

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: MSMW199		PAGE 1 of 2	
	NUMBER	TYPE					START DATE: 16/3/99		DRILLING METHOD: ROTARY AIR FLUSH	
							FINISH DATE: 17/3/99		BOREHOLE DIAMETER: 165/115 mm	
						DRILLER: R2		SCREEN TYPE & DIAMETER: 50 mm ID UPVC		
						LOGGED BY: DB APPR'D BY:		SCREEN SLOT SIZE: 0.5 mm		
							DESCRIPTION	COMMENTS		
					0		Loose brown GRAVEL with some silt and sand (MADE GROUND)	No odour	0	
					1.0				1.0	
					2.0				2.0	
					3.0		becoming siltier	No odour	3.0	
					4.0				4.0	
					5.0		Hard grey crystalline sandstone BOULDER (MADE GROUND)	No odour	5.0	
					6.0		Loose dark grey silty GRAVEL (MADE GROUND)	Damp Moderate hydrocarbon odour	6.0	
					7.0		Void at 6.0m		7.0	
					8.0				8.0	
					9.0		Loose brown silty GRAVEL (MADE GROUND)		9.0	
					10			Damp Moderate hydrocarbon	10	

LOCATION / NOTES: 1. All measurements in m below ground level (mbgl) 2. Located adjacent to substation		LEGEND X Disturbed Sample Undisturbed Sample * Headspace Analysis + Down Borehole Analysis ▽ Groundwater Table ▽ Perched Water Table	BOREHOLE LOG Job Title SOIL & GROUNDWATER INVESTIGATION Location LLANDARCY REFINERY Client BP LLANDARCY LTD App'd DRAFT Ref. CR/MC/BRS Date MAY 99 Job No. 39991-004-401  DAMES & MOORE
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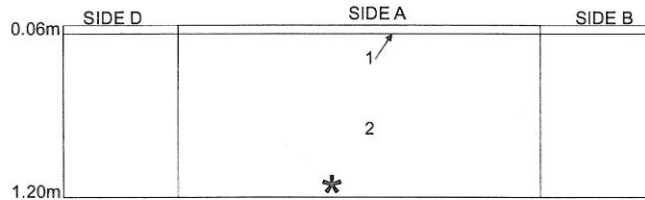
BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: MSMW199		PAGE 2 of 2	
	NUMBER	TYPE					START DATE: 16/3/99		DRILLING METHOD: ROTARY AIR FLUSH	
							FINISH DATE: 17/3/99		BOREHOLE DIAMETER: 165/115 mm	
						DRILLER: R2		SCREEN TYPE & DIAMETER: 50 mm ID UPVC		
						LOGGED BY: DB APPR'D BY:		SCREEN SLOT SIZE: 1 mm		
						DESCRIPTION	COMMENTS			
						Loose dark brown-black silty GRAVEL	No odour			
						ROCKHEAD: Hard light grey crystalline SANDSTONE (BEDROCK)	No odour			
						Hard dark grey crystalline silty SANDSTONE (BEDROCK)	No odour			
						Hard light grey crystalline SANDSTONE (BEDROCK)	No odour			
						Borehole terminated at 19.5 mbgl				
LOCATION / NOTES: 1. All measurements in m below ground level (mbgl) 2. Located adjacent to substation						LEGEND Disturbed Sample Undisturbed Sample Headspace Analysis Down Borehole Analysis Groundwater Table Perched Water Table		BOREHOLE LOG Job Title SOIL & GROUNDWATER INVESTIGATION Location LLANDARCY REFINERY Client BP LLANDARCY LTD App'd DRAFT Ref. CR/MC/BRS Date MAY 99 Job No. 39991-004-401		
						DAMES & MOORE GROUP				

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: MSMW200		PAGE 1 of 1	
	NUMBER	TYPE					START DATE: 15/3/99	DRILLING METHOD: ROTARY AIR FLUSH	FINISH DATE: 15/3/99	BOREHOLE DIAMETER: 165/115 mm
							DESCRIPTION	COMMENTS		
			*0.0		0		Soft brown gravelly CLAY (MADE GROUND)	No odour		
					1.0					
					2.0		Soft brown-grey sandy CLAY with some gravel (MADE GROUND)	No odour		
					3.0					
			*0.0		4.0		Loose brown clayey GRAVEL with some sand (MADE GROUND)	No odour		
			*11.1		5.0			damp at 4m Moderate odour		
					6.0		ROCKHEAD: Hard light grey crystalline SANDSTONE (BEDROCK)	Slight odour Drier		
			*41.1		7.0		sandstone becoming darker grey	No odour		
					8.0		sandstone becoming lighter grey	Damp		
					9.0					
					10					

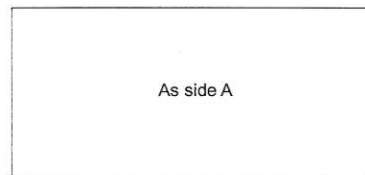
LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
1. All measurements in m below ground level (mbgl)	 Disturbed Sample Undisturbed Sample Headspace Analysis Down Borehole Analysis Groundwater Table Perched Water Table	Job Title SOIL & GROUNDWATER INVESTIGATION Location LLANDARCY REFINERY Client BP LLANDARCY LTD App'd DRAFT Ref. CR/MC/BRS Date MAY 99 Job No. 39991-004-401	 DAMES & MOORE

TRIAL PIT NUMBER: MSTP128
 GROUND ELEVATION: -
 DATE OF EXCAVATION: 3/6/98
 WATER LEVEL: DRY
 LOGGED BY: RC
 APPROVED BY:

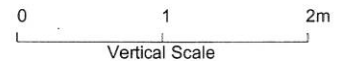
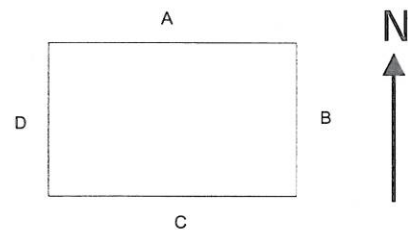
SIDE ELEVATIONS



SIDE C



PLAN



Key:

- * Soil Sample location
- WA Water Sample
- HS Headspace Analysis
- ➡ Water Ingress

STRATA DESCRIPTIONS	COMMENTS	SAMPLES
1. Coarse limestone GRAVEL (MADE GROUND) 2. Loose black ashy GRAVEL with building rubble and lenses of coarse sand (MADE GROUND) fragments of weathered bedrock at approximately 1m Trial pit terminated at 1.20 mbgl on refusal	a. Slightly damp at 0.5m	<u>PID RESULTS</u> 0.5m - 8.5 ppm 1.0m - 19 ppm 1.2m - 14.8 ppm <u>SOIL SAMPLES</u> MSTP128-1.0m

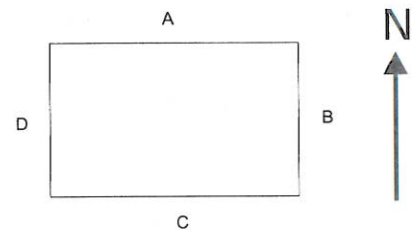
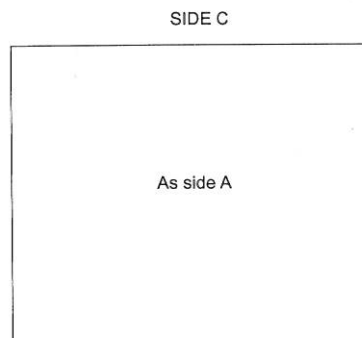
Job Title:	SOIL & GROUNDWATER INVESTIGATION	
Location:	LLANDARCY REFINERY	
Client:	BP LLANDARCY	
Job No:	39991-001-401	DRAFT
 DAMES & MOORE		

TRIAL PIT NUMBER: MSTP134
GROUND ELEVATION: -
DATE OF EXCAVATION: 24/6/98
WATER LEVEL: DRY
LOGGED BY: RF
APPROVED BY:

SIDE ELEVATIONS

	SIDE D	SIDE A	SIDE B
0.2m		1	
		2	
0.6m		*	
		3	
1.00m			

PLAN



0 1 2m
Vertical Scale

Key:

* Soil Sample location
WA Water Sample
HS Headspace Analysis
→ Water Ingress

STRATA DESCRIPTIONS	COMMENTS	SAMPLES
1. Large, loose, pale grey, ashy CHIPPINGS 2. Brown, loose clay, occasional gravels (MADE GROUND) 3. Dark brown, loose clay, coarser gravels, cobbles at 1.0mbgl (MADE GROUND) Trial pit terminated on refusal at 1.0mbgl due to coarse gravel Trial pit terminated at 1.05 mbgl	a. Strong black hydrocarbon staining on surface b. No hydrocarbon odour or staining evident at 1.0m c. Window sampled due to access restrictions	<u>PID RESULTS</u> 0.5m - 0 ppm 1.0m - 0 ppm <u>SOIL SAMPLES</u>

Job Title: SOIL & GROUNDWATER INVESTIGATION

Location: LLANDARCY REFINERY

Client: BP LLANDARCY

Job No: 39991-001-401

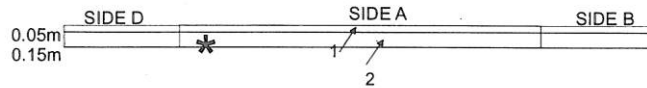
DRAFT



DAMES & MOORE

TRIAL PIT NUMBER: MSTP141
GROUND ELEVATION: -
DATE OF EXCAVATION: 4/6/98
WATER LEVEL: DRY
LOGGED BY: RC
APPROVED BY:

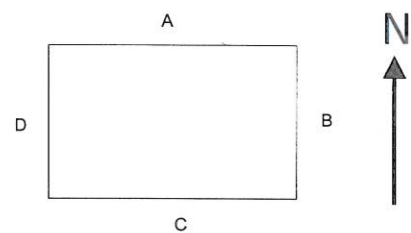
SIDE ELEVATIONS



SIDE C

As side A

PLAN

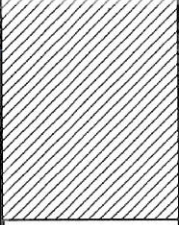


Key:

- * Soil Sample location
- WA Water Sample
- HS Headspace Analysis
- ➔ Water Ingress

STRATA DESCRIPTIONS	COMMENTS	SAMPLES
1. Coarse angular limestone GRAVEL (MADE GROUND)		<u>PID RESULTS</u> 0.5m - 120 ppm
2. Loose black GRAVEL with fragments of weathered bedrock (MADE GROUND)		<u>SOIL SAMPLES</u> MSTP141-0.15m
Trial pit terminated at 0.15 mbgl		

Job Title:	SOIL & GROUNDWATER INVESTIGATION	
Location:	LLANDARCY REFINERY	
Client:	BP LLANDARCY	
Job No:	39991-001-401	DRAFT
 DAMES & MOORE		

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: MSTP301		PAGE 1 of 1	
	NUMBER	TYPE					START DATE: 25/2/99		DRILLING METHOD: HAND AUGER	
							FINISH DATE: 25/2/99		BOREHOLE DIAMETER:	
						DRILLER: GEOTECHNICAL		SCREEN TYPE & DIAMETER:		
						LOGGED BY: SG APPR'D BY:		SCREEN SLOT SIZE:		
						DESCRIPTION	COMMENTS			
	301		*184		0	Soft to firm orangey brown gravelly CLAY with brick and concrete fragments at 0.3m (MADE GROUND) becoming more gravelly with depth		0		
	0.1m			0.5	becoming more orange with depth		0.5			
				1.0	Borehole terminated at 0.75 mbgl on refusal		1.0			
			*15.7		1.5			1.5		
			*8.4		2.0			2.0		
					2.5			2.5		
					3.0			3.0		
					3.5			3.5		
					4.0			4.0		
					4.5			4.5		
					5.0			5.0		

LOCATION / NOTES: 1. All measurements in m below ground level (mbgl)		LEGEND  Disturbed Sample  Undisturbed Sample * Headspace Analysis † Down Borehole Analysis  Groundwater Table  Perched Water Table		BOREHOLE LOG Job Title SOIL & GROUNDWATER INVESTIGATION Location LLANDARCY REFINERY Client BP LLANDARCY LTD App'd DRAFT Ref. CR/DS/BIR/LON Date APRIL 99 Job No. 39991-004-401		 DAMES & MOORE GROUP	
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BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: MSTP302		PAGE 1 of 1	
	NUMBER	TYPE					START DATE: 25/2/99		DRILLING METHOD: HAND AUGER	
							FINISH DATE: 25/2/99		BOREHOLE DIAMETER: N/A	
							DRILLER: GEOTECHNICAL		SCREEN TYPE & DIAMETER: N/A	
		LOGGED BY: SG APPRD BY:		SCREEN SLOT SIZE: N/A						
	MSTP302 0.05m	☒	*3.2		0		DESCRIPTION		COMMENTS	0
					0.5		Not drilled - BEDROCK.			0.5
					1.0		Soft silty CLAY with peat debris around shrubs.			1.0
					1.5		Sample taken from 0.05m.			1.5
					2.0		Bedrock, at 0.07m			2.0
					2.5					2.5
					3.0					3.0
					3.5					3.5
					4.0					4.0
					4.5					4.5
					5.0					5.0

<u>LOCATION / NOTES:</u>		<u>LEGEND</u>		BOREHOLE LOG	
1. All measurements in m below ground level		☒ Disturbed Sample ☐ Undisturbed Sample * Headspace Analysis † Down Borehole Analysis Groundwater Table Perched Water Table		Job Title SOIL & GROUNDWATER INVESTIGATION Location LLANDARCY REFINERY Client BP LLANDARCY LTD Appd DRAFT Ref. CR/DS/BIR/LON Date APRIL 99 Job No. 39991-004-401	
				DAMES & MOORE	

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: MSTP345		PAGE 1 of 1	
	NUMBER	TYPE					START DATE: 25/2/99		DRILLING METHOD: HAND AUGER	
							FINISH DATE: 25/2/99		BOREHOLE DIAMETER: N/A	
							DRILLER: GEOTECHNICAL		SCREEN TYPE & DIAMETER: N/A	
							LOGGED BY: SG APPR'D BY:		SCREEN SLOT SIZE: N/A	
						DESCRIPTION		COMMENTS		
MSTP345 0.1m X						0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0		0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0		
						Not drilled - BEDROCK. Soil sample recovered from 0.1m on top of bedrock - loose brown/grey silty gravel with sandstone fragments.				
LOCATION / NOTES: 1. All measurements in m below ground level						LEGEND X Disturbed Sample ■ Undisturbed Sample * Headspace Analysis † Down Borehole Analysis ▽ Groundwater Table ▽ Perched Water Table		BOREHOLE LOG Job Title SOIL & GROUNDWATER INVESTIGATION Location LLANDARCY REFINERY Client BP LLANDARCY LTD App'd DRAFT Ref. CR/DS/BIR/LON Date APRIL 99 Job No. 39991-004-401 DAMES & MOORE GROUP		

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: P1AF007 (+ PIT)		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 6 - 7/2/03		DRILLING METHODS : ODEX + DTH	
							DRILLER : RLB Drilling (Rees/Steve)		BOREHOLE DIAMETER : 115mm/100mm	
							LOGGED BY : ABB		SCREEN TYPE & DIAM: 50mm uPVC	
							CHECKED BY : TR		SCREEN SLOT SIZE: 1mm	
	DTH from 2.0m					0.0	Topsoil and grey, weathered sandstone clasts with brown staining	10psoil/III?	0,-	
						0.5	Weak-hard, dark grey, weathered, fine-medium grained sandstone with brown staining and silt filled fractures	NVO	1,-	
						1.0		H/C odour. PID reading 6.8 at casing top	1,-	
						1.5		Becoming dark grey and slightly stronger sandstone, interbedded with silty, sandy, moist horizons.	2,-	
						2.0	Hard, dark grey, fine grained, sandstone (with occasional silty horizons).	ODEX-DTH @ 2.0m	1,-	
						2.5		Feint H/C odour	0,-	
						3.0		Moist, silt filled fractures	0,-	
						3.5	Hard, dark grey sandstone with moist, silt filled fractures/horizons.		0,-	
						4.0			0,-	
						4.5			0,-	
						5.0		Strong H/C odour in moist, sandy material	4,-	
						5.5	Occasional silty and sandy, moist, infilled fractures.	Nasty H/C odour	3,-	
						6.0		Water strike at 5.2m	4,-	
						6.5		H/C odour unpleasant to breathe. Moist-wet	3,-	
						7.0	Terminated at 6.5m	Wet (muddy gravel slop)	3,-	
7.5										
8.0										
8.5										
9.0										
9.5										
10.0										

LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence H/C = Hydrocarbon 4,2 = Scoring for (odour, visual) contamination	Disturbed Sample Undisturbed Sample Headspace Analysis Down Borehole Analysis Groundwater Table Perched Water Table	Job Title: Phase 1 Investigation Works Location: BP Llandarcy Refinery, Neath Client: BP/WDA 	
		App'd:	Date: February 2003
		Drawn : ABB	Ref:
		Scale:	Job No: 39991-035-785
		Drg. Size:	BOREHOLE LOG

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: P1AF007 - PIT		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 5/2/03		DRILLING METHODS : CAT excavator	
							DRILLER : Jason		BOREHOLE DIAMETER : N/A	
							LOGGED BY : ABB		SCREEN TYPE & DIAM: N/A	
							CHECKED BY : TR		SCREEN SLOT SIZE: N/A	
	P1AF007 - PIT - 0.20m	☒	*0		0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0		DESCRIPTION		COMMENTS	
							Loose, brown-grey, sub-rounded, fine gravel with sandy silty matrix and occasional sub-rounded cobbles		Grass at surface	0,0
							Dense, dark grey with orange staining, angular, tabular sandstone gravel with brown, silty sand		NVO, damp-moist Weathered sst NVO, wet	0,0
							Hard, dark grey to grey-brown, micaceous, lightly weathered, fractured, very fine to fine-grained sandstone		Feint H/C odour, moist-wet	1,0
							Terminated at 0.5m (refusal on sandstone)		Water ingress at 0.5m on sandstone with trace HC odour in some sandstone fragments	

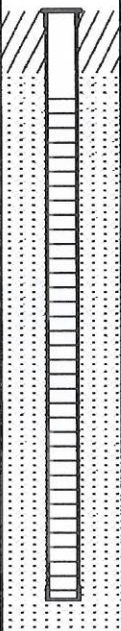
LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence H/C = Hydrocarbon 4,2 = Scoring for (odour, visual) contamination 17.8ppm in air above TP at 1.5m depth	Disturbed Sample Undisturbed Sample Headspace Analysis Down Borehole Analysis Groundwater Table Perched Water Table	Job Title: Phase 1 Investigation Works Location: BP Llandarcy Refinery, Neath Client: BPWDA 	
		App'd:	Date: February 2003
		Drawn: LT	Ref:
		Scale:	Job No: 39991-035-785
		Drg. Size:	BOREHOLE LOG

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: P1AF008 (+PIT)		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 7/2/03		DRILLING METHODS : ODEX + DTH	
							DRILLER : RLB Drilling (Rees/Steve)		BOREHOLE DIAMETER : 115mm/100mm	
							LOGGED BY : ABB		SCREEN TYPE & DIAM: 50mm uPVC	
							CHECKED BY : TR		SCREEN SLOT SIZE: 1mm	
	DTH from 3.5m				0.0	Topsoil/fill, brown, sandy silt.	Topsoil/fill	0,-		
					0.5	Concrete	Concrete footing	-,-		
					1.0	Soft, mottled brown and dark brown, silty, fine sandy clay with rare, very fine gravel	Feint H/C odour	1,-		
					1.5	Weak, grey to dark grey, weathered, fine grained sandstone with brown staining	Feint H/C odour	1,-		
					2.0			1,-		
					2.5	Weak-hard, dark grey, fine grained sandstone	NVO, damp	0,-		
					3.0		NVO, damp	0,-		
					3.5		NVO, damp	0,-		
					4.0		ODEX-DTH @3.5m			
					4.5		Feint H/C odour	1,-		
					4.5	Weak-hard, dark brown, silty sand horizon	Weak H/C odour	2,-		
					5.0	Hard, dark grey sandstone	Becoming moist?			
					5.0	Weak-hard, coal horizon or lens				
					5.5	Hard, dark grey sandstone with softer, silty horizons as infilled fractures.	Weak, H/C odour confined to silty horizons	2,-		
					6.0		Weathered, solvent / H/C odour	3,-		
6.5		Weathered, solvent / H/C odour	3,-							
7.0		Weathered, solvent / H/C odour	3,-							
7.5		Weathered, solvent / H/C odour	3,-							
8.0		Weathered, solvent / H/C odour	3,-							
8.5										
9.0	Terminated at 9.0m									
9.5										
10.0										

LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence H/C = Hydrocarbon 4,2 = Scoring for (odour, visual) contamination	Disturbed Sample Undisturbed Sample Headspace Analysis Down Borehole Analysis Groundwater Table Perched Water Table	Job Title: Phase 1 Investigation Works Location: BP Llandarcy Refinery, Neath Client: BP/WDA 	
		App'd:	Date: February 2003
		Drawn : ABB	Ref:
		Scale:	Job No: 39991-035-785
		Drg. Size:	BOREHOLE LOG

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: P1AF008 - PIT		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 5/2/03		DRILLING METHODS : CAT excavator	
							DRILLER : Jason		BOREHOLE DIAMETER : N/A	
							LOGGED BY : ABB		SCREEN TYPE & DIAM: N/A	
							CHECKED BY : TR		SCREEN SLOT SIZE: N/A	
	P1AF008 - PIT - 0.25m		*2.6		0.0		DESCRIPTION		COMMENTS	0.0
							Soft, dark brown, slightly sandy silt with frequent, angular gravel and cobbles of brick, slag and sandstone. Rootlets down to 0.15m Terminated at 0.3m (refusal on concrete)		NVO, damp Topsoil/fill Clean hole	
					0.5					
					1.0					
					1.5					
					2.0					
					2.5					
					3.0					
					3.5					
					4.0					
					4.5					
					5.0					

LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence H/C = Hydrocarbon 4,2 = Scoring for (odour, visual) contamination 17.8ppm in air above TP at 1.5m depth	 Disturbed Sample  Undisturbed Sample  Headspace Analysis  Down Borehole Analysis  Groundwater Table  Perched Water Table	Job Title: Phase 1 Investigation Works Location: BP Llandarcy Refinery, Neath Client: BPWDA 	
		App'd:	Date: February 2003
		Drawn : LT	Ref:
		Scale:	Job No: 39991-035-785
		Drg. Size:	BOREHOLE LOG

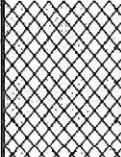
BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: P1AF013 (+ PIT)		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 6/2/03		DRILLING METHODS : ODEX	
							DRILLER : RLB Drilling (Rees/Steve)		BOREHOLE DIAMETER : 115mm/100mm	
							LOGGED BY : ABB		SCREEN TYPE & DIAM: 50mm uPVC	
							CHECKED BY : MC (on-site), TR		SCREEN SLOT SIZE: 1mm	
					0.0		DESCRIPTION		COMMENTS	
							Soft to firm, dark brown, sandy silt.		Topsoil NVO	
					0.5		Firm, grey-cream-brown, sandy gravel with angular gravel and very coarse sand		1,-	
					1.0		Weak, pale brown to grey, weathered, fine grained, sandstone with brown staining and brown, silty arisings		H/C odour	
					1.5		Coal horizon, band.		Coal band 1-2cm	
					2.0		Weak to hard, pale grey, slightly weathered sandstone with occasional brown staining.		2,-	
					2.5		Becoming darker and less weathered with depth.		PID reading 26.4ppm around base of casing	
					3.0		Hard, dark grey sandstone with interbedded silty horizons and rare brown staining		Feint H/C odour, dry	
					3.5		Weak, grey brown, silty, weathered band.		H/C odour, dry-damp	
					4.0		Terminated at 5.0m due to presence of silt.		Feint H/C odour, damp	
					4.5				Water strike @ 4m	
					5.0				Moderate H/C odour, damp-moist	
					5.5				Water bearing silty band.	
					6.0				3,-	
					6.5					
				7.0						
				7.5						
				8.0						
				8.5						
				9.0						
				9.5						
				10.0						

LOCATION / NOTES:		LEGEND		BOREHOLE LOG									
NVO = No visual or olfactory evidence H/C = Hydrocarbon 4,2 = Scoring for (odour, visual) contamination		Disturbed Sample Undisturbed Sample Headspace Analysis Down Borehole Analysis Groundwater Table Perched Water Table		Job Title: Phase 1 Investigation Works Location: BP Llandarcy Refinery, Neath Client: BP/WDA  <table><tr><td>App'd:</td><td>Date: February 2003</td></tr><tr><td>Drawn : ABB</td><td>Ref:</td></tr><tr><td>Scale:</td><td>Job No: 39991-035-785</td></tr><tr><td>Drg. Size:</td><td>BOREHOLE LOG</td></tr></table>		App'd:	Date: February 2003	Drawn : ABB	Ref:	Scale:	Job No: 39991-035-785	Drg. Size:	BOREHOLE LOG
App'd:	Date: February 2003												
Drawn : ABB	Ref:												
Scale:	Job No: 39991-035-785												
Drg. Size:	BOREHOLE LOG												

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: P1AF013 - PIT		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 5/2/03		DRILLING METHODS : CAT excavator	
							DRILLER : Jason		BOREHOLE DIAMETER : N/A	
							LOGGED BY : ABB		SCREEN TYPE & DIAM: N/A	
							CHECKED BY : TR		SCREEN SLOT SIZE: N/A	
							DESCRIPTION	COMMENTS		
	P1AF013 - PIT - 0.2m		*4.3		0.0		Loose, dark brown, very silty, fine sand with rootlets and frequent fine to coarse gravel and frequent gravel of slag and clinker (slopes from 0.25 to 0.3m)	NVO, moist localized black staining and distinct H/C odour (0.3-0.35m)	0,0	
	P1AF013 - PIT - 0.25 - 0.3m		*4.8		0.5		Loose, pale brown, medium to coarse sand with rare fine gravel	NVO, wet from 0.4m	2,1 0,0 1,1	
			*2.1		1.0		Soft, dark brown, very sandy silt with frequent rounded, fine to medium gravel and fragments of weathered sandstone.	Feint H/C odour, saturated from 0.55m	1,0	
					1.5		Weak, brown, slightly silty, medium grained, weathered sandstone.			
					2.0		Hard, dark grey, fine grained sandstone			
							Terminated at 0.75m (refusal on sandstone)			
LOCATION / NOTES:						LEGEND		BOREHOLE LOG		
NVO = No visual or olfactory evidence H/C = Hydrocarbon 4,2 = Scoring for (odour, visual) contamination						 Disturbed Sample  Undisturbed Sample  Headspace Analysis  Down Borehole Analysis  Groundwater Table  Perched Water Table		Job Title: Phase 1 Investigation Works Location: BP Llandarcy Refinery, Neath Client: BP/WDA 		
						App'd:		Date: February 2003		
						Drawn : LT		Ref:		
						Scale:		Job No: 39991-035-785		
						Drg. Size:		BOREHOLE LOG		

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: P1AF014 (+ PIT)		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 6/2/03		DRILLING METHODS : ODEX	
							DRILLER : RLB Drilling (Rees/Steve)		BOREHOLE DIAMETER : 115mm	
							LOGGED BY : ABB		SCREEN TYPE & DIAM: 50mm uPVC	
							CHECKED BY : TR		SCREEN SLOT SIZE: 1mm	
	DTH from 2.0m					DESCRIPTION		COMMENTS		
						Loose, dark brown, very silty sand with brick, ash and clinker		Grass covered topsoil/fill Fast penetration	0,-	
						Weak-hard, dark brown, silty, sandy sandstone gravel and weathered sandstone.		Low PID reading may be due to air purge prior to air monitoring - ambient smell was 2 near hole	2,-	
						Hard, dark grey, fine grained, sandstone			0,-	
						Weak, dark brown, silty horizon		Strong smell of H/C near hole ODEX-DTH @ 2.0m	3,-	
						Hard, dark grey, fine grained sandstone		Slight HC odour.	3,-	
						Weak, dark brown, silty horizon		Interbedded silt and sandstone	1,-	
						Hard, dark grey, fine grained sandstone		Damp conditions may be affecting PID	3,-	
						Weak-hard, dark grey, fine grained sandstone interbedded with dark brown, silty horizons		Damp. Softer, interbedded, silty bands.	1,-	
						Dark brown, silty horizon			0,-	
						Hard, dark grey, fine grained sandstone with dark brown, silty horizons		Hard sandstone, slow drilling	0,-	
						Hard, dark grey, fine grained, sandstone		Water strike?	1,-	
						Terminated at 6.5m		NVO	0,-	
									0,-	

LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence H/C = Hydrocarbon 4,2 = Scoring for (odour, visual) contamination	Disturbed Sample Undisturbed Sample Headspace Analysis Down Borehole Analysis Groundwater Table Perched Water Table	Job Title: Phase 1 Investigation Works Location: BP Llandarcy Refinery, Neath Client: BP/WDA 	
		App'd:	Date: February 2003
		Drawn : ABB	Ref:
		Scale:	Job No: 39991-035-785
		Drg. Size:	BOREHOLE LOG

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: P1AF014 - PIT		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 5/2/03		DRILLING METHODS : CAT excavator	
							DRILLER : Jason		BOREHOLE DIAMETER : N/A	
							LOGGED BY : ABB		SCREEN TYPE & DIAM: N/A	
							CHECKED BY : TR		SCREEN SLOT SIZE: N/A	
DESCRIPTION		COMMENTS								
	P1AF014 - PIT - 0.2m	☒	*3.1	0.0		Loose to soft, dark brown, very silty sand with abundant angular gravel of brick, sandstone and clinker, rare patches of red-brown gravel and sand. Rootlets from 0 to 0.35m	NVO, dry-damp	0,0		
	P1AF014 - PIT - 0.4m	☒	*3.2	0.5				Loose, brown-orange-cream, medium to coarse, shelly sand with rare fine gravel. (Only noted in the roadside face of the pit)	NVO, damp NVO, moist NVO, moist NVO, wet Wet at surface, appears dry in matrix	0,0 0,0 0,0 0,0
				1.0		Loose to dense, dark brown, slightly silty, medium to coarse sandy, angular, tabular, weathered sandstone and gravels				
				1.5		Hard, dark grey with brown staining, micaceous, fractured, very fine to fine-grained sandstone				
				2.0		Terminated at 0.65m (refusal on sandstone)				
				2.5						
				3.0						
				3.5						
				4.0						
				4.5						
				5.0						

LOCATION / NOTES:	LEGEND	BOREHOLE LOG									
NVO = No visual or olfactory evidence H/C = Hydrocarbon 4,2 = Scoring for (odour, visual) contamination	 Disturbed Sample  Undisturbed Sample  Headspace Analysis  Down Borehole Analysis  Groundwater Table  Perched Water Table	Job Title: Phase 1 Investigation Works Location: BP Llandarcy Refinery, Neath Client: BP/WDA									
			<table border="1"> <tr> <td>App'd:</td> <td>Date: February 2003</td> </tr> <tr> <td>Drawn : LT</td> <td>Ref:</td> </tr> <tr> <td>Scale:</td> <td>Job No: 39991-035-785</td> </tr> <tr> <td>Drg. Size:</td> <td>BOREHOLE LOG</td> </tr> </table>	App'd:	Date: February 2003	Drawn : LT	Ref:	Scale:	Job No: 39991-035-785	Drg. Size:	BOREHOLE LOG
App'd:	Date: February 2003										
Drawn : LT	Ref:										
Scale:	Job No: 39991-035-785										
Drg. Size:	BOREHOLE LOG										

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: P1AF015 (+ PIT)		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 13/2/03		DRILLING METHODS : ODEX + DTH	
							DRILLER : RLB Drilling (Rees/Steve)		BOREHOLE DIAMETER : 115mm/100mm	
							LOGGED BY : ABB		SCREEN TYPE & DIAM: 50mm uPVC	
							CHECKED BY : TR		SCREEN SLOT SIZE: 1mm	
	DTH from 1.7m					0.0	Tarmac	F III and sub-base		
						0.5	Loose, dark brown-red, silty, gravelly sand with slag, clinker and brick fragments	Fast penetration		
						1.0	Weak-hard, grey, fine grained, sandstone	NVO, damp	0,-	
						1.5		NVO, dry	0,-	
						2.0	Weak, dark brown, silty, sandy horizon	ODEX-DTH from 1.7m	0,-	
						2.5	Hard, dark grey, fine grained sandstone	NVO, damp?		
						3.0	Dark brown, silty, sandy horizon	NVO, dry damp-moist	0,-	
						3.5	Hard, dark grey, fine grained sandstone	Interbedded sandstone and weaker, damp sandy/silty horizons	1,-	
						4.0	With weaker, damp, silty sandy bands from 3.8m	NVO, damp	0,-	
						4.5	Weak, dark brown-grey, sandy horizon	NVO, damp	0,-	
						5.0	Weak-hard, dark grey, fine grained sandstone with dark brown, sandy, silty horizons	NVO, damp	0,-	
						5.5	Hard, dark grey, fine grained sandstone	H/C odour?, damp	1,-	
						6.0		NVO, damp	0,-	
						7.0	Terminated at 7.0m			

LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence H/C = Hydrocarbon 4,2 = Scoring for (odour, visual) contamination	Disturbed Sample Undisturbed Sample Headspace Analysis Down Borehole Analysis Groundwater Table Perched Water Table	Job Title: Phase 1 Investigation Works Location: BP Llandarcy Refinery, Neath Client: BP/WDA 	
		App'd:	Date: February 2003
		Drawn : ABB	Ref:
		Scale:	Job No: 39991-035-785
		Drg. Size:	BOREHOLE LOG

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: P1AF015 - PIT		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 5/2/03		DRILLING METHODS : CAT excavator	
							DRILLER : Jason		BOREHOLE DIAMETER : N/A	
							LOGGED BY : ABB		SCREEN TYPE & DIAM: N/A	
							CHECKED BY : TR		SCREEN SLOT SIZE: N/A	
	P1AF015 - PIT - 0.1m		*3.8		0.0	 Loose, dark brown, slightly silty, medium sand with frequent rootlets, gravel of brick, slag and clinker with rare patches of reddy-brown gravel and sand.  Weak, loose, dark brown, slightly silty, medium to coarse sandy, angular, tabular weathered sandstone and gravels. Hard, dark grey-brown, micaceous, fractured, fine-grained sandstone Terminated at 0.3m (refusal on sandstone)	NVO, damp 0,0 NVO, damp 0,0			
					0.5					
					1.0					
					1.5					
					2.0					
					2.5					
					3.0					
					3.5					
					4.0					
					4.5					
					5.0					

LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence H/C = Hydrocarbon 4,2 = Scoring for (odour, visual) contamination	 Disturbed Sample  Undisturbed Sample  Headspace Analysis  Down Borehole Analysis  Groundwater Table  Perched Water Table	Job Title: Phase 1 Investigation Works Location: BP Llandarcy Refinery, Neath Client: BP/WDA 	
		App'd:	Date: February 2003
		Drawn : LT	Ref:
		Scale:	Job No: 39991-035-785
		Drg. Size:	BOREHOLE LOG

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: P1AF016 (+ PIT)		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 10/2/03		DRILLING METHODS : ODEX + DTH	
							DRILLER : RLB Drilling (Rees/Steve)		BOREHOLE DIAMETER : 115mm/100mm	
							LOGGED BY : ABB		SCREEN TYPE & DIAM: 50mm uPVC	
							CHECKED BY : TR		SCREEN SLOT SIZE: 1mm	
	DTH from 2.3m				0.0		DESCRIPTION		COMMENTS	
					0.5		Loose, brown, clayey, silty, fine gravel	Topsoil / residual soils		
					1.0		Weak, hard, grey, weathered, fine grained sandstone with brown staining	Feint H/C odour, wet in places	1,-	
					1.5			H/C odour	2,-	
					2.0			ODEX-DTH @ 2.3m	1,-	
					2.5					
					3.0		Hard, grey to brown, fine grained sandstone with occasional, light brown staining	Water strike @ 3.5m.	1,-	
					3.5			Distinct H/C odour	2,-	
					4.0		Weak, dark brown, silty horizon and fracture zone.	Weak silty zone		
					4.5			H/C odour, wet	1,-	
					5.0		Hard, dark grey, fine grained sandstone	H/C odour, wet	1,-	
					5.5			NVO, wet	0,-	
					6.0			H/C odour, wet	1,-	
					6.5			H/C odour, wet	2,-	
					7.0		Terminated at 6.5m	H/C odour, wet	1,-	
7.5										
8.0										
8.5										
9.0										
9.5										
10.0										

LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence	Disturbed Sample	Job Title: Phase 1 Investigation Works	
H/C = Hydrocarbon	Undisturbed Sample	Location: BP Llandarcy Refinery, Neath	
4,2 = Scoring for (odour, visual) contamination	Headspace Analysis	Client: BP/WDA	
	Down Borehole Analysis		App'd: _____ Date: February 2003
	Groundwater Table	Drawn : ABB	Ref: _____
	Perched Water Table	Scale: _____	Job No: 39991-035-785
		Drg. Size: _____	BOREHOLE LOG

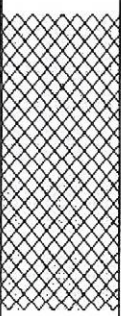
BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: P1AF017 (+ PIT)		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 7/2/03		DRILLING METHODS : ODEX + DTH	
							DRILLER : RLB Drilling (Rees/Steve)		BOREHOLE DIAMETER : 115mm/100mm	
							LOGGED BY : ABB		SCREEN TYPE & DIAM: 50mm uPVC	
							CHECKED BY : TR		SCREEN SLOT SIZE: 1mm	
	DTH from 2.0m				0.0	Soft, brown, silty clay with vegetation	Feint H/C odour, dry	0,-		
					0.5	Weak, loose, brown-grey, silty, weathered sandstone and gravels	Weathered sst	1,-		
					1.0		NVO, dry	0,-		
					1.5	Hard, grey, slightly weathered, fine grained sandstone with brown staining	NVO, dry	0,-		
					2.0	Weak-hard, dark grey sandstone with sandy horizons and fractures	Fractured zone	2,-		
					2.5	Hard, dark grey, fine grained sandstone	Feint H/C odour, dry	2,-		
					3.0		ODEX-DTH @ 2m	2,-		
					3.5		'Dry' H/C odour, dry	2,-		
					4.0		'Acidic' H/C odour, dry	2,-		
					4.5		Feint H/C odour	1,-		
					5.0	Weak-hard, dark grey, fine grained sandstone with sandy, silty horizons and fractures.	Feint H/C odour?	1,-		
					5.5	Hard, dark grey, fine grained sandstone	Fractured zone	1,-		
					6.0	With trace silty, infilled, fractures and weaker, silty horizons.	Very feint H/C odour	1,-		
					6.5		NVO	0,-		
					7.0		NVO	0,-		
					7.5		NVO	0,-		
					8.0	Weak, dark brown, silty horizon and fractured zone.	NVO	0,-		
					8.5	Hard, dark grey, fine grained sandstone	NVO	0,-		
					9.0		NVO	0,-		
					9.5		NVO	0,-		
			10.0		NVO	0,-				

LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence	Disturbed Sample	Job Title: Phase 1 Investigation Works	
H/C = Hydrocarbon	Undisturbed Sample	Location: BP Llandarcy Refinery, Neath	
4,2 = Scoring for (odour, visual) contamination	Headspace Analysis	Client: BP/MDA	
	Down Borehole Analysis		App'd: _____ Date: February 2003
	Groundwater Table	Drawn : ABB	Ref: _____
	Perched Water Table	Scale: _____	Job No: 39991-035-785
		Drg. Size: _____	BOREHOLE LOG

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: P1AF017 - PIT		PAGE 1 of 1				
	NUMBER	TYPE					DRILLING DATES: 12/2/03		DRILLING METHODS : CAT excavator				
							DRILLER : Jason		BOREHOLE DIAMETER : N/A				
							LOGGED BY : LT		SCREEN TYPE & DIAM: N/A				
							CHECKED BY : TR		SCREEN SLOT SIZE: N/A				
DESCRIPTION		COMMENTS											
 P1AF017 - PIT - 0.2m  P1AF017 - PIT - 0.5 - 0.8m  P1AF017 - PIT - 1.0m	  	0.0	Soft, brown, very sandy silt with frequent fine to coarse gravel and fine to very coarse, tabular sandstone gravel	NVO, damp-wet	0.0								
		0.5	Loose, red, coarse sand to fine to medium gravel of ash with some silt and boulders of slag	NVO, damp-wet	0.0								
		1.0	Dense, large, sandstone cobbles with silty sand matrix	NVO	0.0								
		Terminated at 1.0m (refusal)	NVO	0.0									
LOCATION / NOTES:		LEGEND		BOREHOLE LOG									
NVO = No visual or olfactory evidence H/C = Hydrocarbon 4,2 = Scoring for (odour, visual) contamination		 Disturbed Sample  Undisturbed Sample  Headspace Analysis  Down Borehole Analysis  Groundwater Table  Perched Water Table		Job Title: Phase 1 Investigation Works Location: BP Llandarcy Refinery, Neath Client: BP/WDA  <table border="1"> <tr> <td>App'd:</td> <td>Date: February 2003</td> </tr> <tr> <td>Drawn : LT</td> <td>Ref:</td> </tr> <tr> <td>Scale:</td> <td>Job No: 39991-035-785</td> </tr> <tr> <td>Drg. Size:</td> <td>BOREHOLE LOG</td> </tr> </table>		App'd:	Date: February 2003	Drawn : LT	Ref:	Scale:	Job No: 39991-035-785	Drg. Size:	BOREHOLE LOG
App'd:	Date: February 2003												
Drawn : LT	Ref:												
Scale:	Job No: 39991-035-785												
Drg. Size:	BOREHOLE LOG												

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: P1BH027		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 26/2/03		DRILLING METHODS : Perc + DTH	
							DRILLER : APEX - Terry		BOREHOLE DIAMETER : 100mm	
							LOGGED BY : TRR		SCREEN TYPE & DIAM: 50mm uPVC	
							CHECKED BY : TR		SCREEN SLOT SIZE: 1mm	
	P1BH027 - 0.2 - 0.4m	☒	0		0.0	Concrete	DESCRIPTION	COMMENTS	0,0	
	P1BH027 - 0.4 - 0.5m	☒	0		0.5	Medium dense, grey-brown, fine to coarse sandy gravel with sub-angular fragments of brick, concrete and sandstone (<40mm)		NVO, moist	0,0	
						Firm, brown, clayey silt with fragments of fine to medium grained, weathered sandstone		Percussive refusal at 0.55m	0,0	
						Weak to hard, grey-pale brown, fine to medium grained, slightly weathered sandstone.		AF from 0.6m	0,0	
						Becoming hard at 0.8m		NVO, dry	0,0	
						Hard, grey-pale grey, fine to medium grained, sandstone			0,0	
									0,0	
									0,0	
									0,0	
									NVO, dry during drilling	0,0
					5.0	Terminated at 5.0m			0,0	

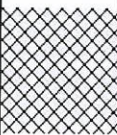
LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence H/C = Hydrocarbon	Disturbed Sample Undisturbed Sample Headspace Analysis Down Borehole Analysis Groundwater Table Perched Water Table	Job Title: Phase 1 Investigation Works Location: BP Llandarcy Refinery, Neath Client: BP/WDA	
4,2 = Scoring for (odour, visual) contamination			App'd: _____ Date: February 2003 Drawn: ABB Ref: _____ Scale: _____ Job No: 39991-035-785 Drg. Size: _____ BOREHOLE LOG

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: P1TP014		PAGE 1 of 1				
	NUMBER	TYPE					DRILLING DATES: 13/2/03		DRILLING METHODS : CAT excavator				
							DRILLER : Jason		BOREHOLE DIAMETER : N/A				
							LOGGED BY : LT/ABB		SCREEN TYPE & DIAM: N/A				
							CHECKED BY : TR		SCREEN SLOT SIZE: N/A				
	P1TP014 - 0.15m		*0		0.0  0.5  1.0  1.5  2.0  2.5  3.0  3.5  4.0  4.5  5.0	DESCRIPTION Medium dense, brown, silty sand and gravel (demolition rubble) Loose to dense, black, ashy coke residue Firm, friable, grey-brown, very sandy silt with black, glassy nodules Hard, orange, cemented sandy, slightly clayey silt. Soft to firm, pinkish-orange, sandy, slightly clayey silt Soft to firm, grey-brown, mottled orange, clayey, slightly sandy silt with frequent, angular, tabular sandstone fragments Terminated at 1.2m (bedrock)		COMMENTS NVO NVO, dry NVO, dry NVO, damp NVO NVO		0,0 0,0 0,0 0,0 0,0 0,0			
	P1TP014 - 0.2m												
	P1TP014 - 0.3m												
	P1TP014 - 0.45m												

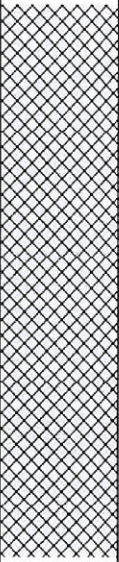
LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence H/C = Hydrocarbon 4,2 = Scoring for (odour, visual) contamination	 Disturbed Sample  Undisturbed Sample  Headspace Analysis  Down Borehole Analysis  Groundwater Table  Perched Water Table	Job Title: Phase 1 Investigation Works Location: BP Llandarcy Refinery, Neath Client: BP/WDA 	
		App'd:	Date: February 2003
		Drawn : ABB	Ref:
		Scale:	Job No: 39991-035-785
		Org. Size:	BOREHOLE LOG

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: WSMW058 (PIT)		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 4/11/2003		DRILLING METHODS : JCB	
							DRILLER : JCB		BOREHOLE DIAMETER : -	
							LOGGED BY : OG		SCREEN TYPE & DIAM: -	
							CHECKED BY : SG		SCREEN SLOT SIZE: -	
	WSMW058 (0.2-0.25m)		*6.6		0.0		DESCRIPTION		COMMENTS	S,V
					0.0		Clinker, brick fragments and concrete. (MADE GROUND)		Wet. Pit filled with surface water, slight sheen.	4,3
					0.5		Trial pit terminated at 0.25m at refusal on bedrock.			
					1.0					
					1.5					
					2.0					
					2.5					
					3.0					
					3.5					
					4.0					
					4.5					
					5.0					

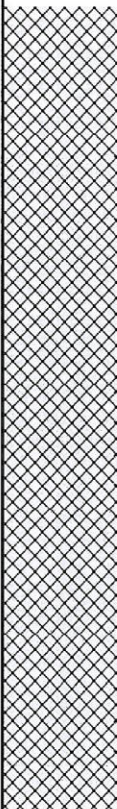
LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence of contamination S,V = Contamination Observations S - Odour score (0-5) V - Visual score (0-5)	Disturbed Sample Undisturbed Sample Headspace Analysis Down Borehole Analysis Groundwater Table Perched Water Table	Job Title: BP Llandarcy Whole Site Investigation Location: BP Llandarcy Refinery Client: BP/WDA	
			App'd: _____ Date: February 2004 Drawn: CM Ref: _____ Scale: As scale Job No: 39991-044-785 Drg. Size: A4 BOREHOLE LOG

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: WSMW079 (PIT)		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 11/11/03		DRILLING METHODS: JCB	
							DRILLER: JCB		BOREHOLE DIAMETER: -	
		LOGGED BY: JW		SCREEN TYPE & DIAM: -						
		CHECKED BY: SG		SCREEN SLOT SIZE: -						
	WSMW079 - 0.1-0.3m (2XP)		*12.0		0.0		DESCRIPTION		COMMENTS	S,V
	WSMW079 - 0.4m (S,L)		*180		0.5		Loose, brown fine to coarse sand with abundant coarse clinker and subangular gravel. (MADE GROUND) Loose, black, fine to coarse sand with abundant subangular fine to coarse gravel. (MADE GROUND) Trial pit terminated at 0.5m due to refusal.		Slight hydrocarbon odour and discoloration Moderate heavy hydrocarbon odour with frequent black staining and sheen on water. Wet from 0.4m	1,1 3,5
					1.0					
					1.5					
					2.0					
					2.5					
					3.0					
					3.5					
					4.0					
					4.5					
					5.0					

LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence of contamination S,V = Contamination Observations S - Odour score (0-5) V - Visual score (0-5)	 Disturbed Sample  Undisturbed Sample  Headspace Analysis  Down Borehole Analysis  Groundwater Table  Perched Water Table	Job Title: BP Llandarcy Whole Site Investigation Location: BP Llandarcy Refinery Client: BP/WDA 	
		App'd:	Date: November 2003
		Drawn: JW	Ref:
		Scale: As scale	Job No: 39991-044-785
		Drg. Size: A4	BOREHOLE LOG

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: WSTP061		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 3/11/03		DRILLING METHODS: JCB	
							DRILLER: JCB		BOREHOLE DIAMETER: -	
							LOGGED BY: EM		SCREEN TYPE & DIAM: -	
							CHECKED BY: SG		SCREEN SLOT SIZE: -	
DESCRIPTION		COMMENTS	S,V							
	WSTP061 - 1.0m (S,L)		0.0	Reinforced concrete hardstanding. (MADE GROUND)						
			0.5	Loose, red brown fine to coarse sand with medium gravel, ash and frequent subangular cobbles and boulders. (MADE GROUND)	Damp, NVO	0,0				
			1.0	Becoming red black with polythene sheeting.	Black staining					
	WSTP061 - 1.75m (S,L)		1.0	Loose, black, fine to coarse sand with medium gravel and frequent subangular cobbles and boulders. (MADE GROUND)	Seepage of oily water into trial pit	3,3				
			1.5		Moderate light hydrocarbon odour	3,3				
			2.0			3,3				
		2.2	Trial pit terminated at 2.2m due to refusal.		3,3					
		2.5								
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							

LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence of contamination S,V = Contamination Observations S - Odour score (0-5) V - Visual score (0-5)	 Disturbed Sample  Undisturbed Sample  Headspace Analysis  Down Borehole Analysis  Groundwater Table  Perched Water Table	Job Title: BP Llandarcy Whole Site Investigation Location: BP Llandarcy Refinery Client: BP/WDA 	
		App'd:	Date: November 2003
		Drawn: CM	Ref:
		Scale: As scale	Job No: 39991-044-785
		Drg. Size: A4	BOREHOLE LOG

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: WSTP062		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 3/11/2003		DRILLING METHODS : JCB	
							DRILLER : JCB - Paul		BOREHOLE DIAMETER : -	
							LOGGED BY : OG		SCREEN TYPE & DIAM: -	
							CHECKED BY : SG		SCREEN SLOT SIZE: -	
DESCRIPTION		COMMENTS	S,V							
	WSTP062 - 0.55m (2xP)		*3.0		0.0	Concrete hardstanding (MADE GROUND)	Damp - wet. NVO	0,0		
					0.5	Loose, red brown silty sand with gravel, angular cobbles and concrete blocks. (MADE GROUND)				
	WSTP062 - 1.0m (S,L)		*710		1.0	Medium dense, mottled dark grey black, medium to coarse SAND with abundant coarse gravel, cobbles and occasional subangular to subrounded boulders.	Steady water ingress at 0.6m	Saturated Water level rising.		
					1.5		Water level dropping. No headspace as pit underwater.			
					2.0					
			*400		2.5	Saturated	4,2			
					3.0	Saturated	4,2			
					3.5	Trial pit terminated at 3.2m due to collapse.				
					4.0					
					4.5					
					5.0					

LOCATION / NOTES:		LEGEND		BOREHOLE LOG	
NVO = No visual or olfactory evidence of contamination		 Disturbed Sample		Job Title: BP Llandarcy Whole Site Investigation	
S,V = Contamination Observations		 Undisturbed Sample		Location: BP Llandarcy Refinery	
S - Odour score (0-5)		 Headspace Analysis		Client: BP/WDA	
V - Visual score (0-5)		 Down Borehole Analysis			
		 Groundwater Table			
		 Perched Water Table			
				App'd:	Date: January 2004
				Drawn : HM	Ref:
				Scale: As scale	Job No: 39991-044-785
				Drg. Size: A4	BOREHOLE LOG