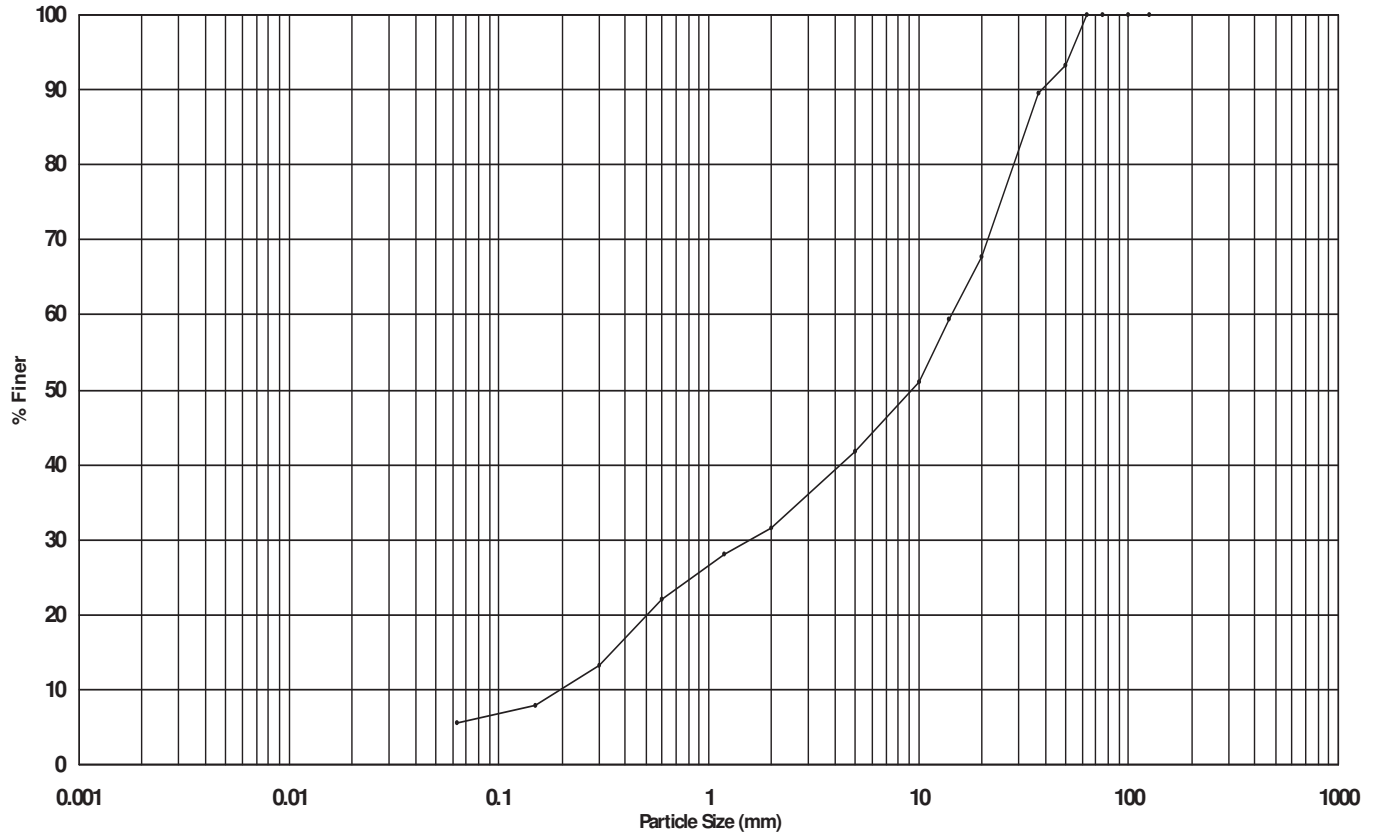
Project No: PC156146

Sample Type: B

Sample Ref: C27972

Sample Description

Brown slightly silty sandy GRAVEL.



Classification	CLAY			SILT			SAND			Gravel			Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse		

Classification	% of each
SILT (including CLAY)	6
SAND	26
GRAVEL	68
COBBLES	0
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	100
63 mm	100
50 mm	93
37.5 mm	90
20 mm	68
14 mm	59
10 mm	51
5 mm	42
2 mm	32
1.18 mm	28
600 µm	22
300 µm	13
150 µm	8
63 µm	6

Size	% Finer

Uniformity Coefficient	
73.05	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks: Test performed in accordance with BS 1377:Part 2:1990

08/10/2015



LABORATORY RESULTS - Particle Size Distribution

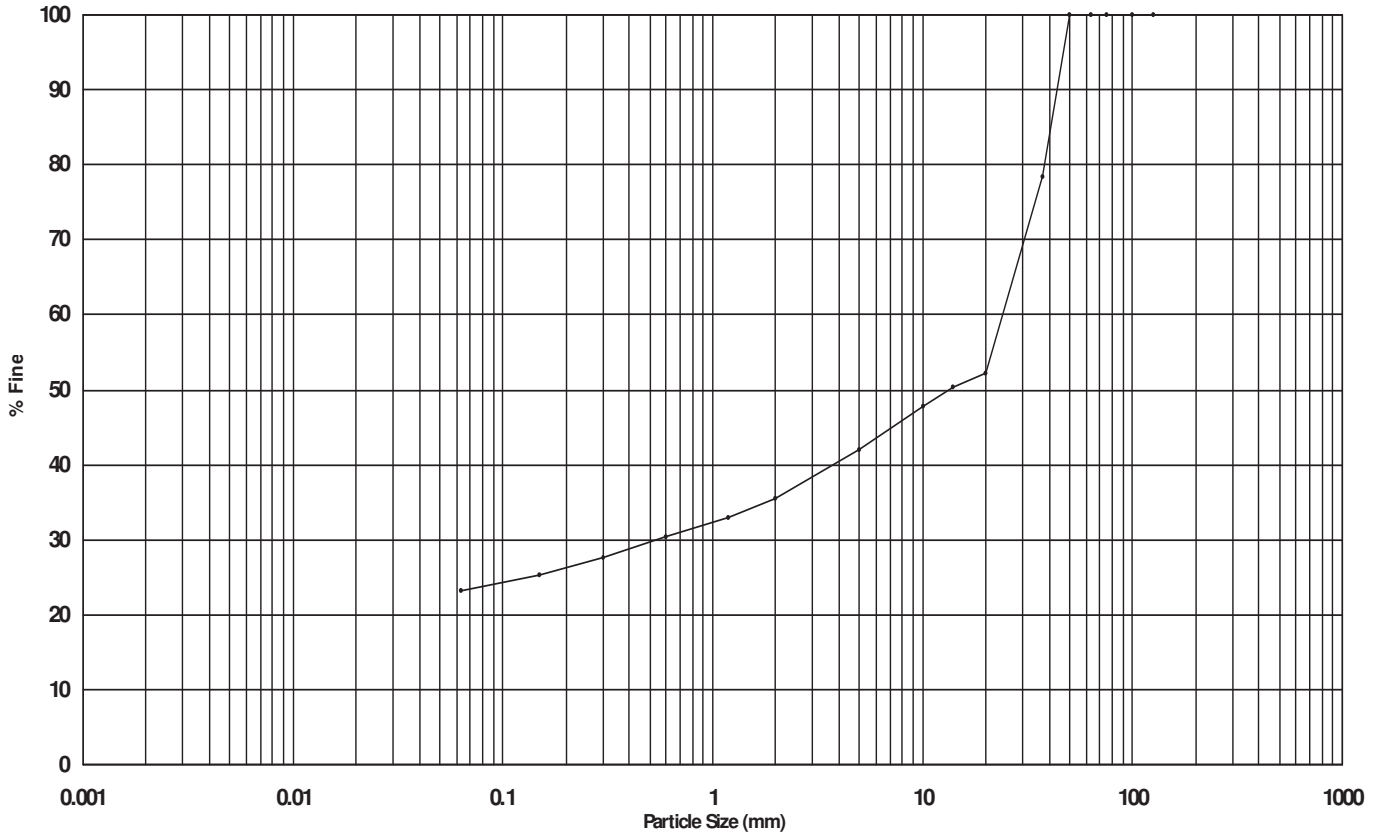
Project: THE DOVE WAY

Hole: BHB
 Sample Depth: 7.50-8.00m
 Sample Type: B
 Sample Ref: C27968

Project No: PC156146

Sample Description

Red brown silty sandy GRAVEL.



Classification	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	Cobbles	Boulders
CLAY	SILT			SAND			Gravel				

Classification	% of each
SILT (including CLAY)	23
SAND	12
GRAVEL	65
COBBLES	0
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	100
63 mm	100
50 mm	100
37.5 mm	78
20 mm	52
14 mm	50
10 mm	48
5 mm	42
2 mm	35
1.18 mm	33
600 µm	30
300 µm	28
150 µm	25
63 µm	23

Size	% Finer

Uniformity Coefficient	
Not Available	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks: Test performed in accordance with BS 1377:Part 2:1990

08/10/2015



LABORATORY RESULTS - Particle Size Distribution

Project: THE DOVE WAY

Hole: BHC

Sample Depth: 2.50-3.00m

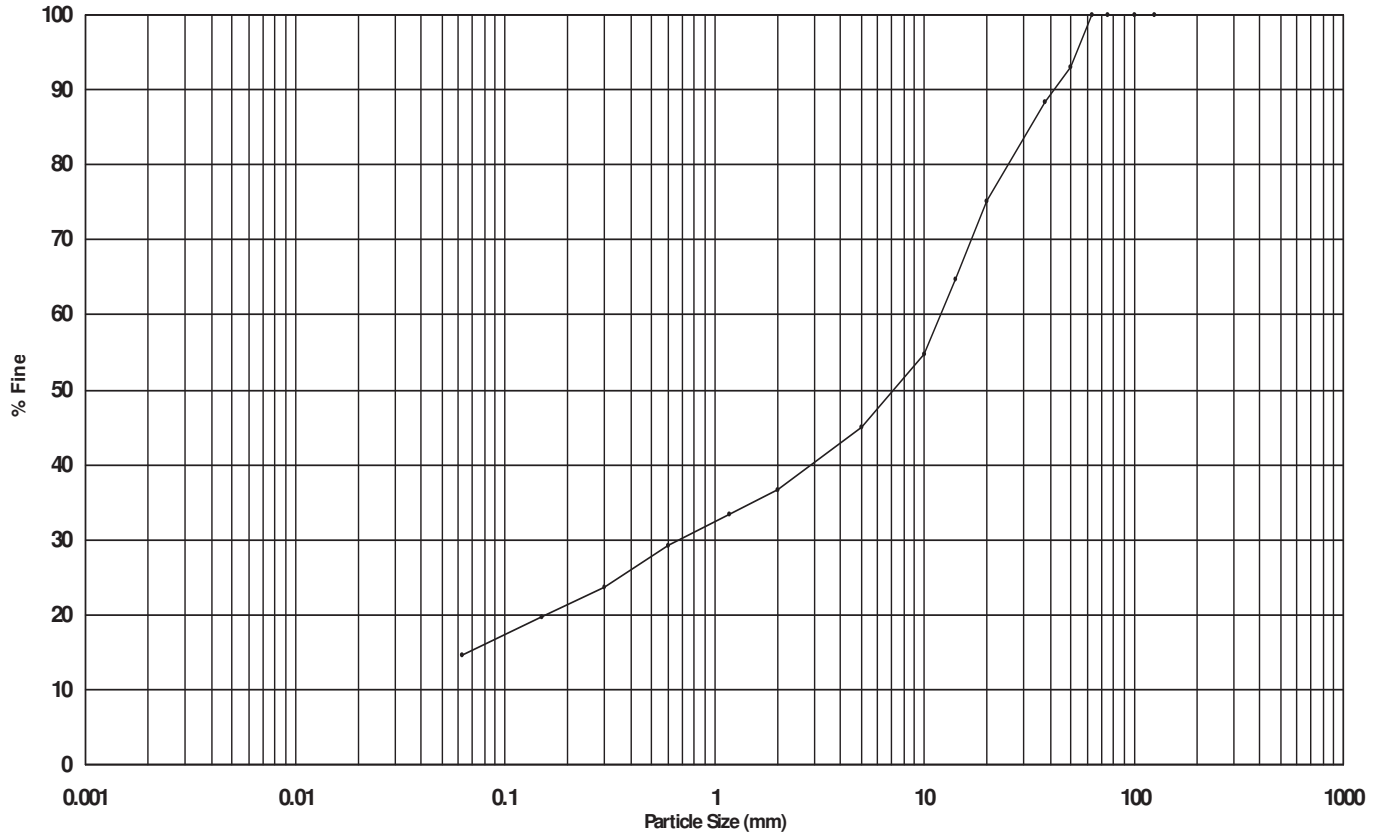
Project No: PC156146

Sample Type: B

Sample Ref: C27975

Sample Description

Brown clayey sandy GRAVEL.



Classification	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	Cobbles	Boulders
CLAY	SILT			SAND			Gravel				

Classification	% of each
SILT (including CLAY)	15
SAND	22
GRAVEL	63
COBBLES	0
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	100
63 mm	100
50 mm	93
37.5 mm	88
20 mm	75
14 mm	65
10 mm	55
5 mm	45
2 mm	37
1.18 mm	33
600 µm	29
300 µm	24
150 µm	20
63 µm	15

Size	% Finer

Uniformity Coefficient	
Not Available	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks: Test performed in accordance with BS 1377:Part 2:1990

08/10/2015



LABORATORY RESULTS - Particle Size Distribution

Project: THE DOVE WAY

Hole: BHC

Sample Depth: 5.00-5.50m

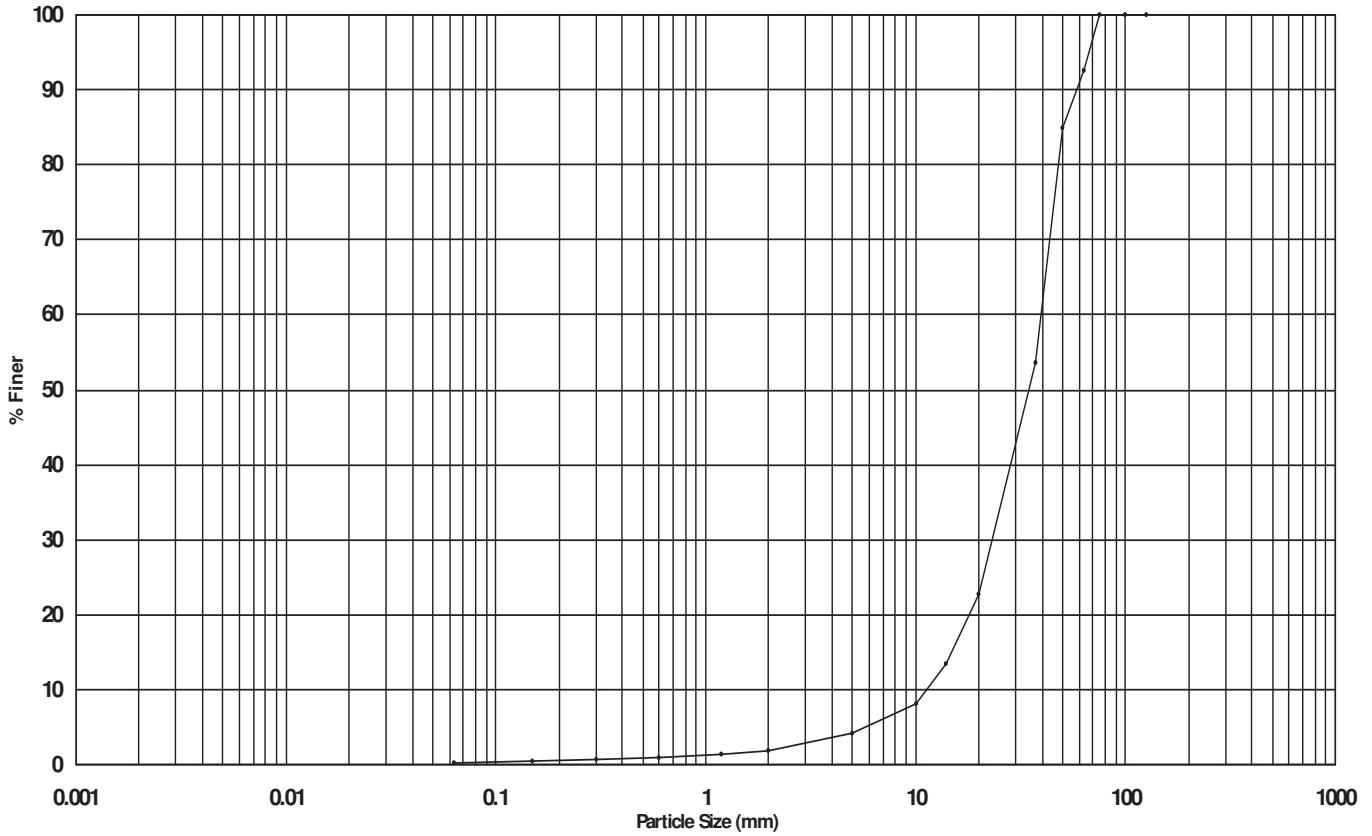
Project No: PC156146

Sample Type: B

Sample Ref: C27976

Sample Description

Brown slightly sandy GRAVEL with some cobbles.



Classification	CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	Cobbles	Boulders
		SILT			SAND			Gravel				

Classification	% of each
SILT (including CLAY)	0
SAND	2
GRAVEL	91
COBBLES	7
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	100
63 mm	93
50 mm	85
37.5 mm	54
20 mm	23
14 mm	13
10 mm	8
5 mm	4
2 mm	2
1.18 mm	1
600 µm	1
300 µm	1
150 µm	0
63 µm	0

Size	% Finer

Uniformity Coefficient	
3.55	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks:  Test performed in accordance with BS 1377:Part 2:1990

08/10/2015



LABORATORY RESULTS - Particle Size Distribution

Project: THE DOVE WAY

Hole: BHC

Sample Depth: 8.50-9.00m

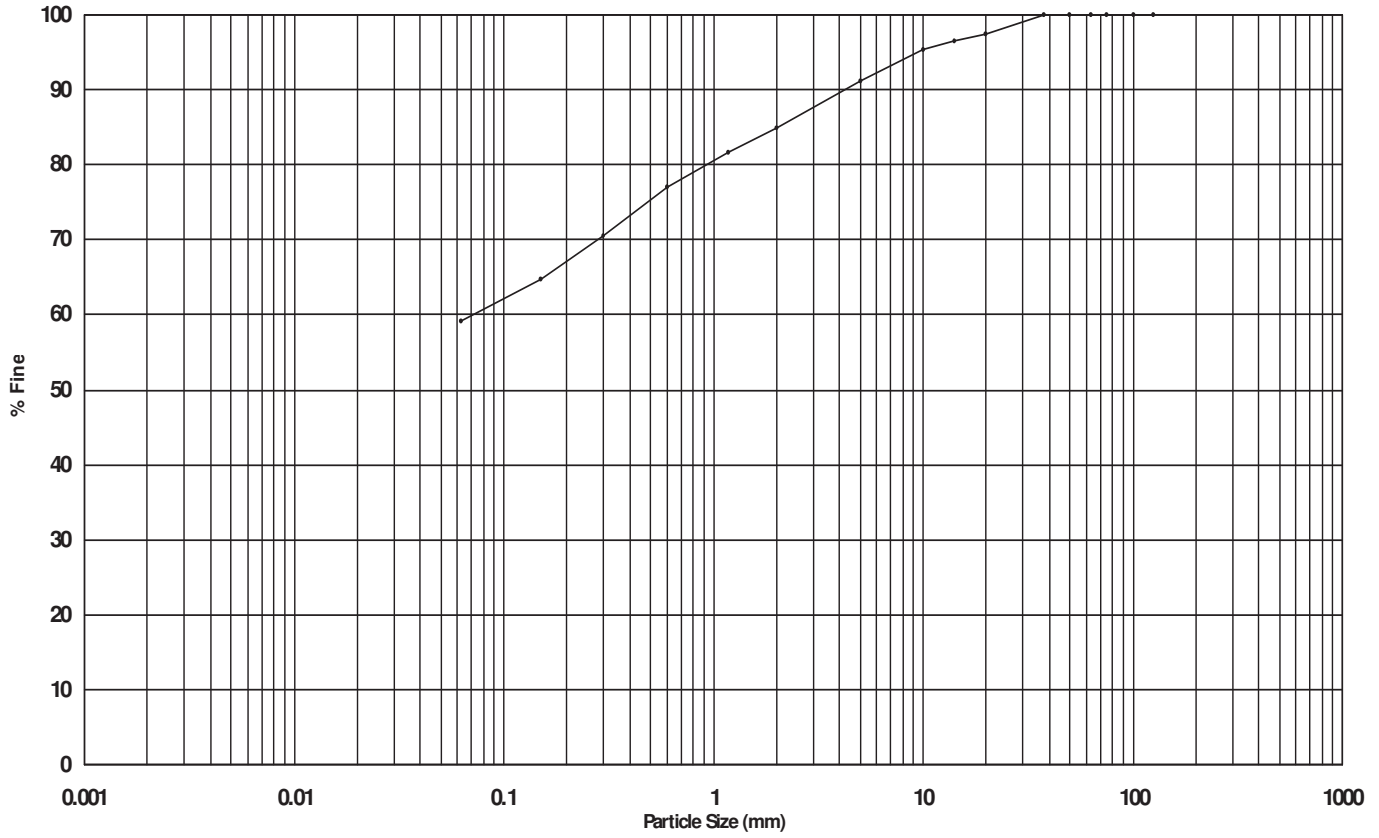
Project No: PC156146

Sample Type: B

Sample Ref: C27984

Sample Description

Red brown and grey gravelly very sandy SILT with siltstones.



Classification	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	Cobbles	Boulders	
	CLAY			SILT			SAND			Gravel		

Classification	% of each
SILT (including CLAY)	59
SAND	26
GRAVEL	15
COBBLES	0
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	100
63 mm	100
50 mm	100
37.5 mm	100
20 mm	98
14 mm	97
10 mm	95
5 mm	91
2 mm	85
1.18 mm	82
600 µm	77
300 µm	71
150 µm	65
63 µm	59

Size	% Finer

Uniformity Coefficient	
Not Available	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks: Test performed in accordance with BS 1377:Part 2:1990

08/10/2015



LABORATORY RESULTS - Particle Size Distribution

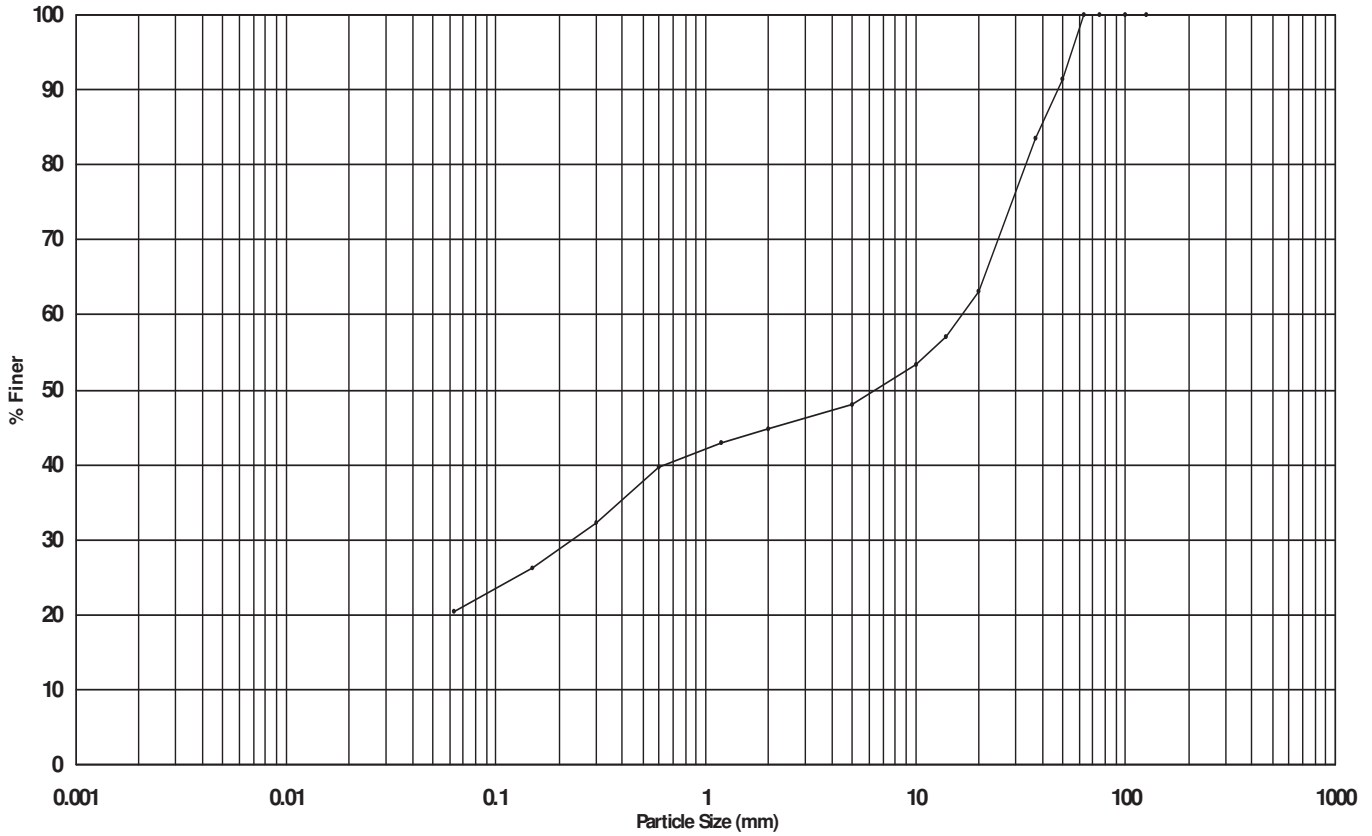
Project: THE DOVE WAY

Hole: BHD
 Sample Depth: 1.50-2.00m
 Sample Type: B
 Sample Ref: C27991

Project No: PC156146

Sample Description

Brown silty very sandy GRAVEL.



Classification	CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	Cobbles	Boulders
		SILT			SAND			Gravel				

Classification	% of each
SILT (including CLAY)	20
SAND	25
GRAVEL	55
COBBLES	0
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	100
63 mm	100
50 mm	91
37.5 mm	83
20 mm	63
14 mm	57
10 mm	53
5 mm	48
2 mm	45
1.18 mm	43
600 μm	40
300 μm	32
150 μm	26
63 μm	20

Size	% Finer

Uniformity Coefficient	
Not Available	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks: Test performed in accordance with BS 1377:Part 2:1990

08/10/2015



LABORATORY RESULTS - Particle Size Distribution

Project: THE DOVE WAY

Hole: BHD

Sample Depth: 2.50-3.00m

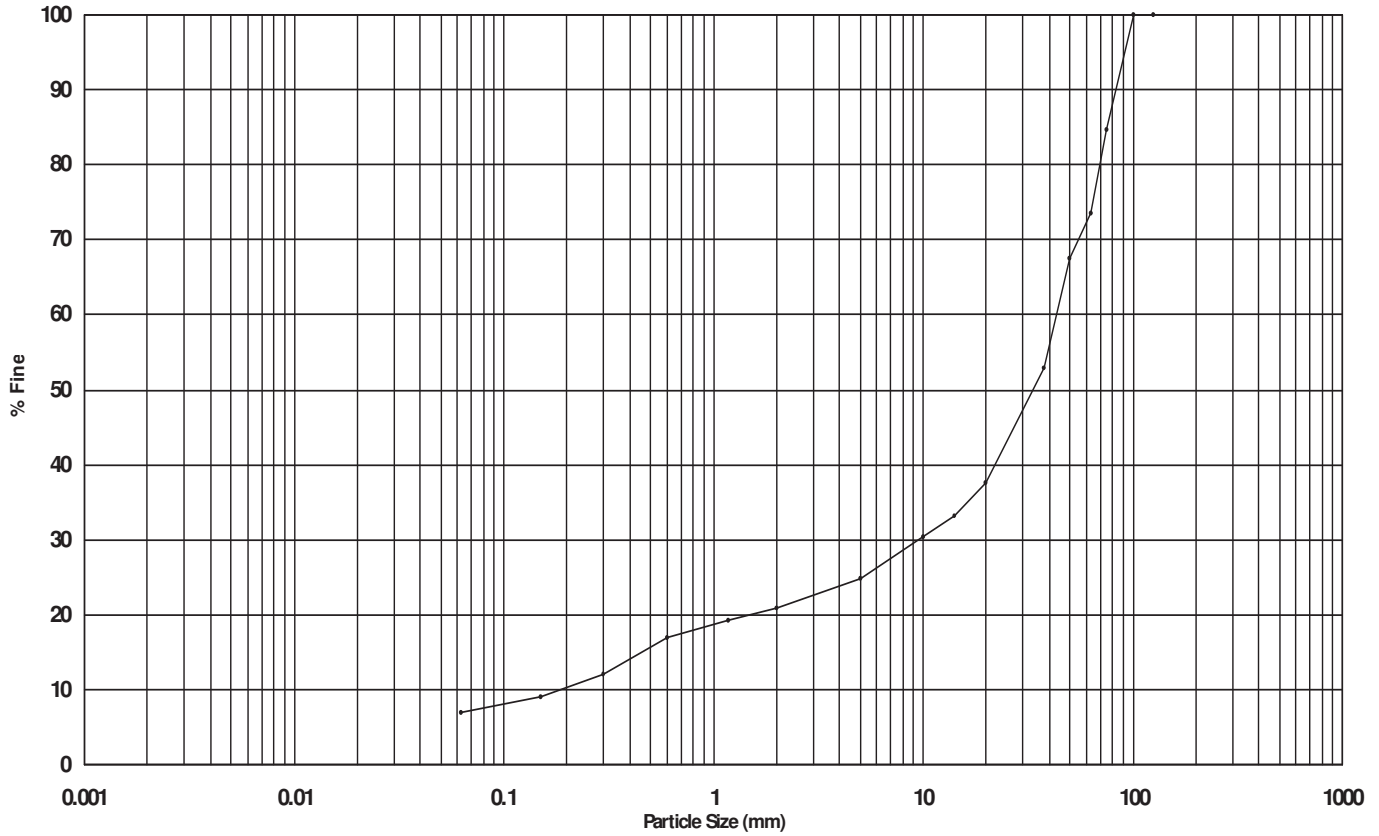
Project No: PC156146

Sample Type: B

Sample Ref: C27986

Sample Description

Brown slightly clayey sandy GRAVEL with many cobbles.
Sample mass not to BS1377.



Classification	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	Cobbles	Boulders
	SLT			SAND			Gravel				
	CLAY										

Classification	% of each
SILT (including CLAY)	7
SAND	14
GRAVEL	53
COBBLES	26
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	85
63 mm	74
50 mm	68
37.5 mm	53
20 mm	38
14 mm	33
10 mm	30
5 mm	25
2 mm	21
1.18 mm	19
600 µm	17
300 µm	12
150 µm	9
63 µm	7

Size	% Finer

Uniformity Coefficient	
233.66	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks Test performed in accordance with BS 1377:Part 2:1990

08/10/2015



LABORATORY RESULTS - Particle Size Distribution

Project: THE DOVE WAY

Hole: BHD

Project No: PC156146

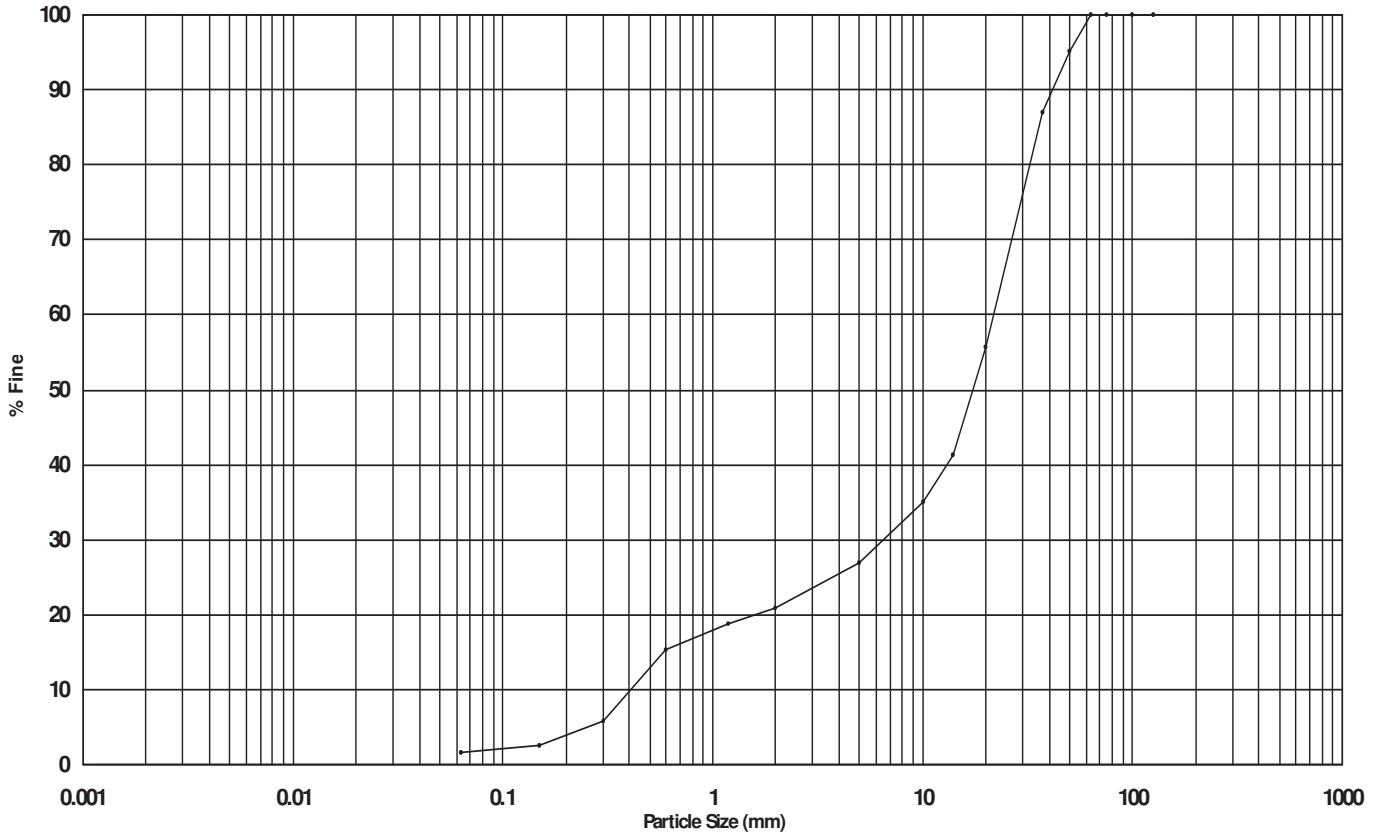
Sample Depth: 5.00-5.50m

Sample Type: B

Sample Ref: C27992

Sample Description

Brown slightly silty sandy GRAVEL.



Classification	CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	Cobbles	Boulders
		SILT			SAND			Gravel				

Classification	% of each
SILT (including CLAY)	2
SAND	19
GRAVEL	79
COBBLES	0
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	100
63 mm	100
50 mm	95
37.5 mm	87
20 mm	56
14 mm	41
10 mm	35
5 mm	27
2 mm	21
1.18 mm	19
600 μm	15
300 μm	6
150 μm	2
63 μm	2

Size	% Finer

Uniformity Coefficient	
53.94	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks  Test performed in accordance with BS 1377:Part 2:1990

08/10/2015



LABORATORY RESULTS - Particle Size Distribution

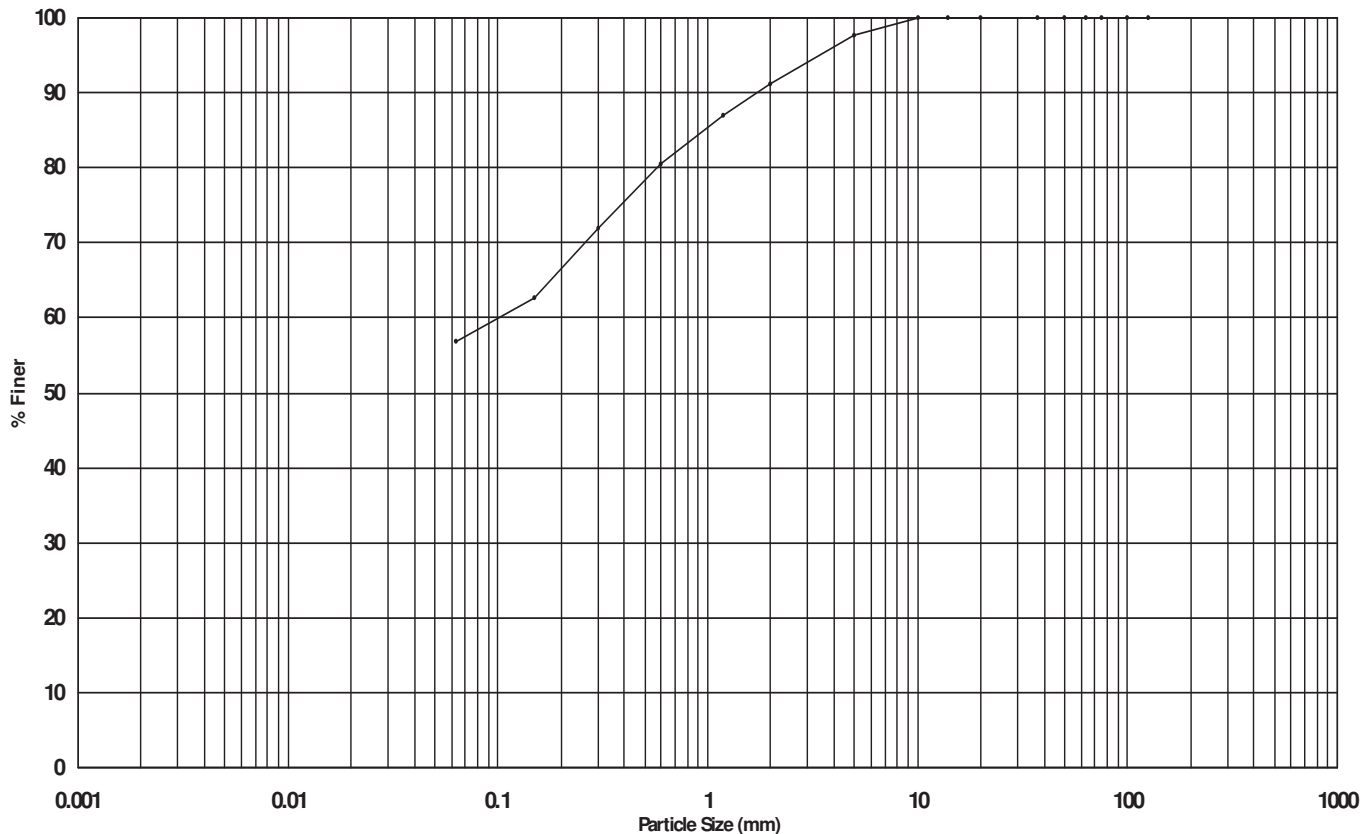
Project: THE DOVE WAY

Hole BHD
Sample Depth 8.50-9.00m
Sample Type B
Sample Ref C27994

Project No: PC156146

Sample Description

Red brown slightly gravelly very sandy SILT with occasional siltstones.



Classification	CLAY			SILT			SAND			GRAVEL			Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse					

Classification	% of each
SILT (including CLAY)	57
SAND	34
GRAVEL	9
COBBLES	0
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	100
63 mm	100
50 mm	100
37.5 mm	100
20 mm	100
14 mm	100
10 mm	100
5 mm	98
2 mm	91
1.18 mm	87
600 μm	81
300 μm	72
150 μm	63
63 μm	57

Size	% Finer

Uniformity Coefficient	
Not Available	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks Test performed in accordance with BS 1377:Part 2:1990

08/10/2015



LABORATORY RESULTS - Particle Size Distribution

Project: THE DOVE WAY

Hole P-WS-1

Sample Depth 2.50m

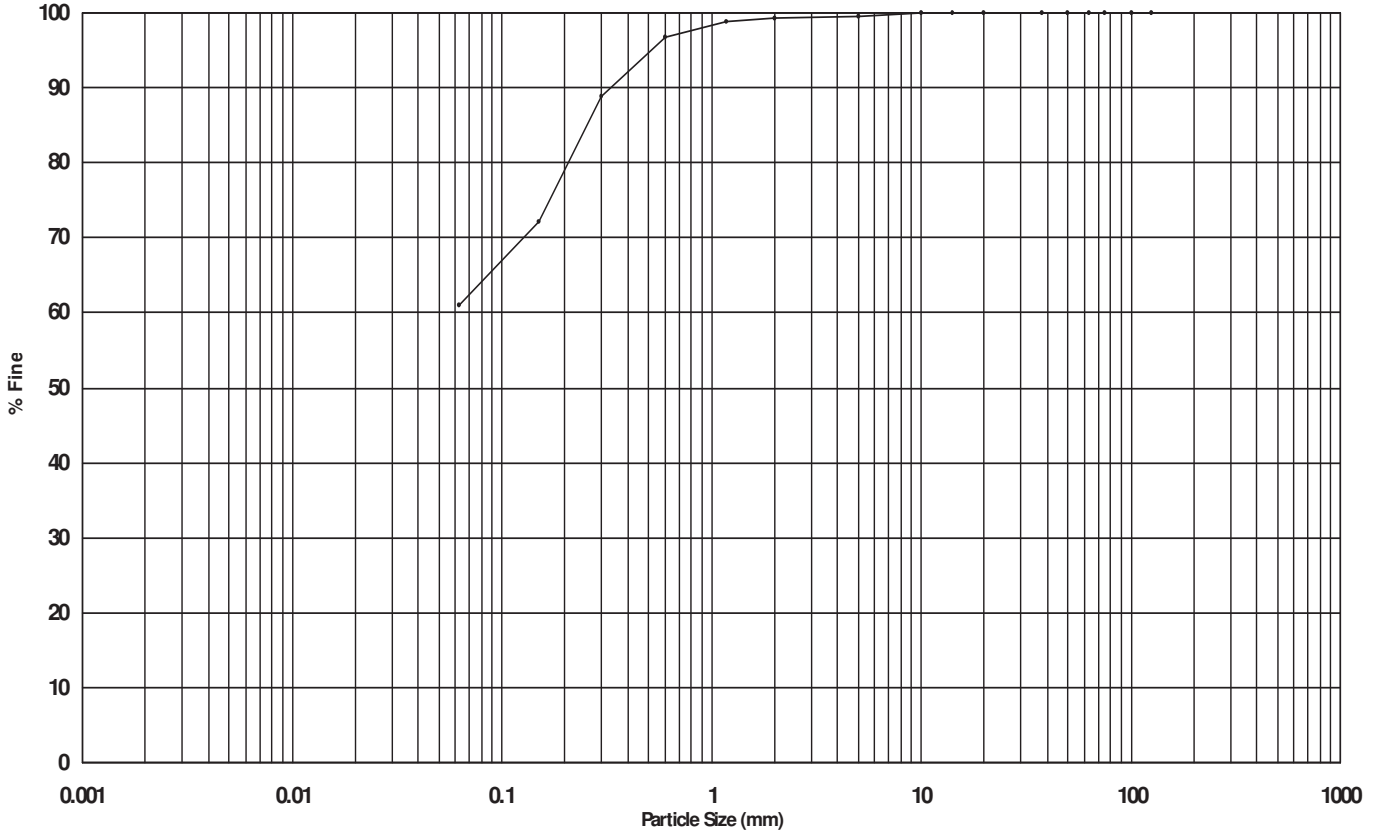
Sample Type D

Sample Ref C28683

Project No: PC156146

Sample Description

Brown and grey slightly gravelly very sandy CLAY.



Classification	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	Cobbles	Boulders
CLAY	SILT			SAND			Gravel				

Classification	% of each
SILT (including CLAY)	61
SAND	38
GRAVEL	1
COBBLES	0
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	100
63 mm	100
50 mm	100
37.5 mm	100
20 mm	100
14 mm	100
10 mm	100
5 mm	100
2 mm	99
1.18 mm	99
600 µm	97
300 µm	89
150 µm	72
63 µm	61

Size	% Finer

Uniformity Coefficient	
Not Available	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks Test performed in accordance with BS 1377:Part 2:1990

08/10/2015



LABORATORY RESULTS - Particle Size Distribution

Project: THE DOVE WAY

Hole WS1

Sample Depth 4.50m

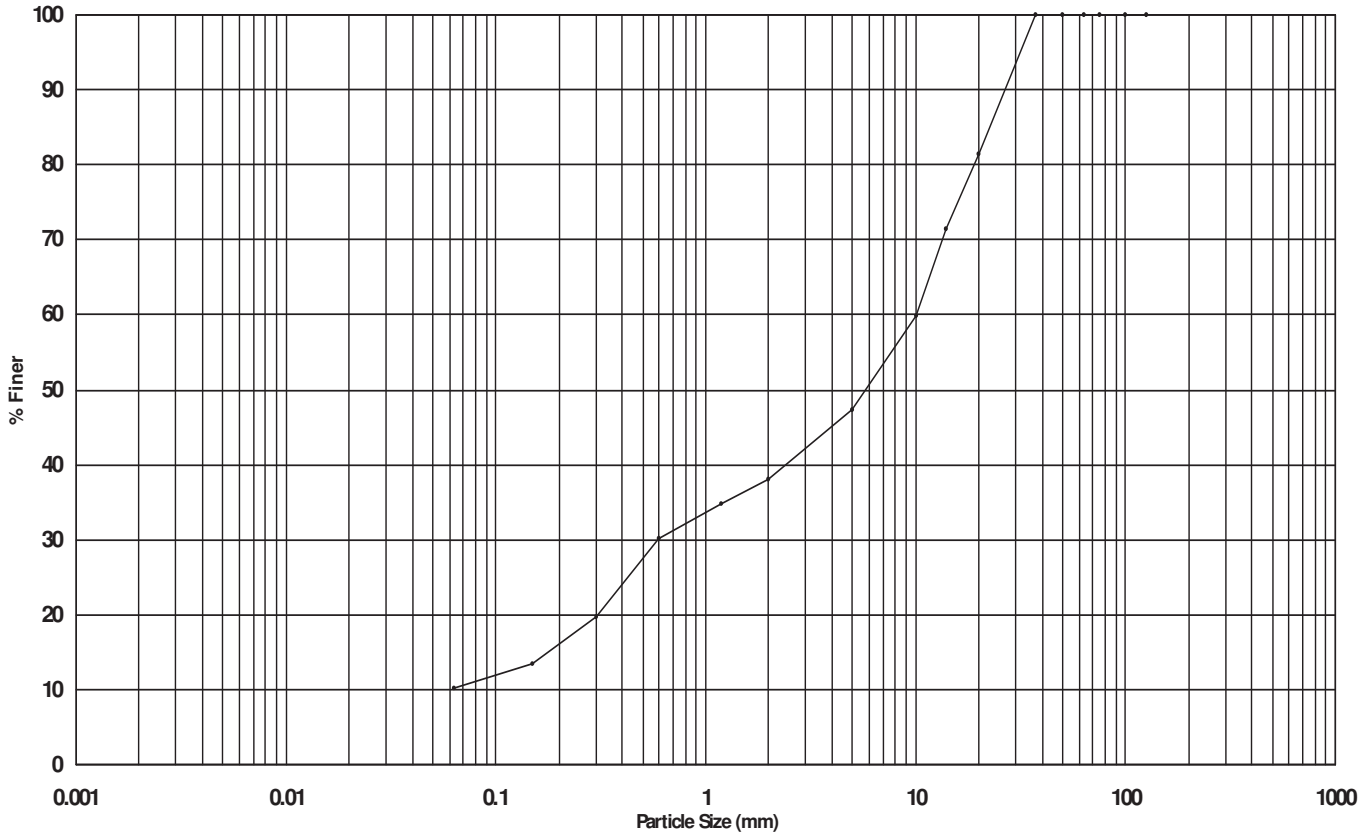
Project No: PC156146

Sample Type D

Sample Ref C28693

Sample Description

Brown silty very sandy GRAVEL.



Classification	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	Cobbles	Boulders
CLAY	SILT			SAND			Gravel				

Classification	% of each
SILT (including CLAY)	10
SAND	28
GRAVEL	62
COBBLES	0
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	100
63 mm	100
50 mm	100
37.5 mm	100
20 mm	81
14 mm	71
10 mm	60
5 mm	47
2 mm	38
1.18 mm	35
600 µm	30
300 µm	20
150 µm	14
63 µm	10

Size	% Finer

Uniformity Coefficient	
Not Available	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks Test performed in accordance with BS 1377:Part 2:1990

08/10/2015



LABORATORY RESULTS - Particle Size Distribution

Project: THE DOVE WAY

Hole WS4

Sample Depth 4.00-5.00m

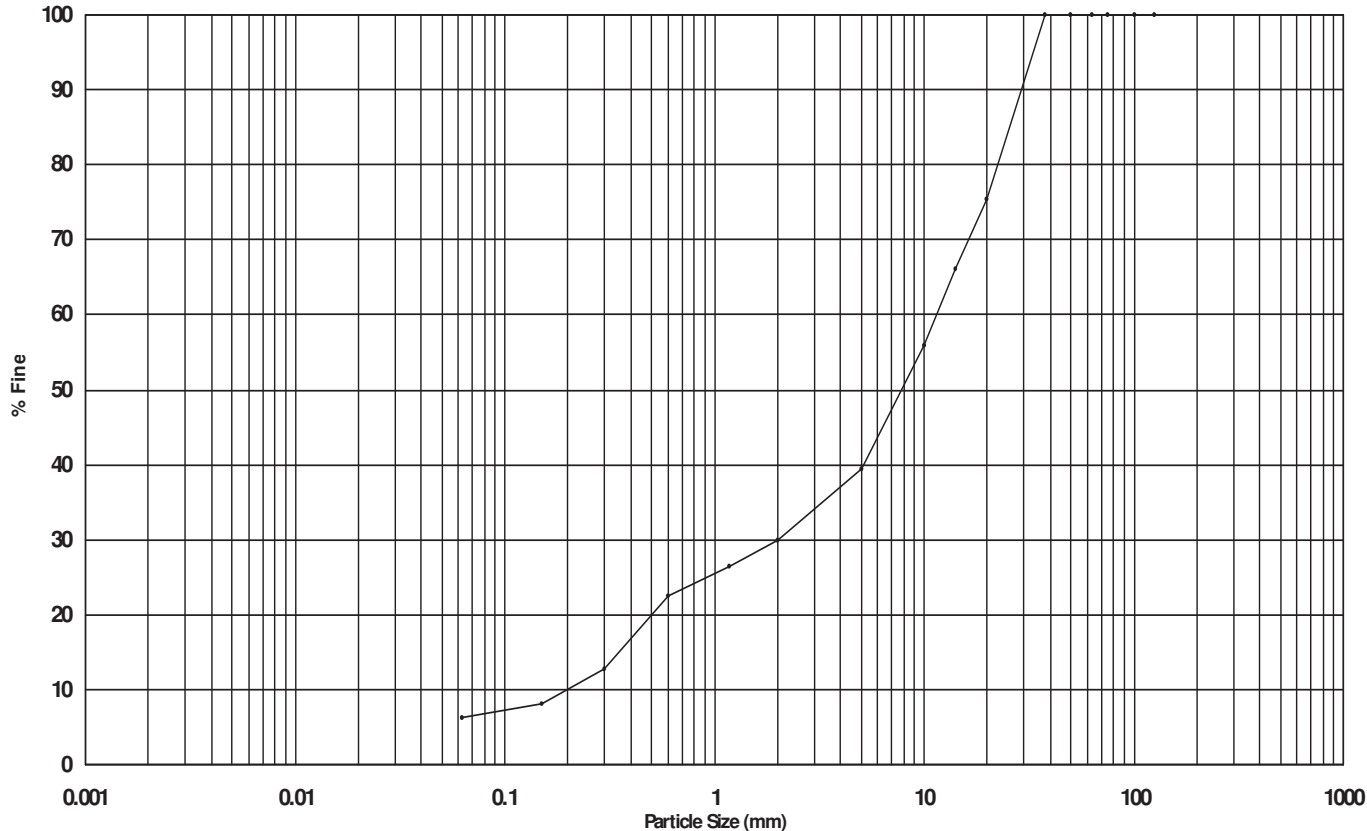
Project No: PC156146

Sample Type D

Sample Ref C28689

Sample Description

Brown slightly silty sandy GRAVEL.



Classification	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	Cobbles	Boulders
CLAY	SILT			SAND			Gravel				

Classification	% of each
SILT (including CLAY)	6
SAND	24
GRAVEL	70
COBBLES	0
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	100
63 mm	100
50 mm	100
37.5 mm	100
20 mm	75
14 mm	66
10 mm	56
5 mm	39
2 mm	30
1.18 mm	26
600 µm	22
300 µm	13
150 µm	8
63 µm	6

Size	% Finer

Uniformity Coefficient	
57.65	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks Test performed in accordance with BS 1377:Part 2:1990

08/10/2015



LABORATORY RESULTS - Particle Size Distribution

Project: THE DOVE WAY

Hole: WS5

Project No: PC156146

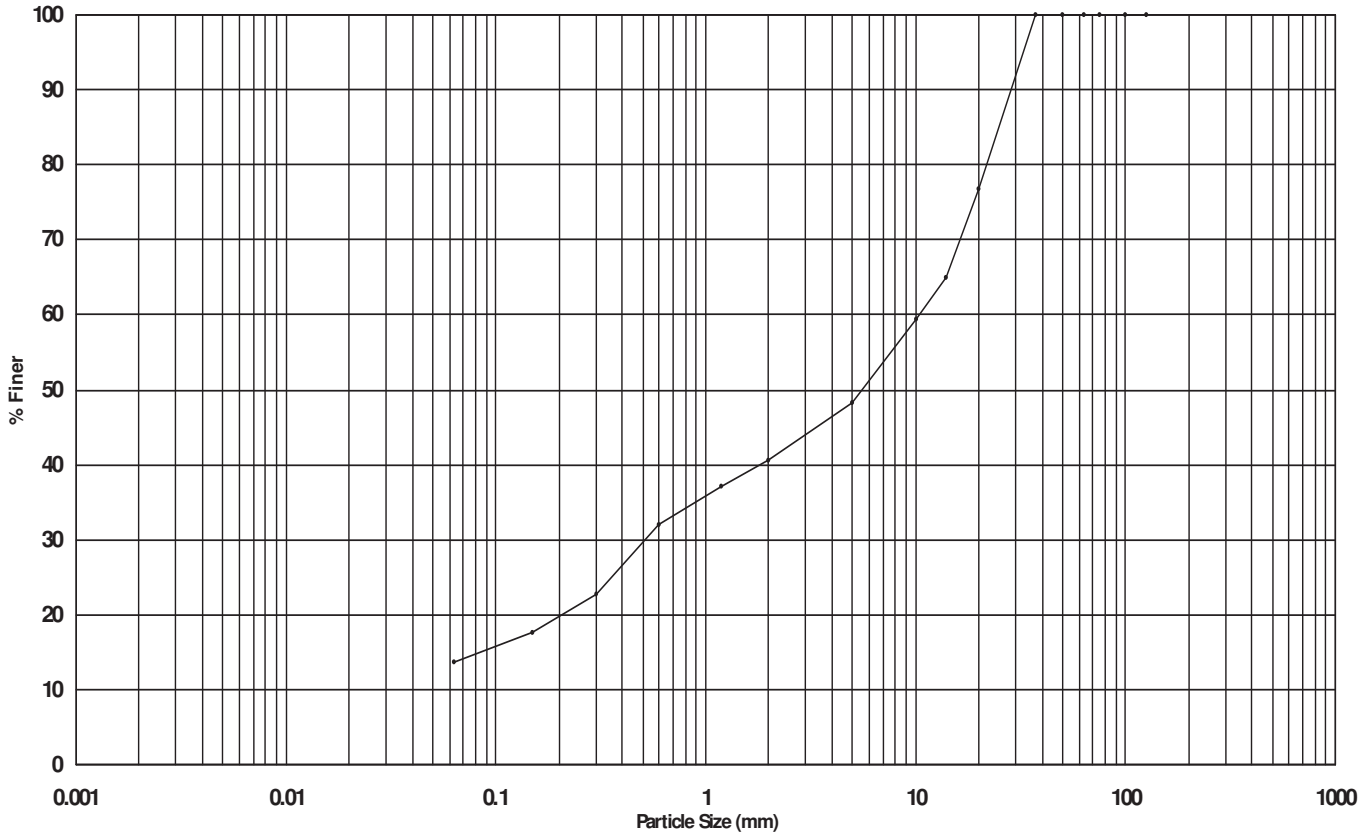
Sample Depth: 2.50m

Sample Type: D

Sample Ref: C28691

Sample Description

Brown clayey very sandy GRAVEL.



Classification	CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	Cobbles	Boulders
		SILT			SAND			Gravel				

Classification	% of each
CLAY	
SILT (including CLAY)	14
SAND	27
GRAVEL	59
COBBLES	0
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	100
63 mm	100
50 mm	100
37.5 mm	100
20 mm	77
14 mm	65
10 mm	59
5 mm	48
2 mm	41
1.18 mm	37
600 μm	32
300 μm	23
150 μm	18
63 μm	14

Size	% Finer

Uniformity Coefficient	
Not Available	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks:  Test performed in accordance with BS 1377:Part 2:1990

08/10/2015





Certificate of Analysis

Certificate Number 15-46570

07-Oct-15

Client Geotechnics LTD
203 Torrington Avenue
Tile Hill
Coventry
CV4 9AP

Our Reference 15-46570

Client Reference PC156146

Contract Title THE DOVE WAY

Description 7 Soil samples.

Date Received 01-Oct-15

Date Started 01-Oct-15

Date Completed 07-Oct-15

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the scope of UKAS accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. Observations and interpretations are outside the scope of ISO 17025. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Rob Brown
Business Manager



Summary of Chemical Analysis

Soil Samples

Our Ref 15-46570

Client Ref PC156146

Contract Title THE DOVE WAY

Lab No	877898	877899	877900	877901	877902	877903	877904
Sample ID	BHC	BHC	BHC	BHD	BHD	BHD	WS2
Depth	1.00-1.50	2.50-3.00	8.50-9.00	1.00-1.50	2.00	8.50-9.00	1.50
Other ID							
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	24/09/15	24/09/15	24/09/15	24/09/15	n/s	24/09/15	n/s
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units							
Metals										
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l	12	< 10	< 10	< 10	< 10	< 10	14
Inorganics										
pH	DETSC 2008#			7.1	7.4	8.1	7.3	7.4	8.0	7.4
Ammonia Aqueous Extract as N	DETSC 2119	10	mg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Chloride Aqueous Extract	DETSC 2055	1	mg/l	9.9	10	8.2	7.2	6.0	7.9	7.8
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l	10	2.7	< 1.0	6.1	10	2.5	31
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	740	280	48	33	290	56	650
Total Sulphur as S	DETSC 2320	0.01	%	0.27	0.04	0.03	0.09	0.09	0.03	0.13
Total Sulphate as SO4	DETSC 2321#	0.01	%	0.56	0.11	0.06	0.09	0.16	0.09	0.25

Information in Support of the Analytical Results

Our Ref 15-46570
 Client Ref PC156146
 Contract THE DOVE WAY

Containers Received & Deviating Samples

Lab No	Sample ID	Date		Containers Received	Holding time exceeded for tests	Inappropriate container for tests
		Sampled				
877898	BHC 1.00-1.50 SOIL	24/09/15		PT 1L		
877899	BHC 2.50-3.00 SOIL	24/09/15		PT 1L		
877900	BHC 8.50-9.00 SOIL	24/09/15		PT 1L		
877901	BHD 1.00-1.50 SOIL	24/09/15		PT 1L		
877902	BHD 2.00 SOIL			PT 1L	Sample date not supplied	
877903	BHD 8.50-9.00 SOIL	24/09/15		PT 1L		
877904	WS2 1.50 SOIL			PT 1L	Sample date not supplied	

Key: P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time and/or inappropriate containers are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

United Kingdom Accreditation Service

ACCREDITATION CERTIFICATE



TESTING LABORATORY
No. 1365

Geotechnics Limited

is accredited in accordance with the recognised International Standard ISO/IEC 17025:2005
General Requirements for the competence of testing and calibration laboratories.

This accreditation demonstrates technical competence for a defined scope as detailed in and at the locations specified in the schedule to this certificate, and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated January 2009).

The schedule to this certificate is an essential accreditation document and from time to time may be revised and reissued by the United Kingdom Accreditation Service. The most recent issue of the schedule of accreditation, which bears the same accreditation number as this certificate, is available from the UKAS website www.ukas.com.

This accreditation is subject to continuing conformity with United Kingdom Accreditation Service requirements. The absence of a schedule on the UKAS website indicates that the accreditation is no longer in force.

Accreditation Manager, United Kingdom Accreditation Service

Initial Accreditation date
1 September 1993

This certificate issued on
13 February 2013

UKAS is appointed as the sole national accreditation body for the UK by The Accreditation Regulations 2009 (SI No 3155/2009) and operates under a Memorandum of Understanding (MoU) with the Department for Business, Innovation and Skills (BIS).

Classification and Strength

Symbol	C - Clay (0 - containing organic matter)	M - Silt
	Plasticity	L - Low I - Intermediate H - High V - Very High E - Extremely High
I_p	Plasticity Index	
%	% Retained on 425 μ m sieve, shown under I_p value	
w_L	Liquid Limit	
w_p	Plastic Limit	
NP	Non-Plastic	
NAT	Sample tested in natural state	
w	Water Content	
P_d	Particle Density	
Test	Quick undrained triaxial tests	
	SS	Single stage - 102mm diameter.
	S3	Single stage - set of 3 38mm diameter.
	MS	Multistage - 102mm diameter.
	D	Drained Test
	HV	Hand Vane
	PP	Pocket Penetrometer (kg/cm ²)
	NST	Not suitable for test
γ_b	Bulk Density	
σ_3	Triaxial Cell Pressure	
$\sigma_1 - \sigma_3$	Deviator Stress	
##	Excessive Strain	
c_u	Undrained Cohesion	
c	Cohesion Intercept	
ϕ	Angle of Shearing Resistance	
Linear Shrink	Linear Shrinkage	

Consolidation

m_v	Coefficient of Volume Compressibility
c_{v50}	Coefficient of Consolidation - Log t
c_{v90}	Coefficient of Consolidation - \sqrt{t}

Rock

UF	Unacceptable Failure
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Chemical Analysis

Acid Soluble	Total sulphate in specimen, expressed as SO ₃ %, value in brackets expressed as SO ₄ %
Water Soluble	Soluble sulphate in 2:1 water : soil extract, expressed as SO ₃ g/l, value in brackets expressed as SO ₄ g/l
In Water	Sulphate content of groundwater, expressed as SO ₃ g/l, value in brackets expressed as SO ₄ g/l
pH	pH value
Organic content	Organic content expressed as a percentage of dry weight
Chloride	Chloride Ion content expressed as a percentage of dry weight

MCV, Compaction, CBR

MCV	Moisture Condition Value at natural water content
MCC	Moisture Condition Calibration
CCV	Chalk Crushing Value

Compaction

Type	2.5 = BS 2.5 kg Rammer
	4.5 = BS 4.5 kg Rammer
	V = BS Vibrating Hammer
γ_b	Bulk Density
γ_d	Dry Density

CBR California Bearing Ratio

Type	2.5 = Test on Specimen Recompacted using BS 2.5 kg Rammer
	4.5 = As above but using BS 4.5 kg Rammer
	V = As above but using BS Vibrating Hammer
	M = Test on open drive mould specimen cut in field
	S = Soaked Specimen
Top	CBR at top of mould
Bottom	CBR at bottom of mould
ND	None Detected

Tests performed in accordance with **BS 1377: Parts 1-9:1990** incorporating amendments where appropriate and **BS EN ISO 17892: Parts 1-2:2014**.

Schedule of Accreditation

Issued by

United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK



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Accredited to
ISO/IEC 17025:2005

Geotechnics Limited

Issue No: 014 Issue date: 17 June 2015

The Geotechnical Centre
203 Torrington Avenue
Tile Hill
Coventry
CV4 9AP

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E-Mail: lgriffin@geotechnics.co.uk
Website: www.geotechnics.co.uk

Testing performed at the above address only

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
AGGREGATES	Particle size distribution - sieving method	BS EN 933-1:2012
	Water content	BS EN 1097-5:2008
ROCK	Point load strength and anisotropy indices	ISRM Commission on Testing Methods.. Suggested Method for Determining Point Load Strength 1985
	Water content – method 1	International Society for Rock Mechanics – suggested methods, Part 1 Test 1: 1981
GEOTECHNICAL INVESTIGATION and TESTING - Laboratory testing of soil	Water content	BS EN ISO 17892-1:2014
	Bulk density - linear measurement method	BS EN ISO 17892-2:2014
SOILS for civil engineering purposes	Organic matter content	BS 1377-3:1990
	Mass loss on ignition	BS 1377-3:1990
	Sulphate content of soil and ground water gravimetric method	BS 1377-3:1990
	Water-soluble chloride content	BS 1377-3:1990
	pH value	BS 1377-3:1990
	California Bearing Ratio (CBR)	BS 1377-4:1990
	Unconfined compressive strength - load frame method	BS 1377-7:1990



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United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

Geotechnics Limited

Issue No: 014 Issue date: 17 June 2015

Testing performed at main address only

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
SOILS for civil engineering purposes (cont'd)	Undrained shear strength - triaxial compression without measurement of pore pressure	BS 1377-7:1990
	Undrained shear strength - triaxial compression with multistage loading and without measurement of pore pressure	BS 1377-7:1990
	Moisture content - oven drying method	BS 1377-2:1990
	Saturation moisture content of chalk	BS 1377-2:1990
	Liquid limit - cone penetrometer	BS 1377-2:1990
	Liquid limit - cone penetrometer - one point	BS 1377-2:1990
	Plastic limit	BS 1377-2:1990
	Plasticity index	BS 1377-2:1990
	Linear shrinkage	BS 1377-2:1990
	Density - linear measurement	BS 1377-2:1990
	Particle density - gas jar	BS 1377-2:1990
	Particle density - small pyknometer	BS 1377-2:1990
	Particle density - large pyknometer	BS 1377-2:1990
	Particle size distribution - wet sieving	BS 1377-2:1990
Particle size distribution - dry sieving	BS 1377-2:1990	
Particle size distribution - sedimentation - pipette method	BS 1377-2:1990	



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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
SOILS for civil engineering purposes (cont'd)	Dry density/moisture content relationship (2.5 kg rammer)	BS 1377-4:1990
	Dry density/moisture content relationship (4.5 kg rammer)	BS 1377-4:1990
	Dry density/moisture content relationship (vibrating hammer)	BS 1377-4:1990
	Maximum and minimum dry densities for granular soils	BS 1377-4:1990
	Moisture condition value (MCV)	BS 1377-4:1990
	MCV/moisture content relation	BS 1377-4:1990
	Chalk crushing value	BS 1377-4:1990
	One-dimensional consolidation properties	BS 1377-5:1990
	Shear strength - small shear box	BS1377: Part 7:1990
	Residual strength - small ring shear apparatus	BS1377: Part 7:1990
STABILIZED MATERIALS for civil engineering purposes - cement-stabilized and lime-stabilized materials	Initial consumption of lime	BS 1924-2:1990
	California Bearing Ratio (CBR)	BS 1924-2:1990
	Moisture content - oven drying method (definitive)	BS 1924-2:1990
	Plastic limit	BS 1924-2:1990
	Liquid limit	BS 1924-2:1990
	Plasticity index	BS 1924-2:1990
	Degree of pulverization	BS 1924-2:1990
	Dry density/moisture content relationship (2.5 kg rammer)	BS 1924-2:1990



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Issue No: 014 Issue date: 17 June 2015

Testing performed at main address only

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
STABILIZED MATERIALS for civil engineering purposes - cement-stabilized and lime- stabilized materials (cont'd)	Dry density/moisture content relationship (4.5 kg rammer)	BS 1924-2:1990
	Dry density/moisture content relationship (vibrating hammer - subsidiary method)	BS 1924-2:1990
	Moisture condition value (MCV)	BS 1924-2:1990
	MCV/moisture content relation	BS 1924-2:1990
END		



Appendix D
Chemical Laboratory Report

DRAFT





Jones Environmental Laboratory

Registered Address : Unit 3 Deeside Point, Zone 3, Deeside Industrial Park, Deeside, CH5 2UA. UK

Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

WYG
Geneva Building, Lake View Drive
Sherwood Business Park
Annesley
Nottingham
NG15 0ED

Tel: +44 (0) 1244 833780

Fax: +44 (0) 1244 833781



Attention : Emelye Towell
Date : 28th September, 2015
Your reference : A093275
Our reference : Test Report 15/12682 Batch 1
Location : A50 Dove Way, Uttoxeter
Date samples received : 12th September, 2015
Status : Final report
Issue : 1

Eight samples were received for analysis on 12th September, 2015 of which four were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Jones Environmental Laboratory

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	13-18	19-21	28-33	40-45															
Sample ID	P-WS04	P-WS04	P-WS01	P-WS01															
Depth	2.00	4.20	1.20	3.00															
COC No / misc																			
Containers	V J T	V J T	V J T	V J T															
Sample Date	11/09/2015	11/09/2015	11/09/2015	11/09/2015															
Sample Type	Soil	Soil	Soil	Soil															
Batch Number	1	1	1	1															
Date of Receipt	12/09/2015	12/09/2015	12/09/2015	12/09/2015															
												LOD/LOR	Units	Method No.					
PAH MS																			
Naphthalene ^{#M}	0.16	<0.04	<0.04	<0.04								<0.04	mg/kg	TM4/PM8					
Acenaphthylene	<0.03	<0.03	0.06	<0.03								<0.03	mg/kg	TM4/PM8					
Acenaphthene ^{#M}	0.06	<0.05	<0.05	<0.05								<0.05	mg/kg	TM4/PM8					
Fluorene ^{#M}	<0.04	<0.04	<0.04	<0.04								<0.04	mg/kg	TM4/PM8					
Phenanthrene ^{#M}	0.22	<0.03	0.16	<0.03								<0.03	mg/kg	TM4/PM8					
Anthracene [#]	0.06	<0.04	0.07	<0.04								<0.04	mg/kg	TM4/PM8					
Fluoranthene ^{#M}	0.19	<0.03	0.52	<0.03								<0.03	mg/kg	TM4/PM8					
Pyrene [#]	0.16	<0.03	0.46	<0.03								<0.03	mg/kg	TM4/PM8					
Benzo(a)anthracene [#]	0.11	<0.06	0.30	<0.06								<0.06	mg/kg	TM4/PM8					
Chrysene ^{#M}	0.10	<0.02	0.34	<0.02								<0.02	mg/kg	TM4/PM8					
Benzo(bk)fluoranthene ^{#M}	0.16	<0.07	0.60	<0.07								<0.07	mg/kg	TM4/PM8					
Benzo(a)pyrene [#]	0.10	<0.04	0.36	<0.04								<0.04	mg/kg	TM4/PM8					
Indeno(123cd)pyrene ^{#M}	0.05	<0.04	0.26	<0.04								<0.04	mg/kg	TM4/PM8					
Dibenzo(ah)anthracene [#]	<0.04	<0.04	0.06	<0.04								<0.04	mg/kg	TM4/PM8					
Benzo(ghi)perylene [#]	0.06	<0.04	0.25	<0.04								<0.04	mg/kg	TM4/PM8					
Coronene	<0.04	-	0.06	-								<0.04	mg/kg	TM4/PM8					
PAH 16 Total	1.4	<0.6	-	<0.6								<0.6	mg/kg	TM4/PM8					
PAH 17 Total	1.43	-	3.50	-								<0.64	mg/kg	TM4/PM8					
Benzo(b)fluoranthene	0.12	<0.05	0.43	<0.05								<0.05	mg/kg	TM4/PM8					
Benzo(k)fluoranthene	0.04	<0.02	0.17	<0.02								<0.02	mg/kg	TM4/PM8					
PAH Surrogate % Recovery	86	93	97	96								<0	%	TM4/PM8					
Mineral Oil (C10-C40)																			
	304	-	<30	-								<30	mg/kg	TM5/PM16					
TPH CWG																			
Aliphatics																			
>C5-C6 ^{#M}	<0.1	<0.1	-	<0.1								<0.1	mg/kg	TM36/PM12					
>C6-C8 ^{#M}	<0.1	<0.1	-	<0.1								<0.1	mg/kg	TM36/PM12					
>C8-C10	0.4	<0.1	-	<0.1								<0.1	mg/kg	TM36/PM12					
>C10-C12 ^{#M}	101.0	<0.2	-	<0.2								<0.2	mg/kg	TM5/PM16					
>C12-C16 ^{#M}	46	<4	-	<4								<4	mg/kg	TM5/PM16					
>C16-C21 ^{#M}	<7	<7	-	<7								<7	mg/kg	TM5/PM16					
>C21-C35 ^{#M}	118	<7	-	<7								<7	mg/kg	TM5/PM16					
>C35-C44	17	<7	-	<7								<7	mg/kg	TM5/PM16					
Total aliphatics C5-44	282	<26	-	<26								<26	mg/kg	TM5/TM36/PM16					

Please see attached notes for all abbreviations and acronyms

Jones Environmental Laboratory

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	13-18	19-21	28-33	40-45							Please see attached notes for all abbreviations and acronyms			
Sample ID	P-WS04	P-WS04	P-WS01	P-WS01										
Depth	2.00	4.20	1.20	3.00										
COC No / misc														
Containers	V J T	V J T	V J T	V J T										
Sample Date	11/09/2015	11/09/2015	11/09/2015	11/09/2015										
Sample Type	Soil	Soil	Soil	Soil										
Batch Number	1	1	1	1										
Date of Receipt	12/09/2015	12/09/2015	12/09/2015	12/09/2015								LOD/LOR	Units	Method No.
TPH CWG														
Aromatics														
>C5-EC7	<0.1	<0.1	-	<0.1								<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	<0.1	-	<0.1								<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{##}	<0.1	<0.1	-	<0.1								<0.1	mg/kg	TM36/PM12
>EC10-EC12	16.8	<0.2	-	<0.2								<0.2	mg/kg	TM5/PM16
>EC12-EC16	11	<4	-	<4								<4	mg/kg	TM5/PM16
>EC16-EC21	15	<7	-	<7								<7	mg/kg	TM5/PM16
>EC21-EC35	108	<7	-	<7								<7	mg/kg	TM5/PM16
>EC35-EC44	11	<7	-	<7								<7	mg/kg	TM5/PM16
Total aromatics C5-44	162	<26	-	<26								<26	mg/kg	TM5/TM36/PM16
Total aliphatics and aromatics(C5-44)	444	<52	-	<52								<52	mg/kg	TM5/TM36/PM16
MTBE [#]	<5	<5	<5	<5								<5	ug/kg	TM31/PM12
Benzene [#]	<5	<5	<5	<5								<5	ug/kg	TM31/PM12
Toluene [#]	<5	<5	<5	<5								<5	ug/kg	TM31/PM12
Ethylbenzene [#]	<5	<5	<5	<5								<5	ug/kg	TM31/PM12
m/p-Xylene [#]	31	<5	<5	<5								<5	ug/kg	TM31/PM12
o-Xylene [#]	<5	<5	<5	<5								<5	ug/kg	TM31/PM12
PCB 28 [#]	<5	-	<5	-								<5	ug/kg	TM17/PM8
PCB 52 [#]	<5	-	<5	-								<5	ug/kg	TM17/PM8
PCB 101 [#]	<5	-	<5	-								<5	ug/kg	TM17/PM8
PCB 118 [#]	<5	-	<5	-								<5	ug/kg	TM17/PM8
PCB 138 [#]	<5	-	<5	-								<5	ug/kg	TM17/PM8
PCB 153 [#]	<5	-	<5	-								<5	ug/kg	TM17/PM8
PCB 180 [#]	<5	-	<5	-								<5	ug/kg	TM17/PM8
Total 7 PCBs [#]	<35	-	<35	-								<35	ug/kg	TM17/PM8
Phenol ^{##}	<0.01	<0.01	-	<0.01								<0.01	mg/kg	TM26/PM21
Natural Moisture Content	-	22.8	17.3	23.8								<0.1	%	PM4/PM0
Natural Moisture Content	24.4	-	-	-								<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	<0.3	-	<0.3								<0.3	mg/kg	TM38/PM20
Free Cyanide	<0.5	<0.5	-	<0.5								<0.5	mg/kg	TM89/PM45
Total Organic Carbon [#]	NDP	-	3.69	-								<0.02	%	TM21/PM24
Fraction Organic Carbon	NDP	0.003	-	0.003								<0.001	None	TM21/PM24
ANC at pH4	0.64	-	0.13	-								<0.03	mol/kg	TM77/PM0
ANC at pH7	NDP	-	<0.03	-								<0.03	mol/kg	TM77/PM0
Loss on Ignition [#]	NDP	-	8.1	-								<1.0	%	TM22/PM0

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	26.9		
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	78.8		
Particle Size <4mm =	>95%				
JEFL Job No	15/12682		Landfill Waste Acceptance Criteria Limits		
Sample No	17		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample No	P-WS04				
Depth/Other	2.00				
Sample Date	11/09/2015				
Batch No	1				
Solid Waste Analysis					
Total Organic Carbon (%)	NDP		3	5	6
Loss on Ignition (%)	NDP		-	-	10
Sum of BTEX (mg/kg)	0.031		6	-	-
Sum of 7 PCBs (mg/kg)	<0.035		1	-	-
Mineral Oil (mg/kg)	304		500	-	-
PAH Sum of 17(mg/kg)	1.43		100	-	-
pH (pH Units)	7.49		-	>6	-
ANC to pH 7 (mol/kg)	NDP		-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	0.64		-	to be evaluated	to be evaluated
Eluate Analysis	10:1 concⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg		
	C₁₀	A₁₀	mg/kg		
	mg/l	mg/kg			
Arsenic	<0.0025	<0.025	0.5	2	25
Barium	0.045	0.45	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	<0.0015	<0.015	0.5	10	70
Copper	<0.007	<0.07	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.038	0.38	0.5	10	30
Nickel	0.009	0.09	0.4	10	40
Lead	<0.005	<0.05	0.5	10	50
Antimony	0.006	0.06	0.06	0.7	5
Selenium	<0.003	<0.03	0.1	0.5	7
Zinc	0.011	0.11	4	50	200
Chloride	1.0	10	800	15000	25000
Fluoride	<0.3	<3	10	150	500
Sulphate as SO4	525.68	5258.0	1000	20000	50000
Total Dissolved Solids	843	8432	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	3	30	500	800	1000

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	25.8		
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	79.5		
Particle Size <4mm =	>95%				
JEFL Job No	15/12682		Landfill Waste Acceptance Criteria Limits		
Sample No	32		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample No	P-WS01				
Depth/Other	1.20				
Sample Date	11/09/2015				
Batch No	1				
Solid Waste Analysis					
Total Organic Carbon (%)	3.69		3	5	6
Loss on Ignition (%)	8.1		-	-	10
Sum of BTEX (mg/kg)	<0.025		6	-	-
Sum of 7 PCBs (mg/kg)	<0.035		1	-	-
Mineral Oil (mg/kg)	<30		500	-	-
PAH Sum of 17(mg/kg)	3.50		100	-	-
pH (pH Units)	7.78		-	>6	-
ANC to pH 7 (mol/kg)	<0.03		-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	0.13		-	to be evaluated	to be evaluated
Eluate Analysis	10:1 concⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg		
	C₁₀	A₁₀	mg/kg		
	mg/l	mg/kg			
Arsenic	<0.0025	<0.025	0.5	2	25
Barium	0.062	0.62	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	<0.0015	<0.015	0.5	10	70
Copper	<0.007	<0.07	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.005	0.05	0.5	10	30
Nickel	<0.002	<0.02	0.4	10	40
Lead	<0.005	<0.05	0.5	10	50
Antimony	<0.002	<0.02	0.06	0.7	5
Selenium	<0.003	<0.03	0.1	0.5	7
Zinc	0.005	0.05	4	50	200
Chloride	0.6	6	800	15000	25000
Fluoride	0.5	5	10	150	500
Sulphate as SO4	10.13	101.3	1000	20000	50000
Total Dissolved Solids	155	1550	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	8	80	500	800	1000

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
15/12682	1	P-WS04	2.00	15	18/09/2015	Mass of Dry Sample	44.3 (g)
					18/09/2015	General Description (Bulk Analysis)	Soil-Silt/Clay/Brick/Stone
					18/09/2015	Asbestos Containing Material	Fibre Bundles
					18/09/2015	Asbestos Screen	Chrysotile
					18/09/2015	Asbestos Level	Quantifiable
					22/09/2015	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					22/09/2015	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
15/12682	1	P-WS04	4.20	20	18/09/2015	Mass of Dry Sample	48.9 (g)
					18/09/2015	General Description (Bulk Analysis)	Soil/Stone
					18/09/2015	Asbestos Containing Material	None
					18/09/2015	Asbestos Containing Material (2)	None
					18/09/2015	Asbestos Screen	NAD
					18/09/2015	Asbestos Screen (2)	NAD
					18/09/2015	Asbestos Level	NAD
15/12682	1	P-WS01	3.00	42	18/09/2015	Mass of Dry Sample	50.1 (g)
					18/09/2015	General Description (Bulk Analysis)	Soil/Stone
					18/09/2015	Asbestos Containing Material	None
					18/09/2015	Asbestos Containing Material (2)	None
					18/09/2015	Asbestos Screen	NAD
					18/09/2015	Asbestos Screen (2)	NAD
					18/09/2015	Asbestos Level	NAD

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 15/12682						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 15/12682

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 (UKAS) accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	Yes
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM17	Modified US EPA method 8270. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM20	Modified USEPA 8163. Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.			AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM22	Modified USEPA 160.4. Gravimetric determination of Loss on Ignition by temperature controlled Muffle Furnace (450°C)	PM0	No preparation is required.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.	Yes	Yes	AR	Yes
TM27	Modified US EPA method 9056. Determination of water soluble anions using Dionex (Ion-Chromatography).	PM0	No preparation is required.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM17	Modified method EN12457-2 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.	Yes		AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM60	Modified USEPA 9060. Determination of TOC by calculation from Total Carbon and Inorganic Carbon using a TOC analyser, the carbon in the sample is converted to CO2 and then passed through a non-dispersive infrared gas analyser (NDIR).	PM0	No preparation is required.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM77	Modified DDCEN/TS method 15364:2006. Determination of Acid Neutralization Capacity by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	No
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	



Jones Environmental Laboratory

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Attention : Emelye Towell
Date : 28th September, 2015
Your reference : A093275
Our reference : Test Report 15/12682 Batch 2
Location : A50 Dove Way, Uttoxeter
Date samples received : 12th September, 2015
Status : Final report
Issue : 1

Ten samples were received for analysis on 12th September, 2015 of which four were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid
Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	52-57				76-81				88-93				100-105				LOD/LOR	Units	Method No.	
	Sample ID	BHC			BHB			BHD			BHD									
Depth	1.20				2.00				2.80				1.20							
COC No / misc																				
Containers	V J T				V J T				V J T				V J T							
Sample Date	10/09/2015				10/09/2015				09/09/2015				09/09/2015							
Sample Type	Soil				Soil				Soil				Soil							
Batch Number	2				2				2				2							
Date of Receipt	12/09/2015				12/09/2015				12/09/2015				12/09/2015							
Arsenic #M	-	4.2	2.3	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM15		
Arsenic	36.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62		
Beryllium	-	1.1	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM15		
Beryllium	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62		
Cadmium #M	-	0.2	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM15		
Cadmium	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62		
Chromium #M	-	59.2	111.0	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM15		
Chromium	60.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62		
Copper #M	-	11	6	-	-	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM15		
Copper	269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62		
Lead #M	-	15	9	-	-	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM15		
Lead	813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62		
Mercury #M	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM15		
Mercury	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62		
Nickel #M	-	29.7	13.2	-	-	-	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM15		
Nickel	71.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62		
Selenium #M	-	1	<1	-	-	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM15		
Selenium	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62		
Vanadium	-	33	13	-	-	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM15		
Vanadium	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62		
Water Soluble Boron #M	-	5.9	2.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM32		
Water Soluble Boron	7.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61		
Zinc #M	-	96	28	-	-	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM15		
Zinc	315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62		

Please see attached notes for all abbreviations and acronyms

Jones Environmental Laboratory

Client Name: WYG
 Reference: A093275
 Location: A50 Dove Way, Uttoxeter
 Contact: Emelye Towell
 JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	52-57	76-81	88-93	100-105														
Sample ID	BHC	BHB	BHD	BHD														
Depth	1.20	2.00	2.80	1.20														
COC No / misc																		
Containers	V J T	V J T	V J T	V J T														
Sample Date	10/09/2015	10/09/2015	09/09/2015	09/09/2015														
Sample Type	Soil	Soil	Soil	Soil														
Batch Number	2	2	2	2														
Date of Receipt	12/09/2015	12/09/2015	12/09/2015	12/09/2015														
											LOD/LOR	Units	Method No.					
PAH MS																		
Naphthalene #M	<0.04	<0.04	<0.04	0.15														
Acenaphthylene	<0.03	<0.03	<0.03	0.05														
Acenaphthene #M	<0.05	<0.05	<0.05	<0.05														
Fluorene #M	<0.04	<0.04	<0.04	<0.04														
Phenanthrene #M	0.08	<0.03	0.06	0.22														
Anthracene #	0.06	<0.04	<0.04	0.06														
Fluoranthene #M	0.33	<0.03	0.11	0.48														
Pyrene #	0.32	<0.03	0.09	0.41														
Benzo(a)anthracene #	0.28	<0.06	<0.06	0.22														
Chrysene #M	0.26	<0.02	0.05	0.29														
Benzo(bk)fluoranthene #M	0.55	<0.07	<0.07	0.50														
Benzo(a)pyrene #	0.36	<0.04	0.05	0.30														
Indeno(123cd)pyrene #M	0.22	<0.04	<0.04	0.21														
Dibenzo(ah)anthracene #	<0.04	<0.04	<0.04	0.06														
Benzo(ghi)perylene #	0.23	<0.04	<0.04	0.21														
Coronene	-	-	-	0.05														
PAH 16 Total	2.7	<0.6	<0.6	-														
PAH 17 Total	-	-	-	3.21														
Benzo(b)fluoranthene	0.40	<0.05	<0.05	0.36														
Benzo(k)fluoranthene	0.15	<0.02	<0.02	0.14														
PAH Surrogate % Recovery	96	94	102	106														
Mineral Oil (C10-C40)	-	-	-	<30														
TPH CWG																		
Aliphatics																		
>C5-C6 #M	<0.1	<0.1	<0.1	-														
>C6-C8 #M	<0.1	<0.1	<0.1	-														
>C8-C10	0.6	<0.1	2.7	-														
>C10-C12 #M	<0.2	<0.2	<0.2	-														
>C12-C16 #M	<4	<4	<4	-														
>C16-C21 #M	11	<7	<7	-														
>C21-C35 #M	39	<7	<7	-														
>C35-C44	<7	<7	<7	-														
Total aliphatics C5-44	51	<26	<26	-														

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttuxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

JE Sample No.	52-57	76-81	88-93	100-105										
Sample ID	BHC	BHB	BHD	BHD										
Depth	1.20	2.00	2.80	1.20										
COC No / misc														
Containers	V J T	V J T	V J T	V J T										
Sample Date	10/09/2015	10/09/2015	09/09/2015	09/09/2015										
Sample Type	Soil	Soil	Soil	Soil										
Batch Number	2	2	2	2										
Date of Receipt	12/09/2015	12/09/2015	12/09/2015	12/09/2015										
												LOD/LOR	Units	Method No.
TPH CWG														
Aromatics														
>C5-EC7	<0.1	<0.1	<0.1	-								<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	<0.1	<0.1	-								<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1	<0.1	-								<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	<0.2	<0.2	-								<0.2	mg/kg	TM5/PM16
>EC12-EC16	<4	<4	<4	-								<4	mg/kg	TM5/PM16
>EC16-EC21	<7	<7	<7	-								<7	mg/kg	TM5/PM16
>EC21-EC35	47	<7	<7	-								<7	mg/kg	TM5/PM16
>EC35-EC44	<7	<7	<7	-								<7	mg/kg	TM5/PM16
Total aromatics C5-44	47	<26	<26	-								<26	mg/kg	TM5/TM36/PM16
Total aliphatics and aromatics(C5-44)	98	<52	<52	-								<52	mg/kg	TM5/TM36/PM16
MTBE [#]	<5	<5	<5	<5								<5	ug/kg	TM31/PM12
Benzene [#]	<5	<5	<5	<5								<5	ug/kg	TM31/PM12
Toluene [#]	<5	<5	<5	<5								<5	ug/kg	TM31/PM12
Ethylbenzene [#]	<5	<5	<5	<5								<5	ug/kg	TM31/PM12
m/p-Xylene [#]	10	<5	<5	<5								<5	ug/kg	TM31/PM12
o-Xylene [#]	8	<5	<5	<5								<5	ug/kg	TM31/PM12
PCB 28 [#]	-	-	-	<5								<5	ug/kg	TM17/PM8
PCB 52 [#]	-	-	-	<5								<5	ug/kg	TM17/PM8
PCB 101 [#]	-	-	-	<5								<5	ug/kg	TM17/PM8
PCB 118 [#]	-	-	-	<5								<5	ug/kg	TM17/PM8
PCB 138 [#]	-	-	-	<5								<5	ug/kg	TM17/PM8
PCB 153 [#]	-	-	-	<5								<5	ug/kg	TM17/PM8
PCB 180 [#]	-	-	-	<5								<5	ug/kg	TM17/PM8
Total 7 PCBs [#]	-	-	-	<35								<35	ug/kg	TM17/PM8
Phenol ^{#M}	<0.01	<0.01	<0.01	-								<0.01	mg/kg	TM26/PM21
Natural Moisture Content	-	18.3	7.0	16.0								<0.1	%	PM4/PM0
Natural Moisture Content	38.2	-	-	-								<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	<0.3	<0.3	-								<0.3	mg/kg	TM38/PM20
Free Cyanide	<0.5	<0.5	<0.5	-								<0.5	mg/kg	TM89/PM45
Total Organic Carbon [#]	-	-	-	8.96								<0.02	%	TM21/PM24
Fraction Organic Carbon	NDP	0.004	0.002	-								<0.001	None	TM21/PM24
ANC at pH4	-	-	-	0.15								<0.03	mol/kg	TM77/PM0
ANC at pH7	-	-	-	<0.03								<0.03	mol/kg	TM77/PM0
Loss on Ignition [#]	-	-	-	14.7								<1.0	%	TM22/PM0

Please see attached notes for all abbreviations and acronyms

Jones Environmental Laboratory

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	52-57	76-81	88-93	100-105							Please see attached notes for all abbreviations and acronyms				
Sample ID	BHC	BHB	BHD	BHD											
Depth	1.20	2.00	2.80	1.20											
COC No / misc															
Containers	V J T	V J T	V J T	V J T											
Sample Date	10/09/2015	10/09/2015	09/09/2015	09/09/2015											
Sample Type	Soil	Soil	Soil	Soil											
Batch Number	2	2	2	2											
Date of Receipt	12/09/2015	12/09/2015	12/09/2015	12/09/2015											
												LOD/LOR	Units	Method No.	
pH #M	7.23	7.01	7.85	7.44								<0.01	pH units	TM73/PM11	
Sample Type	Clayey Loam	Clay	Clayey Sand	Loam									None	PM13/PM0	
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Dark Brown									None	PM13/PM0	
Other Items	vegetation,grass	stones	stones	vegetation,grass,stones									None	PM13/PM0	

Jones Environmental Laboratory

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : CEN 10:1 1 Batch

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	88-93													
Sample ID	BHD													
Depth	2.80													
COC No / misc														
Containers	V J T													
Sample Date	09/09/2015													
Sample Type	Soil													
Batch Number	2													
Date of Receipt	12/09/2015													
										LOD/LOR	Units	Method No.		
Phenol	<0.5									<0.5	ug/l	TM26/PM0		
Sulphate #	28.02									<0.05	mg/l	TM38/PM0		
Ammoniacal Nitrogen as NH4 #	0.05									<0.03	mg/l	TM38/PM0		
Mass of raw test portion	0.0981										kg	NONE/PM17		
Leachant Volume	0.892										l	NONE/PM17		
pH	6.89									<0.01	pH units	TM73/PM0		
Total Alkalinity as CaCO3	92									<1	mg/l	TM75/PM0		

Please see attached notes for all abbreviations and acronyms

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	16.3
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	86.0
Particle Size <4mm =	>95%		
JEFL Job No	15/12682		Landfill Waste Acceptance Criteria Limits
Sample No	104		
Client Sample No	BHD		
Depth/Other	1.20		
Sample Date	09/09/2015		
Batch No	2		
Solid Waste Analysis			
Total Organic Carbon (%)	8.96		Inert Waste Landfill: 3
Loss on Ignition (%)	14.7		Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill: 5
Sum of BTEX (mg/kg)	<0.025		Hazardous Waste Landfill: 6
Sum of 7 PCBs (mg/kg)	<0.035		
Mineral Oil (mg/kg)	<30		
PAH Sum of 17(mg/kg)	3.21		
pH (pH Units)	7.44		
ANC to pH 7 (mol/kg)	<0.03		
ANC to pH 4 (mol/kg)	0.15		
Eluate Analysis	10:1 concⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg
	C₁₀	A₁₀	
	mg/l	mg/kg	mg/kg
Arsenic	<0.0025	<0.025	0.5, 2, 25
Barium	0.103	1.03	20, 100, 300
Cadmium	<0.0005	<0.005	0.04, 1, 5
Chromium	<0.0015	<0.015	0.5, 10, 70
Copper	0.009	0.09	2, 50, 100
Mercury	<0.001	<0.01	0.01, 0.2, 2
Molybdenum	0.008	0.08	0.5, 10, 30
Nickel	<0.002	<0.02	0.4, 10, 40
Lead	<0.005	<0.05	0.5, 10, 50
Antimony	0.004	0.04	0.06, 0.7, 5
Selenium	<0.003	<0.03	0.1, 0.5, 7
Zinc	0.008	0.08	4, 50, 200
Chloride	0.8	8	800, 15000, 25000
Fluoride	0.4	4	10, 150, 500
Sulphate as SO4	8.78	87.8	1000, 20000, 50000
Total Dissolved Solids	149	1489	4000, 60000, 100000
Phenol	<0.01	<0.1	1, -, -
Dissolved Organic Carbon	8	80	500, 800, 1000

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
15/12682	2	BHC	1.20	54	18/09/2015	Mass of Dry Sample	38.2 (g)
					18/09/2015	General Description (Bulk Analysis)	Soil-Silt/Clay/Brick/Stone
					18/09/2015	Asbestos Containing Material	Fibre Bundles
					18/09/2015	Asbestos Screen	Chrysotile
					18/09/2015	Asbestos Level	Quantifiable
					22/09/2015	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					22/09/2015	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
15/12682	2	BHB	2.00	78	18/09/2015	Mass of Dry Sample	51.6 (g)
					18/09/2015	General Description (Bulk Analysis)	Soil-Silt/Clay/Brick/Stone
					18/09/2015	Asbestos Containing Material	None
					18/09/2015	Asbestos Screen	NAD
					18/09/2015	Asbestos Level	NAD
15/12682	2	BHD	2.80	90	18/09/2015	Mass of Dry Sample	56.3 (g)
					18/09/2015	General Description (Bulk Analysis)	Soil-Silt/Clay/Brick/Stone
					18/09/2015	Asbestos Containing Material	None
					18/09/2015	Asbestos Screen	NAD
					18/09/2015	Asbestos Level	NAD

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 15/12682						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 15/12682

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 (UKAS) accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	Yes
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.			AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM17	Modified US EPA method 8270. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM20	Modified USEPA 8163. Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.			AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM22	Modified USEPA 160.4. Gravimetric determination of Loss on Ignition by temperature controlled Muffle Furnace (450°C)	PM0	No preparation is required.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.	Yes	Yes	AR	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM27	Modified US EPA method 9056.Determination of water soluble anions using Dionex (Ion-Chromatography).	PM0	No preparation is required.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM14	Analysis of waters and leachates for metals by ICP OES. Samples are filtered for dissolved metals and acidified if required.	Yes		AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM17	Modified method EN12457-2 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.	Yes		AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM69	Modified BS EN 12457 method. One part soil is mixed with 10 parts water in a vial leaving no headspace. The mixture is shaken and then left to leach for 24 hours before VOC analysis.			AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM60	Modified USEPA 9060. Determination of TOC by calculation from Total Carbon and Inorganic Carbon using a TOC analyser, the carbon in the sample is converted to CO2 and then passed through a non-dispersive infrared gas analyser (NDIR).	PM0	No preparation is required.			AR	Yes
TM61	Modified US EPA methods 245.7 and 200.7. Determination of Mercury by Cold Vapour Atomic Fluorescence.	PM38	Samples are brominated to reduce all mercury compounds to Mercury (II) which is analysed using method TM061.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	Yes
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM75	Modified US EPA method 310.1. Determination of Alkalinity by Metrohm automated titration analyser.	PM0	No preparation is required.			AR	Yes
TM77	Modified DDCEN/TS method 15364:2006. Determination of Acid Neutralization Capacity by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	No
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
NONE	No Method Code	PM17	Modified method EN12457-2 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.				
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	



Jones Environmental Laboratory

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Attention : Emelye Towell
Date : 24th September, 2015
Your reference : A093275
Our reference : Test Report 15/12682 Batch 3
Location : A50 Dove Way, Uttoxeter
Date samples received : 12th September, 2015
Status : Final report
Issue : 1

Eleven samples were received for analysis on 12th September, 2015 of which nine were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied. All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Bruce Leslie
Project Co-ordinator

Jones Environmental Laboratory

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	106-111	112-116	123-128	129-134	135-137	138-140	144-146	147-149	150-152				
Sample ID	TP17	TP21	TP18	TP16	TP14	TP14	TP15	TP19	TP19				
Depth	0.10-0.40	0.10-0.40	0.10-0.40	0.10-0.40	0.10	0.20-0.40	0.20-0.40	0.10-0.25	0.25-0.40				
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T				
Sample Date	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	3	3	3	3	3	3	3	3	3				
Date of Receipt	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015				
										LOD/LOR	Units	Method No.	
Arsenic ^{#M}	22.8	10.7	11.5	14.8	14.7	16.0	11.4	46.5	72.2	<0.5	mg/kg	TM30/PM15	
Beryllium	2.5	1.8	2.5	2.2	2.1	1.4	2.1	5.5	6.7	<0.5	mg/kg	TM30/PM15	
Cadmium ^{#M}	0.2	1.9	1.7	3.7	2.1	2.9	0.9	0.6	<0.1	<0.1	mg/kg	TM30/PM15	
Chromium ^{#M}	58.1	113.6	85.0	97.3	73.6	91.8	80.2	67.7	70.9	<0.5	mg/kg	TM30/PM15	
Copper ^{#M}	129	221	88	115	149	247	78	163	213	<1	mg/kg	TM30/PM15	
Lead ^{#M}	143	142	133	144	127	33	165	213	226	<5	mg/kg	TM30/PM15	
Mercury ^{#M}	<0.1	0.4	0.6	0.3	0.5	<0.1	0.2	0.6	0.1	<0.1	mg/kg	TM30/PM15	
Nickel ^{#M}	28.7	34.4	35.0	37.8	42.9	52.1	27.7	62.0	75.9	<0.7	mg/kg	TM30/PM15	
Selenium ^{#M}	1	3	3	2	2	2	3	2	2	<1	mg/kg	TM30/PM15	
Vanadium	25	41	48	35	46	23	37	69	59	<1	mg/kg	TM30/PM15	
Water Soluble Boron ^{#M}	2.0	1.4	1.9	1.5	1.4	1.0	1.5	2.8	4.1	<0.1	mg/kg	TM74/PM32	
Zinc ^{#M}	180	239	283	270	284	150	251	463	508	<5	mg/kg	TM30/PM15	
PAH MS													
Naphthalene ^{#M}	0.43	0.15	0.07	0.06	0.16	0.31	0.10	0.09	0.09	<0.04	mg/kg	TM4/PM8	
Acenaphthylene	<0.03	<0.03	0.07	0.04	0.09	<0.03	0.36	0.11	0.14	<0.03	mg/kg	TM4/PM8	
Acenaphthene ^{#M}	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.14	<0.05	<0.05	<0.05	mg/kg	TM4/PM8	
Fluorene ^{#M}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.16	<0.04	<0.04	<0.04	mg/kg	TM4/PM8	
Phenanthrene ^{#M}	0.25	0.25	0.60	0.52	0.34	0.29	3.06	0.36	0.18	<0.03	mg/kg	TM4/PM8	
Anthracene #	<0.04	0.06	0.23	0.17	0.15	<0.04	1.18	0.19	0.20	<0.04	mg/kg	TM4/PM8	
Fluoranthene ^{#M}	0.12	0.37	1.97	1.18	1.18	0.17	8.51	1.21	0.45	<0.03	mg/kg	TM4/PM8	
Pyrene #	0.11	0.31	1.65	0.91	1.24	0.17	6.85	1.01	0.42	<0.03	mg/kg	TM4/PM8	
Benzo(a)anthracene #	0.08	0.16	1.00	0.53	0.66	0.09	3.77	0.65	0.58	<0.06	mg/kg	TM4/PM8	
Chrysene ^{#M}	0.07	0.19	1.09	0.57	0.78	0.12	4.00	0.66	0.41	<0.02	mg/kg	TM4/PM8	
Benzo(bk)fluoranthene ^{#M}	0.11	0.31	2.05	1.00	1.75	0.17	6.80	1.26	0.82	<0.07	mg/kg	TM4/PM8	
Benzo(a)pyrene #	0.06	0.21	1.22	0.63	1.19	0.10	4.53	0.80	0.48	<0.04	mg/kg	TM4/PM8	
Indeno(123cd)pyrene ^{#M}	0.05	0.13	0.85	0.39	0.78	0.07	2.74	0.51	0.34	<0.04	mg/kg	TM4/PM8	
Dibenzo(ah)anthracene #	<0.04	<0.04	0.14	0.08	0.08	<0.04	0.31	0.08	0.06	<0.04	mg/kg	TM4/PM8	
Benzo(ghi)perylene #	0.05	0.12	0.78	0.36	0.74	0.06	2.36	0.49	0.39	<0.04	mg/kg	TM4/PM8	
Coronene	<0.04	-	-	-	-	-	-	-	-	<0.04	mg/kg	TM4/PM8	
PAH 16 Total	1.3	2.3	11.7	6.4	9.1	1.6	44.9	7.4	4.6	<0.6	mg/kg	TM4/PM8	
PAH 17 Total	1.33	-	-	-	-	-	-	-	-	<0.64	mg/kg	TM4/PM8	
Benzo(b)fluoranthene	0.08	0.22	1.48	0.72	1.26	0.12	4.90	0.91	0.59	<0.05	mg/kg	TM4/PM8	
Benzo(k)fluoranthene	0.03	0.09	0.57	0.28	0.49	0.05	1.90	0.35	0.23	<0.02	mg/kg	TM4/PM8	
PAH Surrogate % Recovery	106	105	112	103	103	107	104	102	103	<0	%	TM4/PM8	
EPH (C8-C40) ^{#M}	349	319	362	251	-	1844	-	415	471	<30	mg/kg	TM5/PM8	
Mineral Oil (C10-C40)	86	-	-	-	-	-	-	-	-	<30	mg/kg	TM5/PM16	

Please see attached notes for all abbreviations and acronyms

Jones Environmental Laboratory

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	106-111	112-116	123-128	129-134	135-137	138-140	144-146	147-149	150-152				
Sample ID	TP17	TP21	TP18	TP16	TP14	TP14	TP15	TP19	TP19				
Depth	0.10-0.40	0.10-0.40	0.10-0.40	0.10-0.40	0.10	0.20-0.40	0.20-0.40	0.10-0.25	0.25-0.40				
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T				
Sample Date	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	3	3	3	3	3	3	3	3	3				
Date of Receipt	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015				
										LOD/LOR	Units	Method No.	
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	-	-	-	-	<0.1	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12	
>C6-C8 ^{#M}	-	-	-	-	<0.1	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12	
>C8-C10	-	-	-	-	<0.1	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12	
>C10-C12 ^{#M}	-	-	-	-	<0.2	-	<0.2	-	-	<0.2	mg/kg	TM5/PM16	
>C12-C16 ^{#M}	-	-	-	-	<4	-	<4	-	-	<4	mg/kg	TM5/PM16	
>C16-C21 ^{#M}	-	-	-	-	8	-	<7	-	-	<7	mg/kg	TM5/PM16	
>C21-C35 ^{#M}	-	-	-	-	27	-	21	-	-	<7	mg/kg	TM5/PM16	
>C35-C44	-	-	-	-	<7	-	<7	-	-	<7	mg/kg	TM5/PM16	
Total aliphatics C5-44	-	-	-	-	35	-	<26	-	-	<26	mg/kg	TM5/TM36/PM16	
Aromatics													
>C5-EC7	-	-	-	-	<0.1	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12	
>EC7-EC8	-	-	-	-	<0.1	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12	
>EC8-EC10 ^{#M}	-	-	-	-	<0.1	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12	
>EC10-EC12	-	-	-	-	<0.2	-	<0.2	-	-	<0.2	mg/kg	TM5/PM16	
>EC12-EC16	-	-	-	-	<4	-	<4	-	-	<4	mg/kg	TM5/PM16	
>EC16-EC21	-	-	-	-	14	-	105	-	-	<7	mg/kg	TM5/PM16	
>EC21-EC35	-	-	-	-	101	-	320	-	-	<7	mg/kg	TM5/PM16	
>EC35-EC44	-	-	-	-	10	-	16	-	-	<7	mg/kg	TM5/PM16	
Total aromatics C5-44	-	-	-	-	125	-	441	-	-	<26	mg/kg	TM5/TM36/PM16	
Total aliphatics and aromatics(C5-44)	-	-	-	-	160	-	441	-	-	<52	mg/kg	TM5/TM36/PM16	
GRO (>C4-C8) ^{#M}	<100 ^{SV}	<100	<100	<100 ^{SV}	-	<100	-	<100 ^{SV}	<100 ^{SV}	<100	ug/kg	TM36/PM12	
GRO (>C8-C12) ^{#M}	<100 ^{SV}	<100	<100	<100 ^{SV}	-	<100	-	<100 ^{SV}	<100 ^{SV}	<100	ug/kg	TM36/PM12	
GRO (>C4-12) ^{#M}	<100 ^{SV}	<100	<100	<100 ^{SV}	-	<100	-	<100 ^{SV}	<100 ^{SV}	<100	ug/kg	TM36/PM12	
MTBE [#]	<5 ^{SV}	<5	<5	<5 ^{SV}	<5	<5	<5	<5 ^{SV}	<5 ^{SV}	<5	ug/kg	TM31/PM12	
Benzene [#]	<5 ^{SV}	<5	<5	<5 ^{SV}	<5	<5	<5	<5 ^{SV}	<5 ^{SV}	<5	ug/kg	TM31/PM12	
Toluene [#]	<5 ^{SV}	<5	<5	<5 ^{SV}	<5	<5	<5	<5 ^{SV}	<5 ^{SV}	<5	ug/kg	TM31/PM12	
Ethylbenzene [#]	<5 ^{SV}	<5	<5	<5 ^{SV}	<5	<5	<5	<5 ^{SV}	<5 ^{SV}	<5	ug/kg	TM31/PM12	
m/p-Xylene [#]	<5 ^{SV}	<5	<5	<5 ^{SV}	<5	<5	<5	<5 ^{SV}	<5 ^{SV}	<5	ug/kg	TM31/PM12	
o-Xylene [#]	<5 ^{SV}	<5	<5	<5 ^{SV}	<5	<5	<5	<5 ^{SV}	<5 ^{SV}	<5	ug/kg	TM31/PM12	
PCB 28 [#]	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8	
PCB 52 [#]	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8	
PCB 101 [#]	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8	
PCB 118 [#]	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8	
PCB 138 [#]	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8	
PCB 153 [#]	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8	
PCB 180 [#]	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8	
Total 7 PCBs [#]	<35	-	-	-	-	-	-	-	-	<35	ug/kg	TM17/PM8	
Phenol ^{#M}	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	TM26/PM21	

Please see attached notes for all abbreviations and acronyms

Jones Environmental Laboratory

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	106-111	112-116	123-128	129-134	135-137	138-140	144-146	147-149	150-152				
Sample ID	TP17	TP21	TP18	TP16	TP14	TP14	TP15	TP19	TP19				
Depth	0.10-0.40	0.10-0.40	0.10-0.40	0.10-0.40	0.10	0.20-0.40	0.20-0.40	0.10-0.25	0.25-0.40				
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T				
Sample Date	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	3	3	3	3	3	3	3	3	3				
Date of Receipt	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015				
											LOD/LOR	Units	Method No.
Natural Moisture Content	15.7	12.7	18.0	13.2	12.8	10.4	17.1	15.9	14.1		<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	1.5	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	-	-	-	-	54	-	66	-	-		<3	mg/kg	TM38/PM20
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	9.34	-	-	-	-	-	-	-	-		<0.02	%	TM21/PM24
Fraction Organic Carbon	0.093	0.041	0.038	0.026	0.050	0.223	0.071	0.326	0.137		<0.001	None	TM21/PM24
ANC at pH4	0.04	-	-	-	-	-	-	-	-		<0.03	mol/kg	TM77/PM0
ANC at pH7	NDP	-	-	-	-	-	-	-	-		<0.03	mol/kg	TM77/PM0
Loss on Ignition #	14.7	-	-	-	-	-	-	-	-		<1.0	%	TM22/PM0
pH #M	7.02	7.06	6.62	6.77	6.56	6.48	7.40	7.00	7.51		<0.01	pH units	TM73/PM11
Sample Type	Loam	Loam	Clayey Loam	Clayey Loam	Clayey Loam	Loam	Clayey Loam	Clayey Loam	Clayey Loam			None	PM13/PM0
Sample Colour	Dark Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Dark Brown	Medium Brown	Medium Brown	Medium Brown			None	PM13/PM0
Other Items	stones, vegetation	stones, roots	stones, roots, vegetation	stones, roots, vegetation	stones, roots, vegetation	stones, roots, vegetation	stones, roots, glass	stones, roots, vegetation	stones, roots, brick, glass			None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Mass of sample taken (kg) =	-	Moisture Content Ratio (%) =	19.6		
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	83.6		
Particle Size <4mm =	>95%				
JEFL Job No	15/12682		Landfill Waste Acceptance Criteria Limits		
Sample No	110		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample No	TP17				
Depth/Other	0.10-0.40				
Sample Date	11/09/2015				
Batch No	3				
Solid Waste Analysis					
Total Organic Carbon (%)	9.34		3	5	6
Loss on Ignition (%)	14.7		-	-	10
Sum of BTEX (mg/kg)	<0.025		6	-	-
Sum of 7 PCBs (mg/kg)	<0.035		1	-	-
Mineral Oil (mg/kg)	86		500	-	-
PAH Sum of 17(mg/kg)	1.33		100	-	-
pH (pH Units)	7.02		-	>6	-
ANC to pH 7 (mol/kg)	NDP		-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	0.04		-	to be evaluated	to be evaluated
Eluate Analysis	10:1 concⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg		
	C₁₀	A₁₀	mg/kg		
	mg/l	mg/kg			
Arsenic	<0.0025	<0.025	0.5	2	25
Barium	0.003	<0.03	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	<0.0015	<0.015	0.5	10	70
Copper	<0.007	<0.07	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.004	0.04	0.5	10	30
Nickel	<0.002	<0.02	0.4	10	40
Lead	<0.005	<0.05	0.5	10	50
Antimony	<0.002	<0.02	0.06	0.7	5
Selenium	<0.003	<0.03	0.1	0.5	7
Zinc	0.009	0.09	4	50	200
Chloride	0.6	6	800	15000	25000
Fluoride	0.5	5	10	150	500
Sulphate as SO4	4.18	41.8	1000	20000	50000
Total Dissolved Solids	59	590	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	4	40	500	800	1000

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
15/12682	3	TP17	0.10-0.40	108	16/09/2015	Mass of Dry Sample	46.1 (g)
					16/09/2015	General Description (Bulk Analysis)	Soil/Stone/Silt
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD
					16/09/2015	Asbestos Screen (2)	NAD
					16/09/2015	Asbestos Level	NAD
15/12682	3	TP21	0.10-0.40	114	16/09/2015	Mass of Dry Sample	53.0 (g)
					16/09/2015	General Description (Bulk Analysis)	Soil/Stone/Veg
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD
					16/09/2015	Asbestos Screen (2)	NAD
					16/09/2015	Asbestos Level	NAD
15/12682	3	TP18	0.10-0.40	125	16/09/2015	Mass of Dry Sample	51.6 (g)
					16/09/2015	General Description (Bulk Analysis)	Soil/Stone/Veg
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD
					16/09/2015	Asbestos Screen (2)	NAD
					16/09/2015	Asbestos Level	NAD
15/12682	3	TP16	0.10-0.40	131	16/09/2015	Mass of Dry Sample	47.9 (g)
					16/09/2015	General Description (Bulk Analysis)	Soil/Stone/Veg
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD
					16/09/2015	Asbestos Screen (2)	NAD
					16/09/2015	Asbestos Level	NAD
15/12682	3	TP14	0.10	136	16/09/2015	Mass of Dry Sample	48.0 (g)
					16/09/2015	General Description (Bulk Analysis)	Soil-Silt/Clay/Brick/Stone
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD
					16/09/2015	Asbestos Screen (2)	NAD
					16/09/2015	Asbestos Level	NAD

Client Name: WYG
 Reference: A093275
 Location: A50 Dove Way, Uttoxeter
 Contact: Emelye Towell

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
15/12682	3	TP14	0.20-0.40	139	16/09/2015	Mass of Dry Sample	45.9 (g)
					16/09/2015	General Description (Bulk Analysis)	Soil-Silt/Clay/Brick/Stone
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD
					16/09/2015	Asbestos Screen (2)	NAD
					16/09/2015	Asbestos Level	NAD
15/12682	3	TP15	0.20-0.40	145	16/09/2015	Mass of Dry Sample	44.4 (g)
					16/09/2015	General Description (Bulk Analysis)	Soil-Silt/Clay/Brick/Stone
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD
					16/09/2015	Asbestos Screen (2)	NAD
					16/09/2015	Asbestos Level	NAD
15/12682	3	TP19	0.10-0.25	148	16/09/2015	Mass of Dry Sample	42.3 (g)
					16/09/2015	General Description (Bulk Analysis)	Soil-Silt/Clay/Brick/Stone
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD
					16/09/2015	Asbestos Screen (2)	NAD
					16/09/2015	Asbestos Level	NAD
15/12682	3	TP19	0.25-0.40	151	16/09/2015	Mass of Dry Sample	43.6 (g)
					16/09/2015	General Description (Bulk Analysis)	soil/stones
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD
					16/09/2015	Asbestos Screen (2)	NAD
					16/09/2015	Asbestos Level	NAD

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

Matrix : Solid

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	NDP Reason
15/12682	3	TP17	0.10-0.40	106-111	Sample received is below pH7

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 15/12682						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 15/12682

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 (UKAS) accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM17	Modified US EPA method 8270. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM20	Modified USEPA 8163. Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.			AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM22	Modified USEPA 160.4. Gravimetric determination of Loss on Ignition by temperature controlled Muffle Furnace (450°C)	PM0	No preparation is required.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.	Yes	Yes	AR	Yes
TM27	Modified US EPA method 9056. Determination of water soluble anions using Dionex (Ion-Chromatography).	PM0	No preparation is required.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM17	Modified method EN12457-2 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.	Yes		AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM60	Modified USEPA 9060. Determination of TOC by calculation from Total Carbon and Inorganic Carbon using a TOC analyser, the carbon in the sample is converted to CO2 and then passed through a non-dispersive infrared gas analyser (NDIR).	PM0	No preparation is required.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM77	Modified DDCEN/TS method 15364:2006. Determination of Acid Neutralization Capacity by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	No
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	



Jones Environmental Laboratory

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Attention : Emelye Towell
Date : 25th September, 2015
Your reference : A093275
Our reference : Test Report 15/12682 Batch 4
Location : A50 Dove Way, Uttoxeter
Date samples received : 12th September, 2015
Status : Final report
Issue : 1

Nine samples were received for analysis on 12th September, 2015 of which five were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Jones Environmental Laboratory

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	159-164	165-170	189-194	195-197	198-200																		
Sample ID	TP11	TP10	TP6	TP12	TP12																		
Depth	0.10-0.40	0.10-0.40	0.10-0.40	0.00-0.15	0.20-0.40																		
COC No / misc																							
Containers	V J T	V J T	V J T	V J T	V J T																		
Sample Date	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015																		
Sample Type	Soil	Soil	Soil	Soil	Soil																		
Batch Number	4	4	4	4	4																		
Date of Receipt	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015																		
Arsenic ^{#M}	16.5	31.0	-	23.7	72.6																<0.5	mg/kg	TM30/PM15
Arsenic	-	-	16.7	-	-																<0.5	mg/kg	TM30/PM62
Beryllium	2.2	3.7	-	3.6	9.7																<0.5	mg/kg	TM30/PM15
Beryllium	-	-	2.5	-	-																<0.5	mg/kg	TM30/PM62
Cadmium ^{#M}	1.6	0.7	-	0.8	<0.1																<0.1	mg/kg	TM30/PM15
Cadmium	-	-	2.3	-	-																<0.1	mg/kg	TM30/PM62
Chromium ^{#M}	90.4	95.5	-	70.8	80.5																<0.5	mg/kg	TM30/PM15
Chromium	-	-	35.1	-	-																<0.5	mg/kg	TM30/PM62
Copper ^{#M}	132	240	-	217	227																<1	mg/kg	TM30/PM15
Copper	-	-	104	-	-																<1	mg/kg	TM30/PM62
Lead ^{#M}	153	920	-	182	330																<5	mg/kg	TM30/PM15
Lead	-	-	209	-	-																<5	mg/kg	TM30/PM62
Mercury ^{#M}	0.6	0.2	-	0.2	<0.1																<0.1	mg/kg	TM30/PM15
Mercury	-	-	0.5	-	-																<0.1	mg/kg	TM30/PM62
Nickel ^{#M}	48.3	81.1	-	56.7	94.4																<0.7	mg/kg	TM30/PM15
Nickel	-	-	39.6	-	-																<0.7	mg/kg	TM30/PM62
Selenium ^{#M}	2	3	-	3	3																<1	mg/kg	TM30/PM15
Selenium	-	-	2	-	-																<1	mg/kg	TM30/PM62
Vanadium	49	54	-	50	93																<1	mg/kg	TM30/PM15
Vanadium	-	-	41	-	-																<1	mg/kg	TM30/PM62
Water Soluble Boron ^{#M}	1.8	2.5	-	2.3	3.6																<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	1.6	-	-																<0.1	mg/kg	TM74/PM61
Zinc ^{#M}	337	322	-	387	501																<5	mg/kg	TM30/PM15
Zinc	-	-	500	-	-																<5	mg/kg	TM30/PM62

Please see attached notes for all abbreviations and acronyms

Jones Environmental Laboratory

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	159-164	165-170	189-194	195-197	198-200											
Sample ID	TP11	TP10	TP6	TP12	TP12											
Depth	0.10-0.40	0.10-0.40	0.10-0.40	0.00-0.15	0.20-0.40											
COC No / misc																
Containers	V J T	V J T	V J T	V J T	V J T											
Sample Date	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015											
Sample Type	Soil	Soil	Soil	Soil	Soil											
Batch Number	4	4	4	4	4											
Date of Receipt	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015											
											LOD/LOR	Units	Method No.			
PAH MS																
Naphthalene #M	0.07	0.07	0.08	0.08	0.05									<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.11	0.07	0.30	0.15	<0.03									<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05	0.10	<0.05	0.08	<0.05									<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.04	0.07	0.07	0.07	<0.04									<0.04	mg/kg	TM4/PM8
Phenanthrene #M	0.47	1.03	0.93	1.09	0.04									<0.03	mg/kg	TM4/PM8
Anthracene #	0.20	0.35	0.51	0.49	<0.04									<0.04	mg/kg	TM4/PM8
Fluoranthene #M	1.24	3.68	3.26	4.43	0.07									<0.03	mg/kg	TM4/PM8
Pyrene #	1.04	2.93	2.61	3.62	0.06									<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.63	1.54	1.86	2.42	0.08									<0.06	mg/kg	TM4/PM8
Chrysene #M	0.70	1.74	1.86	2.53	0.07									<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	1.30	3.05	2.83	4.70	0.13									<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.86	1.80	1.76	2.95	0.07									<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	0.53	1.25	0.88	1.78	0.06									<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.07	0.19	0.20	0.24	<0.04									<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.52	1.06	0.78	1.51	0.07									<0.04	mg/kg	TM4/PM8
Coronene	0.08	-	-	-	-									<0.04	mg/kg	TM4/PM8
PAH 16 Total	7.7	18.9	17.9	26.1	0.7									<0.6	mg/kg	TM4/PM8
PAH 17 Total	7.82	-	-	-	-									<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.94	2.20	2.04	3.38	0.09									<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.36	0.85	0.79	1.32	0.04									<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	105	103	104	101	103									<0	%	TM4/PM8
EPH (C8-C40) #M	345	478	374	-	339									<30	mg/kg	TM5/PM8
Mineral Oil (C10-C40)	<30	-	-	-	-									<30	mg/kg	TM5/PM16
TPH CWG																
Aliphatics																
>C5-C6 #M	-	-	-	<0.1	-									<0.1	mg/kg	TM36/PM12
>C6-C8 #M	-	-	-	<0.1	-									<0.1	mg/kg	TM36/PM12
>C8-C10	-	-	-	<0.1	-									<0.1	mg/kg	TM36/PM12
>C10-C12 #M	-	-	-	<0.2	-									<0.2	mg/kg	TM5/PM16
>C12-C16 #M	-	-	-	<4	-									<4	mg/kg	TM5/PM16
>C16-C21 #M	-	-	-	<7	-									<7	mg/kg	TM5/PM16
>C21-C35 #M	-	-	-	25	-									<7	mg/kg	TM5/PM16
>C35-C44	-	-	-	<7	-									<7	mg/kg	TM5/PM16
Total aliphatics C5-44	-	-	-	<26	-									<26	mg/kg	TM5/TM36/PM16

Please see attached notes for all abbreviations and acronyms

Jones Environmental Laboratory

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	159-164	165-170	189-194	195-197	198-200																		
Sample ID	TP11	TP10	TP6	TP12	TP12																		
Depth	0.10-0.40	0.10-0.40	0.10-0.40	0.00-0.15	0.20-0.40																		
COC No / misc																							
Containers	V J T	V J T	V J T	V J T	V J T																		
Sample Date	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015																		
Sample Type	Soil	Soil	Soil	Soil	Soil																		
Batch Number	4	4	4	4	4																		
Date of Receipt	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015																		
																					LOD/LOR	Units	Method No.
TPH CWG																							
Aromatics																							
>C5-EC7	-	-	-	<0.1	-																<0.1	mg/kg	TM36/PM12
>EC7-EC8	-	-	-	<0.1	-																<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	-	-	-	<0.1	-																<0.1	mg/kg	TM36/PM12
>EC10-EC12	-	-	-	<0.2	-																<0.2	mg/kg	TM5/PM16
>EC12-EC16	-	-	-	<4	-																<4	mg/kg	TM5/PM16
>EC16-EC21	-	-	-	47	-																<7	mg/kg	TM5/PM16
>EC21-EC35	-	-	-	236	-																<7	mg/kg	TM5/PM16
>EC35-EC44	-	-	-	12	-																<7	mg/kg	TM5/PM16
Total aromatics C5-44	-	-	-	295	-																<26	mg/kg	TM5/TM36/PM16
Total aliphatics and aromatics(C5-44)	-	-	-	295	-																<52	mg/kg	TM5/TM36/PM16
GRO (>C4-C8) ^{#M}	<100	<100	<100	-	<100																<100	ug/kg	TM36/PM12
GRO (>C8-C12) ^{#M}	<100	293	<100	-	<100																<100	ug/kg	TM36/PM12
GRO (>C4-12) ^{#M}	<100	293	<100	-	<100																<100	ug/kg	TM36/PM12
MTBE [#]	<5	<5	<5	<5	<5																<5	ug/kg	TM31/PM12
Benzene [#]	<5	<5	<5	<5	<5																<5	ug/kg	TM31/PM12
Toluene [#]	<5	<5	<5	<5	<5																<5	ug/kg	TM31/PM12
Ethylbenzene [#]	<5	<5	<5	<5	<5																<5	ug/kg	TM31/PM12
m/p-Xylene [#]	<5	<5	<5	<5	<5																<5	ug/kg	TM31/PM12
o-Xylene [#]	<5	<5	<5	<5	<5																<5	ug/kg	TM31/PM12
PCB 28 [#]	<5	-	-	-	-																<5	ug/kg	TM17/PM8
PCB 52 [#]	<5	-	-	-	-																<5	ug/kg	TM17/PM8
PCB 101 [#]	<5	-	-	-	-																<5	ug/kg	TM17/PM8
PCB 118 [#]	<5	-	-	-	-																<5	ug/kg	TM17/PM8
PCB 138 [#]	<5	-	-	-	-																<5	ug/kg	TM17/PM8
PCB 153 [#]	<5	-	-	-	-																<5	ug/kg	TM17/PM8
PCB 180 [#]	<5	-	-	-	-																<5	ug/kg	TM17/PM8
Total 7 PCBs [#]	<35	-	-	-	-																<35	ug/kg	TM17/PM8
Phenol ^{#M}	<0.01	<0.01	<0.01	<0.01	<0.01																<0.01	mg/kg	TM26/PM21
Natural Moisture Content	16.2	20.7	-	21.9	17.1																<0.1	%	PM4/PM0
Natural Moisture Content	-	-	19.4	-	-																<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	<0.3	<0.3	<0.3	<0.3																<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) ^{#M}	-	-	-	95	-																<3	mg/kg	TM38/PM20
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5																<0.5	mg/kg	TM89/PM45
Total Organic Carbon [#]	3.37	-	-	-	-																<0.02	%	TM21/PM24
Fraction Organic Carbon	0.034	0.057	NDP	0.070	0.225																<0.001	None	TM21/PM24

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
 Reference: A093275
 Location: A50 Dove Way, Uttoxeter
 Contact: Emelye Towell
 JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	159-164	165-170	189-194	195-197	198-200								
Sample ID	TP11	TP10	TP6	TP12	TP12								
Depth	0.10-0.40	0.10-0.40	0.10-0.40	0.00-0.15	0.20-0.40								
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T								
Sample Date	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015								
Sample Type	Soil	Soil	Soil	Soil	Soil								
Batch Number	4	4	4	4	4								
Date of Receipt	12/09/2015	12/09/2015	12/09/2015	12/09/2015	12/09/2015								
											LOD/LOR	Units	Method No.
ANC at pH4	0.06	-	-	-	-						<0.03	mol/kg	TM77/PM0
ANC at pH7	NDP	-	-	-	-						<0.03	mol/kg	TM77/PM0
Loss on Ignition #	10.2	-	-	-	-						<1.0	%	TM22/PM0
pH #M	6.96	6.85	7.87	7.50	7.47						<0.01	pH units	TM73/PM11
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam							None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown							None	PM13/PM0
Other Items	roots, stones, plastic	stones, roots	stones, plastic	stones, roots, vegetation	stones, roots, sand							None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	19.9
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	83.4
Particle Size <4mm =	>95%		
JEFL Job No	15/12682		Landfill Waste Acceptance Criteria Limits
Sample No	163		
Client Sample No	TP11		
Depth/Other	0.10-0.40		
Sample Date	11/09/2015		
Batch No	4		
Solid Waste Analysis			
Total Organic Carbon (%)	3.37		3
Loss on Ignition (%)	10.2		-
Sum of BTEX (mg/kg)	<0.025		6
Sum of 7 PCBs (mg/kg)	<0.035		1
Mineral Oil (mg/kg)	<30		500
PAH Sum of 17(mg/kg)	7.82		100
pH (pH Units)	6.96		-
ANC to pH 7 (mol/kg)	NDP		-
ANC to pH 4 (mol/kg)	0.06		-
			to be evaluated
			to be evaluated
Eluate Analysis	10:1 concⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg
	C₁₀	A₁₀	
	mg/l	mg/kg	mg/kg
Arsenic	<0.0025	<0.025	0.5
Barium	0.057	0.57	20
Cadmium	<0.0005	<0.005	0.04
Chromium	<0.0015	<0.015	0.5
Copper	0.043	0.43	2
Mercury	<0.001	<0.01	0.01
Molybdenum	0.003	0.03	0.5
Nickel	0.003	0.03	0.4
Lead	0.005	<0.05	0.5
Antimony	<0.002	<0.02	0.06
Selenium	<0.003	<0.03	0.1
Zinc	0.012	0.12	4
Chloride	0.8	8	800
Fluoride	0.4	4	10
Sulphate as SO4	3.73	37.3	1000
Total Dissolved Solids	80	800	4000
Phenol	<0.01	<0.1	1
Dissolved Organic Carbon	8	80	500
			800
			1000

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
15/12682	4	TP11	0.10-0.40	161	16/09/2015	Mass of Dry Sample	45.8 (g)
					16/09/2015	General Description (Bulk Analysis)	soil/stones
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD
					16/09/2015	Asbestos Screen (2)	NAD
					16/09/2015	Asbestos Level	NAD
15/12682	4	TP10	0.10-0.40	167	16/09/2015	Mass of Dry Sample	45.4 (g)
					16/09/2015	General Description (Bulk Analysis)	soil/stones
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD
					16/09/2015	Asbestos Screen (2)	NAD
					16/09/2015	Asbestos Level	NAD
15/12682	4	TP6	0.10-0.40	191	16/09/2015	Mass of Dry Sample	46.6 (g)
					16/09/2015	General Description (Bulk Analysis)	soil/stones
					16/09/2015	Asbestos Containing Material	Fibre Bundles
					16/09/2015	Asbestos Screen	Chrysotile
					16/09/2015	Asbestos Level	Quantifiable
					17/09/2015	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					17/09/2015	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
15/12682	4	TP12	0.00-0.15	196	16/09/2015	Mass of Dry Sample	44.4 (g)
					16/09/2015	General Description (Bulk Analysis)	soil-stones
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD
					16/09/2015	Asbestos Screen (2)	NAD
					16/09/2015	Asbestos Level	NAD
15/12682	4	TP12	0.20-0.40	199	16/09/2015	Mass of Dry Sample	47.8 (g)
					16/09/2015	General Description (Bulk Analysis)	soil-stones-roots
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD
					16/09/2015	Asbestos Screen (2)	NAD
					16/09/2015	Asbestos Level	NAD

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 15/12682						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 15/12682

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 (UKAS) accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	Yes
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM17	Modified US EPA method 8270. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM20	Modified USEPA 8163. Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.			AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM22	Modified USEPA 160.4. Gravimetric determination of Loss on Ignition by temperature controlled Muffle Furnace (450°C)	PM0	No preparation is required.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.	Yes	Yes	AR	Yes
TM27	Modified US EPA method 9056. Determination of water soluble anions using Dionex (Ion-Chromatography).	PM0	No preparation is required.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM17	Modified method EN12457-2. As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.	Yes		AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes		AR	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM60	Modified USEPA 9060. Determination of TOC by calculation from Total Carbon and Inorganic Carbon using a TOC analyser, the carbon in the sample is converted to CO ₂ and then passed through a non-dispersive infrared gas analyser (NDIR).	PM0	No preparation is required.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM77	Modified DDCEN/TS method 15364:2006. Determination of Acid Neutralization Capacity by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	No
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	



Jones Environmental Laboratory

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Attention : Emelye Towell
Date : 25th September, 2015
Your reference : A093275
Our reference : Test Report 15/12682 Batch 5
Location : A50 Dove Way, Uttoxeter
Date samples received : 14th September, 2015
Status : Final report
Issue : 1

Six samples were received for analysis on 14th September, 2015 of which five were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Bruce Leslie
Project Co-ordinator

Jones Environmental Laboratory

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	207-212	213-218	219-224	225-227	228-230														
Sample ID	TP4	TP2	TP1	TP3.1	TP3.2														
Depth	0.10-0.40	0.10-0.40	0.10-0.40	0.10-0.40	0.10-0.40														
COC No / misc																			
Containers	V J T	V J T	V J T	V J T	V J T														
Sample Date	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015														
Sample Type	Soil	Soil	Soil	Soil	Soil														
Batch Number	5	5	5	5	5														
Date of Receipt	14/09/2015	14/09/2015	14/09/2015	14/09/2015	14/09/2015														
						LOD/LOR	Units	Method No.	Please see attached notes for all abbreviations and acronyms										
Arsenic ^{#M}	9.6	6.3	2.6	-	9.7	<0.5	mg/kg	TM30/PM15											
Arsenic	-	-	-	10.5	-	<0.5	mg/kg	TM30/PM62											
Beryllium	3.2	0.9	<0.5	-	1.6	<0.5	mg/kg	TM30/PM15											
Beryllium	-	-	-	1.6	-	<0.5	mg/kg	TM30/PM62											
Cadmium ^{#M}	0.7	0.4	0.9	-	1.5	<0.1	mg/kg	TM30/PM15											
Cadmium	-	-	-	1.4	-	<0.1	mg/kg	TM30/PM62											
Chromium ^{#M}	141.0	54.9	64.4	-	54.9	<0.5	mg/kg	TM30/PM15											
Chromium	-	-	-	28.9	-	<0.5	mg/kg	TM30/PM62											
Copper ^{#M}	140	16	11	-	62	<1	mg/kg	TM30/PM15											
Copper	-	-	-	52	-	<1	mg/kg	TM30/PM62											
Lead ^{#M}	139	33	33	-	113	<5	mg/kg	TM30/PM15											
Lead	-	-	-	109	-	<5	mg/kg	TM30/PM62											
Mercury ^{#M}	0.1	<0.1	<0.1	-	0.2	<0.1	mg/kg	TM30/PM15											
Mercury	-	-	-	0.1	-	<0.1	mg/kg	TM30/PM62											
Nickel ^{#M}	63.8	15.5	10.4	-	28.5	<0.7	mg/kg	TM30/PM15											
Nickel	-	-	-	23.7	-	<0.7	mg/kg	TM30/PM62											
Selenium ^{#M}	2	<1	<1	-	1	<1	mg/kg	TM30/PM15											
Selenium	-	-	-	1	-	<1	mg/kg	TM30/PM62											
Vanadium	70	39	20	-	37	<1	mg/kg	TM30/PM15											
Vanadium	-	-	-	34	-	<1	mg/kg	TM30/PM62											
Water Soluble Boron ^{#M}	2.1	1.7	1.3	-	1.7	<0.1	mg/kg	TM74/PM32											
Water Soluble Boron	-	-	-	2.0	-	<0.1	mg/kg	TM74/PM61											
Zinc ^{#M}	249	80	54	-	217	<5	mg/kg	TM30/PM15											
Zinc	-	-	-	230	-	<5	mg/kg	TM30/PM62											

Jones Environmental Laboratory

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.						207-212	213-218	219-224	225-227	228-230							Please see attached notes for all abbreviations and acronyms			
Sample ID						TP4	TP2	TP1	TP3.1	TP3.2								LOD/LOR	Units	Method No.
Depth						0.10-0.40	0.10-0.40	0.10-0.40	0.10-0.40	0.10-0.40										
COC No / misc																				
Containers						V J T	V J T	V J T	V J T	V J T										
Sample Date						11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015										
Sample Type						Soil	Soil	Soil	Soil	Soil										
Batch Number						5	5	5	5	5										
Date of Receipt						14/09/2015	14/09/2015	14/09/2015	14/09/2015	14/09/2015										
PAH MS																				
Naphthalene ^{#M}						0.20	<0.04	0.05	0.05	<0.04							<0.04	mg/kg	TM4/PM8	
Acenaphthylene						0.09	0.07	0.11	0.06	0.05							<0.03	mg/kg	TM4/PM8	
Acenaphthene ^{#M}						<0.05	0.41	0.08	<0.05	<0.05							<0.05	mg/kg	TM4/PM8	
Fluorene ^{#M}						<0.04	0.40	0.09	<0.04	<0.04							<0.04	mg/kg	TM4/PM8	
Phenanthrene ^{#M}						0.51	6.07	0.97	0.20	0.37							<0.03	mg/kg	TM4/PM8	
Anthracene [#]						0.20	1.45	0.33	0.09	0.15							<0.04	mg/kg	TM4/PM8	
Fluoranthene ^{#M}						1.10	8.13	1.91	0.69	0.79							<0.03	mg/kg	TM4/PM8	
Pyrene [#]						0.97	6.47	1.60	0.61	0.62							<0.03	mg/kg	TM4/PM8	
Benzo(a)anthracene [#]						0.66	2.71	0.89	0.40	0.48							<0.06	mg/kg	TM4/PM8	
Chrysene ^{#M}						0.69	2.79	0.91	0.45	0.49							<0.02	mg/kg	TM4/PM8	
Benzo(bk)fluoranthene ^{#M}						1.24	4.04	1.44	0.87	0.70							<0.07	mg/kg	TM4/PM8	
Benzo(a)pyrene [#]						0.78	2.53	0.98	0.57	0.42							<0.04	mg/kg	TM4/PM8	
Indeno(123cd)pyrene ^{#M}						0.53	1.52	0.53	0.40	0.16							<0.04	mg/kg	TM4/PM8	
Dibenzo(ah)anthracene [#]						0.10	0.28	0.12	0.09	<0.04							<0.04	mg/kg	TM4/PM8	
Benzo(ghi)perylene [#]						0.51	1.41	0.50	0.35	0.15							<0.04	mg/kg	TM4/PM8	
Coronene						-	0.20	-	0.06	-							<0.04	mg/kg	TM4/PM8	
PAH 16 Total						7.6	38.3	10.5	4.8	4.4							<0.6	mg/kg	TM4/PM8	
PAH 17 Total						-	38.48	-	4.89	-							<0.64	mg/kg	TM4/PM8	
Benzo(b)fluoranthene						0.89	2.91	1.04	0.63	0.50							<0.05	mg/kg	TM4/PM8	
Benzo(k)fluoranthene						0.35	1.13	0.40	0.24	0.20							<0.02	mg/kg	TM4/PM8	
PAH Surrogate % Recovery						101	105	102	102	99							<0	%	TM4/PM8	
EPH (C8-C40) ^{#M}						529	-	896	-	-							<30	mg/kg	TM5/PM8	
Mineral Oil (C10-C40)						-	150	-	<30	-							<30	mg/kg	TM5/PM16	
TPH CWG																				
Aliphatics																				
>C5-C6 ^{#M}						-	<0.1	-	<0.1	<0.1						<0.1	mg/kg	TM36/PM12		
>C6-C8 ^{#M}						-	<0.1	-	<0.1	<0.1						<0.1	mg/kg	TM36/PM12		
>C8-C10						-	<0.1	-	<0.1	<0.1						<0.1	mg/kg	TM36/PM12		
>C10-C12 ^{#M}						-	<0.2	-	<0.2	<0.2						<0.2	mg/kg	TM5/PM16		
>C12-C16 ^{#M}						-	<4	-	<4	<4						<4	mg/kg	TM5/PM16		
>C16-C21 ^{#M}						-	<7	-	<7	<7						<7	mg/kg	TM5/PM16		
>C21-C35 ^{#M}						-	107	-	<7	<7						<7	mg/kg	TM5/PM16		
>C35-C44						-	30	-	<7	<7						<7	mg/kg	TM5/PM16		
Total aliphatics C5-44						-	137	-	<26	<26						<26	mg/kg	TM5/PM36/PM16		

Jones Environmental Laboratory

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	207-212	213-218	219-224	225-227	228-230									
Sample ID	TP4	TP2	TP1	TP3.1	TP3.2									
Depth	0.10-0.40	0.10-0.40	0.10-0.40	0.10-0.40	0.10-0.40									
COC No / misc														
Containers	V J T	V J T	V J T	V J T	V J T									
Sample Date	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015									
Sample Type	Soil	Soil	Soil	Soil	Soil									
Batch Number	5	5	5	5	5									
Date of Receipt	14/09/2015	14/09/2015	14/09/2015	14/09/2015	14/09/2015									
TPH CWG														
Aromatics														
>C5-EC7	-	<0.1	-	<0.1	<0.1							<0.1	mg/kg	TM36/PM12
>EC7-EC8	-	<0.1	-	<0.1	<0.1							<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	-	<0.1	-	<0.1	<0.1							<0.1	mg/kg	TM36/PM12
>EC10-EC12	-	<0.2	-	<0.2	<0.2							<0.2	mg/kg	TM5/PM16
>EC12-EC16	-	<4	-	<4	<4							<4	mg/kg	TM5/PM16
>EC16-EC21	-	20	-	<7	<7							<7	mg/kg	TM5/PM16
>EC21-EC35	-	223	-	<7	<7							<7	mg/kg	TM5/PM16
>EC35-EC44	-	112	-	<7	<7							<7	mg/kg	TM5/PM16
Total aromatics C5-44	-	355	-	<26	<26							<26	mg/kg	TM5/TM36/PM16
Total aliphatics and aromatics(C5-44)	-	492	-	<52	<52							<52	mg/kg	TM5/TM36/PM16
GRO (>C4-C8) ^{#M}	<100	-	<100	-	-							<100	ug/kg	TM36/PM12
GRO (>C8-C12) ^{#M}	<100	-	<100	-	-							<100	ug/kg	TM36/PM12
GRO (>C4-12) ^{#M}	<100	-	<100	-	-							<100	ug/kg	TM36/PM12
MTBE [#]	<5	<5	<5	<5	<5							<5	ug/kg	TM31/PM12
Benzene [#]	<5	<5	<5	<5	<5							<5	ug/kg	TM31/PM12
Toluene [#]	<5	<5	<5	<5	<5							<5	ug/kg	TM31/PM12
Ethylbenzene [#]	<5	<5	<5	<5	<5							<5	ug/kg	TM31/PM12
m/p-Xylene [#]	<5	<5	<5	<5	<5							<5	ug/kg	TM31/PM12
o-Xylene [#]	<5	<5	<5	<5	<5							<5	ug/kg	TM31/PM12
PCB 28 [#]	-	<5	-	<5	-							<5	ug/kg	TM17/PM8
PCB 52 [#]	-	<5	-	<5	-							<5	ug/kg	TM17/PM8
PCB 101 [#]	-	<5	-	<5	-							<5	ug/kg	TM17/PM8
PCB 118 [#]	-	<5	-	<5	-							<5	ug/kg	TM17/PM8
PCB 138 [#]	-	<5	-	<5	-							<5	ug/kg	TM17/PM8
PCB 153 [#]	-	<5	-	<5	-							<5	ug/kg	TM17/PM8
PCB 180 [#]	-	<5	-	<5	-							<5	ug/kg	TM17/PM8
Total 7 PCBs [#]	-	<35	-	<35	-							<35	ug/kg	TM17/PM8
Phenol ^{#M}	<0.01	<0.01	<0.01	<0.01	<0.01							<0.01	mg/kg	TM26/PM21
Natural Moisture Content	12.0	9.1	8.9	-	19.2							<0.1	%	PM4/PM0
Natural Moisture Content	-	-	-	24.9	-							<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	<0.3	<0.3	<0.3	<0.3							<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) ^{#M}	-	622	-	-	53							<3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-	45	-							<3	mg/kg	TM38/PM60
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5							<0.5	mg/kg	TM89/PM45
Total Organic Carbon [#]	-	0.42	-	NDP	-							<0.02	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	207-212	213-218	219-224	225-227	228-230								
Sample ID	TP4	TP2	TP1	TP3.1	TP3.2								
Depth	0.10-0.40	0.10-0.40	0.10-0.40	0.10-0.40	0.10-0.40								
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T								
Sample Date	11/09/2015	11/09/2015	11/09/2015	11/09/2015	11/09/2015								
Sample Type	Soil	Soil	Soil	Soil	Soil								
Batch Number	5	5	5	5	5								
Date of Receipt	14/09/2015	14/09/2015	14/09/2015	14/09/2015	14/09/2015								
Fraction Organic Carbon	0.033	0.004	0.005	NDP	0.029						<0.001	None	TM21/PM24
ANC at pH4	-	1.07	-	0.23	-						<0.03	mol/kg	TM77/PM0
ANC at pH7	-	0.23	-	NDP	-						<0.03	mol/kg	TM77/PM0
Loss on Ignition #	-	4.3	-	NDP	-						<1.0	%	TM22/PM0
pH #M	7.27	8.49	8.10	7.37	7.47						<0.01	pH units	TM73/PM11
Sample Type	Clayey Loam	Sand	Clayey Loam	Clayey Loam	Clay							None	PM13/PM0
Sample Colour	Dark Brown	Light Brown	Light Brown	Medium Brown	Dark Brown							None	PM13/PM0
Other Items	stones, roots, vegetation	mostly stones, brick	sand, stones, roots	stones, vegetation, plastic	roots							None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Mass of sample taken (kg) =	-	Moisture Content Ratio (%) =	17.7		
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	84.9		
Particle Size <4mm =	>95%				
JEFL Job No	15/12682		Landfill Waste Acceptance Criteria Limits		
Sample No	217		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample No	TP2				
Depth/Other	0.10-0.40				
Sample Date	11/09/2015				
Batch No	5				
Solid Waste Analysis					
Total Organic Carbon (%)	0.42		3	5	6
Loss on Ignition (%)	4.3		-	-	10
Sum of BTEX (mg/kg)	<0.025		6	-	-
Sum of 7 PCBs (mg/kg)	<0.035		1	-	-
Mineral Oil (mg/kg)	150		500	-	-
PAH Sum of 17(mg/kg)	38.48		100	-	-
pH (pH Units)	8.49		-	>6	-
ANC to pH 7 (mol/kg)	0.23		-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	1.07		-	to be evaluated	to be evaluated
Eluate Analysis	10:1 concⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg		
	C₁₀ mg/l	A₁₀ mg/kg	mg/kg		
Arsenic	0.0026	0.026	0.5	2	25
Barium	0.041	0.41	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	0.0064	0.064	0.5	10	70
Copper	<0.007	<0.07	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.004	0.04	0.5	10	30
Nickel	<0.002	<0.02	0.4	10	40
Lead	0.006	0.06	0.5	10	50
Antimony	<0.002	<0.02	0.06	0.7	5
Selenium	0.003	<0.03	0.1	0.5	7
Zinc	0.004	0.04	4	50	200
Chloride	0.7	7	800	15000	25000
Fluoride	<0.3	<3	10	150	500
Sulphate as SO4	453.42	4533.8	1000	20000	50000
Total Dissolved Solids	717	7169	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	3	30	500	800	1000

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	23.8					
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	80.8					
Particle Size <4mm =	>95%							
JEFL Job No	15/12682		Landfill Waste Acceptance Criteria Limits					
Sample No	227							
Client Sample No	TP3.1							
Depth/Other	0.10-0.40							
Sample Date	11/09/2015							
Batch No	5							
Solid Waste Analysis			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill			
Total Organic Carbon (%)	NDP					3	5	6
Loss on Ignition (%)	NDP					-	-	10
Sum of BTEX (mg/kg)	<0.025					6	-	-
Sum of 7 PCBs (mg/kg)	<0.035					1	-	-
Mineral Oil (mg/kg)	<30					500	-	-
PAH Sum of 17(mg/kg)	4.89					100	-	-
pH (pH Units)	7.37					-	>6	-
ANC to pH 7 (mol/kg)	NDP					-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	0.23					-	to be evaluated	to be evaluated
Eluate Analysis	10:1 concⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg					
	C₁₀	A₁₀						
	mg/l	mg/kg	mg/kg					
Arsenic	<0.0025	<0.025	0.5	2	25			
Barium	0.032	0.32	20	100	300			
Cadmium	<0.0005	<0.005	0.04	1	5			
Chromium	<0.0015	<0.015	0.5	10	70			
Copper	0.008	0.08	2	50	100			
Mercury	<0.001	<0.01	0.01	0.2	2			
Molybdenum	0.004	0.04	0.5	10	30			
Nickel	<0.002	<0.02	0.4	10	40			
Lead	<0.005	<0.05	0.5	10	50			
Antimony	<0.002	<0.02	0.06	0.7	5			
Selenium	<0.003	<0.03	0.1	0.5	7			
Zinc	0.011	0.11	4	50	200			
Chloride	0.6	6	800	15000	25000			
Fluoride	0.5	5	10	150	500			
Sulphate as SO4	3.06	30.6	1000	20000	50000			
Total Dissolved Solids	96	960	4000	60000	100000			
Phenol	<0.01	<0.1	1	-	-			
Dissolved Organic Carbon	9	90	500	800	1000			

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
15/12682	5	TP4	0.10-0.40	209	16/09/2015	Mass of Dry Sample	44.1 (g)
					16/09/2015	General Description (Bulk Analysis)	soil-stones-silt
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD
					16/09/2015	Asbestos Screen (2)	NAD
					16/09/2015	Asbestos Level	NAD
15/12682	5	TP2	0.10-0.40	215	16/09/2015	Mass of Dry Sample	46.3 (g)
					16/09/2015	General Description (Bulk Analysis)	Soil-Silt/Brick/Stone
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD
					16/09/2015	Asbestos Screen (2)	NAD
					16/09/2015	Asbestos Level	NAD
15/12682	5	TP1	0.10-0.40	221	16/09/2015	Mass of Dry Sample	48.4 (g)
					16/09/2015	General Description (Bulk Analysis)	Soil-Silt/Clay/Brick/Stone
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD
					16/09/2015	Asbestos Screen (2)	NAD
					16/09/2015	Asbestos Level	NAD
15/12682	5	TP3.1	0.10-0.40	226	16/09/2015	Mass of Dry Sample	43.5 (g)
					16/09/2015	General Description (Bulk Analysis)	Soil-Silt/Clay/Brick/Stone
					16/09/2015	Asbestos Containing Material	Asbestos Insulating Board Debris
					16/09/2015	Asbestos Containing Material (2)	Asbestos Insulating Board Debris
					16/09/2015	Asbestos Screen	Chrysotile
					16/09/2015	Asbestos Screen (2)	Amosite
					16/09/2015	Asbestos Level	Quantifiable
					17/09/2015	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					17/09/2015	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
15/12682	5	TP3.2	0.10-0.40	229	16/09/2015	Mass of Dry Sample	42.0 (g)
					16/09/2015	General Description (Bulk Analysis)	Soil-Silt/Clay/Brick/Stone
					16/09/2015	Asbestos Containing Material	None
					16/09/2015	Asbestos Containing Material (2)	None
					16/09/2015	Asbestos Screen	NAD

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 15/12682						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 15/12682

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 (UKAS) accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x10 Dilution

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	Yes
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM17	Modified US EPA method 8270. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM20	Modified USEPA 8163. Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.			AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM22	Modified USEPA 160.4. Gravimetric determination of Loss on Ignition by temperature controlled Muffle Furnace (450°C)	PM0	No preparation is required.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.	Yes	Yes	AR	Yes
TM27	Modified US EPA method 9056. Determination of water soluble anions using Dionex (Ion-Chromatography).	PM0	No preparation is required.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM17	Modified method EN12457-2. As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.	Yes		AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes		AR	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM60	Modified USEPA 9060. Determination of TOC by calculation from Total Carbon and Inorganic Carbon using a TOC analyser, the carbon in the sample is converted to CO ₂ and then passed through a non-dispersive infrared gas analyser (NDIR).	PM0	No preparation is required.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM77	Modified DDCEN/TS method 15364:2006. Determination of Acid Neutralization Capacity by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	No
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	



Jones Environmental Laboratory

Registered Address : Unit 3 Deeside Point, Zone 3, Deeside Industrial Park, Deeside, CH5 2UA. UK

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Tel: +44 (0) 1244 833780
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Attention : Emelye Towell
Date : 30th September, 2015
Your reference : A093275
Our reference : Test Report 15/12682 Batch 6
Location : A50 Dove Way, Uttoxeter
Date samples received : 12th September, 2015
Status : Final report
Issue : 1

Seven samples were received for analysis on 12th September, 2015 of which two were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied. All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:


Phil Sommerton BSc
Project Manager

Jones Environmental Laboratory

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	261-266														
Sample ID	WSS.1														
Depth	1.20														
COC No / misc															
Containers	V J T														
Sample Date	09/09/2015														
Sample Type	Soil														
Batch Number	6														
Date of Receipt	12/09/2015														
Sulphate as SO4 (2:1 Ext) ^{#M}	1.6155												<0.0015	g/l	TM38/PM20
Free Cyanide	<0.5												<0.5	mg/kg	TM89/PM45
pH ^{#M}	7.78												<0.01	pH units	TM73/PM11
Sample Type	Clayey Loam													None	PM13/PM0
Sample Colour	Dark Brown													None	PM13/PM0
Other Items	sand, vegetation, stones													None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

Note:
 Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.
 Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.
 If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
15/12682	6	BHA	1.20	239	29/09/2015	Mass of Dry Sample	42.1 (g)
					29/09/2015	General Description (Bulk Analysis)	Soil/Stone
					29/09/2015	Asbestos Containing Material	Fibre Bundles
					29/09/2015	Asbestos Screen	Chrysotile
					29/09/2015	Asbestos Level	Quantifiable

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 15/12682						

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NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 15/12682

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All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

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Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

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SURROGATES

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A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

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ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x10 Dilution

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes



Jones Environmental Laboratory

Registered Address : Unit 3 Deeside Point, Zone 3, Deeside Industrial Park, Deeside, CH5 2UA. UK

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Tel: +44 (0) 1244 833780

Fax: +44 (0) 1244 833781



Attention : Emelye Towell
Date : 28th September, 2015
Your reference : A093275
Our reference : Test Report 15/12682 Batch 7
Location : A50 Dove Way, Uttoxeter
Date samples received : 12th September, 2015
Status : Final report
Issue : 1

Six samples were received for analysis on 12th September, 2015 of which two were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Bruce Leslie
Project Co-ordinator

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	291-296																				
Sample ID	WS04																				
Depth	3.50																				
COC No / misc																					
Containers	V J T																				
Sample Date	11/09/2015																				
Sample Type	Soil																				
Batch Number	7																				
Date of Receipt	12/09/2015																				
Arsenic ^{#M}	1.7																				
Beryllium	1.1																				
Cadmium ^{#M}	0.1																				
Chromium ^{#M}	96.5																				
Copper ^{#M}	2																				
Lead ^{#M}	11																				
Mercury ^{#M}	<0.1																				
Nickel ^{#M}	15.8																				
Selenium ^{#M}	1																				
Vanadium	25																				
Water Soluble Boron ^{#M}	3.4																				
Zinc ^{#M}	48																				
PAH MS																					
Naphthalene ^{#M}	<0.04																				
Acenaphthylene	<0.03																				
Acenaphthene ^{#M}	<0.05																				
Fluorene ^{#M}	<0.04																				
Phenanthrene ^{#M}	<0.03																				
Anthracene #	<0.04																				
Fluoranthene ^{#M}	<0.03																				
Pyrene #	<0.03																				
Benzo(a)anthracene #	<0.06																				
Chrysene ^{#M}	<0.02																				
Benzo(bk)fluoranthene ^{#M}	<0.07																				
Benzo(a)pyrene #	<0.04																				
Indeno(123cd)pyrene ^{#M}	<0.04																				
Dibenzo(ah)anthracene #	<0.04																				
Benzo(ghi)perylene #	<0.04																				
PAH 16 Total	<0.6																				
Benzo(b)fluoranthene	<0.05																				
Benzo(k)fluoranthene	<0.02																				
PAH Surrogate % Recovery	100																				

Please see attached notes for all abbreviations and acronyms

LOD/LOR	Units	Method No.
---------	-------	------------

Client Name: WYG
 Reference: A093275
 Location: A50 Dove Way, Uttoxeter
 Contact: Emelye Towell
 JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

LOD/LOR	Units	Method No.
Please see attached notes for all abbreviations and acronyms		
TPH CWG		
Aliphatics		
>C5-C6 ^{#M}	<0.1	<0.1 mg/kg TM36/PM12
>C6-C8 ^{#M}	<0.1	<0.1 mg/kg TM36/PM12
>C8-C10	<0.1	<0.1 mg/kg TM36/PM12
>C10-C12 ^{#M}	<0.2	<0.2 mg/kg TM5/PM16
>C12-C16 ^{#M}	<4	<4 mg/kg TM5/PM16
>C16-C21 ^{#M}	<7	<7 mg/kg TM5/PM16
>C21-C35 ^{#M}	<7	<7 mg/kg TM5/PM16
>C35-C44	<7	<7 mg/kg TM5/PM16
Total aliphatics C5-44	<26	<26 mg/kg TM5/TM36/PM16
Aromatics		
>C5-EC7	<0.1	<0.1 mg/kg TM36/PM12
>EC7-EC8	<0.1	<0.1 mg/kg TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1 mg/kg TM36/PM12
>EC10-EC12	<0.2	<0.2 mg/kg TM5/PM16
>EC12-EC16	<4	<4 mg/kg TM5/PM16
>EC16-EC21	<7	<7 mg/kg TM5/PM16
>EC21-EC35	<7	<7 mg/kg TM5/PM16
>EC35-EC44	<7	<7 mg/kg TM5/PM16
Total aromatics C5-44	<26	<26 mg/kg TM5/TM36/PM16
Total aliphatics and aromatics(C5-44)	<52	<52 mg/kg TM5/TM36/PM16
MTBE [#]	<5	<5 ug/kg TM31/PM12
Benzene [#]	<5	<5 ug/kg TM31/PM12
Toluene [#]	<5	<5 ug/kg TM31/PM12
Ethylbenzene [#]	<5	<5 ug/kg TM31/PM12
m/p-Xylene [#]	<5	<5 ug/kg TM31/PM12
o-Xylene [#]	<5	<5 ug/kg TM31/PM12
Phenol ^{#M}	<0.01	<0.01 mg/kg TM26/PM21
Natural Moisture Content	10.0	<0.1 % PM4/PM0
Hexavalent Chromium [#]	<0.3	<0.3 mg/kg TM38/PM20
Free Cyanide	<0.5	<0.5 mg/kg TM89/PM45
Fraction Organic Carbon	0.002	<0.001 None TM21/PM24
pH ^{#M}	7.73	<0.01 pH units TM73/PM11
Sample Type	Clay	None PM13/PM0
Sample Colour	Medium Brown	None PM13/PM0
Other Items	stones	None PM13/PM0

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
15/12682	7	WS04	3.50	293	18/09/2015	Mass of Dry Sample	50.5 (g)
					18/09/2015	General Description (Bulk Analysis)	Soil-Silt/Clay/Brick/Stone
					18/09/2015	Asbestos Containing Material	None
					18/09/2015	Asbestos Screen	NAD
					18/09/2015	Asbestos Level	NAD
15/12682	7	ACM	PIT	300	18/09/2015	Mass of Dry Sample	79.6 (g)
					18/09/2015	General Description (Bulk Analysis)	Cement
					18/09/2015	Asbestos Containing Material	Asbestos Cement
					18/09/2015	Asbestos Screen	Chrysotile
					18/09/2015	Asbestos Level	Quantifiable
					21/09/2015	Asbestos Gravimetric Quantification (ACMs)	15.000 (mass %)

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 15/12682						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 15/12682

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 (UKAS) accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.	Yes	Yes	AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes



Jones Environmental Laboratory

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Tel: +44 (0) 1244 833780
Fax: +44 (0) 1244 833781



Attention : Emelye Towell
Date : 28th September, 2015
Your reference : A093275
Our reference : Test Report 15/12682 Batch 8
Location : A50 Dove Way, Uttoxeter
Date samples received : 12th September, 2015
Status : Final report
Issue : 1

Eight samples were received for analysis on 12th September, 2015 of which three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied. All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Bruce Leslie
Project Co-ordinator

Jones Environmental Laboratory

Client Name: WYG
 Reference: A093275
 Location: A50 Dove Way, Uttoxeter
 Contact: Emelye Towell
 JE Job No.: 15/12682

Report : Solid
 Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.		307-312	337-339								Please see attached notes for all abbreviations and acronyms			
Sample ID	WS6	WS3												
Depth	1.20	3.00												
COC No / misc														
Containers	V J T	V J T												
Sample Date	10/09/2015	10/09/2015												
Sample Type	Soil	Soil												
Batch Number	8	8												
Date of Receipt	12/09/2015	12/09/2015												
											LOD/LOR	Units	Method No.	
Arsenic ^{#M}	73.4	2.2									<0.5	mg/kg	TM30/PM15	
Beryllium	11.4	0.8									<0.5	mg/kg	TM30/PM15	
Cadmium ^{#M}	3.7	0.1									<0.1	mg/kg	TM30/PM15	
Chromium ^{#M}	83.7	91.5									<0.5	mg/kg	TM30/PM15	
Copper ^{#M}	455 ^{AA}	<1									<1	mg/kg	TM30/PM15	
Lead ^{#M}	761	<5									<5	mg/kg	TM30/PM15	
Mercury ^{#M}	<0.1	<0.1									<0.1	mg/kg	TM30/PM15	
Nickel ^{#M}	115.9	15.2									<0.7	mg/kg	TM30/PM15	
Selenium ^{#M}	3	1									<1	mg/kg	TM30/PM15	
Vanadium	90	22									<1	mg/kg	TM30/PM15	
Water Soluble Boron ^{#M}	12.8	3.0									<0.1	mg/kg	TM74/PM32	
Zinc ^{#M}	2232	47									<5	mg/kg	TM30/PM15	
PAH MS														
Naphthalene ^{#M}	0.13	<0.04									<0.04	mg/kg	TM4/PM8	
Acenaphthylene	<0.03	<0.03									<0.03	mg/kg	TM4/PM8	
Acenaphthene ^{#M}	<0.05	<0.05									<0.05	mg/kg	TM4/PM8	
Fluorene ^{#M}	<0.04	<0.04									<0.04	mg/kg	TM4/PM8	
Phenanthrene ^{#M}	0.06	<0.03									<0.03	mg/kg	TM4/PM8	
Anthracene #	0.06	<0.04									<0.04	mg/kg	TM4/PM8	
Fluoranthene ^{#M}	0.13	<0.03									<0.03	mg/kg	TM4/PM8	
Pyrene #	0.11	<0.03									<0.03	mg/kg	TM4/PM8	
Benzo(a)anthracene #	0.14	<0.06									<0.06	mg/kg	TM4/PM8	
Chrysene ^{#M}	0.13	<0.02									<0.02	mg/kg	TM4/PM8	
Benzo(bk)fluoranthene ^{#M}	0.22	<0.07									<0.07	mg/kg	TM4/PM8	
Benzo(a)pyrene #	0.14	<0.04									<0.04	mg/kg	TM4/PM8	
Indeno(123cd)pyrene ^{#M}	0.07	<0.04									<0.04	mg/kg	TM4/PM8	
Dibenzo(ah)anthracene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8	
Benzo(ghi)perylene #	0.08	<0.04									<0.04	mg/kg	TM4/PM8	
PAH 16 Total	1.3	<0.6									<0.6	mg/kg	TM4/PM8	
Benzo(b)fluoranthene	0.16	<0.05									<0.05	mg/kg	TM4/PM8	
Benzo(k)fluoranthene	0.06	<0.02									<0.02	mg/kg	TM4/PM8	
PAH Surrogate % Recovery	96	106									<0	%	TM4/PM8	

Jones Environmental Laboratory

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	307-312	337-339									LOD/LOR	Units	Method No.
Sample ID	WS6	WS3											
Depth	1.20	3.00											
COC No / misc													
Containers	V J T	V J T											
Sample Date	10/09/2015	10/09/2015											
Sample Type	Soil	Soil											
Batch Number	8	8											
Date of Receipt	12/09/2015	12/09/2015											
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	<0.2									<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	<4									<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	<7									<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	<7	<7									<7	mg/kg	TM5/PM16
>C35-C44	<7	<7									<7	mg/kg	TM5/PM16
Total aliphatics C5-44	<26	<26									<26	mg/kg	TM5/TM36/PM16
Aromatics													
>C5-EC7	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	<0.2									<0.2	mg/kg	TM5/PM16
>EC12-EC16	<4	<4									<4	mg/kg	TM5/PM16
>EC16-EC21	<7	<7									<7	mg/kg	TM5/PM16
>EC21-EC35	<7	<7									<7	mg/kg	TM5/PM16
>EC35-EC44	<7	<7									<7	mg/kg	TM5/PM16
Total aromatics C5-44	<26	<26									<26	mg/kg	TM5/TM36/PM16
Total aliphatics and aromatics(C5-44)	<52	<52									<52	mg/kg	TM5/TM36/PM16
MTBE [#]	<5	<5									<5	ug/kg	TM31/PM12
Benzene [#]	<5	<5									<5	ug/kg	TM31/PM12
Toluene [#]	<5	<5									<5	ug/kg	TM31/PM12
Ethylbenzene [#]	<5	<5									<5	ug/kg	TM31/PM12
m/p-Xylene [#]	<5	<5									<5	ug/kg	TM31/PM12
o-Xylene [#]	<5	<5									<5	ug/kg	TM31/PM12
Phenol ^{#M}	<0.01	<0.01									<0.01	mg/kg	TM26/PM21
Natural Moisture Content	33.1	11.0									<0.1	%	PM4/PM0
Hexavalent Chromium [#]	0.8	<0.3									<0.3	mg/kg	TM38/PM20
Free Cyanide	<0.5	<0.5									<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	0.309	0.001									<0.001	None	TM21/PM24
pH ^{#M}	7.16	7.62									<0.01	pH units	TM73/PM11
Sample Type	Sandy Loam	Clay										None	PM13/PM0
Sample Colour	Dark Brown	Medium Brown										None	PM13/PM0
Other Items	stones,twigs	stones										None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : CEN 10:1 1 Batch
Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.									Please see attached notes for all abbreviations and acronyms		
Sample ID	WS3								LOD/LOR	Units	Method No.
Depth	1.20										
COC No / misc											
Containers	V J T										
Sample Date	10/09/2015										
Sample Type	Soil										
Batch Number	8										
Date of Receipt	12/09/2015										
Dissolved Antimony #	<2								<2	ug/l	TM30/PM14
Dissolved Arsenic #	<2.5								<2.5	ug/l	TM30/PM14
Dissolved Barium #	74								<3	ug/l	TM30/PM14
Dissolved Boron #	118								<12	ug/l	TM30/PM14
Dissolved Cadmium #	<0.5								<0.5	ug/l	TM30/PM14
Dissolved Chromium #	<1.5								<1.5	ug/l	TM30/PM14
Dissolved Copper #	3								<3	ug/l	TM30/PM14
Dissolved Lead #	1.3								<0.4	ug/l	TM30/PM14
Dissolved Nickel #	<2								<2	ug/l	TM30/PM14
Dissolved Selenium #	<3								<3	ug/l	TM30/PM14
Dissolved Zinc #	7								<3	ug/l	TM30/PM14
Mercury Dissolved by CVAF #	0.07								<0.01	ug/l	TM61/PM38
PAH MS											
Naphthalene	0.16								<0.01	ug/l	TM4/PM30
Acenaphthylene	0.06								<0.01	ug/l	TM4/PM30
Acenaphthene	0.04								<0.01	ug/l	TM4/PM30
Fluorene	0.03								<0.01	ug/l	TM4/PM30
Phenanthrene	0.22								<0.01	ug/l	TM4/PM30
Anthracene	0.10								<0.01	ug/l	TM4/PM30
Fluoranthene	0.67								<0.01	ug/l	TM4/PM30
Pyrene	0.64								<0.01	ug/l	TM4/PM30
Benzo(a)anthracene	0.37								<0.01	ug/l	TM4/PM30
Chrysene	0.46								<0.01	ug/l	TM4/PM30
Benzo(bk)fluoranthene	1.00								<0.01	ug/l	TM4/PM30
Benzo(a)pyrene	0.79								<0.01	ug/l	TM4/PM30
Indeno(123cd)pyrene	0.49								<0.01	ug/l	TM4/PM30
Dibenzo(ah)anthracene	0.09								<0.01	ug/l	TM4/PM30
Benzo(ghi)perylene	0.45								<0.01	ug/l	TM4/PM30
PAH 16 Total	5.6								<0.1	ug/l	TM4/PM30
Benzo(b)fluoranthene	0.72								<0.01	ug/l	TM4/PM30
Benzo(k)fluoranthene	0.28								<0.01	ug/l	TM4/PM30
PAH Surrogate % Recovery	91								<0	%	TM4/PM30
EPH >C10-C12	<10								<10	ug/l	TM5/PM30
EPH >C12-C16	<10								<10	ug/l	TM5/PM30
EPH >C16-C21	<10								<10	ug/l	TM5/PM30
EPH >C21-C28	<10								<10	ug/l	TM5/PM30
EPH >C28-C35	<10								<10	ug/l	TM5/PM30
EPH >C35-C40	<10								<10	ug/l	TM5/PM30
EPH >C40-C44	<10								<10	ug/l	TM5/PM30
EPH >C10-C44	<10								<10	ug/l	TM5/PM30
GRO (>C5-C10)	<100								<100	ug/l	TM36/PM69

Jones Environmental Laboratory

Client Name: WYG
 Reference: A093275
 Location: A50 Dove Way, Uttoxeter
 Contact: Emelye Towell
 JE Job No.: 15/12682

Report : CEN 10:1 1 Batch
 Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	319-324										Please see attached notes for all abbreviations and acronyms		
Sample ID	WS3										LOD/LOR	Units	Method No.
Depth	1.20												
COC No / misc													
Containers	V J T												
Sample Date	10/09/2015												
Sample Type	Soil												
Batch Number	8												
Date of Receipt	12/09/2015												
Phenol	<0.5										<0.5	ug/l	TM26/PM0
Sulphate #	216.34										<0.05	mg/l	TM38/PM0
Ammoniacal Nitrogen as NH4 #	0.05										<0.03	mg/l	TM38/PM0
Mass of raw test portion	0.1264											kg	NONE/PM17
Leachant Volume	0.864											l	NONE/PM17
pH	7.00										<0.01	pH units	TM73/PM0
Total Alkalinity as CaCO3	94										<1	mg/l	TM75/PM0

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
15/12682	8	WS6	1.20	309	18/09/2015	Mass of Dry Sample	42.8 (g)
					18/09/2015	General Description (Bulk Analysis)	soil-stones
					18/09/2015	Asbestos Containing Material	None
					18/09/2015	Asbestos Containing Material (2)	None
					18/09/2015	Asbestos Screen	NAD
					18/09/2015	Asbestos Screen (2)	NAD
					18/09/2015	Asbestos Level	NAD
15/12682	8	WS3	3.00	338	18/09/2015	Mass of Dry Sample	56.4 (g)
					18/09/2015	General Description (Bulk Analysis)	Soil/Stone
					18/09/2015	Asbestos Containing Material	None
					18/09/2015	Asbestos Containing Material (2)	None
					18/09/2015	Asbestos Screen	NAD
					18/09/2015	Asbestos Screen (2)	NAD
					18/09/2015	Asbestos Level	NAD

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 15/12682						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 15/12682

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 (UKAS) accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.			AR	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.	Yes	Yes	AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM14	Analysis of waters and leachates for metals by ICP OES. Samples are filtered for dissolved metals and acidified if required.	Yes		AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM69	Modified BS EN 12457 method. One part soil is mixed with 10 parts water in a vial leaving no headspace. The mixture is shaken and then left to leach for 24 hours before VOC analysis.			AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM61	Modified US EPA methods 245.7 and 200.7. Determination of Mercury by Cold Vapour Atomic Fluorescence.	PM38	Samples are brominated to reduce all mercury compounds to Mercury (II) which is analysed using method TM061.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	Yes
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM75	Modified US EPA method 310.1. Determination of Alkalinity by Metrohm automated titration analyser.	PM0	No preparation is required.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
NONE	No Method Code	PM17	Modified method EN12457-2 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.				
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	



Jones Environmental Laboratory

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Attention : Emelye Towell
Date : 30th September, 2015
Your reference : A093275
Our reference : Test Report 15/12682 Batch 9
Location : A50 Dove Way, Uttoxeter
Date samples received : 12th September, 2015
Status : Final report
Issue : 1

Fourteen samples were received for analysis on 12th September, 2015 of which four were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied. All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid
Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	379-384	385-389	396-401								LOD/LOR	Units	Method No.
Sample ID	WS2	WS2	WS5										
Depth	2.50	3.50	1.20										
COC No / misc													
Containers	V J T	V J T	V J T										
Sample Date	10/09/2015	10/09/2015	10/09/2015										
Sample Type	Soil	Soil	Soil										
Batch Number	9	9	9										
Date of Receipt	12/09/2015	12/09/2015	12/09/2015										
Arsenic #M	9.5	8.7	-								<0.5	mg/kg	TM30/PM15
Arsenic	-	-	145.5								<0.5	mg/kg	TM30/PM62
Beryllium	1.2	2.0	-								<0.5	mg/kg	TM30/PM15
Beryllium	-	-	16.1								<0.5	mg/kg	TM30/PM62
Cadmium #M	0.1	<0.1	-								<0.1	mg/kg	TM30/PM15
Cadmium	-	-	0.8								<0.1	mg/kg	TM30/PM62
Chromium #M	77.6	105.0	-								<0.5	mg/kg	TM30/PM15
Chromium	-	-	30.8								<0.5	mg/kg	TM30/PM62
Copper #M	7	<1	-								<1	mg/kg	TM30/PM15
Copper	-	-	824AA								<1	mg/kg	TM30/PM62
Lead #M	16	7	-								<5	mg/kg	TM30/PM15
Lead	-	-	330								<5	mg/kg	TM30/PM62
Mercury #M	<0.1	<0.1	-								<0.1	mg/kg	TM30/PM15
Mercury	-	-	87.3AA								<0.1	mg/kg	TM30/PM62
Nickel #M	25.2	15.7	-								<0.7	mg/kg	TM30/PM15
Nickel	-	-	158.3								<0.7	mg/kg	TM30/PM62
Selenium #M	1	<1	-								<1	mg/kg	TM30/PM15
Selenium	-	-	4								<1	mg/kg	TM30/PM62
Vanadium	36	21	-								<1	mg/kg	TM30/PM15
Vanadium	-	-	110								<1	mg/kg	TM30/PM62
Water Soluble Boron #M	5.7	2.7	-								<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	10.6								<0.1	mg/kg	TM74/PM61
Zinc #M	79	34	-								<5	mg/kg	TM30/PM15
Zinc	-	-	819								<5	mg/kg	TM30/PM62

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	379-384	385-389	396-401												
Sample ID	WS2	WS2	WS5												
Depth	2.50	3.50	1.20												
COC No / misc															
Containers	V J T	V J T	V J T												
Sample Date	10/09/2015	10/09/2015	10/09/2015												
Sample Type	Soil	Soil	Soil												
Batch Number	9	9	9												
Date of Receipt	12/09/2015	12/09/2015	12/09/2015												
											LOD/LOR	Units	Method No.		
PAH MS															
Naphthalene #M	<0.04	<0.04	<0.04										<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	0.11										<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05	<0.05	<0.05										<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.04	<0.04	<0.04										<0.04	mg/kg	TM4/PM8
Phenanthrene #M	<0.03	<0.03	0.21										<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	0.25										<0.04	mg/kg	TM4/PM8
Fluoranthene #M	<0.03	<0.03	0.67										<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	<0.03	0.67										<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	<0.06	0.61										<0.06	mg/kg	TM4/PM8
Chrysene #M	<0.02	<0.02	0.64										<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	<0.07	<0.07	1.39										<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	<0.04	0.82										<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	<0.04	<0.04	0.65										<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	0.13										<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	<0.04	0.62										<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6	<0.6	6.8										<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	<0.05	1.00										<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	<0.02	0.39										<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	111	112	106										<0	%	TM4/PM8
TPH CWG															
Aliphatics															
>C5-C6 #M	<0.1	<0.1	<0.1										<0.1	mg/kg	TM36/PM12
>C6-C8 #M	<0.1	<0.1	<0.1										<0.1	mg/kg	TM36/PM12
>C8-C10	0.1	0.4	<0.1										<0.1	mg/kg	TM36/PM12
>C10-C12 #M	<0.2	<0.2	<0.2										<0.2	mg/kg	TM5/PM16
>C12-C16 #M	<4	<4	<4										<4	mg/kg	TM5/PM16
>C16-C21 #M	<7	<7	<7										<7	mg/kg	TM5/PM16
>C21-C35 #M	<7	<7	25										<7	mg/kg	TM5/PM16
>C35-C44	<7	<7	<7										<7	mg/kg	TM5/PM16
Total aliphatics C5-44	<26	<26	<26										<26	mg/kg	TM5/TM36/PM16
Aromatics															
>C5-EC7	<0.1	<0.1	<0.1										<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	<0.1	<0.1										<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	<0.1	<0.1	<0.1										<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	<0.2	<0.2										<0.2	mg/kg	TM5/PM16
>EC12-EC16	<4	<4	<4										<4	mg/kg	TM5/PM16
>EC16-EC21	<7	<7	40										<7	mg/kg	TM5/PM16
>EC21-EC35	<7	<7	167										<7	mg/kg	TM5/PM16
>EC35-EC44	<7	<7	17										<7	mg/kg	TM5/PM16
Total aromatics C5-44	<26	<26	224										<26	mg/kg	TM5/TM36/PM16
Total aliphatics and aromatics(C5-44)	<52	<52	224										<52	mg/kg	TM5/TM36/PM16

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
15/12682	9	WS2	1.20	369	29/09/2015	Mass of Dry Sample	52.8 (g)
					29/09/2015	General Description (Bulk Analysis)	soil-stones
					29/09/2015	Asbestos Containing Material	None
					29/09/2015	Asbestos Containing Material (2)	None
					29/09/2015	Asbestos Screen	NAD
					29/09/2015	Asbestos Screen (2)	NAD
					29/09/2015	Asbestos Level	NAD
15/12682	9	WS2	2.50	381	18/09/2015	Mass of Dry Sample	47.8 (g)
					18/09/2015	General Description (Bulk Analysis)	soil-stones
					18/09/2015	Asbestos Containing Material	None
					18/09/2015	Asbestos Containing Material (2)	None
					18/09/2015	Asbestos Screen	NAD
					18/09/2015	Asbestos Screen (2)	NAD
					18/09/2015	Asbestos Level	NAD
15/12682	9	WS2	3.50	387	18/09/2015	Mass of Dry Sample	57.5 (g)
					18/09/2015	General Description (Bulk Analysis)	soil-stones
					18/09/2015	Asbestos Containing Material	None
					18/09/2015	Asbestos Containing Material (2)	None
					18/09/2015	Asbestos Screen	NAD
					18/09/2015	Asbestos Screen (2)	NAD
					18/09/2015	Asbestos Level	NAD
15/12682	9	WS5	1.20	398	18/09/2015	Mass of Dry Sample	37.3 (g)
					18/09/2015	General Description (Bulk Analysis)	soil-stones
					18/09/2015	Asbestos Containing Material	Free Fibres
					18/09/2015	Asbestos Screen	Chrysotile
					18/09/2015	Asbestos Level	Quantifiable
					22/09/2015	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					22/09/2015	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 15/12682

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 (UKAS) accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	Yes
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.	Yes	Yes	AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes		AR	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes



Jones Environmental Laboratory

Registered Address : Unit 3 Deeside Point, Zone 3, Deeside Industrial Park, Deeside, CH5 2UA. UK

Unit 3 Deeside Point
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Attention : Emelye Towell
Date : 28th September, 2015
Your reference : A093275
Our reference : Test Report 15/12682 Batch 10
Location : A50 Dove Way, Uttoxeter
Date samples received : 12th September, 2015
Status : Final report
Issue : 1

Nine samples were received for analysis on 12th September, 2015 of which three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied. All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Bruce Leslie
Project Co-ordinator

Jones Environmental Laboratory

Client Name: WYG
 Reference: A093275
 Location: A50 Dove Way, Uttoxeter
 Contact: Emelye Towell
 JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	420-425	426-428	429-431									
Sample ID	P-WS2	P-WS2	P-WS2									
Depth	1.20	2.00	3.00									
COC No / misc												
Containers	V J T	V J T	V J T									
Sample Date	11/09/2015	11/09/2015	11/09/2015									
Sample Type	Soil	Soil	Soil									
Batch Number	10	10	10									
Date of Receipt	12/09/2015	12/09/2015	12/09/2015									
										LOD/LOR	Units	Method No.
TPH CWG												
Aliphatics												
>C5-C6 ^{#M}	<0.1	-	<0.1							<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	-	<0.1							<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	-	<0.1							<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	-	<0.2							<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	-	<4							<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	-	<7							<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	44	-	<7							<7	mg/kg	TM5/PM16
>C35-C44	<7	-	<7							<7	mg/kg	TM5/PM16
Total aliphatics C5-44	44	-	<26							<26	mg/kg	TM5/TM36/PM16
Aromatics												
>C5-EC7	<0.1	-	<0.1							<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	-	<0.1							<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	-	<0.1							<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	-	<0.2							<0.2	mg/kg	TM5/PM16
>EC12-EC16	<4	-	<4							<4	mg/kg	TM5/PM16
>EC16-EC21	<7	-	<7							<7	mg/kg	TM5/PM16
>EC21-EC35	62	-	<7							<7	mg/kg	TM5/PM16
>EC35-EC44	<7	-	<7							<7	mg/kg	TM5/PM16
Total aromatics C5-44	62	-	<26							<26	mg/kg	TM5/TM36/PM16
Total aliphatics and aromatics(C5-44)	106	-	<52							<52	mg/kg	TM5/TM36/PM16
MTBE [#]	<5	<5	<5							<5	ug/kg	TM31/PM12
Benzene [#]	<5	<5	<5							<5	ug/kg	TM31/PM12
Toluene [#]	<5	<5	<5							<5	ug/kg	TM31/PM12
Ethylbenzene [#]	<5	<5	<5							<5	ug/kg	TM31/PM12
m/p-Xylene [#]	<5	<5	<5							<5	ug/kg	TM31/PM12
o-Xylene [#]	<5	<5	<5							<5	ug/kg	TM31/PM12
PCB 28 [#]	-	55	-							<5	ug/kg	TM17/PM8
PCB 52 [#]	-	49	-							<5	ug/kg	TM17/PM8
PCB 101 [#]	-	23	-							<5	ug/kg	TM17/PM8
PCB 118 [#]	-	9	-							<5	ug/kg	TM17/PM8
PCB 138 [#]	-	14	-							<5	ug/kg	TM17/PM8
PCB 153 [#]	-	20	-							<5	ug/kg	TM17/PM8
PCB 180 [#]	-	<5	-							<5	ug/kg	TM17/PM8
Total 7 PCBs [#]	-	170	-							<35	ug/kg	TM17/PM8
Phenol ^{#M}	<0.01	-	<0.01							<0.01	mg/kg	TM26/PM21
Natural Moisture Content	19.9	51.7	20.7							<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	-	<0.3							<0.3	mg/kg	TM38/PM20

Please see attached notes for all abbreviations and acronyms

Jones Environmental Laboratory

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell
JE Job No.: 15/12682

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	420-425	426-428	429-431										
Sample ID	P-WS2	P-WS2	P-WS2										
Depth	1.20	2.00	3.00										
COC No / misc													
Containers	V J T	V J T	V J T										
Sample Date	11/09/2015	11/09/2015	11/09/2015										
Sample Type	Soil	Soil	Soil										
Batch Number	10	10	10										
Date of Receipt	12/09/2015	12/09/2015	12/09/2015										
										LOD/LOR	Units	Method No.	
Free Cyanide	<0.5	-	<0.5							<0.5	mg/kg	TM89/PM45	
Total Organic Carbon #	-	9.72	-							<0.02	%	TM21/PM24	
Fraction Organic Carbon	0.039	-	0.003							<0.001	None	TM21/PM24	
ANC at pH4	-	0.36	-							<0.03	mol/kg	TM77/PM0	
ANC at pH7	-	NDP	-							<0.03	mol/kg	TM77/PM0	
Loss on Ignition #	-	29.0	-							<1.0	%	TM22/PM0	
pH #M	7.83	6.77	7.07							<0.01	pH units	TM73/PM11	
Sample Type	Sandy Loam	Clayey Loam	Clay								None	PM13/PM0	
Sample Colour	Dark Brown	Light Grey	Dark Grey								None	PM13/PM0	
Other Items	NA	plastic stones, vegetation	stones								None	PM13/PM0	

Please see attached notes for all abbreviations and acronyms

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	49.4		
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	66.9		
Particle Size <4mm =	>95%				
JEFL Job No	15/12682		Landfill Waste Acceptance Criteria Limits		
Sample No	428		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample No	P-WS2				
Depth/Other	2.00				
Sample Date	11/09/2015				
Batch No	10				
Solid Waste Analysis					
Total Organic Carbon (%)	9.72		3	5	6
Loss on Ignition (%)	29.0		-	-	10
Sum of BTEX (mg/kg)	<0.025		6	-	-
Sum of 7 PCBs (mg/kg)	0.170		1	-	-
Mineral Oil (mg/kg)	6762		500	-	-
PAH Sum of 17(mg/kg)	1.16		100	-	-
pH (pH Units)	6.77		-	>6	-
ANC to pH 7 (mol/kg)	NDP		-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	0.36		-	to be evaluated	to be evaluated
Eluate Analysis	10:1 concⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg		
	C₁₀	A₁₀	mg/kg		
	mg/l	mg/kg			
Arsenic	<0.0025	<0.025	0.5	2	25
Barium	0.057	0.57	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	<0.0015	<0.015	0.5	10	70
Copper	<0.007	<0.07	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.007	0.07	0.5	10	30
Nickel	0.005	0.05	0.4	10	40
Lead	<0.005	<0.05	0.5	10	50
Antimony	<0.002	<0.02	0.06	0.7	5
Selenium	<0.003	<0.03	0.1	0.5	7
Zinc	0.007	0.07	4	50	200
Chloride	1.5	15	800	15000	25000
Fluoride	<0.3	<3	10	150	500
Sulphate as SO4	742.06	7424.4	1000	20000	50000
Total Dissolved Solids	1094	10946	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	10	100	500	800	1000

Client Name: WYG
Reference: A093275
Location: A50 Dove Way, Uttoxeter
Contact: Emelye Towell

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
15/12682	10	P-WS2	1.20	422	18/09/2015	Mass of Dry Sample	46.9 (g)
					18/09/2015	General Description (Bulk Analysis)	Soil/Stone/Silt
					18/09/2015	Asbestos Containing Material	None
					18/09/2015	Asbestos Containing Material (2)	None
					18/09/2015	Asbestos Screen	NAD
					18/09/2015	Asbestos Screen (2)	NAD
					18/09/2015	Asbestos Level	NAD
15/12682	10	P-WS2	3.00	430	18/09/2015	Mass of Dry Sample	50.6 (g)
					18/09/2015	General Description (Bulk Analysis)	Soil/Stone
					18/09/2015	Asbestos Containing Material	None
					18/09/2015	Asbestos Containing Material (2)	None
					18/09/2015	Asbestos Screen	NAD
					18/09/2015	Asbestos Screen (2)	NAD
					18/09/2015	Asbestos Level	NAD

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 15/12682

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 (UKAS) accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.			AR	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM17	Modified US EPA method 8270. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM20	Modified USEPA 8163. Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.			AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM22	Modified USEPA 160.4. Gravimetric determination of Loss on Ignition by temperature controlled Muffle Furnace (450°C)	PM0	No preparation is required.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.	Yes	Yes	AR	Yes
TM27	Modified US EPA method 9056. Determination of water soluble anions using Dionex (Ion-Chromatography).	PM0	No preparation is required.			AR	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM14	Analysis of waters and leachates for metals by ICP OES. Samples are filtered for dissolved metals and acidified if required.	Yes		AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM17	Modified method EN12457-2 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.	Yes		AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM69	Modified BS EN 12457 method. One part soil is mixed with 10 parts water in a vial leaving no headspace. The mixture is shaken and then left to leach for 24 hours before VOC analysis.			AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes		AR	Yes

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM60	Modified USEPA 9060. Determination of TOC by calculation from Total Carbon and Inorganic Carbon using a TOC analyser, the carbon in the sample is converted to CO2 and then passed through a non-dispersive infrared gas analyser (NDIR).	PM0	No preparation is required.			AR	Yes
TM61	Modified US EPA methods 245.7 and 200.7. Determination of Mercury by Cold Vapour Atomic Fluorescence.	PM38	Samples are brominated to reduce all mercury compounds to Mercury (II) which is analysed using method TM061.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	Yes
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM75	Modified US EPA method 310.1. Determination of Alkalinity by Metrohm automated titration analyser.	PM0	No preparation is required.			AR	Yes
TM77	Modified DDCEN/TS method 15364:2006. Determination of Acid Neutralization Capacity by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	No

JE Job No: 15/12682

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
NONE	No Method Code	PM17	Modified method EN12457-2 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.				
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	



DRAFT

Appendix E
Photographs





TP01 0.0mbgl to 0.4mbgl



TP02 0.0mbgl to 0.4mbgl



TP03.1 0.0mbgl to 0.4mbgl



TP03.2 0.0mbgl to 0.4mbgl



TP04 0.0mbgl to 0.4mbgl



TP05 0.0mbgl to 0.4mbgl



TP06 0.0mbgl to 0.4mbgl



TP07 0.0mbgl to 0.4mbgl



TP08 0.0mbgl to 0.4mbgl



TP09 0.0mbgl to 0.4mbgl



TP10 0.0mbgl to 0.4mbgl



TP11 0.0mbgl to 0.4mbgl



TP12 0.0mbgl to 0.4mbgl



TP13 0.0mbgl to 0.4mbgl



TP14 0.0mbgl to 0.4mbgl



TP15 0.0mbgl to 0.5mbgl



TP16 0.0mbgl to 0.4mbgl



TP17 0.0mbgl to 0.4mbgl



TP18 0.0mbgl to 0.45mbgl



TP19 0.0mbgl to 0.45mbgl



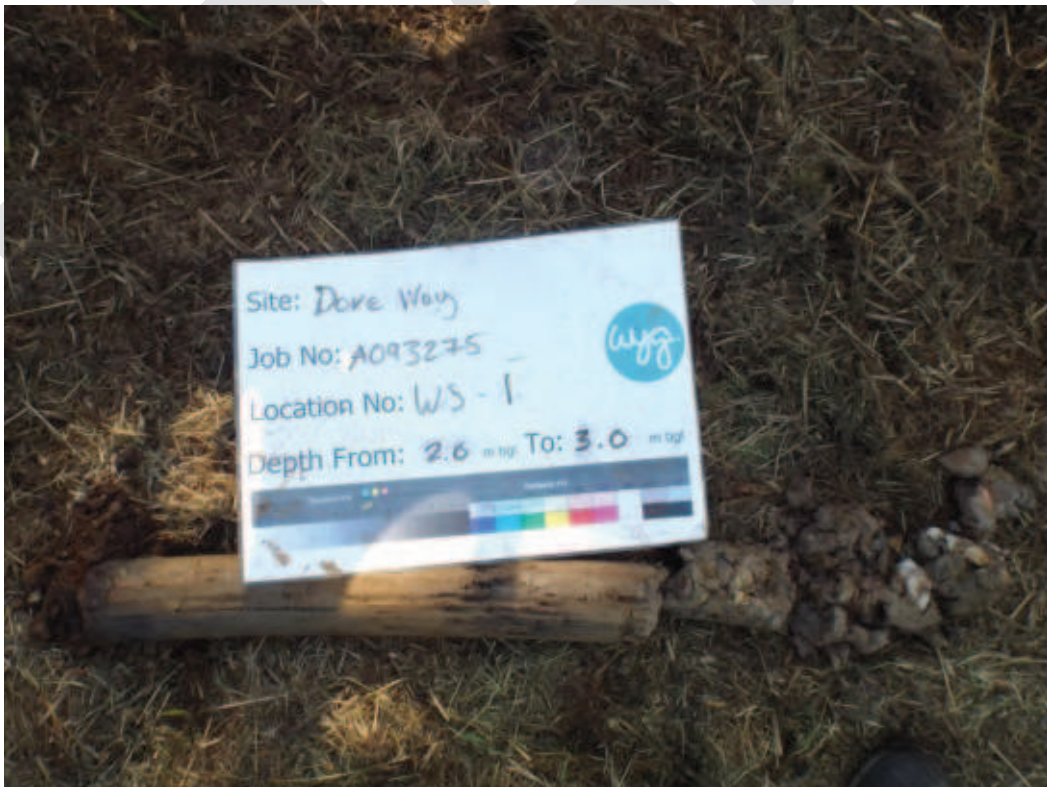
TP20 0.0mbgl to 0.5mbgl



TP21 0.0mbgl to 0.45mbgl



WS01 1.2mbgl to 2.0mbgl



WS01 2.0mbgl to 3.0mbgl



WS01 3.0mbgl to 4.0mbgl



WS01 4.0mbgl to 5.0mbgl



WS02 1.2mbgl to 2.0mbgl



WS02 2.0mbgl to 3.0mbgl



WS02 3.0mbgl to 4.0mbgl



WS03 1.2mbgl to 2.0mbgl



WS03 2.0mbgl to 3.0mbgl



WS04 1.2mbgl to 2.0mbgl



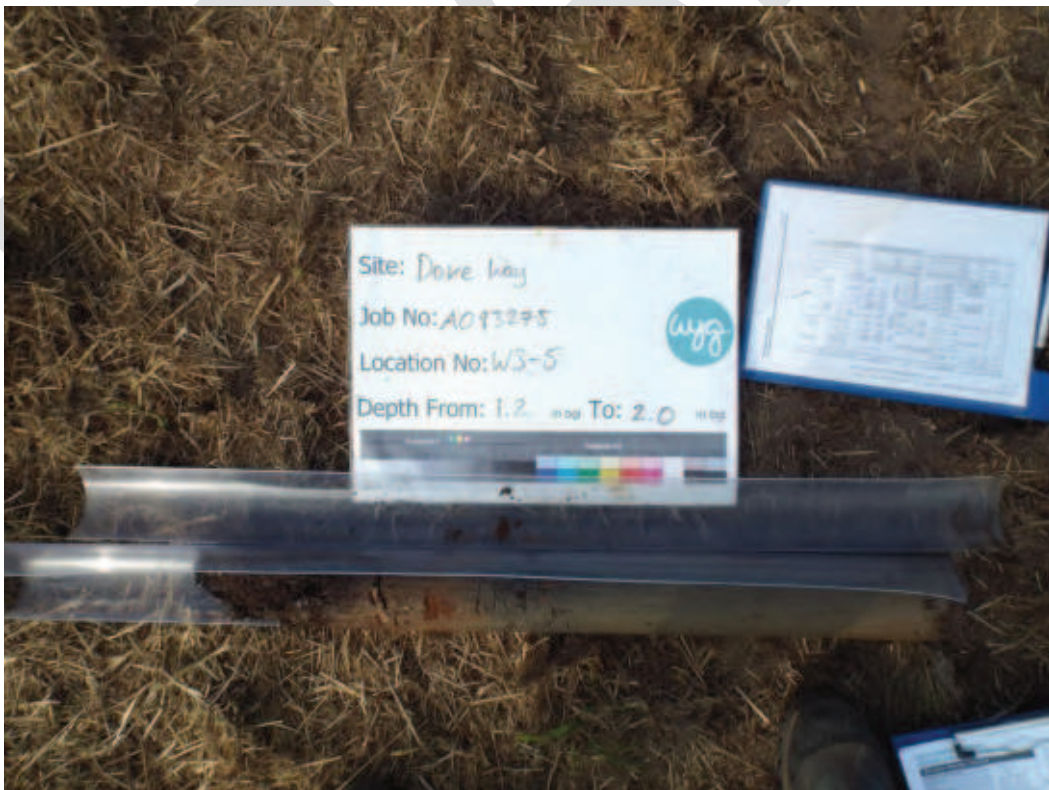
WS04 2.0mbgl to 3.0mbgl



WS04 3.0mbgl to 4.0mbgl



WS04 4.0mbgl to 5.0mbgl



WS05 1.2mbgl to 2.0mbgl



WS05 2.0mbgl to 3.0mbgl



WS05.1 1.2mbgl to 2.0mbgl



WS06 1.2mbgl to 2.0mbgl



WS06 2.0mbgl to 3.0mbgl



WS06 3.0mbgl to 4.0mbgl



P WS01 2.0mbgl to 3.0mbgl



P WS02 1.2mbgl to 2.0mbgl



P WS02 2.0mbgl to 3.0mbgl



P WS02 3.0mbgl to 4.0mbgl



P WS02 4.0mbgl to 5.0mbgl



P WS03 1.2mbgl to 2.0mbgl



P WS03 3.0mbgl to 4.0mbgl



P WS04 1.2mbgl to 2.0mbgl



P WS04 2.0mbgl to 3.0mbgl



P WS04 3.0mbgl to 4.0mbgl



P WS04 4.0mbgl to 5.0mbgl

Appendix C Contamination risk assessment methodology

The following Contaminated Land Risk Assessment methodology is based on CIRIA C552 (2001) Contaminated Land Risk Assessment – A Guide to Good Practice, in order to quantify potential risk via risk estimation and risk evaluation, which can be adopted at the Phase I stage. This will then determine an overall risk category which can be used to identify likely actions. This methodology uses qualitative descriptors and therefore is a qualitative approach.

The methodology requires the classification of:

- the magnitude of the consequence (severity) of a risk occurring, and
- the magnitude of the probability (likelihood) of a risk occurring.

The potential consequences of contamination risks occurring at this site are classified in accordance with the following table, which is adapted from the CIRIA guidance.

Table C.0.1: Classification of consequence

Classification	Definition of Consequence
Severe	Short-term (acute) risks to human health. Short-term risk of pollution of sensitive water resource or ecosystem. Catastrophic damage to crops/buildings/property/infrastructure, including off-site soils.
Medium	Medium/long-term (chronic) risks to human health. Medium/long-term risk of pollution of sensitive water resource or ecosystem. Significant damage to crops/buildings/property/infrastructure (on or off-site). Contamination of off-site soils.
Mild	Easily preventable, permanent health effects on humans. Pollution of non-sensitive water resources. Localised damage to crops/buildings/property/infrastructure (on or off-site).

Minor	Easily preventable, non-permanent health effects on humans, or no effects. Minor, low-level and localised contamination of on-site soils. Easily repairable damage to crops/buildings/property/infrastructure.
-------	--

The probability of contamination risks occurring at this site will be classified in accordance with Table D.2, Classification of probability, which is also adapted from the CIRIA guidance. Note that for each category, it is assumed that a pollution linkage exists. Where a pollution linkage does not exist, the likelihood is zero, as is the risk.

Table C.0.2: Classification of probability

Classification	Definition of Probability
High Likelihood	Circumstances are such that an event appears very likely in the short-term or almost inevitable in the long-term; or there is already evidence that such an event has occurred.
Likely	Circumstances are such that such an event is not inevitable, but is possible in the short-term and is likely over the long-term.
Low Likelihood	Circumstances are such that it is by no means certain that an event would occur even over a longer period, and it is less likely in the short-term.
Unlikely	Circumstances are such that it is improbable that an event would occur even in the very long-term.

For each possible pollution linkage (source-pathway-receptor) identified, the potential risk can be evaluated, as presented in Section 5. Based upon this, CIRIA C552 presents definitions of the risk categories, together with the investigatory and remedial actions that are likely to be necessary in each case, as in Table D.3. These risk categories apply to each pollutant linkage, not simply to each hazard or receptor.

Table C.0.3: Definition of risk categories and likely actions required

Risk Category	Definition and likely actions required
Very high	Severe harm to a defined receptor is very likely, or has already occurred. The risk is likely to result in a substantial liability. Urgent investigation (if not already undertaken) is likely to be required. Urgent remediation is likely to be required.



High	<p>Harm to a defined receptor is likely.</p> <p>The risk, if realised, may result in a substantial liability.</p> <p>Urgent investigation (if not already undertaken) is likely to be required.</p> <p>Remediation is likely to be required in the long term, possibly sooner.</p>
Moderate	<p>Harm to a defined receptor is possible, but severe harm is unlikely.</p> <p>Investigation is likely to be required to clarify the level of potential liability and risk.</p> <p>Some remediation may be required in the longer term.</p>
Low	<p>Harm to a defined receptor is possible, but is likely to be mild at worst.</p> <p>Liabilities could theoretically arise, but are unlikely.</p> <p>Further investigation is not required at this stage.</p> <p>Remediation is unlikely to be required.</p>
Very low	<p>Harm to a defined receptor is unlikely, and would be minor at worst.</p> <p>No liabilities are likely to arise.</p> <p>Further investigation is not required at this stage.</p> <p>Remediation is very unlikely to be required.</p>

Appendix D Groundwater and leachate assessment criteria

Table D.0.4: Groundwater assessment criteria

Parameter	Hazardous/ non- hazardous classification	MRV/MDL (µg/l)	UK Drinking Water Standard (µg/l)	EQS – Freshwater (µg/l)
Metals/semi-metals				
Arsenic	H	1.0	10	
Barium	NH	-	100	
Boron	NH	-	1000	
Cadmium	H	0.1	5	
Chromium	NH	-	50	
Mercury	H	0.01	1	
Nickel	NH	-	20	
Lead	NH	-	10	
Selenium	H	1.0	10	
Boron (Water Soluble)	NH	-	1000	
Copper	NH	-	2000	1-28
Zinc	NH	-	5000	8-125
Vanadium	NH	-	-	
Iron	NH	-	200	
Magnesium	NH	-	50 000	
Major ions and quality parameters				
Sulphate	NH	-	250,000	



Chloride	NH	-	250,000	
Ammoniacal Nitrogen	NH	-	500	
Nitrate	NH	-	50000 (37500**)	
Nitrite	NH	-	100/500	
pH Value	-	-	-	
Polycyclic aromatic hydrocarbons				
Benzo(a)pyrene	H	0.01	0.01	
Benzo(k)fluoranthene	H	0.01	-	
Benzo(b)fluoranthene	H	0.01	-	
Benzo(g,h,i)perylene	H	0.01	-	
Indeno(1.2.3-cd)pyrene	H	0.01	-	
Fluoranthene	H	0.01	-	
Naphthalene	H	0.01	-	10
Phenanthrene	H	0.01	-	
Acenaphthene	H	0.01	-	
Acenaphthylene	H	0.01	-	
Fluorene	H	0.01	-	
Anthracene	H	0.01	-	
Pyrene	H	0.01	-	
Benzo(a)anthracene	H	0.01	-	
Chrysene	H	0.01	-	
Benzo(a)pyrene	H	0.01	-	
Dibenzo(a,h)anthracene	H	0.01	-	
PAH total of 4	H	0.01	0.1	
BTEX and TPH				



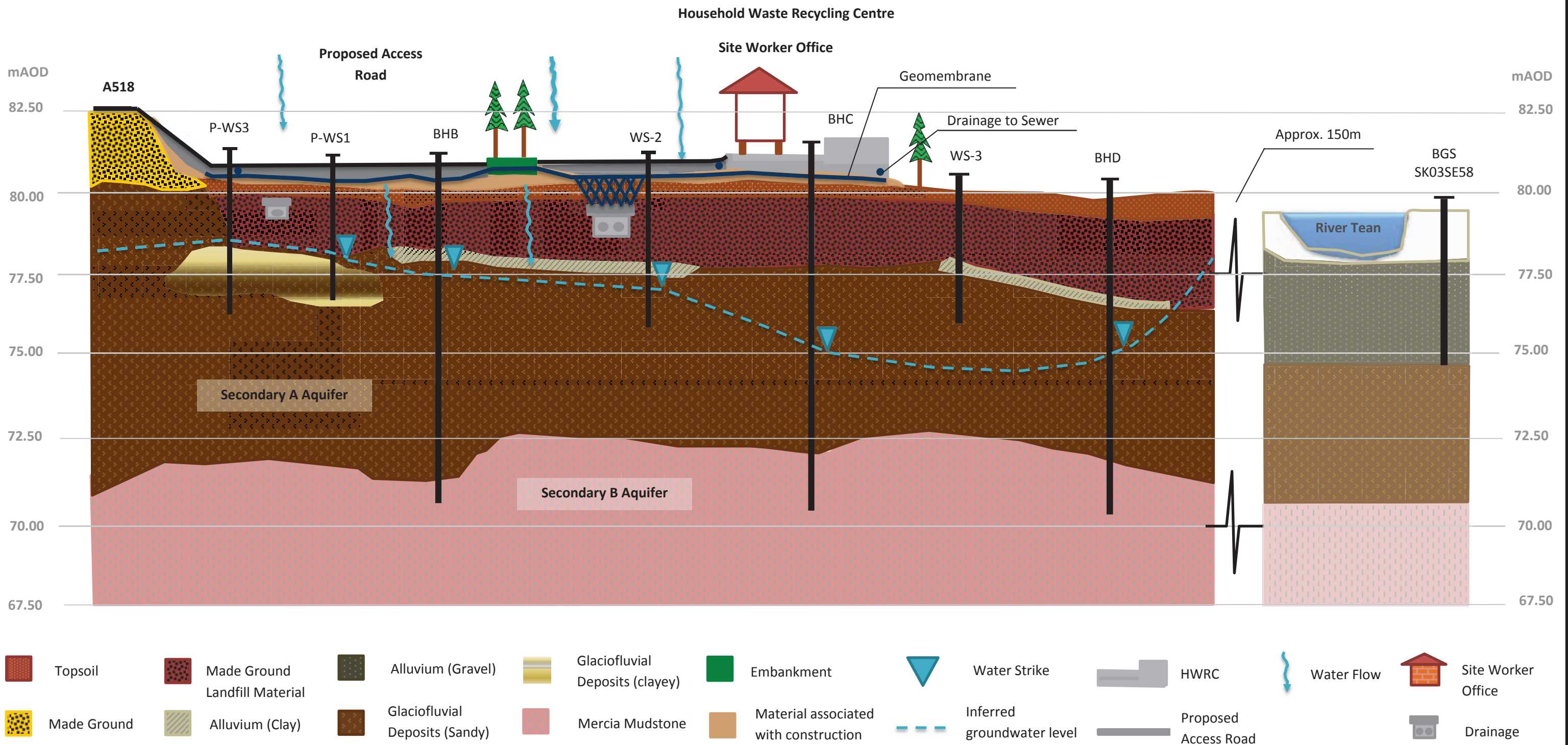
Benzene	H	1.0	1.0	
Toluene	H	4.0	-	
Ethylbenzene	H	0.1	-	
Total Xylenes	H	3.0	-	
TPH	H	0.01	10*	
Other organic contaminants				
Phenols	NH	-	0.5	
Cyanide	NH	-	50	



Appendix E Diagrammatic conceptual site model

Dove Way HWRC - Conceptual Site Model – including proposed design

Receptors	Possible exposure pathways	Receptors	Pathways	Heavy Metals	Petroleum Hydrocarbons	PAH	Asbestos	pH	Ground gas	VOC	SVOC
Human health (future site users - construction workers)	Ingestion, inhalation, dermal contact with soil, fugitive dust and vapours.	Human health (site users / construction workers)	Inhalation	x	x	x	x	x	x	x	x
Controlled waters (surface and groundwater)	Lateral and vertical migration of leachates, free-phase non-aqueous liquids and surface run-off. Disturbance of contaminated sediments and associated turbidity issues.		Ingestion	x	x	x	x	x	x	x	x
Flora & fauna (plants and animals including aquatic organisms)	Direct contact, root uptake and stomatal diffusion.		Dermal	x	x	x	x	x	x	x	x
Built environment (structures / services)	Direct contact with soil and water contaminants.	Surface water	Run-off, leaching of contaminants	✓	✓	✓	x	✓	x	✓	✓
		Flora and fauna (including aquatic organisms)	Root uptake	✓	✓	✓	x	✓	✓	✓	✓
Direct contact	✓		✓	✓	x	✓	x	✓	✓		
Leaching	✓		✓	✓	x	✓	x	✓	✓		
Built environment	Direct contact	Built environment	Direct contact	x	✓	✓	x	✓	✓	✓	





Appendix F Consultation with Regulators

From: [Davis, John](#)
To: [Levick, Thomas](#)
Cc: [Withnell, Chris](#)
Subject: RE: A50 Dove Way CL;AIRE DOW and A50 Growth Corridor PFA
Date: 27 October 2015 13:20:37
Attachments: [image010.jpg](#)
[image011.jpg](#)
[image012.jpg](#)
[image013.gif](#)
[image014.png](#)
[image003.jpg](#)
[image004.jpg](#)

Thomas

I have answered your questions as they relate to my teams function, some points need a more waste legislation focussed view so I have forwarded your Email to Chris Withnell who is the Team Leader of the Environment Management Team that covers waste in this area.

My comments are in Black below;

Firstly the CL;AIRE DoW CoP for the A50 Dove Way site.

Although the site is underlain by Solid Geology designated as Secondary A aquifer, this is overlain by Drift (Alluvium and Glacial Sands and Gravels) both of which are designated as Secondary A aquifers. Groundwater from these Drift deposits may be in continuity with drains and watercourses near the site. So we would consider the groundwater and linked surface water as potential receptors for contaminants at the site. We would expect you to undertake an assessment of the risks in accordance with CLR 11: Model Procedures for the Management of Land Contamination (the UK technical framework), this would be a requirement whether the work is being carried out under a Planning Permission or Voluntarily. The outcome of this assessment would determine what material can remain on site and what needs to be treated before re-use or removed. The minimum requirement is that the work meets the Governments requirements in their Planning Policy Framework (2012). Depending on what treatment (if any) you do on site you may need an appropriate waste permit or mobile plant permit – the Waste Team can provide more advice on this if you provide details of what you intend to do.

In terms of the DoW CoP, the appointed Qualified Person makes the declaration, all you need to do is send a copy of this to us and we will acknowledge it. We do not need anything else from you in this regard.

We have a site with made ground we are hoping to re-use as part of future developments. Areas of the site are historic fill although unlicensed. We hope that we can test and stockpile suitable material to be placed under pile caps and hard standing/building footprints in the proposed future development. The local authority agree in principal with the proposed development. Currently we are stockpiling non-hazardous material which has passed GACs until we can agree its re-use. The site plan is attached. We estimate that approximately 10,000-15,000 tonnes, 5000-7500m³ is to be stockpiled with respect to re-use subsequently further testing is planned. As per our discussion the site overlies a Secondary B aquifer (mercia mudstone) and not near a SPZ. What information would you require to enable me to progress the definition of waste method for re-use of materials?

Secondly the use of PFA in the A50 Growth Corridor

Again a small section of the works may be underlain by Secondary A aquifer. Having, see leachate results for PFA in the past and once constructed the embankment structure and inherent low permeability of the material will largely exclude water. Therefore, in this setting the GW&CL Team would not wish to see any detailed technical assessment. You could if you wish send us leachate test results for the PFA to be laid, for our opinion. In terms of the regulatory position statement I will have to refer you to my colleagues in the EM Waste Team.

We would like to use pulverised fuel ash in a section of re-development of the A50 pictured in the attached plan. At the moment we are estimating ~100,000 tonnes + of PFA up to 10 m high separated from (natural) ground level by a 600mm granular layer, with paradrain (geogrid combined with drainage solution) and some deep soil mixing underneath the embankment footprint in the cohesive soils. PFA will be reinforced using geogrid and capped with pavement or cohesive capping layer. The scheme 1.2km long in total.

The regulatory position statement says the use of waste must not exceed 100,000 tonnes is there a work around for this? The underlying geology is similar to the above scheme the site overlies a Secondary B aquifer (mercia mudstone) and not within an SPZ.

John Davis BSc (Hons), MSc, Pg Dip, FGS, C(Geol), EuroGeol



Technical Specialist (Groundwater and Contaminated Land)
Environment Agency - Staffordshire, Warwickshire & West Midlands Area

Int: 7 22 4809

Ext: 01543 404809

Sentinel House | 9 Wellington Crescent | Fradley Park | Lichfield | WS13 8RR

cid:image004.jpg@01D0CACB.1A3D6F30



From: Levick, Thomas [mailto:Thomas.Levick@amey.co.uk]
Sent: 26 October 2015 12:10
To: Davis, John
Subject: A50 Dove Way CL;AIRE DOW and A50 Growth Corridor PFA
Importance: High

Hello John,

It was good to touch base last week. Thank you for your advice. I have two schemes I would like to liaise with you on.

Firstly the CL;AIRE DoW CoP for the A50 Dove Way site.

We have a site with made ground we are hoping to re-use as part of future developments. Areas of the site are historic fill although unlicensed. We hope that we can test and stockpile suitable material to be placed under pile caps and hard standing/building footprints in the proposed future development. The local authority agree in principal with the proposed development. Currently we are stockpiling non-hazardous material which has passed GACs until we can agree its re-use. The site plan is attached. We estimate that approximately 10,000-15,000 tonnes, 5000-7500m³ is to be stockpiled with respect to re-use subsequently further testing is planned. As per our discussion the site overlies a Secondary B aquifer (mercia mudstone) and not near a SPZ. What information would you require to enable me to progress the definition of waste method for re-use of materials?

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We would like to use pulverised fuel ash in a section of re-development of the A50 pictured in the attached plan. At the moment we are estimating ~100,000 tonnes + of PFA up to 10 m high separated from (natural) ground level by a 600mm granular layer, with paradrain (geogrid combined with drainage solution) and some deep soil mixing underneath the embankment footprint in the cohesive soils. PFA will be reinforced using geogrid and capped with pavement or cohesive capping layer. The scheme 1.2km long in total.

The regulatory position statement says the use of waste must not exceed 100,000 tonnes is there a work around for this? The underlying geology is similar to the above scheme the site overlies a Secondary B aquifer (mercia mudstone) and not within an SPZ.

Please could you advise me of any further information you need for me to progress both of these issues.

Many thanks in advance,

Thomas Levick B.Sc. (Hons) P.G.Cert M.Sc. FGS MCIWEM

Senior Geo-Environmental Engineer | Geotechnical | Consulting

Amey

t: 0121 2125360 | m: [n/a] | e: thomas.levick@amey.co.uk

International Design Hub | Colmore Plaza | 20 Colmore Circus Queensway | Birmingham | B4 6AT



From: Levick, Thomas

Sent: 23 October 2015 10:33

To: 'john.davis@environment-agency.gov.uk'

Subject: test

Thomas Levick B.Sc. (Hons) P.G.Cert M.Sc. FGS MCIWEM

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FILE NOTE - Telephone record

Call In:	<input type="checkbox"/>	Call Out:	<input checked="" type="checkbox"/>	Meeting:	<input type="checkbox"/>	File Note:	<input type="checkbox"/>	Time:		Date:	02/02/2016
Name:	Tom Levick		Office:		IDH						
Project Title:	Dove Way Access Works										
Project Number:	COSTCDM0015										
Subject:	Telephone call to discuss submission of Combined Phase I/II report to discharge planning conditions.										
Notes:	Commenced 16:11 – Telephone call ended approximately 16:20										

TL rang to confirm the current available information regarding history of landfill, whether there had been any determinations or additional records held by the LPA. DF agreed there was not any additional information.

TL – Discussed preliminary findings of Phase I/II report. DF agreed with use of hardstanding and clean cover and keeping made ground materials at depth within the development as an acceptable technique for mitigating potential human health concerns from asbestos.
DF Agreed that use of swales and hardstanding to drain surface waters to sewerage networks to reduce infiltration sensible precautions and mitigation for protection of groundwater, though recommends this will have to be verified by the Environment Agency.
DF – Agreed that there is no direct contact with soils or groundwater

TL – Discussed the likelihood that 4-5 window samples will be required to verify both ground gas assumptions and findings and groundwater findings. Wells will have multi-well style construction.

TL – informed DF of intended submission of Phase I/II report ~8th February 2016.

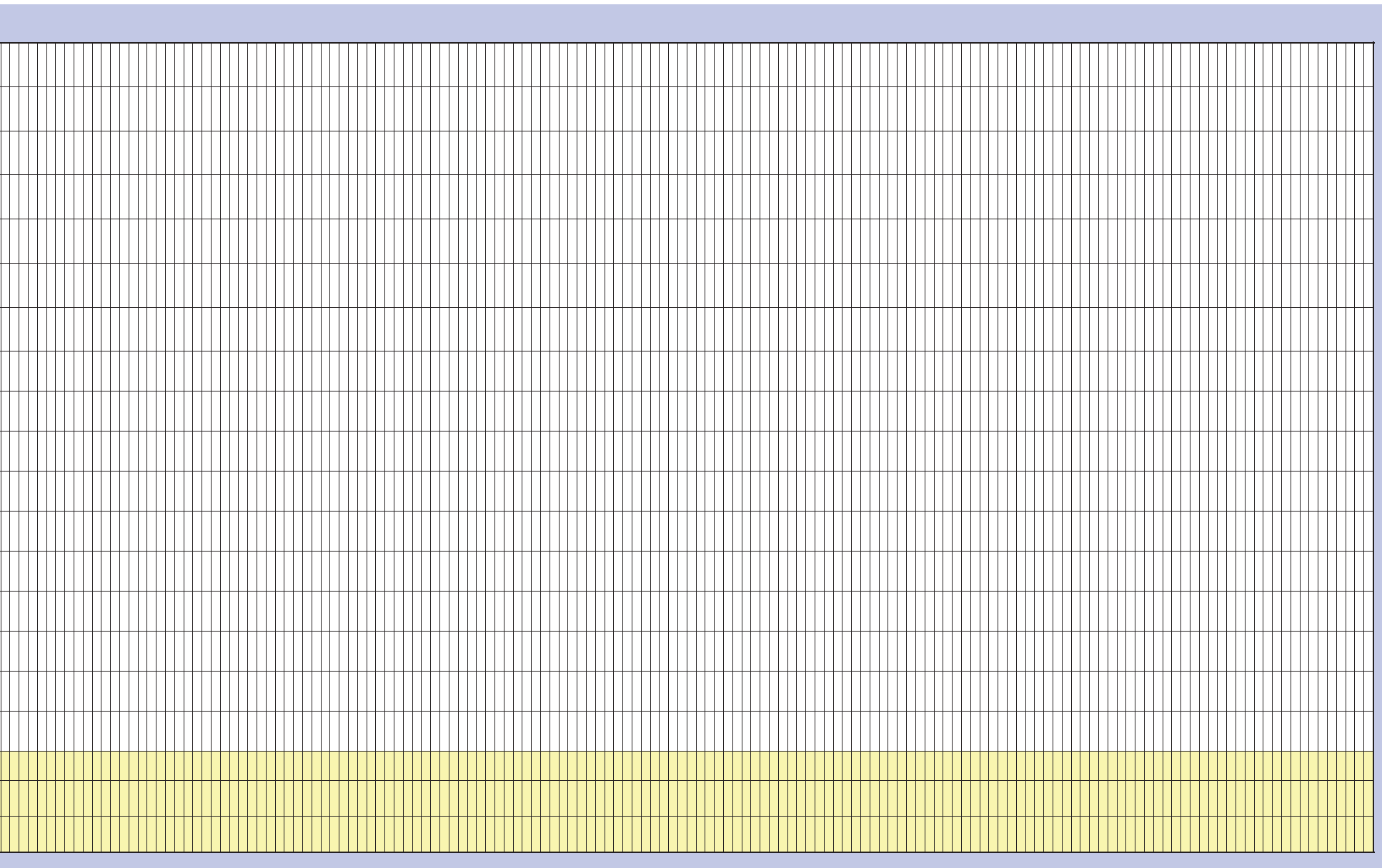
Client/client ref	Staffordshire County Council
Project ref	Dovey Access Road and HWRC
Site ref	Dovey , Uffoxeter
Data description	WS, BH and TP, Preliminary and Phase I investigation
Contaminant(s)	Assessment of PAH, Cyanide and Lead
Test scenario	Planning: is true mean lower than critical concentration ($\mu < Cc$)?
Date	2 February 2016
User details	Dino Giordanelli

Statistics calculator (version 1)

This spreadsheet has been produced based on the document 'Guidance on Comparing Soil Contamination Data with a Critical Concentration (CIEH/CL:AIRE, 2008)' refer to this guidance, the User Manual and to relevant guidance on UK legislation and policy, in order to understand how the procedure should be applied in an app

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Client/client ref: Staffordshire County Council
 Project ref: Dovey Access Road and HWRC
 Site ref: Dovey , Uttoxeter
 Data description: WS, BH and TP
 Primary and Phase I Investigation
 Contaminant list: Assessment of PAH, Cyanide and Lead
 Test scenario: Plantrig

Critical concentration, C_c

Notes
Sample size, n
Sample mean, \bar{x}
Standard deviation, s
Number of non-detects
Set non-detect values to:
Outliers?
Distribution
Statistical approach

Test scenario:	
t statistic, t_0 (or k_0)	
Upper confidence limit (on true mean concentration, μ)	
Evidence level	
Base decision on:	
Result	
Select dataset	

[Back to data](#)

[Go to outlier test](#)

[Go to normality test](#)

[Show individual summary](#)

Cyanide (Total) (AR) (mg/kg)	Benzofluoranthene (mg/kg)	Lead (MS) (mg/kg)	Benz(a)pyrene (mg/kg)																		
34	44	1330	35																		
44	49	43	49																		
2.01477273	3.04183673	523.788372	2.3144898																		
5.58424923	9.84587534	862.304423	7.57371663																		
0	0	0	0																		
Yes	Yes	Yes	Yes																		
Non-normal	Non-normal	Non-normal	Non-normal																		
Auto: Chebychev	Auto: Chebychev	Auto: Chebychev	Auto: Chebychev																		

Planning: Is true mean lower than critical concentration ($\mu < C_c$)? Evidence level required: Use Normal distribution to test for outliers

-37.99364724 -29.11951788 -6.13087797 -30.20955003

5.68434339 9.17286182 1096.98442 7.030642

100% 100% 97% 100%

evidence level evidence level evidence level evidence level

$\mu < C_c$ $\mu < C_c$ $\mu < C_c$ $\mu < C_c$

Y Y Y Y

Y Y Y Y

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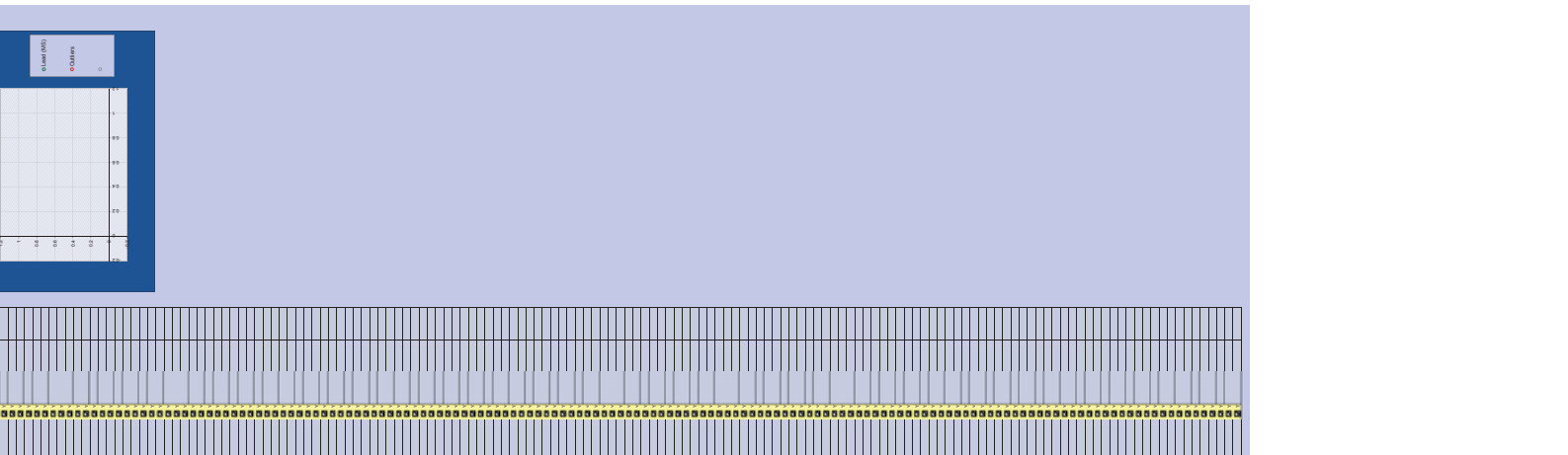
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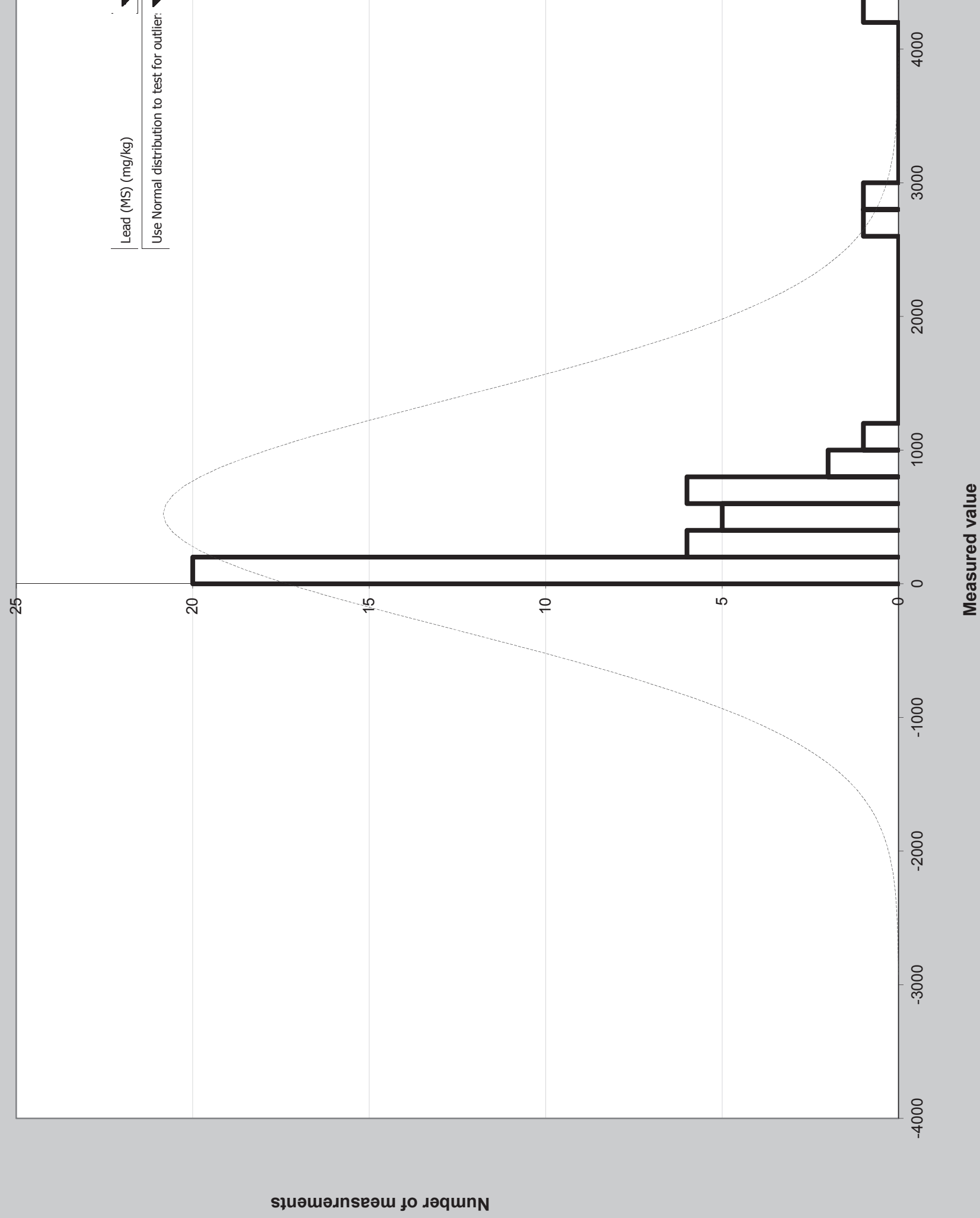
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Y Y Y Y

Y Y Y Y



Histogram



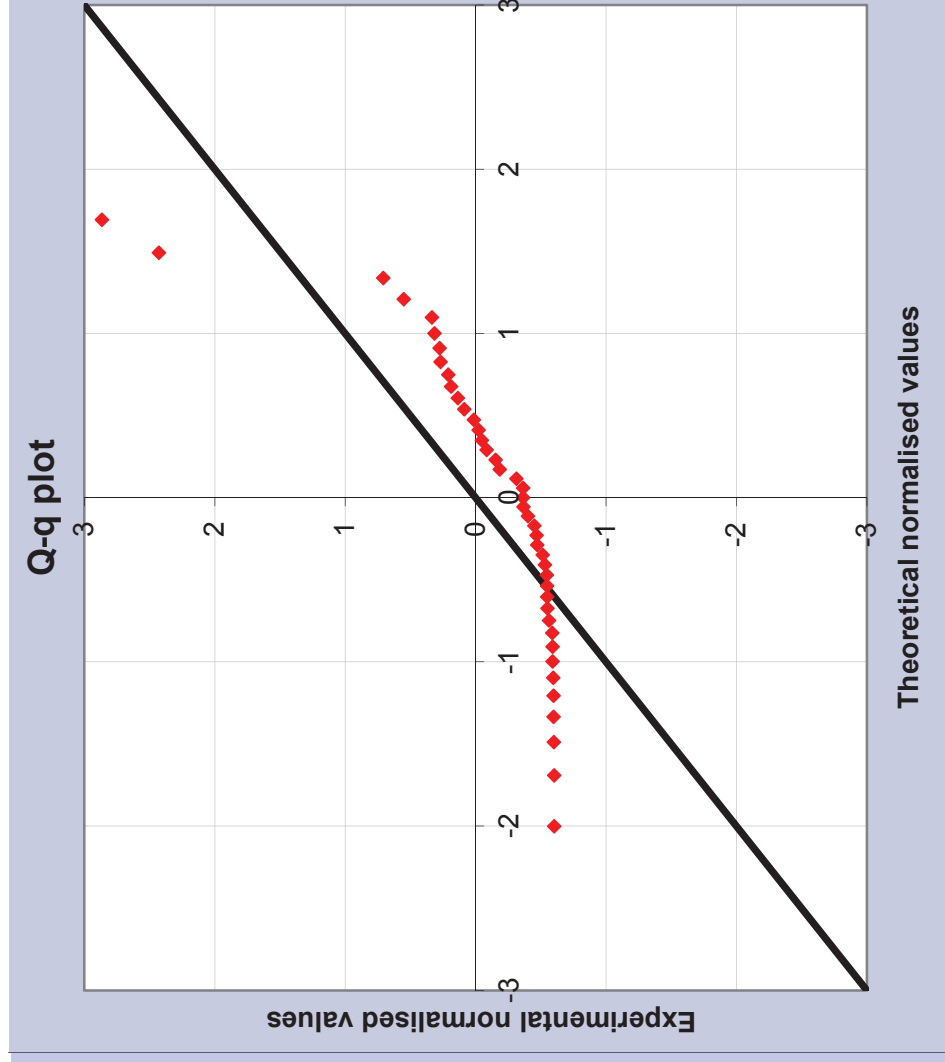
Lead (MS) (mg/kg)

Use Normal distribution to test for outlier:

Number of measurements

Measured value

Experimental	Theoretical (normalised)
5	-2.000423569
5	-1.69062163
7	-1.489470042
9	-1.335177736
9	-1.20741405
11	-1.096803562
15	-0.998201172
16	-0.908457869
17	-0.825494491
37.7	-0.747858595
49.1	-0.67448975
50.4	-0.604585347
51.3	-0.537519106
52.2	-0.472789121
66.2	-0.409983322
81.4	-0.348755696
116.8	-0.288809355
120.3	-0.229884118
135.9	-0.17174709
179	-0.114185294
207	-0.056999674
210.3	0
210.6	0.056999674
255	0.114185294
364.2	0.17174709
391.8	0.229884118
450.9	0.288809355
482	0.348755696
503.3	0.409983322
536	0.472789121
598	0.537519106
641.2	0.604585347
685	0.67448975
705	0.747858595



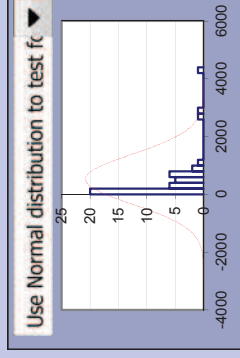
Test Results

Client/client ref: Staffordshire Cc Site ref: Doveway , Uttoxeter

Date:

Project ref: Doveway Access Ro Data description: WS, BH and TP, Preliminary and User

Dataset:	Lead (MS) (mg/kg)	
Sample mean, \bar{X} (mg/kg)	523.79	
Sample standard deviation, s	862.3	
Sample size, n	43	
Critical concentration, Cc (mg/kg)	1330	



Outliers & non-defects	
Outliers present?	YES
Significance level	5% ▼
Outliers removed?	0
Non-defects	0

Normality test

Significance level: 5% ▼

Non-normal distribution

Use: Auto: Chebychev

Test scenario: **Planning: is true mean lower than critical concentration ($\mu < C_c$)?**

Null hypothesis: The true mean concentration is equal to or greater than the critical concentration: $\mu \geq C_c$

Alternative hypothesis: The true mean concentration is less than the critical concentration: $\mu < C_c$

Evidence against hypothesis:

Base decision on

Evidence level re

Balance of proba

Reject Null Hypo

$\mu < C_c$

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[Back to summary](#)

[Go to outlier test](#)

[Go to](#)

Waste Stream

Default Contaminated Land

Comments

Dove way

Project

Dove Way phase 1

Site

Classified by

Name: **Levick, Thomas**
Date: **05/02/2016 16:39 UTC**
Telephone: **0121 2125360**
Company: **Amey plc**
International Design Hub, Colmore Plaza
20 Colmore Circus Queensway
Birmingham
B4 6AT

Report

Created by: Levick, Thomas
Created date: 05/02/2016 16:39 UTC

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazardous properties	Page
1	PWS04	2	Non Hazardous		3
2	PWS04[1]	4.2	Non Hazardous		6
3	PWS01	1.2	Non Hazardous		9
4	PWS01[1]	3	Non Hazardous		11
5	BHC	1.2	Non Hazardous		14
6	BHB	2	Non Hazardous		17
7	BHD	2.8	Non Hazardous		20
8	BHD[1]	1.2	Non Hazardous		23
9	WS5.1	1.2	Hazardous	HP 14	25
10	WS04	3.5	Non Hazardous		27
11	PWS02	1.2	Non Hazardous		30
12	PWS02[1]	2	Non Hazardous		33
13	PWS02[2]	3	Non Hazardous		35
14	WS6	1.2	Hazardous	HP 14	38
15	WS3	3	Non Hazardous		41
16	WS2	2.5	Non Hazardous		44
17	WS2[1]	3.5	Non Hazardous		47

31	TP25	0.70	Hazardous			89
32	TP26	3.00	Non Hazardous	HP 7, HP 11		92
33	TP27	1.00	Hazardous			95
34	TP27[1]	2.50	Non Hazardous	HP 7, HP 11		98
35	TP28	2.00	Hazardous			101
36	TP29	1.50	Non Hazardous	HP 7, HP 11, HP 14		104
37	TP33	0.20	Hazardous			107
38	TP35	1.00	Non Hazardous	HP 7, HP 11		110
39	TP36	0.30	Hazardous			113
40	TP01	1.50	Non Hazardous	HP 7, HP 14		116
41	TP02	0.50	Hazardous			118
42	TP03	0.40	Non Hazardous			120
43	TP04	1.50	Non Hazardous			122
44	TP05	2.50	Hazardous	HP 7, HP 14		124
45	TP07	1.50	Hazardous	HP 7, HP 14		126
46	TP08	0.50	Non Hazardous			128
47	TP09	1.50	Non Hazardous			130
48	TP10	1.60	Non Hazardous			132
49	TP11	0.50	Non Hazardous			134

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Sample Depth: 2 m
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Moisture content: 24.4%
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 24.4%, no correction)

acenaphthene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
acenaphthylene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
anthracene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
arsenic trioxide: (Cation conc. entered: 56.5 mg/kg, converted to compound conc.:74.598 mg/kg or 0.00746%)
benzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 0.11 mg/kg or 0.000011%)
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.1 mg/kg or 0.00001%)
benzo[b]fluoranthene: (Whole conc. entered as: 0.12 mg/kg or 0.000012%)
benzo[ghi]perylene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
beryllium oxide: (Cation conc. entered: 9.6 mg/kg, converted to compound conc.:26.643 mg/kg or 0.00266%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 62 mg/kg, converted to compound conc.:832.66 mg/kg or 0.0833%)
cadmium sulfide: (Cation conc. entered: 1.1 mg/kg, converted to compound conc.:1.414 mg/kg or 0.000141%, Note 1 conc.: 0.00011%)
chromium(III) oxide: (Cation conc. entered: 46.8 mg/kg, converted to compound conc.:68.401 mg/kg or 0.00684%)
chromium(VI) oxide: (Cation conc. entered: 0.3 mg/kg, converted to compound conc.:0.577 mg/kg or 0.0000577%)
chrysene: (Whole conc. entered as: 0.1 mg/kg or 0.00001%)
copper (I) oxide: (Cation conc. entered: 152 mg/kg, converted to compound conc.:171.135 mg/kg or 0.0171%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.19 mg/kg or 0.000019%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
lead chromate: (Cation conc. entered: 705 mg/kg, converted to compound conc.:1099.67 mg/kg or 0.11%, Note 1 conc.: 0.0705%)
mercury dichloride: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.135 mg/kg or 0.0000135%)
naphthalene: (Whole conc. entered as: 0.16 mg/kg or 0.000016%)
nickel dihydroxide: (Cation conc. entered: 90.7 mg/kg, converted to compound conc.:143.261 mg/kg or 0.0143%)
pH: (Whole conc. entered as: 7.49 pH, converted to conc.:7.49 pH or 7.49 pH)
phenanthrene: (Whole conc. entered as: 0.22 mg/kg or 0.000022%)
phenol: (Whole conc. entered as: 0.01 mg/kg or 0.000001%)
pyrene: (Whole conc. entered as: 0.16 mg/kg or 0.000016%)

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"

Determinand notes

Note 1 , used on:

determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A , used on:

determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

Note C , used on:

determinand: "xylene"

Sample Depth: 4.2 m Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
Moisture content: 22.8% (no correction) 17 05 03

Hazard properties

None identified

Determinands (Moisture content: 22.8%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
acenaphthylene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
arsenic trioxide: (Cation conc. entered: 4.7 mg/kg, converted to compound conc.:6.206 mg/kg or 0.000621%)
benzene: (Whole conc. entered as: <0.005 mg/kg or <0.0000005%) **IGNORED Because: "<LOD"**
benzo[*a*]anthracene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
benzo[*a*]pyrene: benzo[*def*]chrysene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[*b*]fluoranthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
benzo[*ghi*]perylene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[*k*]fluoranthene: (Whole conc. entered as: 0.02 mg/kg or 0.000002%)
beryllium oxide: (Cation conc. entered: 1.3 mg/kg, converted to compound conc.:3.608 mg/kg or 0.000361%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 4 mg/kg, converted to compound conc.:53.72 mg/kg or 0.00537%)
cadmium sulfide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.129 mg/kg or 0.0000129%, Note 1 conc.: 0.00001%)
chromium(III) oxide: (Cation conc. entered: 61.1 mg/kg, converted to compound conc.:89.301 mg/kg or 0.00893%)
chromium(VI) oxide: (Cation conc. entered: 0.3 mg/kg, converted to compound conc.:0.577 mg/kg or 0.0000577%)
chrysene: (Whole conc. entered as: 0.02 mg/kg or 0.000002%)
copper (I) oxide: (Cation conc. entered: 10 mg/kg, converted to compound conc.:11.259 mg/kg or 0.00113%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[*a,h*]anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.0000005%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[123-*cd*]pyrene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
lead chromate: (Cation conc. entered: 5 mg/kg, converted to compound conc.:7.799 mg/kg or 0.00078%, Note 1 conc.: 0.0005%)
mercury dichloride: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.135 mg/kg or 0.0000135%)
naphthalene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
nickel dihydroxide: (Cation conc. entered: 26.7 mg/kg, converted to compound conc.:42.173 mg/kg or 0.004222%)
pH: (Whole conc. entered as: 7.59 pH, converted to conc.:7.59 pH or 7.59 pH)
phenanthrene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
phenol: (Whole conc. entered as: 0.01 mg/kg or 0.000001%)
pyrene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"

Determinand notes

Note 1, used on:

determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A, used on:

Sample Depth: 1.2 m
Moisture content: 17.3%
(no correction)
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Hazard properties

None identified

Determinands (Moisture content: 17.3%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
acenaphthylene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
anthracene: (Whole conc. entered as: 0.07 mg/kg or 0.000007%)
benzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 0.3 mg/kg or 0.00003%)
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.36 mg/kg or 0.000036%)
benzo[b]fluoranthene: (Whole conc. entered as: 0.43 mg/kg or 0.000043%)
benzo[ghi]perylene: (Whole conc. entered as: 0.25 mg/kg or 0.000025%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.17 mg/kg or 0.000017%)
chrysene: (Whole conc. entered as: 0.34 mg/kg or 0.000034%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.52 mg/kg or 0.000052%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.26 mg/kg or 0.000026%)
naphthalene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
pH: (Whole conc. entered as: 7.78 pH, converted to conc.: 7.78 pH or 7.78 pH)
phenanthrene: (Whole conc. entered as: 0.16 mg/kg or 0.000016%)
pyrene: (Whole conc. entered as: 0.46 mg/kg or 0.000046%)
toluene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
xylene: (Whole conc. entered as: 0.005 mg/kg or 0.000005%)

Test Settings

HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "he risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be > 10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "acenaphthene"

Determinand notes

Note C , used on:

determinand: "xylene"

Sample Depth: 3 m
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Moisture content: **23.8%**
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 23.8%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
acenaphthylene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
arsenic trioxide: (Cation conc. entered: 8.9 mg/kg, converted to compound conc.:11.751 mg/kg or 0.00118%)
benzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[b]fluoranthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
benzo[ghi]perylene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.02 mg/kg or 0.000002%)
beryllium oxide: (Cation conc. entered: 2.1 mg/kg, converted to compound conc.:5.828 mg/kg or 0.000583%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 4.4 mg/kg, converted to compound conc.:59.092 mg/kg or 0.00591%)
cadmium sulfide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.129 mg/kg or 0.0000129%, Note 1 conc.: 0.00001%)
chromium(III) oxide: (Cation conc. entered: 64.5 mg/kg, converted to compound conc.:94.27 mg/kg or 0.00943%)
chromium(VI) oxide: (Cation conc. entered: 0.3 mg/kg, converted to compound conc.:0.577 mg/kg or 0.0000577%)
chrysene: (Whole conc. entered as: 0.02 mg/kg or 0.000002%)
copper (I) oxide: (Cation conc. entered: 9 mg/kg, converted to compound conc.:10.133 mg/kg or 0.00101%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
lead chromate: (Cation conc. entered: 9 mg/kg, converted to compound conc.:14.038 mg/kg or 0.0014%, Note 1 conc.: 0.0009%)
mercury dichloride: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.135 mg/kg or 0.0000135%)
naphthalene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
nickel dihydroxide: (Cation conc. entered: 27.2 mg/kg, converted to compound conc.:42.962 mg/kg or 0.0043%)
pH: (Whole conc. entered as: 7.31 pH, converted to conc.:7.31 pH or 7.31 pH)
phenanthrene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
phenol: (Whole conc. entered as: 0.01 mg/kg or 0.000001%)
pyrene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

- Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(II) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"

Determinand notes

Note 1 , used on:

determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A , used on:

1.2 m
Moisture content: **38.2%**
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 38.2%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
 acenaphthylene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
 anthracene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
 arsenic trioxide: (Cation conc. entered: 36.6 mg/kg, converted to compound conc.:48.324 mg/kg or 0.00483%)
 benzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
 benzo[a]anthracene: (Whole conc. entered as: 0.28 mg/kg or 0.000028%)
 benzo[a]pyrene: benzo[def]chrysene: (Whole conc. entered as: 0.36 mg/kg or 0.000036%)
 benzo[b]fluoranthene: (Whole conc. entered as: 0.55 mg/kg or 0.000055%)
 benzo[ghi]perylene: (Whole conc. entered as: 0.23 mg/kg or 0.000023%)
 benzo[k]fluoranthene: (Whole conc. entered as: 0.55 mg/kg or 0.000055%)
 boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 7.3 mg/kg, converted to compound conc.:98.039 mg/kg or 0.0098%)
 cadmium sulfide: (Cation conc. entered: 1.2 mg/kg, converted to compound conc.:1.542 mg/kg or 0.000154%, Note 1 conc.: 0.00012%)
 chromium(III) oxide: (Cation conc. entered: 60.5 mg/kg, converted to compound conc.:88.424 mg/kg or 0.00884%)
 chromium(VI) oxide: (Cation conc. entered: 0.3 mg/kg, converted to compound conc.:0.577 mg/kg or 0.0000577%)
 chrysene: (Whole conc. entered as: 0.26 mg/kg or 0.000026%)
 copper (I) oxide: (Cation conc. entered: 269 mg/kg, converted to compound conc.:302.864 mg/kg or 0.0303%)
 salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
 dibenz[a,h]anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
 ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
 fluoranthene: (Whole conc. entered as: 0.33 mg/kg or 0.000033%)
 fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
 indeno[123-cd]pyrene: (Whole conc. entered as: 0.22 mg/kg or 0.000022%)
 lead chromate: (Cation conc. entered: 813 mg/kg, converted to compound conc.:1268.13 mg/kg or 0.127%, Note 1 conc.: 0.0813%)
 mercury dichloride: (Cation conc. entered: 0.3 mg/kg, converted to compound conc.:0.406 mg/kg or 0.0000406%)
 naphthalene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
 nickel dihydroxide: (Cation conc. entered: 71.3 mg/kg, converted to compound conc.:112.618 mg/kg or 0.0113%)
 pH: (Whole conc. entered as: 7.23 pH, converted to conc.:7.23 pH or 7.23 pH)
 phenanthrene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
 phenol: (Whole conc. entered as: 0.01 mg/kg or 0.000001%)
 pyrene: (Whole conc. entered as: 0.32 mg/kg or 0.000032%)

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"

Determinand notes

Note 1, used on:

determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A, used on:

Sample Depth: 2 m
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Moisture content: 18.3%
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 18.3%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
acenaphthylene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
arsenic trioxide: (Cation conc. entered: 4.2 mg/kg, converted to compound conc.:5.545 mg/kg or 0.000555%)
benzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[b]fluoranthene: (Whole conc. entered as: 0.07 mg/kg or 0.000007%)
benzo[ghi]perylene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.07 mg/kg or 0.000007%)
beryllium oxide: (Cation conc. entered: 1.1 mg/kg, converted to compound conc.:3.053 mg/kg or 0.000305%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 5.9 mg/kg, converted to compound conc.:79.237 mg/kg or 0.00792%)
cadmium sulfide: (Cation conc. entered: 0.2 mg/kg, converted to compound conc.:0.257 mg/kg or 0.0000257%, Note 1 conc.: 0.00002%)
chromium(III) oxide: (Cation conc. entered: 59.2 mg/kg, converted to compound conc.:86.524 mg/kg or 0.00865%)
chromium(VI) oxide: (Cation conc. entered: 0.3 mg/kg, converted to compound conc.:0.577 mg/kg or 0.0000577%)
chrysene: (Whole conc. entered as: 0.02 mg/kg or 0.000002%)
copper (I) oxide: (Cation conc. entered: 11 mg/kg, converted to compound conc.:12.385 mg/kg or 0.00124%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
lead chromate: (Cation conc. entered: 15 mg/kg, converted to compound conc.:23.397 mg/kg or 0.00234%, Note 1 conc.: 0.0015%)
mercury dichloride: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.135 mg/kg or 0.0000135%)
naphthalene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
nickel dihydroxide: (Cation conc. entered: 29.7 mg/kg, converted to compound conc.:46.911 mg/kg or 0.00469%)
pH: (Whole conc. entered as: 7.01 pH, converted to conc.:7.01 pH or 7.01 pH)
phenanthrene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
phenol: (Whole conc. entered as: 0.01 mg/kg or 0.000001%)
pyrene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)

and mercuric cyanide and those specified elsewhere in this Annex;
determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Note C , used on:

determinand: "xylene"

WM3: Unknown oil , used on:

determinand: "TPH (C6 to C40) petroleum group"

Sample Depth: 2.8 m
Moisture content: 7%
(no correction)
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03)

Hazard properties

None identified

Determinands (Moisture content: 7%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
acenaphthylene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
arsenic trioxide: (Cation conc. entered: 2.3 mg/kg, converted to compound conc.: 3.037 mg/kg or 0.000304%)
benzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
benzo[*a*]anthracene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
benzo[*a*]pyrene: benzo[*def*]chrysene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
benzo[*b*]fluoranthene: (Whole conc. entered as: 0.07 mg/kg or 0.000007%)
benzo[*ghi*]perylene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[*k*]fluoranthene: (Whole conc. entered as: 0.07 mg/kg or 0.000007%)
beryllium oxide: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.: 1.388 mg/kg or 0.000139%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 2.5 mg/kg, converted to compound conc.: 33.575 mg/kg or 0.00336%)
cadmium sulfide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.: 0.129 mg/kg or 0.0000129%, Note 1 conc.: 0.00001%)
chromium(III) oxide: (Cation conc. entered: 111 mg/kg, converted to compound conc.: 162.233 mg/kg or 0.0162%)
chromium(VI) oxide: (Cation conc. entered: 0.3 mg/kg, converted to compound conc.: 0.577 mg/kg or 0.0000577%)
chrysene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
copper (I) oxide: (Cation conc. entered: 6 mg/kg, converted to compound conc.: 6.755 mg/kg or 0.000676%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.: 0.942 mg/kg or 0.0000942%)
dibenz[*a,h*]anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.11 mg/kg or 0.000011%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[123-*cd*]pyrene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
lead chromate: (Cation conc. entered: 9 mg/kg, converted to compound conc.: 14.038 mg/kg or 0.0014%, Note 1 conc.: 0.0009%)
mercury dichloride: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.: 0.135 mg/kg or 0.0000135%)
naphthalene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
nickel dihydroxide: (Cation conc. entered: 13.2 mg/kg, converted to compound conc.: 20.849 mg/kg or 0.00208%)
pH: (Whole conc. entered as: 7.85 pH, converted to conc.: 7.85 pH or 7.85 pH)
phenanthrene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
phenol: (Whole conc. entered as: 0.01 mg/kg or 0.000001%)
pyrene: (Whole conc. entered as: 0.09 mg/kg or 0.000009%)

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"

Determinand notes

Note 1, used on:

determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A, used on:

Sample Depth: 1.2 m
Moisture content: **16%**
(no correction)
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Hazard properties

None identified

Determinands (Moisture content: 16%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
acenaphthylene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
anthracene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
benzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 0.22 mg/kg or 0.000022%)
benzo[a]pyrene: benzo[def]chrysene: (Whole conc. entered as: 0.3 mg/kg or 0.00003%)
benzo[b]fluoranthene: (Whole conc. entered as: 0.5 mg/kg or 0.00005%)
benzo[ghi]perylene: (Whole conc. entered as: 0.21 mg/kg or 0.000021%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.5 mg/kg or 0.00005%)
chrysene: (Whole conc. entered as: 0.29 mg/kg or 0.000029%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.48 mg/kg or 0.000048%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.21 mg/kg or 0.000021%)
naphthalene: (Whole conc. entered as: 0.15 mg/kg or 0.000015%)
pH: (Whole conc. entered as: 7.44 pH, converted to conc.: 7.44 pH or 7.44 pH)
phenanthrene: (Whole conc. entered as: 0.22 mg/kg or 0.000022%)
pyrene: (Whole conc. entered as: 0.41 mg/kg or 0.000041%)
toluene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
xylene: (Whole conc. entered as: 0.005 mg/kg or 0.000005%)

Test Settings

HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "he risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be > 10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "acenaphthene"

Determinand notes

Note C , used on:

determinand: "xylene"

Sample Depth: excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)
1.2 m
Moisture content: 27.1%
(no correction)

Hazard properties

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Risk phrases hit:

R50/53 "Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Because of determinands:

copper (I) oxide: (compound conc.: 0.218%)
zinc sulphate: (compound conc.: 0.144%)

Determinands (Moisture content: 27.1%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
acenaphthylene: (Whole conc. entered as: 0.13 mg/kg or 0.000013%)
anthracene: (Whole conc. entered as: 0.19 mg/kg or 0.000019%)
arsenic trioxide: (Cation conc. entered: 64.4 mg/kg, converted to compound conc.:85.029 mg/kg or 0.0085%)
benzo[a]anthracene: (Whole conc. entered as: 0.69 mg/kg or 0.000069%)
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 1.05 mg/kg or 0.000105%)
benzo[b]fluoranthene: (Whole conc. entered as: 1.64 mg/kg or 0.000164%)
benzo[ghi]perylene: (Whole conc. entered as: 1.02 mg/kg or 0.000102%)
benzo[k]fluoranthene: (Whole conc. entered as: 1.64 mg/kg or 0.000164%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 5.6 mg/kg, converted to compound conc.:75.208 mg/kg or 0.00752%)
cadmium sulfide: (Cation conc. entered: 1.9 mg/kg, converted to compound conc.:2.442 mg/kg or 0.000244%, Note 1 conc.: 0.00019%)
chromium(III) oxide: (Cation conc. entered: 64.2 mg/kg, converted to compound conc.:93.832 mg/kg or 0.00938%)
chromium(VI) oxide: (Cation conc. entered: 0.4 mg/kg, converted to compound conc.:0.769 mg/kg or 0.0000769%)
chrysene: (Whole conc. entered as: 0.75 mg/kg or 0.000075%)
copper (I) oxide: (Cation conc. entered: 1937 mg/kg, converted to compound conc.:2180.846 mg/kg or 0.218%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.: 0.942 mg/kg or 0.0000942%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.15 mg/kg or 0.000015%)
fluoranthene: (Whole conc. entered as: 1.17 mg/kg or 0.000117%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.99 mg/kg or 0.000099%)
lead chromate: (Cation conc. entered: 255 mg/kg, converted to compound conc.:397.753 mg/kg or 0.0398%, Note 1 conc.: 0.0255%)
mercury dichloride: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.135 mg/kg or 0.0000135%)
naphthalene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
nickel dihydroxide: (Cation conc. entered: 112.1 mg/kg, converted to compound conc.:177.062 mg/kg or 0.0177%)

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "acenaphthene"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "anthracene"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[a]anthracene"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[b]fluoranthene"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[ghi]perylene"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[k]fluoranthene"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(III) oxide"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(VI) oxide"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chrysene"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "dibenz[a,h]anthracene"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluoranthene"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluorene"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead chromate"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "mercury dichloride"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "naphthalene"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "pyrene"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

C14: Step 6, Equation 1

"use the equations given in Table C14.3 to decide if the waste is hazardous by HP 14", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"
 Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"

Determinand notes

Note 1, used on:

determinand: "cadmium sulfide"
 determinand: "lead chromate"

Note A, used on:

determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
 determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Sample Depth: 3.5 m
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Moisture content: 10%
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 10%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
acenaphthylene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
arsenic trioxide: (Cation conc. entered: 1.7 mg/kg, converted to compound conc.:2.245 mg/kg or 0.000224%)
benzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[b]fluoranthene: (Whole conc. entered as: 0.07 mg/kg or 0.000007%)
benzo[ghi]perylene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.07 mg/kg or 0.000007%)
beryllium oxide: (Cation conc. entered: 1.1 mg/kg, converted to compound conc.:3.053 mg/kg or 0.000305%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 3.4 mg/kg, converted to compound conc.:45.662 mg/kg or 0.00457%)
cadmium sulfide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.129 mg/kg or 0.0000129%, Note 1 conc.: 0.00001%)
chromium(III) oxide: (Cation conc. entered: 96.5 mg/kg, converted to compound conc.:141.04 mg/kg or 0.0141%)
chromium(VI) oxide: (Cation conc. entered: 0.3 mg/kg, converted to compound conc.:0.577 mg/kg or 0.000577%)
chrysene: (Whole conc. entered as: 0.02 mg/kg or 0.000002%)
copper (I) oxide: (Cation conc. entered: 2 mg/kg, converted to compound conc.:2.252 mg/kg or 0.000225%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
lead chromate: (Cation conc. entered: 11 mg/kg, converted to compound conc.:17.158 mg/kg or 0.00172%, Note 1 conc.: 0.0011%)
mercury dichloride: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.135 mg/kg or 0.0000135%)
naphthalene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
nickel dihydroxide: (Cation conc. entered: 15.8 mg/kg, converted to compound conc.:24.956 mg/kg or 0.00255%)
pH: (Whole conc. entered as: 7.73 pH, converted to conc.:7.73 pH or 7.73 pH)
phenanthrene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
phenol: (Whole conc. entered as: 0.01 mg/kg or 0.000001%)
pyrene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

- Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(II) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"

Determinand notes

Note 1 , used on:

determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A , used on:

Sample Depth: 1.2 m
Moisture content: 19.9%
(no correction)
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03)

Hazard properties

None identified

Determinands (Moisture content: 19.9%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
acenaphthylene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
anthracene: (Whole conc. entered as: 0.3 mg/kg or 0.00003%)
arsenic trioxide: (Cation conc. entered: 13.1 mg/kg, converted to compound conc.: 17.296 mg/kg or 0.00173%)
benzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
benzo[*a*]anthracene: (Whole conc. entered as: 0.66 mg/kg or 0.000066%)
benzo[*a*]pyrene: benzo[*def*]chrysene: (Whole conc. entered as: 0.84 mg/kg or 0.000084%)
benzo[*b*]fluoranthene: (Whole conc. entered as: 1.37 mg/kg or 0.000137%)
benzo[*ghi*]perylene: (Whole conc. entered as: 0.49 mg/kg or 0.000049%)
benzo[*k*]fluoranthene: (Whole conc. entered as: 1.37 mg/kg or 0.000137%)
beryllium oxide: (Cation conc. entered: 2 mg/kg, converted to compound conc.: 5.551 mg/kg or 0.000555%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 3.5 mg/kg, converted to compound conc.: 47.005 mg/kg or 0.0047%)
cadmium sulfide: (Cation conc. entered: 1.3 mg/kg, converted to compound conc.: 1.671 mg/kg or 0.000167%, Note 1 conc.: 0.00013%)
chromium(III) oxide: (Cation conc. entered: 77.1 mg/kg, converted to compound conc.: 112.686 mg/kg or 0.0113%)
chromium(VI) oxide: (Cation conc. entered: 0.3 mg/kg, converted to compound conc.: 0.577 mg/kg or 0.0000577%)
chrysene: (Whole conc. entered as: 0.79 mg/kg or 0.000079%)
copper (I) oxide: (Cation conc. entered: 51 mg/kg, converted to compound conc.: 57.42 mg/kg or 0.00574%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.: 0.942 mg/kg or 0.0000942%)
dibenz[*a,h*]anthracene: (Whole conc. entered as: 0.09 mg/kg or 0.000009%)
ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 1.07 mg/kg or 0.000107%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[123-*cd*]pyrene: (Whole conc. entered as: 0.54 mg/kg or 0.000054%)
lead chromate: (Cation conc. entered: 207 mg/kg, converted to compound conc.: 322.882 mg/kg or 0.0323%, Note 1 conc.: 0.0207%)
mercury dichloride: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.: 0.135 mg/kg or 0.0000135%)
naphthalene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
nickel dihydroxide: (Cation conc. entered: 39.1 mg/kg, converted to compound conc.: 61.758 mg/kg or 0.00618%)
pH: (Whole conc. entered as: 7.83 pH, converted to conc.: 7.83 pH or 7.83 pH)
phenanthrene: (Whole conc. entered as: 0.3 mg/kg or 0.00003%)
phenol: (Whole conc. entered as: 0.01 mg/kg or 0.000001%)
pyrene: (Whole conc. entered as: 0.96 mg/kg or 0.000096%)

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Determinand notes

Note 1, used on:

determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A, used on:

Sample Depth: 2 m
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Moisture content: 51.7%
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 51.7%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
acenaphthylene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 0.12 mg/kg or 0.000012%)
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.14 mg/kg or 0.000014%)
benzo[b]fluoranthene: (Whole conc. entered as: 0.24 mg/kg or 0.000024%)
benzo[ghi]perylene: (Whole conc. entered as: 0.11 mg/kg or 0.000011%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.24 mg/kg or 0.000024%)
chrysene: (Whole conc. entered as: 0.12 mg/kg or 0.000012%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.15 mg/kg or 0.000015%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[1,23-cd]pyrene: (Whole conc. entered as: 0.09 mg/kg or 0.000009%)
naphthalene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
pH: (Whole conc. entered as: 6.77 pH, converted to conc.: 6.77 pH or 6.77 pH)
phenanthrene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
pyrene: (Whole conc. entered as: 0.14 mg/kg or 0.000014%)
toluene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
xylene: (Whole conc. entered as: 0.005 mg/kg or 0.000005%)

Test Settings

HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "he risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be > 10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"

Determinand notes

Note C , used on:

determinand: "xylene"

Sample Depth: 3 m
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Moisture content: 20.7%
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 20.7%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
acenaphthylene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
arsenic trioxide: (Cation conc. entered: 8.4 mg/kg, converted to compound conc.:11.091 mg/kg or 0.00111%)
benzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
benzo[a]pyrene: benzo[def]chrysene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[b]fluoranthene: (Whole conc. entered as: 0.07 mg/kg or 0.000007%)
benzo[ghi]perylene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.07 mg/kg or 0.000007%)
beryllium oxide: (Cation conc. entered: 1.6 mg/kg, converted to compound conc.:4.441 mg/kg or 0.000444%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 4.2 mg/kg, converted to compound conc.:56.406 mg/kg or 0.00564%)
cadmium sulfide: (Cation conc. entered: 0.2 mg/kg, converted to compound conc.:0.257 mg/kg or 0.000257%, Note 1 conc.: 0.00002%)
chromium(III) oxide: (Cation conc. entered: 60.8 mg/kg, converted to compound conc.:88.863 mg/kg or 0.00889%)
chromium(VI) oxide: (Cation conc. entered: 0.3 mg/kg, converted to compound conc.:0.577 mg/kg or 0.000577%)
chrysene: (Whole conc. entered as: 0.02 mg/kg or 0.000002%)
copper (I) oxide: (Cation conc. entered: 9 mg/kg, converted to compound conc.:10.133 mg/kg or 0.00101%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
lead chromate: (Cation conc. entered: 17 mg/kg, converted to compound conc.:26.517 mg/kg or 0.00265%, Note 1 conc.: 0.0017%)
mercury dichloride: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.135 mg/kg or 0.0000135%)
naphthalene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
nickel dihydroxide: (Cation conc. entered: 28.4 mg/kg, converted to compound conc.:44.858 mg/kg or 0.00449%)
pH: (Whole conc. entered as: 7.07 pH, converted to conc.:7.07 pH or 7.07 pH)
phenanthrene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
phenol: (Whole conc. entered as: 0.01 mg/kg or 0.000001%)
pyrene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Determinand notes

Note 1 , used on:

determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A , used on:

Sample Depth: excavated soil from contaminated sites)
17 05 03 * (Soil and stones containing hazardous substances)
Entry:

1.2 m
Moisture content: **33.1%**
(no correction)

Hazard properties

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Risk phrases hit:

R50/53 "Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Because of determinand:

zinc sulphate: (compound conc.: 0.551%)

Determinands (Moisture content: 33.1%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
acenaphthylene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
anthracene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
arsenic trioxide: (Cation conc. entered: 73.4 mg/kg, converted to compound conc.:96.912 mg/kg or 0.00969%)
benzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 0.14 mg/kg or 0.000014%)
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.14 mg/kg or 0.000014%)
benzo[b]fluoranthene: (Whole conc. entered as: 0.22 mg/kg or 0.000022%)
benzo[ghi]perylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.22 mg/kg or 0.000022%)
beryllium oxide: (Cation conc. entered: 1.4 mg/kg, converted to compound conc.:31.639 mg/kg or 0.00316%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 12.8 mg/kg, converted to compound conc.:171.904 mg/kg or 0.0172%)
cadmium sulfide: (Cation conc. entered: 3.7 mg/kg, converted to compound conc.:4.755 mg/kg or 0.000476%, Note 1 conc.: 0.00037%)
chromium(III) oxide: (Cation conc. entered: 83.7 mg/kg, converted to compound conc.:122.332 mg/kg or 0.0122%)
chromium(VI) oxide: (Cation conc. entered: 0.8 mg/kg, converted to compound conc.:1.538 mg/kg or 0.000154%)
chrysene: (Whole conc. entered as: 0.13 mg/kg or 0.000013%)
copper (I) oxide: (Cation conc. entered: 455 mg/kg, converted to compound conc.:512.279 mg/kg or 0.0512%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.13 mg/kg or 0.000013%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.07 mg/kg or 0.000007%)
lead chromate: (Cation conc. entered: 761 mg/kg, converted to compound conc.:1187.019 mg/kg or 0.119%, Note 1 conc.: 0.0761%)
mercury dichloride: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.135 mg/kg or 0.0000135%)

Test Settings

HP 2 on Ox. Sol. 1; H271: Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."
HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "the risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be >10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

C14: Step 6, Equation 1

"use the equations given in Table C14.3 to decide if the waste is hazardous by HP 14", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"

Note C , used on:

determinand: "xylene"

WM3: Unknown oil , used on:

determinand: "TPH (C6 to C40) petroleum group"

Sample Depth: 3 m
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Moisture content: 11%
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 11%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
acenaphthylene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
arsenic trioxide: (Cation conc. entered: 2.2 mg/kg, converted to compound conc.:2.905 mg/kg or 0.00029%)
benzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[b]fluoranthene: (Whole conc. entered as: 0.07 mg/kg or 0.000007%)
benzo[ghi]perylene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.07 mg/kg or 0.000007%)
beryllium oxide: (Cation conc. entered: 0.8 mg/kg, converted to compound conc.:2.22 mg/kg or 0.000222%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 3 mg/kg, converted to compound conc.:40.29 mg/kg or 0.00403%)
cadmium sulfide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.129 mg/kg or 0.000129%, Note 1 conc.: 0.00001%)
chromium(III) oxide: (Cation conc. entered: 91.5 mg/kg, converted to compound conc.:133.732 mg/kg or 0.0134%)
chromium(VI) oxide: (Cation conc. entered: 0.3 mg/kg, converted to compound conc.:0.577 mg/kg or 0.000577%)
chrysene: (Whole conc. entered as: 0.02 mg/kg or 0.000002%)
copper (I) oxide: (Cation conc. entered: 1 mg/kg, converted to compound conc.:1.126 mg/kg or 0.000113%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
lead chromate: (Cation conc. entered: 5 mg/kg, converted to compound conc.:7.799 mg/kg or 0.00078%, Note 1 conc.: 0.0005%)
mercury dichloride: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.135 mg/kg or 0.0000135%)
naphthalene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
nickel dihydroxide: (Cation conc. entered: 15.2 mg/kg, converted to compound conc.:24.008 mg/kg or 0.0024%)
pH: (Whole conc. entered as: 7.62 pH, converted to conc.:7.62 pH or 7.62 pH)
phenanthrene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
phenol: (Whole conc. entered as: 0.01 mg/kg or 0.000001%)
pyrene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)

content of the sample. The concentration required to provide a flammability risk is likely to be >10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Determinand notes

Note 1 , used on:

determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A , used on:

Sample Depth: 2.5 m
Moisture content: 22%
(no correction)
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03)

Hazard properties

None identified

Determinands (Moisture content: 22%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
acenaphthylene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
arsenic trioxide: (Cation conc. entered: 9.5 mg/kg, converted to compound conc.:12.543 mg/kg or 0.00125%)
benzene: (Whole conc. entered as: <0.005 mg/kg or <0.0000005%) **IGNORED Because: "<LOD"**
benzo[*a*]anthracene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
benzo[*a*]pyrene: benzo[*def*]chrysene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[*b*]fluoranthene: (Whole conc. entered as: 0.07 mg/kg or 0.000007%)
benzo[*ghi*]perylene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[*k*]fluoranthene: (Whole conc. entered as: 0.07 mg/kg or 0.000007%)
beryllium oxide: (Cation conc. entered: 1.2 mg/kg, converted to compound conc.:3.33 mg/kg or 0.000333%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 5.7 mg/kg, converted to compound conc.:76.551 mg/kg or 0.00766%)
cadmium sulfide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.129 mg/kg or 0.0000129%, Note 1 conc.: 0.00001%)
chromium(III) oxide: (Cation conc. entered: 77.6 mg/kg, converted to compound conc.:113.417 mg/kg or 0.0113%)
chromium(VI) oxide: (Cation conc. entered: 0.3 mg/kg, converted to compound conc.:0.577 mg/kg or 0.0000577%)
chrysene: (Whole conc. entered as: 0.02 mg/kg or 0.000002%)
copper (I) oxide: (Cation conc. entered: 7 mg/kg, converted to compound conc.:7.881 mg/kg or 0.000788%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[*a,h*]anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.0000005%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[123-*cd*]pyrene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
lead chromate: (Cation conc. entered: 16 mg/kg, converted to compound conc.:24.957 mg/kg or 0.0025%, Note 1 conc.: 0.0016%)
mercury dichloride: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.135 mg/kg or 0.0000135%)
naphthalene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
nickel dihydroxide: (Cation conc. entered: 25.2 mg/kg, converted to compound conc.:39.803 mg/kg or 0.00398%)
pH: (Whole conc. entered as: 7.04 pH, converted to conc.:7.04 pH or 7.04 pH)
phenanthrene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
phenol: (Whole conc. entered as: 0.01 mg/kg or 0.000001%)
pyrene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Determinand notes

Note 1, used on:

determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A, used on:

Sample Depth: 3.5 m
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Moisture content: 8.3%
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 8.3%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
acenaphthylene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
arsenic trioxide: (Cation conc. entered: 8.7 mg/kg, converted to compound conc.:1.487 mg/kg or 0.00115%)
benzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 0.06 mg/kg or 0.000006%)
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[b]fluoranthene: (Whole conc. entered as: 0.07 mg/kg or 0.000007%)
benzo[ghi]perylene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.07 mg/kg or 0.000007%)
beryllium oxide: (Cation conc. entered: 2 mg/kg, converted to compound conc.:5.551 mg/kg or 0.000555%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 2.7 mg/kg, converted to compound conc.:36.261 mg/kg or 0.00363%)
cadmium sulfide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.129 mg/kg or 0.000129%, Note 1 conc.: 0.00001%)
chromium(III) oxide: (Cation conc. entered: 105 mg/kg, converted to compound conc.:153.463 mg/kg or 0.0153%)
chromium(VI) oxide: (Cation conc. entered: 0.3 mg/kg, converted to compound conc.:0.577 mg/kg or 0.000577%)
chrysene: (Whole conc. entered as: 0.02 mg/kg or 0.000002%)
copper (I) oxide: (Cation conc. entered: 1 mg/kg, converted to compound conc.:1.126 mg/kg or 0.000113%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
lead chromate: (Cation conc. entered: 7 mg/kg, converted to compound conc.:10.919 mg/kg or 0.00109%, Note 1 conc.: 0.0007%)
mercury dichloride: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.135 mg/kg or 0.0000135%)
naphthalene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
nickel dihydroxide: (Cation conc. entered: 15.7 mg/kg, converted to compound conc.:24.798 mg/kg or 0.00248%)
pH: (Whole conc. entered as: 7.81 pH, converted to conc.:7.81 pH or 7.81 pH)
phenanthrene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)
phenol: (Whole conc. entered as: 0.01 mg/kg or 0.000001%)
pyrene: (Whole conc. entered as: 0.03 mg/kg or 0.000003%)

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Determinand notes

Note 1 , used on:

determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A , used on:

Sample Depth: 1.2 m
Moisture content: 41.5%
(no correction)
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03)

Hazard properties

None identified

Determinands (Moisture content: 41.5%, no correction)

acenaphthene: (Whole conc. entered as: 0.05 mg/kg or 0.000005%)
acenaphthylene: (Whole conc. entered as: 0.11 mg/kg or 0.000011%)
anthracene: (Whole conc. entered as: 0.25 mg/kg or 0.000025%)
benzene: (Whole conc. entered as: <0.005 mg/kg or <0.0000005%) **IGNORED Because: "<LOD"**
benzo[*a*]anthracene: (Whole conc. entered as: 0.61 mg/kg or 0.000061%)
benzo[*a*]pyrene: benzo[*def*]chrysene: (Whole conc. entered as: 0.82 mg/kg or 0.000082%)
benzo[*b*]fluoranthene: (Whole conc. entered as: 1.39 mg/kg or 0.000139%)
benzo[*ghi*]perylene: (Whole conc. entered as: 0.62 mg/kg or 0.000062%)
benzo[*k*]fluoranthene: (Whole conc. entered as: 1.39 mg/kg or 0.000139%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 10.6 mg/kg, converted to compound conc.:142.358 mg/kg or 0.0142%)
cadmium sulfide: (Cation conc. entered: 0.8 mg/kg, converted to compound conc.:1.028 mg/kg or 0.000103%, Note 1 conc.: 0.00008%)
chromium(III) oxide: (Cation conc. entered: 30.8 mg/kg, converted to compound conc.:45.016 mg/kg or 0.0045%)
chromium(VI) oxide: (Cation conc. entered: 0.3 mg/kg, converted to compound conc.:0.577 mg/kg or 0.0000577%)
chrysene: (Whole conc. entered as: 0.64 mg/kg or 0.000064%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[*a,h*]anthracene: (Whole conc. entered as: 0.13 mg/kg or 0.000013%)
ethylbenzene: (Whole conc. entered as: <0.005 mg/kg or <0.0000005%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.67 mg/kg or 0.000067%)
fluorene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
indeno[123-*cd*]pyrene: (Whole conc. entered as: 0.65 mg/kg or 0.000065%)
naphthalene: (Whole conc. entered as: 0.04 mg/kg or 0.000004%)
pH: (Whole conc. entered as: 7.59 pH, converted to conc.:7.59 pH or 7.59 pH)
phenanthrene: (Whole conc. entered as: 0.21 mg/kg or 0.000021%)
phenol: (Whole conc. entered as: 0.01 mg/kg or 0.000001%)
pyrene: (Whole conc. entered as: 0.67 mg/kg or 0.000067%)
toluene: (Whole conc. entered as: <0.005 mg/kg or <0.0000005%) **IGNORED Because: "<LOD"**
TPH (C6 to C40) petroleum group: (Whole conc. entered as: 43 mg/kg or 0.0043%)
xylene: (Whole conc. entered as: 0.005 mg/kg or 0.0000005%)
zinc sulphate: (Cation conc. entered: 819 mg/kg, converted to compound conc.:2022.354 mg/kg or 0.202%)

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Determinand notes

Note 1, used on:

determinand: "cadmium sulfide"

Note A, used on:

determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

Note C, used on:

determinand: "xylene"

WM3: Unknown oil, used on:

determinand: "TPH (C6 to C40) petroleum group"

Sample Depth: 1.00 m
Moisture content: 11.1%
(no correction)

Entry:

17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Hazard properties

None identified

Determinands (Moisture content: 11.1%, no correction)

acenaphthene: (Whole conc. entered as: 0.13 mg/kg or 0.000013%)
acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
anthracene: (Whole conc. entered as: 0.18 mg/kg or 0.000018%)
antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 1.1 mg/kg, converted to compound conc.: 1.1 mg/kg or 0.00011%, Note 1 conc.: 0.00011%)
arsenic trioxide: (Cation conc. entered: 15.8 mg/kg, converted to compound conc.: 20.861 mg/kg or 0.00209%)
benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 0.75 mg/kg or 0.000075%)
benzo[a]pyrene: benzo[def]chrysene: (Whole conc. entered as: 0.79 mg/kg or 0.000079%)
benzo[b]fluoranthene: (Whole conc. entered as: 0.99 mg/kg or 0.000099%)
benzo[ghi]perylene: (Whole conc. entered as: 0.5 mg/kg or 0.00005%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.34 mg/kg or 0.000034%)
beryllium oxide: (Cation conc. entered: 1.37 mg/kg, converted to compound conc.: 3.802 mg/kg or 0.00038%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.1 mg/kg, converted to compound conc.: 14.773 mg/kg or 0.00148%)
cadmium sulfide: (Cation conc. entered: 0.39 mg/kg, converted to compound conc.: 0.501 mg/kg or 0.0000501%, Note 1 conc.: 0.000039%)
chromium(III) oxide: (Cation conc. entered: 20.9 mg/kg, converted to compound conc.: 30.547 mg/kg or 0.00305%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.: 0.192 mg/kg or 0.0000192%)
chrysene: (Whole conc. entered as: 0.81 mg/kg or 0.000081%)
copper (I) oxide: (Cation conc. entered: 35.7 mg/kg, converted to compound conc.: 40.194 mg/kg or 0.00402%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.: 0.942 mg/kg or 0.0000942%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.66 mg/kg or 0.000066%)
ethylbenzene: (Whole conc. entered as: <0.002 mg/kg or <0.0000002%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 1.47 mg/kg or 0.000147%)
fluorene: (Whole conc. entered as: 0.1 mg/kg or 0.00001%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.66 mg/kg or 0.000066%)
lead chromate: (Cation conc. entered: 52.2 mg/kg, converted to compound conc.: 81.422 mg/kg or 0.00814%, Note 1 conc.: 0.00522%)
mercury dichloride: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.: 0.135 mg/kg or 0.0000135%)
molybdenum(VI) oxide: (Cation conc. entered: 1.5 mg/kg, converted to compound conc.: 2.25 mg/kg or 0.000225%)
naphthalene: (Whole conc. entered as: 0.17 mg/kg or 0.000017%)
nickel dihydroxide: (Cation conc. entered: 34.5 mg/kg, converted to compound conc.: 54.493 mg/kg or 0.00545%)

Test Settings

HP 2 on Ox. Sol. 1; H271: Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."
HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "he risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be > 10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."
HP 3(iv) on Flam. Gas 1; H220, Flam. Gas 2; H221: Force this test to non hazardous because: "Samples at limit of detection. No elevated levels recorded."

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "trichloroethylene; trichloroethene"

Determinand notes

Note 1 , used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb₂O₄), pentoxide (Sb₂O₅), trisulphide (Sb₂S₃), pentasulphide (Sb₂S₅) and those specified elsewhere in this Annex"
determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A , used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb₂O₄), pentoxide (Sb₂O₅), trisulphide (Sb₂S₃), pentasulphide (Sb₂S₅) and those specified elsewhere in this Annex"
determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Note C , used on:

determinand: "xylene"

Note D , used on:

determinand: "vinyl chloride"

Sample Depth: 0.30 m
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Moisture content: 0%
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.4 mg/kg or 0.00004%)
acenaphthylene: (Whole conc. entered as: 0.3 mg/kg or 0.00003%)
anthracene: (Whole conc. entered as: 0.95 mg/kg or 0.000095%)
antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 11.3 mg/kg, converted to compound conc.:1.3 mg/kg or 0.00113%, Note 1 conc.: 0.00113%)
arsenic trioxide: (Cation conc. entered: 74.2 mg/kg, converted to compound conc.:97.968 mg/kg or 0.0098%)
benzene: (Whole conc. entered as: <0.002 mg/kg or <0.000002%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 2.41 mg/kg or 0.000241%)
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 1.98 mg/kg or 0.000198%)
benzo[b]fluoranthene: (Whole conc. entered as: 2.79 mg/kg or 0.000279%)
benzo[ghi]perylene: (Whole conc. entered as: 1.03 mg/kg or 0.000103%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.92 mg/kg or 0.000092%)
beryllium oxide: (Cation conc. entered: 3.84 mg/kg, converted to compound conc.:10.657 mg/kg or 0.00107%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 2 mg/kg, converted to compound conc.:26.86 mg/kg or 0.00269%)
cadmium sulfide: (Cation conc. entered: 0.86 mg/kg, converted to compound conc.:1.105 mg/kg or 0.000111%, Note 1 conc.: 0.000086%)
chromium(III) oxide: (Cation conc. entered: 39.6 mg/kg, converted to compound conc.:57.878 mg/kg or 0.00579%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.192 mg/kg or 0.0000192%)
chrysene: (Whole conc. entered as: 2.53 mg/kg or 0.000253%)
copper (I) oxide: (Cation conc. entered: 175.4 mg/kg, converted to compound conc.:197.481 mg/kg or 0.0197%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[a,h]anthracene: (Whole conc. entered as: 1.44 mg/kg or 0.000144%)
ethylbenzene: (Whole conc. entered as: <0.002 mg/kg or <0.000002%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 4.87 mg/kg or 0.000487%)
fluorene: (Whole conc. entered as: 0.63 mg/kg or 0.000063%)
indeno[123-cd]pyrene: (Whole conc. entered as: 1.44 mg/kg or 0.000144%)
lead chromate: (Cation conc. entered: 391.8 mg/kg, converted to compound conc.:611.136 mg/kg or 0.0611%, Note 1 conc.: 0.0392%)
mercury dichloride: (Cation conc. entered: 1.79 mg/kg, converted to compound conc.:2.423 mg/kg or 0.000242%)
molybdenum(VI) oxide: (Cation conc. entered: 10.7 mg/kg, converted to compound conc.:16.052 mg/kg or 0.00161%)
naphthalene: (Whole conc. entered as: 1.17 mg/kg or 0.000117%)
nickel dihydroxide: (Cation conc. entered: 47 mg/kg, converted to compound conc.:74.236 mg/kg or 0.00742%)

HP 2 on Ox. Sol. 1; H271: Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."
 HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "the risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be >10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

HP 3(iv) on Flam. Gas 1; H220, Flam. Gas 2; H221: Force this test to non hazardous because: "Samples at limit of detection. No elevated levels recorded."

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "trichloroethylene; trichloroethene"

(Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex:
determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Note C , used on:

determinand: "xylene"

Note D , used on:

determinand: "vinyl chloride"

Sample Depth: 2.00 m
Moisture content: 27.7%
(no correction)

Entry:

17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Hazard properties

None identified

Determinands (Moisture content: 27.7%, no correction)

acenaphthene: (Whole conc. entered as: 0.21 mg/kg or 0.000021%)
acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
anthracene: (Whole conc. entered as: 0.42 mg/kg or 0.000042%)
antimony compounds, with the exception of the tetraoxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 18.7 mg/kg, converted to compound conc.: 18.7 mg/kg or 0.00187%, Note 1 conc.: 0.00187%)
arsenic trioxide: (Cation conc. entered: 85.2 mg/kg, converted to compound conc.: 112.492 mg/kg or 0.0112%)
benzene: (Whole conc. entered as: 0.01 mg/kg or 0.000001%)
benzo[*a*]anthracene: (Whole conc. entered as: 1.38 mg/kg or 0.000138%)
benzo[*a*]pyrene: benzo[*def*]chrysene: (Whole conc. entered as: 1.34 mg/kg or 0.000134%)
benzo[*b*]fluoranthene: (Whole conc. entered as: 1.93 mg/kg or 0.000193%)
benzo[*ghi*]perylene: (Whole conc. entered as: 0.89 mg/kg or 0.000089%)
benzo[*k*]fluoranthene: (Whole conc. entered as: 0.66 mg/kg or 0.000066%)
beryllium oxide: (Cation conc. entered: 3.69 mg/kg, converted to compound conc.: 10.241 mg/kg or 0.00102%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 6.2 mg/kg, converted to compound conc.: 83.266 mg/kg or 0.00833%)
cadmium sulfide: (Cation conc. entered: 1.01 mg/kg, converted to compound conc.: 1.298 mg/kg or 0.00013%, Note 1 conc.: 0.000101%)
chromium(III) oxide: (Cation conc. entered: 64.2 mg/kg, converted to compound conc.: 93.832 mg/kg or 0.00938%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.: 0.192 mg/kg or 0.0000192%)
chrysene: (Whole conc. entered as: 1.39 mg/kg or 0.000139%)
copper (I) oxide: (Cation conc. entered: 332.1 mg/kg, converted to compound conc.: 373.908 mg/kg or 0.0374%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.: 0.942 mg/kg or 0.0000942%)
dibenz[*a,h*]anthracene: (Whole conc. entered as: 1.2 mg/kg or 0.00012%)
ethylbenzene: (Whole conc. entered as: 0.004 mg/kg or 0.000004%)
fluoranthene: (Whole conc. entered as: 2.83 mg/kg or 0.000283%)
fluorene: (Whole conc. entered as: 0.21 mg/kg or 0.000021%)
indeno[123-*cd*]pyrene: (Whole conc. entered as: 1.2 mg/kg or 0.00012%)
lead chromate: (Cation conc. entered: 641.2 mg/kg, converted to compound conc.: 1000.153 mg/kg or 0.1%, Note 1 conc.: 0.0641%)
mercury dichloride: (Cation conc. entered: 0.71 mg/kg, converted to compound conc.: 0.961 mg/kg or 0.0000961%)
molybdenum(VI) oxide: (Cation conc. entered: 13.7 mg/kg, converted to compound conc.: 20.553 mg/kg or 0.00206%)
naphthalene: (Whole conc. entered as: 0.7 mg/kg or 0.00007%)
nickel dihydroxide: (Cation conc. entered: 72.5 mg/kg, converted to compound conc.: 114.514 mg/kg or 0.0115%)

Test Settings

HP 2 on Ox. Sol. 1; H271: Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."
HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "he risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be >10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."
HP 3(iv) on Flam. Gas 1; H220, Flam. Gas 2; H221: Force this test to non hazardous because: "Samples at limit of detection. No elevated levels recorded."

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "trichloroethylene; trichloroethene"

Determinand notes

Note 1 , used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb₂O₄), pentoxide (Sb₂O₅), trisulphide (Sb₂S₃), pentasulphide (Sb₂S₅) and those specified elsewhere in this Annex"
determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A , used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb₂O₄), pentoxide (Sb₂O₅), trisulphide (Sb₂S₃), pentasulphide (Sb₂S₅) and those specified elsewhere in this Annex"
determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Note C , used on:

determinand: "xylene"

Note D , used on:

determinand: "vinyl chloride"

Sample Depth: 2.20 m
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Moisture content: 20.7%
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 20.7%, no correction)

acenaphthene: (Whole conc. entered as: 0.18 mg/kg or 0.000018%)
acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
anthracene: (Whole conc. entered as: 0.16 mg/kg or 0.000016%)
antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 1 mg/kg, converted to compound conc.:1 mg/kg or 0.0001%, Note 1 conc.: 0.0001%)
arsenic trioxide: (Cation conc. entered: 13.2 mg/kg, converted to compound conc.:17.428 mg/kg or 0.00174%)
benzene: (Whole conc. entered as: <0.001 mg/kg or <0.000001%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 0.39 mg/kg or 0.000039%)
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.35 mg/kg or 0.000035%)
benzo[b]fluoranthene: (Whole conc. entered as: 0.51 mg/kg or 0.000051%)
benzo[ghi]perylene: (Whole conc. entered as: 0.22 mg/kg or 0.000022%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.18 mg/kg or 0.000018%)
beryllium oxide: (Cation conc. entered: 1.42 mg/kg, converted to compound conc.:3.941 mg/kg or 0.000394%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.1 mg/kg, converted to compound conc.:14.773 mg/kg or 0.00148%)
cadmium sulfide: (Cation conc. entered: 0.4 mg/kg, converted to compound conc.:0.514 mg/kg or 0.0000514%, Note 1 conc.: 0.00004%)
chromium(III) oxide: (Cation conc. entered: 42.6 mg/kg, converted to compound conc.:62.262 mg/kg or 0.00623%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.192 mg/kg or 0.0000192%)
chrysene: (Whole conc. entered as: 0.4 mg/kg or 0.00004%)
copper (I) oxide: (Cation conc. entered: 89.7 mg/kg, converted to compound conc.:100.992 mg/kg or 0.0101%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.3 mg/kg or 0.00003%)
ethylbenzene: (Whole conc. entered as: <0.002 mg/kg or <0.000002%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.83 mg/kg or 0.000083%)
fluorene: (Whole conc. entered as: 0.17 mg/kg or 0.000017%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.3 mg/kg or 0.00003%)
lead chromate: (Cation conc. entered: 49.1 mg/kg, converted to compound conc.:76.587 mg/kg or 0.00766%, Note 1 conc.: 0.00491%)
mercury dichloride: (Cation conc. entered: 0.25 mg/kg, converted to compound conc.:0.338 mg/kg or 0.0000338%)
molybdenum(VI) oxide: (Cation conc. entered: 1.7 mg/kg, converted to compound conc.:2.55 mg/kg or 0.000255%)
naphthalene: (Whole conc. entered as: 0.15 mg/kg or 0.000015%)
nickel dihydroxide: (Cation conc. entered: 34.8 mg/kg, converted to compound conc.:54.967 mg/kg or 0.00555%)

Test Settings

HP 2 on Ox. Sol. 1; H271: Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."
HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "the risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be >10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

HP 3(iv) on Flam. Gas 1; H220, Flam. Gas 2; H221: Force this test to non hazardous because: "Samples at limit of detection. No elevated levels recorded."

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "trichloroethylene; trichloroethene"

(Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex:
determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Note C , used on:

determinand: "xylene"

Note D , used on:

determinand: "vinyl chloride"

Sample Depth:

Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03)

Moisture content: **0%**
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.27 mg/kg or 0.000027%)
acenaphthylene: (Whole conc. entered as: 0.23 mg/kg or 0.000023%)
anthracene: (Whole conc. entered as: 0.58 mg/kg or 0.000058%)
antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 5.5 mg/kg, converted to compound conc.: 5.5 mg/kg or 0.00055%, Note 1 conc.: 0.00055%)
arsenic trioxide: (Cation conc. entered: 29.9 mg/kg, converted to compound conc.: 39.478 mg/kg or 0.00395%)
benzene: (Whole conc. entered as: 0.004 mg/kg or 0.0000004%)
benzo[a]anthracene: (Whole conc. entered as: 2.34 mg/kg or 0.000234%)
benzo[a]pyrene: benzo[def]chrysene: (Whole conc. entered as: 2.62 mg/kg or 0.000262%)
benzo[b]fluoranthene: (Whole conc. entered as: 3.12 mg/kg or 0.000312%)
benzo[ghi]perylene: (Whole conc. entered as: 1.77 mg/kg or 0.000177%)
benzo[k]fluoranthene: (Whole conc. entered as: 1.06 mg/kg or 0.000106%)
beryllium oxide: (Cation conc. entered: 1.37 mg/kg, converted to compound conc.: 3.802 mg/kg or 0.00038%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.7 mg/kg, converted to compound conc.: 22.831 mg/kg or 0.00228%)
cadmium sulfide: (Cation conc. entered: 1 mg/kg, converted to compound conc.: 1.285 mg/kg or 0.000129%, Note 1 conc.: 0.0001%)
chromium(III) oxide: (Cation conc. entered: 99.6 mg/kg, converted to compound conc.: 145.571 mg/kg or 0.0146%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.: 0.192 mg/kg or 0.0000192%)
chrysene: (Whole conc. entered as: 2.31 mg/kg or 0.000231%)
copper (I) oxide: (Cation conc. entered: 414.4 mg/kg, converted to compound conc.: 466.568 mg/kg or 0.0467%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.: 0.942 mg/kg or 0.0000942%)
dibenz[a,h]anthracene: (Whole conc. entered as: 2.44 mg/kg or 0.000244%)
ethylbenzene: (Whole conc. entered as: <0.002 mg/kg or <0.0000002%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 3.86 mg/kg or 0.000386%)
fluorene: (Whole conc. entered as: 0.26 mg/kg or 0.000026%)
indeno[123-cd]pyrene: (Whole conc. entered as: 2.44 mg/kg or 0.000244%)
lead chromate: (Cation conc. entered: 210.3 mg/kg, converted to compound conc.: 328.029 mg/kg or 0.0328%, Note 1 conc.: 0.021%)
mercury dichloride: (Cation conc. entered: 1.39 mg/kg, converted to compound conc.: 1.881 mg/kg or 0.000188%)
molybdenum(VI) oxide: (Cation conc. entered: 3.7 mg/kg, converted to compound conc.: 5.551 mg/kg or 0.000555%)
naphthalene: (Whole conc. entered as: 0.41 mg/kg or 0.000041%)
nickel dihydroxide: (Cation conc. entered: 40.4 mg/kg, converted to compound conc.: 63.812 mg/kg or 0.00638%)

Test Settings

HP 2 on Ox. Sol. 1; H271: Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."
HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "he risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be >10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."
HP 3(iv) on Flam. Gas 1; H220, Flam. Gas 2; H221: Force this test to non hazardous because: "Samples at limit of detection. No elevated levels recorded."

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "trichloroethylene; trichloroethene"

(Sb₂S₃), pentasulphide (Sb₂S₅) and those specified elsewhere in this Annex
determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Note C , used on:

determinand: "xylene"

Note D , used on:

determinand: "vinyl chloride"

Sample Depth: 3.00 m
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Moisture content: 0%
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
anthracene: (Whole conc. entered as: 0.13 mg/kg or 0.000013%)
antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 3.8 mg/kg, converted to compound conc.:3.8 mg/kg or 0.00038%, Note 1 conc.: 0.00038%)
arsenic trioxide: (Cation conc. entered: 21.6 mg/kg, converted to compound conc.:28.519 mg/kg or 0.002855%)
benzene: (Whole conc. entered as: <0.001 mg/kg or <0.000001%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 0.38 mg/kg or 0.000038%)
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.46 mg/kg or 0.000046%)
benzo[b]fluoranthene: (Whole conc. entered as: 0.58 mg/kg or 0.000058%)
benzo[ghi]perylene: (Whole conc. entered as: 0.5 mg/kg or 0.00005%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.16 mg/kg or 0.000016%)
beryllium oxide: (Cation conc. entered: 1.56 mg/kg, converted to compound conc.:4.33 mg/kg or 0.000433%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.4 mg/kg, converted to compound conc.:18.802 mg/kg or 0.00188%)
cadmium sulfide: (Cation conc. entered: 0.58 mg/kg, converted to compound conc.:0.745 mg/kg or 0.0000745%, Note 1 conc.: 0.000058%)
chromium(III) oxide: (Cation conc. entered: 45.8 mg/kg, converted to compound conc.:66.939 mg/kg or 0.00669%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.192 mg/kg or 0.0000192%)
chrysene: (Whole conc. entered as: 0.42 mg/kg or 0.000042%)
copper (I) oxide: (Cation conc. entered: 76 mg/kg, converted to compound conc.:85.568 mg/kg or 0.00856%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.61 mg/kg or 0.000061%)
ethylbenzene: (Whole conc. entered as: <0.002 mg/kg or <0.000002%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.78 mg/kg or 0.000078%)
fluorene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.61 mg/kg or 0.000061%)
lead chromate: (Cation conc. entered: 120.3 mg/kg, converted to compound conc.:187.646 mg/kg or 0.0188%, Note 1 conc.: 0.012%)
mercury dichloride: (Cation conc. entered: 0.41 mg/kg, converted to compound conc.:0.555 mg/kg or 0.0000555%)
molybdenum(VI) oxide: (Cation conc. entered: 3.7 mg/kg, converted to compound conc.:5.551 mg/kg or 0.000555%)
naphthalene: (Whole conc. entered as: 0.26 mg/kg or 0.000026%)
nickel dihydroxide: (Cation conc. entered: 42.8 mg/kg, converted to compound conc.:67.603 mg/kg or 0.00676%)

Test Settings

HP 2 on Ox. Sol. 1; H271: Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."
HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "the risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be >10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

HP 3(iv) on Flam. Gas 1; H220, Flam. Gas 2; H221: Force this test to non hazardous because: "Samples at limit of detection. No elevated levels recorded."

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "trichloroethylene; trichloroethene"

(Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex:
determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Note C , used on:

determinand: "xylene"

Note D , used on:

determinand: "vinyl chloride"

Sample Depth: 1.00 m
Moisture content: 7.8%
(no correction)
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03)

Hazard properties

None identified

Determinands (Moisture content: 7.8%, no correction)

acenaphthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
anthracene: (Whole conc. entered as: 0.11 mg/kg or 0.000011%)
antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 1.4 mg/kg, converted to compound conc.: 1.4 mg/kg or 0.00014%, Note 1 conc.: 0.00014%)
arsenic trioxide: (Cation conc. entered: 13.9 mg/kg, converted to compound conc.: 18.353 mg/kg or 0.00184%)
benzene: (Whole conc. entered as: <0.001 mg/kg or <0.000001%) **IGNORED Because: "<LOD"**
benzo[*a*]anthracene: (Whole conc. entered as: 0.36 mg/kg or 0.000036%)
benzo[*a*]pyrene: (Whole conc. entered as: 0.3 mg/kg or 0.00003%)
benzo[*b*]fluoranthene: (Whole conc. entered as: 0.43 mg/kg or 0.000043%)
benzo[*ghi*]perylene: (Whole conc. entered as: 0.18 mg/kg or 0.000018%)
benzo[*k*]fluoranthene: (Whole conc. entered as: 0.13 mg/kg or 0.000013%)
beryllium oxide: (Cation conc. entered: 1.01 mg/kg, converted to compound conc.: 2.803 mg/kg or 0.00028%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1 mg/kg, converted to compound conc.: 13.43 mg/kg or 0.00134%)
cadmium sulfide: (Cation conc. entered: 0.34 mg/kg, converted to compound conc.: 0.437 mg/kg or 0.0000437%, Note 1 conc.: 0.000034%)
chromium(III) oxide: (Cation conc. entered: 25 mg/kg, converted to compound conc.: 36.539 mg/kg or 0.00365%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.: 0.192 mg/kg or 0.0000192%)
chrysene: (Whole conc. entered as: 0.36 mg/kg or 0.000036%)
copper (I) oxide: (Cation conc. entered: 32.2 mg/kg, converted to compound conc.: 36.254 mg/kg or 0.00363%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.: 0.942 mg/kg or 0.0000942%)
dibenz[*a,h*]anthracene: (Whole conc. entered as: 0.25 mg/kg or 0.000025%)
ethylbenzene: (Whole conc. entered as: <0.002 mg/kg or <0.000002%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 0.65 mg/kg or 0.000065%)
fluorene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
indeno[123-*cd*]pyrene: (Whole conc. entered as: 0.25 mg/kg or 0.000025%)
lead chromate: (Cation conc. entered: 66.2 mg/kg, converted to compound conc.: 103.26 mg/kg or 0.0103%, Note 1 conc.: 0.00662%)
mercury dichloride: (Cation conc. entered: 0.14 mg/kg, converted to compound conc.: 0.189 mg/kg or 0.0000189%)
molybdenum(VI) oxide: (Cation conc. entered: 1.5 mg/kg, converted to compound conc.: 2.25 mg/kg or 0.000225%)
naphthalene: (Whole conc. entered as: 0.09 mg/kg or 0.000009%)
nickel dihydroxide: (Cation conc. entered: 28.5 mg/kg, converted to compound conc.: 45.016 mg/kg or 0.0045%)

Test Settings

HP 2 on Ox. Sol. 1; H271: Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."
HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "the risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be > 10,000mg. This risk of flammability from solid state soils < 1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

HP 3(iv) on Flam. Gas 1; H220, Flam. Gas 2; H221: Force this test to non hazardous because: "Samples at limit of detection. No elevated levels recorded."

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "trichloroethylene; trichloroethene"

(Sb₂S₃), pentasulphide (Sb₂S₅) and those specified elsewhere in this Annex
determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Note C , used on:

determinand: "xylene"

Note D , used on:

determinand: "vinyl chloride"

Sample Depth: excavated soil from contaminated sites)
0.70 m Entry: 17 05 03 * (Soil and stones containing hazardous substances)
Moisture content: **0%**
(no correction)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

lead chromate: (Note 1 conc.: 0.438%)

HP 10: Toxic for reproduction "waste which has adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in the offspring"

Hazard Statements hit:

Repr. 1A; H360Df "May damage the unborn child. Suspected of damaging fertility."

Because of determinand:

lead chromate: (Note 1 conc.: 0.438%)

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Risk phrases hit:

R50/53 "Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Because of determinands:

lead chromate: (Note 1 conc.: 0.438%)

zinc sulphate: (compound conc.: 2.556%)

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)

acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)

anthracene: (Whole conc. entered as: 0.14 mg/kg or 0.000014%)

antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3),

pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 47.4 mg/kg, converted to

compound conc.: 47.4 mg/kg or 0.00474%, Note 1 conc.: 0.00474%)

arsenic trioxide: (Cation conc. entered: 137.7 mg/kg, converted to compound conc.: 181.809 mg/kg or 0.0182%)

benzene: (Whole conc. entered as: 0.002 mg/kg or 0.0000002%)

benzo[a]anthracene: (Whole conc. entered as: 0.45 mg/kg or 0.000045%)

benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.45 mg/kg or 0.000045%)

benzo[b]fluoranthene: (Whole conc. entered as: 0.71 mg/kg or 0.000071%)

benzo[ghi]perylene: (Whole conc. entered as: 0.41 mg/kg or 0.000041%)

dibenz[a,h]anthracene: (Whole conc. entered as: 0.09 mg/kg or 0.0000009%)
 ethylbenzene: (Whole conc. entered as: <0.002 mg/kg or <0.0000002%) **IGNORED Because: "<LOD"**
 fluoranthene: (Whole conc. entered as: 0.69 mg/kg or 0.0000069%)
 fluorene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
 indeno[123-cd]pyrene: (Whole conc. entered as: 0.4 mg/kg or 0.00004%)
 lead chromate: (Cation conc. entered: 4381 mg/kg, converted to compound conc.:6833.55 mg/kg or 0.683%, Note 1 conc.: 0.438%)
 mercury dichloride: (Cation conc. entered: 0.23 mg/kg, converted to compound conc.:0.311 mg/kg or 0.0000311%)
 molybdenum(VI) oxide: (Cation conc. entered: 24.1 mg/kg, converted to compound conc.:36.155 mg/kg or 0.00362%)
 naphthalene: (Whole conc. entered as: 0.12 mg/kg or 0.000012%)
 nickel dihydroxide: (Cation conc. entered: 130.3 mg/kg, converted to compound conc.:205.809 mg/kg or 0.0206%)
 pH: (Whole conc. entered as: 7.3 pH, converted to conc.:7.3 pH or 7.3 pH)
 phenanthrene: (Whole conc. entered as: 0.34 mg/kg or 0.000034%)
 phenol: (Whole conc. entered as: 0.5 mg/kg or 0.00005%)
 pyrene: (Whole conc. entered as: 0.57 mg/kg or 0.000057%)
 selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex: (
 Cation conc. entered: 1.5 mg/kg, converted to compound conc.:3.83 mg/kg or 0.000383%)
 toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) **IGNORED Because: "<LOD"**
 TPH (C6 to C40) petroleum group: (Whole conc. entered as: 168.9 mg/kg or 0.0169%)
 trichloroethylene; trichloroethene: (Whole conc. entered as: 0.001 mg/kg or 0.0000001%)
 vinyl chloride: (Whole conc. entered as: 0.001 mg/kg or 0.0000001%)
 xylene: (Whole conc. entered as: 1E-05 mg/kg or 0.000000001%)
 zinc sulphate: (Cation conc. entered: 10350 mg/kg, converted to compound conc.:25557.218 mg/kg or 2.556%)

Test Settings

HP 2 on Ox. Sol. 1; H271: Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."
 HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "he risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be >10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."
 HP 3(iv) on Flam. Gas 1; H220, Flam. Gas 2; H221: Force this test to non hazardous because: "Samples at limit of detection. No elevated levels recorded."

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "trichloroethylene; trichloroethene"

C14: Step 6, Equation 1

"use the equations given in Table C14.3 to decide if the waste is hazardous by HP 14", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"

Determinand notes

Note 1 , used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A , used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Note C , used on:

determinand: "xylene"

Note D , used on:

determinand: "vinyl chloride"

WM3: Unknown oil , used on:

determinand: "TPH (C6 to C40) petroleum group"

Sample Depth: 0.10 m Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
Moisture content: 0% (no correction) 17 05 03

Hazard properties

None identified

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.41 mg/kg or 0.000041%)
acenaphthylene: (Whole conc. entered as: 0.43 mg/kg or 0.000043%)
anthracene: (Whole conc. entered as: 1.55 mg/kg or 0.000155%)
arsenic trioxide: (Cation conc. entered: 108.5 mg/kg, converted to compound conc.:143.255 mg/kg or 0.0143%)
benzene: (Whole conc. entered as: <1E-05 mg/kg or <0.00000001%) **IGNORED Because: "<LOD"**
benzo[*a*]anthracene: (Whole conc. entered as: 3.38 mg/kg or 0.000338%)
benzo[*a*]pyrene: benzo[*def*]chrysene: (Whole conc. entered as: 2.73 mg/kg or 0.000273%)
benzo[*b*]fluoranthene: (Whole conc. entered as: 3.65 mg/kg or 0.000365%)
benzo[*ghi*]perylene: (Whole conc. entered as: 1.38 mg/kg or 0.000138%)
benzo[*k*]fluoranthene: (Whole conc. entered as: 1.35 mg/kg or 0.000135%)
cadmium sulfide: (Cation conc. entered: 0.78 mg/kg, converted to compound conc.:1.002 mg/kg or 0.0001%, Note 1 conc.: 0.000078%)
chromium(III) oxide: (Cation conc. entered: 40.3 mg/kg, converted to compound conc.:58.901 mg/kg or 0.00589%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.192 mg/kg or 0.0000192%)
chrysene: (Whole conc. entered as: 3.53 mg/kg or 0.000353%)
copper (I) oxide: (Cation conc. entered: 225.7 mg/kg, converted to compound conc.:254.113 mg/kg or 0.0254%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 1.07 mg/kg, converted to compound conc.:2.016 mg/kg or 0.000202%)
dibenz[*a,h*]anthracene: (Whole conc. entered as: 0.41 mg/kg or 0.000041%)
fluoranthene: (Whole conc. entered as: 6.72 mg/kg or 0.000672%)
fluorene: (Whole conc. entered as: 0.67 mg/kg or 0.000067%)
indeno[123-*cd*]pyrene: (Whole conc. entered as: 1.58 mg/kg or 0.000158%)
lead chromate: (Cation conc. entered: 482 mg/kg, converted to compound conc.:751.831 mg/kg or 0.0752%, Note 1 conc.: 0.0482%)
mercury dichloride: (Cation conc. entered: 0.79 mg/kg, converted to compound conc.:1.069 mg/kg or 0.000107%)
naphthalene: (Whole conc. entered as: 0.93 mg/kg or 0.000093%)
nickel dihydroxide: (Cation conc. entered: 44.7 mg/kg, converted to compound conc.:70.604 mg/kg or 0.00706%)
pH: (Whole conc. entered as: 6.8 pH, converted to conc.:6.8 pH or 6.8 pH)
phenanthrene: (Whole conc. entered as: 5.83 mg/kg or 0.000583%)
pyrene: (Whole conc. entered as: 5.61 mg/kg or 0.000561%)
selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex: (Cation conc. entered: 1.1 mg/kg, converted to compound conc.:2.809 mg/kg or 0.000281%)
toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) **IGNORED Because: "<LOD"**
TPH (C6 to C40) petroleum group: (Whole conc. entered as: 171.2 mg/kg or 0.0171%)
xylene: (Whole conc. entered as: 1E-05 mg/kg or 0.00000001%)

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Determinand notes

Note 1, used on:

determinand: "cadmium sulfide"
 determinand: "lead chromate"

Note A, used on:

determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
 determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Note C, used on:

Sample Depth: excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)
0.70 m
Moisture content: **0%**
(no correction)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.392%)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.392%)

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Risk phrases hit:

R52/53 "Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Because of determinand:

benzo[*a*]anthracene: (conc.: 0.00756%)

R50/53 "Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Because of determinand:

zinc sulphate: (compound conc.: 0.526%)

R51/53 "Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.392%)

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 21.8 mg/kg or 0.00218%)

acenaphthylene: (Whole conc. entered as: 0.39 mg/kg or 0.000039%)

anthracene: (Whole conc. entered as: 34.8 mg/kg or 0.00348%)

cadmium sulfide: (Cation conc. entered: 3.57 mg/kg, converted to compound conc.:4.588 mg/kg or 0.000459%, Note 1 conc.: 0.000357%)

chromium(III) oxide: (Cation conc. entered: 69 mg/kg, converted to compound conc.:100.847 mg/kg or 0.0101%)

chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.192 mg/kg or 0.0000192%)

chrysene: (Whole conc. entered as: 78.5 mg/kg or 0.00785%)

copper (I) oxide: (Cation conc. entered: 518.5 mg/kg, converted to compound conc.:583.773 mg/kg or 0.0584%)

salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 36 mg/kg, converted to compound conc.:67.824 mg/kg or 0.00678%)

dibenz[a,h]anthracene: (Whole conc. entered as: 5.82 mg/kg or 0.000582%)

ethylbenzene: (Whole conc. entered as: <0.002 mg/kg or <0.000002%) **IGNORED Because: "<LOD"**

fluoranthene: (Whole conc. entered as: 200 mg/kg or 0.02%)

fluorene: (Whole conc. entered as: 18.6 mg/kg or 0.00186%)

indeno[123-cd]pyrene: (Whole conc. entered as: 23 mg/kg or 0.0023%)

lead chromate: (Cation conc. entered: 795 mg/kg, converted to compound conc.:1240.053 mg/kg or 0.124%, Note 1 conc.: 0.0795%)

mercury dichloride: (Cation conc. entered: 2.1 mg/kg, converted to compound conc.:2.842 mg/kg or 0.000284%)

molybdenum(VI) oxide: (Cation conc. entered: 21.7 mg/kg, converted to compound conc.:32.554 mg/kg or 0.00326%)

naphthalene: (Whole conc. entered as: 36.3 mg/kg or 0.00363%)

nickel dihydroxide: (Cation conc. entered: 95.8 mg/kg, converted to compound conc.:151.316 mg/kg or 0.0151%)

pH: (Whole conc. entered as: 7.2 pH, converted to conc.:7.2 pH or 7.2 pH)

phenanthrene: (Whole conc. entered as: 225 mg/kg or 0.0225%)

phenol: (Whole conc. entered as: 0.5 mg/kg or 0.00005%)

pyrene: (Whole conc. entered as: 192 mg/kg or 0.0192%)

Selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex: (Cation conc. entered: 1.3 mg/kg, converted to compound conc.:3.32 mg/kg or 0.000332%)

toluene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**

TPH (C6 to C40) petroleum group: (Whole conc. entered as: 3923 mg/kg or 0.392%)

trichloroethylene: trichloroethene: (Whole conc. entered as: 0.004 mg/kg or 0.000004%)

vinyl chloride: (Whole conc. entered as: 0.001 mg/kg or 0.000001%)

xylene: (Whole conc. entered as: 1E-05 mg/kg or 0.00000001%)

zinc sulphate: (Cation conc. entered: 2130 mg/kg, converted to compound conc.:5259.601 mg/kg or 0.526%)

Test Settings

HP 2 on Ox. Sol. 1; H271: Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."

HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "he risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be >10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

HP 3(iv) on Flam. Gas 1; H220, Flam. Gas 2; H221: Force this test to non hazardous because: "Samples at limit of detection. No elevated levels recorded."

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "trichloroethylene; trichloroethene"

C14: Step 6, Equation 1

"Use the equations given in Table C14.3 to decide if the waste is hazardous by HP 14", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"

Determinand notes

Note 1, used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"

determinand: "cadmium sulfide"

determinand: "lead chromate"

Note A, used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"

determinand: "TPH (C6 to C40) petroleum group"

Sample Depth: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
Entry: 17 05 03

0.50 m
Moisture content: 0%
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
anthracene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 4.2 mg/kg, converted to compound conc.:4.2 mg/kg or 0.00042%, Note 1 conc.: 0.00042%)
arsenic trioxide: (Cation conc. entered: 30 mg/kg, converted to compound conc.:39.61 mg/kg or 0.00396%)
benzo[*a*]anthracene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
benzo[*a*]pyrene; benzo[*def*]chrysene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
benzo[*b*]fluoranthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
benzo[*ghi*]perylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
benzo[*k*]fluoranthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
beryllium oxide: (Cation conc. entered: 1.69 mg/kg, converted to compound conc.:4.69 mg/kg or 0.000469%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 3.4 mg/kg, converted to compound conc.:45.662 mg/kg or 0.00457%)
cadmium sulfide: (Cation conc. entered: 1.54 mg/kg, converted to compound conc.:1.979 mg/kg or 0.000198%, Note 1 conc.: 0.000154%)
chromium(III) oxide: (Cation conc. entered: 38.7 mg/kg, converted to compound conc.:56.562 mg/kg or 0.00566%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.192 mg/kg or 0.0000192%)
chrysene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
copper (I) oxide: (Cation conc. entered: 101.3 mg/kg, converted to compound conc.:114.052 mg/kg or 0.0114%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[*a,h*]anthracene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
fluoranthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
fluorene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
indeno[123-*cd*]pyrene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
lead chromate: (Cation conc. entered: 179 mg/kg, converted to compound conc.:279.207 mg/kg or 0.0279%, Note 1 conc.: 0.0179%)
mercury dichloride: (Cation conc. entered: 0.52 mg/kg, converted to compound conc.:0.704 mg/kg or 0.0000704%)
molybdenum(VI) oxide: (Cation conc. entered: 3.9 mg/kg, converted to compound conc.:5.851 mg/kg or 0.000585%)
naphthalene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
nickel dihydroxide: (Cation conc. entered: 53.8 mg/kg, converted to compound conc.:84.977 mg/kg or 0.0085%)
pH: (Whole conc. entered as: 7.6 pH, converted to conc.:7.6 pH or 7.6 pH)
phenanthrene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2S5), pentasulphide (Sb2S3), trisulphide (Sb2O5) and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Determinand notes

Note 1, used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
determinand: "cadmium sulfide"
determinand: "lead chromate"

Sample Depth: excavated soil from contaminated sites)
0.70 m 17 05 03 * (Soil and stones containing hazardous substances)
Entry: substances)

Moisture content: **0%**
(no correction)

Hazard properties

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Risk phrases hit:

R50/53 "Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Because of determinands:

copper (I) oxide: (compound conc.: 0.103%)
zinc sulphate: (compound conc.: 0.178%)

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.19 mg/kg or 0.000019%)
acenaphthylene: (Whole conc. entered as: 0.1 mg/kg or 0.00001%)
anthracene: (Whole conc. entered as: 0.46 mg/kg or 0.000046%)
antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 20.5 mg/kg, converted to compound conc.: 20.5 mg/kg or 0.00205%, Note 1 conc.: 0.00205%)
arsenic trioxide: (Cation conc. entered: 79.4 mg/kg, converted to compound conc.: 104.834 mg/kg or 0.0105%)
benzo[a]anthracene: (Whole conc. entered as: 3.01 mg/kg or 0.000301%)
benzo[a]pyrene: benzo[def]chrysene: (Whole conc. entered as: 2.97 mg/kg or 0.000297%)
benzo[b]fluoranthene: (Whole conc. entered as: 4.05 mg/kg or 0.000405%)
benzo[ghi]perylene: (Whole conc. entered as: 1.9 mg/kg or 0.00019%)
benzo[k]fluoranthene: (Whole conc. entered as: 1.58 mg/kg or 0.000158%)
beryllium oxide: (Cation conc. entered: 4.3 mg/kg, converted to compound conc.: 11.934 mg/kg or 0.00119%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 4.9 mg/kg, converted to compound conc.: 65.807 mg/kg or 0.00658%)
cadmium sulfide: (Cation conc. entered: 0.81 mg/kg, converted to compound conc.: 1.041 mg/kg or 0.000104%, Note 1 conc.: 0.000081%)
chromium(III) oxide: (Cation conc. entered: 50.5 mg/kg, converted to compound conc.: 73.809 mg/kg or 0.00738%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.: 0.192 mg/kg or 0.0000192%)
chrysene: (Whole conc. entered as: 3.15 mg/kg or 0.000315%)
copper (I) oxide: (Cation conc. entered: 917.8 mg/kg, converted to compound conc.: 1033.34 mg/kg or 0.103%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 1.21 mg/kg, converted to compound conc.: 2.28 mg/kg or 0.000228%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.47 mg/kg or 0.000047%)
fluoranthene: (Whole conc. entered as: 4.66 mg/kg or 0.000466%)
fluorene: (Whole conc. entered as: 0.11 mg/kg or 0.000011%)
indeno[123-cd]pyrene: (Whole conc. entered as: 2.11 mg/kg or 0.000211%)

Test Settings

HP 2 on Ox. Sol. 1; H271: Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."
HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "the risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be >10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

C14: Step 6, Equation 1

Note A , used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb₂O₄), pentoxide (Sb₂O₅), trisulphide (Sb₂S₃), pentasulphide (Sb₂S₅) and those specified elsewhere in this Annex"
determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

WM3: Unknown oil , used on:

determinand: "TPH (C6 to C40) petroleum group"

Sample Depth: 3.00 m
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Moisture content: 0%
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
anthracene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
arsenic trioxide: (Cation conc. entered: 25.3 mg/kg, converted to compound conc.:33.404 mg/kg or 0.003334%)
benzo[*a*]anthracene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
benzo[*a*]pyrene; benzo[*def*]chrysene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
benzo[*b*]fluoranthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
benzo[*ghi*]perylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
benzo[*k*]fluoranthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
cadmium sulfide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.129 mg/kg or 0.0000129%, Note 1 conc.: 0.00001%)
chromium(III) oxide: (Cation conc. entered: 21.2 mg/kg, converted to compound conc.:30.985 mg/kg or 0.0031%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.192 mg/kg or 0.0000192%)
chrysene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
copper (I) oxide: (Cation conc. entered: 49.4 mg/kg, converted to compound conc.:55.619 mg/kg or 0.00556%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[*a,h*]anthracene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
fluoranthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
fluorene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
indeno[123-*cd*]pyrene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
lead chromate: (Cation conc. entered: 37.7 mg/kg, converted to compound conc.:58.805 mg/kg or 0.00588%, Note 1 conc.: 0.00377%)
mercury dichloride: (Cation conc. entered: 0.14 mg/kg, converted to compound conc.:0.189 mg/kg or 0.0000189%)
naphthalene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
nickel dihydroxide: (Cation conc. entered: 15.5 mg/kg, converted to compound conc.:24.482 mg/kg or 0.00245%)
pH: (Whole conc. entered as: 5.1 pH, converted to conc.:5.1 pH or 5.1 pH)
phenanthrene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
pyrene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex: (Cation conc. entered: 0.6 mg/kg, converted to compound conc.:1.532 mg/kg or 0.000153%)
TPH (C6 to C40) petroleum group: (Whole conc. entered as: 20.67 mg/kg or 0.00207%)
zinc sulphate: (Cation conc. entered: 59.8 mg/kg, converted to compound conc.:147.664 mg/kg or 0.0148%)

Sample Depth: excavated soil from contaminated sites)
3.00 m Entry: 17 05 03 * (Soil and stones containing hazardous substances)
Moisture content: 0% (no correction)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.139%)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.139%)

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.87 mg/kg or 0.000087%)
acenaphthylene: (Whole conc. entered as: 0.24 mg/kg or 0.000024%)
anthracene: (Whole conc. entered as: 2.51 mg/kg or 0.000251%)
antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 15.5 mg/kg, converted to compound conc.: 15.5 mg/kg or 0.00155%, Note 1 conc.: 0.00155%)
arsenic trioxide: (Cation conc. entered: 61 mg/kg, converted to compound conc.: 80.54 mg/kg or 0.00805%)
benzene: (Whole conc. entered as: 0.003 mg/kg or 0.000003%)
benzo[a]anthracene: (Whole conc. entered as: 3.03 mg/kg or 0.000303%)
benzo[a]pyrene: benzo[def]chrysene: (Whole conc. entered as: 3.01 mg/kg or 0.000301%)
benzo[b]fluoranthene: (Whole conc. entered as: 3.81 mg/kg or 0.000381%)
benzo[ghi]perylene: (Whole conc. entered as: 1.9 mg/kg or 0.00019%)
benzo[k]fluoranthene: (Whole conc. entered as: 1.34 mg/kg or 0.000134%)
beryllium oxide: (Cation conc. entered: 3.3 mg/kg, converted to compound conc.: 9.159 mg/kg or 0.000916%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 5.6 mg/kg, converted to compound conc.: 75.208 mg/kg or 0.00752%)
cadmium sulfide: (Cation conc. entered: 9.36 mg/kg, converted to compound conc.: 12.03 mg/kg or 0.0012%, Note 1 conc.: 0.000936%)
chromium(III) oxide: (Cation conc. entered: 175.7 mg/kg, converted to compound conc.: 256.795 mg/kg or 0.0257%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.: 0.192 mg/kg or 0.0000192%)

molybdenum(VI) oxide: (Cation conc. entered: 12.9 mg/kg, converted to compound conc.:19.352 mg/kg or 0.00194%)
naphthalene: (Whole conc. entered as: 0.85 mg/kg or 0.000085%)
nickel dihydroxide: (Cation conc. entered: 89.8 mg/kg, converted to compound conc.:141.839 mg/kg or 0.0142%)
pH: (Whole conc. entered as: 7.3 pH, converted to conc.:7.3 pH or 7.3 pH)
phenanthrene: (Whole conc. entered as: 5.2 mg/kg or 0.00052%)
phenol: (Whole conc. entered as: 0.1 mg/kg or 0.00001%)
pyrene: (Whole conc. entered as: 5.2 mg/kg or 0.00052%)
selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex: (Cation conc. entered: 1 mg/kg, converted to compound conc.:2.554 mg/kg or 0.000255%)
toluene: (Whole conc. entered as: <0.005 mg/kg or <0.0000005%) **IGNORED Because: "<LOD"**
TPH (C6 to C40) petroleum group: (Whole conc. entered as: 1385.68 mg/kg or 0.139%)
trichloroethylene; trichloroethene: (Whole conc. entered as: 0.001 mg/kg or 0.0000001%)
vinyl chloride: (Whole conc. entered as: 0.001 mg/kg or 0.0000001%)
xylene: (Whole conc. entered as: 0.09 mg/kg or 0.000009%)
zinc sulphate: (Cation conc. entered: 857 mg/kg, converted to compound conc.:2116.187 mg/kg or 0.212%)

Test Settings

HP 2 on Ox. Sol. 1; H271: **Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."**
HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: **Force this test to non hazardous because: "he risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be > 10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."**
HP 3(iv) on Flam. Gas 1; H220, Flam. Gas 2; H221: **Force this test to non hazardous because: "Samples at limit of detection. No elevated levels recorded."**

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "trichloroethylene; trichloroethene"

Note 1 , used on:

Test: "HP 6 on Acute Tox. 4; H332" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"

Determinand notes

Note 1 , used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A , used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Note C , used on:

determinand: "xylene"

Note D , used on:

determinand: "vinyl chloride"

WM3: Unknown oil , used on:

determinand: "TPH (C6 to C40) petroleum group"

Sample Depth: 1.00 m
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Moisture content: 0%
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.11 mg/kg or 0.000011%)
acenaphthylene: (Whole conc. entered as: 0.1 mg/kg or 0.00001%)
anthracene: (Whole conc. entered as: 0.35 mg/kg or 0.000035%)
antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 15.8 mg/kg, converted to compound conc.:15.8 mg/kg or 0.00158%, Note 1 conc.: 0.00158%)
arsenic trioxide: (Cation conc. entered: 112.9 mg/kg, converted to compound conc.:149.065 mg/kg or 0.0149%)
benzene: (Whole conc. entered as: 0.002 mg/kg or 0.000002%)
benzo[a]anthracene: (Whole conc. entered as: 1.32 mg/kg or 0.000132%)
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 1.33 mg/kg or 0.000133%)
benzo[b]fluoranthene: (Whole conc. entered as: 1.95 mg/kg or 0.000195%)
benzo[ghi]perylene: (Whole conc. entered as: 1.01 mg/kg or 0.000101%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.56 mg/kg or 0.000056%)
beryllium oxide: (Cation conc. entered: 4.84 mg/kg, converted to compound conc.:13.433 mg/kg or 0.00134%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 7.8 mg/kg, converted to compound conc.:104.754 mg/kg or 0.0105%)
cadmium sulfide: (Cation conc. entered: 0.53 mg/kg, converted to compound conc.:0.681 mg/kg or 0.0000681%, Note 1 conc.: 0.000053%)
chromium(III) oxide: (Cation conc. entered: 50 mg/kg, converted to compound conc.:73.078 mg/kg or 0.00731%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.192 mg/kg or 0.0000192%)
chrysene: (Whole conc. entered as: 1.39 mg/kg or 0.000139%)
copper (I) oxide: (Cation conc. entered: 493.8 mg/kg, converted to compound conc.:555.964 mg/kg or 0.0556%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 1.23 mg/kg, converted to compound conc.:2.317 mg/kg or 0.000232%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.23 mg/kg or 0.000023%)
ethylbenzene: (Whole conc. entered as: <0.002 mg/kg or <0.000002%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 2.42 mg/kg or 0.000242%)
fluorene: (Whole conc. entered as: 0.1 mg/kg or 0.00001%)
indeno[123-cd]pyrene: (Whole conc. entered as: 1.04 mg/kg or 0.000104%)
lead chromate: (Cation conc. entered: 364.2 mg/kg, converted to compound conc.:568.085 mg/kg or 0.0568%, Note 1 conc.: 0.0364%)
mercury dichloride: (Cation conc. entered: 0.33 mg/kg, converted to compound conc.:0.447 mg/kg or 0.0000447%)
molybdenum(VI) oxide: (Cation conc. entered: 18.6 mg/kg, converted to compound conc.:27.904 mg/kg or 0.00279%)
naphthalene: (Whole conc. entered as: 0.4 mg/kg or 0.00004%)
nickel dihydroxide: (Cation conc. entered: 87.4 mg/kg, converted to compound conc.:138.048 mg/kg or 0.0138%)

Test Settings

HP 2 on Ox. Sol. 1; H271: Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."
HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "the risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be >10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

HP 3(iv) on Flam. Gas 1; H220, Flam. Gas 2; H221: Force this test to non hazardous because: "Samples at limit of detection. No elevated levels recorded."

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "trichloroethylene; trichloroethene"

(SbZS3), pentasulphide (SbZS5) and those specified elsewhere in this Annex:
determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Note C , used on:

determinand: "xylene"

Note D , used on:

determinand: "vinyl chloride"

WM3: Unknown oil , used on:

determinand: "TPH (C6 to C40) petroleum group"

Sample Depth: excavated soil from contaminated sites)
2.50 m Entry: 17 05 03 * (Soil and stones containing hazardous substances)
Moisture content: 0%
(no correction)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.45%)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.45%)

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 1.68 mg/kg or 0.000168%)
acenaphthylene: (Whole conc. entered as: 0.18 mg/kg or 0.000018%)
anthracene: (Whole conc. entered as: 1.97 mg/kg or 0.000197%)
antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 28.2 mg/kg, converted to compound conc.:28.2 mg/kg or 0.00282%, Note 1 conc.: 0.00282%)
arsenic trioxide: (Cation conc. entered: 141.4 mg/kg, converted to compound conc.:186.694 mg/kg or 0.0187%)
benzo[a]anthracene: (Whole conc. entered as: 4.24 mg/kg or 0.000424%)
benzo[a]pyrene: benzo[def]chrysene: (Whole conc. entered as: 3.66 mg/kg or 0.000366%)
benzo[b]fluoranthene: (Whole conc. entered as: 5.25 mg/kg or 0.000525%)
benzo[ghi]perylene: (Whole conc. entered as: 2.39 mg/kg or 0.000239%)
benzo[k]fluoranthene: (Whole conc. entered as: 2 mg/kg or 0.0002%)
beryllium oxide: (Cation conc. entered: 4.34 mg/kg, converted to compound conc.:12.045 mg/kg or 0.0012%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 6.6 mg/kg, converted to compound conc.:88.638 mg/kg or 0.00886%)
cadmium sulfide: (Cation conc. entered: 2.12 mg/kg, converted to compound conc.:2.725 mg/kg or 0.000272%, Note 1 conc.: 0.000212%)
chromium(III) oxide: (Cation conc. entered: 75.6 mg/kg, converted to compound conc.:110.494 mg/kg or 0.011%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.192 mg/kg or 0.0000192%)
chrysene: (Whole conc. entered as: 4.58 mg/kg or 0.000458%)

nickel dihydroxide: (Cation conc. entered: 74.3 mg/kg, converted to compound conc.:117.357 mg/kg or 0.0117%)
pH: (Whole conc. entered as: 7 pH, converted to conc.:7 pH or 7 pH)
phenanthrene: (Whole conc. entered as: 3.45 mg/kg or 0.000345%)
pyrene: (Whole conc. entered as: 8.6 mg/kg or 0.00086%)
selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex: (
Cation conc. entered: 1.9 mg/kg, converted to compound conc.:4.852 mg/kg or 0.000485%)
TPH (C6 to C40) petroleum group: (Whole conc. entered as: 4502.5 mg/kg or 0.45%)
zinc sulphate: (Cation conc. entered: 396 mg/kg, converted to compound conc.:977.841 mg/kg or 0.0978%)

Test Settings

HP 2 on Ox. Sol. 1; H271: Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."
HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "the risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be >10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"

determinand: "pentasulphide (Sb₂S₅) and those specified elsewhere in this Annex"
determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A , used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb₂O₄), pentoxide (Sb₂O₅), trisulphide (Sb₂S₃), pentasulphide (Sb₂S₅) and those specified elsewhere in this Annex"
determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

WM3: Unknown oil , used on:

determinand: "TPH (C6 to C40) petroleum group"

Sample Depth: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
Entry: 17 05 03

2.00 m
Moisture content: 0%
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
anthracene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 1.2 mg/kg, converted to compound conc.:1.2 mg/kg or 0.00012%, Note 1 conc.: 0.00012%)
arsenic trioxide: (Cation conc. entered: 7 mg/kg, converted to compound conc.:9.242 mg/kg or 0.000924%)
benzo[a]anthracene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
benzo[b]fluoranthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
benzo[ghi]perylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
beryllium oxide: (Cation conc. entered: 1.78 mg/kg, converted to compound conc.:4.94 mg/kg or 0.000494%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.6 mg/kg, converted to compound conc.:21.488 mg/kg or 0.00215%)
cadmium sulfide: (Cation conc. entered: 0.15 mg/kg, converted to compound conc.:0.193 mg/kg or 0.0000193%, Note 1 conc.: 0.000015%)
chromium(III) oxide: (Cation conc. entered: 31.3 mg/kg, converted to compound conc.:45.747 mg/kg or 0.00457%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.192 mg/kg or 0.0000192%)
chrysene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
copper (I) oxide: (Cation conc. entered: 67.9 mg/kg, converted to compound conc.:76.448 mg/kg or 0.00764%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
fluoranthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
fluorene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
lead chromate: (Cation conc. entered: 51.3 mg/kg, converted to compound conc.:80.019 mg/kg or 0.008%, Note 1 conc.: 0.00513%)
mercury dichloride: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.135 mg/kg or 0.0000135%)
molybdenum(VI) oxide: (Cation conc. entered: 1.1 mg/kg, converted to compound conc.:1.65 mg/kg or 0.000165%)
naphthalene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
nickel dihydroxide: (Cation conc. entered: 58.7 mg/kg, converted to compound conc.:92.717 mg/kg or 0.00927%)
pH: (Whole conc. entered as: 7.8 pH, converted to conc.:7.8 pH or 7.8 pH)
phenanthrene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2S5), pentasulphide (Sb2S3), trisulphide (Sb2O5) and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Determinand notes

Note 1, used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
determinand: "cadmium sulfide"
determinand: "lead chromate"

Sample Depth: excavated soil from contaminated sites)
1.50 m Entry: 17 05 03 * (Soil and stones containing hazardous substances)
Moisture content: 0% (no correction)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.111%)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.111%)

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Risk phrases hit:

R50/53 "Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Because of determinand:

zinc sulphate: (compound conc.: 0.358%)

R51/53 "Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.111%)

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)

acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)

anthracene: (Whole conc. entered as: 0.23 mg/kg or 0.000023%)

antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3),

pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 31.2 mg/kg, converted to

compound conc.: 31.2 mg/kg or 0.00312%, Note 1 conc.: 0.00312%)

arsenic trioxide: (Cation conc. entered: 106.7 mg/kg, converted to compound conc.: 140.879 mg/kg or 0.0141%)

benzo[a]anthracene: (Whole conc. entered as: 0.84 mg/kg or 0.000084%)

salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 1.05 mg/kg, converted to compound conc.: 1.978 mg/kg or 0.000198%)

dibenz[a,h]anthracene: (Whole conc. entered as: 0.14 mg/kg or 0.000014%)

fluoranthene: (Whole conc. entered as: 1.58 mg/kg or 0.000158%)

fluorene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)

indeno[1,2,3-cd]pyrene: (Whole conc. entered as: 0.62 mg/kg or 0.000062%)

lead chromate: (Cation conc. entered: 998.7 mg/kg, converted to compound conc.: 1557.787 mg/kg or 0.156%, Note 1 conc.: 0.0999%)

mercury dichloride: (Cation conc. entered: 1.1 mg/kg, converted to compound conc.: 1.489 mg/kg or 0.000149%)

molybdenum(VI) oxide: (Cation conc. entered: 20.8 mg/kg, converted to compound conc.: 31.204 mg/kg or 0.00312%)

naphthalene: (Whole conc. entered as: 0.18 mg/kg or 0.000018%)

nickel dihydroxide: (Cation conc. entered: 95.4 mg/kg, converted to compound conc.: 150.684 mg/kg or 0.0151%)

pH: (Whole conc. entered as: 6.6 pH, converted to conc.: 6.6 pH or 6.6 pH)

phenanthrene: (Whole conc. entered as: 0.67 mg/kg or 0.000067%)

pyrene: (Whole conc. entered as: 1.27 mg/kg or 0.000127%)

selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex: (Cation conc. entered: 1.4 mg/kg, converted to compound conc.: 3.575 mg/kg or 0.000358%)

TPH (C6 to C40) petroleum group: (Whole conc. entered as: 1111.64 mg/kg or 0.111%)

zinc sulphate: (Cation conc. entered: 1450 mg/kg, converted to compound conc.: 3580.48 mg/kg or 0.358%)

Test Settings

HP 2 on Ox. Sol. 1; H271: Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."

HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "The risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be > 10,000mg. This risk of flammability from solid state soils < 1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"

cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

C14: Step 6, Equation 1

"use the equations given in Table C14.3 to decide if the waste is hazardous by HP 14", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"

Determinand notes

Note 1 , used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A , used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

WM3: Unknown oil , used on:

determinand: "TPH (C6 to C40) petroleum group"

Sample Depth: 0.20 m
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Moisture content: 0%
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.91 mg/kg or 0.000091%)
acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
anthracene: (Whole conc. entered as: 1.98 mg/kg or 0.000198%)
antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 3.2 mg/kg, converted to compound conc.:3.2 mg/kg or 0.00032%, Note 1 conc.: 0.00032%)
arsenic trioxide: (Cation conc. entered: 17.8 mg/kg, converted to compound conc.:23.502 mg/kg or 0.002355%)
benzo[*a*]anthracene: (Whole conc. entered as: 2.5 mg/kg or 0.00025%)
benzo[*a*]pyrene; benzo[*def*]chrysene: (Whole conc. entered as: 1.97 mg/kg or 0.000197%)
benzo[*b*]fluoranthene: (Whole conc. entered as: 2.49 mg/kg or 0.000249%)
benzo[*ghi*]perylene: (Whole conc. entered as: 0.97 mg/kg or 0.000097%)
benzo[*k*]fluoranthene: (Whole conc. entered as: 0.98 mg/kg or 0.000098%)
beryllium oxide: (Cation conc. entered: 1.49 mg/kg, converted to compound conc.:4.135 mg/kg or 0.000414%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.9 mg/kg, converted to compound conc.:25.517 mg/kg or 0.002555%)
cadmium sulfide: (Cation conc. entered: 0.44 mg/kg, converted to compound conc.:0.566 mg/kg or 0.0000566%, Note 1 conc.: 0.000044%)
chromium(III) oxide: (Cation conc. entered: 34 mg/kg, converted to compound conc.:49.693 mg/kg or 0.00497%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.192 mg/kg or 0.0000192%)
chrysene: (Whole conc. entered as: 2.34 mg/kg or 0.000234%)
copper (I) oxide: (Cation conc. entered: 89.4 mg/kg, converted to compound conc.:100.654 mg/kg or 0.0101%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
dibenz[*a,h*]anthracene: (Whole conc. entered as: 0.24 mg/kg or 0.000024%)
fluoranthene: (Whole conc. entered as: 5.7 mg/kg or 0.00057%)
fluorene: (Whole conc. entered as: 0.74 mg/kg or 0.000074%)
indeno[123-*cd*]pyrene: (Whole conc. entered as: 1.17 mg/kg or 0.000117%)
lead chromate: (Cation conc. entered: 116.8 mg/kg, converted to compound conc.:182.186 mg/kg or 0.0182%, Note 1 conc.: 0.0117%)
mercury dichloride: (Cation conc. entered: 0.29 mg/kg, converted to compound conc.:0.393 mg/kg or 0.0000393%)
molybdenum(VI) oxide: (Cation conc. entered: 2.2 mg/kg, converted to compound conc.:3.3 mg/kg or 0.000033%)
naphthalene: (Whole conc. entered as: 0.94 mg/kg or 0.000094%)
nickel dihydroxide: (Cation conc. entered: 35.6 mg/kg, converted to compound conc.:56.23 mg/kg or 0.00562%)
pH: (Whole conc. entered as: 8.1 pH, converted to conc.:8.1 pH or 8.1 pH)
phenanthrene: (Whole conc. entered as: 5.74 mg/kg or 0.000574%)

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2S5), trisulphide (Sb2O5), pentasulphide (Sb2S3) and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Determinand notes

Note 1, used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
determinand: "cadmium sulfide"
determinand: "lead chromate"

Sample Depth: excavated soil from contaminated sites)
1.00 m Entry: 17 05 03 * (Soil and stones containing hazardous substances)
Moisture content: 0% (no correction)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.155%)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.155%)

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 1.51 mg/kg or 0.000151%)
acenaphthylene: (Whole conc. entered as: 0.44 mg/kg or 0.000044%)
anthracene: (Whole conc. entered as: 3.58 mg/kg or 0.000358%)
antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 11.9 mg/kg, converted to compound conc.: 11.9 mg/kg or 0.00119%, Note 1 conc.: 0.00119%)
arsenic trioxide: (Cation conc. entered: 14.3 mg/kg, converted to compound conc.: 18.881 mg/kg or 0.00189%)
benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 9.36 mg/kg or 0.000936%)
benzo[a]pyrene: benzo[def]chrysene: (Whole conc. entered as: 8.79 mg/kg or 0.000879%)
benzo[b]fluoranthene: (Whole conc. entered as: 10.5 mg/kg or 0.00105%)
benzo[ghi]perylene: (Whole conc. entered as: 4.97 mg/kg or 0.000497%)
benzo[k]fluoranthene: (Whole conc. entered as: 3.82 mg/kg or 0.000382%)
beryllium oxide: (Cation conc. entered: 1.33 mg/kg, converted to compound conc.: 3.691 mg/kg or 0.000369%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 2.4 mg/kg, converted to compound conc.: 32.232 mg/kg or 0.00322%)
cadmium sulfide: (Cation conc. entered: 4.21 mg/kg, converted to compound conc.: 5.411 mg/kg or 0.000541%, Note 1 conc.: 0.000421%)
chromium(III) oxide: (Cation conc. entered: 319.5 mg/kg, converted to compound conc.: 466.967 mg/kg or 0.0467%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.: 0.192 mg/kg or 0.0000192%)

molybdenum(VI) oxide: (Cation conc. entered: 4.7 mg/kg, converted to compound conc.:7.051 mg/kg or 0.000705%)
naphthalene: (Whole conc. entered as: 0.85 mg/kg or 0.000085%)
nickel dihydroxide: (Cation conc. entered: 58.2 mg/kg, converted to compound conc.:91.927 mg/kg or 0.00919%)
pH: (Whole conc. entered as: 7.2 pH, converted to conc.:7.2 pH or 7.2 pH)
phenanthrene: (Whole conc. entered as: 9.93 mg/kg or 0.000993%)
phenol: (Whole conc. entered as: 0.5 mg/kg or 0.00005%)
pyrene: (Whole conc. entered as: 15.2 mg/kg or 0.00152%)
selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex: (Cation conc. entered: 0.7 mg/kg, converted to compound conc.:1.788 mg/kg or 0.000179%)
toluene: (Whole conc. entered as: <0.005 mg/kg or <0.000005%) **IGNORED Because: "<LOD"**
TPH (C6 to C40) petroleum group: (Whole conc. entered as: 1545.39 mg/kg or 0.155%)
trichloroethylene; trichloroethene: (Whole conc. entered as: 0.001 mg/kg or 0.0000001%)
vinyl chloride: (Whole conc. entered as: 0.001 mg/kg or 0.0000001%)
xylene: (Whole conc. entered as: 0.004 mg/kg or 0.0000004%)
zinc sulphate: (Cation conc. entered: 637.7 mg/kg, converted to compound conc.:1574.67 mg/kg or 0.157%)

Test Settings

HP 2 on Ox. Sol. 1; H271: **Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."**
HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: **Force this test to non hazardous because: "he risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be > 10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."**
HP 3(iv) on Flam. Gas 1; H220, Flam. Gas 2; H221: **Force this test to non hazardous because: "Samples at limit of detection. No elevated levels recorded."**

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "trichloroethylene; trichloroethene"

Determinand notes

Note 1 , used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A , used on:

determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Note C , used on:

determinand: "xylene"

Note D , used on:

determinand: "vinyl chloride"

WM3: Unknown oil , used on:

determinand: "TPH (C6 to C40) petroleum group"

Sample Depth: 0.30 m
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Moisture content: 0%
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.16 mg/kg or 0.000016%)
acenaphthylene: (Whole conc. entered as: 0.11 mg/kg or 0.000011%)
anthracene: (Whole conc. entered as: 0.4 mg/kg or 0.00004%)
antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex: (Cation conc. entered: 2.7 mg/kg, converted to compound conc.:2.7 mg/kg or 0.00027%, Note 1 conc.: 0.00027%)
arsenic trioxide: (Cation conc. entered: 18.3 mg/kg, converted to compound conc.:24.162 mg/kg or 0.00242%)
benzene: (Whole conc. entered as: <0.001 mg/kg or <0.000001%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 1.33 mg/kg or 0.000133%)
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 1.29 mg/kg or 0.000129%)
benzo[b]fluoranthene: (Whole conc. entered as: 1.61 mg/kg or 0.000161%)
benzo[ghi]perylene: (Whole conc. entered as: 0.84 mg/kg or 0.000084%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.55 mg/kg or 0.000055%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.7 mg/kg, converted to compound conc.:22.831 mg/kg or 0.00228%)
cadmium sulfide: (Cation conc. entered: 0.64 mg/kg, converted to compound conc.:0.823 mg/kg or 0.0000823%, Note 1 conc.: 0.000064%)
chromium(III) oxide: (Cation conc. entered: 66.7 mg/kg, converted to compound conc.:97.486 mg/kg or 0.00975%)
chromium(VI) oxide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.192 mg/kg or 0.0000192%)
chrysene: (Whole conc. entered as: 1.32 mg/kg or 0.000132%)
copper (I) oxide: (Cation conc. entered: 98.5 mg/kg, converted to compound conc.:110.9 mg/kg or 0.0111%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.79 mg/kg, converted to compound conc.:1.488 mg/kg or 0.000149%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.19 mg/kg or 0.000019%)
ethylbenzene: (Whole conc. entered as: <0.002 mg/kg or <0.000002%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 2.54 mg/kg or 0.000254%)
fluorene: (Whole conc. entered as: 0.12 mg/kg or 0.000012%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.93 mg/kg or 0.000093%)
lead chromate: (Cation conc. entered: 135.9 mg/kg, converted to compound conc.:211.979 mg/kg or 0.0212%, Note 1 conc.: 0.0136%)
mercury dichloride: (Cation conc. entered: 0.86 mg/kg, converted to compound conc.:1.164 mg/kg or 0.000116%)
molybdenum(VI) oxide: (Cation conc. entered: 2.6 mg/kg, converted to compound conc.:3.9 mg/kg or 0.00039%)
naphthalene: (Whole conc. entered as: 0.18 mg/kg or 0.000018%)
nickel dihydroxide: (Cation conc. entered: 41 mg/kg, converted to compound conc.:64.759 mg/kg or 0.00648%)
pH: (Whole conc. entered as: 8.3 pH, converted to conc.:8.3 pH or 8.3 pH)

Test Settings

HP 2 on Ox. Sol. 1; H271: Force this test to non hazardous because: "Chromium IV detected at or marginally above limit of detection. Samples do not display HP 2, or H271 Hazard properties or phases."
HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "the risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be >10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

HP 3(iv) on Flam. Gas 1; H220, Flam. Gas 2; H221: Force this test to non hazardous because: "Samples at limit of detection. No elevated levels recorded."

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(VI) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "trichloroethylene; trichloroethene"

(SbZS3), pentasulphide (SbZS5) and those specified elsewhere in this Annex.
determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
determinand: "selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex"

Note C , used on:

determinand: "xylene"

Note D , used on:

determinand: "vinyl chloride"

WM3: Unknown oil , used on:

determinand: "TPH (C6 to C40) petroleum group"

Sample Depth: excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)
1.50 m
Moisture content: 0%
(no correction)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

lead chromate: (Note 1 conc.: 0.262%)

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Risk phrases hit:

R50/53 "Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Because of determinands:

copper (I) oxide: (compound conc.: 0.141%)

lead chromate: (Note 1 conc.: 0.262%)

zinc sulphate: (compound conc.: 0.364%)

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.12 mg/kg or 0.000012%)

acenaphthylene: (Whole conc. entered as: 0.11 mg/kg or 0.000011%)

anthracene: (Whole conc. entered as: 0.32 mg/kg or 0.000032%)

arsenic trioxide: (Cation conc. entered: 113.2 mg/kg, converted to compound conc.:149.461 mg/kg or 0.0149%)

benzo[a]anthracene: (Whole conc. entered as: 2.16 mg/kg or 0.000216%)

benzo[a]pyrene: (Whole conc. entered as: 2.09 mg/kg or 0.000209%)

benzo[b]fluoranthene: (Whole conc. entered as: 2.8 mg/kg or 0.00028%)

benzo[ghi]perylene: (Whole conc. entered as: 1.24 mg/kg or 0.000124%)

benzo[k]fluoranthene: (Whole conc. entered as: 1.08 mg/kg or 0.000108%)

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 4 mg/kg, converted to compound conc.:53.72 mg/kg or 0.00537%)

cadmium sulfide: (Cation conc. entered: 1.68 mg/kg, converted to compound conc.:2.159 mg/kg or 0.000216%, Note 1 conc.: 0.000168%)

chromium(III) oxide: (Cation conc. entered: 62.7 mg/kg, converted to compound conc.:91.64 mg/kg or 0.00916%)

chrysene: (Whole conc. entered as: 2.24 mg/kg or 0.000224%)

copper (I) oxide: (Cation conc. entered: 1255 mg/kg, converted to compound conc.:1412.99 mg/kg or 0.141%)

salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

C14: Step 6, Equation 1

"Use the equations given in Table C14.3 to decide if the waste is hazardous by HP 14", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"

Determinand notes

Note 1, used on:

determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A, used on:

determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

Hazard properties

None identified

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
 acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
 anthracene: (Whole conc. entered as: 0.43 mg/kg or 0.000043%)
 arsenic trioxide: (Cation conc. entered: 71.6 mg/kg, converted to compound conc.:94.535 mg/kg or 0.00945%)
 benzo[*a*]anthracene: (Whole conc. entered as: 1.39 mg/kg or 0.000139%)
 benzo[*a*]pyrene: benzo[*def*]chrysene: (Whole conc. entered as: 1.35 mg/kg or 0.000135%)
 benzo[*b*]fluoranthene: (Whole conc. entered as: 1.89 mg/kg or 0.000189%)
 benzo[*ghi*]perylene: (Whole conc. entered as: 1.14 mg/kg or 0.000114%)
 benzo[*k*]fluoranthene: (Whole conc. entered as: 0.64 mg/kg or 0.000064%)
 boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 2.5 mg/kg, converted to compound conc.:33.575 mg/kg or 0.00336%)
 cadmium sulfide: (Cation conc. entered: 0.58 mg/kg, converted to compound conc.:0.745 mg/kg or 0.0000745%, Note 1 conc.: 0.000058%)
 chromium(III) oxide: (Cation conc. entered: 41.5 mg/kg, converted to compound conc.:60.655 mg/kg or 0.00607%)
 chrysene: (Whole conc. entered as: 1.45 mg/kg or 0.000145%)
 copper (I) oxide: (Cation conc. entered: 437.2 mg/kg, converted to compound conc.:492.238 mg/kg or 0.0492%)
 salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
 dibenz[*a,h*]anthracene: (Whole conc. entered as: 0.25 mg/kg or 0.000025%)
 fluoranthene: (Whole conc. entered as: 2.64 mg/kg or 0.000264%)
 fluorene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
 indeno[123-*cd*]pyrene: (Whole conc. entered as: 1.27 mg/kg or 0.000127%)
 lead chromate: (Cation conc. entered: 754.6 mg/kg, converted to compound conc.:1177.037 mg/kg or 0.118%, Note 1 conc.: 0.0755%)
 mercury dichloride: (Cation conc. entered: 0.29 mg/kg, converted to compound conc.:0.393 mg/kg or 0.0000393%)
 naphthalene: (Whole conc. entered as: 0.22 mg/kg or 0.000022%)
 nickel dihydroxide: (Cation conc. entered: 71 mg/kg, converted to compound conc.:112.144 mg/kg or 0.0112%)
 pH: (Whole conc. entered as: 7.2 pH, converted to conc.:7.2 pH or 7.2 pH)
 phenanthrene: (Whole conc. entered as: 1.52 mg/kg or 0.000152%)
 pyrene: (Whole conc. entered as: 2.14 mg/kg or 0.000214%)
 zinc sulphate: (Cation conc. entered: 380.5 mg/kg, converted to compound conc.:939.567 mg/kg or 0.094%)

Notes utilised in assessment

exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Determinand notes

Note 1 , used on:

determinand: "cadmium sulfide"

determinand: "lead chromate"

Note A , used on:

determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

Sample Depth:

0.40 m

Moisture content: 0%
(no correction)

Entry:

17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03)

Hazard properties

None identified

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.09 mg/kg or 0.000009%)
acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
anthracene: (Whole conc. entered as: 0.27 mg/kg or 0.000027%)
arsenic trioxide: (Cation conc. entered: 77.5 mg/kg, converted to compound conc.: 102.325 mg/kg or 0.0102%)
benzo[*a*]anthracene: (Whole conc. entered as: 0.98 mg/kg or 0.000098%)
benzo[*a*]pyrene: benzo[*def*]chrysene: (Whole conc. entered as: 0.99 mg/kg or 0.000099%)
benzo[*b*]fluoranthene: (Whole conc. entered as: 1.38 mg/kg or 0.000138%)
benzo[*ghi*]perylene: (Whole conc. entered as: 0.74 mg/kg or 0.000074%)
benzo[*k*]fluoranthene: (Whole conc. entered as: 0.5 mg/kg or 0.00005%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 2.1 mg/kg, converted to compound conc.: 28.203 mg/kg or 0.00282%)
cadmium sulfide: (Cation conc. entered: 0.73 mg/kg, converted to compound conc.: 0.938 mg/kg or 0.0000938%, Note 1 conc.: 0.000073%)
chromium(III) oxide: (Cation conc. entered: 46.4 mg/kg, converted to compound conc.: 67.816 mg/kg or 0.00678%)
chrysene: (Whole conc. entered as: 0.99 mg/kg or 0.000099%)
copper (I) oxide: (Cation conc. entered: 145.4 mg/kg, converted to compound conc.: 163.704 mg/kg or 0.0164%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.: 0.942 mg/kg or 0.0000942%)
dibenz[*a,h*]anthracene: (Whole conc. entered as: 0.15 mg/kg or 0.000015%)
fluoranthene: (Whole conc. entered as: 1.7 mg/kg or 0.00017%)
fluorene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
indeno[123-*cd*]pyrene: (Whole conc. entered as: 0.82 mg/kg or 0.000082%)
lead chromate: (Cation conc. entered: 210.6 mg/kg, converted to compound conc.: 328.497 mg/kg or 0.0328%, Note 1 conc.: 0.0211%)
mercury dichloride: (Cation conc. entered: 0.47 mg/kg, converted to compound conc.: 0.636 mg/kg or 0.0000636%)
naphthalene: (Whole conc. entered as: 0.2 mg/kg or 0.00002%)
nickel dihydroxide: (Cation conc. entered: 51.1 mg/kg, converted to compound conc.: 80.712 mg/kg or 0.00807%)
pH: (Whole conc. entered as: 8.2 pH, converted to conc.: 8.2 pH or 8.2 pH)
phenanthrene: (Whole conc. entered as: 1.02 mg/kg or 0.000102%)
pyrene: (Whole conc. entered as: 1.49 mg/kg or 0.000149%)
zinc sulphate: (Cation conc. entered: 228.3 mg/kg, converted to compound conc.: 563.74 mg/kg or 0.0564%)

Notes utilised in assessment

C14: Step 5

exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Determinand notes

Note 1 , used on:

determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A , used on:

determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

Sample Depth: **1.50 m**
Entry: 17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Moisture content: **25.3%**
(no correction)

Hazard properties

None identified

Determinands (Moisture content: 25.3%, no correction)

acenaphthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
anthracene: (Whole conc. entered as: 0.34 mg/kg or 0.000034%)
benzene: (Whole conc. entered as: <0.01 mg/kg or <0.000001%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 1.92 mg/kg or 0.000192%)
benzo[a]pyrene: benzo[def]chrysene: (Whole conc. entered as: 1.9 mg/kg or 0.00019%)
benzo[b]fluoranthene: (Whole conc. entered as: 2.8 mg/kg or 0.00028%)
benzo[ghi]perylene: (Whole conc. entered as: 1.4 mg/kg or 0.00014%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.96 mg/kg or 0.000096%)
chrysene: (Whole conc. entered as: 2.02 mg/kg or 0.000202%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.33 mg/kg or 0.000033%)
ethylbenzene: (Whole conc. entered as: <0.01 mg/kg or <0.000001%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 3.39 mg/kg or 0.000339%)
fluorene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
indeno[123-cd]pyrene: (Whole conc. entered as: 1.6 mg/kg or 0.00016%)
naphthalene: (Whole conc. entered as: 0.14 mg/kg or 0.000014%)
phenanthrene: (Whole conc. entered as: 1.07 mg/kg or 0.000107%)
pyrene: (Whole conc. entered as: 2.82 mg/kg or 0.000282%)
toluene: (Whole conc. entered as: <0.01 mg/kg or <0.000001%) **IGNORED Because: "<LOD"**
xylene: (Whole conc. entered as: 0.02 mg/kg or 0.000002%)

Test Settings

HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "he risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be >10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "acenaphthene"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "anthracene"

Note C , used on:
determinand: "xylene"

Sample Depth: excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)
2.50 m
Moisture content: **0%**
(no correction)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

lead chromate: (Note 1 conc.: 0.299%)

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Risk phrases hit:

R50/53 "Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Because of determinands:

lead chromate: (Note 1 conc.: 0.299%)

zinc sulphate: (compound conc.: 0.107%)

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.09 mg/kg or 0.000009%)
acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
anthracene: (Whole conc. entered as: 0.46 mg/kg or 0.000046%)
arsenic trioxide: (Cation conc. entered: 164.4 mg/kg, converted to compound conc.:217.061 mg/kg or 0.0217%)
benzo[a]anthracene: (Whole conc. entered as: 2.91 mg/kg or 0.000291%)
benzo[a]pyrene: benzo[def]chrysene: (Whole conc. entered as: 2.58 mg/kg or 0.000258%)
benzo[b]fluoranthene: (Whole conc. entered as: 3.49 mg/kg or 0.000349%)
benzo[ghi]perylene: (Whole conc. entered as: 1.73 mg/kg or 0.000173%)
benzo[k]fluoranthene: (Whole conc. entered as: 1.28 mg/kg or 0.000128%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 8.7 mg/kg, converted to compound conc.:116.841 mg/kg or 0.0117%)
cadmium sulfide: (Cation conc. entered: 1.22 mg/kg, converted to compound conc.:1.568 mg/kg or 0.000157%, Note 1 conc.: 0.000122%)
chromium(III) oxide: (Cation conc. entered: 91 mg/kg, converted to compound conc.:133.002 mg/kg or 0.0133%)
chrysene: (Whole conc. entered as: 2.92 mg/kg or 0.000292%)
copper (I) oxide: (Cation conc. entered: 233.9 mg/kg, converted to compound conc.:263.345 mg/kg or 0.0263%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 1.8 mg/kg, converted to compound conc.:3.391 mg/kg or 0.000339%)
dibenz[ah]anthracene: (Whole conc. entered as: 0.38 mg/kg or 0.000038%)

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

C14: Step 6, Equation 1

"Use the equations given in Table C14.3 to decide if the waste is hazardous by HP 14", used on:

- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"

Determinand notes

Note 1, used on:

- determinand: "cadmium sulfide"
- determinand: "lead chromate"

Note A, used on:

determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

Sample Depth: excavated soil from contaminated sites)
1.50 m Entry: 17 05 03 * (Soil and stones containing hazardous substances)
Moisture content: 0% (no correction)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

lead chromate: (Note 1 conc.: 0.113%)

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Risk phrases hit:

R50/53 "Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Because of determinands:

lead chromate: (Note 1 conc.: 0.113%)

zinc sulphate: (compound conc.: 0.295%)

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
acenaphthylene: (Whole conc. entered as: 0.1 mg/kg or 0.00001%)
anthracene: (Whole conc. entered as: 0.29 mg/kg or 0.000029%)
arsenic trioxide: (Cation conc. entered: 98.5 mg/kg, converted to compound conc.: 130.052 mg/kg or 0.013%)
benzo[a]anthracene: (Whole conc. entered as: 1.36 mg/kg or 0.000136%)
benzo[a]pyrene: benzo[def]chrysene: (Whole conc. entered as: 1.33 mg/kg or 0.000133%)
benzo[b]fluoranthene: (Whole conc. entered as: 1.95 mg/kg or 0.000195%)
benzo[ghi]perylene: (Whole conc. entered as: 0.97 mg/kg or 0.000097%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.67 mg/kg or 0.000067%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 9.6 mg/kg, converted to compound conc.: 128.928 mg/kg or 0.0129%)
cadmium sulfide: (Cation conc. entered: 1.26 mg/kg, converted to compound conc.: 1.619 mg/kg or 0.000162%, Note 1 conc.: 0.000126%)
chromium(III) oxide: (Cation conc. entered: 66.2 mg/kg, converted to compound conc.: 96.755 mg/kg or 0.00968%)
chrysene: (Whole conc. entered as: 1.41 mg/kg or 0.000141%)
copper (I) oxide: (Cation conc. entered: 236.1 mg/kg, converted to compound conc.: 265.822 mg/kg or 0.0266%)
salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 4 mg/kg, converted to compound conc.: 7.536 mg/kg or 0.000754%)
dibenz[ah]anthracene: (Whole conc. entered as: 0.23 mg/kg or 0.000023%)

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

C14: Step 6, Equation 1

"Use the equations given in Table C14.3 to decide if the waste is hazardous by HP 14", used on:

- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
- Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"

Determinand notes

Note 1, used on:

- determinand: "cadmium sulfide"
- determinand: "lead chromate"

Note A, used on:

determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

Hazard properties

None identified

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.16 mg/kg or 0.000016%)
 acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
 anthracene: (Whole conc. entered as: 0.4 mg/kg or 0.00004%)
 arsenic trioxide: (Cation conc. entered: 16.9 mg/kg, converted to compound conc.:22.313 mg/kg or 0.00223%)
 benzo[a]anthracene: (Whole conc. entered as: 0.92 mg/kg or 0.000092%)
 benzo[a]pyrene: benzo[def]chrysene: (Whole conc. entered as: 0.82 mg/kg or 0.000082%)
 benzo[b]fluoranthene: (Whole conc. entered as: 0.98 mg/kg or 0.000098%)
 benzo[ghi]perylene: (Whole conc. entered as: 0.49 mg/kg or 0.000049%)
 benzo[k]fluoranthene: (Whole conc. entered as: 0.49 mg/kg or 0.000049%)
 boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.5 mg/kg, converted to compound conc.:20.145 mg/kg or 0.00201%)
 cadmium sulfide: (Cation conc. entered: 0.51 mg/kg, converted to compound conc.:0.655 mg/kg or 0.0000655%, Note 1 conc.: 0.000051%)
 chromium(III) oxide: (Cation conc. entered: 45.1 mg/kg, converted to compound conc.:65.916 mg/kg or 0.00659%)
 chrysene: (Whole conc. entered as: 0.87 mg/kg or 0.000087%)
 copper (I) oxide: (Cation conc. entered: 132.3 mg/kg, converted to compound conc.:148.955 mg/kg or 0.0149%)
 salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.942 mg/kg or 0.0000942%)
 dibenz[a,h]anthracene: (Whole conc. entered as: 0.12 mg/kg or 0.000012%)
 fluoranthene: (Whole conc. entered as: 1.96 mg/kg or 0.000196%)
 fluorene: (Whole conc. entered as: 0.13 mg/kg or 0.000013%)
 indeno[123-cd]pyrene: (Whole conc. entered as: 0.58 mg/kg or 0.000058%)
 lead chromate: (Cation conc. entered: 81.4 mg/kg, converted to compound conc.:126.969 mg/kg or 0.0127%, Note 1 conc.: 0.00814%)
 mercury dichloride: (Cation conc. entered: 0.23 mg/kg, converted to compound conc.:0.311 mg/kg or 0.0000311%)
 naphthalene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
 nickel dihydroxide: (Cation conc. entered: 35.8 mg/kg, converted to compound conc.:56.546 mg/kg or 0.005656%)
 pH: (Whole conc. entered as: 8.7 pH, converted to conc.:8.7 pH or 8.7 pH)
 phenanthrene: (Whole conc. entered as: 1.34 mg/kg or 0.000134%)
 pyrene: (Whole conc. entered as: 1.61 mg/kg or 0.000161%)
 zinc sulphate: (Cation conc. entered: 199.2 mg/kg, converted to compound conc.:491.884 mg/kg or 0.0492%)

Notes utilised in assessment

exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Determinand notes

Note 1 , used on:

determinand: "cadmium sulfide"

determinand: "lead chromate"

Note A , used on:

determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

Hazard properties

None identified

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 1.86 mg/kg or 0.000186%)
 acenaphthylene: (Whole conc. entered as: 0.44 mg/kg or 0.000044%)
 anthracene: (Whole conc. entered as: 5.55 mg/kg or 0.000555%)
 arsenic trioxide: (Cation conc. entered: 16.8 mg/kg, converted to compound conc.:22.181 mg/kg or 0.002222%)
 benzo[*a*]anthracene: (Whole conc. entered as: 8.37 mg/kg or 0.000837%)
 benzo[*a*]pyrene: benzo[*def*]chrysene: (Whole conc. entered as: 9.39 mg/kg or 0.000939%)
 benzo[*b*]fluoranthene: (Whole conc. entered as: 11 mg/kg or 0.0011%)
 benzo[*ghi*]perylene: (Whole conc. entered as: 6.1 mg/kg or 0.00061%)
 benzo[*k*]fluoranthene: (Whole conc. entered as: 4.37 mg/kg or 0.000437%)
 boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 2.9 mg/kg, converted to compound conc.:38.947 mg/kg or 0.00389%)
 cadmium sulfide: (Cation conc. entered: 2.95 mg/kg, converted to compound conc.:3.791 mg/kg or 0.000379%, Note 1 conc.: 0.000295%)
 chromium(III) oxide: (Cation conc. entered: 321.1 mg/kg, converted to compound conc.:469.306 mg/kg or 0.0469%)
 chrysene: (Whole conc. entered as: 8.24 mg/kg or 0.000824%)
 copper (I) oxide: (Cation conc. entered: 369.7 mg/kg, converted to compound conc.:416.241 mg/kg or 0.0416%)
 salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 4.4 mg/kg, converted to compound conc.:8.29 mg/kg or 0.000829%)
 dibenz[*a,h*]anthracene: (Whole conc. entered as: 1.38 mg/kg or 0.000138%)
 fluoranthene: (Whole conc. entered as: 16.9 mg/kg or 0.00169%)
 fluorene: (Whole conc. entered as: 2.13 mg/kg or 0.000213%)
 indeno[123-*cd*]pyrene: (Whole conc. entered as: 7.4 mg/kg or 0.00074%)
 lead chromate: (Cation conc. entered: 503.3 mg/kg, converted to compound conc.:785.055 mg/kg or 0.0785%, Note 1 conc.: 0.0503%)
 mercury dichloride: (Cation conc. entered: 3.52 mg/kg, converted to compound conc.:4.764 mg/kg or 0.000476%)
 naphthalene: (Whole conc. entered as: 3.07 mg/kg or 0.000307%)
 nickel dihydroxide: (Cation conc. entered: 47.4 mg/kg, converted to compound conc.:74.868 mg/kg or 0.00749%)
 pH: (Whole conc. entered as: 8.1 pH, converted to conc.:8.1 pH or 8.1 pH)
 phenanthrene: (Whole conc. entered as: 11 mg/kg or 0.0011%)
 pyrene: (Whole conc. entered as: 14 mg/kg or 0.0014%)
 zinc sulphate: (Cation conc. entered: 599 mg/kg, converted to compound conc.:1479.109 mg/kg or 0.148%)

Notes utilised in assessment

exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Determinand notes

Note 1 , used on:

determinand: "cadmium sulfide"

determinand: "lead chromate"

Note A , used on:

determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

Sample Depth: 1.60 m
Moisture content: 27.2%
(no correction)

Entry:

17 05 04 (Soil and stones other than those mentioned in excavated soil from contaminated sites)
17 05 03

Hazard properties

None identified

Determinands (Moisture content: 27.2%, no correction)

acenaphthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
anthracene: (Whole conc. entered as: 0.18 mg/kg or 0.000018%)
benzene: (Whole conc. entered as: <0.01 mg/kg or <0.000001%) **IGNORED Because: "<LOD"**
benzo[a]anthracene: (Whole conc. entered as: 0.55 mg/kg or 0.000055%)
benzo[a]pyrene: benzo[def]chrysene: (Whole conc. entered as: 0.47 mg/kg or 0.000047%)
benzo[b]fluoranthene: (Whole conc. entered as: 0.69 mg/kg or 0.000069%)
benzo[ghi]perylene: (Whole conc. entered as: 0.36 mg/kg or 0.000036%)
benzo[k]fluoranthene: (Whole conc. entered as: 0.22 mg/kg or 0.000022%)
chrysene: (Whole conc. entered as: 0.53 mg/kg or 0.000053%)
dibenz[a,h]anthracene: (Whole conc. entered as: 0.09 mg/kg or 0.000009%)
ethylbenzene: (Whole conc. entered as: <0.01 mg/kg or <0.000001%) **IGNORED Because: "<LOD"**
fluoranthene: (Whole conc. entered as: 1 mg/kg or 0.0001%)
fluorene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.41 mg/kg or 0.000041%)
naphthalene: (Whole conc. entered as: 0.24 mg/kg or 0.000024%)
phenanthrene: (Whole conc. entered as: 0.79 mg/kg or 0.000079%)
pyrene: (Whole conc. entered as: 0.86 mg/kg or 0.000086%)
toluene: (Whole conc. entered as: <0.01 mg/kg or <0.000001%) **IGNORED Because: "<LOD"**
xylene: (Whole conc. entered as: 0.02 mg/kg or 0.000002%)

Test Settings

HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this test to non hazardous because: "he risk phrase HP 3 (i) Flammable is unlikely to apply to this waste stream. This is due to the solid soil and natural moisture content of the sample. The concentration required to provide a flammability risk is likely to be >10,000mg. This risk of flammability from solid state soils <1000mg/kg TPH is negligible and has been deemed non-hazardous if below this concentration."

Notes utilised in assessment

C14: Step 5

"Identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "acenaphthene"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "anthracene"

Note C , used on:
determinand: "xylene"

Hazard properties

None identified

Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
 acenaphthylene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
 anthracene: (Whole conc. entered as: 0.19 mg/kg or 0.000019%)
 arsenic trioxide: (Cation conc. entered: 14.6 mg/kg, converted to compound conc.: 19.277 mg/kg or 0.00193%)
 benzo[*a*]anthracene: (Whole conc. entered as: 0.43 mg/kg or 0.000043%)
 benzo[*a*]pyrene: benzo[*def*]chrysene: (Whole conc. entered as: 0.34 mg/kg or 0.000034%)
 benzo[*b*]fluoranthene: (Whole conc. entered as: 0.49 mg/kg or 0.000049%)
 benzo[*ghi*]perylene: (Whole conc. entered as: 0.23 mg/kg or 0.000023%)
 benzo[*k*]fluoranthene: (Whole conc. entered as: 0.17 mg/kg or 0.000017%)
 boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.2 mg/kg, converted to compound conc.: 16.116 mg/kg or 0.00161%)
 cadmium sulfide: (Cation conc. entered: 0.34 mg/kg, converted to compound conc.: 0.437 mg/kg or 0.0000437%, Note 1 conc.: 0.000034%)
 chromium(III) oxide: (Cation conc. entered: 31.5 mg/kg, converted to compound conc.: 46.039 mg/kg or 0.0046%)
 chrysene: (Whole conc. entered as: 0.43 mg/kg or 0.000043%)
 copper (I) oxide: (Cation conc. entered: 45.2 mg/kg, converted to compound conc.: 50.89 mg/kg or 0.00509%)
 salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex: (Cation conc. entered: 0.5 mg/kg, converted to compound conc.: 0.942 mg/kg or 0.0000942%)
 dibenz[*a,h*]anthracene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
 fluoranthene: (Whole conc. entered as: 0.81 mg/kg or 0.000081%)
 fluorene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
 indeno[123-*cd*]pyrene: (Whole conc. entered as: 0.24 mg/kg or 0.000024%)
 lead chromate: (Cation conc. entered: 50.4 mg/kg, converted to compound conc.: 78.615 mg/kg or 0.00786%, Note 1 conc.: 0.00504%)
 mercury dichloride: (Cation conc. entered: 0.17 mg/kg, converted to compound conc.: 0.23 mg/kg or 0.000023%)
 naphthalene: (Whole conc. entered as: 0.08 mg/kg or 0.000008%)
 nickel dihydroxide: (Cation conc. entered: 32.8 mg/kg, converted to compound conc.: 51.808 mg/kg or 0.00518%)
 pH: (Whole conc. entered as: 8.4 pH, converted to conc.: 8.4 pH or 8.4 pH)
 phenanthrene: (Whole conc. entered as: 0.65 mg/kg or 0.000065%)
 pyrene: (Whole conc. entered as: 0.72 mg/kg or 0.000072%)
 zinc sulphate: (Cation conc. entered: 118 mg/kg, converted to compound conc.: 291.377 mg/kg or 0.0291%)

Notes utilised in assessment

exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

Determinand notes

Note 1 , used on:

determinand: "cadmium sulfide"
determinand: "lead chromate"

Note A , used on:

determinand: "salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex"

<p>Comments: Data from C&L Inventory Database</p> <p>Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database</p> <p>Data source date: 17/07/2015</p> <p>Risk Phrases: R22, R26, R27, R36, R37, R38</p> <p>Hazard Statements: Acute Tox. 4; H302, Acute Tox. 1; H330, Acute Tox. 1; H310, Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315</p>
<p>anthracene (CAS Number: 120-12-7)</p> <p>Comments: Data from C&L Inventory Database</p> <p>Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database</p> <p>Data source date: 17/07/2015</p> <p>Risk Phrases: R36, R37, R38, R43, N; R50/53</p> <p>Hazard Statements: Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Skin Sens. 1; H317, Aquatic Acute 1; H400, Aquatic Chronic 1; H410</p>
<p>benzo[ghi]perylene (CAS Number: 191-24-2)</p> <p>Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015</p> <p>Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database</p> <p>Data source date: 23/07/2015</p> <p>Risk Phrases: N; R50/53</p> <p>Hazard Statements: Aquatic Acute 1; H400, Aquatic Chronic 1; H410</p>
<p>boron tribromide/trichloride/trifluoride (combined) (CAS Number: 10294-33-4, 10294-34-5, 7637-07-2)</p> <p>Conversion factor: 13.43</p> <p>Comments: Combines the hazard statements and the average of the conversion factors for boron tribromide, boron trichloride and boron trifluoride</p> <p>Data source: N/A</p> <p>Data source date: 06/08/2015</p> <p>Risk Phrases: R14, T+; R26/28, C; R34, C; R35</p> <p>Hazard Statements: EUH014, Acute Tox. 2; H330, Acute Tox. 2; H300, Skin Corr. 1A; H314, Skin Corr. 1B; H314</p>
<p>chromium(III) oxide (CAS Number: 1308-38-9)</p> <p>Conversion factor: 1.462</p> <p>Comments: Data from C&L Inventory Database</p> <p>Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database</p> <p>Data source date: 17/07/2015</p> <p>Risk Phrases: R20, R22, R36, R37, R38, R42, R43, R50/53, R60, R61</p> <p>Hazard Statements: Acute Tox. 4; H332, Acute Tox. 4; H302, Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Resp. Sens. 1; H334, Skin Sens. 1; H317, Repr. 1B; H360FD, Aquatic Acute 1; H400, Aquatic Chronic 1; H410</p>
<p>salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex</p> <p>CLP index number: 006-007-00-5</p> <p>Data source: Commission Regulation (EC) No 790/2009 - 1st Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP1)</p> <p>Additional Risk Phrases: T+; R26/27/28, R32, N; R50/53</p> <p>Additional Hazard Statements: Acute Tox. 2; H330, Acute Tox. 1; H310, Acute Tox. 2; H300, Aquatic Acute 1; H400, Aquatic Chronic 1; H410, EUH032, EUH032>= 0.2%</p> <p>Reason: 14/12/2015 - EUH032>= 0.2% hazard statement sourced from: WM3, Table C12.2</p>

Data source date: 21/08/2015
Risk Phrases: Xn; R22; N; R50/53
Hazard Statements: Acute Tox. 4; H302, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

fluorene (CAS Number: 86-73-7)

Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06/08/2015
Risk Phrases: N; R50/53
Hazard Statements: Aquatic Acute 1; H400, Aquatic Chronic 1; H410

indeno[1,23-cd]pyrene (CAS Number: 193-39-5)

Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06/08/2015
Risk Phrases: R40
Hazard Statements: Carc. 2; H351

pH

Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25/05/2015
Risk Phrases: None.
Hazard Statements: None.

phenanthrene (CAS Number: 85-01-8)

Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06/08/2015
Risk Phrases: R22, R36, R37, R38, R40, R43, N; R50/53
Hazard Statements: Acute Tox. 4; H302, Eye Irrit. 2; H319, STOT SE 3; H335, Carc. 2; H351, Skin Sens. 1; H317, Aquatic Acute 1; H400, Aquatic Chronic 1; H410, Skin Irrit. 2; H315

pyrene (CAS Number: 129-00-0)

Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21/08/2015
Risk Phrases: Xi; R36/37/38, N; R50/53
Hazard Statements: Skin Irrit. 2; H315, Eye Irrit. 2; H319, STOT SE 3; H335, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

TPH (C6 to C40) petroleum group

Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25/05/2015
Risk Phrases: R10, R45, R46, R51/53, R63, R65
Hazard Statements: Flam. Liq. 3; H226, Asp. Tox. 1; H304, STOT RE 2; H373, Muta. 1B; H340, Carc. 1B; H350, Repr. 2; H361d, Aquatic Chronic 2; H411

from section: WM3: C14 in the document: "WM3 - Waste Classification"

"use the equations given in Table C14.3 to decide if the waste is hazardous by HP 14"

Note 1

from section: 1.1.3.2, Annex VI in the document: "CLP Regulations"

"The concentration stated or, in the absence of such concentrations, the generic concentrations of this Regulation (Table 3.1) or the generic concentrations of Directive 1999/45/EC (Table 3.2), are the percentages by weight of the metallic element calculated with reference to the total weight of the mixture."

Note A

from section: 1.1.3.1, Annex VI in the document: "CLP Regulations"

"Without prejudice to Article 17(2), the name of the substance must appear on the label in the form of one of the designations given in Part 3. In Part 3, use is sometimes made of a general description such as '... compounds' or '... salts'. In this case, the supplier is required to state on the label the correct name, due account being taken of section 1.1.1.4."

Note C

from section: 1.1.3.1, Annex VI in the document: "CLP Regulations"

"Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers."

Note D

from section: 1.1.3.1, Annex VI in the document: "CLP Regulations"

"Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed in Part 3. However, such substances are sometimes placed on the market in a non-stabilised form. In this case, the supplier must state on the label the name of the substance followed by the words 'non-stabilised'."

WM3: Unknown oil

from section: Chapter 3: 4. Waste oils and other wastes containing or contaminated with oil in the document: "WM3 - Waste Classification"

"If the identity of the oil is unknown, and the petroleum group cannot be established, then the oil contaminating the waste can be classified as non-carcinogenic due to the presence of oil if all three of the following criteria are met:

- the waste contains **benzo[a]pyrene (BaP)** at a concentration of less than 0.01% (1/10,000th) of the TPH concentration (This is the carcinogenic limit specified in table 3.2 of the CLP for BaP)
- this has been determined by an appropriate and representative sampling approach in accordance with the principles set out in Appendix D, and
- the analysis clearly demonstrates, for example by carbon bands or chromatograph, and the laboratory has reasonably concluded that the hydrocarbons present have not arisen from petrol or diesel

- Revised List of Wastes 2014 - Decision 2014/955/EU of 18 December 2014
- WM3 - Waste Classification - May 2015
- 7th ATP - Regulation 2015/1221/EU of 24 July 2015
- POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004
- 1st ATP to POPs Regulation - Regulation 756/2010/EU of 24 August 2010
- 2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010

HazWasteOnline Engine: WM3 1st Edition, May 2015

HazWasteOnline Engine Version: 2016.22.3028.6025 (22 Jan 2016)

HazWasteOnline Database: 2016.22.3028.6025 (23 Jan 2016)