

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 37.0 AHD
COORDINATE: E:330108.2, N:6247863.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH01
PROJECT No: 234875.00
DATE: 02/04/25 - 04/04/25
SHEET: 1 of 2

CONDITIONS ENCOUNTERED													SAMPLE			TESTING				
GROUNDWATER	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK						SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
				ORIGIN(%)	CONSIS. (%)	DENSITY (%)	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)								
04/04/25 NFGCOWWA	0.13	CONCRETE SLAB; plastic sheet at 0.13m depth.			NA	NA														
	0.15			FILL	ND	D								B/ES		0.15	PID	<1ppm	Concrete	
	0.25	FILL / GRAVEL; fine to coarse, igneous; trace asbestos containing material.												B/ES		0.30	PID	<1ppm	Concrete	
	1	FILL / Gravelly SAND trace clay; pale grey; fine to coarse; fine to coarse, sandstone gravel; trace asbestos containing material.			VSt to H															
	36																			
	35	CLAY (CI-CH); red-brown mottled grey; medium to high plasticity.																		
29/04/25	2																			
	34			RS	w<PL															
	33				(VSt) to (H)															
	32																			
	5.60	CLAY (CI-CH) trace gravel; red-brown mottled grey; medium to high plasticity; fine to medium, ironstone gravel; extremely weathered Ashfield Shale.																		
	6			XWM	w<PL															
	7.00	SILTSTONE: dark grey and brown. Ashfield Shale.																		
																				</

PLANT: Comacchio 205

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MIERS

METHOD: HA to 0.35m, then WB to 7.3m, then NMLC to 11.73m

CASING: HW to 1.5m

REMARKS: Surface Level estimated from survey. * BD3/20250402 taken from 0.25-0.3m

Refer to explanatory notes for symbol and abbreviation definitions



BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 37.0 AHD
COORDINATE: E:330108.2, N:6247863.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH01
PROJECT No: 234875.00
DATE: 02/04/25 - 04/04/25
SHEET: 2 of 2

[illegible][illegible]

PLANT: Comacchio 205

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MIERS

METHOD: HA to 0.35m, then WB to 7.3m, then NMLC to 11.73m

CASING: HW to 1.5m

REMARKS: Surface Level estimated from survey. * BD3/20250402 taken from 0.25-0.3m

Refer to explanatory notes for symbol and abbreviation definitions



CORE PHOTO LOG

CLIENT: Newington College

PROJECT: Newington Masterplan

LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 37.0 AHD

COORDINATE: E:330108.2, N:6247863.8

DATUM/GRID: MGA2020 Zone 56

DIP/AZIMUTH: 90°/---°

LOCATION ID: BH01

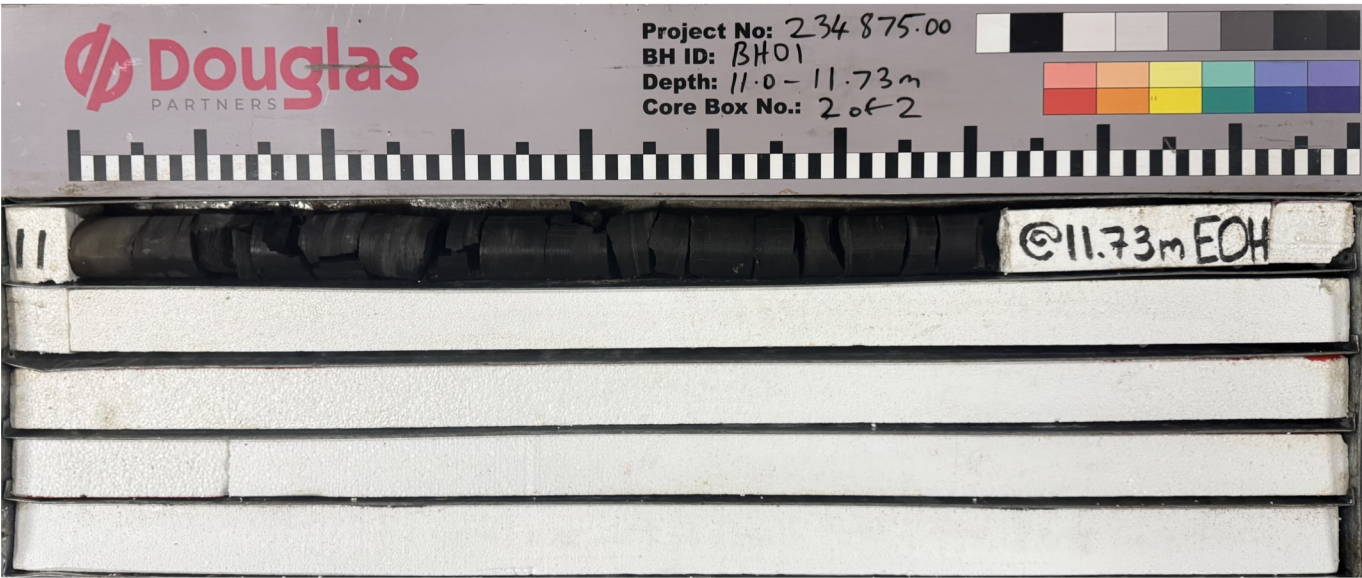
PROJECT No: 234875.00

DATE: 02/04/25 - 04/04/25

SHEET: 1 of 1



7.30-11.00 m depth



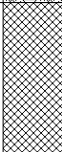
11.00-11.73 m depth

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Masterplan and Concept Stage 1 SSDA
LOCATION: 244 Stanmore Road, Stanmore NSW

SURFACE LEVEL: 36.9 AHD
COORDINATE: E:330109.4, N:6247836.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH02
PROJECT No: 234875.01
DATE: 02/04/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED														SAMPLE			TESTING AND REMARKS				
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSIS. ^(*)	DENSITY. ^(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS							
02/04/25 No free groundwater observed		0.13	CONCRETE; 130mm thick.					NA													
		0.23	FILL / Sandy CLAY trace cobbles: light brown; concrete cobbles.		FILL	ND				ES		0.13	PID	<1ppm							
		0.23	CLAY (CL): light brown; light grey; medium to high plasticity.		RS		w<PL			ES		0.23	PID	<1ppm							
Borehole discontinued at 0.35m depth. Hand auger refusal on very stiff clay.																0.25					
																0.35					

NOTES: #Soil origin is "probable" unless otherwise stated. °Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand Tools
METHOD: DT to 0.13m, HA to 0.35m
REMARKS:

OPERATOR: (DK)

LOGGED: DK
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions



BOREHOLE LOG

CLIENT: Newington College
PROJECT: Masterplan and Concept Stage 1 SSDA
LOCATION: 244 Stanmore Road, Stanmore NSW

SURFACE LEVEL: 38.3 AHD
COORDINATE: E:330147.6, N:6247824.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH03
PROJECT No: 234875.01
DATE: 02/04/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED										SAMPLE		TESTING AND REMARKS		
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSIS. ⁽¹⁾	DENSITY. ⁽²⁾	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
02/04/25 No free groundwater observed		0.05	ASPHALT.											
	38	0.30	Roadbase: Gravelly SAND; fine to medium, roadbase; fine to medium, igneous gravel with bitumen gravel.		FILL			D		ES	0.20 0.30	PID	<1ppm	
			FILL / SAND with gravel trace concrete fragments, terracota, tiles and bricks: light brown; fine to medium; igneous and sandstone gravel.							ES	0.40 0.50	PID	<1ppm	
	1				FILL			M		ES	1.00 1.10	PID	<1ppm	
	37									ES	1.50 1.70	PID	<1ppm	
	1.70		FILL / Sandy CLAY with gravel trace terracota, tiles and bricks: brown to reddish brown; low plasticity; fine to coarse, sandstone and concrete gravel.				ND			ES	1.80 1.90	PID	<1ppm	
	2				FILL					ES	2.40 2.60	PID	<1ppm	
	36							w<PL		ES	3.00 3.20	PID	<1ppm	
	2.80		CLAY (CL) trace gravel: reddish brown with light orange and light grey; medium to high plasticity; ironstone gravel.		RS					ES				
	3													
	35													
			Borehole discontinued at 3.30m depth. Target depth reached.											

NOTES: ⁽¹⁾Soil origin is "probable" unless otherwise stated. ⁽²⁾Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

NOTES: #Soil origin is "probable" unless otherwise stated. °Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Drillman GT-10
METHOD: SAF Auger to 3.3m
REMARKS: BDI/20250402 collected from 1-1.1m

OPERATOR: Ground Test

LOGGED: DK
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Masterplan and Concept Stage 1 SSDA
LOCATION: 244 Stanmore Road, Stanmore NSW

SURFACE LEVEL: 38.3 AHD
COORDINATE: E:330154.1, N:6247836.2
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH04
PROJECT No: 234875.01
DATE: 02/04/25
SHEET: 1 of 1

GROUNDWATER		CONDITIONS ENCOUNTERED					SAMPLE			TESTING AND REMARKS		
RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSIS. ⁽¹⁾ DENSITY. ⁽²⁾	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
02/04/25 No free groundwater observed	0.05	ASPHALT.										
	0.30	Roadbase: Gravelly SAND; fine to medium, roadbase; igneous gravel with bitumen gravel.		FILL								
	1	FILL / SAND with gravel trace concrete fragments, terracota, tiles and bricks: light brown; fine to medium; igneous and sandstone gravel.		FILL		M			ES	0.40 0.60	PID	<1ppm
	1.50	FILL / Sandy CLAY with gravel trace terracota, tiles and bricks: brown to dark grey-brown; low plasticity; fine to coarse, sandstone and concrete gravel.		FILL								
	1.70	CLAY (CL) trace gravel: reddish brown with hint of orange and light grey; medium to high plasticity; ironstone gravel.		RS		w<PL			ES	1.10 1.20	PID	<1ppm
	2	Borehole discontinued at 2.00m depth. Target depth reached.							ES	1.50 1.70 1.80	PID	<1ppm
	3											
	4											
	5											
	6											

02/04/25 No free groundwater observed

38
37
36
35
34

0.05
0.30
1
1.50
1.70
2
3
4
5
6

ES
ES
ES
ES
ES

0.40
0.60
1.10
1.20
1.50
1.70
1.80
2.00

PID
PID
PID
PID
PID

<1ppm
<1ppm
<1ppm
<1ppm
<1ppm

ND
M
w<PL

NOTES: ⁽¹⁾Soil origin is "probable" unless otherwise stated. ⁽²⁾Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Soil Log

PLANT: Drillman GT-10
METHOD: SAF Auger to 2m
REMARKS: BDI/20250402 collected from 0.40 to 0.60m

OPERATOR: Ground test

LOGGED: DK
CASING: Uncased

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 33.4 AHD
COORDINATE: E:330003.9, N:6247685.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH06
PROJECT No: 234875.00
DATE: 04/04/25 - 11/04/25
SHEET: 1 of 2

CONDITIONS ENCOUNTERED														SAMPLE			TESTING				
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK						SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
					ORIGIN (#)	CONSIS. (%)	DENSITY (%)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD								
11/04/25 NFGWOWA		0.15	FILL / Silty SAND: brown; fine to medium; with rootlets, topsoil.		FILE TOP			M								ES	0.10	PID	<1ppm		
																ES	0.25	PID	<1ppm		
			FILL / CLAY trace gravel: pale grey and orange-brown; fine to coarse, ironstone and igneous gravel.		FILL			w<PL								ES	0.40	PID	<1ppm		
		0.70														ES	0.70	PID	<1ppm		
			CLAY (CI-CH) trace gravel: pale yellow and pale grey; medium to high plasticity; fine to coarse, ironstone gravel.													ES	0.80	PID	<1ppm		
																ES	0.90	PID	<1ppm		
		1																			
			From 1.30m: trace very low strength siltstone gravel		RS											ES	1.40	PID	<1ppm		
																ES	1.50	PID	<1ppm		
29/04/25		2																			
		2.50	CLAY (CI-CH): grey mottled red-orange-brown; medium to high plasticity; with very low strength siltstone and iron indurated bands, extremely weathered Ashfield Shale.													ES	1.70	PID			<1ppm
																SPT	2.00	PID			<1ppm
		3																			
		4														SPT	2.30	PID			<1ppm
	4.25															SPT	2.50	SPT	7,12,20 N=32		
	5																				
	5.36	From 5.40m: relict rock fabric strongly evident		XWM																	
	6																				
	7																				
	7.35																				

NOTES: "Soil origin is "probable" unless otherwise stated. "Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Bobcat

OPERATOR: Groundtest (J.Johnson)

LOGGED: R.MULLERS/E.MILE

METHOD: HA to 1.68m, then AD/T to 2.5m, then WB to 4m, then NMLC to 12.12m

CASING: HW to 2.5m

REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions



BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 33.4 AHD
COORDINATE: E:330003.9, N:6247685.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH06
PROJECT No: 234875.00
DATE: 04/04/25 - 11/04/25
SHEET: 2 of 2

CONDITIONS ENCOUNTERED														SAMPLE			TESTING					
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK							SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
					ORIGIN (#)	CONSIS. (%)	DENSITY (%)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)								
		8.00	SILTSTONE: dark grey and grey; interlaminated with pale grey fine grained sandstone (<5%). Ashfield Shale.					HW	8.00	VL								PLT	PL(A)=0.03MPa			
	25								MW													
		8.56													8.52m: CS, PR, SM, gravel				PLT	PL(A)=0.46MPa		
	9														8.83m: P, 0-5°, PR, CN, RF	C						
		9	LAMINITE: pale grey, black, fine grained; sandstone, interlaminated with shreds (50/50).					SW										PLT	PL(A)=0.46MPa			
		24							FR						9.52m JT, 40-60°, ST, CN, SM				PLT	PL(A)=0.35MPa		
		10																				
	10																					
		10.08																				
	23														10.34m: P, 0-5°, PR, VNR Clay, RF							
		10.60													10.50m: P, 0-5°, PR, VNR Clay, SM				PLT	PL(A)=0.38MPa		
		11													10.56m: P, 0-5°, PR, VNR Clay, SM							
		11																				
		11													10.70m: P, 0-5°, PR, VNR Clay, SM							
		12													10.81m: P, 0-5°, PR, CN, SM							
	22														10.89m: P, 0-5°, PR, VNR Clay, RF	C			PLT	PL(A)=0.91MPa		
		12	Borehole discontinued at 12.12m depth. Target Depth Reached.																			
		12													11.17-11.58m: P x13, 0-5°, PR, RF, Clay 0-3 mm							
		12																				
		12.12													12.00m: JT, 75°, PR, CN, SM				PLT	PL(A)=0.79MPa		
		12.12																PLT	PL(A)=0.74MPa			
		13																				
		14																				
		15																				

NOTES: ^(a)Soil origin is "probable" unless otherwise stated. ^(b)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

NOTES: ¹Soil origin is "probable" unless otherwise stated. ²Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Bobcat
METHOD: HA to 1.68m, then AD/T to 2.5m, then WB to 4m, then NMLC to 12.12m
REMARKS:

OPERATOR: Groundtest (J.Johnson)
LOGGED: R.MULLERS/E.MILE
CASING: HW to 2.5m

Refer to explanatory notes for symbol and abbreviation definitions



CORE PHOTO LOG

CLIENT: Newington College

PROJECT: Newington Masterplan

LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 33.4 AHD

COORDINATE: E:330003.9, N:6247685.1

DATUM/GRID: MGA2020 Zone 56

DIP/AZIMUTH: 90°/---°

LOCATION ID: BH06

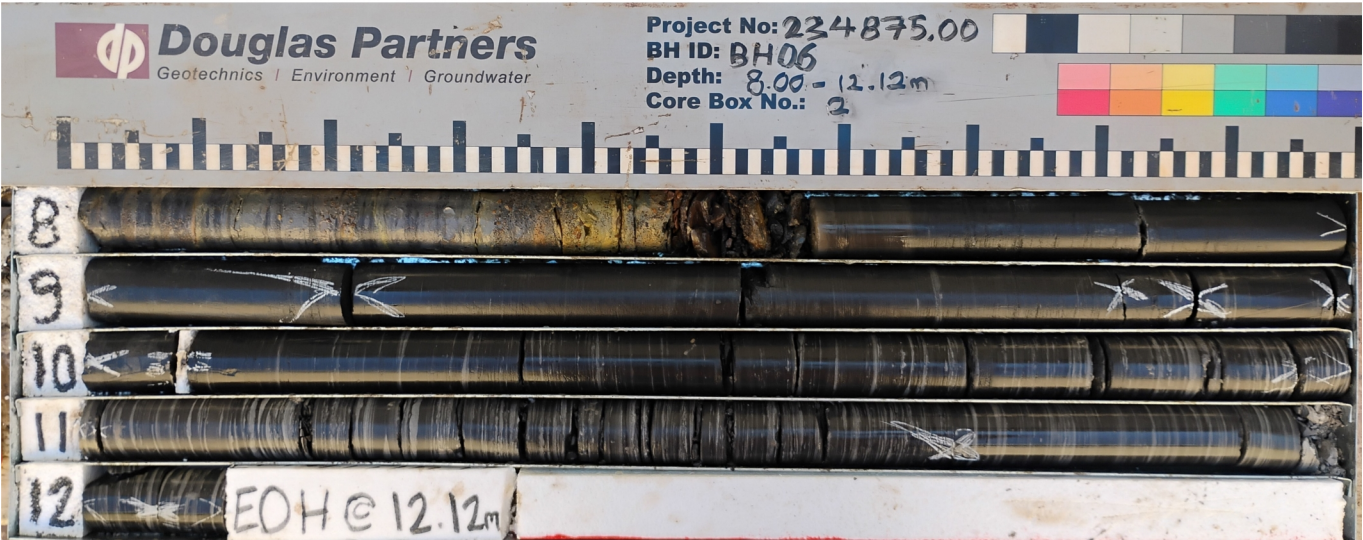
PROJECT No: 234875.00

DATE: 04/04/25 - 11/04/25

SHEET: 1 of 1



4.00-8.00 m depth



8.00-12.12 m depth

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 30.2 AHD
COORDINATE: E:330035.2, N:6247658.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH07
PROJECT No: 234875.00
DATE: 14/04/25
SHEET: 1 of 2

CONDITIONS ENCOUNTERED														SAMPLE				TESTING		
GROUNDWATER	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK								SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
				ORIGIN ^(#)	CONSIS. ^(*) DENSITY ^(*)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS							
14/04/25 NFGOWWA	0.05	ASPHALTIC CONCRETE.		FILL	ND										D/ES	0.10	PID	<1ppm		
	0.30	FILL / CLAY trace sand trace gravel: dark grey-brown; fine sand; fine to medium, sandstone gravel.													D/ES	0.40	PID	<1ppm		
	1	CLAY (CI-CH): grey mottled red-orange-brown; medium to high plasticity.			St										D/ES	0.80	PID	<1ppm		
	2.5														SPT	1.00	SPT	3,5,5 N=10		
	2.8			RS												1.45				
	3															2				
	2.7															2.50	SPT	13,12,25 N=37		
	4					w<PL										2.95				
	4.60	CLAY (CI-CH): grey mottled red-orange-brown; medium to high plasticity; with iron indurated bands, extremely weathered Ashfield Shale.			H										SPT	4.00	SPT	8,18,25/130		
	5															4.43				
	6			XWM												5				
	7															6				
	7.55	LAMINITE: [description over].													SPT	7.00	SPT	11,17,25/50 (HB)		
																7.22				
																7.35	PLT	PL(A)=0.24MPa		
																	PLT	PL(A)=0.25MPa		
																	PLI	PL(I)=0.35MPa		
NOTES: [#] Soil origin is "probable" unless otherwise stated. [*] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.																				

PLANT: Bobcat
METHOD: AD/T to 2.5m, then WB to 7m, then NMLC to 11.96m
REMARKS:

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MILERS
CASING: HW to 2.5m

Refer to explanatory notes for symbol and abbreviation definitions



BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 30.2 AHD
COORDINATE: E:330035.2, N:6247658.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH07
PROJECT No: 234875.00
DATE: 14/04/25
SHEET: 2 of 2

CONDITIONS ENCOUNTERED														SAMPLE				TESTING	
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK					SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	
					ORIGIN ^(#)	CONSIS. ^(*) DENSITY. ^(*)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD							FRACTURE SPACING (m)
		8.00	LAMINITE: dark grey and orange-brown; with pale grey fine grained sandstone interlaminated with dark grey shale (40% sandstone and 60% shale). Ashfield Shale.					HW - MW											
		9	From 8.00m-11.96m: Inter laminate with dark grey shale (40% sandstone and 60% shale)					MW - SW										PLT — PL(A)=0.52MPa	
		9.10																PLT — PL(A)=0.51MPa	
		10																PLT — PL(A)=0.88MPa	
		10.30																	
		10.60																PLT — PL(A)=1.1MPa	
		11						SW - FR											
		11.96																	
		12	Borehole discontinued at 11.96m depth. Target Depth Reached.																
		13																	
		14																	
		15																	

NOTES: [#]Soil origin is "probable" unless otherwise stated. ^{*}Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Bobcat

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MILERS

METHOD: AD/T to 2.5m, then WB to 7m, then NMLC to 11.96m

CASING: HW to 2.5m

REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions



CORE PHOTO LOG

CLIENT: Newington College

PROJECT: Newington Masterplan

LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 30.2 AHD

COORDINATE: E:330035.2, N:6247658.8

DATUM/GRID: MGA2020 Zone 56

DIP/AZIMUTH: 90°/---°

LOCATION ID: BH07

PROJECT No: 234875.00

DATE: 14/04/25

SHEET: 1 of 1



7.22-11.96 m depth

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 29.1 AHD
COORDINATE: E:330070.5, N:6247675.4
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH08
PROJECT No: 234875.00
DATE: 09/04/25
SHEET: 1 of 2

CONDITIONS ENCOUNTERED														SAMPLE		TESTING			
GROUNDWATER	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK							SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
				ORIGIN(%)	CONSISTENCY(%)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS						
09/04/25 NFGWOWA	0.07	ASPHALTIC CONCRETE.			NA	NA													
	0.10	FILL / GRAVEL; medium to coarse, igneous; 30mm thick.		FILL	ND										ES	0.20	PID	<1ppm	
		FILL / Sandy CLAY trace gravel: red-brown mottled grey; fine sand; fine to medium, sandstone gravel; trace rootlets.													ES	0.30	PID	<1ppm	
	0.80																		
	1	FILL / CLAY trace sand: grey mottled red-orange-brown; medium to high plasticity; fine sand.		FILL	(F)	w<PL									B	0.80	PID	<1ppm	
															SPT	1.00	SPT	2,3,3 N=6	
	2																		
	2.40	CLAY (CI-CH): dark grey; medium to high plasticity; possibly alluvial, possibly fill.		possibly ALV	VS to S										SPT	1.30	SPT	2,3,3 N=6	
	3																		
3.50	CLAY (CI-CH): grey; medium to high plasticity.																		
4	3.50m: becoming grey		RS	St	w=PL									SPT	1.45	SPT	2,3,3 N=6		
5																			
5.79	CORE LOSS (630mm).				ND	ND		5.79						SPT	2	SPT	0,0,1 N=1		
6																			
6.42	CLAY (CI-CH): grey and red-brown; medium to high plasticity; with bands of ironstone and very low strength siltstone.							6.42											
7			XWM	H	NDF				77	0				C					

NOTES: [#]Soil origin is "probable" unless otherwise stated. ¹Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

NOTES: (I) Soil origin is "probable" unless otherwise stated. (I) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Bobcat
METHOD: AD/T to 2.5m, then WB to 5.8m, then NMLC to 13.3m
REMARKS: * BD5/20250409 taken from 0.8-1.0m

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MILERS
CASING: HW to 2.5m

Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 29.1 AHD
COORDINATE: E:330070.5, N:6247675.4
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH08
PROJECT No: 234875.00
DATE: 09/04/25
SHEET: 2 of 2

CONDITIONS ENCOUNTERED														SAMPLE				TESTING	
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK						SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
					ORIGIN (#)	CONSIS. ⁽¹⁾	DENSITY. ⁽¹⁾	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD						
	21		[CONT] CLAY (CI-CH): grey and red-brown; medium to high plasticity; with bands of ironstone and very low strength siltstone.		XWM	H	NDF				77	0							
	8.50								8.50					8.53-9.10m: P x9 0-5°, PR, Clay, SM, 0-10mm			8.53		
	20	9	SILTSTONE: dark grey; 5% pale grey, fine grained sandstone laminations. Ashfield Shale.											9.40m: JT, 30°, PR, CN, SM			9		
														9.42-9.85m: P x7, 0-5°, PR, Clay, 0-5mm				PLT — PL(A)=0.01MPa	
		10.00	SILTSTONE: dark grey; 5-15% pale grey, fine grained sandstone laminations. Ashfield Shale.					XW to HW		VL	100	0		10.00m: EW, Clay, 20mm		C	10		
														10.10m: EW, Clay, 20mm				PLT — PL(A)=0.01MPa	
														10.26-10.70m: P x5, 0-5°, PR, CN, SM					
		11												10.75-10.85m: JT x2, 50°, UN, Clay, SM, 0-5mm			11		
														10.88m: EW, Clay, 40mm				PLT — PL(A)=0.05MPa	
														11.00m: EW, Clay, 10mm					
														11.15-11.52m: P x5, 0-5°, PR, CN, SM				PLT — PL(A)=0.03MPa	
									11.55					11.53-11.66m: FG			11.66		
		12						SW to FR						11.75-12.00m: P x9 0-5°, PR, CN, SM		C	12		
											100	45		11.76-12.00m: JT x7, 50-80°, IR-CU, SM, CN				PLT — PL(A)=0.30MPa	
														12.06-13.25m: P x13 0-5°, PR, SM, Clay 0-10mm					
		13												12.16-13.28m: JT x4, 40-80°, PR, CN, SM			13		
	16		Borehole discontinued at 13.30m depth. Target Depth Reached.														13.30		
		14																	
		15																	

NOTES: ⁽¹⁾Soil origin is "probable" unless otherwise stated. ⁽²⁾Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

NOTES: (I) Soil origin is "probable" unless otherwise stated. (I) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Bobcat
METHOD: AD/T to 2.5m, then WB to 5.8m, then NMLC to 13.3m
REMARKS: * BD5/20250409 taken from 0.8-1.0m

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MILERS
CASING: HW to 2.5m

Refer to explanatory notes for symbol and abbreviation definitions



CORE PHOTO LOG

CLIENT: Newington College

PROJECT: Newington Masterplan

LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 29.1 AHD

COORDINATE: E:330070.5, N:6247675.4

DATUM/GRID: MGA2020 Zone 56

DIP/AZIMUTH: 90°/---°

LOCATION ID: BH08

PROJECT No: 234875.00

DATE: 09/04/25

SHEET: 1 of 1



5.79-10.00 m depth



10.00-13.30 m depth

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 30.4 AHD
COORDINATE: E:330087.8, N:6247716.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH09
PROJECT No: 234875.00
DATE: 08/04/25
SHEET: 1 of 2

CONDITIONS ENCOUNTERED														SAMPLE		TESTING				
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK							SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
					ORIGIN(%)	CONSIS.(%)	DENSITY.(%)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)						
08/04/25 NFGWOWA		0.08	ASPHALTIC CONCRETE.			NA	NA													
		0.40	FILL / Silty SAND trace clay trace gravel: dark brown; fine to medium gravel.		FILL	ND									ES	0.20-0.30	PID	<1ppm		
		0.70	FILL / CLAY trace silt: dark brown; medium to high plasticity.		FILL										ES	0.50-0.65	PID	<1ppm		
	1		CLAY (CI-CH): grey mottled red-orange-brown; medium to high plasticity.												ES	0.80-1.00	PID	<1ppm		
	2.9				RS	F									SPT	1.00-1.45	SPT	2,2,4 N=6		
	2.00		CLAY (CI-CH): red-orange-brown mottled pale grey; medium to high plasticity; with very low strength siltstone and iron indurated bands, extremely weathered Ashfield Shale.																	
	2.8					VSt - H	w<PL								SPT	2.50-2.95	SPT	7,17,15 N=32		
	3																			
	2.7										100	0			C					
	4					XWM	H													
2.6																				
5																				
2.5																				
5.45			SILTSTONE: dark grey and orange-brown; interlaminated with 20-30% pale grey fine grained sandstone, Ashfield Shale.																	
6																				
2.4																				
7																				
2.3																				
7.45			LAMINITE: [description over].																	
NOTES: #Soil origin is "probable" unless otherwise stated. %Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.																				

NOTES: # Soil origin is "probable" unless otherwise stated. % Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Bobcat
METHOD: AD/T to 2.95m, then NMLC to 11.64m
REMARKS: * BD4/20250409 taken from 0.8-1.0m

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MILERS
CASING: HW to 2.75m

Refer to explanatory notes for symbol and abbreviation definitions



BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 30.4 AHD
COORDINATE: E:330087.8, N:6247716.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH09
PROJECT No: 234875.00
DATE: 08/04/25
SHEET: 2 of 2

CONDITIONS ENCOUNTERED														SAMPLE		TESTING				
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK							SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
					ORIGIN (#)	CONSIS. (°)	DENSITY (°)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)						
		8.00	LAMINITE: dark grey shale; interlaminated with pale grey, fine grained sandstone (<30%). Ashfield Shale.																	
	22																			
	9																			
	21																			
	10																			
	20																			
		11																		
	19																			
		12	Borehole discontinued at 11.64m depth. Target Depth Reached.																	
		13																		
		14																		
		15																		

NOTES: ^(#)Soil origin is "probable" unless otherwise stated. ^(°)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

NOTES: ° Soil origin is "probable" unless otherwise stated. ° Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Bobcat
METHOD: AD/T to 2.95m, then NMLC to 11.64m
REMARKS: * BD4/20250409 taken from 0.8-1.0m

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MILERS
CASING: HW to 2.75m

Refer to explanatory notes for symbol and abbreviation definitions



CORE PHOTO LOG

CLIENT: Newington College

PROJECT: Newington Masterplan

LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 30.4 AHD

COORDINATE: E:330087.8, N:6247716.6

DATUM/GRID: MGA2020 Zone 56

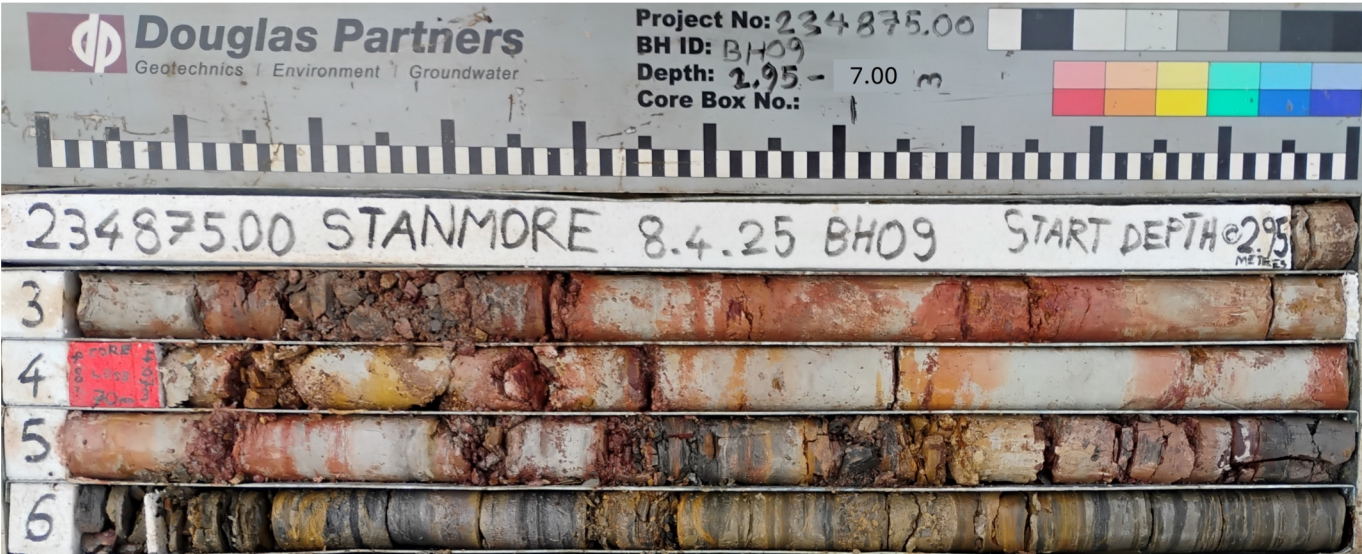
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH09

PROJECT No: 234875.00

DATE: 08/04/25

SHEET: 1 of 1



2.95-7.00 m depth



7.00-11.64 m depth

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 30.7 AHD
COORDINATE: E:330037.0, N:6247707.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH10
PROJECT No: 234875.00
DATE: 28/04/25 - 29/04/25
SHEET: 1 of 2

CONDITIONS ENCOUNTERED																SAMPLE		TESTING		
GROUNDWATER	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK							SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	
				ORIGIN ^(#)	CONSIS. ^(*) DENSITY. ^(*)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS							
28/04/25 NFGWOWA	0.04	CONCRETE PAVERS.		FILL		w<PL									D		0.05	PID	<1ppm	
	0.30	FILL / SAND trace clay trace gravel: pale brown and brown; fine to coarse; fine to coarse, sandstone gravel; brick fragments.		FILL											ES		0.25	PID	<1ppm	
	0.90	FILL / Sandy CLAY trace organics trace gravel: dark brown; fine to coarse sand; decomposed organics; fine to medium, sandstone gravel.		RS	ND	w=PL									D/ES		0.50	PID	<1ppm	
	1.60	CLAY (CI-CH) trace gravel: grey mottled red-orange-brown; medium to high plasticity; fine, ironstone gravel.															1.00	PID	<1ppm	
	2.12	CLAY (CI-CH): grey and red-brown; medium to high plasticity; with very low strength siltstone bands and medium strength iron indurated bands, extremely weathered Ashfield Shale.		XWM	H	NDF			100	0							1.20	PID	<1ppm	
	3.70	CORE LOSS (530mm).		NA	ND	ND			42	0							1.30	PID	<1ppm	
	4.23			XWM	H	NDF			22	0							1.70	PID	<1ppm	
	4.50	SANDSTONE: dark grey and orange-brown; with medium strength ironstone bands up to 50mm thick. Ashfield Shale.															2.00	PID	<1ppm	
	5.83	SILTSTONE: dark grey and brown. Ashfield Shale.																2.12	PLT	PL(A)=0.02MPa
	6.91	CORE LOSS (50mm).																2.21	PLT	PL(A)=0.04MPa
	7.04																	3.54	PLT	PL(A)=0.01MPa
	7.65																	3.92	PLT	PL(A)=0.03MPa
	7.90																	4.32	PLT	PL(A)=0.03MPa
	8.00																	4.32	PLT	PL(A)=0.49MPa
	8.10																	4.32	PLT	PL(A)=0.05MPa
	8.20																	4.32	PLT	PL(A)=0.05MPa
8.30																	4.32	PLT	PL(A)=0.11MPa	
8.40																	5.38	PLT	PL(A)=0.33MPa	
8.50																	5.38	PLT	PL(A)=0.03MPa	
8.60																	5.38	PLT	PL(A)=0.09MPa	
8.70																	5.38	PLT	PL(A)=0.04MPa	
8.80																	5.38	PLT	PL(A)=0.11MPa	
8.90																	5.38	PLT	PL(A)=0.08MPa	
9.00																	5.38	PLT	PL(A)=0.08MPa	
9.10																	5.38	PLT	PL(A)=0.08MPa	
9.20																	5.38	PLT	PL(A)=0.08MPa	
9.30																	5.38	PLT	PL(A)=0.08MPa	
9.40																	5.38	PLT	PL(A)=0.08MPa	
9.50																	5.38	PLT	PL(A)=0.08MPa	
9.60																	5.38	PLT	PL(A)=0.08MPa	
9.70																	5.38	PLT	PL(A)=0.08MPa	
9.80																	5.38	PLT	PL(A)=0.08MPa	
9.90																	5.38	PLT	PL(A)=0.08MPa	
10.00																	5.38	PLT	PL(A)=0.08MPa	
10.10																	5.38	PLT	PL(A)=0.08MPa	
10.20																	5.38	PLT	PL(A)=0.08MPa	
10.30																	5.38	PLT	PL(A)=0.08MPa	
10.40																	5.38	PLT	PL(A)=0.08MPa	
10.50																	5.38	PLT	PL(A)=0.08MPa	
10.60																	5.38	PLT	PL(A)=0.08MPa	
10.70																	5.38	PLT	PL(A)=0.08MPa	
10.80																	5.38	PLT	PL(A)=0.08MPa	
10.90																	5.38	PLT	PL(A)=0.08MPa	
11.00																	5.38	PLT	PL(A)=0.08MPa	
11.10																	5.38	PLT	PL(A)=0.08MPa	
11.20																	5.38	PLT	PL(A)=0.08MPa	
11.30																	5.38	PLT	PL(A)=0.08MPa	
11.40																	5.38	PLT	PL(A)=0.08MPa	
11.50																	5.38	PLT	PL(A)=0.08MPa	
11.60																	5.38	PLT	PL(A)=0.08MPa	
11.70																	5.38	PLT	PL(A)=0.08MPa	
11.80																	5.38	PLT	PL(A)=0.08MPa	
11.90																	5.38	PLT	PL(A)=0.08MPa	
12.00																	5.38	PLT	PL(A)=0.08MPa	
12.10																	5.38	PLT	PL(A)=0.08MPa	
12.20																	5.38	PLT	PL(A)=0.08MPa	
12.30																	5.38	PLT	PL(A)=0.08MPa	
12.40																	5.38	PLT	PL(A)=0.08MPa	
12.50																	5.38	PLT	PL(A)=0.08MPa	
12.60																	5.38	PLT	PL(A)=0.08MPa	
12.70																	5.38	PLT	PL(A)=0.08MPa	
12.80																	5.38	PLT	PL(A)=0.08MPa	
12.90																	5.38	PLT	PL(A)=0.08MPa	
13.00																	5.38	PLT	PL(A)=0.08MPa	
13.10																	5.38	PLT	PL(A)=0.08MPa	
13.20																	5.38	PLT	PL(A)=0.08MPa	
13.30																	5.38	PLT	PL(A)=0.08MPa	
13.40																	5.38	PLT	PL(A)=0.08MPa	
13.50																	5.38	PLT	PL(A)=0.08MPa	
13.60																	5.38	PLT	PL(A)=0.08MPa	
13.70																	5.38	PLT	PL(A)=0.08MPa	
13.80																	5.38	PLT	PL(A)=0.08MPa	
13.90																	5.38	PLT	PL(A)=0.08MPa	
14.00																	5.38	PLT	PL(A)=0.08MPa	
14.10																	5.38	PLT	PL(A)=0.08MPa	
14.20																	5.38	PLT	PL(A)=0.08MPa	
14.30																	5.38	PLT	PL(A)=0.08MPa	
14.40																	5.38	PLT	PL(A)=0.08MPa	
14.50																	5.38	PLT	PL(A)=0.08MPa	
14.60																	5.38	PLT	PL(A)=0.08MPa	
14.70																	5.38	PLT	PL(A)=0.08MPa	
14.80																	5.38	PLT	PL(A)=0.08MPa	
14.90																	5.38	PLT	PL(A)=0.08MPa	
15.00																	5.38	PLT	PL(A)=0.08MPa	
15.10																	5.38	PLT	PL(A)=0.08MPa	
15.20																	5.38	PLT	PL(A)=0.08MPa	
15.30																	5.38	PLT	PL(A)=0.08MPa	
15.40																	5.38	PLT	PL(A)=0.08MPa	
15.50																	5.38	PLT	PL(A)=0.08MPa	
15.60																	5.38	PLT	PL(A)=0.08MPa	
15.70																	5.38	PLT	PL(A)=0.08MPa	
15.80																	5.38	PLT	PL(A)=0.08MPa	
15.90																	5.38	PLT	PL(A)=0.08MPa	
16.00																	5.38	PLT	PL(A)=0.08MPa	
16.10																	5.38	PLT	PL(A)=0.08MPa	
16.20																	5.38	PLT	PL(A)=0.08MPa	
16.30																	5.38	PLT	PL(A)=0.08MPa	
16.40																	5.38	PLT	PL(A)=0.08MPa	
16.50																	5.38	PLT	PL(A)=0.08MPa	
16.60																	5.38	PLT	PL(A)=0.08MPa	
16.70																	5.38	PLT	PL(A)=0.08MPa	
16.80																	5.38	PLT	PL(A)=0.08MPa	
16.90																	5.38	PLT	PL(A)=0.08MPa	
17.00																	5.38	PLT	PL(A)=0.08MPa	
17.10																	5.38	PLT	PL(A)=0.08MPa	
17.20																	5.38	PLT	PL(A)=0.08MPa	
17.30																	5.38	PLT	PL(A)=0.08MPa	
17.40																	5.38	PLT	PL(A)=0.08MPa	
17.50																	5.38	PLT	PL(A)=0.08MPa	
17.60																	5.38	PLT	PL(A)=0.08MPa	
17.70																				

PLANT: Proline

OPERATOR: Tightsite (Ben B)

LOGGED: E.MILERS

METHOD: HA to 2.12m, then NMLC to 11.64m

CASING: HQ to 2.1m

REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions



BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 30.7 AHD
COORDINATE: E:330037.0, N:6247707.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH10
PROJECT No: 234875.00
DATE: 28/04/25 - 29/04/25
SHEET: 2 of 2

CONDITIONS ENCOUNTERED														SAMPLE		TESTING			
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK						SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
					ORIGIN ^(#)	CONSIS. ^(*)	DENSITY ^(*)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD						
		8.00	SILTSTONE: dark grey and brown. Ashfield Shale [continued].																
		8.40	LAMINITE: dark grey shale (60%); interlaminated with pale grey (40%), fine grained sandstone laminations. Ashfield Shale.																
		9	9.20m: (Inferred fault zone) Bedding displaced and rotated from 9.2m-9.7m.																
		10.00	SILTSTONE: dark grey; with 15% pale grey, fine grained sandstone laminations.																
		11																	
		12	Borehole discontinued at 11.64m depth. Target Depth Reached.																
		13																	
		14																	
		15																	

NOTES: ^(#)Soil origin is "probable" unless otherwise stated. ^(*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

NOTES: ^(I)Soil origin is "probable" unless otherwise stated. ^(I)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Proline
METHOD: HA to 2.12m, then NMLC to 11.64m
REMARKS:

OPERATOR: Tightsite (Ben B)

LOGGED: E.MILERS
CASING: HQ to 2.1m

Refer to explanatory notes for symbol and abbreviation definitions



CORE PHOTO LOG

CLIENT: Newington College

PROJECT: Newington Masterplan

LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 30.7 AHD

COORDINATE: E:330037.0, N:6247707.1

DATUM/GRID: MGA2020 Zone 56

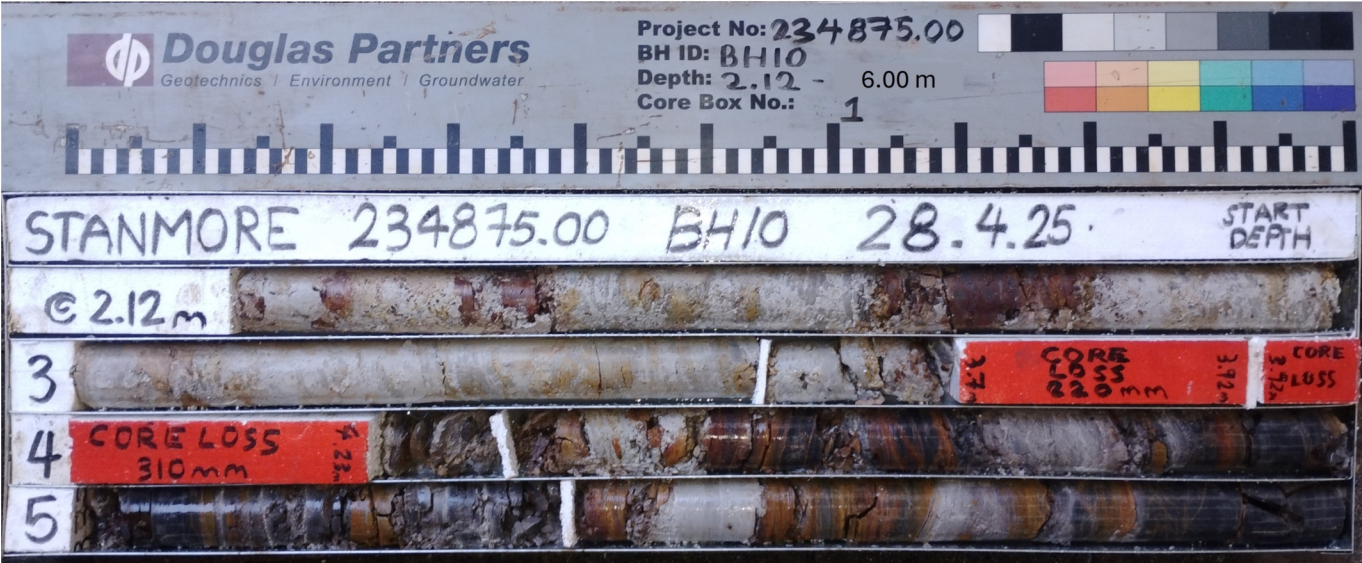
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH10

PROJECT No: 234875.00

DATE: 28/04/25 - 29/04/25

SHEET: 1 of 2



2.12-6.00 m depth



6.00-10.00 m depth

CORE PHOTO LOG

CLIENT: Newington College

PROJECT: Newington Masterplan

LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 30.7 AHD

COORDINATE: E:330037.0, N:6247707.1

DATUM/GRID: MGA2020 Zone 56

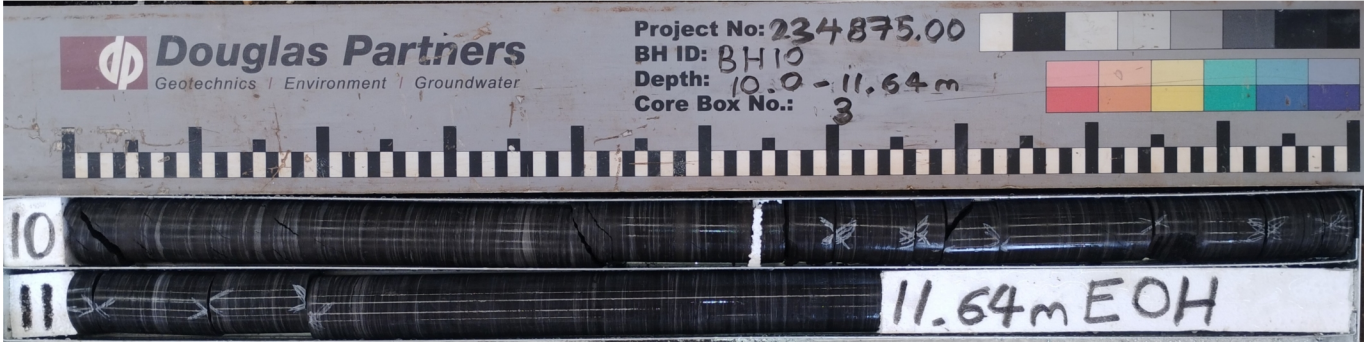
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH10

PROJECT No: 234875.00

DATE: 28/04/25 - 29/04/25

SHEET: 2 of 2



10.00-11.64 m depth

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 33.0 AHD
COORDINATE: E:330134.1, N:6247760.5
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH11
PROJECT No: 234875.00
DATE: 09/04/25 - 10/04/25
SHEET: 1 of 2

CONDITIONS ENCOUNTERED														SAMPLE		TESTING			
GROUNDWATER	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK							SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
				ORIGIN ^(#)	CONSIS. ^(*) DENSITY. ^(*)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS						
09/04/25 NFGWOWA	0.06	CONCRETE PAVER.			NA	NA													
	0.12	PAVER BASE SAND.																	
	0.24	CONCRETE.																	
	0.34	FILL / GRAVEL: grey; igneous, road base.		FILL		NDF													
	0.50	FILL / Silty CLAY trace sand trace gravel: dark brown; fine sand; fine gravel.		FILL		w<PL													
	1	FILL / Silty SAND: pale brown and grey; fine to medium.		FILL	ND	D									ES	0.50-0.60	PID	<1ppm	
	2	CLAY (CI-CH): grey mottled red-brown; medium to high plasticity.													ES	0.80-1.00	PID	<1ppm	
	2.30	CLAY (CI-CH): grey mottled red-orange-brown; medium to high plasticity; with ironstone gravel and bands.													SPT	1.20	SPT	4,7,6 N=13	
	3														ES	1.45-1.50	PID	<1ppm	
	3.30																		
	4																		
	5																		
	5.90	CLAY (CI-CH): grey and brown; medium to high plasticity; with bands of ironstone and very low strength siltstone.																	
	6																		
	6.70	SILTSTONE: dark grey and orange-brown; 20-30% extremely weathered material. Ashfield Shale.																	
	7																		
NOTES: ^(#) Soil origin is "probable" unless otherwise stated. ^(*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.																			

PLANT: Bobcat
METHOD: DT to 0.34m, then AD/T to 2m, then WB to 5.9m, then NMLC to 12.98m
REMARKS:

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MILERS

CASING: HW to 2m

Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 33.0 AHD
COORDINATE: E:330134.1, N:6247760.5
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH11
PROJECT No: 234875.00
DATE: 09/04/25 - 10/04/25
SHEET: 2 of 2

CONDITIONS ENCOUNTERED														SAMPLE					
GROUNDWATER	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK							SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
				ORIGIN (#)	CONSIS. ⁽¹⁾ DENSITY. ⁽¹⁾	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS						
	8.70	[CONT] SILTSTONE: dark grey and orange-brown; 20-30% extremely weathered material. Ashfield Shale.					XW HW		VL L				8.05m: JT, 30°, PR, SN Fe, SM 8.15-8.50m DS, 350mm						
	9	SILTSTONE: dark grey. Ashfield Shale.						8.70		100	21		8.62-8.70m: DS, 80mm 8.80m JT, 60°, PR, CT Clay, SM 9.00m: JT, 85°, PR, Tl, (8.88-9.05) 9.10m: JT, 50°, PR, CN, SM			9	PLT	PL(A)=0.55MPa	
	10.00	LAMINITE: dark grey shale (50%); interlaminated with fine grained pale grey sandstone (50%).											9.43-9.50m: JT x2, 30-60°, PR, CN, SM, fragmented 9.75-9.90m: JT x2, 60-70°, PR, CN, SM			10	PLT PLT	PL(A)=0.23MPa PL(A)=0.42MPa PL(A)=0.38MPa	
	11						FR	11.00					10.78-10.95m: B x4, 0-10°, PR, CT Clay, SM 11.05m: EW, Clay 10mm 11.10m: B, 0°, PR, VNR Clay, SM 11.25m JT, 30-50°, ST, CN, SM			11	PLT	PL(A)=0.33MPa PL(A)=0.97MPa	
	12									100	66		12.32m: B, 5°, PR, VNR Clay, SM 12.36m: B, 0°, PR, VNR Clay, SM 12.69m B 0°, PR, CN, SM			12	PLT	PL(A)=0.92MPa	
	13	Borehole discontinued at 12.98m depth. Target Depth Reached.																	
	14																		
	15																		

NOTES: ⁽¹⁾Soil origin is "probable" unless otherwise stated. ⁽²⁾Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

NOTES: (I) Soil origin is "probable" unless otherwise stated. (I) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Bobcat
METHOD: DT to 0.34m, then AD/T to 2m, then WB to 5.9m, then NMLC to 12.98m
REMARKS:

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MILERS

CASING: HW to 2m

Refer to explanatory notes for symbol and abbreviation definitions



CORE PHOTO LOG

CLIENT: Newington College

PROJECT: Newington Masterplan

LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 33.0 AHD

COORDINATE: E:330134.1, N:6247760.5

DATUM/GRID: MGA2020 Zone 56

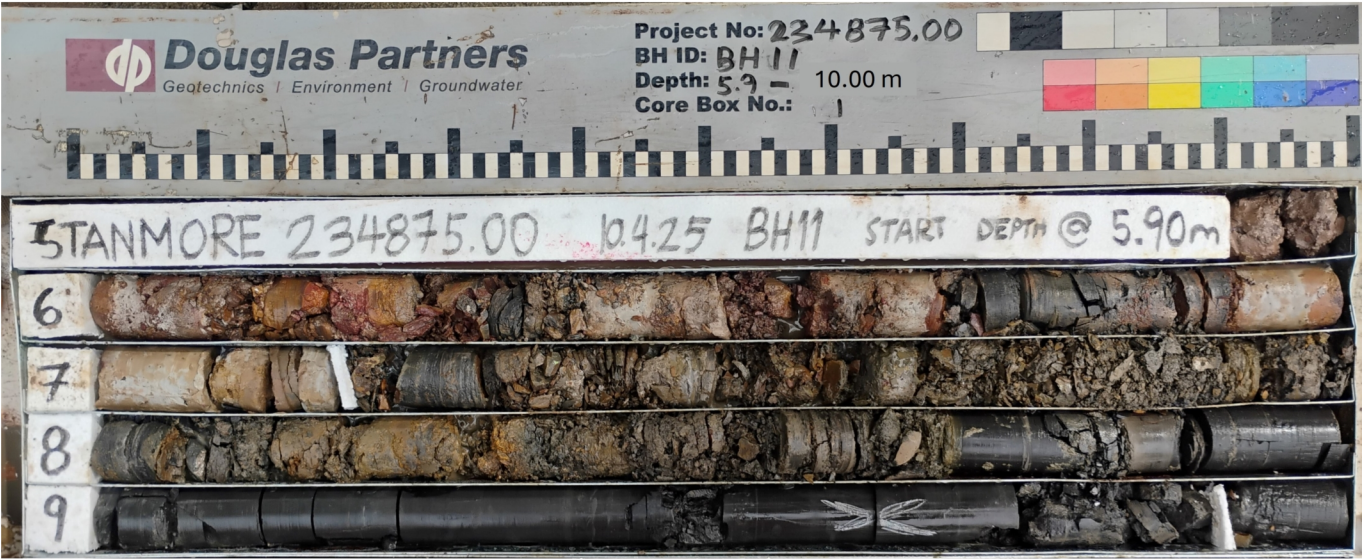
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH11

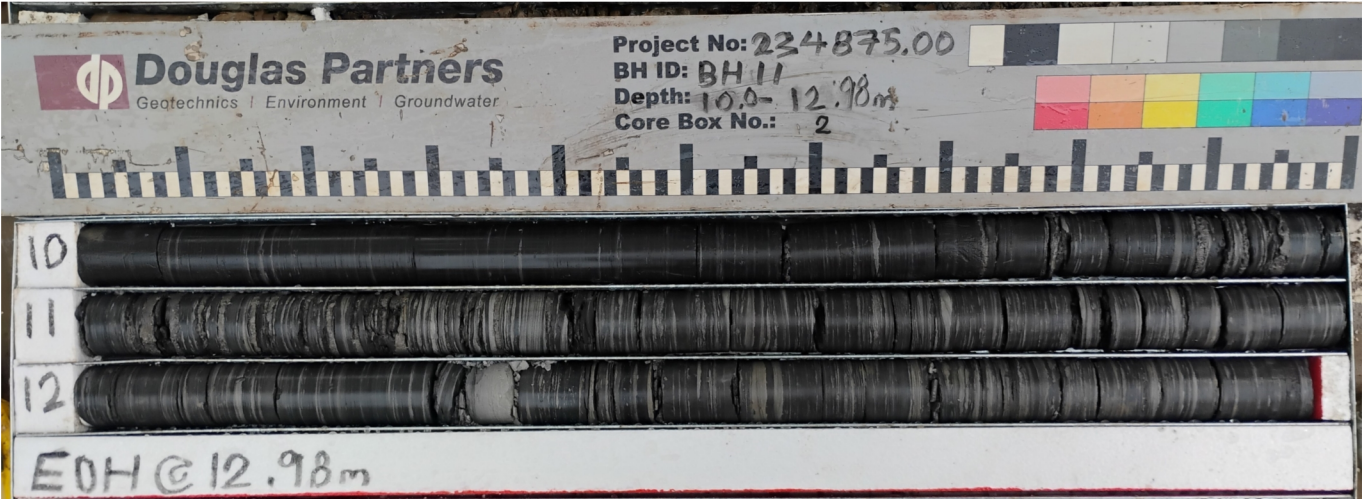
PROJECT No: 234875.00

DATE: 09/04/25 - 10/04/25

SHEET: 1 of 1



5.90-10.00 m depth



10.00-12.98 m depth

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 33.7 AHD
COORDINATE: E:330153.3, N:6247775.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH12
PROJECT No: 234875.00
DATE: 10/04/25
SHEET: 1 of 2

CONDITIONS ENCOUNTERED													SAMPLE		TESTING				
GROUNDWATER	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK							SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
				ORIGIN(%)	CONSIS. (%)	DENSITY (%)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)						
10/04/25 NFGWOWA	0.06	CONCRETE PAVERS.				NA	NA												
	0.10	PAVERS.																	
	0.24	CONCRETE SLAB.																	
	0.50	FILL / GRAVEL; fine to coarse, igneous.		FILL	ND	NDF								ES	0.40 - 0.50	PID	<1ppm		
	1	FILL / Silty CLAY: dark brown; tile fragment.		FILL	VS	w<PL								ES	0.80 - 1.00	PID	<1ppm		
	1.60	FILL / Silty SAND: pale brown and grey; fine to medium.		FILL	(VL) (L)	D								SPT	1.30 - 1.50	SPT	0,1,1 N=2		
	2	CLAY (CI-CH): grey mottled red-brown; medium to high plasticity.												ES	1.80 - 2.00	PID	<1ppm		
	2.30	CLAY (CI-CH): grey mottled red-brown; medium to high plasticity.												SPT	2.50 - 2.60	SPT	3,6,6 N=12		
	3			RS	St - VSt	w<PL								ES	2.80 - 3.00	PID	<1ppm		
	4.00	CLAY (CI-CH): grey mottled red-brown; medium to high plasticity; with beds of ironstone and very low strength siltstone.												SPT	4.00 - 4.45	SPT	8,25,25 N=50		
	5			XWM	H	w=PL													
	6.50	SILTSTONE: dark grey and orange-brown. Ashfield Shale.																	
	7																		

NOTES: # Soil origin is "probable" unless otherwise stated. % Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Bobcat

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MILERS

METHOD: DT to 0.24m, then AD/T to 3m, then WB to 8.11m, then NMLC to 12.88m

CASING: HW to 3m

REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions



BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 33.7 AHD
COORDINATE: E:330153.3, N:6247775.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH12
PROJECT No: 234875.00
DATE: 10/04/25
SHEET: 2 of 2

CONDITIONS ENCOUNTERED														SAMPLE				TESTING		
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK							SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
					ORIGIN ^(#)	CONSIS. ^(*) DENSITY. ^(*)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS						
			[CONT] SILTSTONE: dark grey and orange-brown. Ashfield Shale.					HW	8.11	(VL)							8.11			
		8.40	SILTSTONE: dark grey; 1% pale grey, fine grained sandstone laminations. Ashfield Shale.					SW	8.40	(VL)								PLT	PL(A)=0.40MPa	
		9																		
		9.25																PLT	PL(A)=0.39MPa	
		10																PLT	PL(A)=0.32MPa	
		10																PLT	PL(A)=0.35MPa	
		11																PLT	PL(A)=0.51MPa	
		11.50	SILTSTONE: dark grey; 1-5% pale grey, fine grained sandstone laminations. Ashfield Shale.					FR										PLT	PL(A)=0.51MPa	
		12																		
		12.30	From 12.30m: 30-40% pale grey, fine grained sandstone laminations															PLT	PL(A)=1.1MPa	
		12.88																PLT	PL(A)=1.2MPa	
		13	Borehole discontinued at 12.88m depth. Target Depth Reached.																	
		14																		
		15																		

NOTES: [#]Soil origin is "probable" unless otherwise stated. ^{*}Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Bobcat	OPERATOR: Groundtest (J.Johnson)
METHOD: DT to 0.24m, then AD/T to 3m, then WB to 8.11m, then NMLC to 12.88m	
REMARKS:	

LOGGED: E.MILERS
CASING: HW to 3m

Refer to explanatory notes for symbol and abbreviation definitions



CORE PHOTO LOG

CLIENT: Newington College

PROJECT: Newington Masterplan

LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 33.7 AHD

COORDINATE: E:330153.3, N:6247775.0

DATUM/GRID: MGA2020 Zone 56

DIP/AZIMUTH: 90°/---°

LOCATION ID: BH12

PROJECT No: 234875.00

DATE: 10/04/25

SHEET: 1 of 1



8.11-12.88 m depth

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 31.7 AHD
COORDINATE: E:330193.8, N:6247769.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH13
PROJECT No: 234875.00
DATE: 17/04/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED														SAMPLE			TESTING AND REMARKS	
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSIS. ^(*)	DENSITY. ^(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS				
17/04/25 NFGWOWA	0.02		FILL / SYNTHETIC GRASS; 15mm thick.															
	0.07		FILL / CONCRETE SLAB; 50mm thick.		FILL					ES	0.10	PID	<1ppm					
	0.33		FILL / GRAVEL; medium to coarse, igneous.		FILL						0.20							
	0.48		FILL / CONCRETE; inferred retaining wall footing.		FILL													
			FILL / Silty Gravelly CLAY trace roots; apparent void present.		FILL													
	1		Borehole discontinued at 0.90m depth. Practical refusal on concrete rubble in fill.															
	30																	
	2																	
	25																	
	3																	
	28																	
	4																	
	27																	
	5																	
	26																	
	6																	
	25																	
	7																	
	24																	

NOTES: ^(#)Soil origin is "probable" unless otherwise stated. ^(*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

NOTES: #Soil origin is "probable" unless otherwise stated. %Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Bobcat
METHOD: DT to 0.07m, then AD/T to 0.33m, then DT to 0.48m
REMARKS:

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MILERS
CASING: Uncased

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 31.3 AHD
COORDINATE: E:330220.6, N:6247752.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH14
PROJECT No: 234875.00
DATE: 14/04/25 - 15/04/25
SHEET: 1 of 2

CONDITIONS ENCOUNTERED														SAMPLE		TESTING			
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK						SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
					ORIGIN(%)	CONSIS.(%) DENSITY.(%)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)						
14/04/25 NFGWOWA		0.06	ASPHALTIC CONCRETE.			NA	NA												
		31	FILL / Silty CLAY with sand trace gravel: pale grey-brown; fine sand; fine, igneous gravel; rootlets.		FILL	ND									ES	0.10	PID	<1ppm	
															ES	0.20			
																0.40	PID	<1ppm	
																0.50			
		0.70	CLAY trace silt: red-orange-brown mottled grey; medium to high plasticity.												ES	0.80	PID	<1ppm	
		1													SPT	1.00			
																1.30	SPT	2,3,4 N=7	
															ES	1.45	PID	<1ppm	
																1.50			
											</								

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 31.3 AHD
COORDINATE: E:330220.6, N:6247752.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH14
PROJECT No: 234875.00
DATE: 14/04/25 - 15/04/25
SHEET: 2 of 2

[illegible]

PLANT: Bobcat

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MILERS

METHOD: AD/T to 2.5m, then WB to 7m, then NMLC to 12.73m

CASING: HW to 2.5m

REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions

CORE PHOTO LOG

CLIENT: Newington College

PROJECT: Newington Masterplan

LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 31.3 AHD

COORDINATE: E:330220.6, N:6247752.0

DATUM/GRID: MGA2020 Zone 56

DIP/AZIMUTH: 90°/---

LOCATION ID: BH14

PROJECT No: 234875.00

DATE: 14/04/25 - 15/04/25

SHEET: 1 of 1



7.00-12.73 m depth

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 28.9 AHD
COORDINATE: E:330206.3, N:6247718.9
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH15
PROJECT No: 234875.00
DATE: 15/04/25 - 16/04/25
SHEET: 1 of 2

CONDITIONS ENCOUNTERED														SAMPLE		TESTING					
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK						SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
					ORIGIN(%)	CONSIS.(%) DENSITY.(%)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)								
15/04/25 NFGWOWA		0.06	ASPHALTIC CONCRETE.			NA	NA														
			FILL / Sandy CLAY trace silt trace gravel: dark grey-brown; fine sand; fine, igneous gravel.		FILL	ND									ES	0.10 0.20	PID	<1ppm			
		0.70	CLAY (CI-CH) trace silt: grey mottled red-brown; medium to high plasticity.												ES	0.40 0.50	PID	<1ppm			
	28	1												B	0.70 0.80	PID	<1ppm				
					RS	F to St								ES	1.00	SPT	2,3,5 N=8				
														SPT	1.45						
		2																			
			2.50	CLAY (CI-CH): grey mottled red-brown; medium to high plasticity; with ironstone gravels.											SPT	2.50 2.95	SPT	7,11,21 N=32			
	26	3																			
					RS	w<PL									SPT	4.00 4.45	SPT	8,13,21 N=34			
		4																			
			5.50	CLAY (CI-CH): dark grey and orange-brown; medium to high plasticity; with very low strength siltstone beds, some ironstaining.											SPT	5.50 5.93	SPT	18,23,25/130			
	23	6																			
				XWM																	
	22	7												SPT	7.00 7.29	SPT	11,25/140				
	21																				

NOTES: #Soil origin is "probable" unless otherwise stated. %Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

NOTES: #Soil origin is "probable" unless otherwise stated. #Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Bobcat
METHOD: AD/T to 2.5m, then WB to 8m, then NMLC to 12.81m
REMARKS: * BD6/20250415 taken from 0.4-0.5m

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MILERS
CASING: HW to 2.6m

Refer to explanatory notes for symbol and abbreviation definitions



BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 28.9 AHD
COORDINATE: E:330206.3, N:6247718.9
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH15
PROJECT No: 234875.00
DATE: 15/04/25 - 16/04/25
SHEET: 2 of 2

CONDITIONS ENCOUNTERED														SAMPLE		TESTING						
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK							SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
					ORIGIN (#)	CONSIS. ⁽¹⁾	DENSITY ⁽¹⁾	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)								
		8.00	LAMINITE: dark grey shale (45%); interlaminated with fine grained, pale grey sandstone (55%). Ashfield Shale.											8.02m: JT, 30°, PR, SN Fe			8.00					
		9												8.05-815m: DS, 60mm				PLT	PL(A)=0.04MPa			
														8.10-109m: 40°, PR, SN Fe				PLT	PL(A)=0.02MPa			
														8.23-8.40m: B x5, 0°, PR, CT Clay				PLT	PL(A)=0.15MPa			
														8.45-853m: DS, 80mm				PLT	PL(A)=0.46MPa			
														8.56-875m: B x9, 0-10°, PR, CT Clay				PLT	PL(A)=0.72MPa			
														8.75-885m: DS, 100mm				PLT	PL(A)=0.87MPa			
														8.88-8.95m: DS, 70mm				PLT	PL(A)=1.9MPa			
														9.02m: EW, Clay 30mm				PLT	PL(A)=0.72MPa			
														9.06-9.42m: B x7, 0-10°, PR, CT Clay 1mm, SM				PLT	PL(A)=1.0MPa			
														9.92m: B, 5°, PR, VNR Clay, SM				PLT	PL(A)=0.23MPa			
														10.48-10.56m DS, 60mm				PLT	PL(A)=1.4MPa			
																		PLT	PL(A)=1.2MPa			
																		PLT	PL(A)=2.8MPa			
																		PLT	PL(A)=2.4MPa			
																		PLT	PL(A)=3.0MPa			
																		PLT	PL(A)=2.0MPa			
		12.81	Borehole discontinued at 12.81m depth. Target Depth Reached.											11.64m JT, 40-90°, CU, CN, SM, (11.59-11.75m)								
		13																				
		14																				
		15																				

NOTES: ⁽¹⁾Soil origin is "probable" unless otherwise stated. ⁽¹⁾Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

NOTES: ¹Soil origin is "probable" unless otherwise stated. ²Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Bobcat
METHOD: AD/T to 2.5m, then WB to 8m, then NMLC to 12.81m
REMARKS: * BD6/20250415 taken from 0.4-0.5m

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MILERS
CASING: HW to 2.6m



Refer to explanatory notes for symbol and abbreviation definitions

CORE PHOTO LOG

CLIENT: Newington College

PROJECT: Newington Masterplan

LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 28.9 AHD

COORDINATE: E:330206.3, N:6247718.9

DATUM/GRID: MGA2020 Zone 56

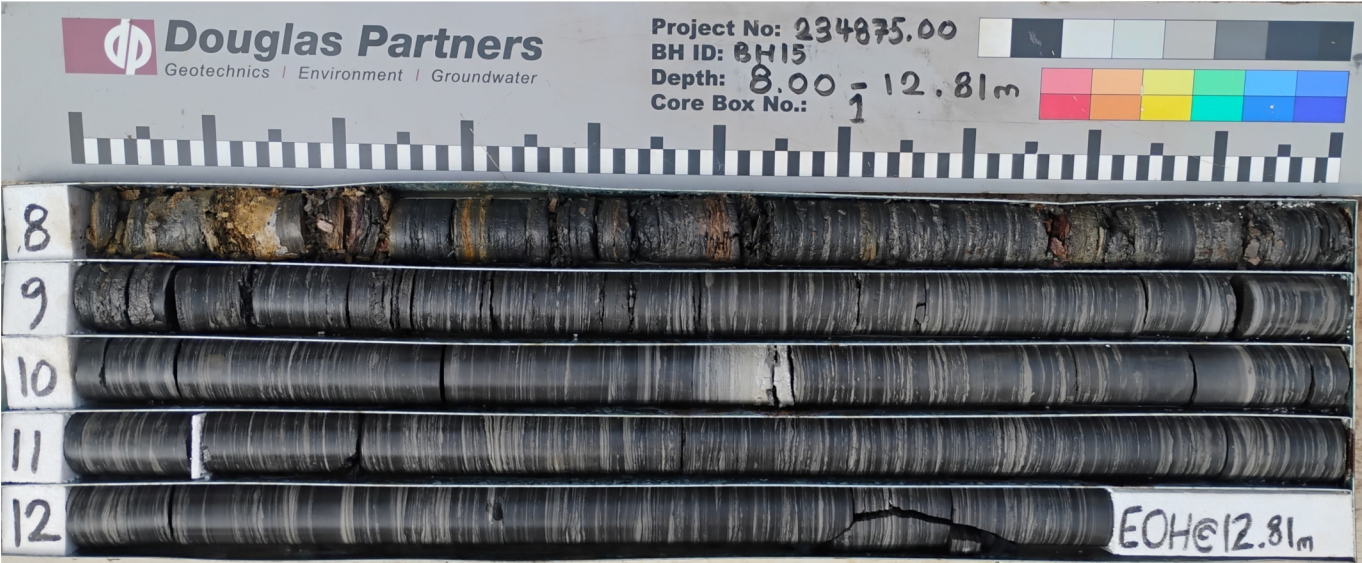
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH15

PROJECT No: 234875.00

DATE: 15/04/25 - 16/04/25

SHEET: 1 of 1



8.00-12.81 m depth

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 29.6 AHD
COORDINATE: E:330175.3, N:6247737.4
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH16
PROJECT No: 234875.00
DATE: 16/04/25
SHEET: 1 of 2

CONDITIONS ENCOUNTERED													SAMPLE		TESTING						
GROUNDWATER	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK							SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
				ORIGIN(%)	CONSIS.(%)	DENSITY.(%)	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS								
16/04/25 NFGWOWA	0.08	ASPHALTIC PAVERS.		FILL	NA	NA								ES	0.10	PID	<1ppm				
	0.25	FILL / Gravelly SAND with clay; fine; fine to coarse gravel.		FILL		M															
	0.55	FILL / SAND with clay trace gravel: pale brown; fine to medium; fine gravel.		FILL	ND									ES	0.60	PID	<1ppm				
	0.95	FILL / Sandy CLAY trace gravel: brown; fine - medium sand; fine - coarse gravel.		FILL										ES	0.80	PID	<1ppm				
														SPT	0.95	PID	<1ppm				
		CLAY (CI-CH) trace silt: red-brown mottled grey; medium to high plasticity.			F									ES	1.30	SPT	3,3,2 N=5				
														B	1.50	PID	<1ppm				
					RS																
														SPT	2.50	SPT PP	2,5,5 N=10 240-300kPa				
	4.00	CLAY (CI-CH): red-brown mottled grey; medium to high plasticity; ironstained, with bands of very low strength siltstone.			w<PL									SPT	4.00	SPT PP	8,16,22 N=38 450-600kPa				
				XWM	H																

PLANT: Bobcat

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MILERS

METHOD: DT to 0.08m, then AD/T to 2.5m, then WB to 8m, then NMLC to 12.84m

CASING: HW to 2.5m

REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions



BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 29.6 AHD
COORDINATE: E:330175.3, N:6247737.4
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH16
PROJECT No: 234875.00
DATE: 16/04/25
SHEET: 2 of 2

CONDITIONS ENCOUNTERED													SAMPLE		TESTING					
GROUNDWATER	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL			ROCK						SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
				ORIGIN ^(#)	CONSIS. ^(*)	DENSITY. ^(*)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD								
	8.00	CORE LOSS (320mm).														8.00				
	8.32	SILTSTONE: dark grey and brown; ironstained. Ashfield Shale.																		
	8.90	SILTSTONE: dark grey; 20-30% pale grey, fine grained sandstone laminations. Ashfield Shale.																		
	9.00																			
	9.20																			
	9.40																			
	9.60																			
	9.80																			
	10.00																			
	10.20																			
	10.40																			
	10.60																			
	10.80																			
	11.00																			
	11.20																			
	11.40																			
	11.60																			
	11.80																			
	12.00																			
	12.20																			
	12.40																			
	12.60																			
	12.80																			
	12.84	Borehole discontinued at 12.84m depth. Target Depth Reached.																		
	13.00																			
	13.20																			
	13.40																			
	13.60																			
	13.80																			
	14.00																			
	14.20																			
	14.40																			
	14.60																			
	14.80																			
	15.00																			

NOTES: ^(#)Soil origin is "probable" unless otherwise stated. ^(*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Bobcat **OPERATOR:** Groundtest (J.Johnson)
METHOD: DT to 0.08m, then AD/T to 2.5m, then WB to 8m, then NMLC to 12.84m
REMARKS:

LOGGED: E.MILERS
CASING: HW to 2.5m

Refer to explanatory notes for symbol and abbreviation definitions



CORE PHOTO LOG

CLIENT: Newington College

PROJECT: Newington Masterplan

LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 29.6 AHD

COORDINATE: E:330175.3, N:6247737.4

DATUM/GRID: MGA2020 Zone 56

DIP/AZIMUTH: 90°/---°

LOCATION ID: BH16

PROJECT No: 234875.00

DATE: 16/04/25

SHEET: 1 of 1



8.00-12.84 m depth

Introduction to Terminology, Symbols and Abbreviations

Douglas Partners' reports, investigation logs, and other correspondence may use terminology which has quantitative or qualitative connotations. To remove ambiguity or uncertainty surrounding the use of such terms, the following sets of notes pages may be attached Douglas Partners' reports, depending on the work performed and conditions encountered:

- Soil Descriptions;
- Rock Descriptions; and
- Sampling, insitu testing, and drilling methodologies

In addition to these pages, the following notes generally apply to most documents.

Abbreviation Codes

Site conditions may also be presented in a number of different formats, such as investigation logs, field mapping, or as a written summary. In some of these formats textual or symbolic terminology may be presented using textual abbreviation codes or graphic symbols, and, where commonly used, these are listed alongside the terminology definition. For ease of identification in these note pages, textual codes are presented in these notes in the following style **XW**. Code usage conforms with the following guidelines:

- Textual codes are case insensitive, although herein they are generally presented in upper case; and
- Textual codes are contextual (i.e. the same or similar combinations of characters may be used in different contexts with different meanings (for example `PL` is used for plastic limit in the context of soil moisture condition, as well as in `PL(A)` for point load test result in the testing results column)).

Data Integrity Codes

Subsurface investigation data recorded by Douglas Partners is generally managed in a highly structured database environment, where records "span" between a top and bottom depth interval. Depth interval "gaps" between records are considered to introduce ambiguity, and, where appropriate, our practice guidelines may require contiguous data sets. Recording meaningful data is not always appropriate (for example assigning a "strength" to a concrete pavement) and the following codes may be used to maintain contiguity in such circumstances.

Term	Description	Abbreviation Code
Core loss	No core recovery	KL
Unknown	Information was not available to allow classification of the property. For example, when auguring in loose, saturated sand auger cuttings may not be returned.	UK
No data	Information required to allow classification of the property was not available. For example if drilling is commenced from the base of a hole predrilled by others	ND
Not Applicable	Derivation of the properties not appropriate or beyond the scope of the investigation. For example providing a description of the strength of a concrete pavement	NA

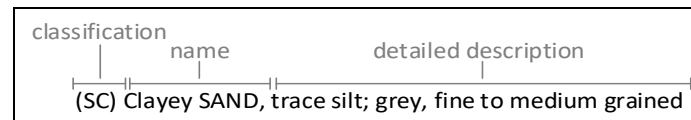
Graphic Symbols

Douglas Partners' logs contain a "graphic" column which provides a pictorial representation of the basic composition of the material. The symbols used are directly representing the material name stated in the adjacent "Description of Strata" column, and as such no specific graphic symbology legend has been provided in these notes.

intentionally blank

Introduction

All materials which are not considered to be “in-situ rock” are described in general accordance with the soil description model of AS 1726-2017 Part 6.1.3, and can be broken down into the following description structure:



The “classification” comprises a two character “group symbol” providing a general summary of dominant soil characteristics. The “name” summarises the particle sizes within the soil which most influence its behaviour. The detailed description presents more information about composition, condition, structure, and origin of the soil.

Classification, naming and description of soils require the relative proportion of particles of different sizes within the whole soil mixture to be considered.

Particle size designation and Behaviour Model

Solid particles within a soil are differentiated on the basis of size.

The engineering behaviour properties of a soil can subsequently be modelled to be either “fine grained” (also known as “cohesive” behaviour) or “coarse grained” (“non cohesive” behaviour), depending on the relative proportion of fine or coarse fractions in the soil mixture.

Particle Size Designation	Particle Size (mm)	Behaviour Model	
		Behaviour	Approximate Dry Mass
Boulder	>200	Excluded from particle behaviour model as “oversize”	
Cobble	63 - 200		
Gravel ¹	2.36 - 63	Coarse	>65%
Sand ¹	0.075 - 2.36		
Silt	0.002 - 0.075	Fine	>35%
Clay	<0.002		

¹ – refer grain size subdivision descriptions below

The behaviour model boundaries defined above are not precise, and the material behaviour should be assumed from the name given to the material (which considers the particle fraction which dominates the behaviour, refer “component proportions” below), rather than strict observance of the proportions of particle sizes. For example, if a material is named a “Sandy CLAY”, this is indicative that the material exhibits fine grained behaviour, even if the dry mass of coarse grained material may exceed 65%.

Component proportions

The relative proportion of the dry mass of each particle size fraction is assessed to be a “primary”, “secondary”, or “minor” component of the soil mixture, depending on its influence over the soil behaviour.

Component Proportion Designation	Definition ¹	Relative Proportion	
		In Fine Grained Soil	In Coarse Grained Soil
Primary	The component (particle size designation, refer above) which dominates the engineering behaviour of the soil	The clay/silt component with the greater proportion	The sand/gravel component with the greater proportion
Secondary	Any component which is not the primary, but is significant to the engineering properties of the soil	Any component with greater than 30% proportion	Any granular component with greater than 30%; or Any fine component with greater than 12%
Minor ²	Present in the soil, but not significant to its engineering properties	All other components	All other components

¹ As defined in AS1726-2017 6.1.4.4

² In the detailed material description, minor components are split into two further sub-categories. Refer “identification of minor components” below.

Composite Materials

In certain situations, a lithology description may describe more than one material, for example, collectively describing a layer of interbedded sand and clay. In such a scenario, the two materials would be described independently, with the names preceded or followed by a statement describing the arrangement by which the materials co-exist. For example, “INTERBEDDED Silty CLAY AND SAND”.

Classification

The soil classification comprises a two character group symbol. The first character identifies the primary component. The second character identifies either the grading or presence of fines in a coarse grained soil, or the plasticity in a fine grained soil. Refer AS1726-2017 6.1.6 for further clarification.

Soil Name

For most soils, the name is derived with the primary component included as the noun (in upper case), preceded by any secondary components stated in an adjective form. In this way, the soil name also describes the general composition and indicates the dominant behaviour of the material.

Component ¹	Prominence in Soil Name
Primary	Noun (eg "CLAY")
Secondary	Adjective modifier (eg "Sandy")
Minor	No influence

¹ – for determination of component proportions, refer component proportions on previous page

For materials which cannot be disaggregated, or which are not comprised of rock or mineral fragments, the names "ORGANIC MATTER" or "ARTIFICIAL MATERIAL" may be used, in accordance with AS1726-2017 Table 14.

Commercial or colloquial names are not used for the soil name where a component derived name is possible (for example "Gravelly SAND" rather than "CRACKER DUST").

Materials of "fill" or "topsoil" origin are generally assigned a name derived from the primary/secondary component (where appropriate). In log descriptions this is preceded by uppercase "FILL" or "TOPSOIL". Origin uncertainty is indicated in the description by the characters (?), with the degree of uncertainty described (using the terms "probably" or "possibly" in the origin column, or at the end of the description).

Identification of minor components

Minor components are identified in the soil description immediately following the soil name. The minor component fraction is usually preceded with a term indicating the relative proportion of the component.

Minor Component Proportion Term	Relative Proportion	
	In Fine Grained Soil	In Coarse Grained Soil
With	All fractions: 15-30%	Clay/silt: 5-12% sand/gravel: 15-30%
Trace	All fractions: 0-15%	Clay/silt: 0-5% sand/gravel: 0-15%

The terms "with" and "trace" generally apply only to gravel or fine particle fractions. Where cobbles/boulders are encountered in minor proportions (generally less than about 12%) the term "occasional" may be used. This term describes the sporadic distribution of the material within the confines of the investigation excavation only, and there may be considerable variation in proportion over a wider area which is difficult to factually characterise due to the relative size of the particles and the investigation methods.

Soil Composition

Plasticity

Descriptive Term	Laboratory liquid limit range	
	Silt	Clay
Non-plastic materials	Not applicable	Not applicable
Low plasticity	≤50	≤35
Medium plasticity	Not applicable	>35 and ≤50
High plasticity	>50	>50

Note, Plasticity descriptions generally describe the plasticity behaviour of the whole of the fine grained soil, not individual fine grained fractions.

Grain Size

Type	Particle size (mm)	
	Gravel	Sand
Gravel	Coarse	19 - 63
	Medium	6.7 - 19
	Fine	2.36 - 6.7
Sand	Coarse	0.6 - 2.36
	Medium	0.21 - 0.6
	Fine	0.075 - 0.21

Grading

Grading Term	Particle size (mm)
Well	A good representation of all particle sizes
Poorly	An excess or deficiency of particular sizes within the specified range
Uniformly	Essentially of one size
Gap	A deficiency of a particular size or size range within the total range

Note, AS1726-2017 provides terminology for additional attributes not listed here.

Soil Condition

Moisture

The moisture condition of soils is assessed relative to the plastic limit for fine grained soils, while for coarse grained soils it is assessed based on the appearance and feel of the material. The moisture condition of a material is considered to be independent of stratigraphy (although commonly these are related), and this data is presented in its own column on logs.

Applicability	Term	Tactile Assessment	Abbreviation code
Fine	Dry of plastic limit	Hard and friable or powdery	w<PL
	Near plastic limit	Can be moulded	w=PL
	Wet of plastic limit	Water residue remains on hands when handling	w>PL
	Near liquid limit	"oozes" when agitated	w=LL
	Wet of liquid limit	"oozes"	w>LL
Coarse	Dry	Non-cohesive and free running	D
	Moist	Feels cool, darkened in colour, particles may stick together	M
	Wet	Feels cool, darkened in colour, particles may stick together, free water forms when handling	W

The abbreviation code **NDF**, meaning "not-assessable due to drilling fluid use" may also be used.

Note, observations relating to free ground water or drilling fluids are provided independent of soil moisture condition.

Consistency/Density/Compaction/Cementation/Extremely Weathered Material

These concepts give an indication of how the material may respond to applied forces (when considered in conjunction with other attributes of the soil). This behaviour can vary independent of the composition of the material, and on logs these are described in an independent column and are generally mutually exclusive (i.e it is inappropriate to describe both consistency and compaction at the same time). The method by which the behaviour is described depends on the behaviour model and other characteristics of the soil as follows:

- In fine grained soils, the "consistency" describes the ease with which the soil can be remoulded, and is generally correlated against the materials undrained shear strength;
- In granular materials, the relative density describes how tightly packed the particles are, and is generally correlated against the density index;
- In anthropogenically modified materials, the compaction of the material is described qualitatively;
- In cemented soils (both natural and anthropogenic), the cemented "strength" is described qualitatively, relative to the difficulty with which the material is disaggregated; and
- In soils of extremely weathered material origin, the engineering behaviour may be governed by relic rock features, and expected behaviour needs to be assessed based the overall material description.

Quantitative engineering performance of these materials may be determined by laboratory testing or estimated by correlated field tests (for example penetration or shear vane testing). In some cases, performance may be assessed by tactile or other subjective methods, in which case investigation logs will show the estimated value enclosed in round brackets, for example (VS).

Consistency (fine grained soils)

Consistency Term	Tactile Assessment	Undrained Shear Strength (kPa)	Abbreviation Code
Very soft	Extrudes between fingers when squeezed	<12	VS
Soft	Mouldable with light finger pressure	>12 - ≤25	S
Firm	Mouldable with strong finger pressure	>25 - ≤50	F
Stiff	Cannot be moulded by fingers	>50 - ≤100	St
Very stiff	Indented by thumbnail	>100 - ≤200	VSt
Hard	Indented by thumbnail with difficulty	>200	H
Friable	Easily crumbled or broken into small pieces by hand	-	Fr

Relative Density (coarse grained soils)

Relative Density Term	Density Index	Abbreviation Code
Very loose	<15	VL
Loose	>15 - ≤35	L
Medium dense	>35 - ≤65	MD
Dense	>65 - ≤85	D
Very dense	>85	VD

Note, tactile assessment of relative density is difficult, and generally requires penetration testing, hence a tactile assessment guide is not provided.

Compaction (anthropogenically modified soil)

Compaction Term	Abbreviation Code
Well compacted	WC
Poorly compacted	PC
Moderately compacted	MC
Variably compacted	VC

Cementation (natural and anthropogenic)

Cementation Term	Abbreviation Code
Moderately cemented	MOD
Weakly cemented	WEK

Extremely Weathered Material

AS1726-2017 considers weathered material to be soil if the unconfined compressive strength is less than 0.6 MPa (i.e. less than very low strength rock). These materials may be identified as “extremely weathered material” in reports and by the abbreviation code **XWM** on log sheets. This identification is not correlated to any specific qualitative or quantitative behaviour, and the engineering properties of this material must therefore be assessed according to engineering principles with reference to any relic rock structure, fabric, or texture described in the description.

Soil Origin

Term	Description	Abbreviation Code
Residual	Derived from in-situ weathering of the underlying rock	RS
Extremely weathered material	Formed from in-situ weathering of geological formations. Has strength of less than ‘very low’ as per as1726 but retains the structure or fabric of the parent rock.	XWM
Alluvial	Deposited by streams and rivers	ALV
Fluvial	Deposited by channel fill and overbank (natural levee, crevasse splay or flood basin)	FLV
Estuarine	Deposited in coastal estuaries	EST
Marine	Deposited in a marine environment	MAR
Lacustrine	Deposited in freshwater lakes	LAC
Aeolian	Carried and deposited by wind	AEO
Colluvial	Soil and rock debris transported down slopes by gravity	COL
Slopewash	Thin layers of soil and rock debris gradually and slowly deposited by gravity and possibly water	SW
Topsoil	Mantle of surface soil, often with high levels of organic material	TOP
Fill	Any material which has been moved by man	FILL
Littoral	Deposited on the lake or seashore	LIT
Unidentifiable	Not able to be identified	UID

Cobbles and Boulders

The presence of particles considered to be “oversize” may be described using one of the following strategies:

- Oversize encountered in a minor proportion (when considered relative to the wider area) are noted in the soil description; or
- Where a significant proportion of oversize is encountered, the cobbles/boulders are described independent of the soil description, in a similar manner to composite soils (described above) but qualified with “MIXTURE OF”.

intentionally blank

Sampling and Testing

A record of samples retained, and field testing performed is usually shown on a Douglas Partners' log with samples appearing to the left of a depth scale, and selected field and laboratory testing (including results, where relevant) appearing to the right of the scale, as illustrated below:

SAMPLE			DEPTH (m)	TESTING	
SAMPLE REMARKS	TYPE	INTERVAL		TEST TYPE	RESULTS AND REMARKS
	SPT		1.0 1.45	SPT	4,9,11 N=20

Sampling

The type or intended purpose for which a sample was taken is indicated by the following abbreviation codes.

Sample Type	Code
Auger sample	A
Acid Sulfate sample	ASS
Bulk sample	B
Core sample	C
Disturbed sample	D
Environmental sample	ES
Driven Tube sample	DT
Gas sample	G
Piston sample	P
Sample from SPT test	SPT
Undisturbed tube sample	U ¹
Water sample	W
Material Sample	MT
Core sample for unconfined compressive strength testing	UCS

¹ – numeric suffixes indicate tube diameter/width in mm

The above codes only indicate that a sample was retained, and not that testing was scheduled or performed.

Field and Laboratory Testing

A record that field and laboratory testing was performed is indicated by the following abbreviation codes.

Test Type	Code
Pocket penetrometer (kPa)	PP
Photo ionisation detector (ppm)	PID
Standard Penetration Test x/y = x blows for y mm penetration HB = hammer bouncing HW = fell under weight of hammer	SPT
Shear vane (kPa)	V
Unconfined compressive strength, (MPa)	UCS
Point load test, (MPa), axial (A), diametric (D), irregular (I)	PLT(-)
Dynamic cone penetrometer, followed by blow count penetration increment in mm (cone tip, generally in accordance with AS1289.6.3.2)	DCP9/150
Perth sand penetrometer, followed by blow count penetration increment in mm (flat tip, generally in accordance with AS1289.6.3.3)	PSP/150
Dynamic probe super heavy, followed by blow count penetration increment in mm	DPSH/100

Groundwater Observations

	water seepage/inflow
	water seepage/outflow
	standing or observed water level
NFGWO	no free groundwater observed
OBS	observations obscured by drilling fluids

Drilling or Excavation Methods/Tools

The drilling/excavation methods used to perform the investigation may be shown either in a dedicated column down the left-hand edge of the log, or stated in the log footer. In some circumstances abbreviation codes may be used.

Method	Abbreviation Code
Direct Push	DP
Solid flight auger. Suffixes: /T = tungsten carbide tip, /V = v-shaped tip	AD ¹
Air Track	AT
Diatube	DT ¹
Hand auger	HA ¹
Hand tools (unspecified)	HAND
Existing exposure	X
Hollow flight auger	HSA ¹
HQ coring	HQ3
HMLC series coring	HMLC
NMLC series coring	NMLC
NQ coring	NQ3
PQ coring	PQ3
Predrilled	PD
Push tube	PT ¹
Ripping tyne/ripper	R
Rock roller	RR ¹
Rock breaker/hydraulic hammer	EH
Sonic drilling	SON ¹
Mud/blade bucket	MB ¹
Toothed bucket	TB ¹
Vibrocore	VC ¹
Vacuum excavation	VE
Wash bore (unspecified bit type)	WB ¹

¹ – numeric suffixes indicate tool diameter/width in mm

Appendix I

Summary of Results



Table I1: Summary of Laboratory Results Stage 01 - SAC

				Priority metals								Priority PAH				Priority TRH						BTEX				Priority phenols
				Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Naphthalene ^b	Benzo[a]pyrene (BaP)	Benzo[a]pyrene TEQ (BaP/TEQ)	Total PAH	TRH C6 - C10	TRH >C10-C16	F1 (C6-C10)- BTEX	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total Phenolics
			PQL	4	0.4	1	1	1	0.1	1	1	1	0.05	0.5	0.05	25	50	25	50	100	100	0.2	0.5	1	1	5
Sample ID	Depth	Soil Profile	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH11	0.5 - 0.6 m	Fill	09/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	0.8 - 1 m	Fill	09/04/25	4	<0.4	13	32	130	0.4	5	77	<1	0.77	1.1	6.2	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<5
				100 100 20 -	100 410	6,000 230	300 1,100	40 -	400 250	7,400 760	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600	0.7 65	480 105	NL 125	110 45	100 -	
BH11	1.2 - 1.5 m	Fill	10/04/25	<4	<0.4	13	18	51	0.4	5	58	<1	0.8	1.2	6.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	-
				100 100 20 -	100 410	6,000 230	300 1,100	40 -	400 250	7,400 760	NL 170	- 0.7	3 -	300 -	- -	- 120	90 180	NL -	- 1,300	- 5,600	1 65	NL 105	NL 125	310 45	- -	
BH12	0.8 - 1 m	Fill	10/04/25	9	<0.4	33	26	98	0.2	17	76	<1	0.88	1.3	8	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<5
				100 100 20 -	100 410	6,000 230	300 1,100	40 -	400 250	7,400 760	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600	0.7 65	480 105	NL 125	110 45	100 -	
BH12	1.3 - 1.5 m	Fill	10/04/25	7	<0.4	13	23	62	0.1	8	120	<1	1.4	1.9	11	<25	<50	<25	<50	170	130	<0.2	<0.5	<1	<1	-
				100 100 20 -	100 410	6,000 230	300 1,100	40 -	400 250	7,400 760	NL 170	- 0.7	3 -	300 -	- -	- 120	90 180	NL -	- 1,300	- 5,600	1 65	NL 105	NL 125	310 45	- -	
BH12	1.8 - 2.3 m	Fill	10/04/25	5	<0.4	20	24	65	0.3	7	60	<1	0.78	1.1	6.2	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	-
				100 100 20 -	100 410	6,000 230	300 1,100	40 -	400 250	7,400 760	NL 170	- 0.7	3 -	300 -	- -	- 120	90 180	NL -	- 1,300	- 5,600	1 65	NL 105	NL 125	310 45	- -	
BH12	2.6 - 3 m	Natural	10/04/25	4	<0.4	6	7	22	<0.1	<1	6	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	-
				100 100 20 -	100 410	6,000 70	300 1,100	40 -	400 10	7,400 200	NL 170	- 0.7	3 -	300 -	- -	- 120	150 180	NL -	- 1,300	- 5,600	2 65	NL 105	NL 125	NL 45	- -	
BH13	0 - 0.2 m	Fill	17/04/25	<4	<0.4	24	63	15	0.2	120	53	<0.1	0.55	0.8	5.8	<25	<50	<25	<50	480	<100	<0.2	<0.5	<1	<1	<5
				100 100 20 -	100 410	6,000 230	300 1,100	40 -	400 250	7,400 760	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600	0.7 65	480 105	NL 125	110 45	100 -	
BH14	0.1 - 0.2 m	Fill	14/04/25	<4	<0.4	41	94	14	<0.1	14	46	<1	0.5	0.6	4.6	<25	53	<25	53	840	1,200	<0.2	<0.5	<1	<1	<5
				100 100 20 -	100 410	6,000 230	300 1,100	40 -	400 250	7,400 760	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600	0.7 65	480 105	NL 125	110 45	100 -	
BH14	0.4 - 0.5 m	Fill	14/04/25	<4	<0.4	20	100	30	<0.1	22	75	<1	2.1	3	24	<25	<50	<25	<50	310	200	<0.2	<0.5	<1	<1	-
				100 100 20 -	100 410	6,000 230	300 1,100	40 -	400 250	7,400 760	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600	0.7 65	480 105	NL 125	110 45	- -	
BH15	0.1 - 0.2 m	Fill	15/04/25	<4	<0.4	16	99	5	<0.1	80	42	<1	0.2	<0.5	2.2	<25	<50	<25	<50	370	540	<0.2	<0.5	<1	<1	<5
				100 100 20 -	100 410	6,000 230	300 1,100	40 -	400 250	7,400 760	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600	0.7 65	480 105	NL 125	110 45	100 -	
BH15	0.4 - 0.5 m	Fill	15/04/25	5	<0.4	20	16	26	<0.1	17	15	<1	0.1	<0.5	1.1	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<5
				100 100 20 -	100 410	6,000 230	300 1,100	40 -	400 250	7,400 760	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600	0.7 65	480 105	NL 125	110 45	100 -	
BD6/20250415	0.4 - 0.5 m	Fill	15/04/25	5	<0.4	24	36	53	<0.1	39	39	<0.1	3.1	4.6	26	<25	<50	<25	<50	310	150	<0.2	<0.5	<1	<1	-
BH15 - [TRIPLICATE]	0.4 - 0.5 m	Fill	15/04/25	4	<0.4	20	21	33	<0.1	22	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				100 100 20 -	100 410	6,000 230	300 1,100	40 -	400 250	7,400 760	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	0.8 - 1 m	Natural	15/04/25	6	<0.4	22	15	26	<0.1	19	9	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	-
				100 100 20 -	100 410	6,000 70	300 1,100	40 -	400 10	7,400 200	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600	0.7 65	480 105	NL 125	110 45	- -	
BH16	0.1 - 0.2 m	Fill	17/04/25	<4	<0.4	7	12	6	<0.1	5	25	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<5
				100 100 20 -	100 410	6,000 230	300 1,100	40 -	400 250	7,400 760	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600	0.7 65	480 105	NL 125	110 45	100 -	
BH16	0.4 - 0.5 m	Fill	17/04/25	7	<0.4	5	8	11	<0.1	2	21	<1	0.07	<0.5	0.3	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<5
				100 100 20 -	100 410	6,000 230	300 1,100	40 -	400 250	7,400 760	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600	0.7 65	480 105	NL 125	110 45	100 -	
BH16	0.6 - 0.8 m	Fill	17/04/25	6	<0.4	7	11	26	<0.1	2	18	<1	9.9	15	170	<25	<50	<25	<50	570	140	<0.2	<0.5	<1	<1	<5
				100 100 20 -	100 410	6,000 230	300 1,100	40 -	400 250	7,400 760	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600	0.7 65	480 105	NL 125	110 45	100 -	
BH16	0.8 - 0.95 m	Fill	17/04/25	12	<0.4	6	33	26	<0.1	3	17	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<5
				100 100 20 -	100 410	6,000 230	300 1,100	40 -	400 250	7,400 760	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600	0.7 65	480 105	NL 125	110 45	100 -	

Lab result

HIL/HSL value EIL/ESL/EGV value

HIL/HSL exceedance

EIL/ESL exceedance

HIL/HSL and EIL/ESL exceedance

ML exceedance

ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report

Blue = DC exceedance

Red = EGV-indirect exceedance

HSL 0-<1 Exceedance

Bold = Lab detections

- = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable

NL = Not limiting

NAD = No Asbestos detected

HIL = Health investigation level HSL = Health screening level (excluding DC) EIL = Ecological investigation level ESL = Ecological screening level EGV = Environmental Guideline Value ML = Management Limit DC = Direct Contact HSL

- Notes:
- a QA/QC replicate of sample listed directly below the primary sample
 - b Naphthalene reported as highest detection from the BTEXN or PAH suite, or if both results <PQL as lowest PQL
 - c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Residential A with garden/accessible soil

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

HIL	HIL-A (NEPC, 2013 or HEPA, 2020 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2020)
HSL (vapour intrusion)	HSL-A/B (NEPC, 2013)	ESL	Urban Residential and Public Open Space (NEPC, 2013)
DC	Direct contact HSL A Residential (Low density) (CRC CARE, 2011)	ML	Residential, Parkland and Public Open Space (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2020)



Table I1: Summary of Laboratory Results Stage 01 - SAC

				Priority OCP									Priority OPP	PCB	Priority PFAS					Asbestos (NEPM)						Asbestos ID		pH, EC and CEC				
				DDT+DDE+DDD	Aldrin + Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	Chlorpyrifos	Total PCB	Total Positive PFAS	PFOA	PFOS + PFHxS	PFOS	PFHxS	Asbestos ID in soil >0.1g/kg	Trace Analysis (NEPC)	Total Asbestos#1	Asbestos ID in soil <0.1g/kg	ACM >7mm Estimation	FA and AF Estimation	FA and AF Estimation	Asbestos ID in soil >0.1g/kg	Trace Analysis (AS)	pH 15 soil/water	Cation Exchange Capacity		
			PQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0001	0.0001	0.0001	0.0001	0.0001			0.1				0.001					1	
Sample ID	Depth	Soil Profile	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	g/kg	-	g	g	%(w/w)	-	-	pH Units	cmol/kg	
BH11	0.5 - 0.6 m	Fill	09/04/25	-	-	-	-	-	-	-	-	-	-	-	0.0021	0.0004	0.0017	0.0017	<0.0001	-	-	-	-	-	-	-	-	-	-	-	-	
				<0.1	-	-	-	-	-	-	-	-	-	-	-	-	0.06	10	0.003	-	0.003	1	0.003	-	-	-	<0.001	-	-	-	-	-
BH11	0.8 - 1 m	Fill	09/04/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	<0.1	NAD	NAD	-	<0.001	-	-	-	-	
BH11	1.2 - 1.5 m	Fill	10/04/25	240	180	6	-	50	-	270	-	10	-	6	-	10	-	300	-	10	-	160	-	1	-	-	-	0.001	-	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-
BH12	0.8 - 1 m	Fill	10/04/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	<0.1	NAD	NAD	-	<0.001	-	-	-	-	
				240	180	6	-	50	-	270	-	10	-	6	-	10	-	300	-	10	-	160	-	1	-	-	-	0.001	-	-	-	-
BH12	1.3 - 1.5 m	Fill	10/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	<0.1	NAD	NAD	-	<0.001	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001	-	-	-	-	-
BH12	1.8 - 2.3 m	Fill	10/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	<0.1	NAD	NAD	-	<0.001	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001	-	-	-	-	-
BH12	2.6 - 3 m	Natural	10/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	<0.1	NAD	NAD	-	<0.001	-	-	-
BH13	0 - 0.2 m	Fill	17/04/25	240	180	6	-	50	-	270	-	10	-	6	-	10	-	300	-	10	-	160	-	1	-	-	-	0.001	-	-	-	-
				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	<0.1	NAD	NAD	-	<0.001	-	-	-
BH14	0.1 - 0.2 m	Fill	14/04/25	240	180	6	-	50	-	270	-	10	-	6	-	10	-	300	-	10	-	160	-	1	-	-	-	0.001	-	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-
BH14	0.4 - 0.5 m	Fill	14/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	11.1	82
				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-
BH15	0.1 - 0.2 m	Fill	15/04/25	240	180	6	-	50	-	270	-	10	-	6	-	10	-	300	-	10	-	160	-	1	-	-	-	0.001	-	-	-	-
				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	NAD	NAD	<0.1	NAD	NAD	-	<0.001	-	-	-
BD6/20250415	0.4 - 0.5 m	Fill	15/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	10	0.003	-	0.003	1	0.003	-	-	-	0.001	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15 - [TRIPLICATE]	0.4 - 0.5 m	Fill	15/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	0.8 - 1 m	Natural	15/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	<0.1	NAD	NAD	-	<0.001	-	-	-	-	
				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	
BH16	0.1 - 0.2 m	Fill	17/04/25	240	180	6	-	50	-	270	-	10	-	6	-	10	-	300	-	10	-	160	-	1	-	-	-	0.001	-	-	-	-
				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	<0.1	NAD	NAD	-	<0.001	-	-	-
BH16	0.4 - 0.5 m	Fill	17/04/25	240	180	6	-	50	-	270	-	10	-	6	-	10	-	300	-	10	-	160	-	1	-	-	-	0.001	-	-	-	-
				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	
BH16	0.6 - 0.8 m	Fill	17/04/25	240	180	6	-	50	-	270	-	10	-	6	-	10	-	300	-	10	-	160	-	1	-	-	-	0.001	-	-	-	-
				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	
BH16	0.8 - 0.95 m	Fill	17/04/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				240	180	6	-	50	-	270	-	10	-	6	-	10	-	300	-	10	-	160	-	1	-	-	-	-	-	-	-	-

Lab result

HIL/HSL value

EIL/ESL/EGV value

HIL/HSL exceedance

EIL/ESL exceedance

HIL/HSL and EIL/ESL exceedance

ML exceedance

ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report

Blue = DC exceedance

Red = EGV-indirect exceedance

HSL 0-<1 Exceedance

Bold = Lab detections

- = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable

NL = Not limiting

NAD = No Asbestos detected

HIL = Health investigation level

HSL = Health screening level (excluding DC)

EIL = Ecological investigation level

ESL = Ecological screening level

EGV = Environmental Guideline Value

ML = Management Limit

DC = Direct Contact HSL

Notes:

a

QA/QC replicate of sample listed directly below the primary sample

b

Naphthalene reported as highest detection from the BTEXN or PAH suite, or if both results <PQL as lowest PQL

c

EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Residential A with garden/accessible soil

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

HIL	HIL-A (NEPC, 2013 or HEPA, 2020 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2020)
HSL (vapour intrusion)	HSL-A/B (NEPC, 2013)	ESL	Urban Residential and Public Open Space (NEPC, 2013)
DC	Direct contact HSL A Residential (Low density) (CRC CARE, 2011)	ML	Residential, Parkland and Public Open Space (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2020)



Table I2: Summary of Laboratory Results – Stage 02 -04 SAC

				Priority metals								Priority PAH				Priority TRH								BTEX			
				Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	^b Naphthalene	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ (BaP TEQ)	Total PAH	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10)-BTX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	TPH >C16-C34 (SG)	F4 (>C34-C40)	Benzene	Toluene	Ethylbenzene	Total Xylenes	
			PQL	4	0.4	1	1	1	0.1	1	1	1	0.05	0.5	0.05	25	50	25	50	100	100	100	0.2	0.5	1	1	
Sample ID	Depth	Soil Profile	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH6	0 - 0.1 m	Fill	04/04/25	5	<0.4	14	68	41	0.2	7	140	<1	0.2	<0.5	1.8	<25	<50	<25	<50	250	-	180	<0.2	<0.5	<1	<1	
				100 100 20 - 100 410 6,000 230 300 1,100 40 - 400 250 7,400 760 5 170 - 0.7 3 - 300 - - - 120 50 180 280 - - 1,300 - - - 5,600 0.7 65 480 105 NL 125 110 45																							
BH6	0.15 - 0.25 m	Fill	04/04/25	6	<0.4	9	42	140	<0.1	2	89	<1	0.1	<0.5	0.6	<25	<50	<25	<50	<100	-	<100	<0.2	<0.5	<1	<1	
				100 100 20 - 100 410 6,000 230 300 1,100 40 - 400 250 7,400 760 5 170 - 0.7 3 - 300 - - - 120 50 180 280 - - 1,300 - - - 5,600 0.7 65 480 105 NL 125 110 45																							
BH6	0.15 - 0.5 m	Fill	04/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				- -																							

Lab result

HIL/HSL value EIL/ESL/EGV value

HIL/HSL exceedance

EIL/ESL exceedance

HIL/HSL and EIL/ESL exceedance

ML exceedance

ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report

Blue = DC exceedance

Red = EGV-indirect exceedance

HSL 0-<1 Exceedance

Bold = Lab detections

- = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable

NL = Not limiting

NAD = No Asbestos detected

HIL = Health investigation level

HSL = Health screening level (excluding DC)

EIL = Ecological investigation level

ESL = Ecological screening level

EGV = Environmental Guideline Value

ML = Management Limit

DC = Direct Contact HSL

- Notes:
- a QA/QC replicate of sample listed directly below the primary sample
 - b Naphthalene reported as highest detection from the BTEXN or PAH suite, or if both results <PQL as lowest PQL
 - c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Residential A with garden/accessible soil

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

HIL	HIL-A (NEPC, 2013 or HEPA, 2020 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2020)
HSL (vapour intrusion)	HSL-A/B (NEPC, 2013)	ESL	Urban Residential and Public Open Space (NEPC, 2013)
DC	Direct contact HSL A Residential (Low density) (CRC CARE, 2011)	ML	Residential, Parkland and Public Open Space (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2020)



Table I2: Summary of Laboratory Results – Stage 02 -04 SAC

				Priority phenols	Priority OCP									Priority OPP	PCB	Asbestos							pH, EC and CEC	
				Total Phenolics	DDT+DDE+DDD	Aldrin + Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	Chlorpyrifos	Total PCB	Asbestos ID in soil >0.1g/kg	Asbestos ID in soil <0.1g/kg	Trace Analysis (NEPC)	ACM >7mm Estimation	FA and AF Estimation	FA and AF Estimation	Total Asbestos#1	pH 1:5 soil:water	Cation Exchange Capacity
			PQL	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1						0.001	0.1		1
Sample ID	Depth	Soil Profile	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-	g	g	%(w/w)	g/kg	pH Units	cmol/kg
BH6	0 - 0.1 m	Fill	04/04/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-
				100 -	240 180 -	6 -	50 -	270 -	10 -	6 -	10 -	300 -	10 -	160 -	1 -				- - -	- - -	0.001 -		- - -	- - -
BH6	0.15 - 0.25 m	Fill	04/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -				- - -	- - -	- - -		- - -	- - -
BH6	0.15 - 0.5 m	Fill	04/04/25	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-
				- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -				- - -	0.001 -	- - -		- - -	
BH07	0.1 - 0.2 m	Fill	14/04/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	<0.001	<0.1	8.9	18
				100 -	240 180 -	6 -	50 -	270 -	10 -	6 -	10 -	300 -	10 -	160 -	1 -				- - -	- - -	0.001 -		- - -	- - -
BH07	0.4 - 0.5 m	Fill	14/04/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-
				100 -	240 180 -	6 -	50 -	270 -	10 -	6 -	10 -	300 -	10 -	160 -	1 -				- - -	- - -	0.001 -		- - -	- - -
BH08	0.2 - 0.3 m	Fill	09/04/25	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-
				- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -				- - -	0.001 -	- - -		- - -	
BH08	0.35 - 0.5 m	Fill	09/04/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-
				100 -	240 180 -	6 -	50 -	270 -	10 -	6 -	10 -	300 -	10 -	160 -	1 -				- - -	- - -	0.001 -		- - -	- - -
BH08	0.8 - 1 m	Natural	09/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -				- - -	- - -	- - -		- - -	- - -
BD5/20250409	0.8 - 1 m	Natural	09/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -				- - -	- - -	- - -		- - -	- - -
BH09	0.2 - 0.3 m	Fill	08/04/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-
				100 -	240 180 -	6 -	50 -	270 -	10 -	6 -	10 -	300 -	10 -	160 -	1 -				- - -	- - -	0.001 -		- - -	- - -
BH09	0.5 - 0.6 m	Fill	08/04/25	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-
				- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -				- - -	0.001 -	- - -		- - -	
BH09	0.8 - 1 m	Natural	08/04/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-
				100 -	240 180 -	6 -	50 -	270 -	10 -	6 -	10 -	300 -	10 -	160 -	1 -				- - -	- - -	0.001 -		- - -	- - -
BH10	0.05 - 0.2 m	Fill	28/04/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-
				100 -	240 180 -	6 -	50 -	270 -	10 -	6 -	10 -	300 -	10 -	160 -	1 -				- - -	- - -	0.001 -		- - -	- - -
BH10 - [TRIPLICATE]	0.05 - 0.2 m	Fill	28/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -				- - -	- - -	- - -		- - -	- - -
BH10	0.5 - 0.6 m	Fill	28/04/25	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-
				- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -				- - -	0.001 -	- - -		- - -	
BH10	1 - 1.1 m	Natural	28/04/25	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-
				- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -				- - -	0.001 -	- - -		- - -	
BH10	1.2 - 1.3 m	Natural	28/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	2.4
				- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -				- - -	- - -	- - -		- - -	- - -

Lab result

HIL/HSL value EIL/ESL/EGV value

HIL/HSL exceedance

EIL/ESL exceedance

HIL/HSL and EIL/ESL exceedance

ML exceedance

ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report

Blue = DC exceedance

Red = EGV-indirect exceedance

HSL 0-<1 Exceedance

Bold = Lab detections

- = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable

NL = Not limiting

NAD = No Asbestos detected

HIL = Health investigation level

HSL = Health screening level (excluding DC)

EIL = Ecological investigation level

ESL = Ecological screening level

EGV = Environmental Guideline Value

ML = Management Limit

DC = Direct Contact HSL

- Notes:
- a QA/QC replicate of sample listed directly below the primary sample
 - b Naphthalene reported as highest detection from the BTEXN or PAH suite, or if both results <PQL as lowest PQL
 - c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Residential A with garden/accessible soil

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

HIL	HIL-A (NEPC, 2013 or HEPA, 2020 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2020)
HSL (vapour intrusion)	HSL-A/B (NEPC, 2013)	ESL	Urban Residential and Public Open Space (NEPC, 2013)
DC	Direct contact HSL A Residential (Low density) (CRC CARE, 2011)	ML	Residential, Parkland and Public Open Space (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2020)

Table I3: Summary of Laboratory Results of Stage 06 - SAC

				Priority metals								Priority PAH				Priority TRH					
				Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Naphthalene	Benzo(a)pyrene (B(a)P)	Benzo(a)pyrene TEQ (B(a)P TEQ)	Total PAH	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10)-BTX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)
			PQL	4	0.4	1	1	1	0.1	1	1	0.1	0.05	0.5	0.05	25	50	25	50	100	100
Sample ID	Depth	Soil Profile	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH1	0.15 - 0.25 m	Fill/ Road Base	03/04/25	<4	<0.4	7	7	16	<0.1	6	18	<0.1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				100 100	20 -	100 410	6,000 150	300 1,100	40 -	400 65	7,400 410	3 170	- 0.7	3 -	300 -	- -	- 120	45 180	110 -	- 300	- 2,800
BH1	0.15 - 0.25 m	Material	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
BH2	0.13 - 0.23 m	Fill	03/04/25	<4	<0.4	7	26	39	<0.1	4	21	<1	0.2	<0.5	1.8	<25	<50	<25	<50	<100	<100
				100 100	20 -	100 410	6,000 150	300 1,100	40 -	400 65	7,400 410	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600
BH2	0.25 - 0.35 m	Natural	03/04/25	<4	<0.4	3	<1	10	<0.1	<1	2	<1	0.09	<0.5	0.09	<25	<50	<25	<50	<100	<100
				100 100	20 -	100 410	6,000 100	300 1,100	40 -	400 20	7,400 220	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600
BH3	0.2 - 0.3 m	Fill/ Road Base	03/04/25	<4	<0.4	26	85	19	<0.1	32	42	<1	0.2	<0.5	1.6	<25	<50	<25	<50	430	750
				100 100	20 -	100 410	6,000 150	300 1,100	40 -	400 65	7,400 410	3 170	- 0.7	3 -	300 -	- -	- 120	45 180	110 -	- 300	- 2,800
BH3	0.5 - 0.6 m	Fill	03/04/25	<4	<0.4	17	9	15	<0.1	17	21	<1	0.3	<0.5	2.8	<25	<50	<25	<50	<100	<100
				100 100	20 -	100 410	6,000 150	300 1,100	40 -	400 65	7,400 410	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600
BH3	1 - 1.1 m	Fill	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH3	1.8 - 1.9 m	Fill	03/04/25	<4	<0.4	9	7	500	<0.1	2	70	<1	0.2	<0.5	1.6	<25	<50	<25	<50	<100	<100
				100 100	20 -	100 410	6,000 150	300 1,100	40 -	400 65	7,400 410	NL 170	- 0.7	3 -	300 -	- -	- 120	90 180	NL -	- 1,300	- 5,600
BH3	2.4 - 2.6 m	Fill	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH3	3 - 3.2 m	Natural	03/04/25	4	<0.4	12	<1	32	<0.1	<1	5	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				100 100	20 -	100 410	6,000 100	300 1,100	40 -	400 20	7,400 220	NL 170	- 0.7	3 -	300 -	- -	- 120	150 180	NL -	- 1,300	- 5,600
BH4	0.4 - 0.6 m	Fill	03/04/25	<4	<0.4	3	4	20	<0.1	2	30	<1	0.1	<0.5	0.4	<25	<50	<25	<50	<100	<100
				100 100	20 -	100 410	6,000 150	300 1,100	40 -	400 65	7,400 410	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600
BH4 - [TRIPLICATE]	0.4 - 0.6 m	Fill	03/04/25	<4	<0.4	2	3	18	<0.1	1	16	-	-	-	-	-	-	-	-	-	-
				100 100	20 -	100 410	6,000 150	300 1,100	40 -	400 65	7,400 410	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BD02/20250402	0.4 - 0.6 m	Fill	03/04/25	<4	<0.4	2	2	17	<0.1	<1	15	<1	0.1	<0.5	0.4	<25	<50	<25	<50	<100	<100
				100 100	20 -	100 410	6,000 150	300 1,100	40 -	400 65	7,400 410	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600
BH4	1 - 1.2 m	Fill	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH4	1.5 - 1.7 m	Fill	03/04/25	4	<0.4	26	47	290	0.2	2	69	<1	0.2	<0.5	2.2	<25	<50	<25	<50	<100	<100
				100 100	20 -	100 410	6,000 150	300 1,100	40 -	400 65	7,400 410	NL 170	- 0.7	3 -	300 -	- -	- 120	90 180	NL -	- 1,300	- 5,600

Lab result

HIL/HSL value EIL/ESL/EGV value

■ HIL/HSL exceedance ■ EIL/ESL exceedance ■ HIL/HSL and EIL/ESL exceedance ■ ML exceedance ■ ML and HIL/HSL or EIL/ESL exceedance

■ Indicates that asbestos has been detected by the lab, refer to the lab report ■ Blue = DC exceedance ■ Red = EGV-indirect exceedance ■ HSL 0-<1 Exceedance

Bold = Lab detections - = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable NL = Not limiting NAD = No Asbestos detected

HIL = Health investigation level HSL = Health screening level (excluding DC) EIL = Ecological investigation level ESL = Ecological screening level EGV = Environmental Guideline Value ML = Management Limit DC = Direct Contact HSL

Notes:

- a QA/QC replicate of sample listed directly below the primary sample
- b Naphthalene reported as highest detection from the BTEXN or PAH suite, or if both results <PQL as lowest PQL
- c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Residential A with garden/accessible soil

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

HIL	HIL-A (NEPC, 2013 or HEPA, 2020 (PFAS only))
HSL (vapour intrusion)	HSL-A/B (NEPC, 2013)
DC	Direct contact HSL A Residential (Low density) (CRC CARE, 2011)

EGV	EGV, all land uses, direct exposure (HEPA, 2020)
ESL	Urban Residential and Public Open Space (NEPC, 2013)
ML	Residential, Parkland and Public Open Space (NEPC, 2013)
EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2020)



Table I3: Summary of Laboratory Results of Stage 06 - SAC

				TRH		BTEX				Priority phenol	Priority OCP										Priority OPP	PCB											
				TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total Phenolics	DDT+DDE+DDD ^c	Aldrin + Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	Chlorpyrifos	Total PCB												
			PQL	25	50	0.2	0.5	1	1	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1												
Sample ID	Depth	Soil Profile	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg											
BH1	0.15 - 0.25 m	Fill/ Road Base	03/04/25	<25	<50	<0.2	<0.5	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1											
				-	-	0.5	50	160	85	55	70	40	105	100	-	240	180	6	-	50	-	270	-	10	-	6	-	10	-	300	-	10	-
BH1	0.15 - 0.25 m	Material	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH2	0.13 - 0.23 m	Fill	03/04/25	<25	<50	<0.2	<0.5	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1											
				-	-	0.7	65	480	105	NL	125	110	45	100	-	240	180	6	-	50	-	270	-	10	-	6	-	10	-	300	-	10	-
BH2	0.25 - 0.35 m	Natural	03/04/25	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-											
				-	-	0.7	65	480	105	NL	125	110	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH3	0.2 - 0.3 m	Fill/ Road Base	03/04/25	<25	670	<0.2	<0.5	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1											
				-	-	0.5	50	160	85	55	70	40	105	100	-	240	180	6	-	50	-	270	-	10	-	6	-	10	-	300	-	10	-
BH3	0.5 - 0.6 m	Fill	03/04/25	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-											
				-	-	0.7	65	480	105	NL	125	110	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH3	1 - 1.1 m	Fill	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH3	1.8 - 1.9 m	Fill	03/04/25	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-											
				-	-	1	65	NL	105	NL	125	310	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH3	2.4 - 2.6 m	Fill	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH3	3 - 3.2 m	Natural	03/04/25	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-											
				-	-	2	65	NL	105	NL	125	NL	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH4	0.4 - 0.6 m	Fill	03/04/25	<25	<50	<0.2	<0.5	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1											
				-	-	0.7	65	480	105	NL	125	110	45	100	-	240	180	6	-	50	-	270	-	10	-	6	-	10	-	300	-	10	-
BH4 - [TRIPLICATE]	0.4 - 0.6 m	Fill	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BD02/20250402	0.4 - 0.6 m	Fill	03/04/25	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-											
				-	-	0.7	65	480	105	NL	125	110	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH4	1 - 1.2 m	Fill	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH4	1.5 - 1.7 m	Fill	03/04/25	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-											
				-	-	1	65	NL	105	NL	125	310	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Lab result
HIL/HSL value EIL/ESL/EGV value

■ HIL/HSL exceedance ■ EIL/ESL exceedance ■ HIL/HSL and EIL/ESL exceedance ■ ML exceedance ■ ML and HIL/HSL or EIL/ESL exceedance

■ Indicates that asbestos has been detected by the lab, refer to the lab report ■ Blue = DC exceedance ■ Red = EGV-indirect exceedance ■ HSL 0-<1 Exceedance

Bold = Lab detections - = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable NL = Not limiting NAD = No Asbestos detected

HIL = Health investigation level HSL = Health screening level (excluding DC) EIL = Ecological investigation level ESL = Ecological screening level EGV = Environmental Guideline Value ML = Management Limit DC = Direct Contact HSL

- Notes:
- a QA/QC replicate of sample listed directly below the primary sample
 - b Naphthalene reported as highest detection from the BTEXN or PAH suite, or if both results <PQL as lowest PQL
 - c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Residential A with garden/accessible soil

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

HIL	HIL-A (NEPC, 2013 or HEPA, 2020 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2020)
HSL (vapour intrusion)	HSL-A/B (NEPC, 2013)	ESL	Urban Residential and Public Open Space (NEPC, 2013)
DC	Direct contact HSL A Residential (Low density) (CRC CARE, 2011)	ML	Residential, Parkland and Public Open Space (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2020)



Table I3: Summary of Laboratory Results of Stage 06 - SAC

				Priority PFAS					Asbestos							Asbestos ID in materials		pH, EC and CEC	
				Total Positive PFAS	PFOA	PFOS + PFHxS	PFOS	PFHxS	Asbestos ID in soil >0.1g/kg	Asbestos ID in soil <0.1g/kg	Trace Analysis (NEPC)	ACM >7mm Estimation	FA and AF Estimation	FA and AF Estimation	Total Asbestos#1	Asbestos ID in materials	Asbestos Summary	pH 1:5 soil:water	Cation Exchange Capacity
			PQL	0.0001	0.0001	0.0001	0.0001	0.0001						0.001	0.1		0.1		1
Sample ID	Depth	Soil Profile	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-	g	g	%(w/w)	g/kg	-		pH Units	cmol/kg
BH1	0.15 - 0.25 m	Fill/ Road Base	03/04/25	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1			-	-
				-	-	-	-	-				-	-	0.001				-	-
BH1	0.15 - 0.25 m	Material	03/04/25	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	Detected	Detected	-	-
				-	-	-	-	-				-	-	0.001				-	-
BH2	0.13 - 0.23 m	Fill	03/04/25	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-	-	-
				-	-	-	-	-				-	-	0.001				-	-
BH2	0.25 - 0.35 m	Natural	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.4	5.7
				-	-	-	-	-				-	-	-				-	-
BH3	0.2 - 0.3 m	Fill/ Road Base	03/04/25	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-	8.4	25
				-	-	-	-	-				-	-	0.001				-	-
BH3	0.5 - 0.6 m	Fill	03/04/25	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-	9	6.6
				-	0.06	10	0.003	0.003				-	-	0.001				-	-
BH3	1 - 1.1 m	Fill	03/04/25	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-	-	-
				-	-	-	-	-				-	-	0.001				-	-
BH3	1.8 - 1.9 m	Fill	03/04/25	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-	-	-
				-	-	-	-	-				-	-	0.001				-	-
BH3	2.4 - 2.6 m	Fill	03/04/25	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-	-	-
				-	-	-	-	-				-	-	0.001				-	-
BH3	3 - 3.2 m	Natural	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.3	2
				-	-	-	-	-				-	-	-				-	-
BH4	0.4 - 0.6 m	Fill	03/04/25	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-	-	-
				-	-	-	-	-				-	-	0.001				-	-
BH4 - [TRIPLICATE]	0.4 - 0.6 m	Fill	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				-	-	-	-	-				-	-	-				-	-
BD02/20250402	0.4 - 0.6 m	Fill	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				-	-	-	-	-				-	-	-				-	-
BH4	1 - 1.2 m	Fill	03/04/25	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-	-	-
				-	-	-	-	-				-	-	0.001				-	-
BH4	1.5 - 1.7 m	Fill	03/04/25	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	-	-	-	-
				-	-	-	-	-				-	-	0.001				-	-

Lab result

HIL/HSL value EIL/ESL/EGV value

HIL/HSL exceedance

EIL/ESL exceedance

HIL/HSL and EIL/ESL exceedance

ML exceedance

ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report

Blue = DC exceedance

Red = EGV-indirect exceedance

HSL 0-<1 Exceedance

Bold = Lab detections

- = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable

NL = Not limiting

NAD = No Asbestos detected

HIL = Health investigation level HSL = Health screening level (excluding DC) EIL = Ecological investigation level ESL = Ecological screening level EGV = Environmental Guideline Value ML = Management Limit DC = Direct Contact HSL

- Notes:
- a QA/QC replicate of sample listed directly below the primary sample
 - b Naphthalene reported as highest detection from the BTEXN or PAH suite, or if both results <PQL as lowest PQL
 - c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Residential A with garden/accessible soil

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

HIL	HIL-A (NEPC, 2013 or HEPA, 2020 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2020)
HSL (vapour intrusion)	HSL-A/B (NEPC, 2013)	ESL	Urban Residential and Public Open Space (NEPC, 2013)
DC	Direct contact HSL A Residential (Low density) (CRC CARE, 2011)	ML	Residential, Parkland and Public Open Space (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2020)

CT1 exceedance
 TCLP1 and/or SCCC1 exceedance
 CT2 exceedance
 TCLP2 and/or SCCC2 exceedance
 Asbestos detection

- = Not tested, no criteria or not applicable NAD = no asbestos detected

Notes:

- | | |
|---|---|
| b | QA/QC replicate of sample listed directly below the primary sample |
| c | Total chromium used as initial screen for chromium(VI) |
| d | Total recoverable hydrocarbons (TRH) used as an initial screen for total petroleum hydrocarbons (TPH) |
| e | Criteria for scheduled chemicals used as an initial screen |
| f | Criteria for Chlorpyrifos used as initial screen |
| g | NSW EPA, 2014, Waste Classification Guidelines Part I; Classifying Waste |
| h | Practical quantitation limit |
| i | Maximum values of specific contaminant concentration (SCC) for classification without TCLP: General solid waste |
| j | Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste |
| k | Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste |
| l | Maximum values of specific contaminant concentration (SCC) for classification without TCLP: Restricted solid waste |
| m | Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste |
| n | Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste |



Table I5: Summary of Laboratory Results - Waste Classification of Stage 06

				Metals							TRH		BTEX				PAH		Phenols	OCP						OPP	PCB	PFAS				Asbestos
				Total Arsenic	Cadmium	Total Chromium	Lead	TCLP Lead	Mercury (Inorganic)	Nickel	TRH C6- C9	TRH Cl0-C16	Benzene	Toluene	Ethylbenzene	Total Xylenes	Benzo(a)pyrene (BaP)	Total PAH	Total Phenolics	Scheduled Chemical Waste (standard)	Chlordane	Total Endosulfan	Total Analysed OCP	Mirex	Total Analysed Opp	Total PCB	PFOA	TCLP PFOA	PFOS + PFHxS	TCLP PFOS + PFHxS	Summary	
			PQL	4	0.4	1	1	0.03	0.1	1	25	50	0.2	0.5	1	1	0.05	0.05	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0001	0.00001	0.0001	0.00001		
Sample ID	Depth	Soil Profile	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/L	-
BH1	0.15 - 0.25 m	Fill	03/04/25	<4	<0.4	7	16	-	<0.1	6	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	NAD	
BH1	0.15 - 0.25 m	Material	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Detected	
BH2	0.13 - 0.23 m	Fill	03/04/25	<4	<0.4	7	39	-	<0.1	4	<25	<50	<0.2	<0.5	<1	<1	0.2	1.8	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	NAD	
BH2	0.25 - 0.35 m	Natural	03/04/25	<4	<0.4	3	10	-	<0.1	<1	<25	<50	<0.2	<0.5	<1	<1	0.09	0.09	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH3	0.2 - 0.3 m	Fill	03/04/25	<4	<0.4	26	19	-	<0.1	32	<25	670	<0.2	<0.5	<1	<1	0.2	1.6	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	NAD	
BH3	0.5 - 0.6 m	Fill	03/04/25	<4	<0.4	17	15	-	<0.1	17	<25	<50	<0.2	<0.5	<1	<1	0.3	2.8	-	-	-	-	-	-	-	-	<0.0001	<0.00001	<0.0001	<0.00001	NAD	
BH3	1 - 1.1 m	Fill	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	
BH3	1.8 - 1.9 m	Fill	03/04/25	<4	<0.4	9	500	2.2	<0.1	2	<25	<50	<0.2	<0.5	<1	<1	0.2	1.6	-	-	-	-	-	-	-	-	-	-	-	-	NAD	
BH3	2.4 - 2.6 m	Fill	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	
BH3	3 - 3.2 m	Natural	03/04/25	4	<0.4	12	32	-	<0.1	<1	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH4	0.4 - 0.6 m	Fill	03/04/25	<4	<0.4	3	20	-	<0.1	2	<25	<50	<0.2	<0.5	<1	<1	0.1	0.4	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	NAD	
BD002/20250402 BH4 - (TRIPLICATE)	0.4 - 0.6 m	Fill	03/04/25	<4	<0.4	2	17	-	<0.1	<1	<25	<50	<0.2	<0.5	<1	<1	0.1	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	
	0.4 - 0.6 m	Fill	03/04/25	<4	<0.4	2	18	-	<0.1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	1 - 1.2 m	Fill	03/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	
	BH4	1.5 - 1.7 m	Fill	03/04/25	4	<0.4	26	290	-	0.2	2	<25	<50	<0.2	<0.5	<1	<1	0.2	2.2	-	-	-	-	-	-	-	-	-	-	-	-	NAD
Waste Classification Criteria ^f																																
CT1				100	20	100	100	-	4	40	650	10,000	10	288	600	1000	0.8	200	288	<50	-	60	-	-	4	<50	-	-	-	-	-	-
SCC1				500	100	1,900	1,500	-	50	1,050	650	10,000	18	518	1,080	1,800	10	200	518	<50	-	108	-	-	7.5	<50	18	-	1.8	-	-	-
TCLP1				-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	0.05	-	
CT2				400	80	400	400	-	16	160	2,600	40,000	40	1,152	2,400	4,000	3.2	800	1,152	<50	-	240	-	-	16	<50	-	-	-	-	-	-
SCC2				2,000	400	7,600	6,000	-	200	4,200	2,600	40,000	72	2,073	4,320	7,200	23	800	2,073	<50	-	432	-	-	30	<50	72	-	7.2	-	-	-
TCLP2				-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	0.2	-
VENM Classification Criteria																																
NEPC (1999)				1-50	1	5-1000	2-200	-	0.03	5-500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZECC (1992)				0.2-30	0.04-2	0.5-110	<2-200	-	0.001-0.1	2-400	-	-	0.05 - 1	0.1 - 1	-	-	-	0.95-5	0.03 - 0.5	-	-	<0.001 - <0.97	-	-	-	0.02 - 0.1	-	-	-	-	-	-
ANZECC (2000)				1-53	0.016-0.78	2.5-673	2-81	-	-	1-517	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

☐ CT1 exceedance ☐ TCLP1 and/or SCC1 exceedance ☐ CT2 exceedance ☐ TCLP2 and/or SCC2 exceedance ☐ Asbestos detection
- = Not tested, no criteria or not applicable NAD = no asbestos detected

Notes:

- a QA/QC replicate of sample listed directly below the primary sample
- b Total chromium used as initial screen for chromium(VI).
- c Total recoverable hydrocarbons (TRH) used as an initial screen for total petroleum hydrocarbons (TPH)
- d Criteria for scheduled chemicals used as an initial screen
- e Criteria for Chlorpyrifos used as initial screen
- f NSW EPA, 2014, Waste Classification Guidelines Part 1: Classifying Waste
- PQL Practical quantitation limit
- CT1 Maximum values of specific contaminant concentration (SCC) for classification without TCLP: General solid waste
- SCC1 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste
- TCLP1 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste
- CT2 Maximum values of specific contaminant concentration (SCC) for classification without TCLP: Restricted solid waste
- SCC2 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste
- TCLP2 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

Table I6: Summary of Laboratory Results of Groundwater

		Metals & Metalloids - Dissolved								TRH				BTEx											
		Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	F1 (C6-Cl0)-BTEx	F2 (>Cl0-Cl6 less Naphthalene)	F3 (C16-C34)	F4 (C34-C40)	Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene	Total Xylenes	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Naphthalene	Benzo[a]pyrene (BaP)
	PQL	1	0.1	1	1	1	0.05	1	1	10	50	100	100	1	1	1	1	2	1	0.01	0.01	0.01	0.01	1	0.01
ANZG (2018) 95% LOP Fresh (Hardness adjusted)		13	0.2 ^	1	1.4	4.1^	0.06	12.5^	9.1^					950	180	80	350	75			0.01			16	0.1
NEPC (2013) HSL 2-4m										NL	NL			5,000	NL	NL			NL					NL	
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH1	29/04/25	<1	<0.1	<1	<1	<1	<0.05	10	26	<10	<50	<100	<100	<1	<1	<1	<1	<2	<1	<0.01	<0.01	<0.01	<0.01	<1	<0.01
BD01	29/04/25	<1	<0.1	<1	<1	<1	<0.05	9	25	<10	<50	110	<100	<1	<1	<1	<1	<2	<1	<0.01	<0.01	<0.01	<0.01	<1	<0.01
BH6	29/04/25	<1	<0.1	<1	1	<1	<0.05	13	30	<10	<50	<100	<100	<1	<1	<1	<1	<2	<1	<0.01	<0.01	<0.01	<0.01	<1	<0.01
BH15	29/04/25	<1	0.1	<1	6	<1	<0.05	27	69	<10	<50	<100	<100	<1	<1	<1	<1	<2	<1	<0.01	<0.01	<0.01	<0.01	<1	<0.01

Notes:

- ^

Hardness adjusted value
- No criterion / not defined / not tested / not applicable
- *

QA/QC replicate of sample listed directly below the primary sample
- NL

Not limiting
- PQL

Practical quantitation limit
- Shaded cell is exceedance of guideline value
- Where one or more guideline value is exceeded, the cell is shaded to the colour of the highest guideline value exceeded
- NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013), health screening level Clay 2-4m
- ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 95% level of protection of species for Fresh aquatic ecosystems [NB: 99% level of protection adopted for bioaccumulative chemicals]
- ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, orange text is 'unknown' level of protection
- Underlining of ANZG (2018) criteria indicates a criteria with an 'unknown' level of protection.
- ANZG (2018) DGV adopted for most conservative species of following analytes: DGV for xylene (m) adopted for xylene (m+p); DGV for CrVI adopted for total chromium; DGV for AsV adopted for total arsenic
- ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered
- ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Table I6: Summary of Laboratory Results of Groundwater

		PAH										OCP													
		Benzo(b)kfluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	Sum of detected PAH	DDE	DDT	DDD	Aldrin	Dieldrin	Aldrin + Dieldrin (calculated)	alpha-chlordane	gamma-Chlordane	Endosulfan I	Endosulfan II	Endosulfan Sulphate	Endrin	Endrin Aldehyde	Heptachlor
	PQL	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.001	0.001	0.001	0.001
ANZG (2018) 95% LOP Fresh (Hardness adjusted)					1				0.6				0.006		0.001	0.01							0.01		0.01
NEPC (2013) HSL 2-4m																									
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH1	29/04/25	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
BD01	29/04/25	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH6	29/04/25	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
BH15	29/04/25	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001

Notes:

- ▲

Hardness adjusted value
- No criterion / not defined / not tested / not applicable
- QA/QC replicate of sample listed directly below the primary sample
- NL

Not limiting
- PQL

Practical quantitation limit
- Shaded cell is exceedance of guideline value
- Where one or more guideline value is exceeded, the cell is shaded to the colour of the highest guideline value exceeded
- NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013), health screening level Clay 2-4m
- ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 95% level of protection of species for Fresh aquatic ecosystems [NB: 99% level of protection adopted for bioaccumulative chemicals]
- ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, orange text is 'unknown' level of protection
- Underlining of ANZG (2018) criteria indicates a criteria with an 'unknown' level of protection.
- ANZG (2018) DGV adopted for most conservative species of following analytes: DGV for xylene (m) adopted for xylene (m+p); DGV for CrVI adopted for total chromium; DGV for AsV adopted for total arsenic
- ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered
- ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Table I6: Summary of Laboratory Results of Groundwater

										OPP																
		Heptachlor Epoxide	Hexachlorobenzene	Methoxychlor	alpha-BHC	beta-BHC	delta-BHC	Lindane	Sum of detected OCP	Azinphos methyl (Guthion)	Bromophos-ethyl	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Rommel (fenchlorphos)	Fenitrothion	Fenthion	Malathion	Parathion	Parathion-methyl	Methidathion	Fenamiphos	Sum of detected OPP
	PQL	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.02	0.05	0.009	0.05	0.01	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.004	0.05	0.05	0.05	0.004
ANZG (2018) 95% LOP Fresh (Hardness adjusted)			0.1	0.005				0.2		0.02		0.00004		0.01		0.15			0.2		0.05	0.004				
NEPC (2013) HSL 2-4m																										
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH1	29/04/25	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.02	<0.05	<0.009	<0.05	<0.01	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.004	<0.05	<0.05	<0.05	<0.004
BD01	29/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH6	29/04/25	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.02	<0.05	<0.009	<0.05	<0.01	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.004	<0.05	<0.05	<0.05	<0.004
BH15	29/04/25	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.02	<0.05	<0.009	<0.05	<0.01	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.004	<0.05	<0.05	<0.05	<0.004

Notes:

- ▲

Hardness adjusted value
- No criterion / not defined / not tested / not applicable
- QA/QC replicate of sample listed directly below the primary sample
- NL

Not limiting
- PQL

Practical quantitation limit
- Shaded cell is exceedance of guideline value
- Where one or more guideline value is exceeded, the cell is shaded to the colour of the highest guideline value exceeded
- NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013), health screening level Clay 2-4m
- ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 95% level of protection of species for Fresh aquatic ecosystems [NB: 99% level of protection adopted for bioaccumulative chemicals]
- ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, orange text is 'unknown' level of protection
- Underlining of ANZG (2018) criteria indicates a criteria with an 'unknown' level of protection.
- ANZG (2018) DGV adopted for most conservative species of following analytes: DGV for xylene (m) adopted for xylene (m+p); DGV for CrVI adopted for total chromium; DGV for AsV adopted for total arsenic
- ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered
- ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Table I6: Summary of Laboratory Results of Groundwater

		PCB																					
		Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Aroclor 1260	Sum of detected PCB	1,1,2- tetrachloroethane	1,1,1- trichloroethane	1,1,2,2- tetrachloroethane	tetrachloroethene (PCE)	1,1,2- trichloroethane	Trichloroethene (TCE)	1,1-dichloroethane	1,1-Dichloroethene	1,1- dichloropropene	1,2,3- trichlorobenzene	1,2,3- trichloropropane	1,2,4- trichlorobenzene	1,2,4-trimethyl benzene	1,2-dibromo-3- chloropropane
	PQL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ANZG (2018) 95% LOP Fresh (Hardness adjusted)					0.3		0.01				270	400	70	6,500	330		700		3		85		
NEPC (2013) HSL 2-4m																							
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH1	29/04/25	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BD01	29/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH6	29/04/25	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH15	29/04/25	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Notes:

- ^

Hardness adjusted value
- No criterion / not defined / not tested / not applicable
- *

QA/QC replicate of sample listed directly below the primary sample
- NL

Not limiting
- PQL

Practical quantitation limit
- Shaded cell is exceedance of guideline value
- Where one or more guideline value is exceeded, the cell is shaded to the colour of the highest guideline value exceeded
- NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013), health screening level Clay 2-4m
- ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 95% level of protection of species for Fresh aquatic ecosystems [NB: 99% level of protection adopted for bioaccumulative chemicals]
- ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, orange text is 'unknown' level of protection
- Underlining of ANZG (2018) criteria indicates a criteria with an 'unknown' level of protection.
- ANZG (2018) DGV adopted for most conservative species of following analytes: DGV for xylene (m) adopted for xylene (m+p); DGV for CrVI adopted for total chromium; DGV for AsV adopted for total arsenic
- ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered
- ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Table I6: Summary of Laboratory Results of Groundwater

		VOC (excluding BTEX)																								
		1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	2,2-dichloropropane	2-chlorotoluene	4-chlorotoluene	4-isopropyltoluene	Bromobenzene	Bromochloromethane	Bromodichloroethane	Bromodform	Tetrachloromethane (carbon tetrachloride / CCl4)	Chloroethane	Chloroethene (vinyl chloride / VC)	Trichloromethane (chloroform / TCM)	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Isopropylbenzene (cumene)	Cyclohexane	dibromochloromethane
	PQL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10	10	1	10	1	1	1	1	1
ANZG (2018) 95% LOP Fresh (Hardness adjusted)		160	1,900	900		260	1,100	60									240		100	770				30		
NEPC (2013) HSL 2-4m																										
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH1	29/04/25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10	1	<10	<1	<1	<1	<1	<1
BD01	29/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH6	29/04/25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10	<1	<10	<1	<1	<1	<1	<1
BH15	29/04/25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10	<1	<10	<1	<1	<1	<1	<1

Notes:

- ▲ Hardness adjusted value
- No criterion / not defined / not tested / not applicable
- * QA/QC replicate of sample listed directly below the primary sample
- NL Not limiting
- PQL Practical quantitation limit

Shaded cell is exceedance of guideline value

Where one or more guideline value is exceeded, the cell is shaded to the colour of the highest guideline value exceeded

NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013), health screening level Clay 2-4m

ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 95% level of protection of species for Fresh aquatic ecosystems [NB: 99% level of protection adopted for bioaccumulative chemicals]

ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, orange text is 'unknown' level of protection

Underlining of ANZG (2018) criteria indicates a criteria with an 'unknown' level of protection.

ANZG (2018) DGV adopted for most conservative species of following analytes: DGV for xylene (m+p); DGV for CrVI adopted for total chromium; DGV for AsV adopted for total arsenic

ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered

ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Table I6: Summary of Laboratory Results of Groundwater

		Dibromomethane	Dichlorodifluoromethane	1,2-dibromoethane	hexachlorobutadiene	Bromomethane	Monochlorobenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene (vinylbenzene)	Tert-butyl benzene	trans,1,2-dichloroethene	trans,1,3-dichloropropene	Trichlorofluoromethane	Sum of detected VOC
	PQL	1	10	1	1	10	1	1	1	1	1	1	1	1	10	1
ANZG (2018) 95% LOP Fresh (Hardness adjusted)							55									
NEPC (2013) HSL 2-4m																
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH1	29/04/25	<1	<10	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<10	1
BD01	29/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH6	29/04/25	<1	<10	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1
BH15	29/04/25	<1	<10	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1

Notes:

- ▲

Hardness adjusted value
- No criterion / not defined / not tested / not applicable
- *

QA/QC replicate of sample listed directly below the primary sample
- NL

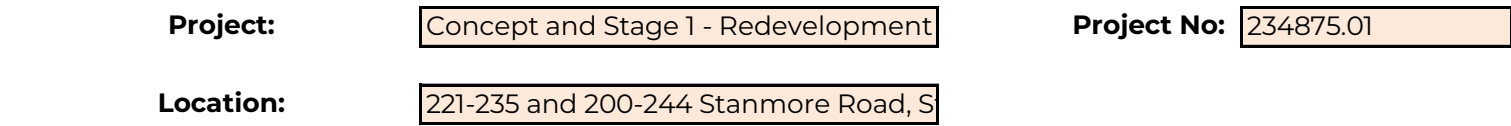
Not limiting
- PQL

Practical quantitation limit
- Shaded cell is exceedance of guideline value
- Where one or more guideline value is exceeded, the cell is shaded to the colour of the highest guideline value exceeded
- NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013), health screening level Clay 2-4m
- ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 95% level of protection of species for Fresh aquatic ecosystems [NB: 99% level of protection adopted for bioaccumulative chemicals]
- ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, orange text is 'unknown' level of protection
- Underlining of ANZG (2018) criteria indicates a criteria with an 'unknown' level of protection.
- ANZG (2018) DGV adopted for most conservative species of following analytes: DGV for xylene (m) adopted for xylene (m+p); DGV for CrVI adopted for total chromium; DGV for AsV adopted for total arsenic
- ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered
- ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Table I7: Input data for statistical analysis (Stage 01 -B(a)P TEQ)

				Benzo(a)pyrene TEQ (B(a)P TEQ)
			PQL	0.5
Sample ID	Depth	Soil Profile	Sample Date	mg/kg
BH11	0.5 - 0.6 m	Fill	09/04/25	-
BH11	0.8 - 1 m	Fill	09/04/25	1.1
BH11	1.2 - 1.5 m	Fill	10/04/25	1.2
BH12	0.8 - 1 m	Fill	10/04/25	1.3
BH12	1.3 - 1.5 m	Fill	10/04/25	1.9
BH12	1.8 - 2.3 m	Fill	10/04/25	1.1
BH13	0 - 0.2 m	Fill	17/04/25	0.8
BH14	0.1 - 0.2 m	Fill	14/04/25	0.6
BH14	0.4 - 0.5 m	Fill	14/04/25	3
BH15	0.1 - 0.2 m	Fill	15/04/25	0.5
BD6/20250415	0.4 - 0.5 m	Fill	15/04/25	4.6
BH16	0.1 - 0.2 m	Fill	17/04/25	0.5
BH16	0.4 - 0.5 m	Fill	17/04/25	0.5
BH16	0.8 - 0.95 m	Fill	17/04/25	0.5

© 29 January 2024 Douglas Partners Pty Ltd
Correlation of field PAH data to reference datasets



Method A: closest to 1 = strongest correlation
Method B: closest to 0 = strongest correlation

Non-detect method	0	Determines handling of results <PQL. Options for: results as 0 (DEFAULT), 0.5 x PQL or 1 x PQL
--------------------------	---	--

Version	1.8
Date	29/01/2024
Last Updated by:	LC/JRR/JJH

Project No: 234875.01
Project: Concept and Stage 1 - Redevelopment of Newington College
Location: 221-235 and 200-244 Stanmore Road, Stanmore NSW

Table I8: Results for PAH Fingerprinting Method A (Correlation Coefficient)

	BH16/0.6-0.8	BH15/0.4-0.5	BH7/0.1-0.2	BH7/0.4-0.5	BH14/0.4-0.5	BH11/0.8-1	BH11/1.2 - 1.5	BH12/0.8-1	BH12/1.3-1.5	BH12/1.8-2.3	
Black Coal Tar 1	0.34	-0.08	0.15	0.10	0.16	-0.03	-0.09	-0.02	-0.04	-0.09	-
Black Coal Tar 2	0.75	0.40	0.65	0.61	0.67	0.49	0.43	0.50	0.44	0.45	-
Brown Coal Tar	-0.02	-0.36	-0.14	-0.16	-0.18	-0.32	-0.36	-0.33	-0.35	-0.35	-
Steelworks Tar 1	0.73	0.21	0.61	0.57	0.57	0.31	0.22	0.36	0.27	0.25	-
Steelworks Tar 2	0.42	0.27	0.55	0.54	0.45	0.30	0.25	0.35	0.29	0.29	-
Weathered Coal Tar	0.79	0.07	0.46	0.44	0.50	0.19	0.11	0.23	0.13	0.13	-
Creosote 1	0.75	0.04	0.57	0.57	0.50	0.17	0.07	0.23	0.10	0.11	-
Creosote 2	0.34	-0.26	0.18	0.16	0.09	-0.15	-0.24	-0.14	-0.23	-0.22	-
Weathered Creosote	0.82	0.13	0.63	0.63	0.59	0.25	0.16	0.31	0.18	0.20	-
Ash from Black Coal 1	0.81	0.83	0.96	0.95	0.95	0.87	0.81	0.93	0.83	0.86	-
Ash from Black Coal 2	0.92	0.81	0.95	0.93	0.98	0.86	0.81	0.90	0.84	0.84	-
Ash from Black Coal 3	0.80	0.86	0.93	0.90	0.94	0.90	0.85	0.93	0.87	0.88	-
Ash from Brown Coal	0.77	0.91	0.93	0.92	0.95	0.95	0.91	0.98	0.92	0.94	-
Bitumen	0.05	0.08	0.02	0.01	0.04	0.15	0.07	0.11	0.06	0.07	-
Coke	0.77	0.92	0.93	0.91	0.96	0.94	0.91	0.98	0.93	0.94	-
Waste Oil Petrol	0.21	0.62	0.27	0.26	0.36	0.59	0.56	0.52	0.59	0.55	-
Waste Oil Diesel	0.74	0.60	0.85	0.84	0.76	0.63	0.52	0.77	0.57	0.63	-

Black Coal Tar 1	-	-	-	-	-	-	-	-	-	-	-
Black Coal Tar 2	-	-	-	-	-	-	-	-	-	-	-
Brown Coal Tar	-	-	-	-	-	-	-	-	-	-	-
Steelworks Tar 1	-	-	-	-	-	-	-	-	-	-	-
Steelworks Tar 2	-	-	-	-	-	-	-	-	-	-	-
Weathered Coal Tar	-	-	-	-	-	-	-	-	-	-	-
Creosote 1	-	-	-	-	-	-	-	-	-	-	-
Creosote 2	-	-	-	-	-	-	-	-	-	-	-
Weathered Creosote	-	-	-	-	-	-	-	-	-	-	-
Ash from Black Coal 1	-	-	-	-	-	-	-	-	-	-	-
Ash from Black Coal 2	-	-	-	-	-	-	-	-	-	-	-
Ash from Black Coal 3	-	-	-	-	-	-	-	-	-	-	-
Ash from Brown Coal	-	-	-	-	-	-	-	-	-	-	-
Bitumen	-	-	-	-	-	-	-	-	-	-	-
Coke	-	-	-	-	-	-	-	-	-	-	-
Waste Oil Petrol	-	-	-	-	-	-	-	-	-	-	-
Waste Oil Diesel	-	-	-	-	-	-	-	-	-	-	-

Notes

Result ≥0.95 = Very Good Fit

1 ≤ Result <0.95 = Good Fit

1 ≤ Result <0.85 = Reasonable Fit

Result <0.75 = Poor Fit

Project No: 234875.01**Project:** Concept and Stage 1 - Redevelopment of Newington College**Location:** 221-235 and 200-244 Stanmore Road, Stanmore NSW**Table I8:** Results for PAH Fingerprinting Method B (pyrene normalised, sum of absolute differences)

	BH16/0.6-0.8	BH15/0.4-0.5	BH7/0.1-0.2	BH7/0.4-0.5	BH14/0.4-0.5	BH11/0.8-1	BH11/1.2 - 1.5	BH12/0.8-1	BH12/1.3-1.5	BH12/1.8-2.3	
Black Coal Tar 1	8.47	10.03	10.55	10.27	9.10	9.89	10.30	9.74	9.82	10.29	-
Black Coal Tar 2	2.80	4.30	3.91	3.78	2.72	4.12	4.60	3.53	4.09	3.96	-
Brown Coal Tar	14.95	18.36	16.10	15.93	16.25	18.08	18.56	17.32	18.04	18.02	-
Steelworks Tar 1	3.24	5.64	4.73	4.45	3.96	5.36	5.84	4.66	5.32	5.33	-
Steelworks Tar 2	4.42	5.25	4.55	4.28	3.93	4.97	5.45	4.28	4.93	4.95	-
Weathered Coal Tar	3.65	6.77	4.77	4.78	4.77	6.57	7.05	5.81	6.47	6.42	-
Creosote 1	5.46	8.92	5.79	5.81	6.72	8.59	9.06	7.99	8.78	8.52	-
Creosote 2	8.55	11.90	8.81	8.79	9.70	11.62	12.10	10.97	11.77	11.55	-
Weathered Creosote	3.70	7.13	4.01	4.02	4.93	6.82	7.30	6.20	6.99	6.76	-
Ash from Black Coal 1	2.43	2.42	0.98	0.90	1.40	2.08	2.56	1.56	2.45	2.13	-
Ash from Black Coal 2	1.80	2.66	1.31	1.40	0.67	2.41	2.88	1.66	2.34	2.32	-
Ash from Black Coal 3	2.72	2.45	1.84	1.83	1.25	2.22	2.70	1.63	2.32	2.06	-
Ash from Brown Coal	2.89	1.69	1.55	1.60	1.37	1.32	1.86	0.90	1.65	1.29	-
Bitumen	10.96	10.31	12.62	12.57	11.01	10.41	10.44	10.57	10.22	10.66	-
Coke	2.60	1.84	1.51	1.50	1.02	1.58	2.04	0.84	1.66	1.54	-
Waste Oil Petrol	6.00	2.88	5.07	5.10	4.67	3.35	3.23	3.78	3.28	3.18	-
Waste Oil Diesel	4.12	3.71	2.10	2.28	3.43	3.83	4.24	3.45	3.98	3.43	-

Black Coal Tar 1	-	-	-	-	-	-	-	-	-	-	-
Black Coal Tar 2	-	-	-	-	-	-	-	-	-	-	-
Brown Coal Tar	-	-	-	-	-	-	-	-	-	-	-
Steelworks Tar 1	-	-	-	-	-	-	-	-	-	-	-
Steelworks Tar 2	-	-	-	-	-	-	-	-	-	-	-
Weathered Coal Tar	-	-	-	-	-	-	-	-	-	-	-
Creosote 1	-	-	-	-	-	-	-	-	-	-	-
Creosote 2	-	-	-	-	-	-	-	-	-	-	-
Weathered Creosote	-	-	-	-	-	-	-	-	-	-	-
Ash from Black Coal 1	-	-	-	-	-	-	-	-	-	-	-
Ash from Black Coal 2	-	-	-	-	-	-	-	-	-	-	-
Ash from Black Coal 3	-	-	-	-	-	-	-	-	-	-	-
Ash from Brown Coal	-	-	-	-	-	-	-	-	-	-	-
Bitumen	-	-	-	-	-	-	-	-	-	-	-
Coke	-	-	-	-	-	-	-	-	-	-	-
Waste Oil Petrol	-	-	-	-	-	-	-	-	-	-	-
Waste Oil Diesel	-	-	-	-	-	-	-	-	-	-	-

Notes

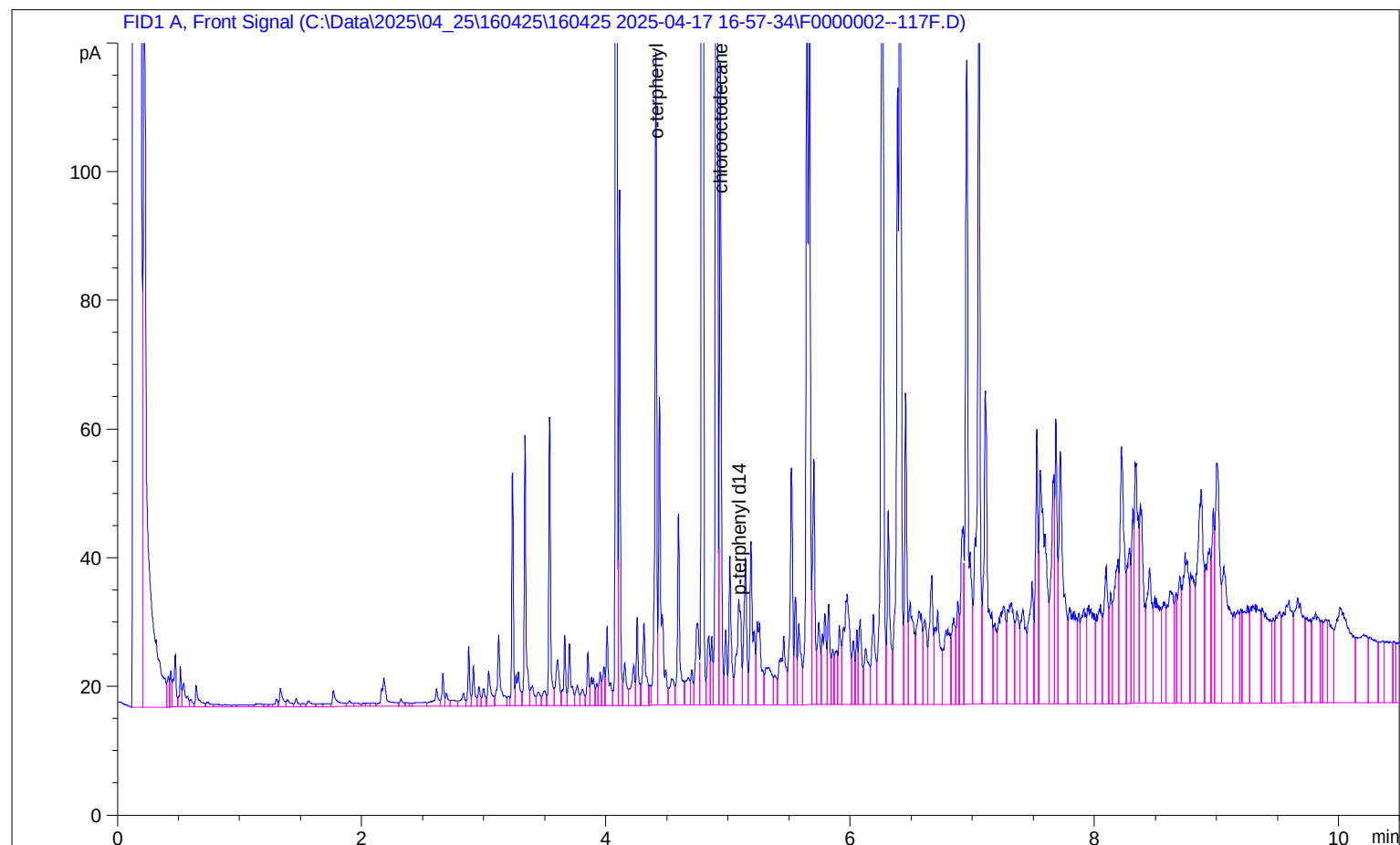
Result ≤ 1.5 =	Very Good Fit
2 ≤ Result < 3 =	Good Fit
3 ≤ Result < 5 =	Reasonable Fit
Result > 5 =	Poor Fit

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.2 21/05/2025 1:02:01 PM								
5	From File			WorkSheet_b.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	B(a)P TEQ											
12												
13	General Statistics											
14	Total Number of Observations				13		Number of Distinct Observations				9	
15							Number of Missing Observations				0	
16	Minimum				0.5		Mean				1.354	
17	Maximum				4.6		Median				1.1	
18	SD				1.207		Std. Error of Mean				0.335	
19	Coefficient of Variation				0.892		Skewness				1.998	
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic				0.735		Shapiro Wilk GOF Test					
23	1% Shapiro Wilk Critical Value				0.814		Data Not Normal at 1% Significance Level					
24	Lilliefors Test Statistic				0.287		Lilliefors GOF Test					
25	1% Lilliefors Critical Value				0.271		Data Not Normal at 1% Significance Level					
26	Data Not Normal at 1% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL					95% UCLs (Adjusted for Skewness)						
30	95% Student's-t UCL				1.951		95% Adjusted-CLT UCL (Chen-1995)				2.103	
31							95% Modified-t UCL (Johnson-1978)				1.982	
32												
33	Gamma GOF Test											
34	A-D Test Statistic				0.737		Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value				0.743		Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic				0.197		Kolmogorov-Smirnov Gamma GOF Test					
37	5% K-S Critical Value				0.239		Detected data appear Gamma Distributed at 5% Significance Level					
38	Detected data appear Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)				1.985		k star (bias corrected MLE)				1.578	
42	Theta hat (MLE)				0.682		Theta star (bias corrected MLE)				0.858	
43	nu hat (MLE)				51.61		nu star (bias corrected)				41.03	
44	MLE Mean (bias corrected)				1.354		MLE Sd (bias corrected)				1.078	
45						Approximate Chi Square Value (0.05)				27.35		
46	Adjusted Level of Significance				0.0301		Adjusted Chi Square Value				25.77	
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL				2.031		95% Adjusted Gamma UCL				2.156	
50												
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic				0.888		Shapiro Wilk Lognormal GOF Test					

	A	B	C	D	E	F	G	H	I	J	K	L	
53	10% Shapiro Wilk Critical Value					0.889	Data Not Lognormal at 10% Significance Level						
54	Lilliefors Test Statistic					0.159	Lilliefors Lognormal GOF Test						
55	10% Lilliefors Critical Value					0.215	Data appear Lognormal at 10% Significance Level						
56	Data appear Approximate Lognormal at 10% Significance Level												
57													
58	Lognormal Statistics												
59	Minimum of Logged Data					-0.693	Mean of logged Data					0.0304	
60	Maximum of Logged Data					1.526	SD of logged Data					0.724	
61													
62	Assuming Lognormal Distribution												
63	95% H-UCL					2.215	90% Chebyshev (MVUE) UCL					2.134	
64	95% Chebyshev (MVUE) UCL					2.508	97.5% Chebyshev (MVUE) UCL					3.028	
65	99% Chebyshev (MVUE) UCL					4.048							
66													
67	Nonparametric Distribution Free UCL Statistics												
68	Data appear to follow a Discernible Distribution												
69													
70	Nonparametric Distribution Free UCLs												
71	95% CLT UCL					1.905	95% BCA Bootstrap UCL					2.038	
72	95% Standard Bootstrap UCL					1.894	95% Bootstrap-t UCL					2.8	
73	95% Hall's Bootstrap UCL					4.588	95% Percentile Bootstrap UCL					1.938	
74	90% Chebyshev(Mean, Sd) UCL					2.358	95% Chebyshev(Mean, Sd) UCL					2.813	
75	97.5% Chebyshev(Mean, Sd) UCL					3.445	99% Chebyshev(Mean, Sd) UCL					4.686	
76													
77	Suggested UCL to Use												
78	95% Adjusted Gamma UCL					2.156							
79													
80	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.												
81	Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.												
82	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.												
83													

Sample Name: s378369-1

```
=====
Acq. Operator   : SYSTEM                      Seq. Line : 117
Sample Operator : SYSTEM
Acq. Instrument : gc7                        Location  : 54 (F)
Injection Date  : 18/04/2025 7:45:30 AM      Inj       : 1
                                           Inj Volume: 1 µl
Acq. Method     : C:\Data\2025\04_25\160425\160425 2025-04-17 16-57-34\TRH_FAST LT Broken
                                           Racer.M
Last changed    : 30/04/2024 5:32:52 PM by SYSTEM
Analysis Method : C:\METHODS\2025\04_23\160425-F PROCESSING.M
Last changed    : 17/04/2025 10:06:17 AM by SYSTEM
Method Info     : FAST TPH WITH 15M HP5 COLUMNS
=====
```



```
=====
External Standard Report
=====
```

```
Sorted By      : Signal
Calib. Data Modified : 17/04/2025 9:59:43 AM
Multiplier     : 1.0000
Dilution       : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID1 A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [mg/L]	Grp	Name
4.410	VV	106.35909	1.30614e-1	13.89198		o-terphenyl
4.938	VV	110.67761	1.68300e-1	18.62702		chlorooctodecane

Sample Name: s378369-1

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [mg/L]	Grp	Name
5.090	VV I	42.19905	1.43200e-1	6.04291		p-terphenyl d14

Totals : 38.56191

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [mg/L]
TRH C10-C14	0.780	3.080	122.15253	17.0298
NEPM >C10-C16	1.435	3.700	303.28475	42.2821
TRH C15-C28	3.080	6.475	3405.84597	517.8759
NEPM >C16-C34	3.700	7.480	4277.70191	650.4460
TRH C29-C36	6.475	7.780	1555.20330	247.9834
NEPM >C34-C40	7.480	8.367	1134.07256	180.8324

Totals : 1656.4496

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [mg/L]
TRH C10-C14	122.15253	17.0298
NEPM >C10-C16	303.28475	42.2821
TRH C15-C28	3405.84597	517.8759
NEPM >C16-C34	4277.70191	650.4460
TRH C29-C36	1555.20330	247.9834
NEPM >C34-C40	1134.07256	180.8324
o-terphenyl	106.35909	13.8920
chlorooctodecan	110.67761	18.6270
p-terphenyl d14	42.19905	6.0429

Totals : 1695.0115

*** End of Report ***



The header banner features the Envirolab logo on the left, which includes a stylized leaf and the word 'Envirolab'. To the right of the logo is a green banner with the text 'Great Chemistry. Great Service.' and a chemical equation: $2\text{H}^+ + 2\text{Cl}^- + 2\text{Na}^+ + \text{S}^{2-} \rightarrow \text{H}_2\text{S (g)} + 2\text{Na}^+ + 2\text{Cl}^-$. Below the equation are three small icons labeled 'Qy' (Quality), 'Ri' (Reliability), and 'Va' (Value). At the bottom right of the banner is the company name 'ENVIROLAB SERVICES PTY LTD' and contact information: 'phone: 02 9910 6200; fax: 02 9910 6201', 'www.envirolabservices.com.au', 'enquiries@envirolabservices.com.au', and '12 Ashley St, Chatswood NSW 2067'.

Great Chemistry. Great Service.

$2\text{H}^+ + 2\text{Cl}^- + 2\text{Na}^+ + \text{S}^{2-} \rightarrow \text{H}_2\text{S (g)} + 2\text{Na}^+ + 2\text{Cl}^-$

Qy Quality Ri Reliability Va Value

ENVIROLAB SERVICES PTY LTD
phone: 02 9910 6200; fax: 02 9910 6201
www.envirolabservices.com.au
enquiries@envirolabservices.com.au
12 Ashley St, Chatswood NSW 2067

Hydrocarbon Reference Library

Envirolab Services Pty Ltd



Background

Petroleum hydrocarbons are made up of a large number of compounds that are originally derived from crude oil, as well as other sources of petroleum such as natural gas, coal, and peat. Petroleum hydrocarbons consist of three major groups of compounds (paraffins, olefins and aromatics).

Paraffins are alkanes (single bonded) and are one of the major constituents of crude oil. Examples are kerosene, gasoline and diesel.

Olefins are alkenes (double bonded). An example is Ethylene (extracted from natural gas).

Aromatics contain one or more 6 carbon rings with 3 of the carbons containing double bonds. Mononuclear (1 ring) examples are Benzene, Toluene, Ethyl benzene, Xylene (BTEX). Polynuclear (multiple rings) examples include Naphthalene, Pyrene (PAHs).

Products are produced by a combination of several individual hydrocarbon compounds all of which have slightly different vaporization and boiling temperatures. Due to the large number of constituents that make up petroleum products, samples are measured as Total Petroleum Hydrocarbons (TPH) and are analysed by capillary column gas chromatography.

A small amount of the sample extract is injected into a gas chromatograph. Once injected, the product is heated and vaporized and carried into a capillary column by a flow of inert gas. As the temperature of the column increases, the compounds begin to move through the column. The more volatile and lower boiling compounds will move first. A flame ionization detector (FID) connected to the end of the column detects the components of the product as they elute from the column. The time that it takes for individual components to go through the column depends on the temperature, length of column, column characteristics, and the character of the compound itself.

Hydrocarbon Reference Chromatograms

The resulting chromatogram (hydrocarbon report) gives a “fingerprint” of the contamination in the sample. This hydrocarbon report can then be compared to the Envirolab Hydrocarbon Reference Library, to help to qualitatively identify the source of the contamination. Chromatograms may differ slightly depending on the source of the product and the effects of weathering.

The bottom (horizontal) scale indicates the time in minutes. These retention times may differ slightly, but the overall “fingerprint” will usually be comparable to the reference hydrocarbon report.

The vertical scale indicates the response from the detector, and this scale will vary depending on the concentration of the sample.



Table of Contents

Petroleum Products

Unleaded Petrol—unweathered	7
Unleaded Petrol—25% weathered	8
Unleaded Petrol—50% weathered	9
Unleaded Petrol—75% weathered	10
Jet Fuel	11
2 Stroke Fuel	12
White Spirit	13
Turpentine	14
WD-40 (white spirit + isoparaffins)	15
Kerosene—unweathered	16
Kerosene—25% weathered	17
Kerosene—50% weathered	18
Kerosene—75% weathered	19
Mineral Spirit—unweathered	20
Mineral Spirit—25% weathered	21
Mineral Spirit—50% weathered	22
Mineral Spirit—75% weathered	23



Table of Contents

Petroleum Products (continued)

Diesel—unweathered	24
Diesel—25% weathered	25
Diesel—50% weathered	26
Diesel—75% weathered	27
Synthetic 2 Stroke Fuel	28
Asphalt—no coal tar	29
Asphalt—with coal tar	30
Coal	31
Weathered Coal	32
Coal Shale	33
White Petroleum Jelly (Vaseline)	34
Grease	35

Wax

Candle Wax	36
Paraffin Wax	37

Oils (industrial/ commercial)

Engine Oil	38
Outboard Gear Oil	39



Table of Contents

Oils (industrial/ commercial)

Transformer Oil	40
-----------------	----

Oils (vegetable or plant)

Camellia Oil	41
Castor Oil	42
Coconut Oil	43
Corn Oil	44
Eucalyptus Oil	45
Linseed Oil	46
Olive Oil	47
Palm Oil	48
Rice Bran Oil	49
Sesame Oil	50
Soya Bean Oil	51
Vegetable Oil	52

Paper Products

Cardboard	53
Glossy Magazine Paper	54



Table of Contents

Paper Products (continued)

Newspaper	55
Printer/Copier Paper	56

Miscellaneous Products

Diluted Decontamination Soap	57
Defoamer	58
Truck Tyres	59
Wood Stain	60

Organic Samples

Eucalyptus Wood Chip	61
Eucalyptus Wood Chip with Silica Gel Cleanup	62
Premium Blend Compost	63
Premium Blend Compost with Silica Gel Cleanup	64
Wood chips spiked with diesel	65
Wood chips spiked with diesel with Silica Gel Cleanup	66

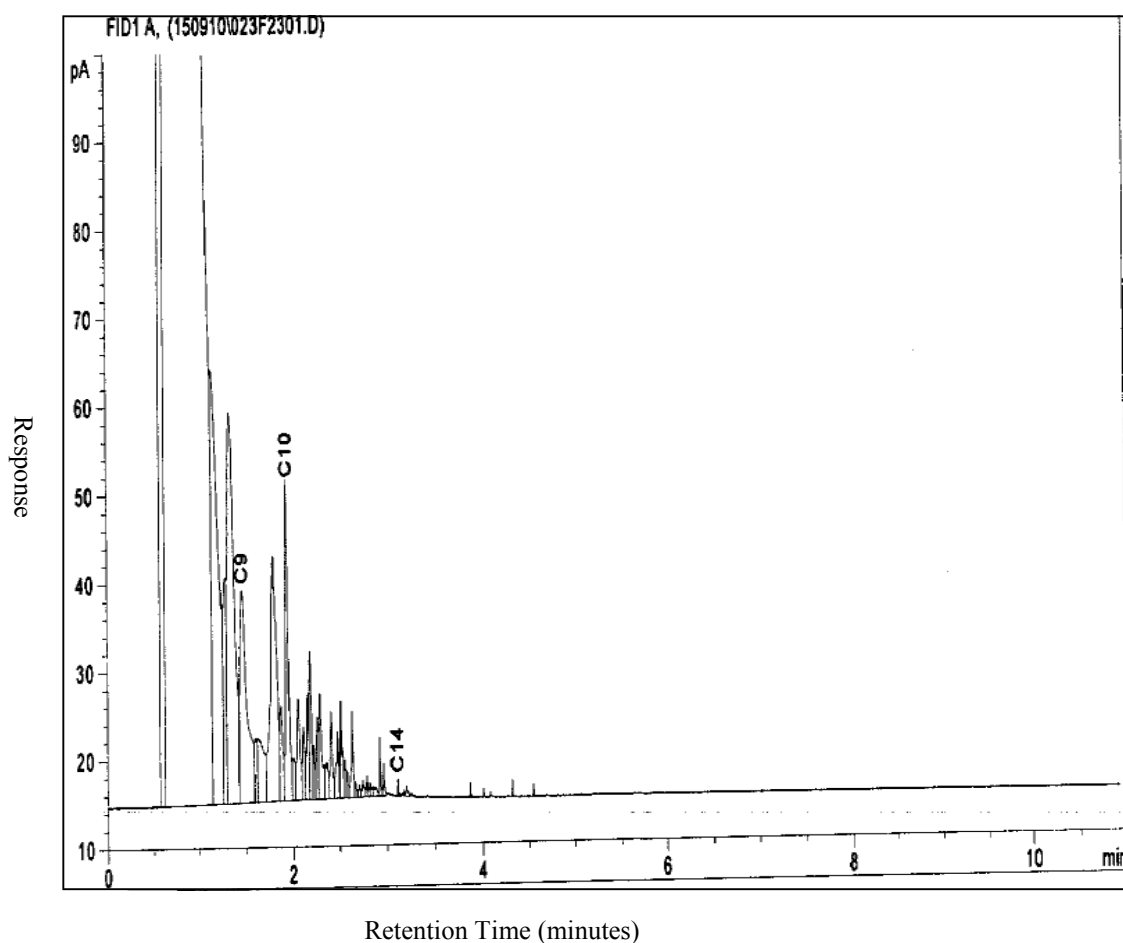
Discrete Compounds

Florida Alkane Mix	67
PAH mixture	68

HYDROCARBON REFERENCE LIBRARY



UNLEADED PETROL unweathered



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

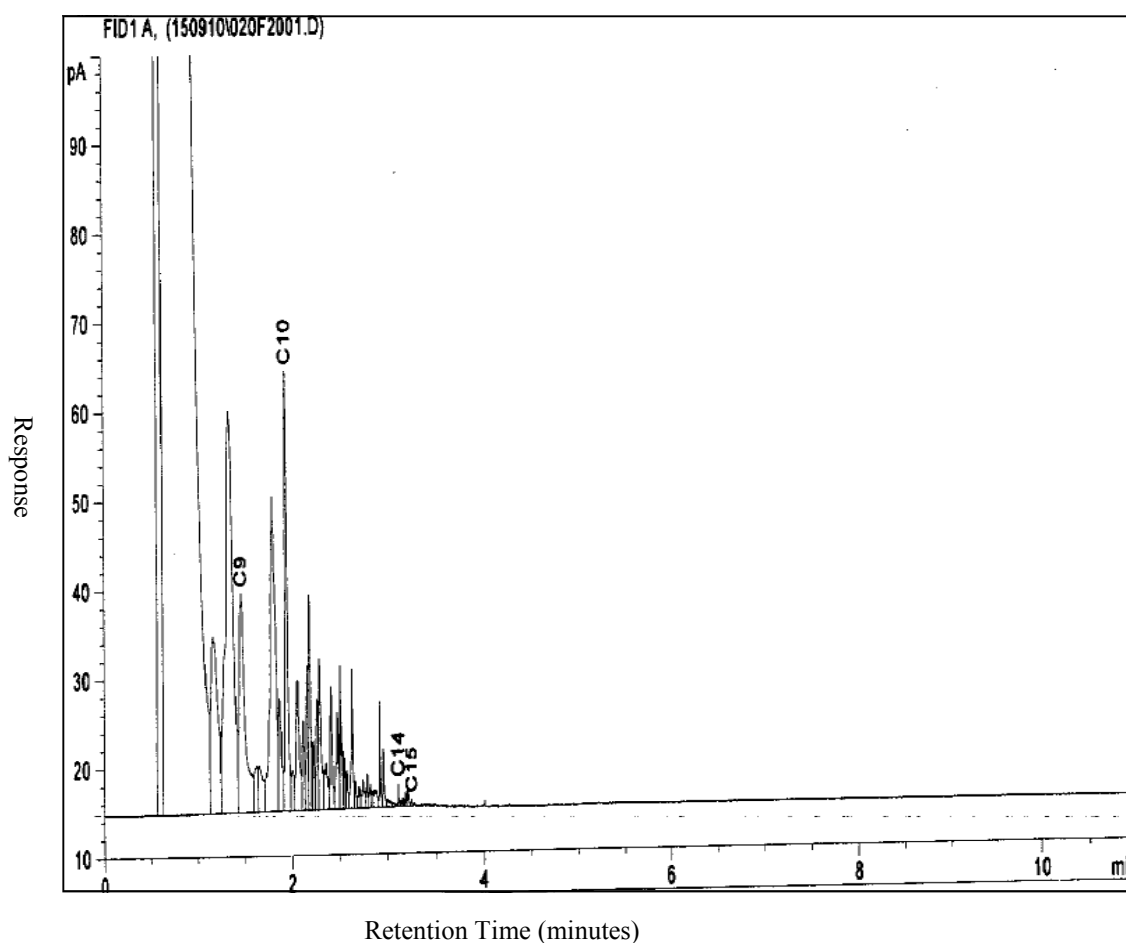
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



UNLEADED PETROL 25% Weathered



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

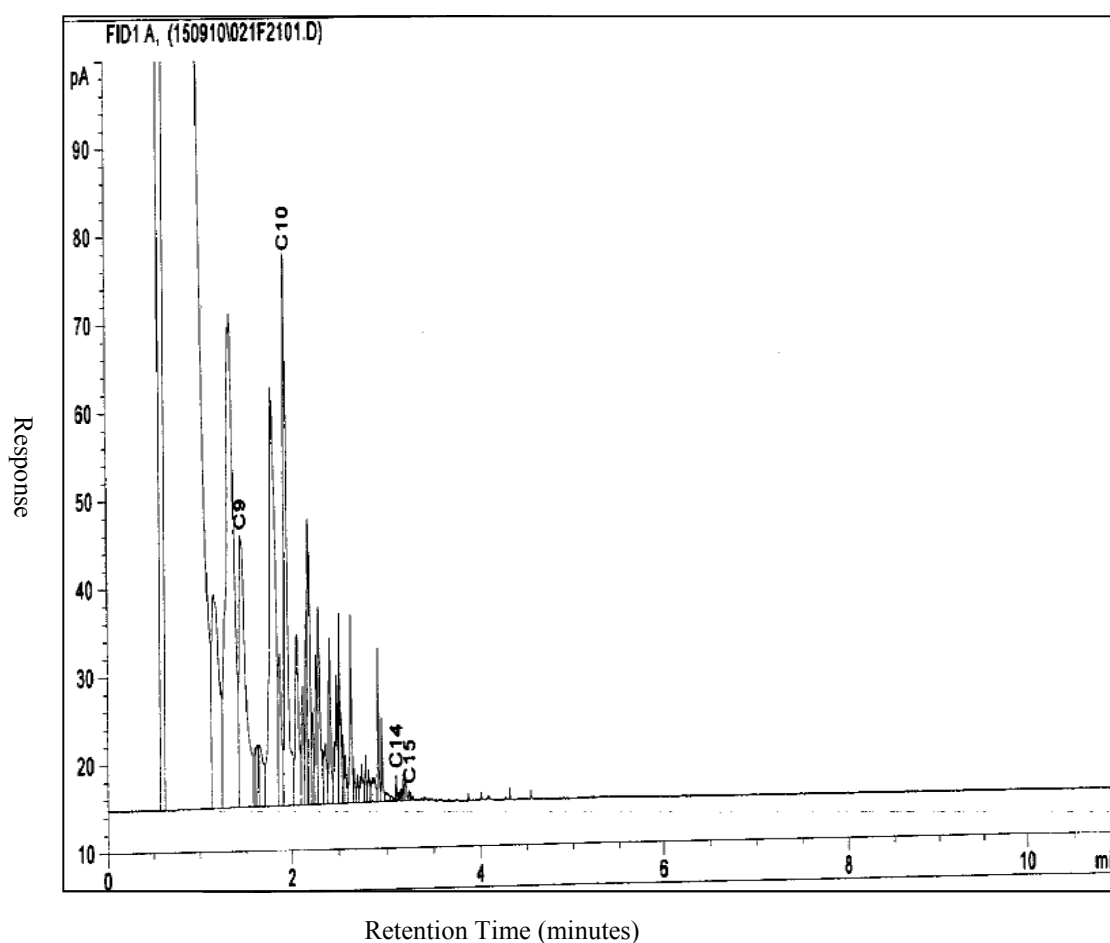
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



UNLEADED PETROL 50% Weathered



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

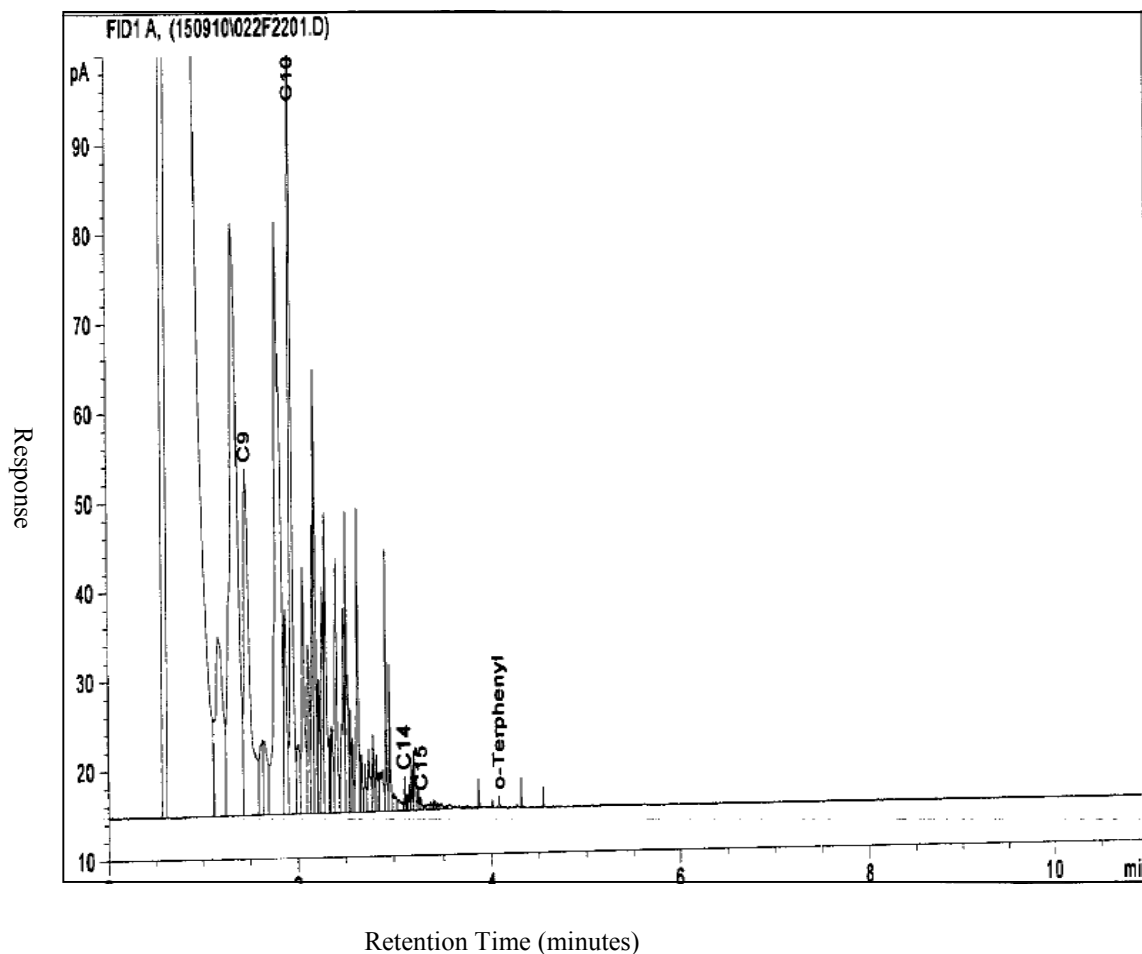
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



UNLEADED PETROL 75% Weathered



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

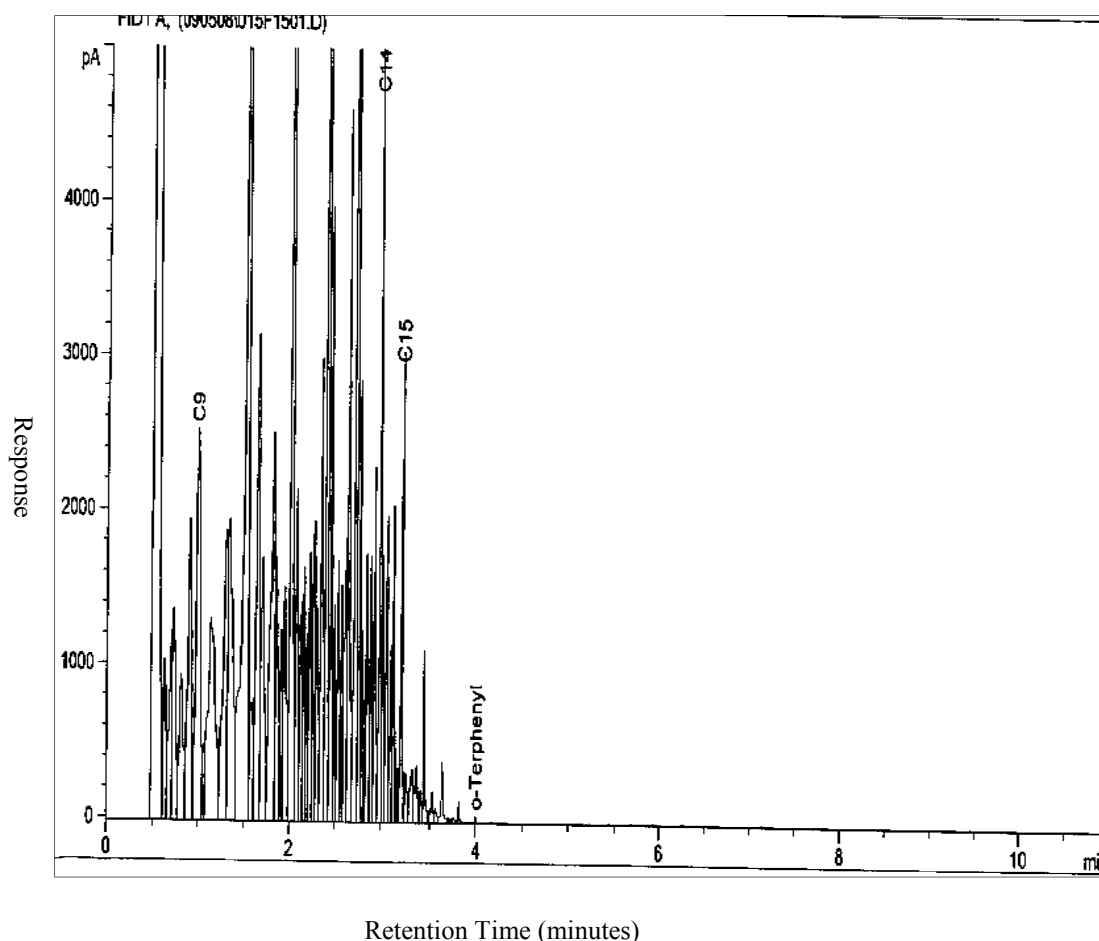
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



JET FUEL



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

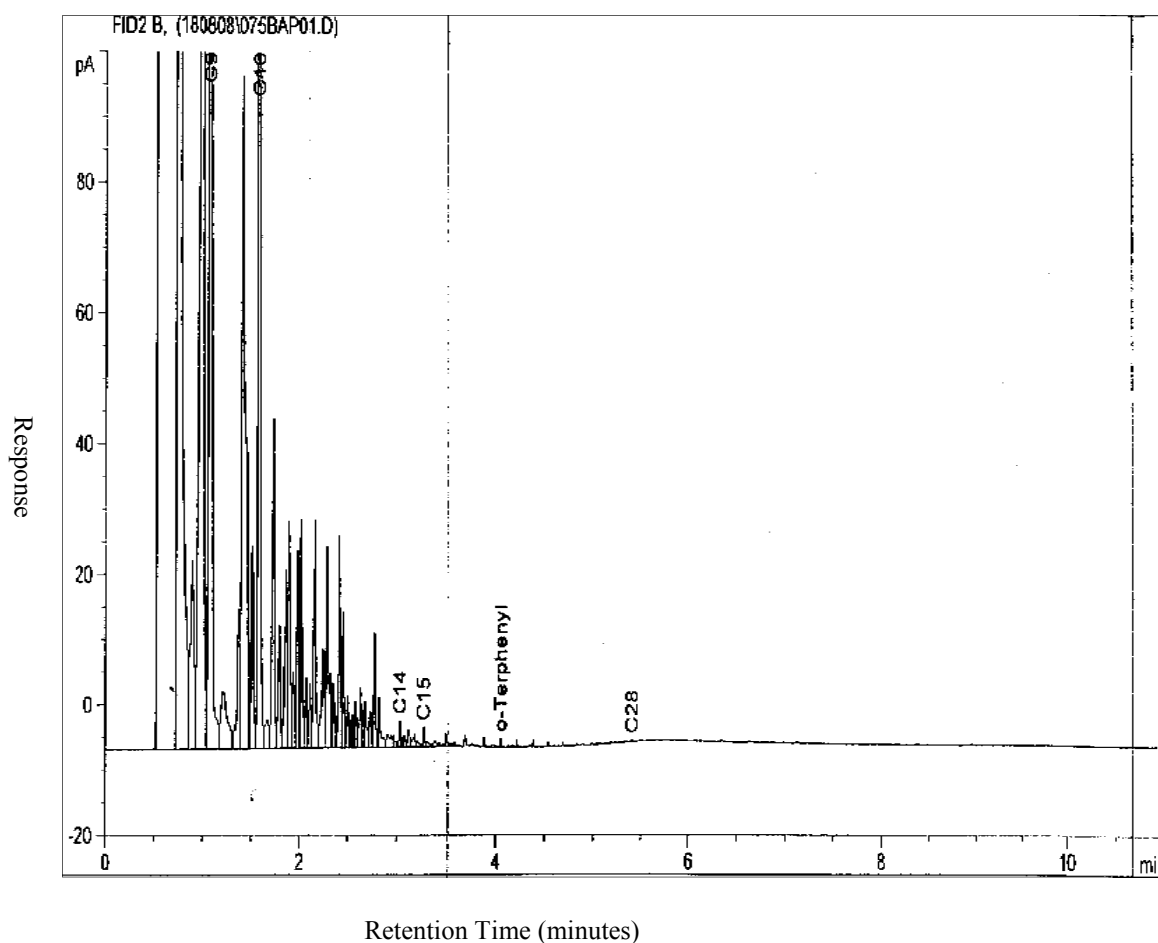
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



2 STROKE FUEL



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

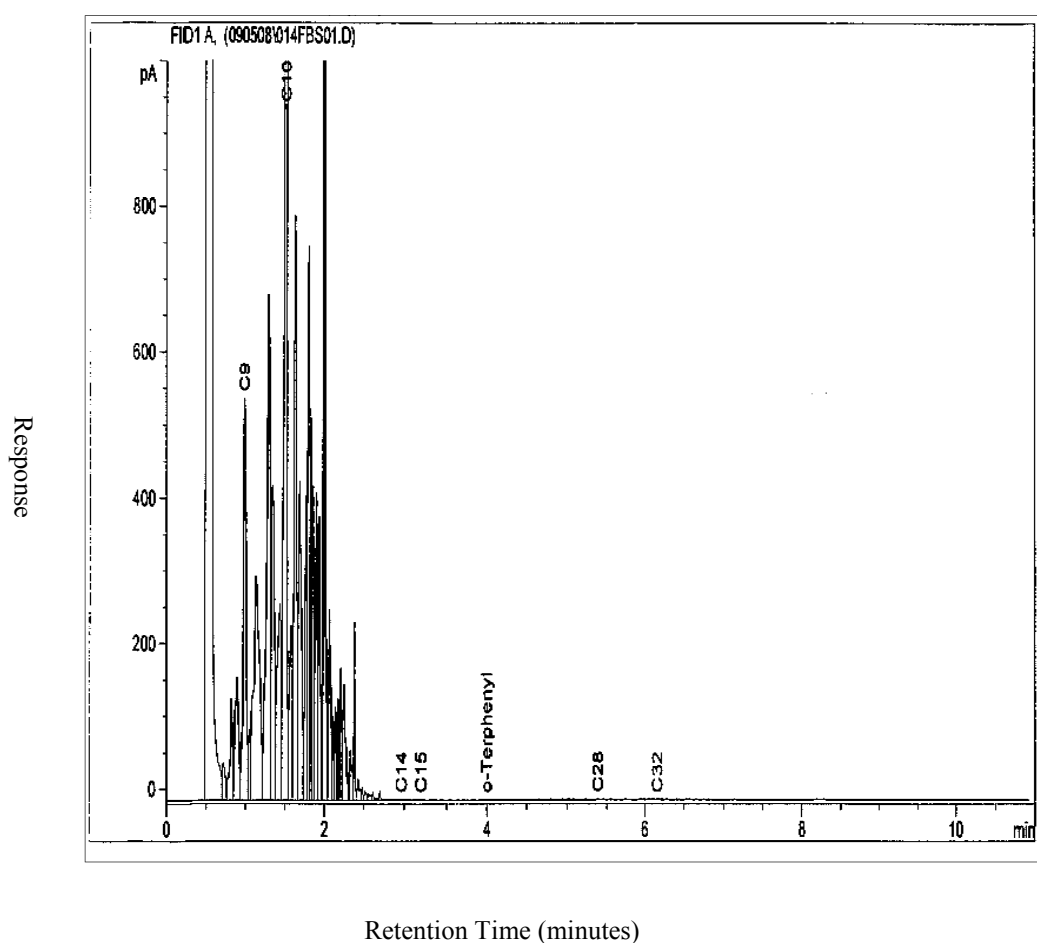
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



WHITE SPIRIT (Paraffin derived solvent)



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

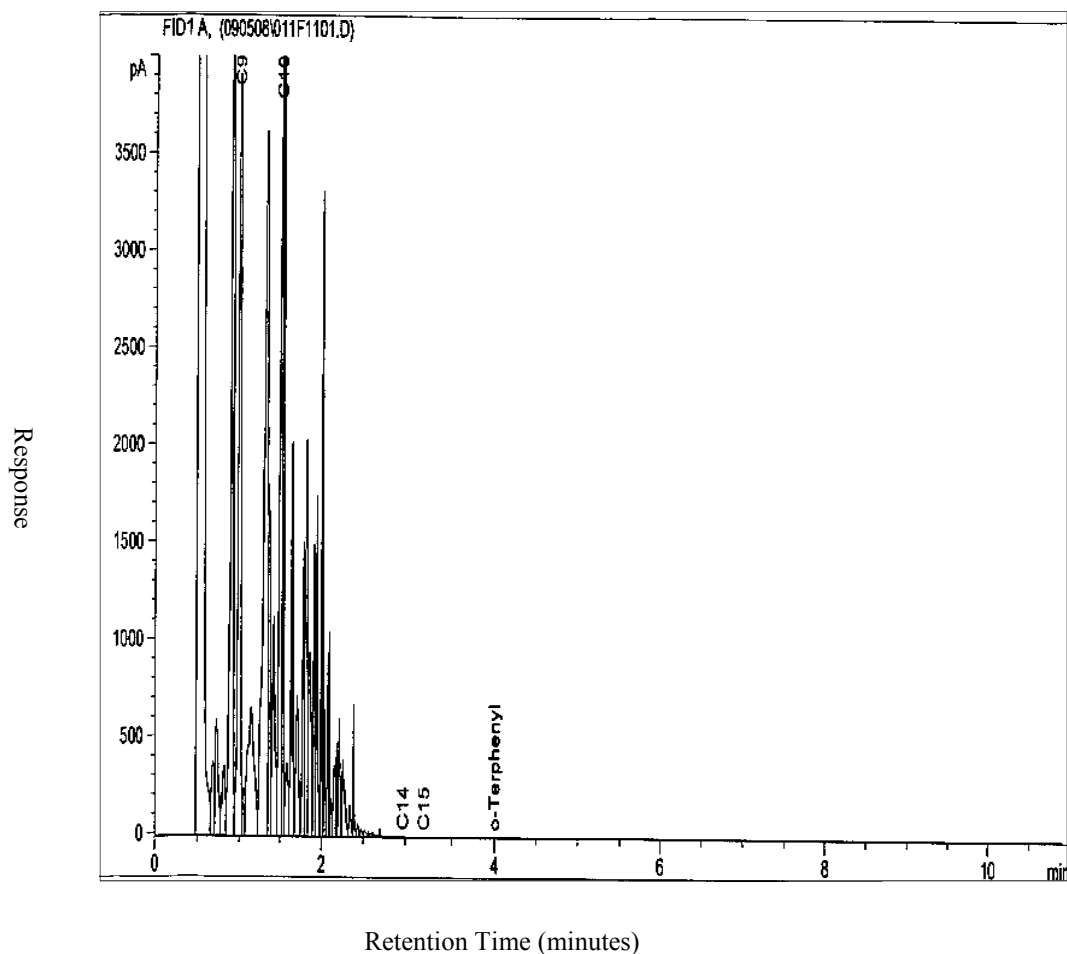
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



TURPENTINE



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

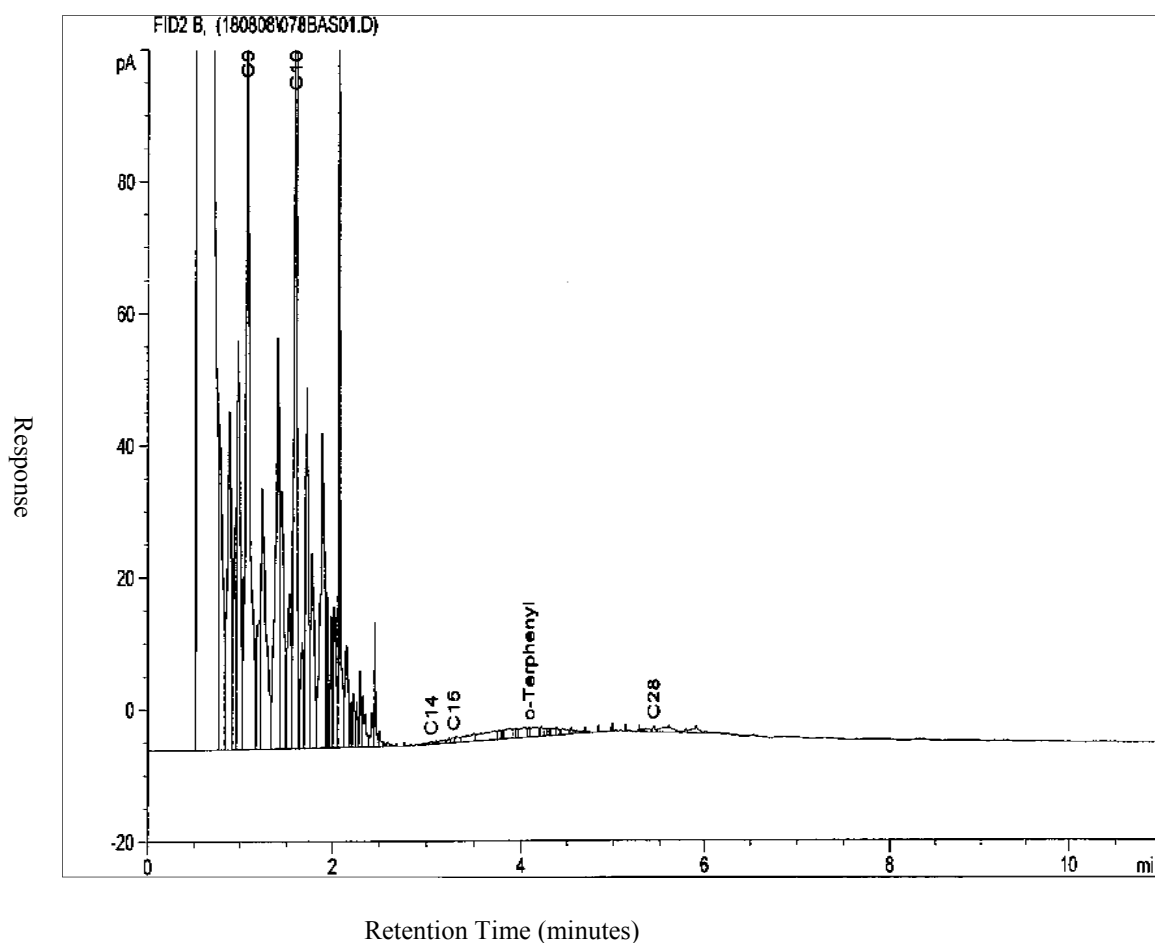
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



WD 40



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

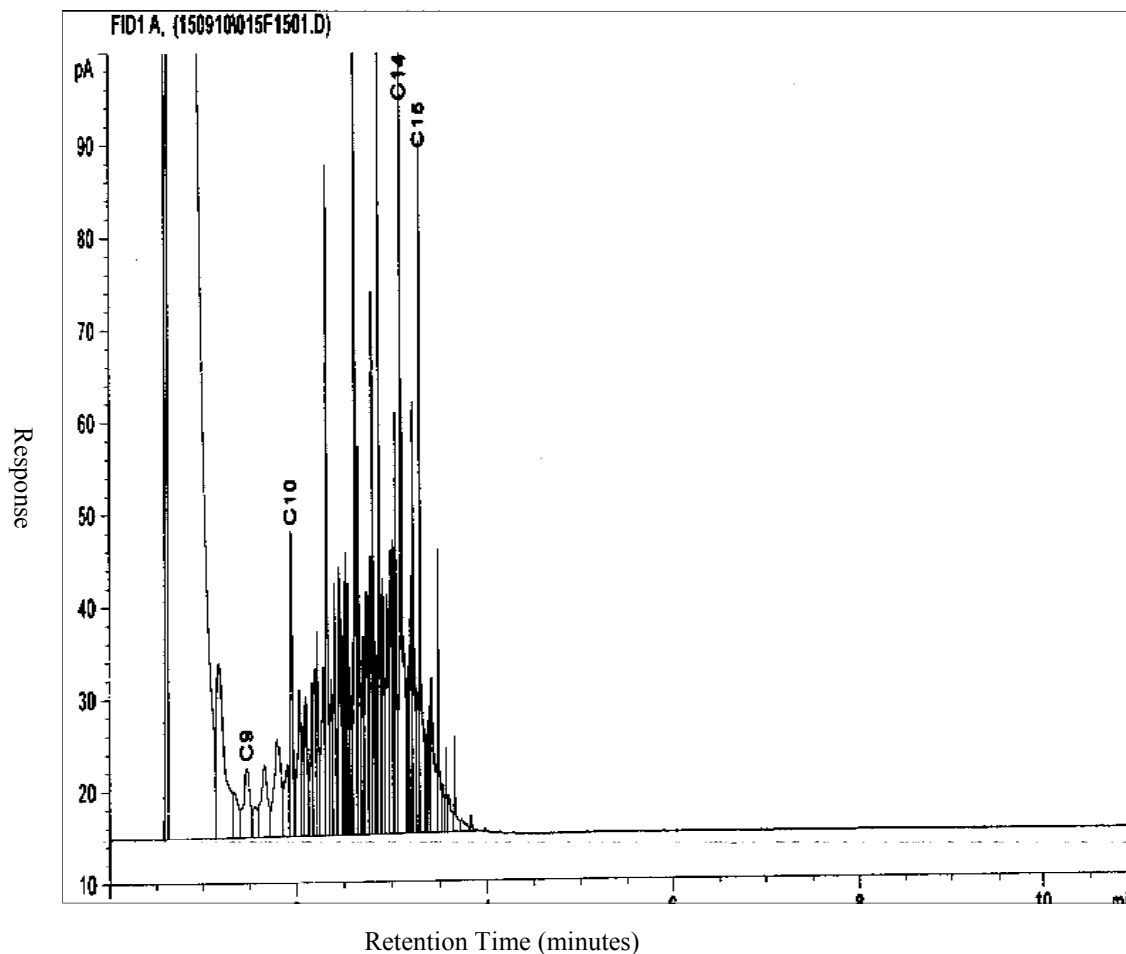
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



KEROSENE Unweathered



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

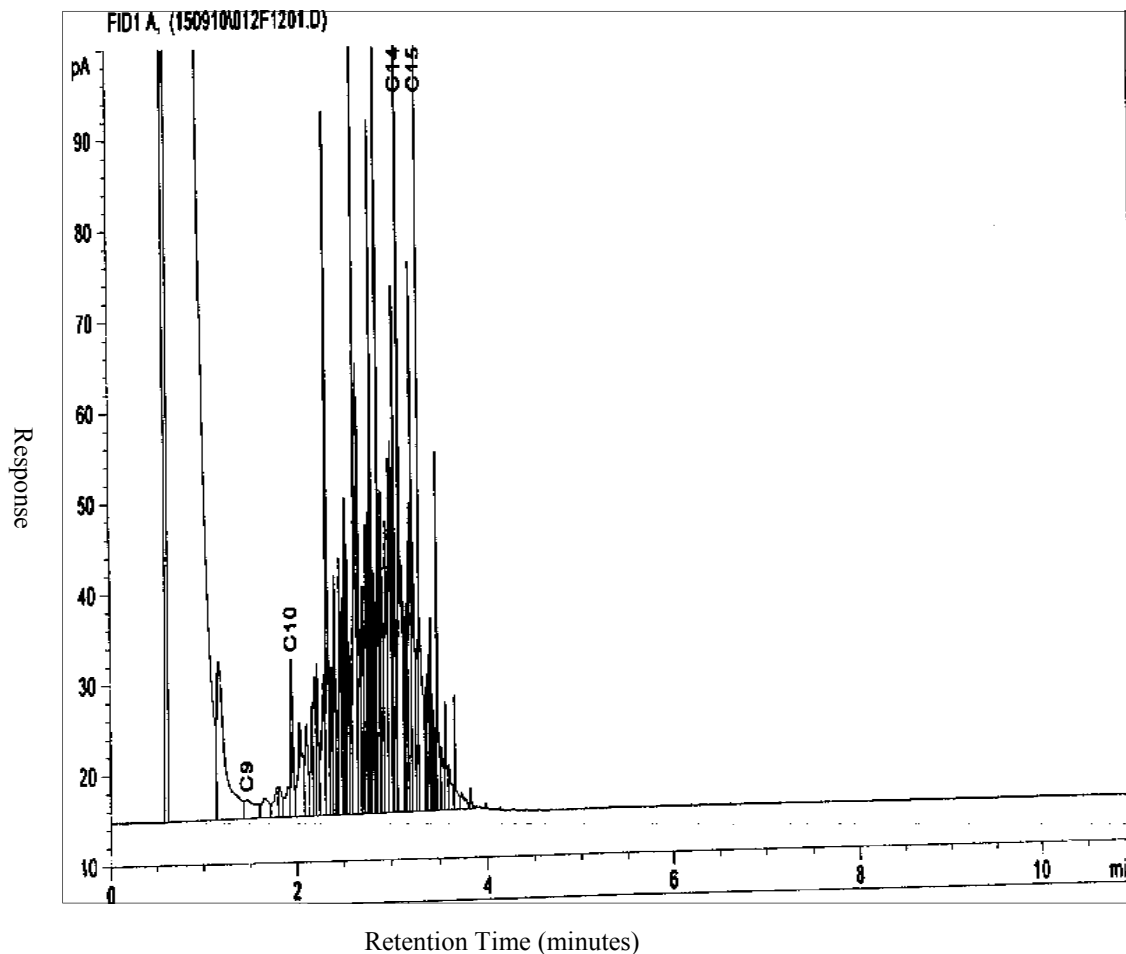
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



KEROSENE 25% weathered



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

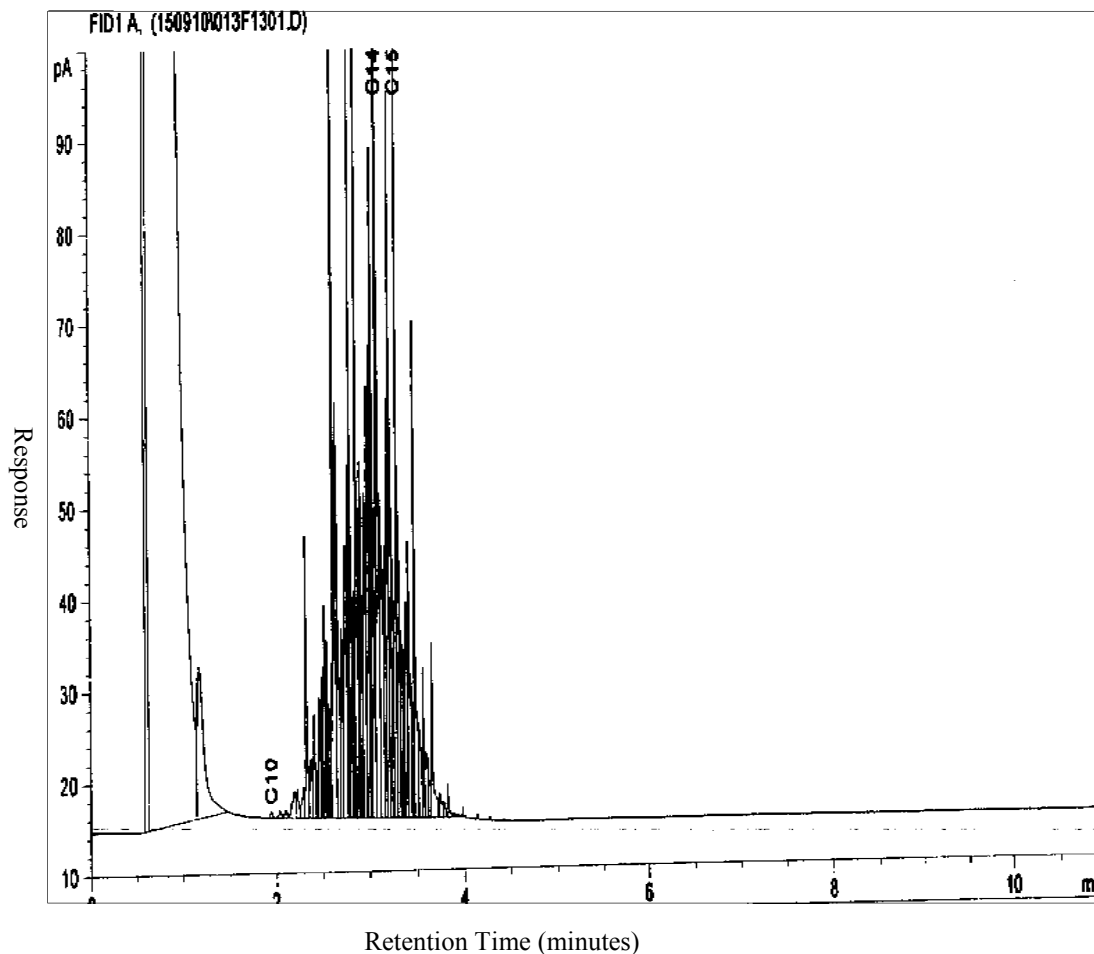
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



KEROSENE 50% weathered



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

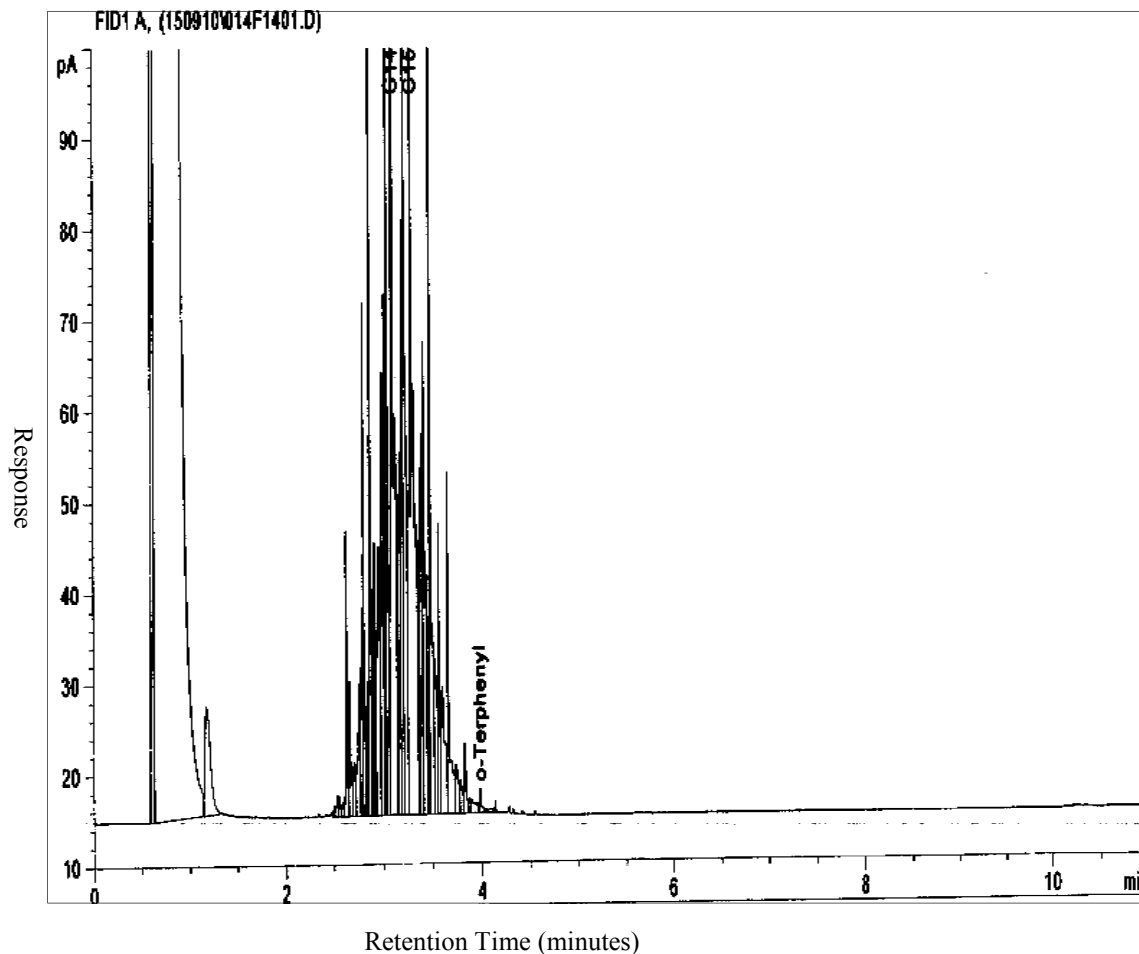
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



KEROSENE 75% weathered



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

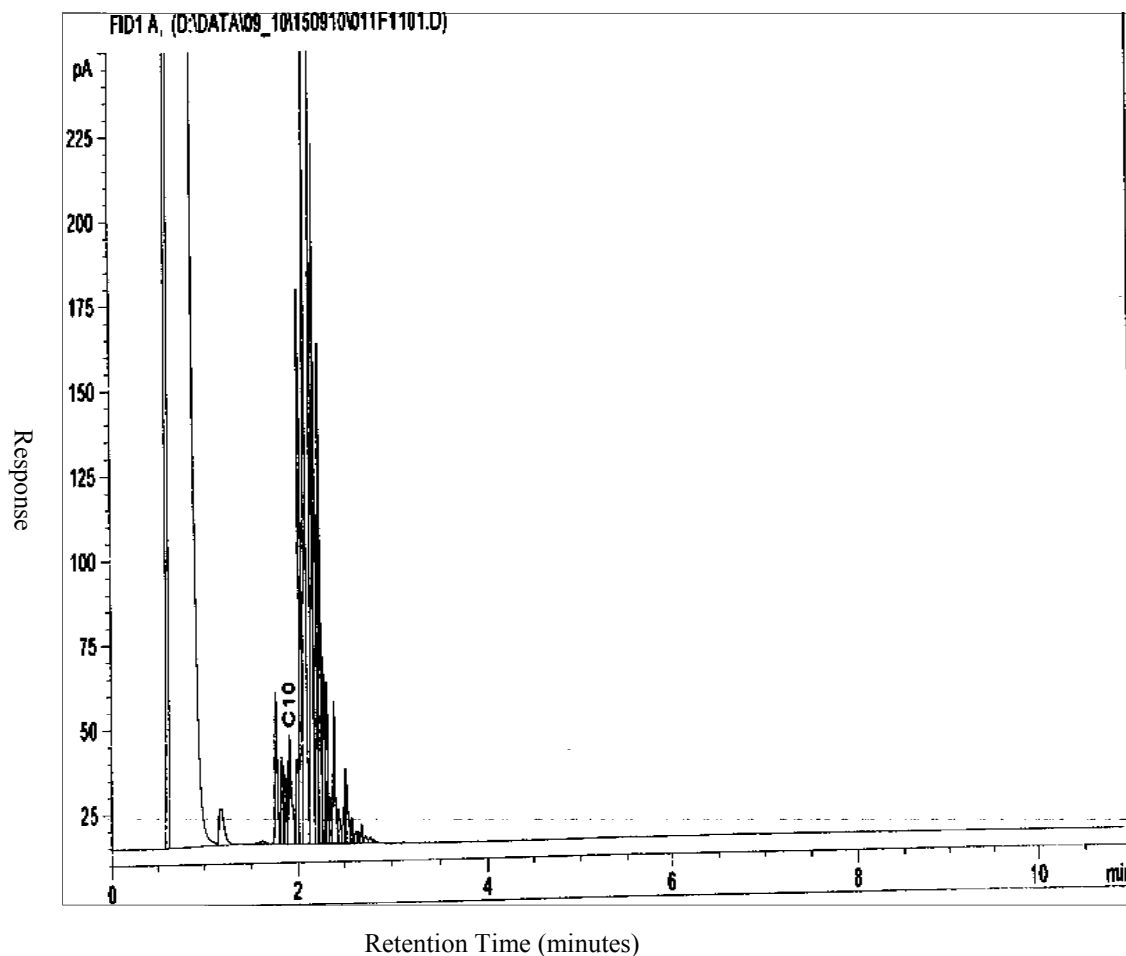
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



MINERAL SPIRIT unweathered



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

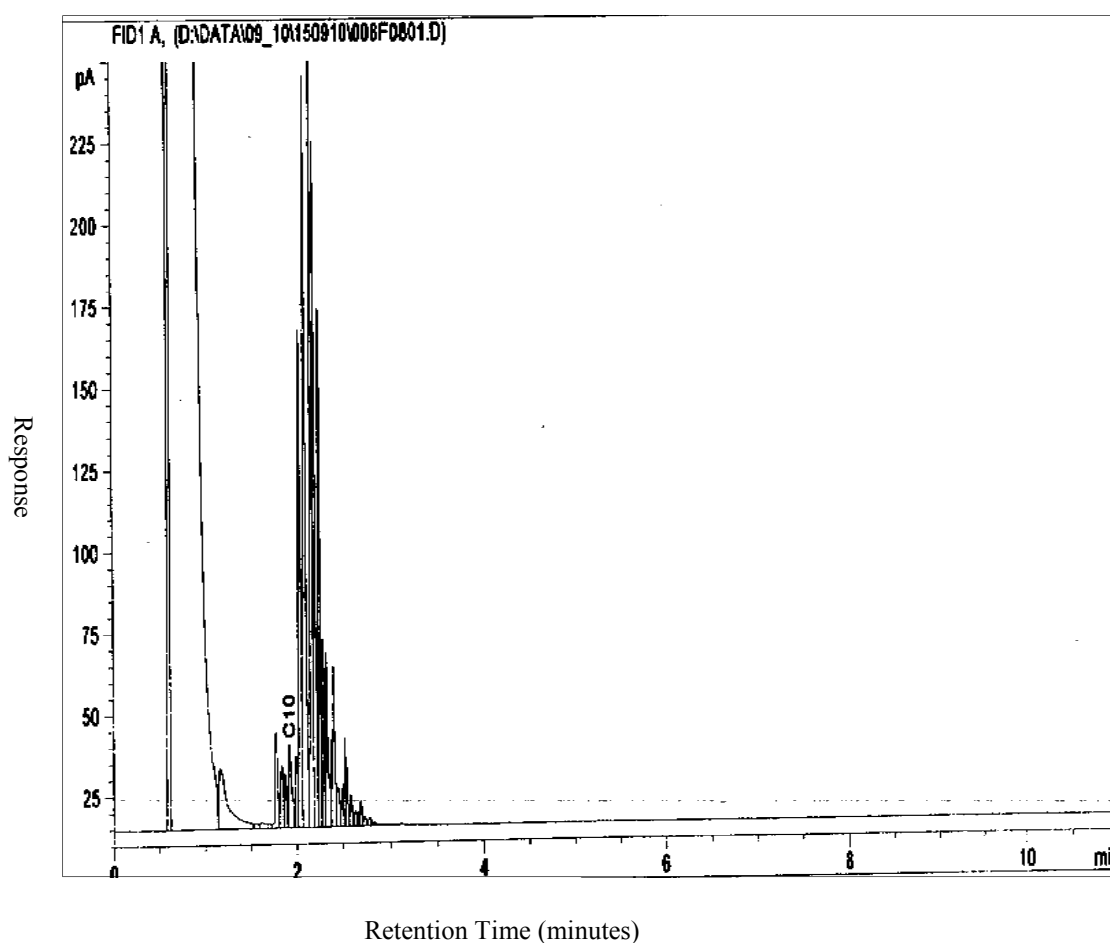
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



MINERAL SPIRIT 25% weathered



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

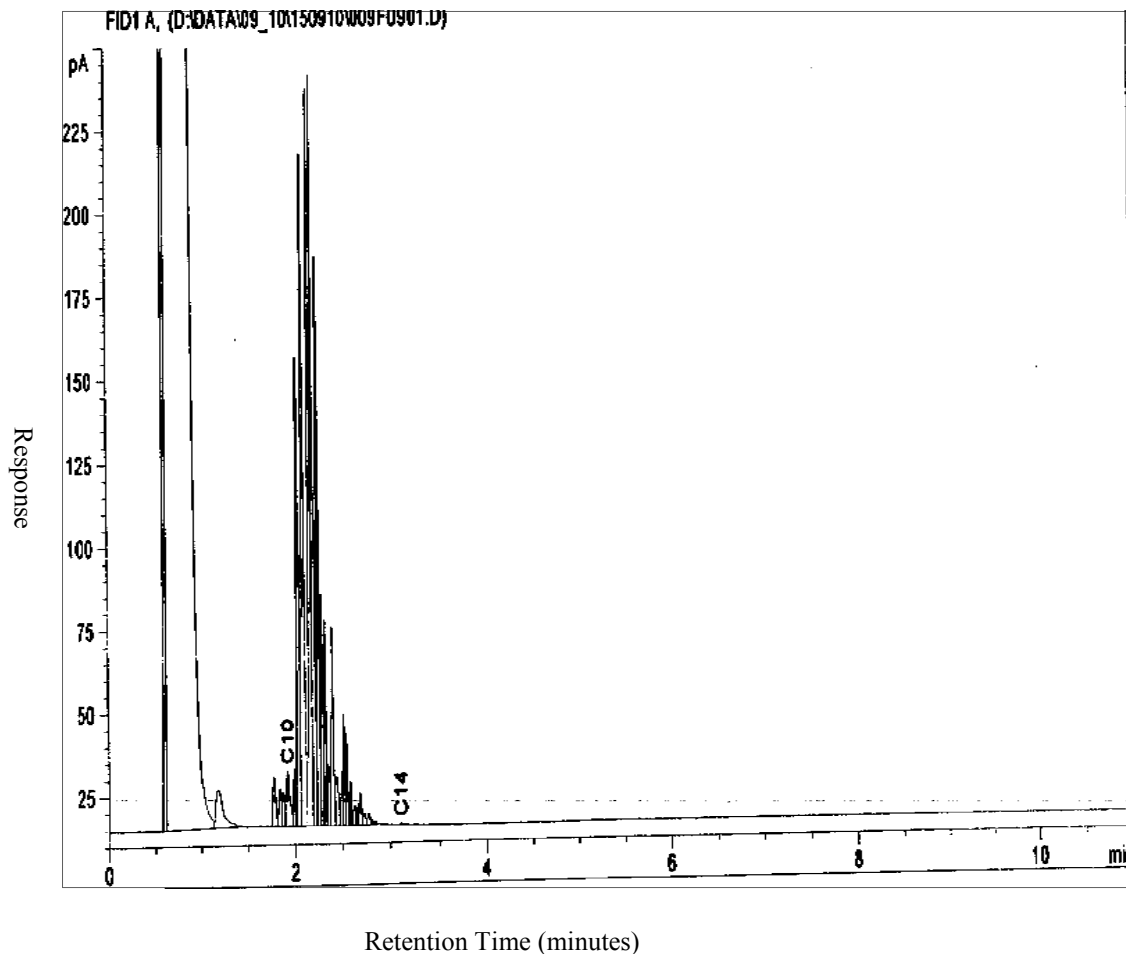
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



MINERAL SPIRIT 50% weathered



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

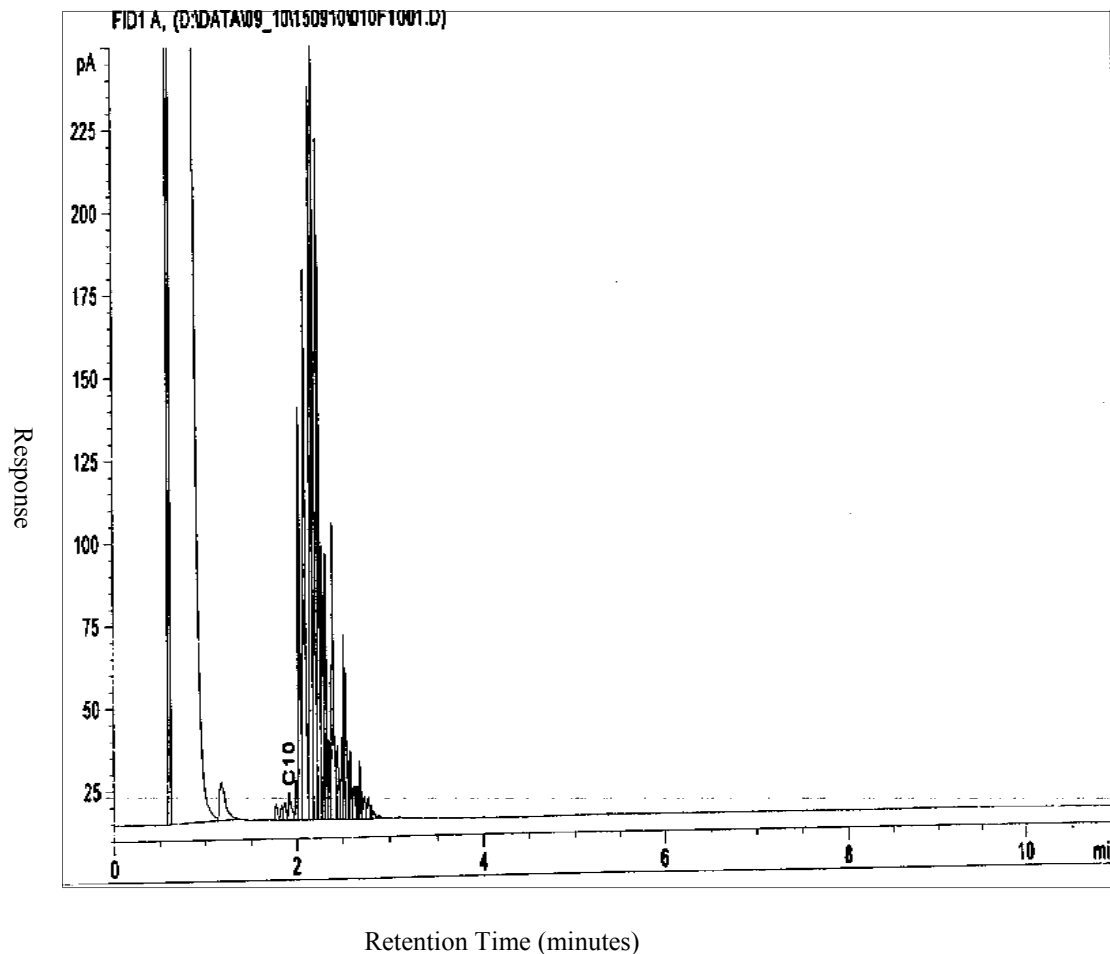
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



MINERAL SPIRIT 75% weathered



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

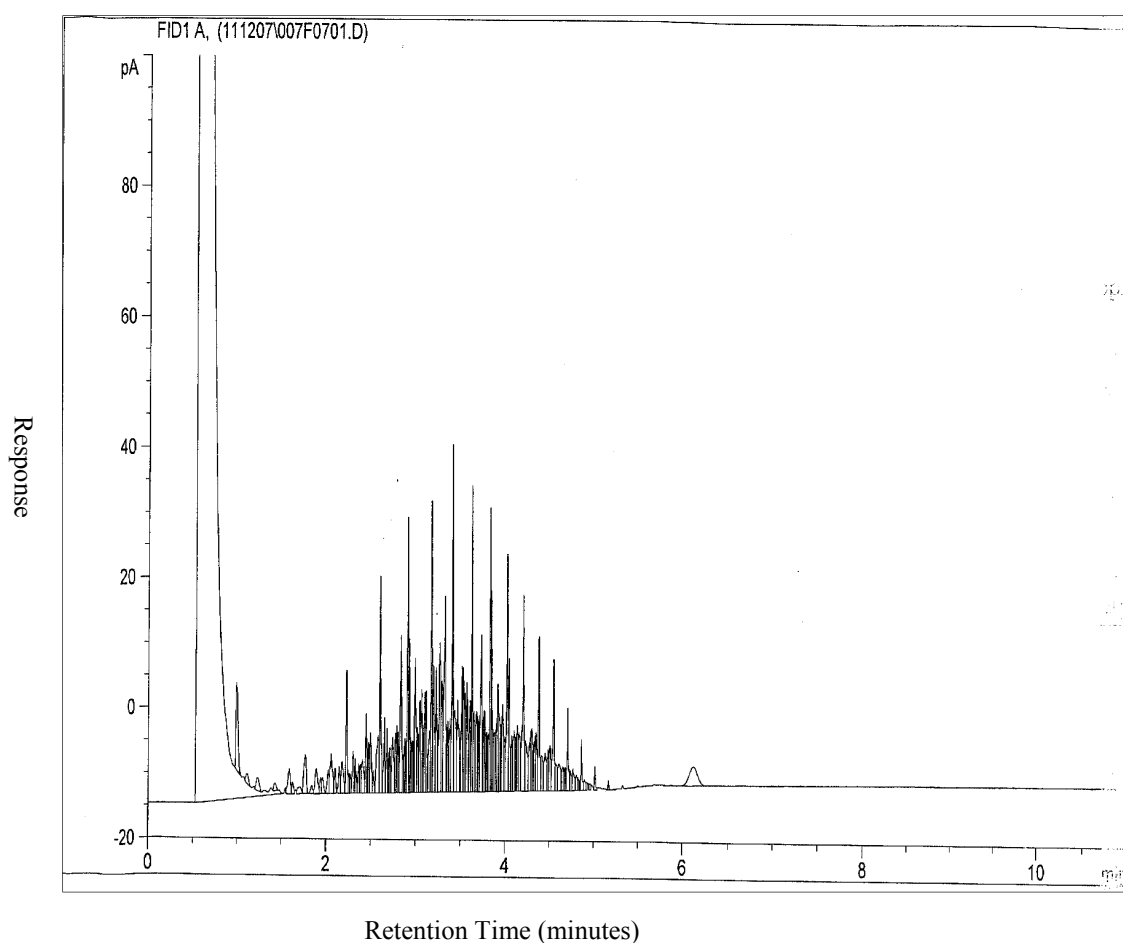
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



UNWEATHERED DIESEL



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

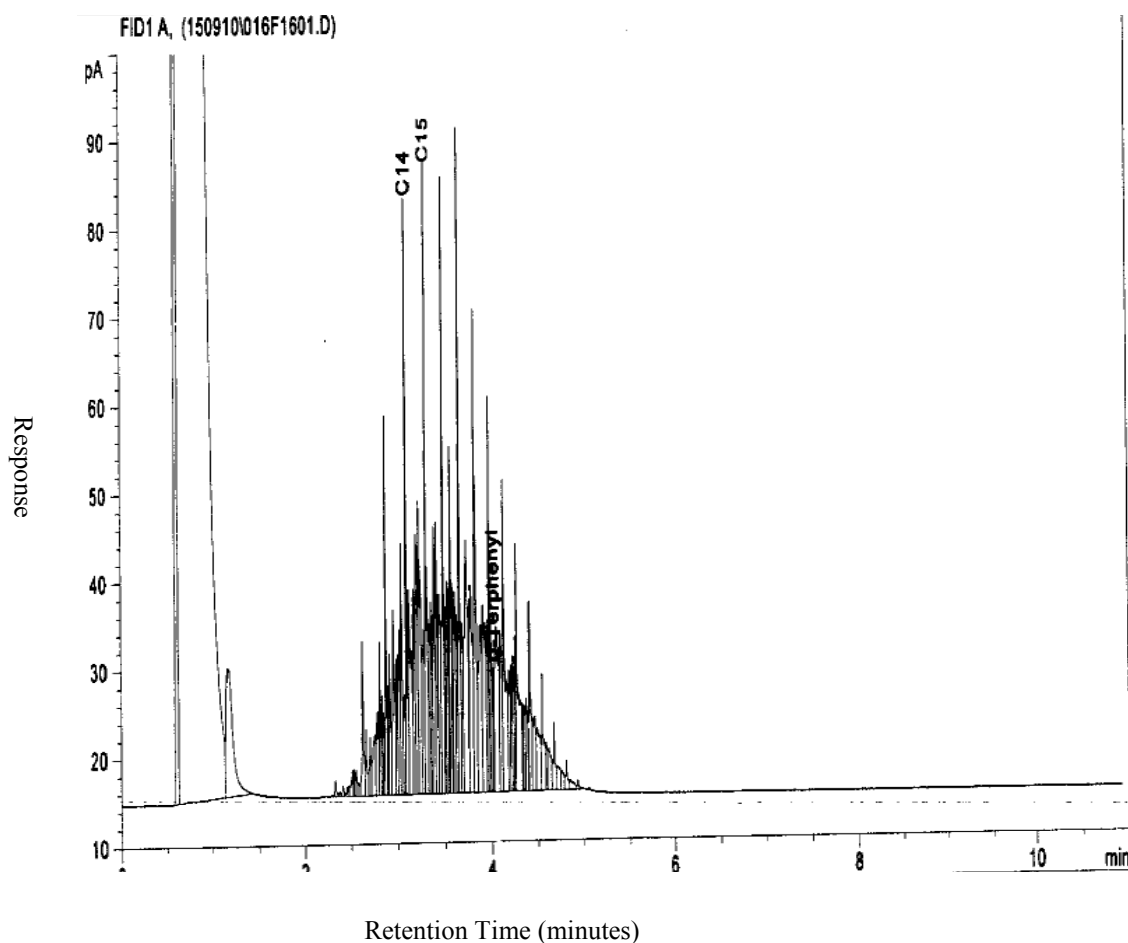
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



25% WEATHERED DIESEL



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

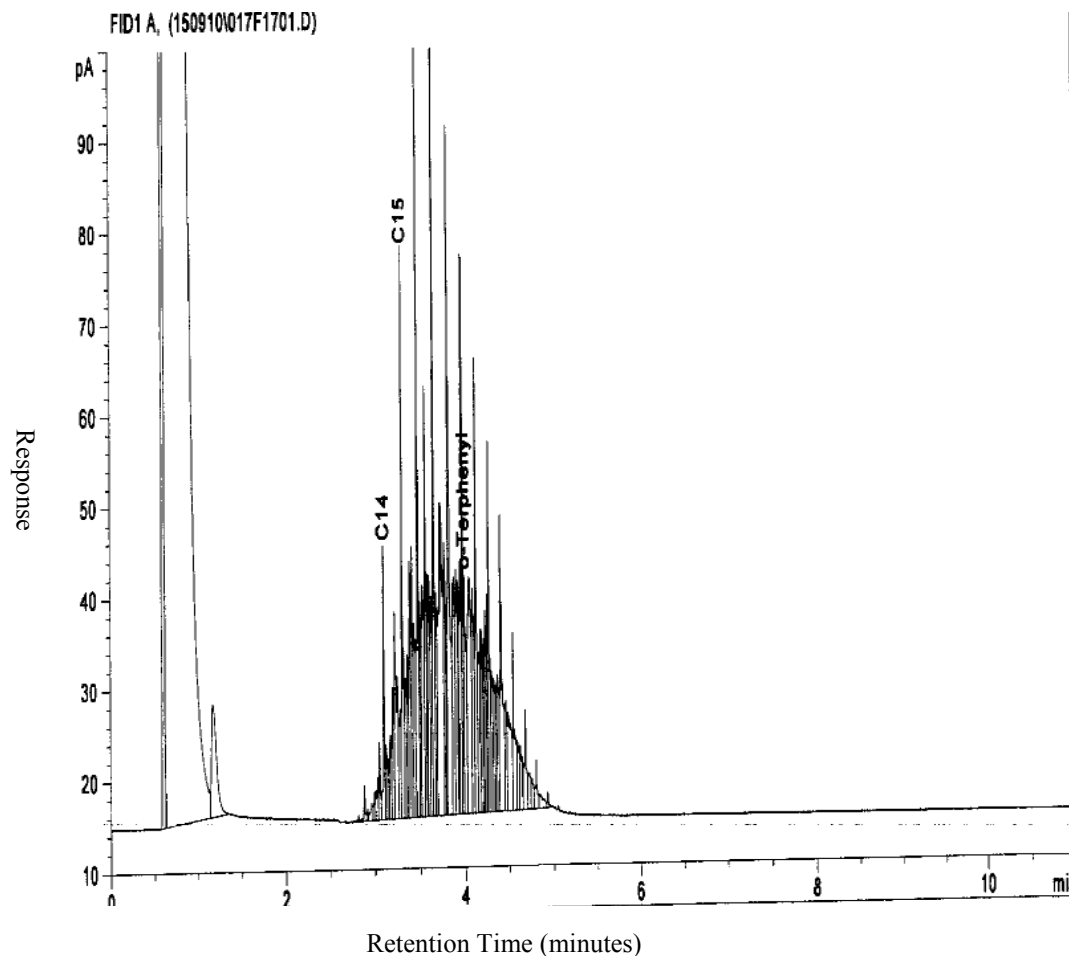
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



50% WEATHERED DIESEL



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

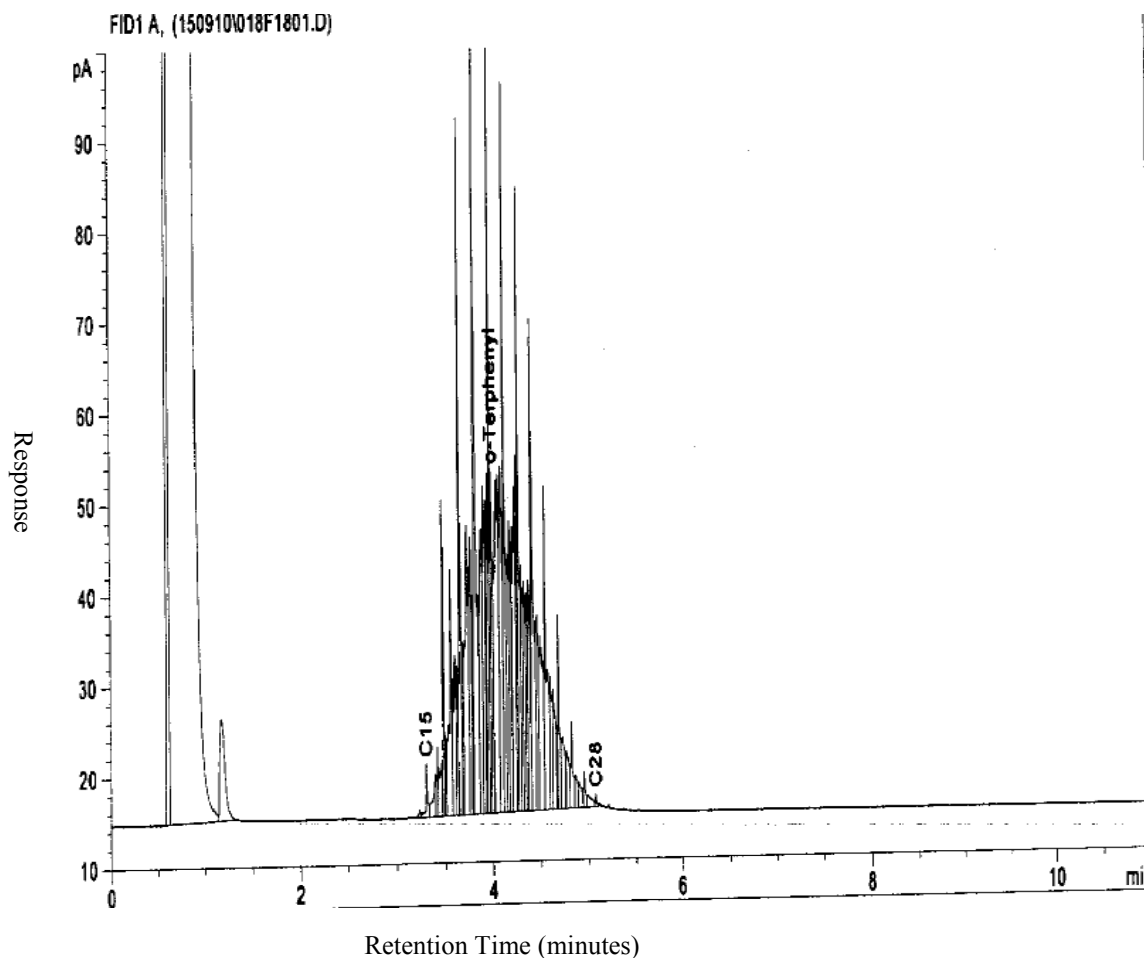
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



75% WEATHERED DIESEL



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

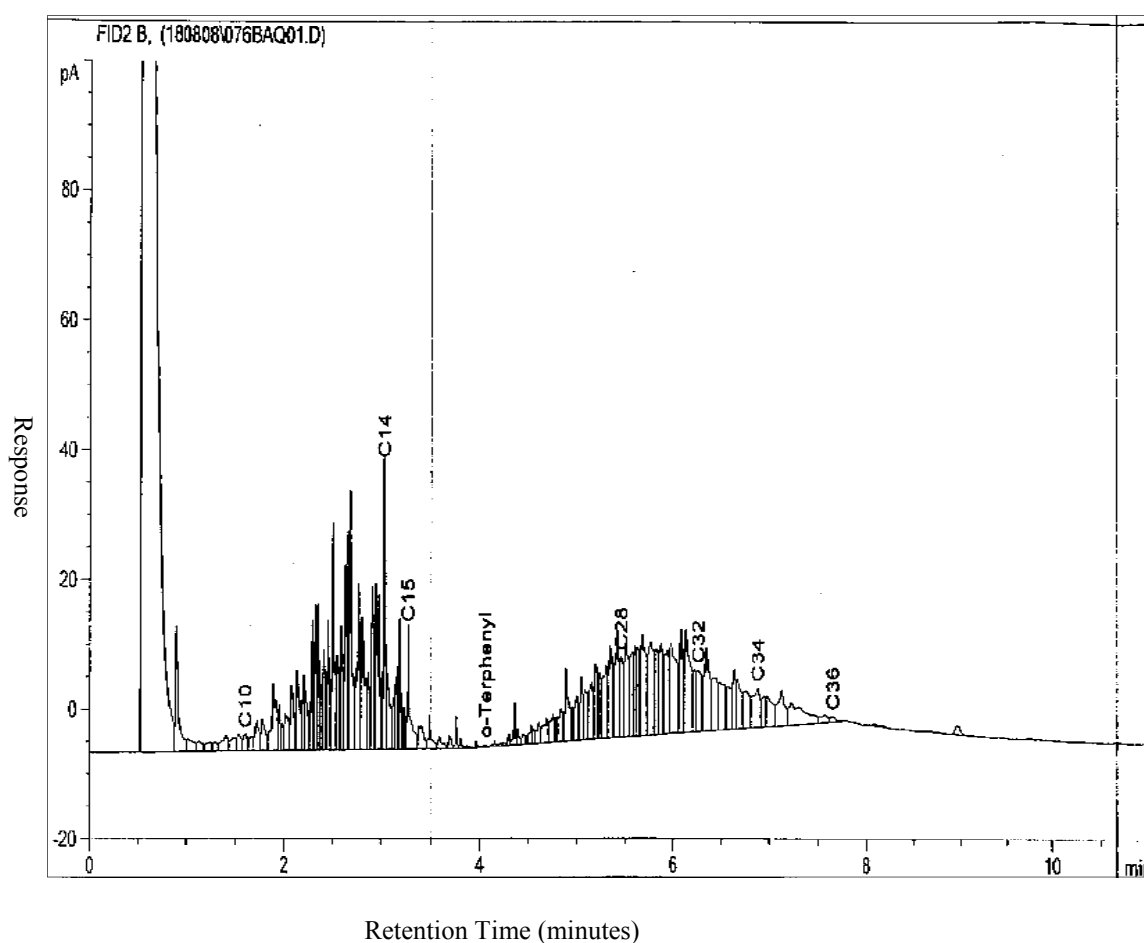
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



SYNTHETIC 2 STROKE FUEL



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

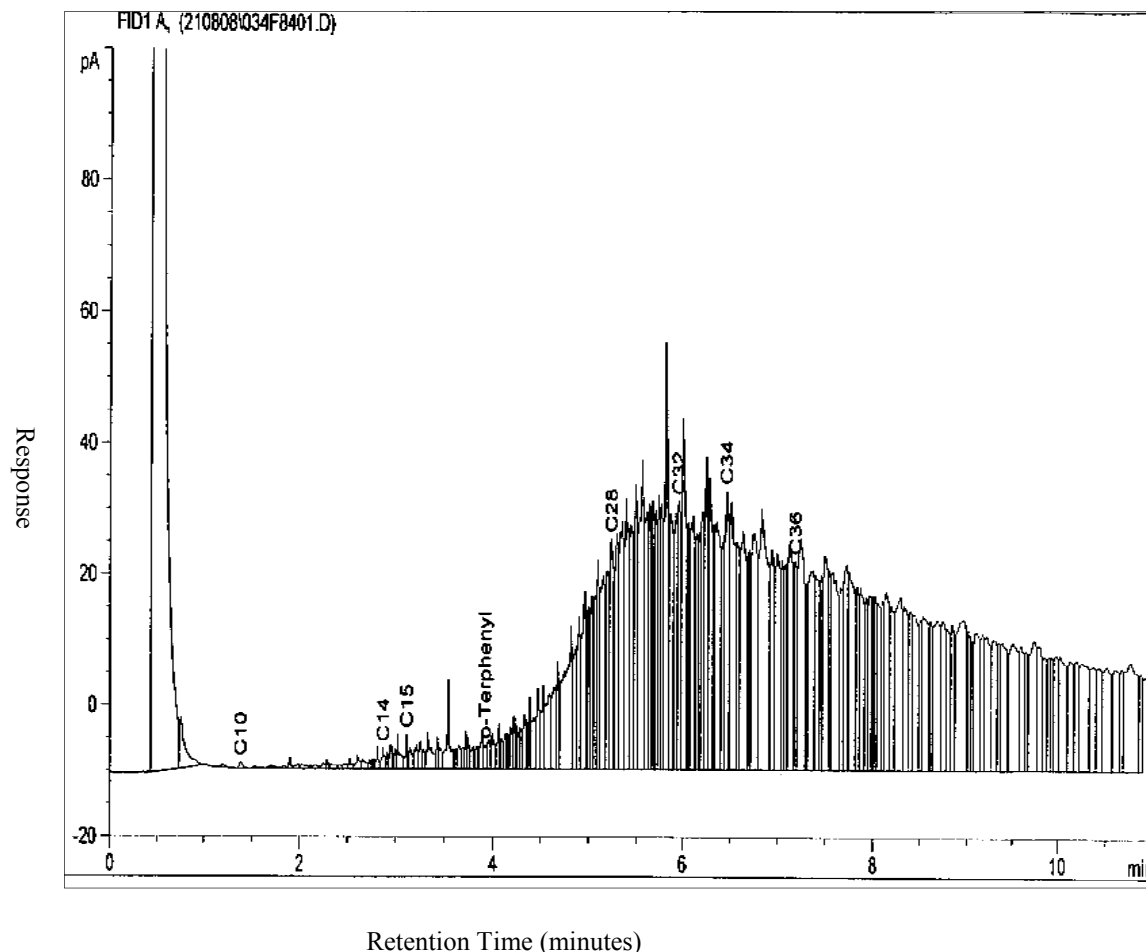
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



ASPHALT (no coal tar)



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

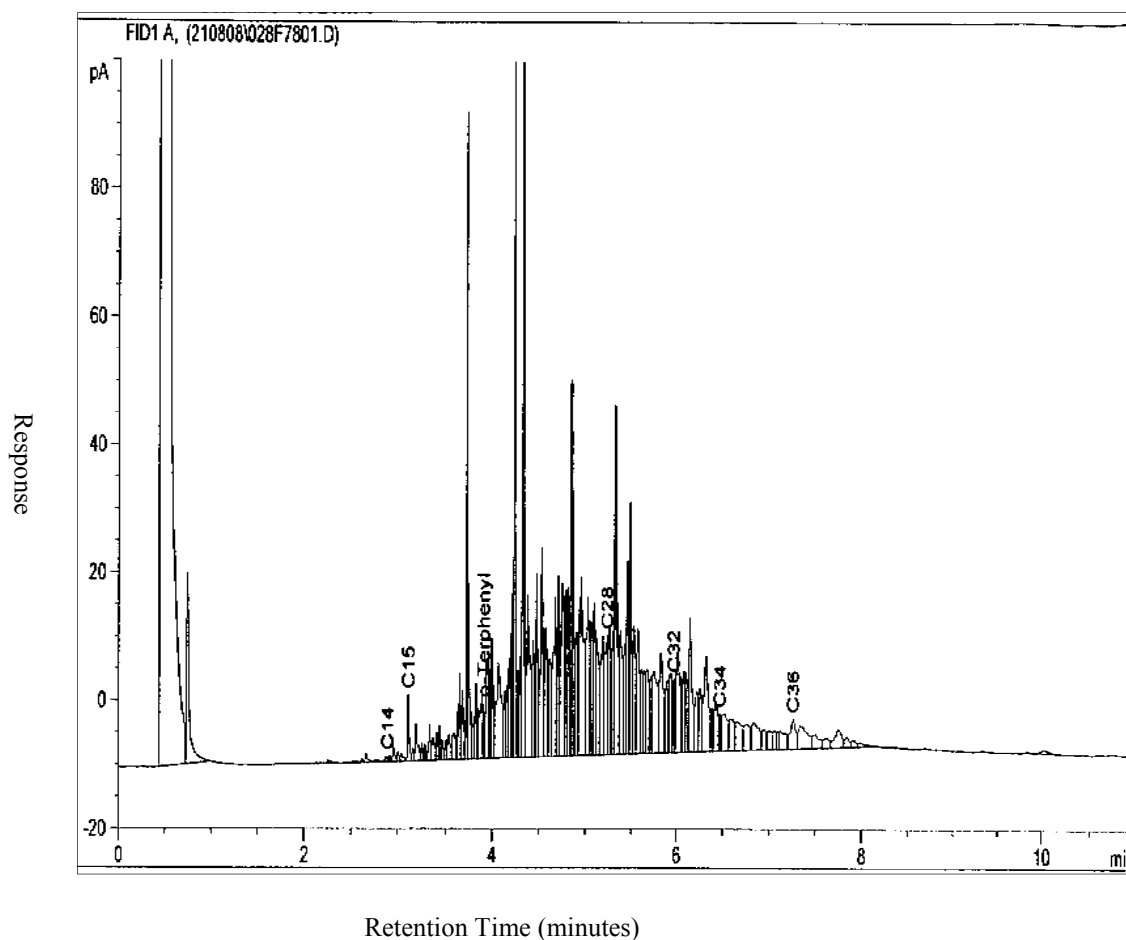
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



ASPHALT (with coal tar)



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

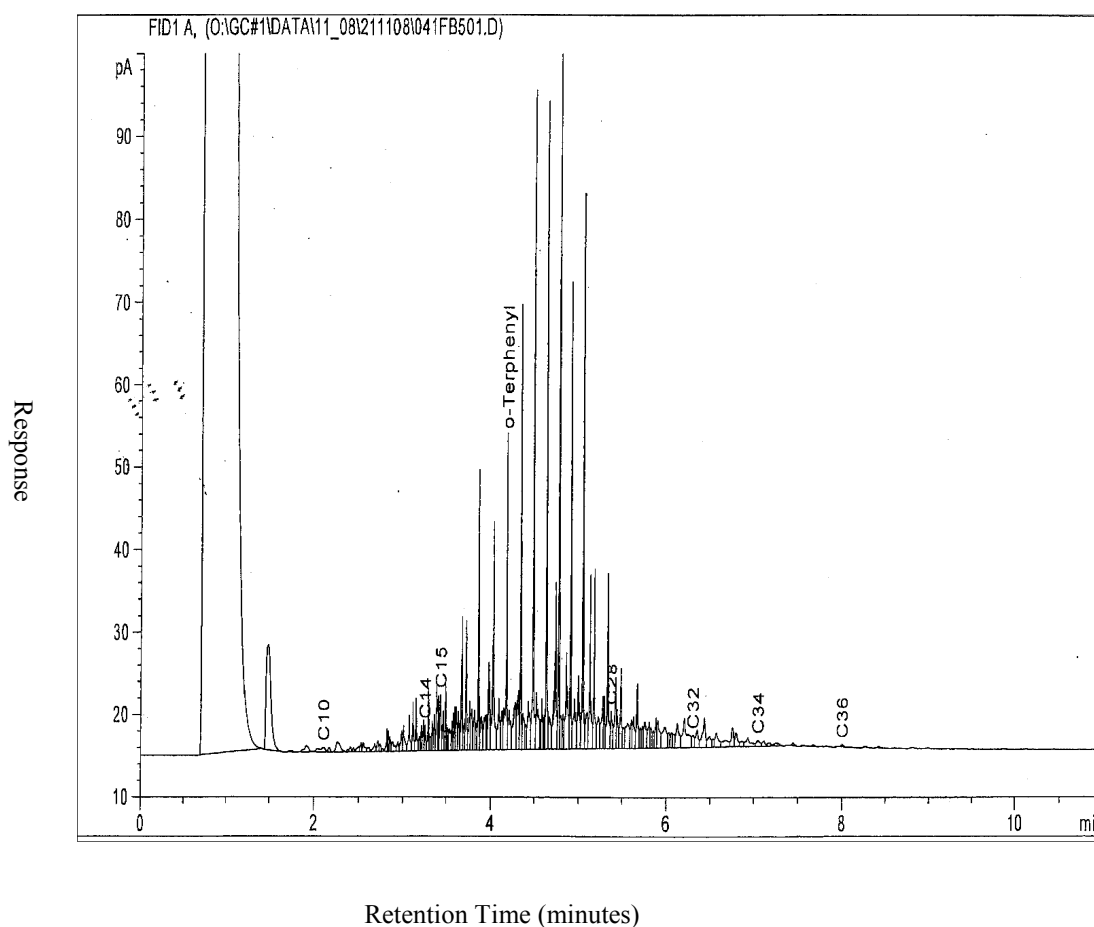
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



COAL



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

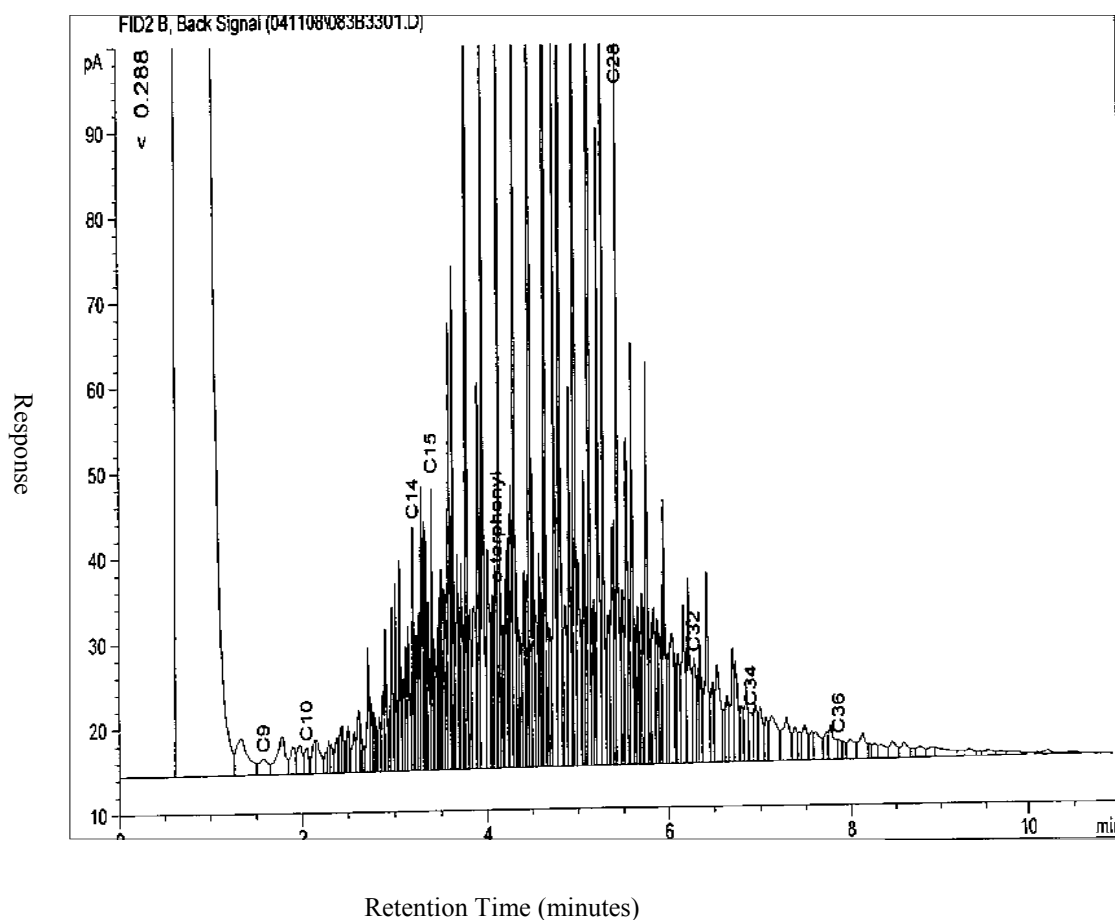
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



WEATHERED COAL



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

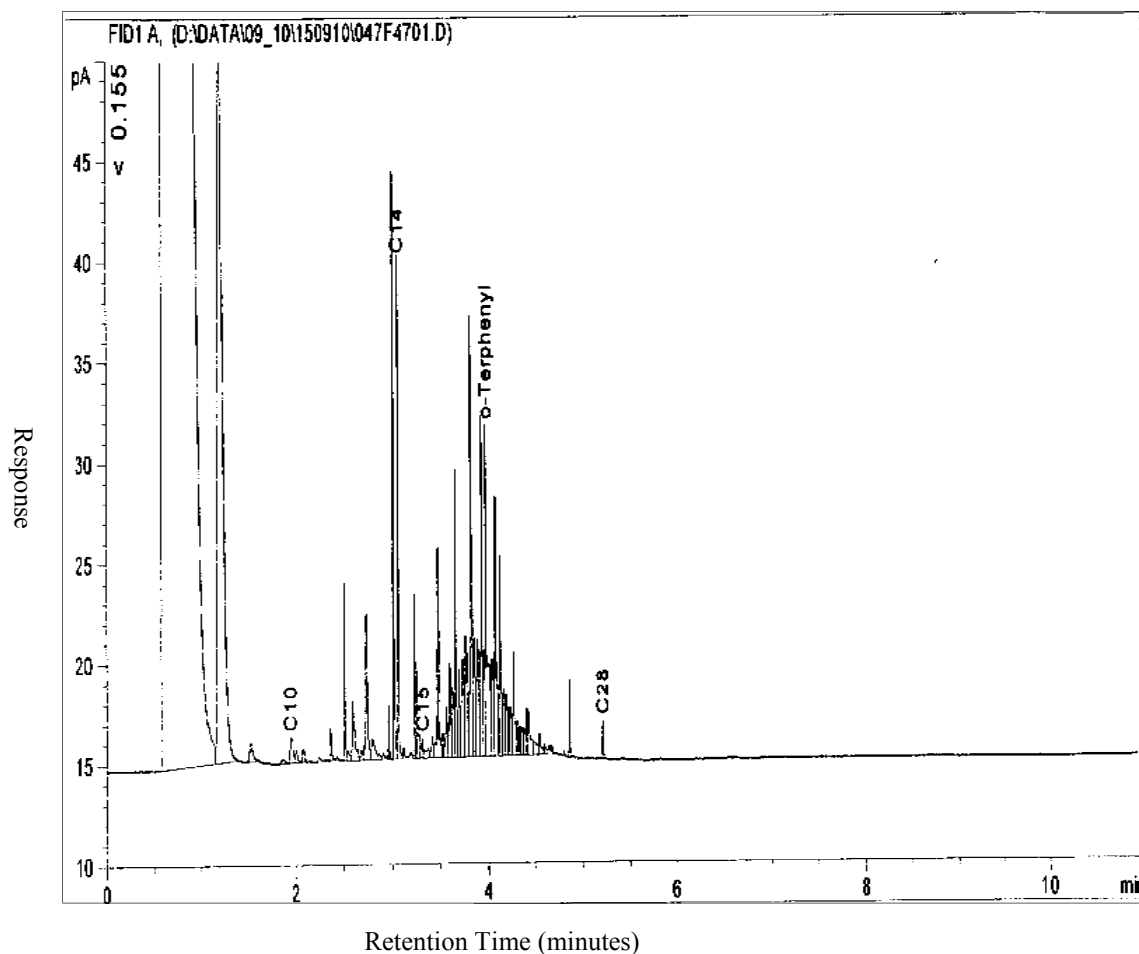
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



COAL SHALE



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

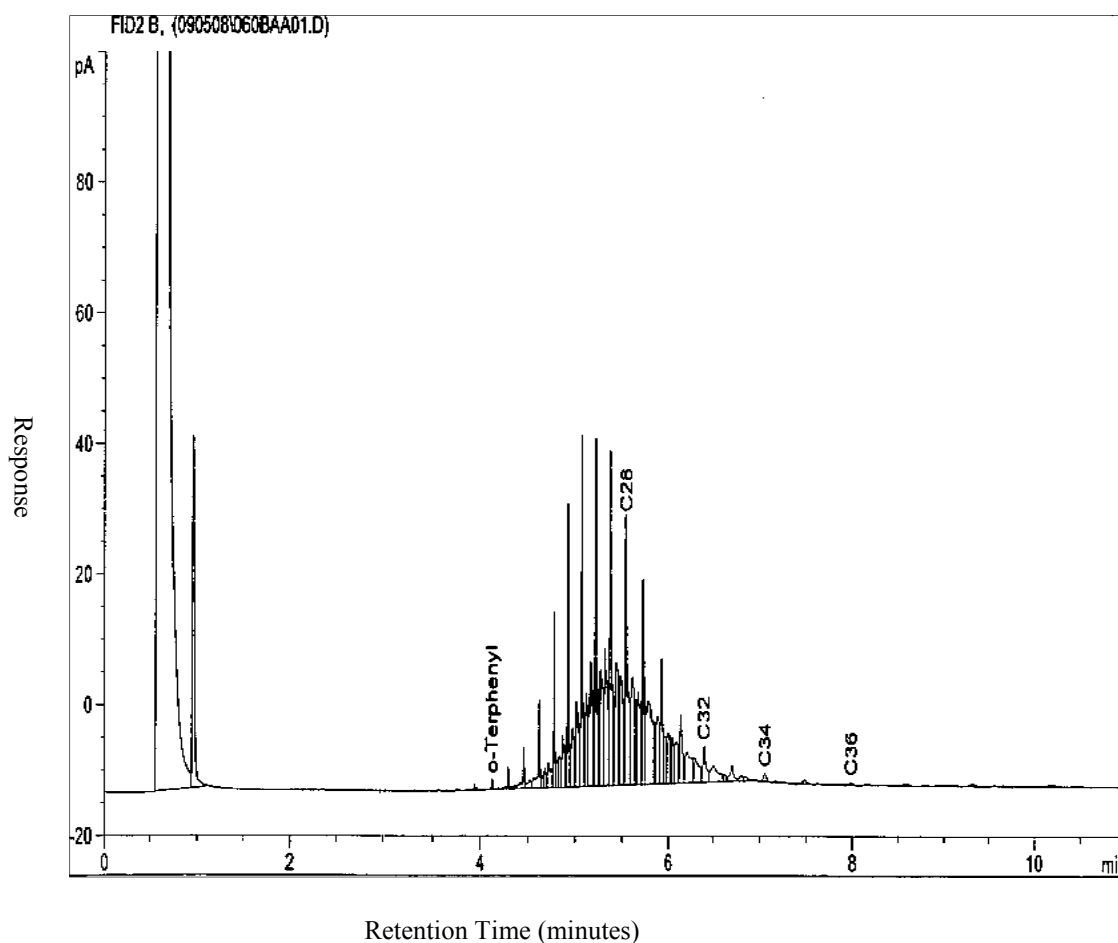
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



WHITE PETROLEUM JELLY (VASELINE)



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

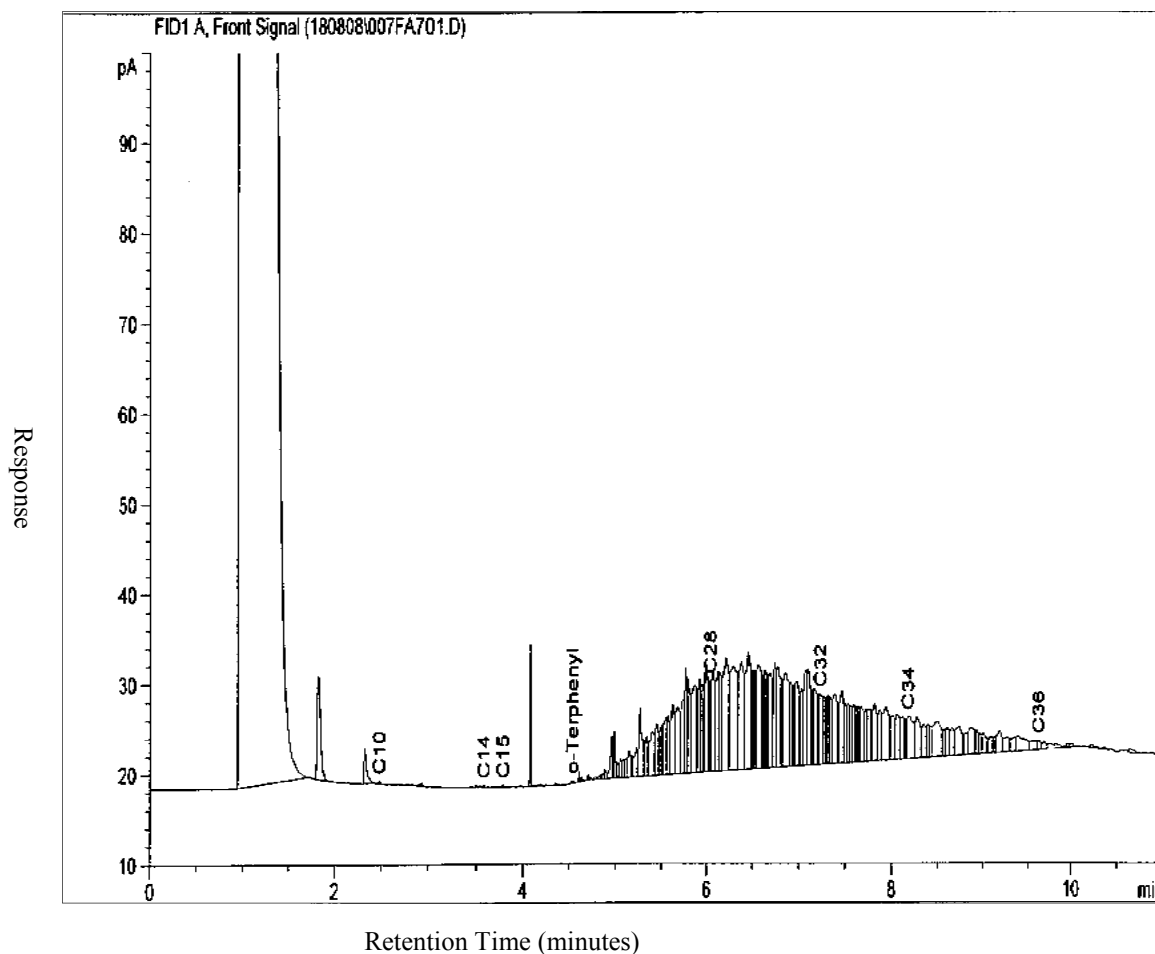
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



GREASE



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

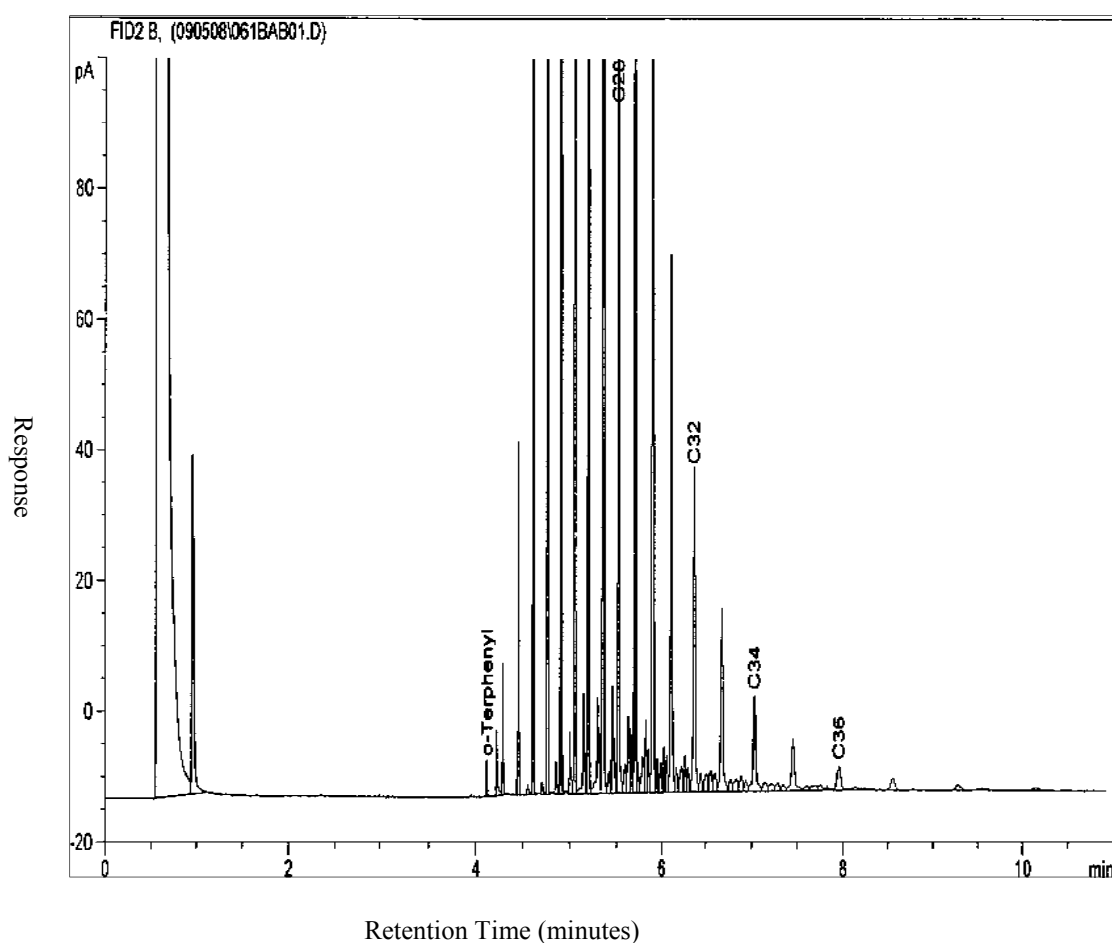
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



CANDLE WAX



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

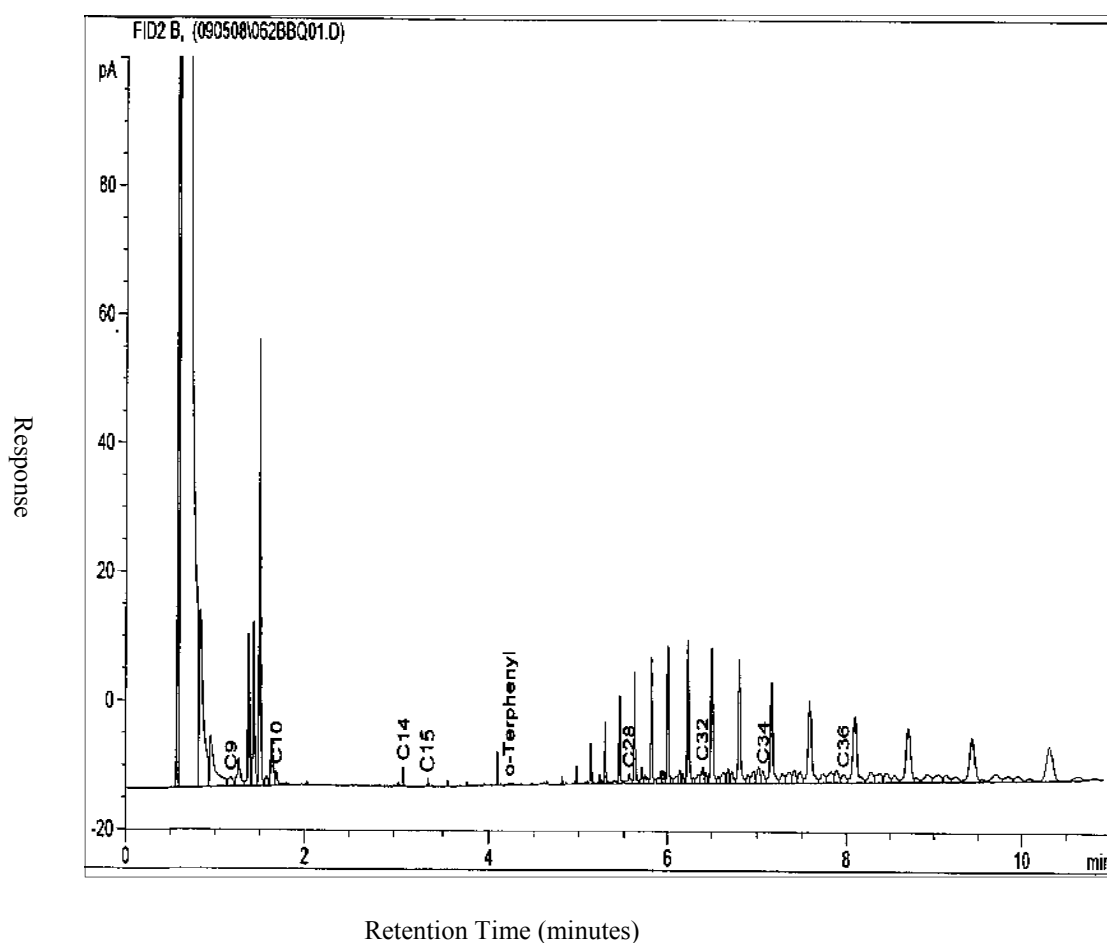
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



PARAFFIN WAX



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

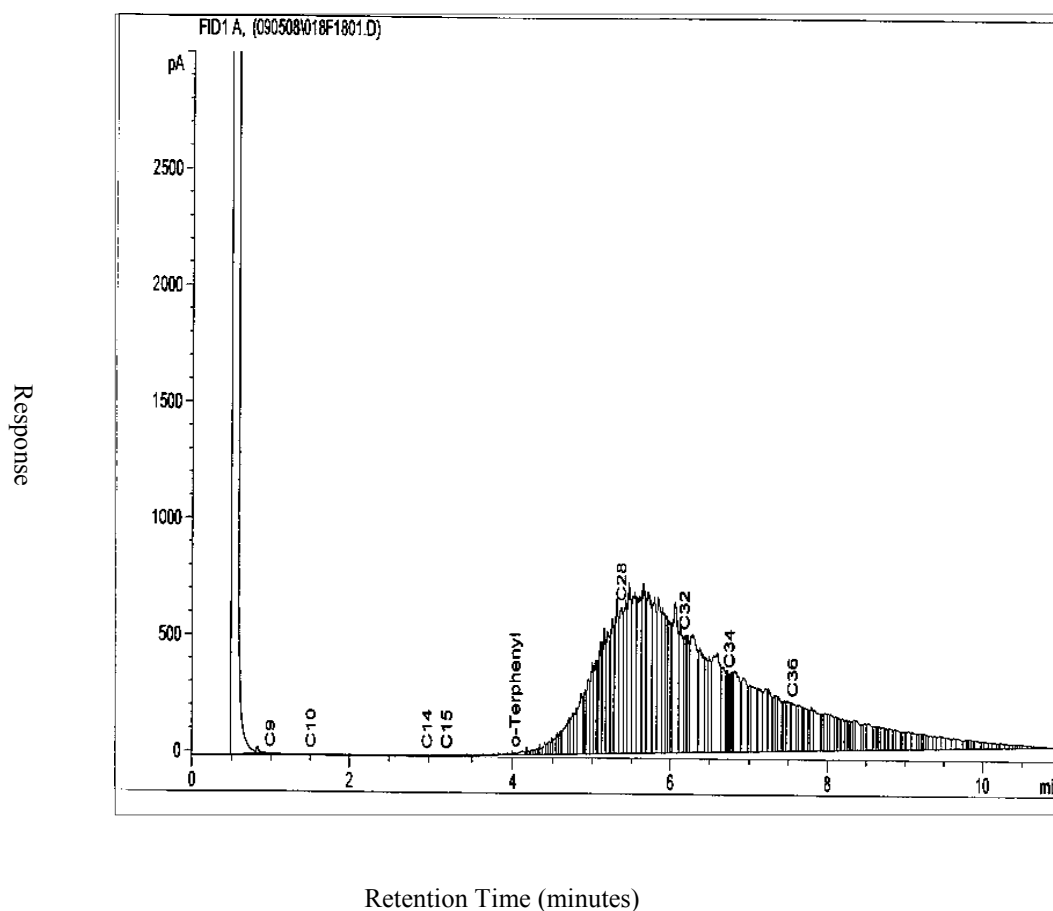
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



ENGINE OIL



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

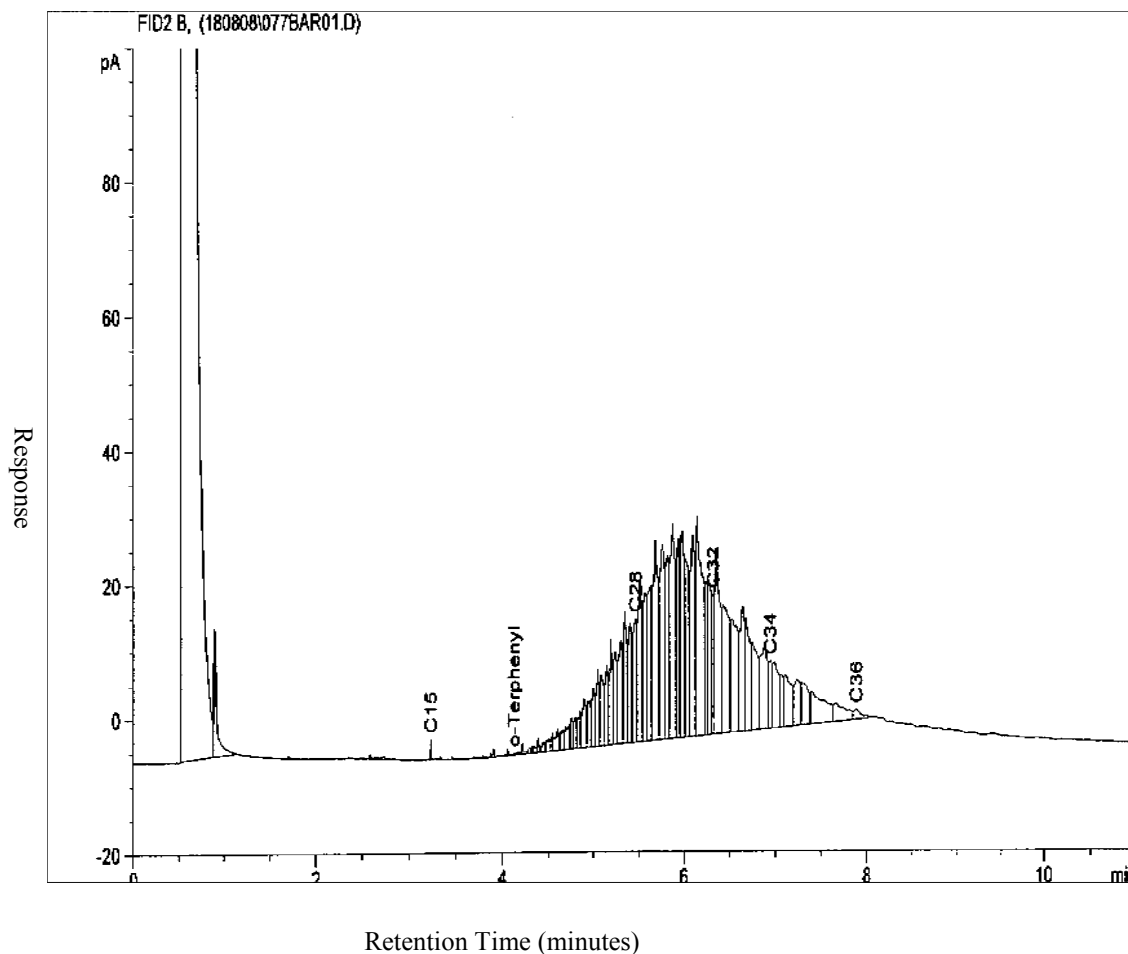
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



OUTBOARD GEAR OIL



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

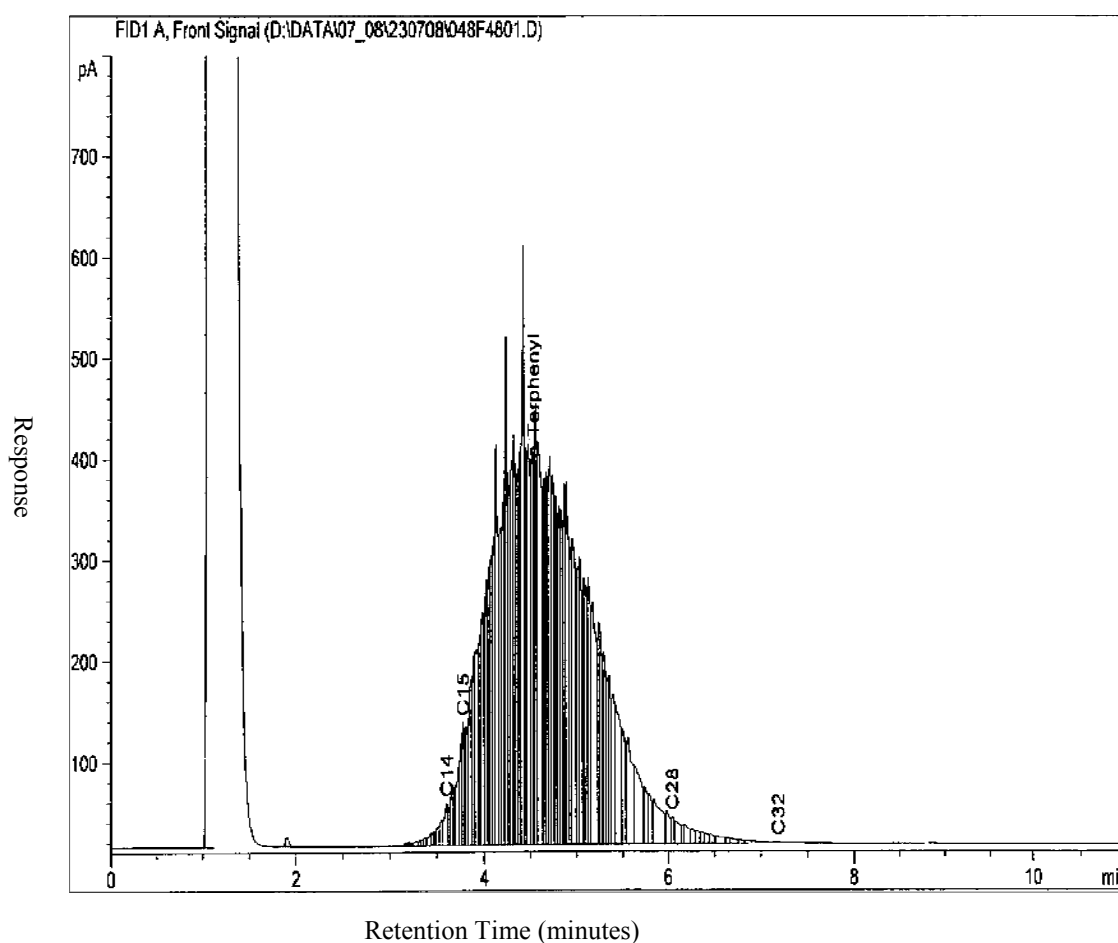
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



TRANSFORMER OIL



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

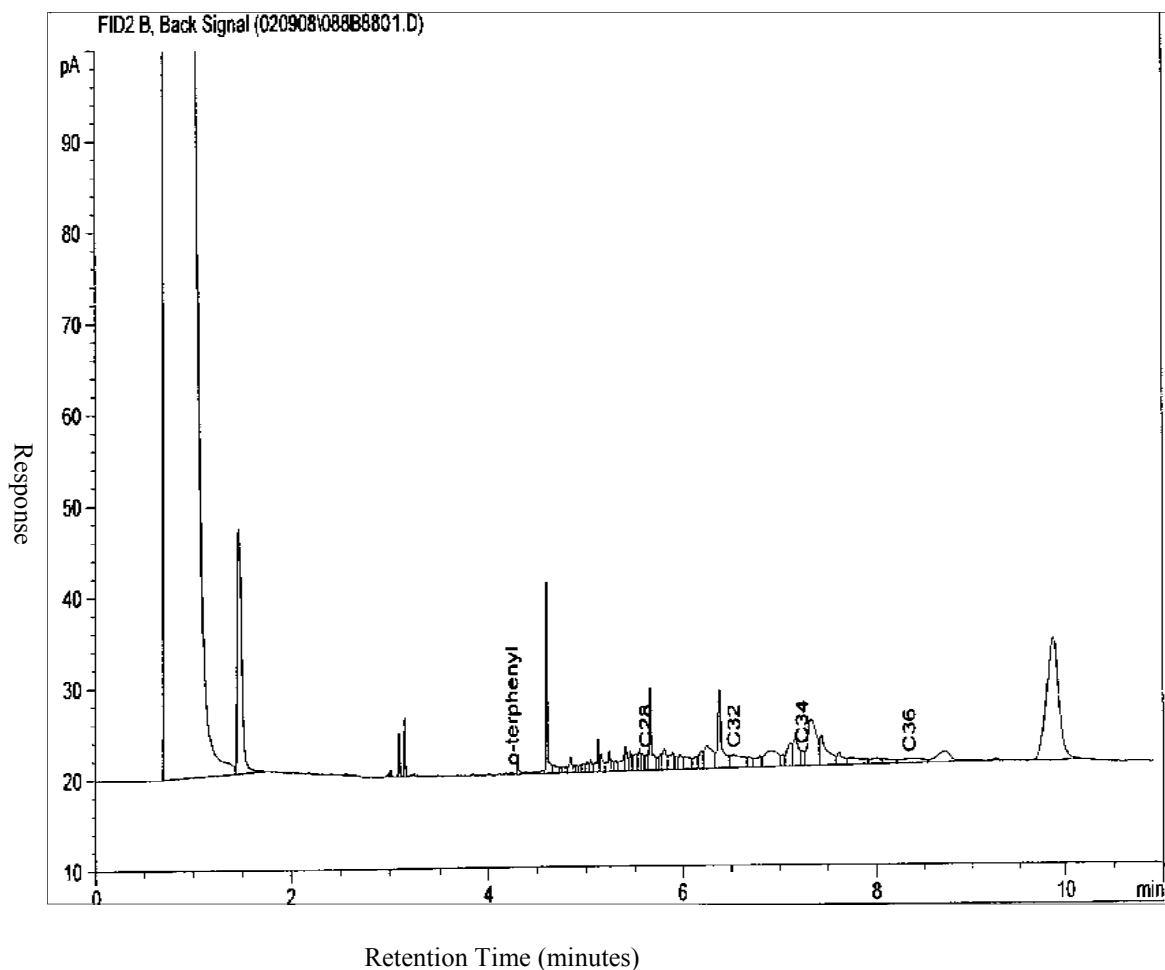
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



CAMELLIA OIL



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

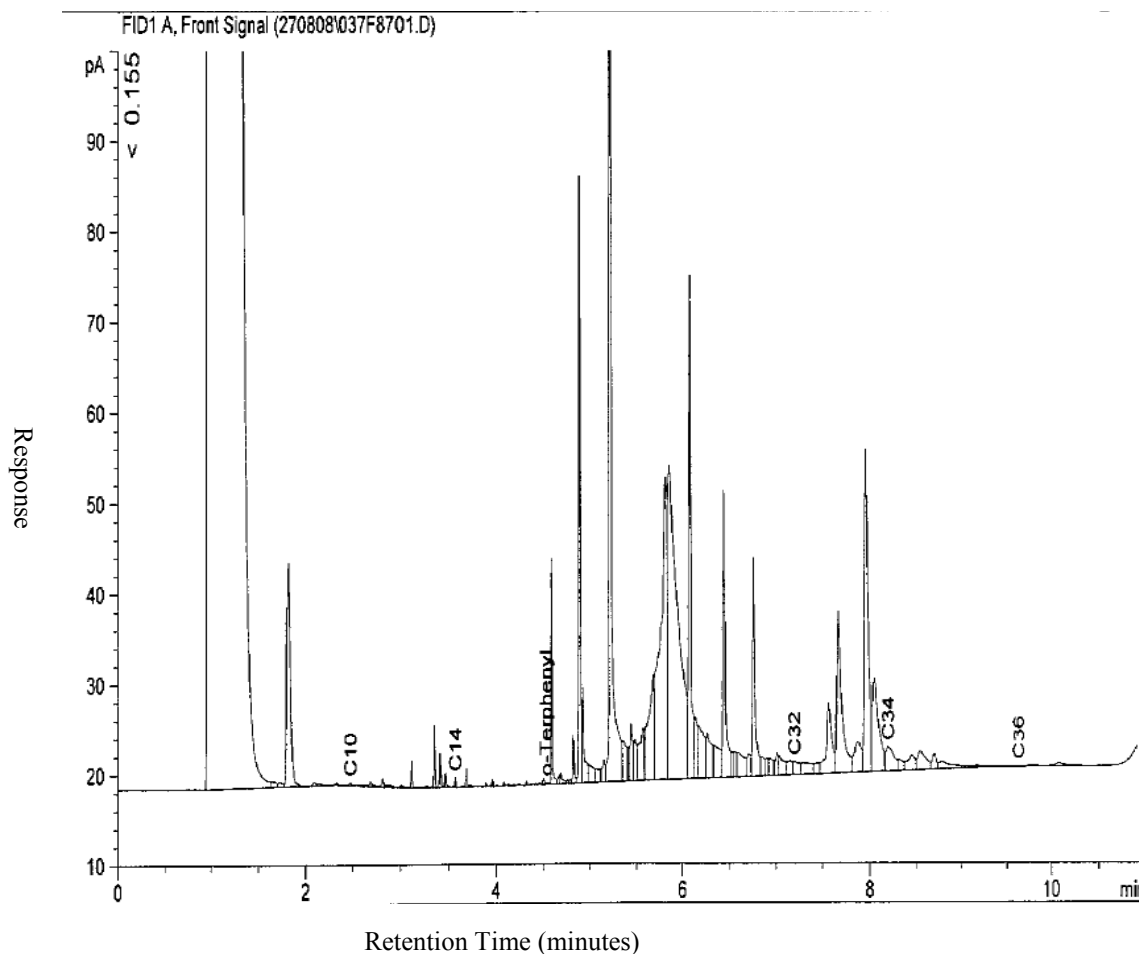
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



CASTOR OIL



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

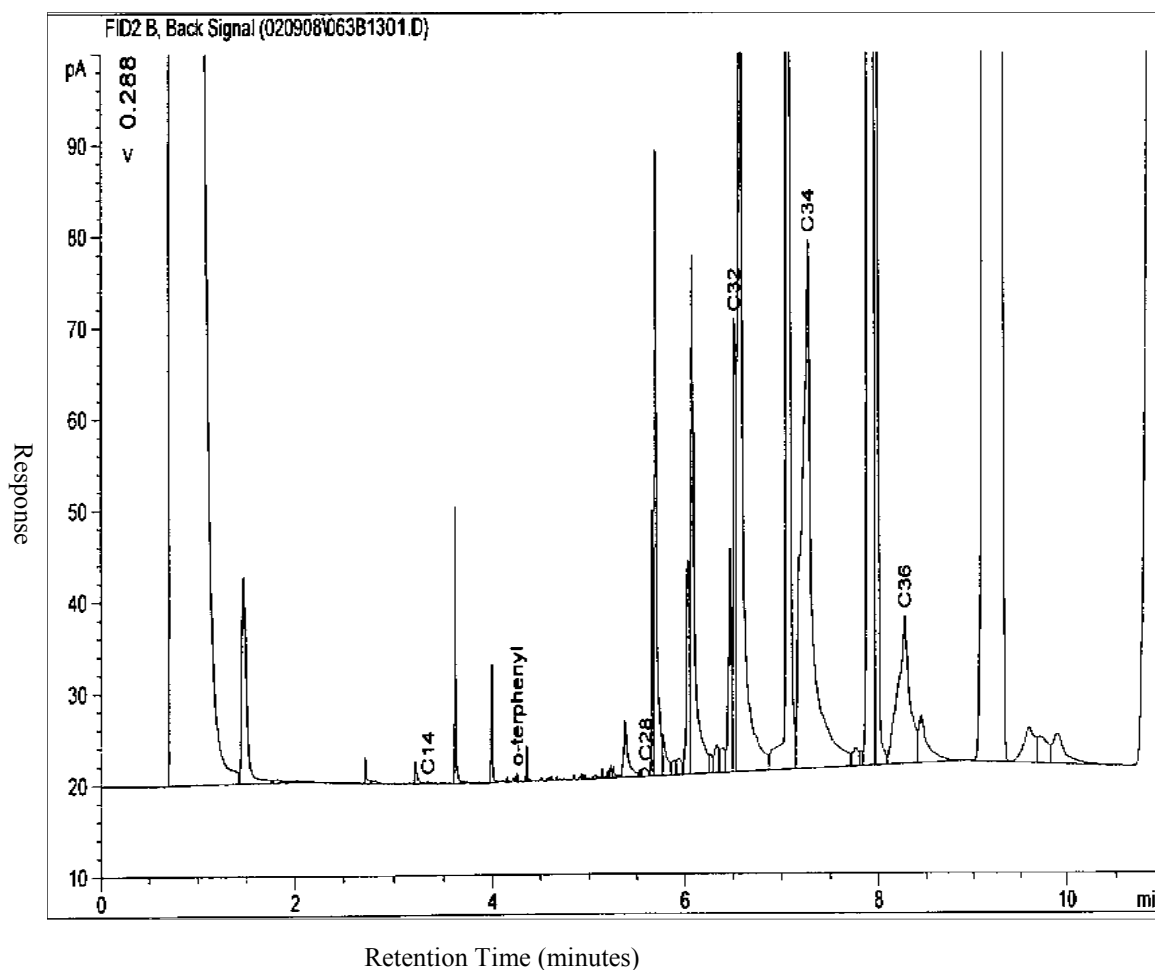
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



COCONUT OIL



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

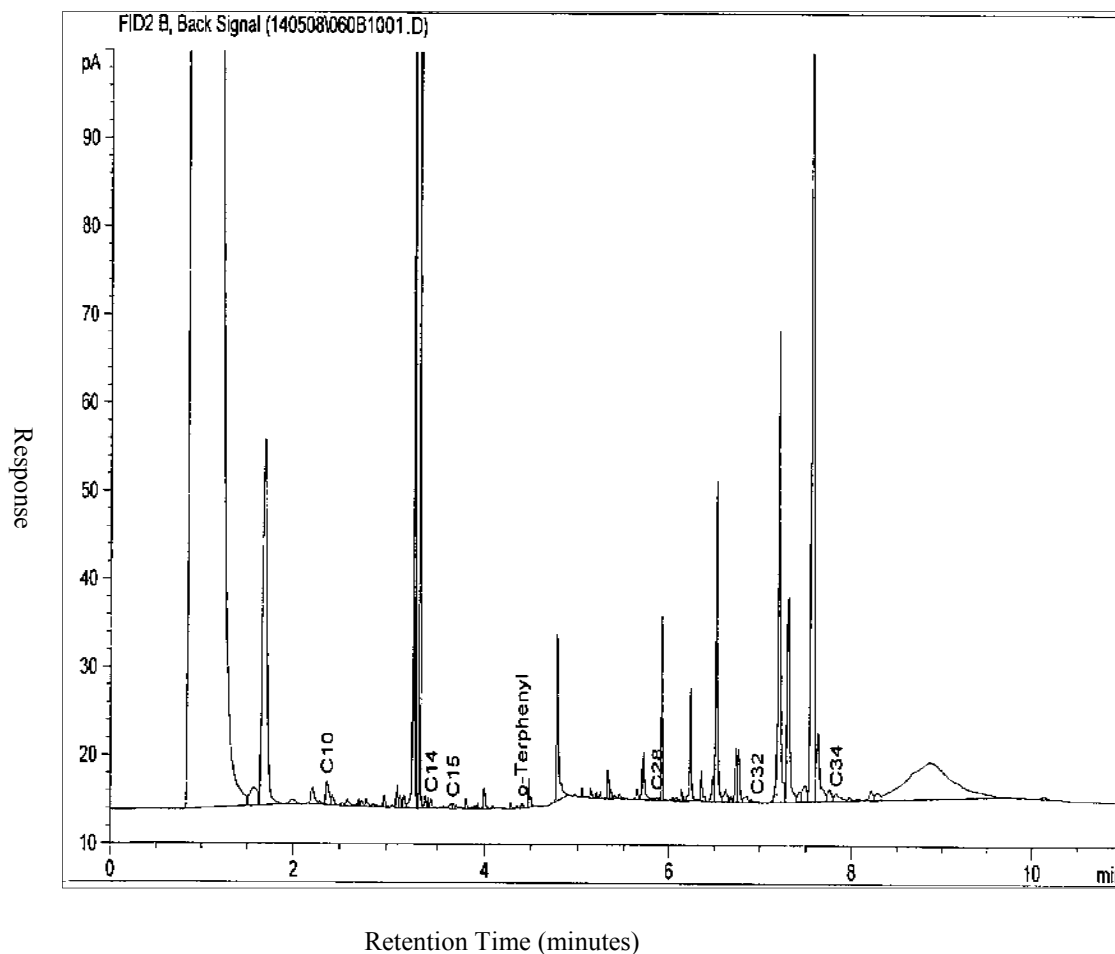
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



CORN OIL



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

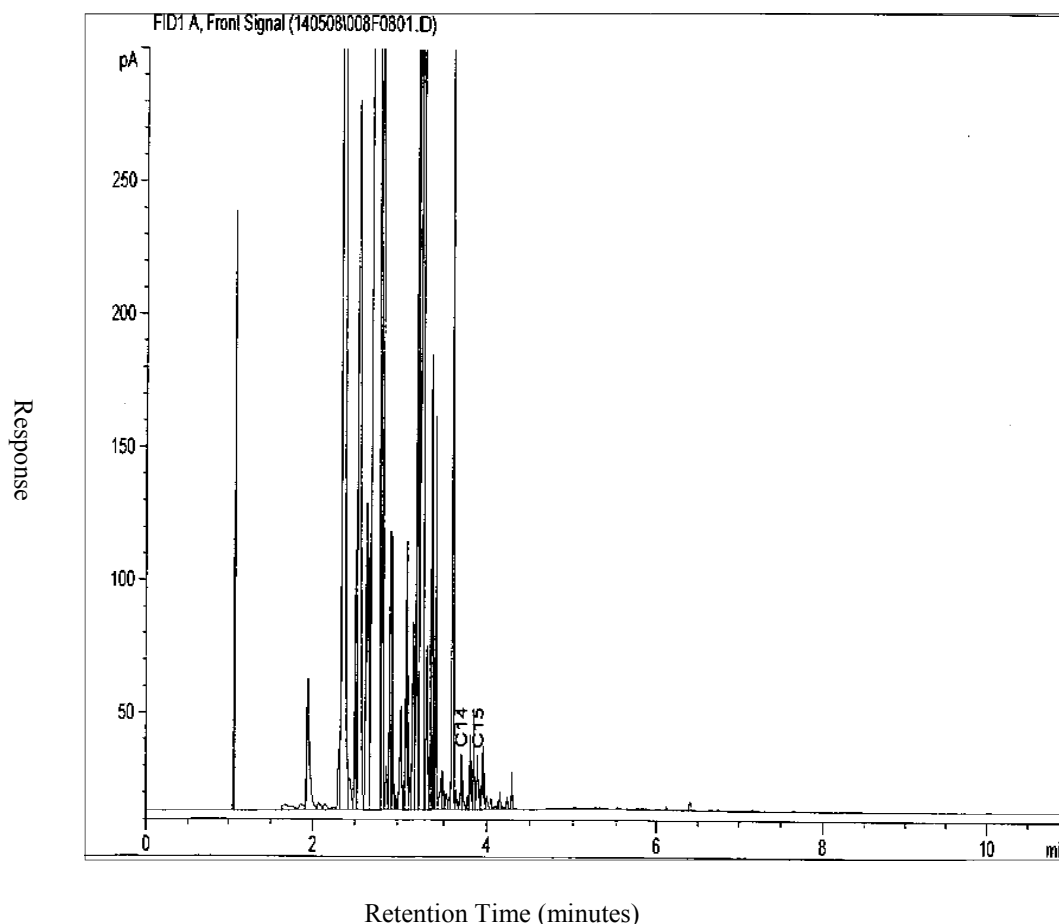
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



EUCALYPTUS OIL



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

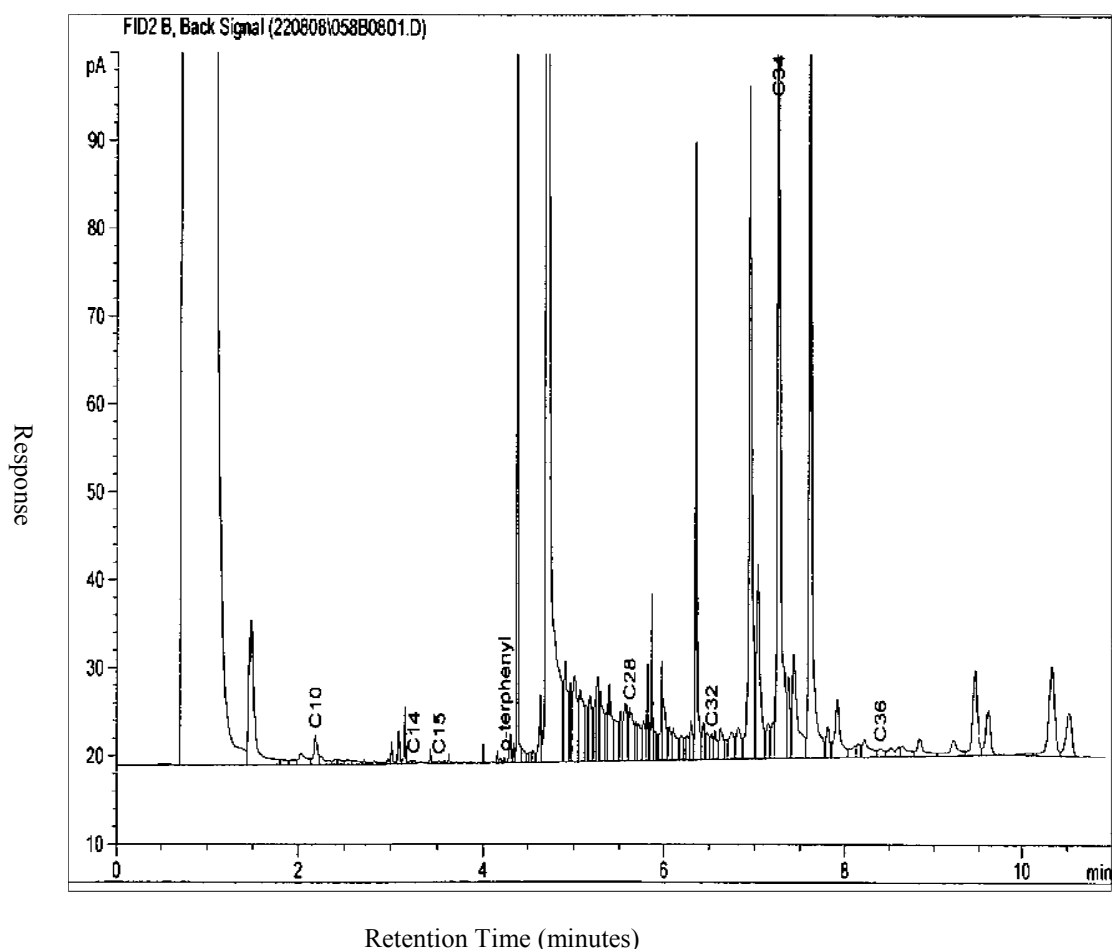
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



LINSEED OIL



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

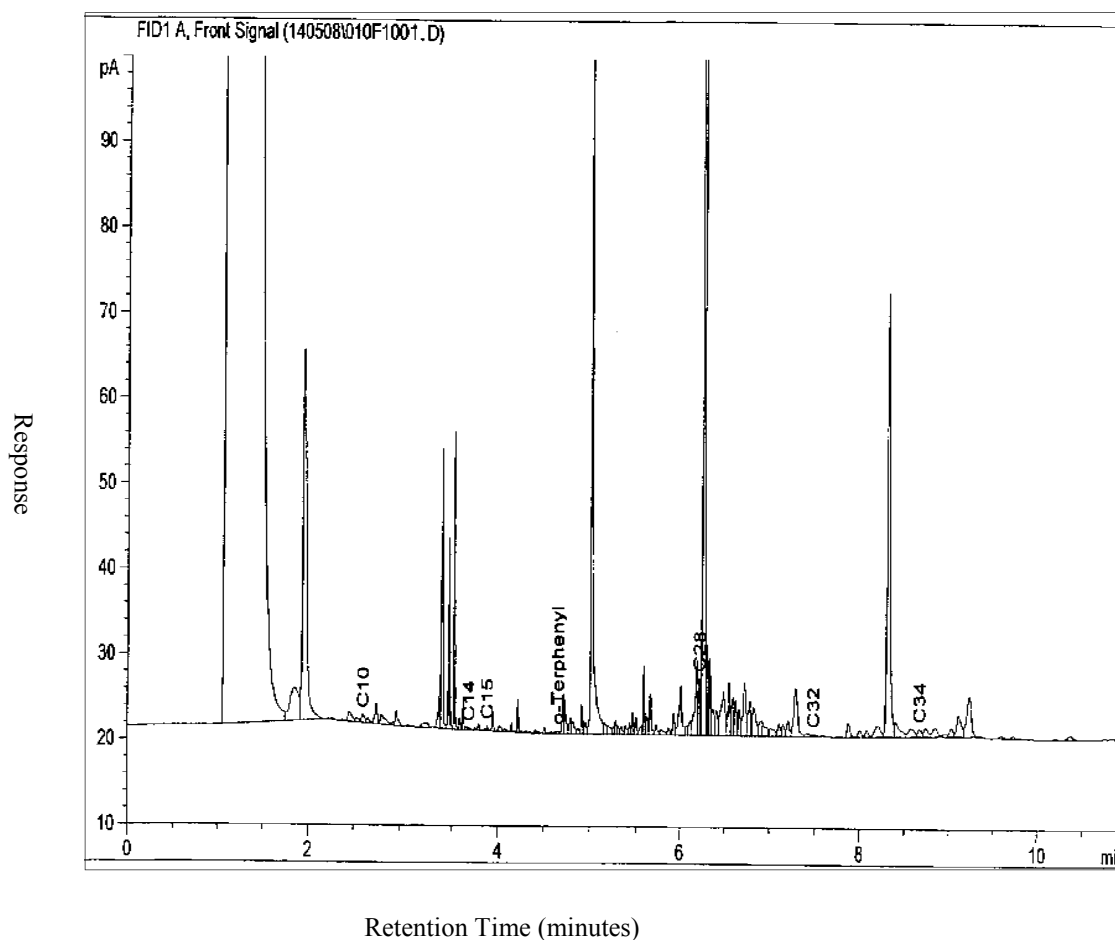
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



OLIVE OIL



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

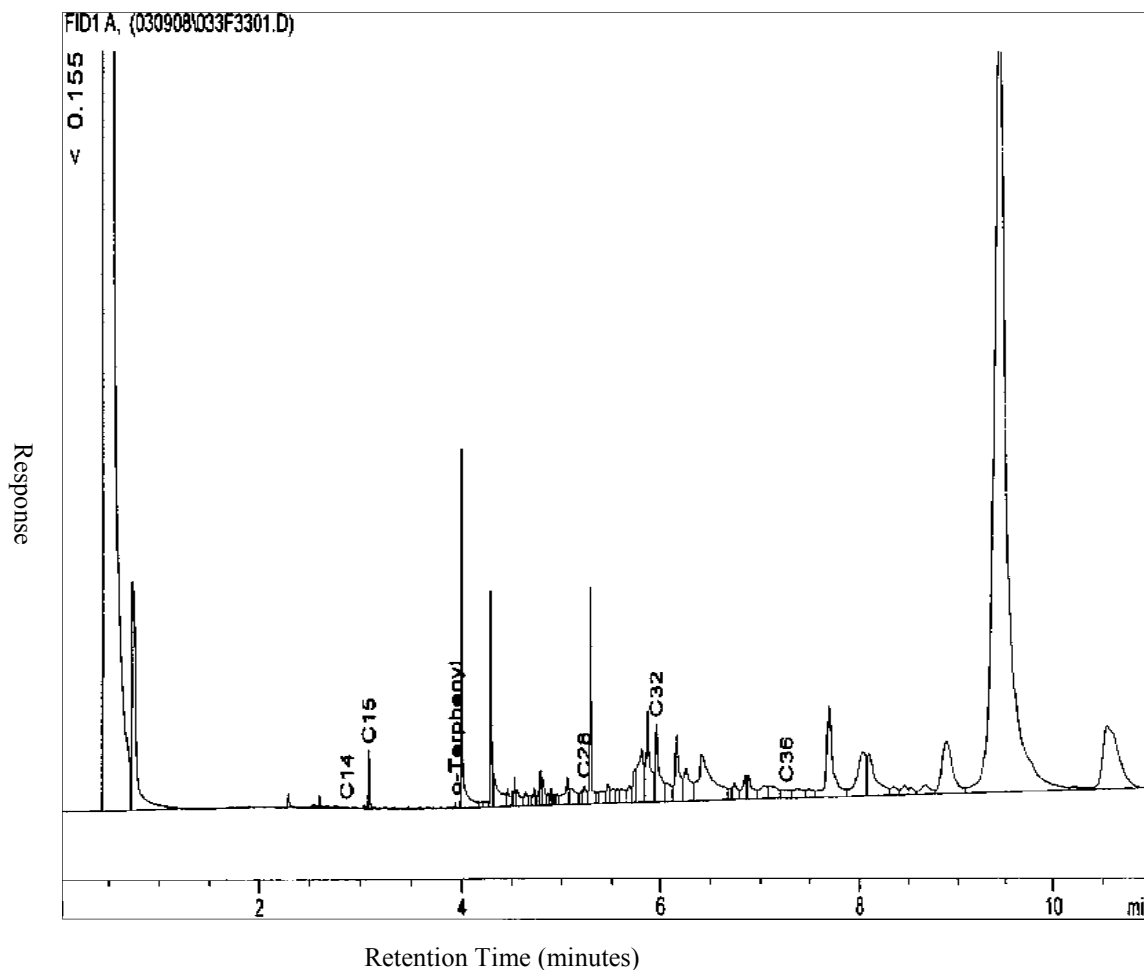
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



PALM OIL



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

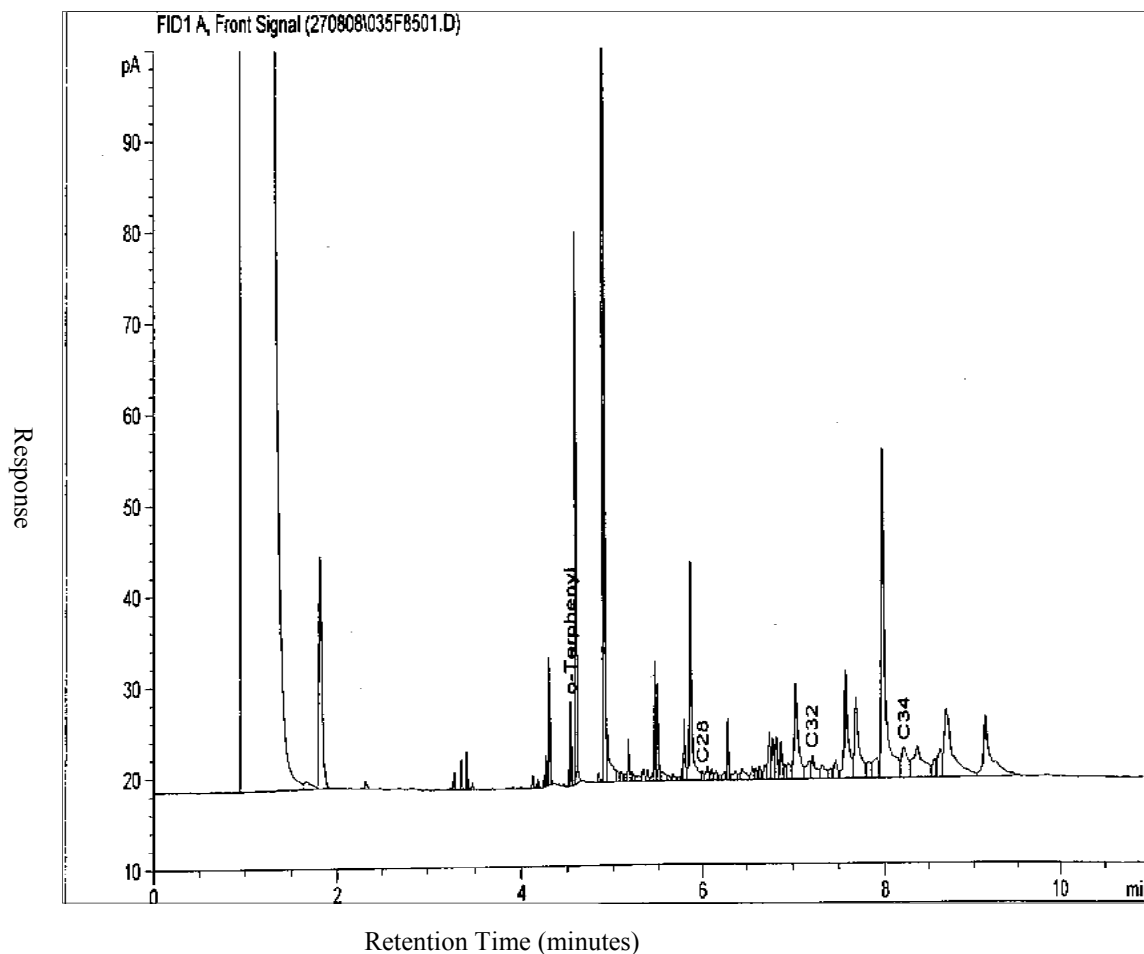
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



RICE BRAN OIL



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

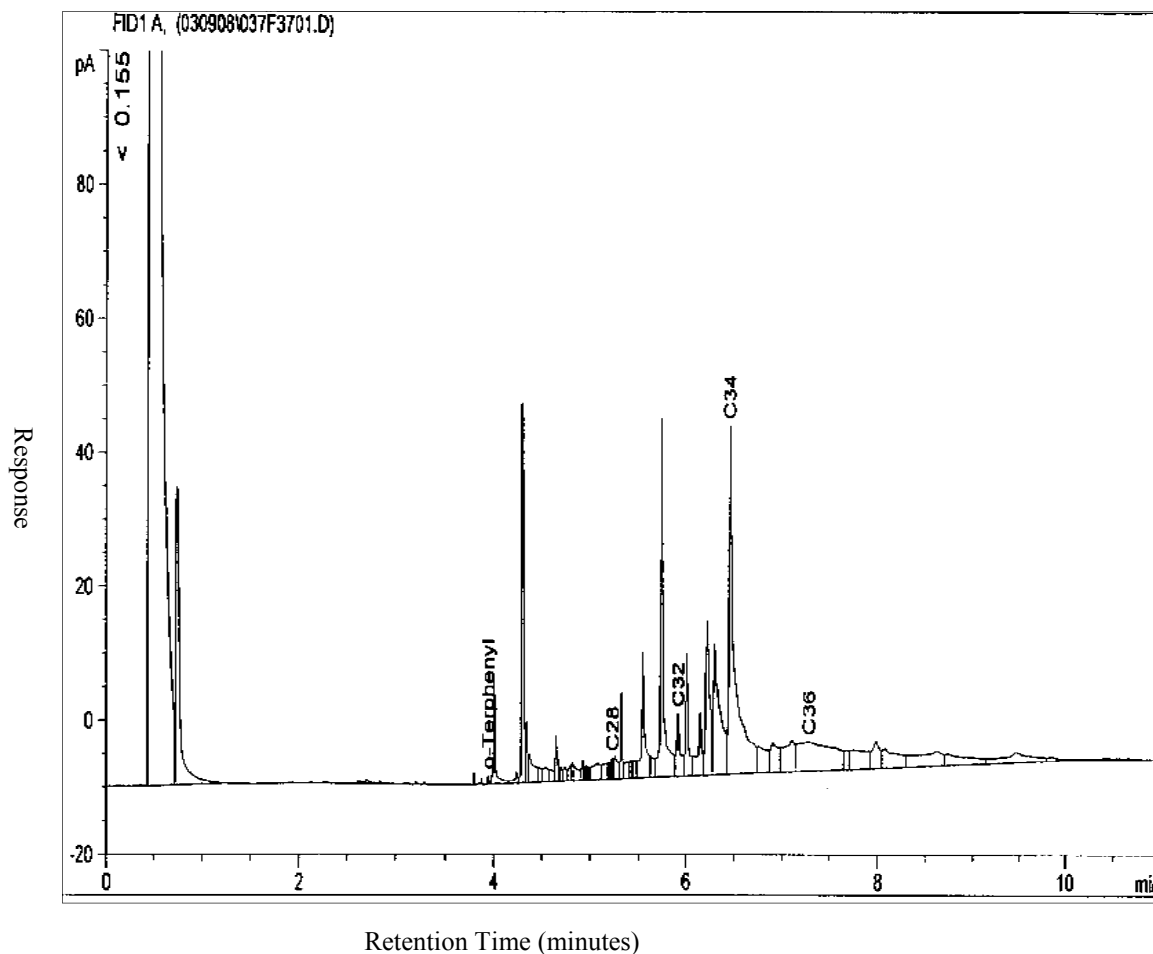
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



SESAME OIL



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

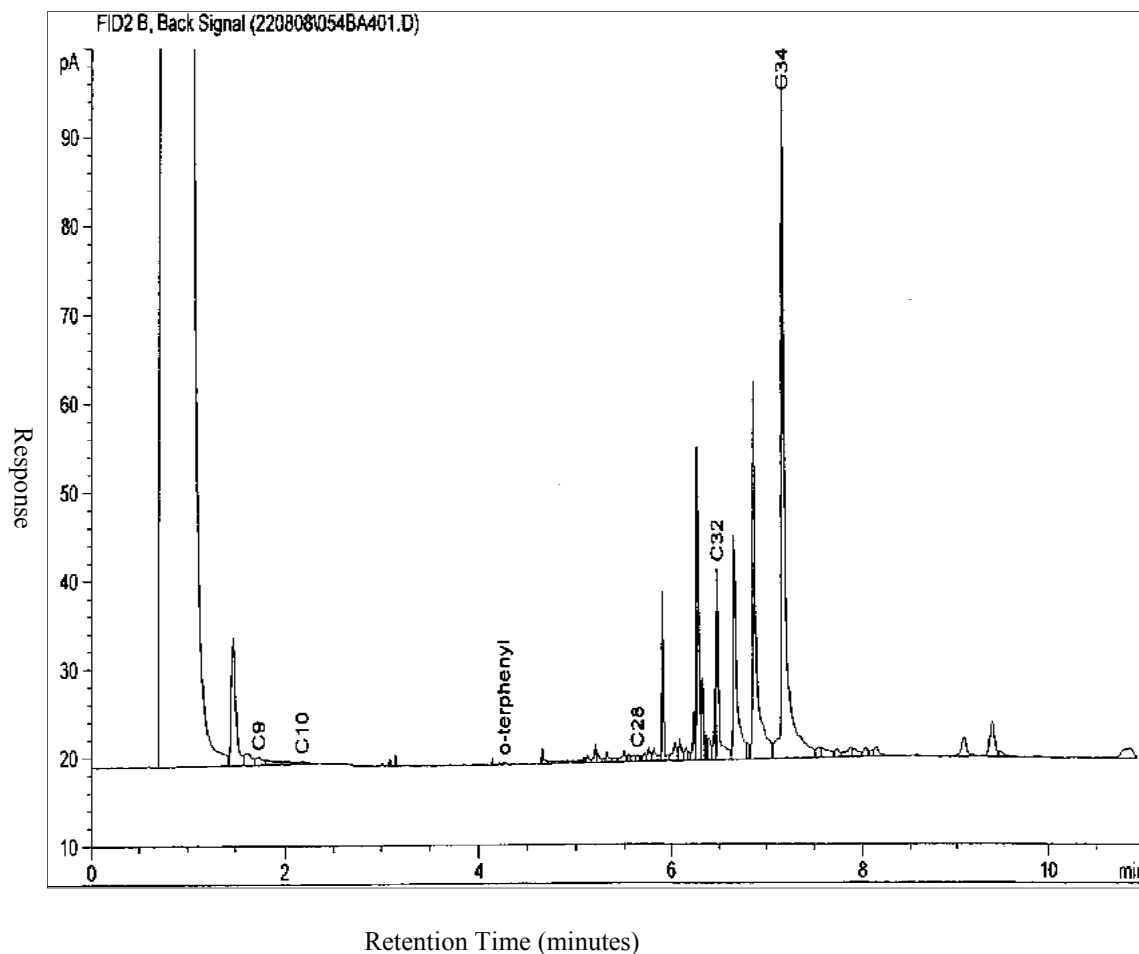
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



SOYA BEAN OIL



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

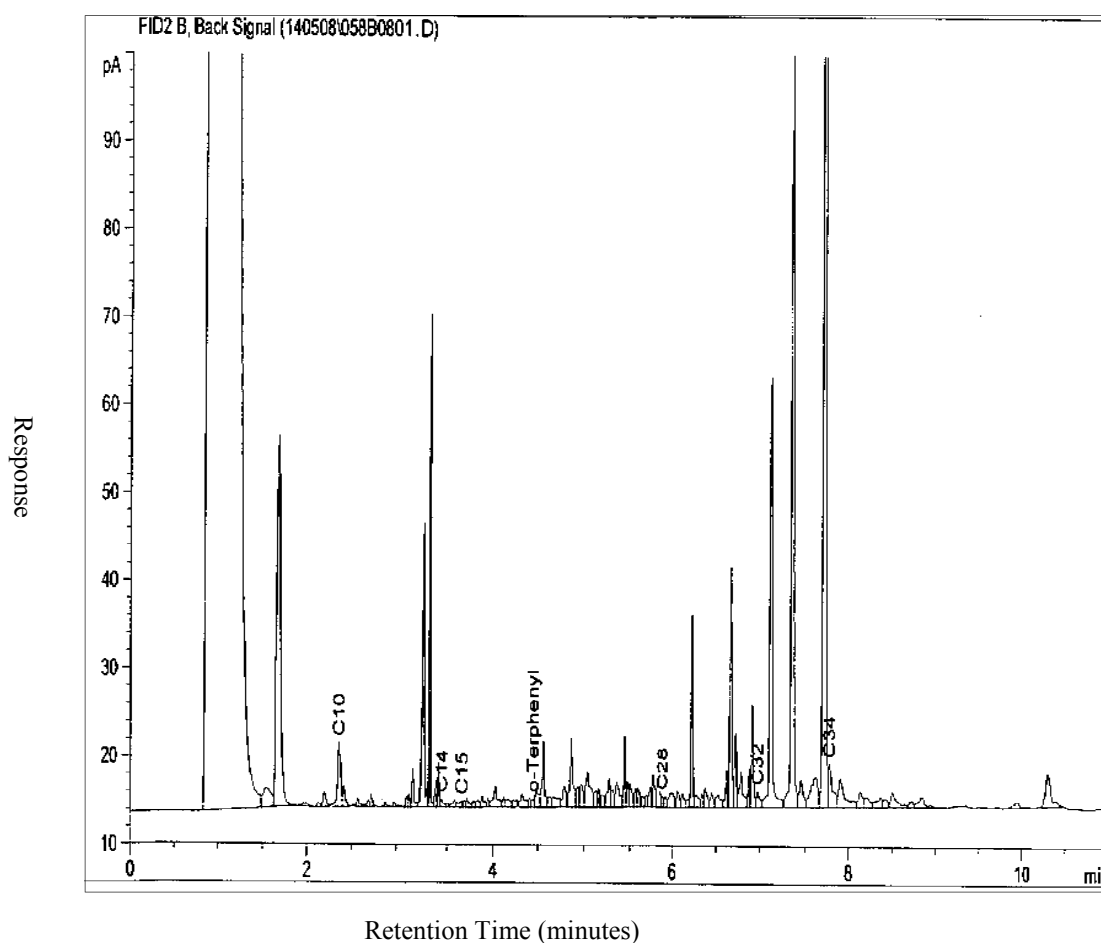
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



VEGETABLE OIL



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

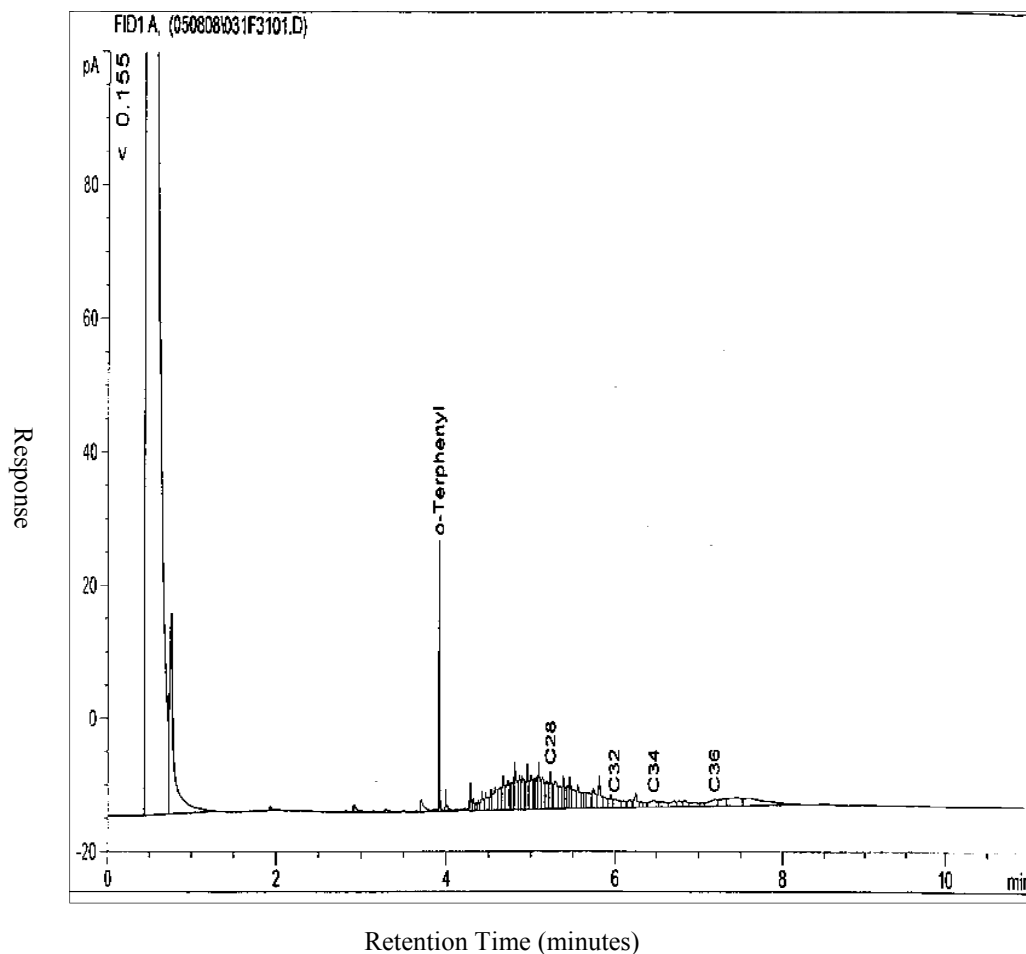
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



CARDBOARD



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

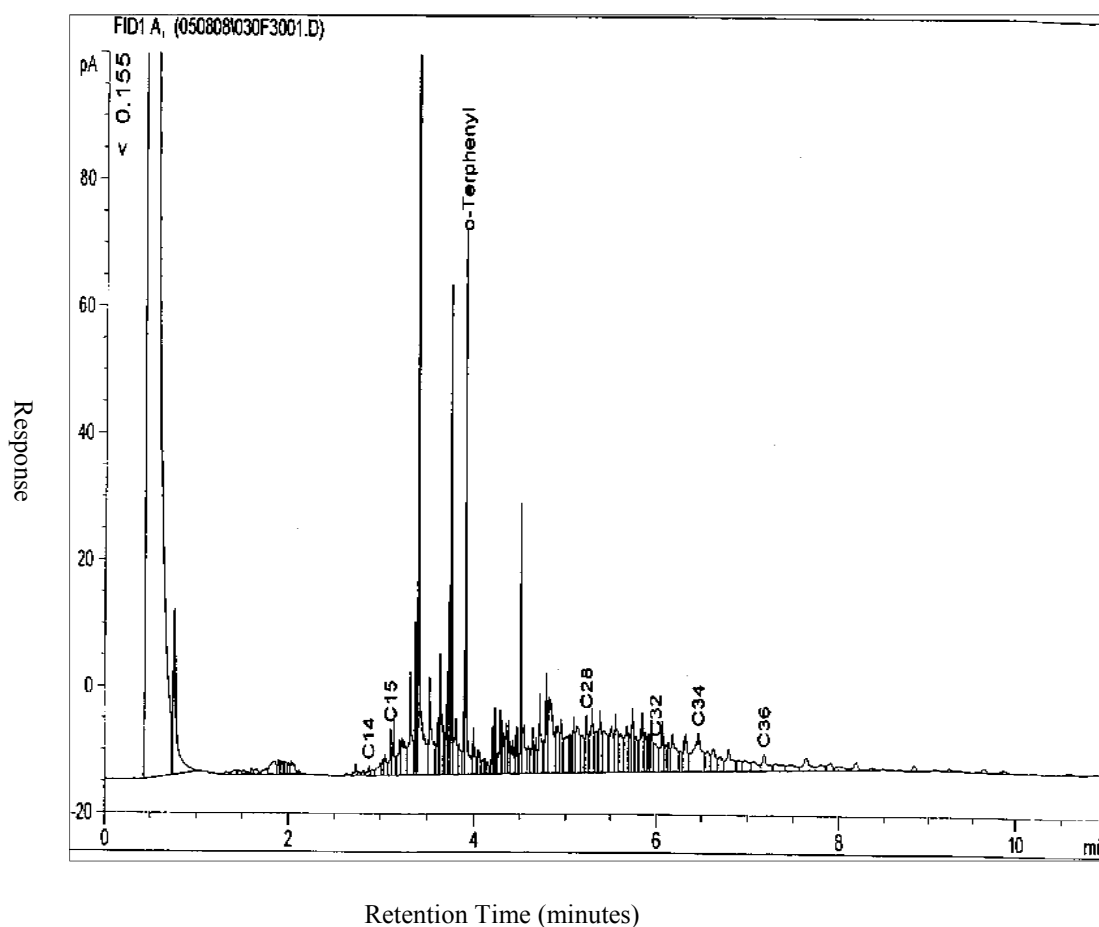
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



GLOSSY MAGAZINE PAPER



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

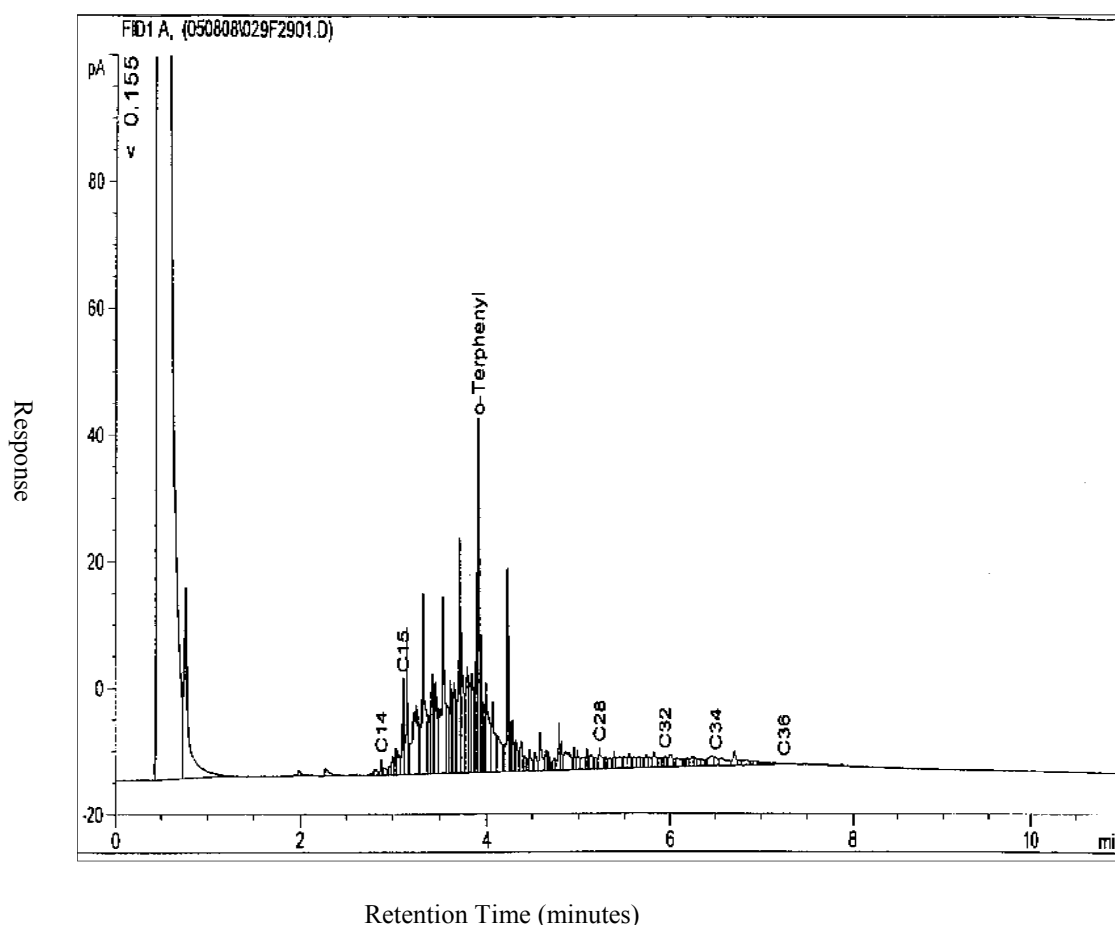
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



NEWSPAPER



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

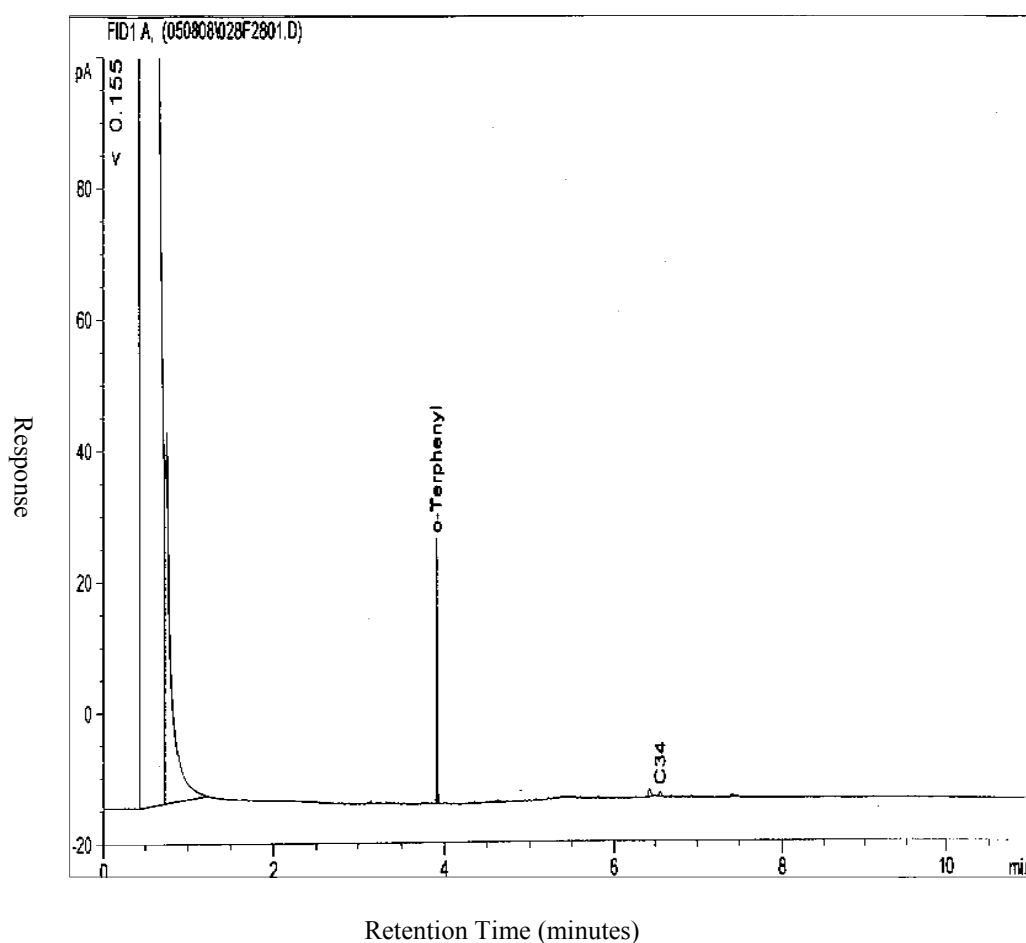
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



PRINTER/COPIER PAPER



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

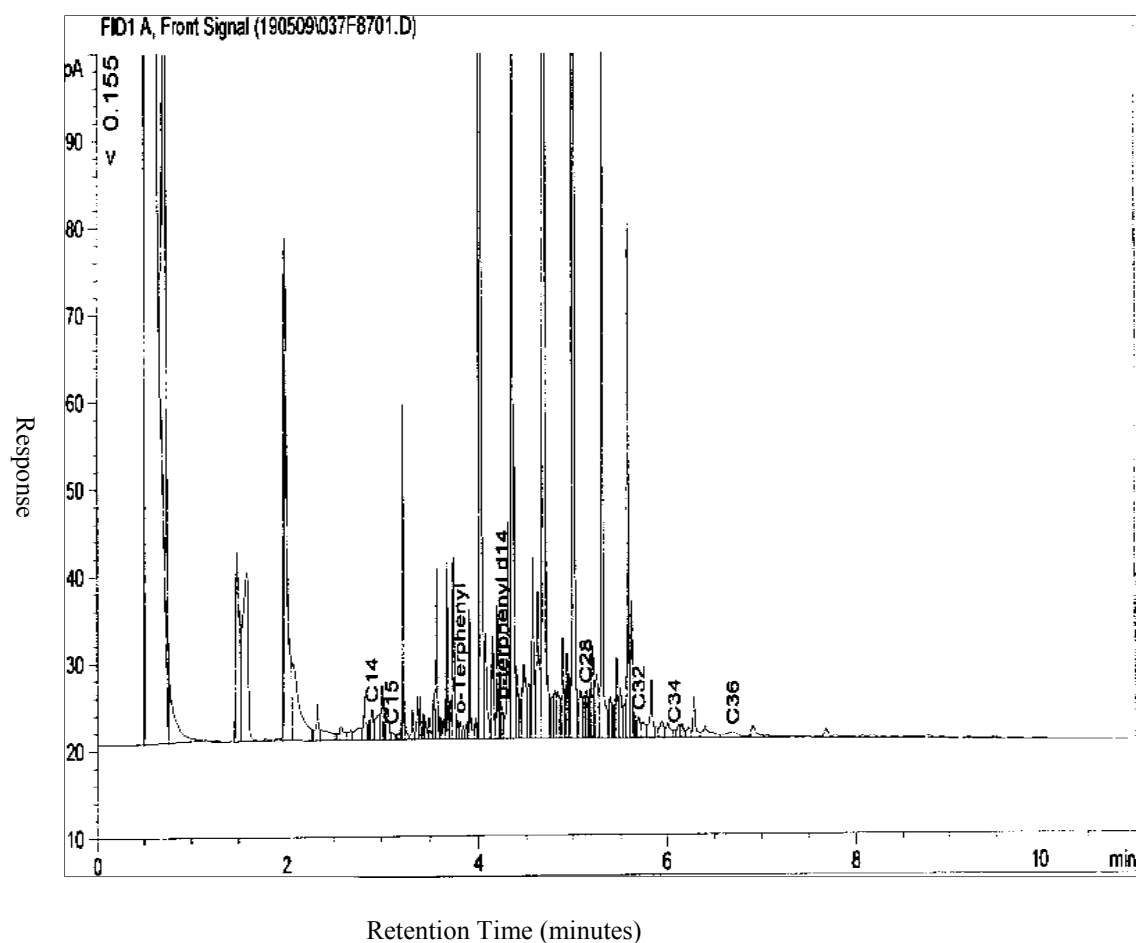
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



DILUTED DECONTAMINATION SOAP



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

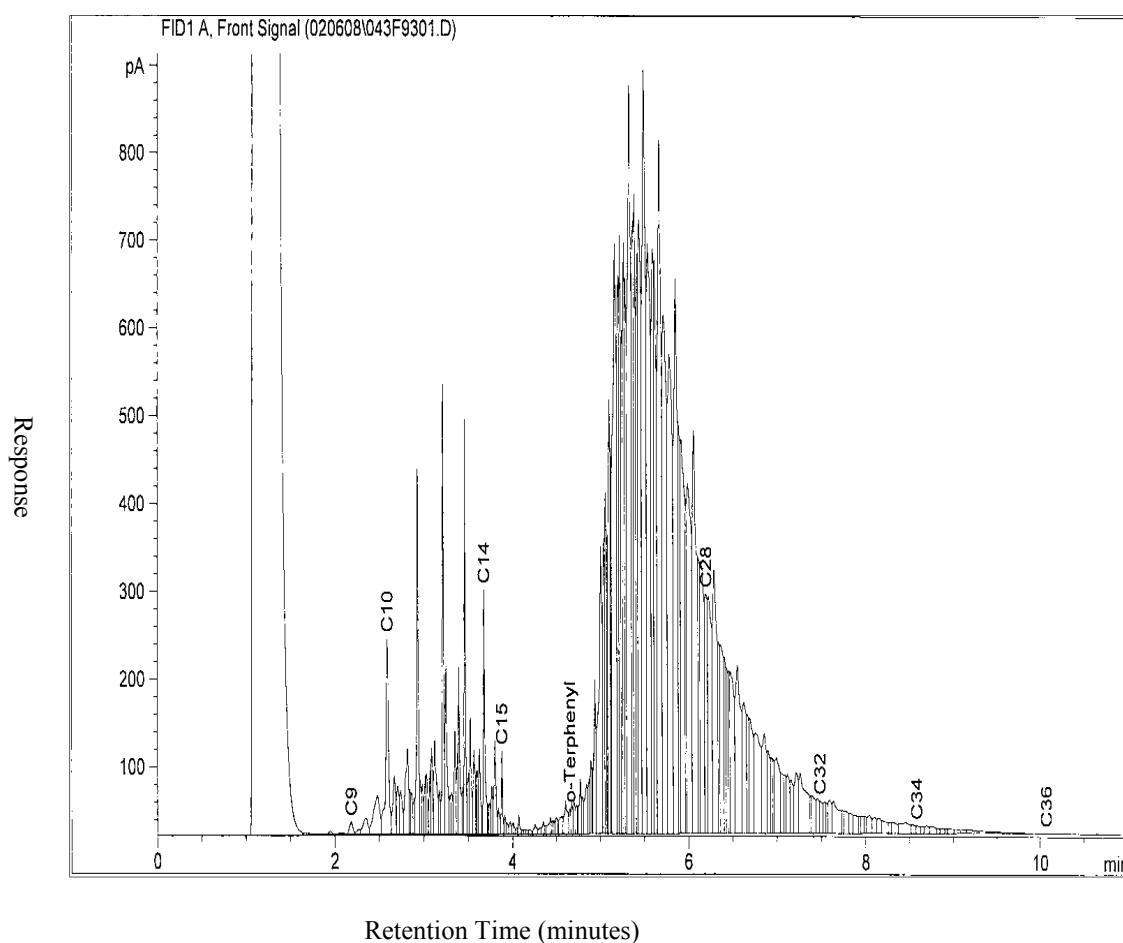
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



DEFOAMER



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

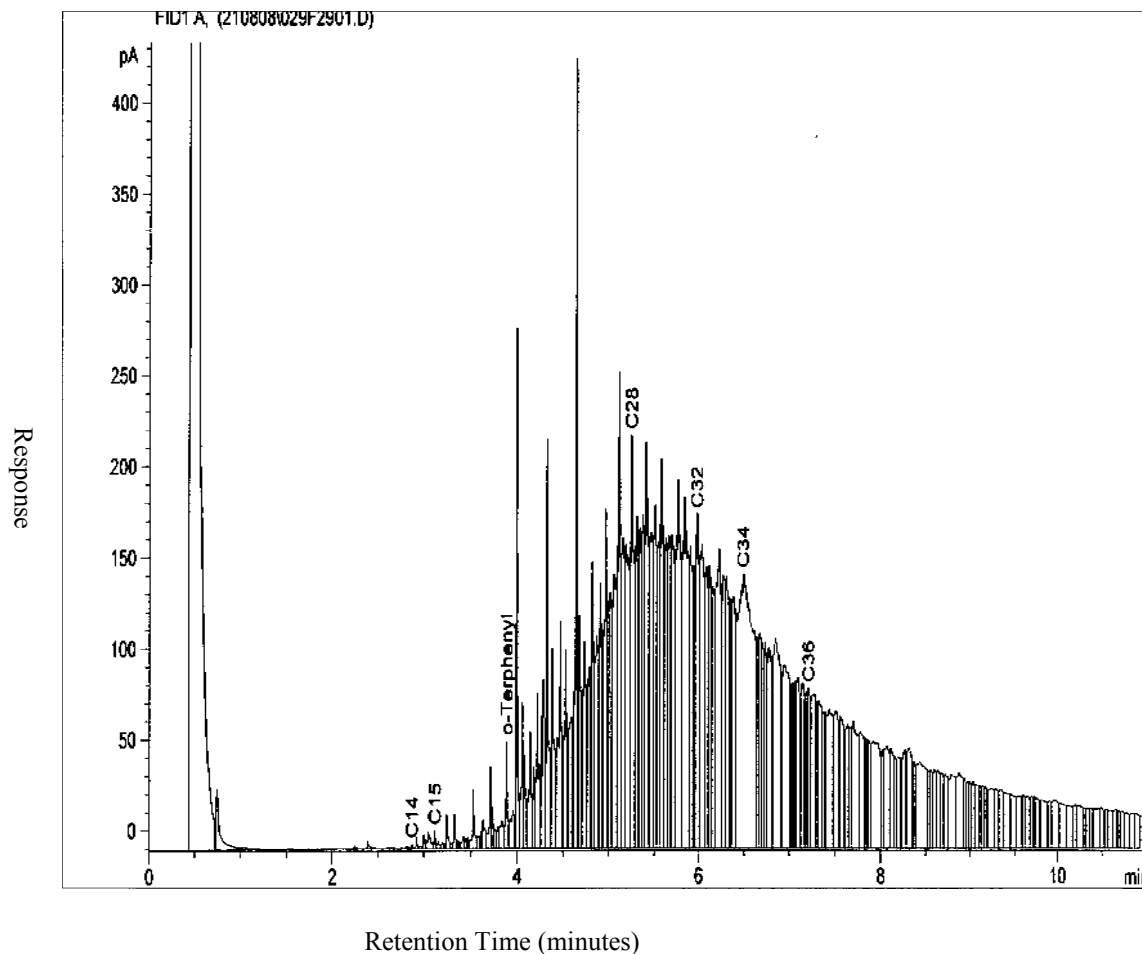
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



TYRE



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

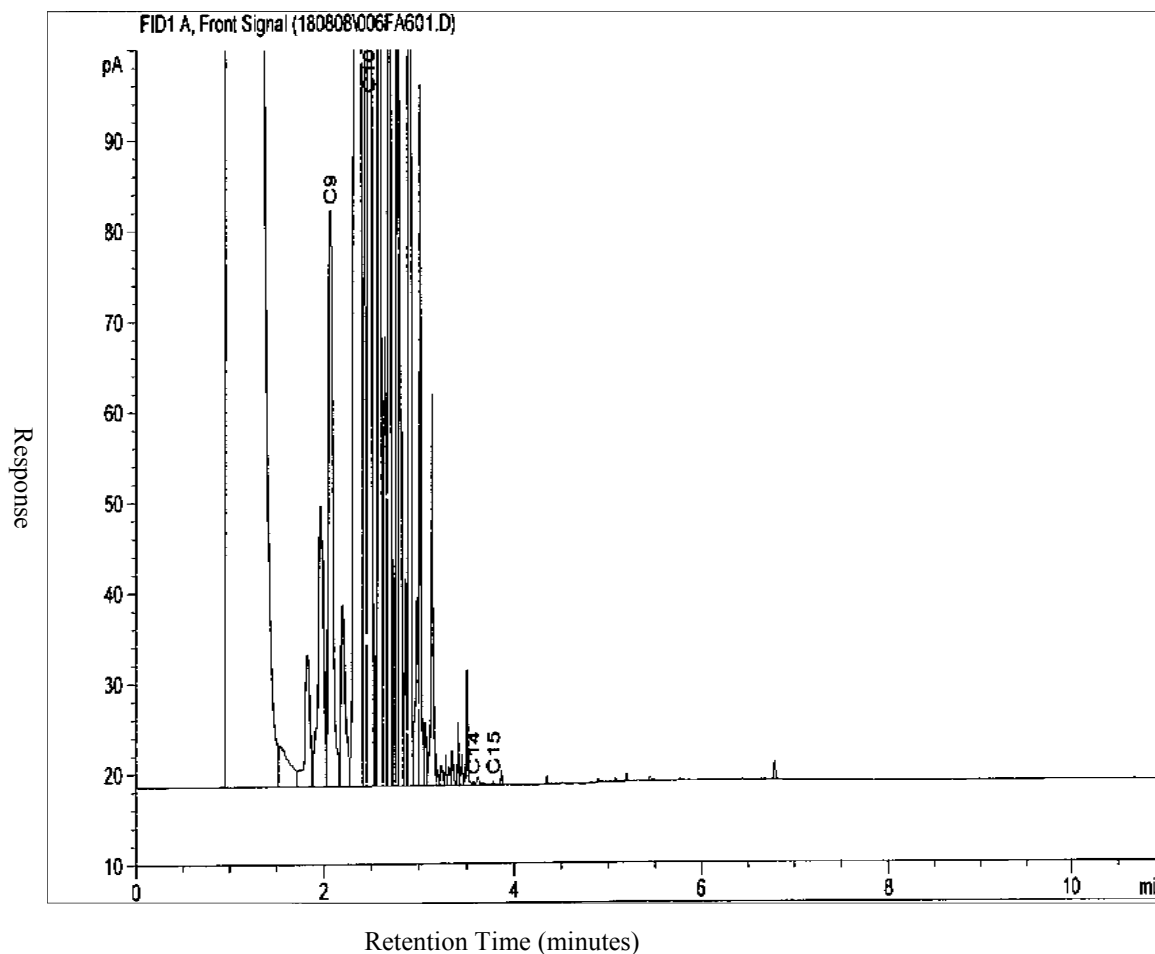
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



WOOD STAIN



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

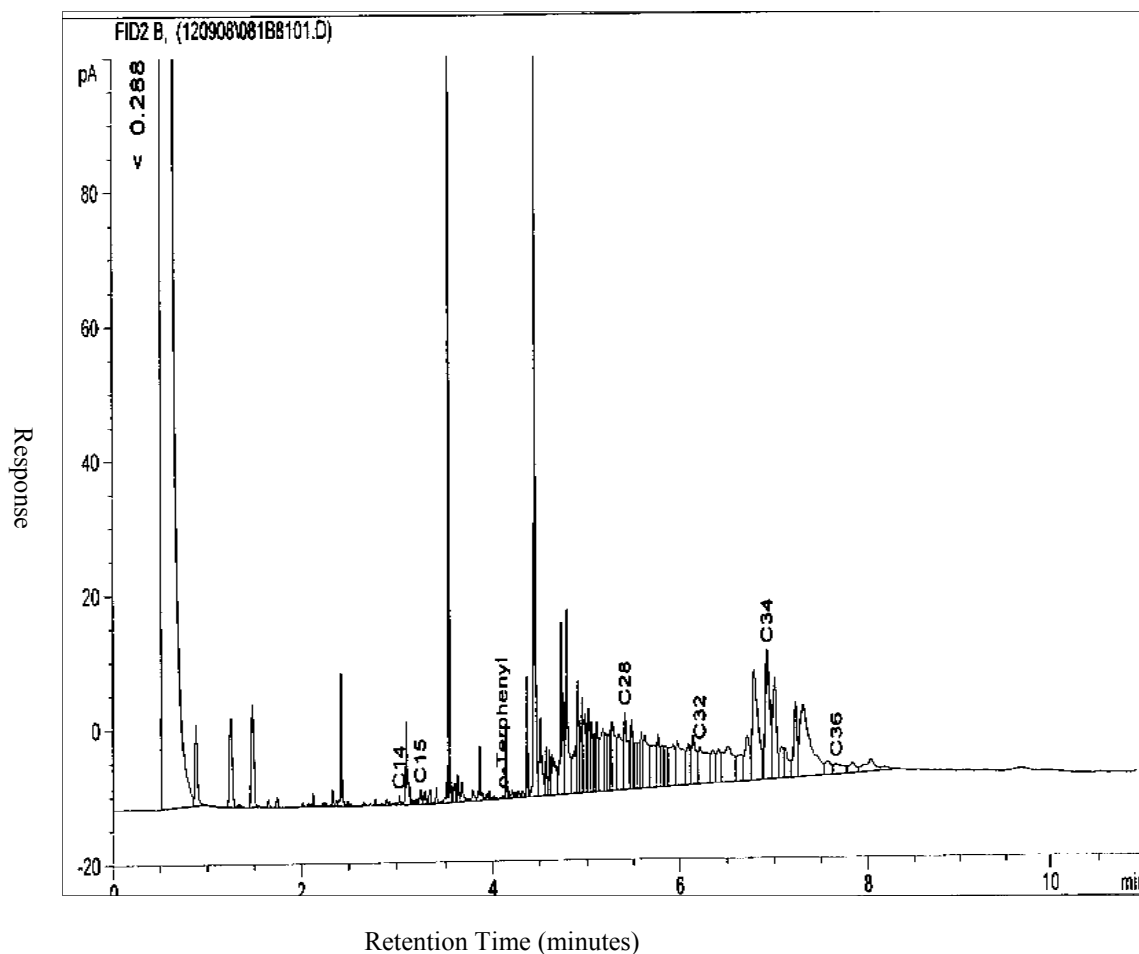
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



EUCALYPTUS WOOD CHIP



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

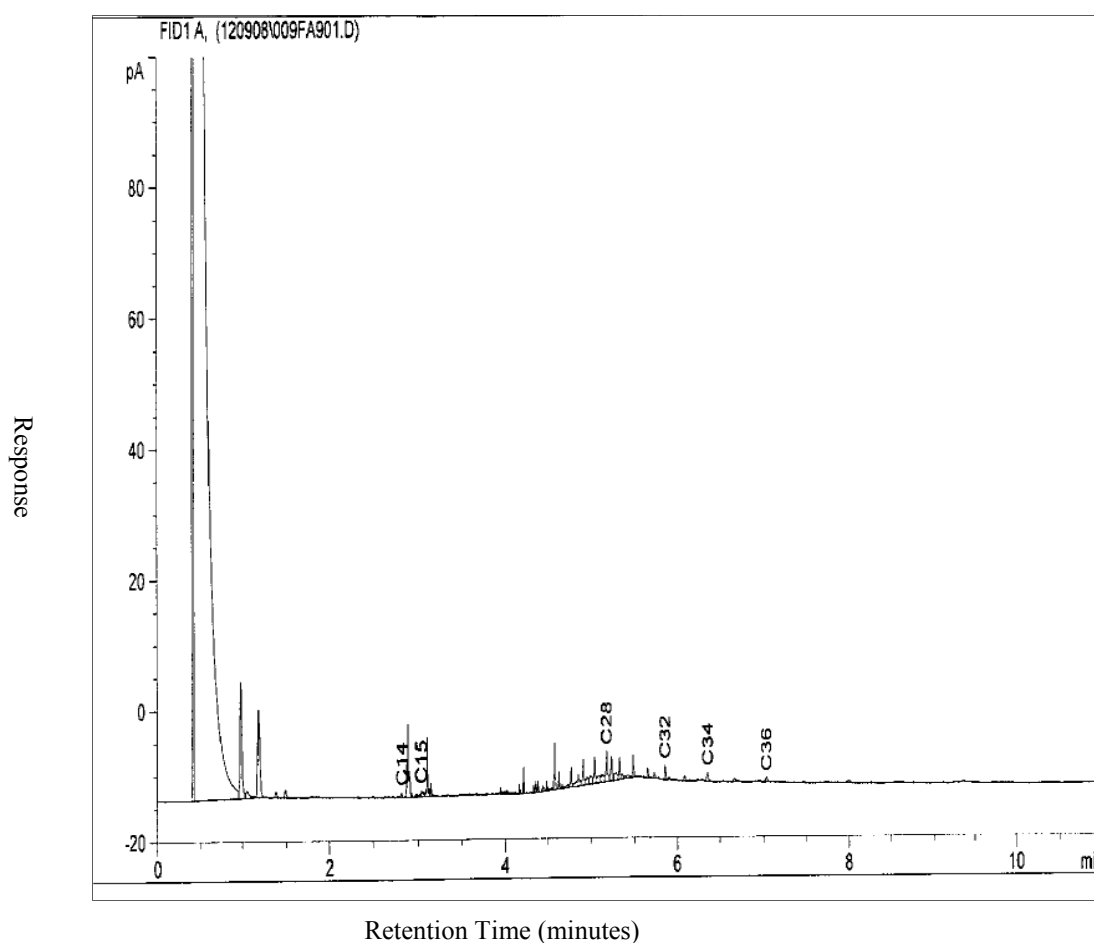
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



EUCALYPTUS WOOD CHIP WITH SILICA GEL CLEANUP



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

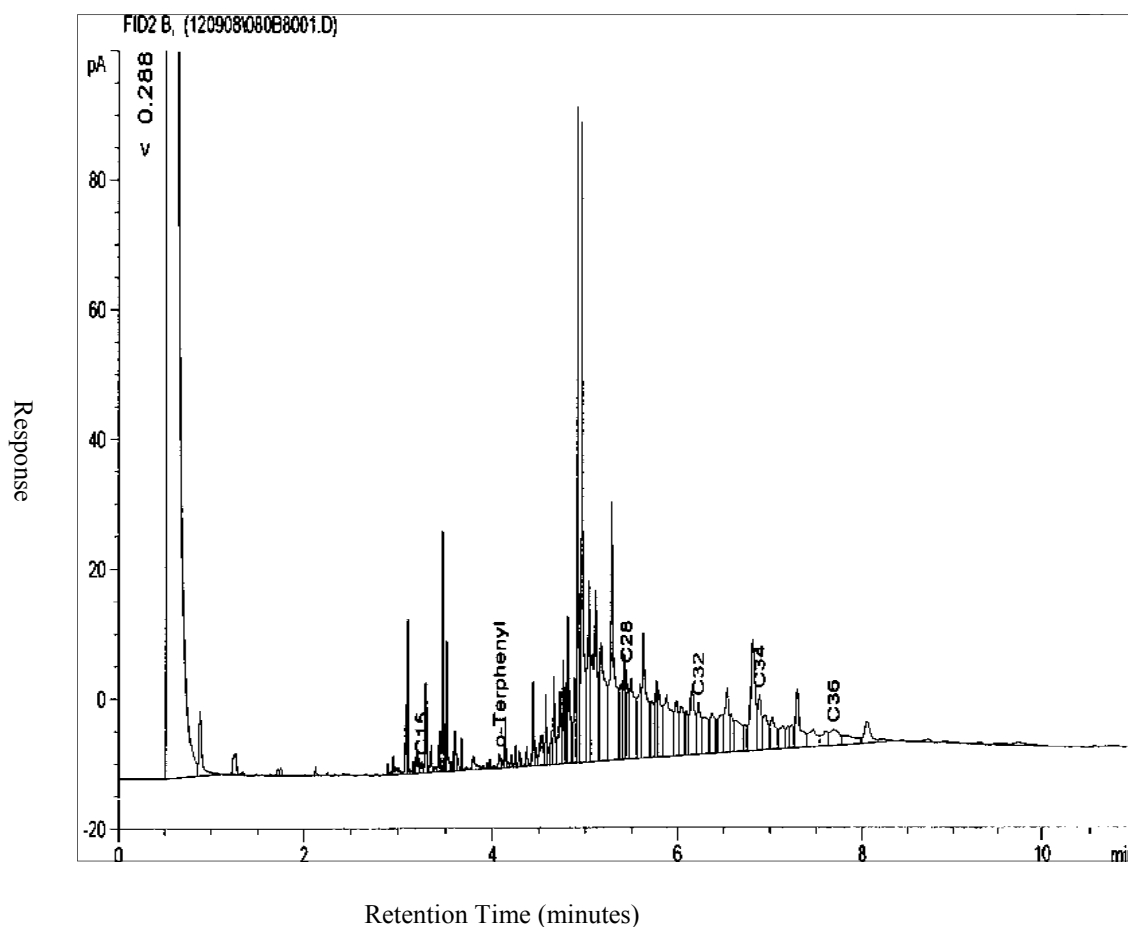
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



PREMIUM BLEND COMPOST



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

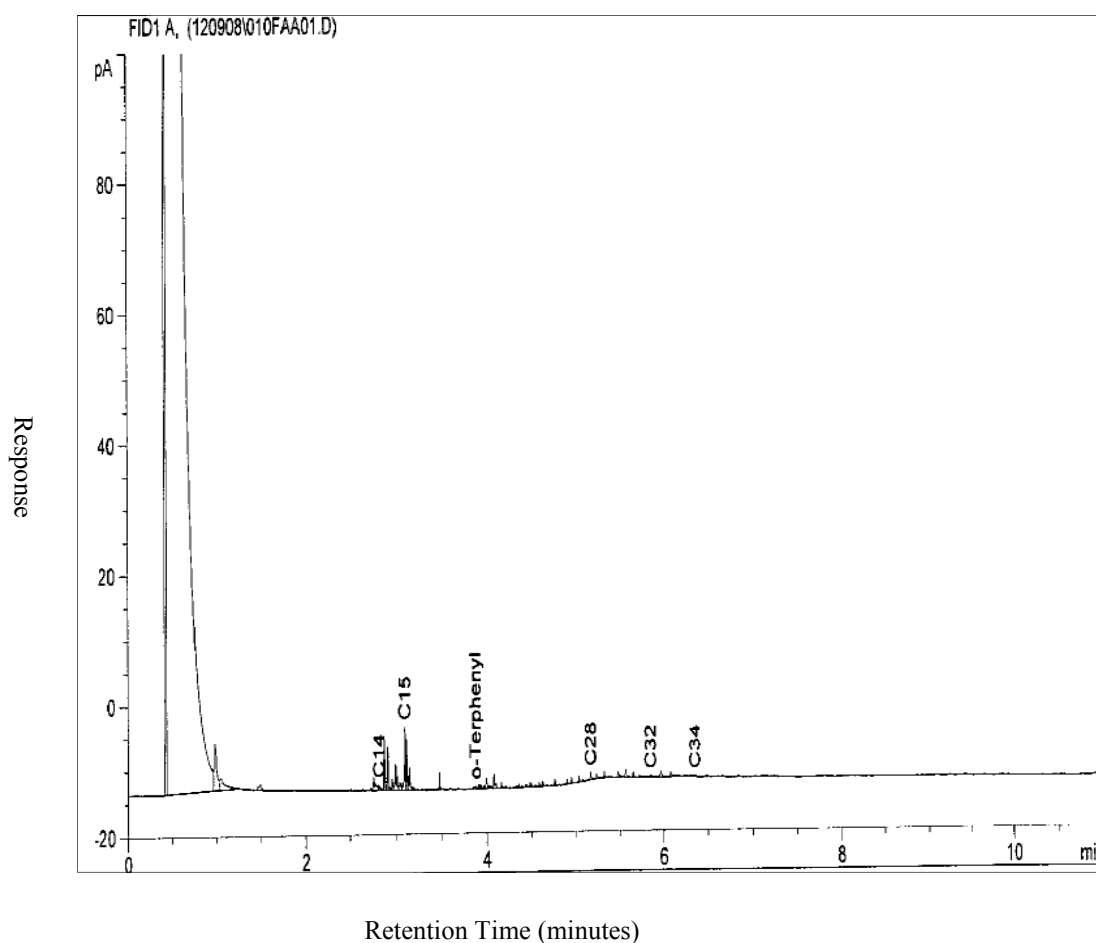
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



PREMIUM BLEND COMPOST WITH SILICA GEL CLEANUP



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

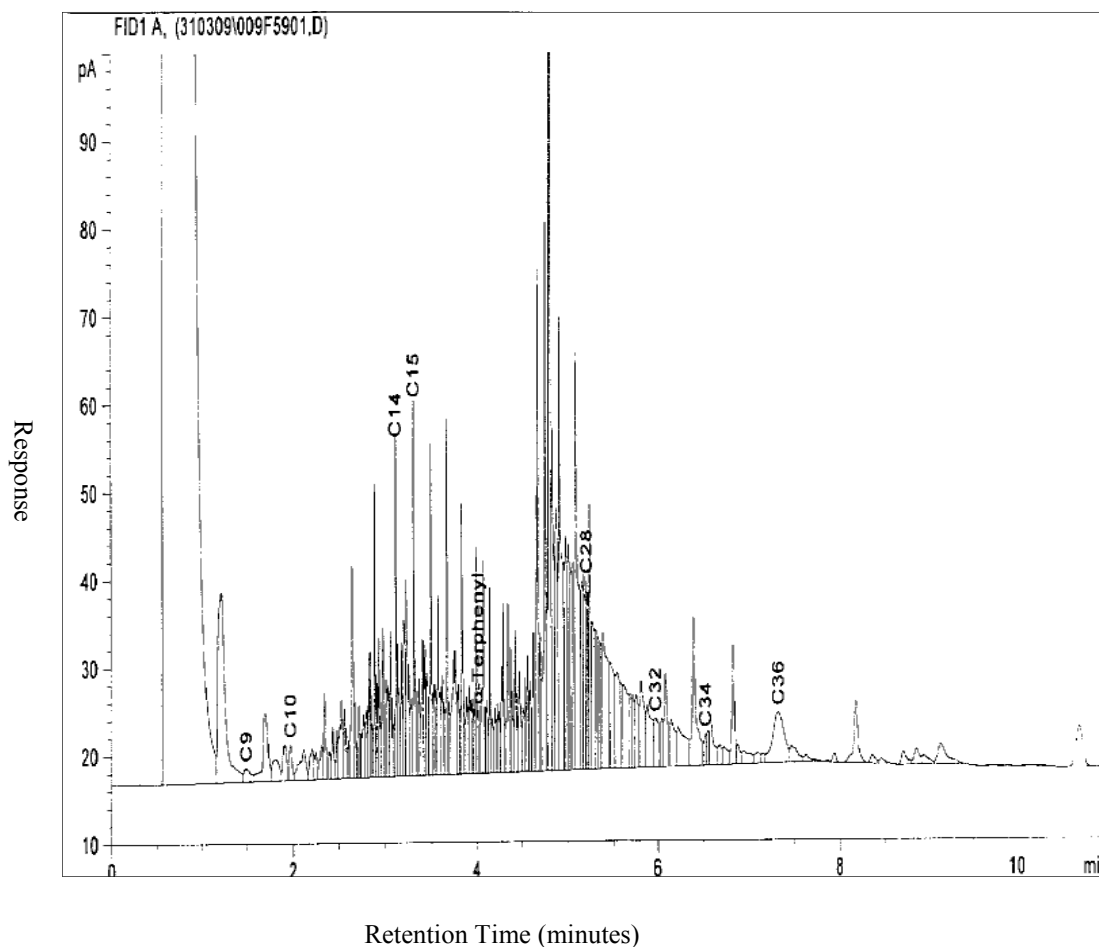
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



WOOD CHIPS SPIKED WITH DIESEL



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

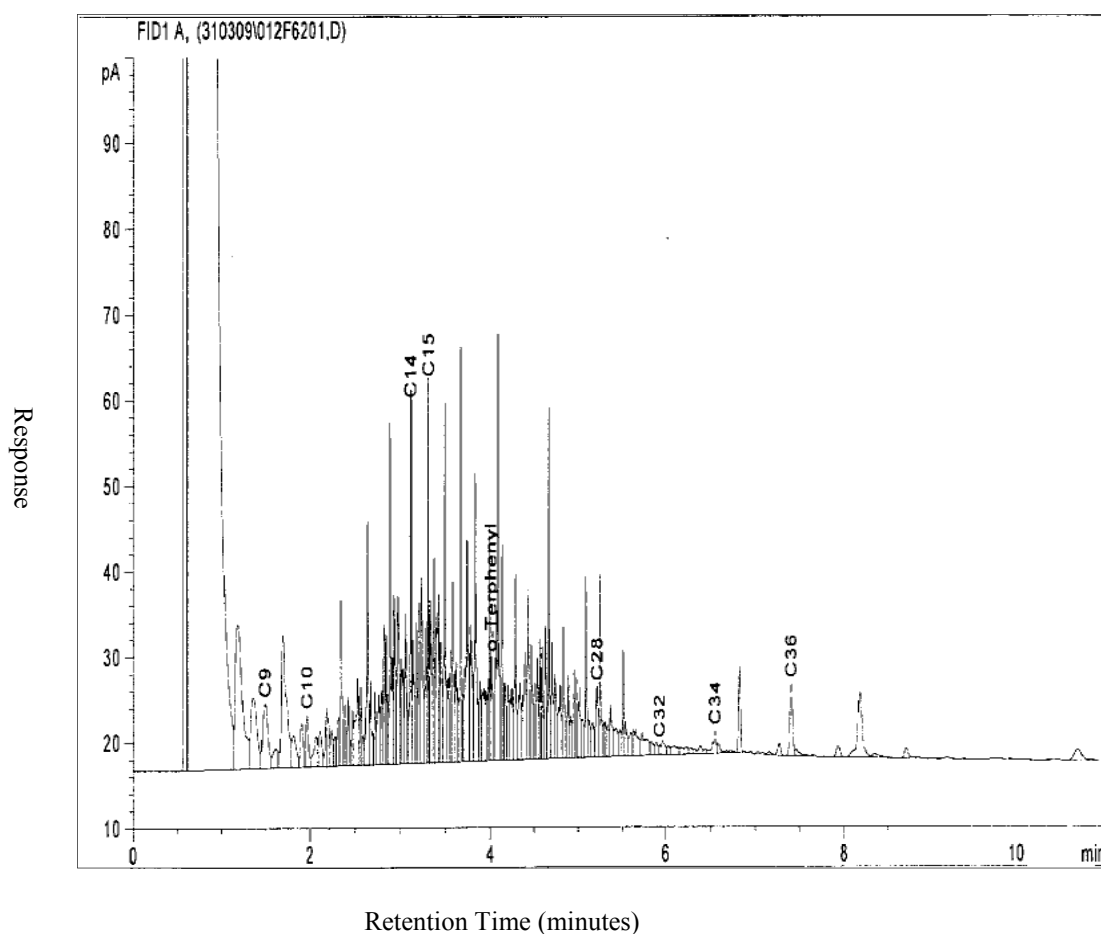
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



WOOD CHIPS SPIKED WITH DIESEL WITH SILICA GEL CLEANUP



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

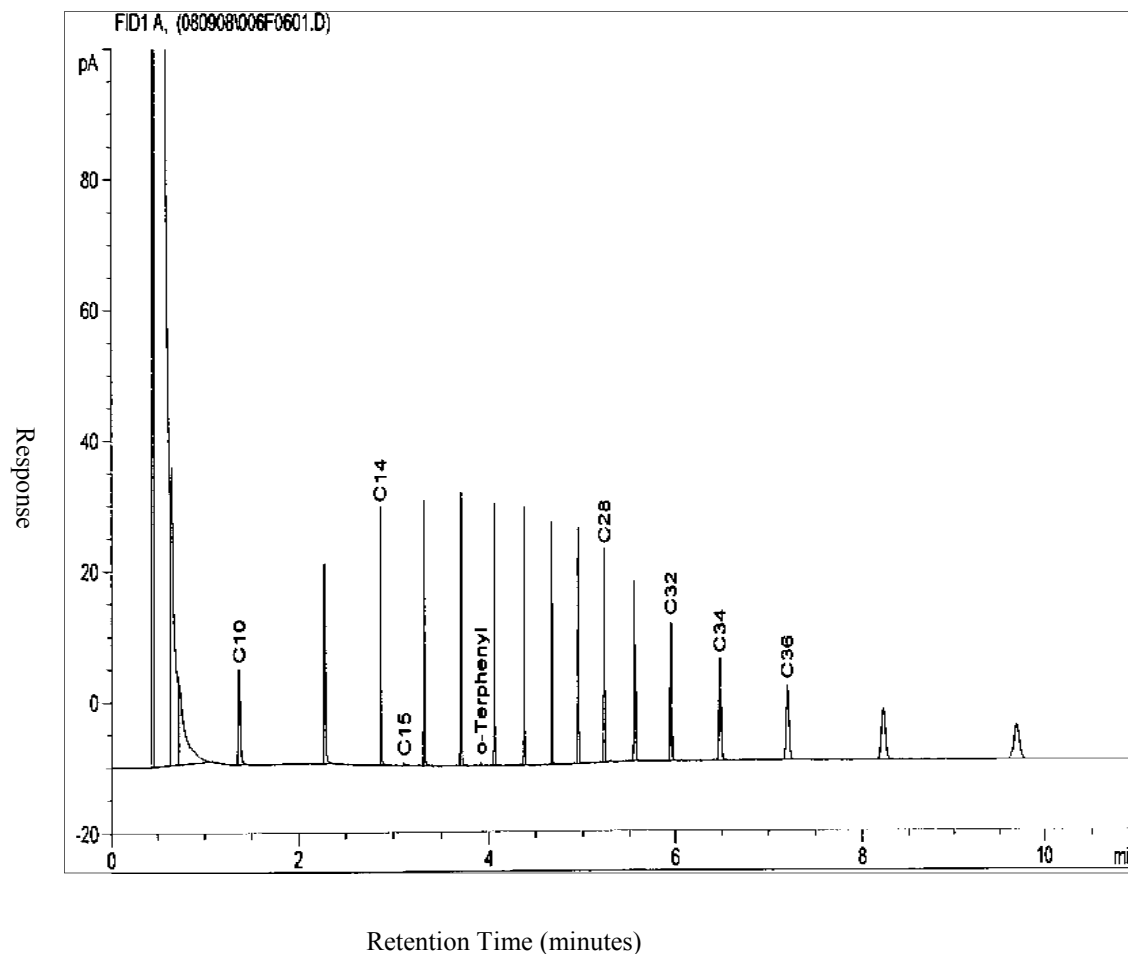
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



FLORIDA - ALKANE MIXTURE



The EnviroLab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

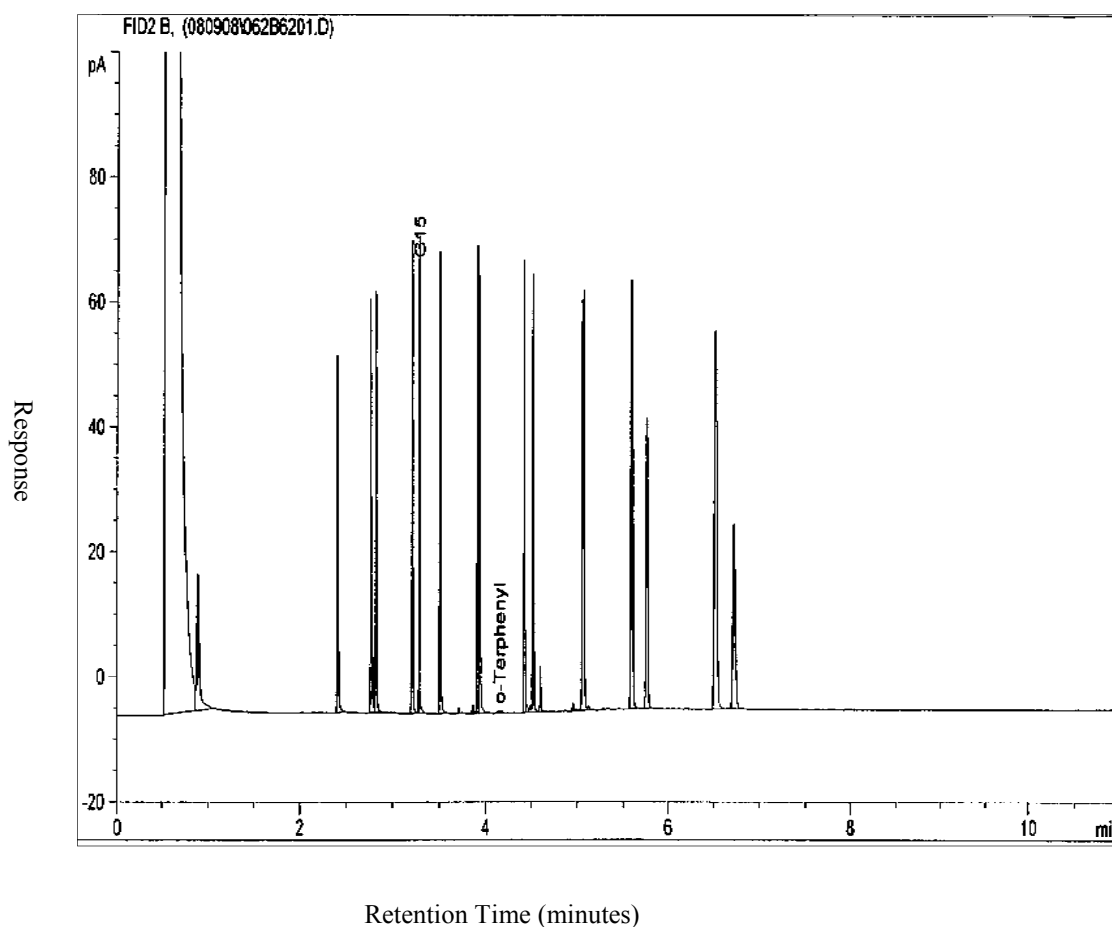
These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

HYDROCARBON REFERENCE LIBRARY



PAH MIXTURE



The Envirolab reference chromatogram library was compiled using compounds found in petroleum products, standards, natural products and readily available commercial products.

The components with the lowest boiling points tend to volatilize more rapidly than the components with higher boiling points. On the reference chromatograms, the components that have the shortest retention times (left side of the GC trace) are the most volatile and will tend to decrease in peak intensity preferentially as more volatilization takes place.

These reference chromatograms can be used as a guide for comparison with unknown samples to help identify the contaminants.

The o-Terphenyl peak is the TPH surrogate used in our extraction.

Appendix J

Field Notes Equipment Calibration Sheet

Certificate of Service and Calibration

Bladder Pump QED MP15 Micropurge Kit

Company Name	WAM Scientific
Office Address	26 Bungarra Crescent, Chipping Norton NSW 2170
Phone Number	+61 405 241 484
Contact Name	William Pak
Instrument	QED MP15 Kit
Serial Number	Sample Pro Pump: 145106
Serial Number	MP15 Backpack: 1735
Client Name	Cathy Li (Douglas Partners)
Project Number	234875.01
Comments	1x Spare CO2 Bottle

Instrument Check			
Item	Test	Test Passed	Comments
MP15 Backpack Controller	Operation	✓	Controller operational
Gas Regulator	Condition	✓	No damage, good condition
Wrench and Tube Cutter	Condition	✓	Attached to the controller
Blue Coiled Hose	Condition	✓	No tears, clean, good condition
Tube Connection Fitting	Condition	✓	No damage
Black Canvas Bag	Condition	✓	No damage, clean
Sample Pro Pump	Condition	✓	No damage, decontaminated
Bladder	Condition	✓	1x New bladder included free of charge
Pump Fittings	Condition	✓	No damage, good condition
CO2 Gas Bottle	Check & Test	✓	1x CO2 bottle included free of charge
Kit Operation	Operation	✓	MP15 kit fully operational
Instructional Manual	-	✓	User manual included

Inclusions
The MP15 Kit should include the following items: - QED MP15 Backpack Controller, Blue Coiled Hose with Tube Connection Fitting, Wrench and Tube Cutter, Sample Pro Pump, 1x CO2 gas bottle fitted with the MP15 Backpack, Wire Cable Hand Reel and spares/accessories box - Additional CO2 gas bottles will be supplied upon request at an additional cost

Declaration
WAM Scientific certifies that the above instrument was successfully tested according to manufacturer's standards and all necessary checks were conducted to ensure the instrument was fully operational prior to dispatch. The pump has been decontaminated and cleaned upon return from the previous hire and is in good working order.

Checked By	William Pak
Calibration Date	28/04/2025
Calibration Due	28/10/2025

Project and Bore Installation Details					
Project Name / Site Location	234875-01			Project Number	234875-01
Well Construction Details	Well ID	BH1	Drilling Method		Hole Diameter (m)
	Well Depth (m bgl)		Screened (m bgl)		Stick Up (m)
Survey Information	Easting		Northing		Elevation RL
CW Level During Drilling		m bgl			
Contaminants/Comments					

Well Development Details					
Date / Time / Weather Conditions	17/4/25 09:00 Overcast			Purged By	LT
Purge Method / Equipment	Twister pump				
Product observed / Thickness		mm	Confirmed with Bailers (Y/N)		
CW Level (pre-purge)	1.31	m bgl	Observed Well Depth	11.61 m bgl	
Height of Water Column (H)	10.3	m bgl	Estimated Bore Volume*	53.56 L	
CW Level (post-purge)	9.7 / 11.10	m bgl	Total Volume Purged**	150 L	
Appearance/Comments	Purge to clean				

Sampling Details					
Date / Time / Weather Conditions	29/04/2025 / 8:33 am			Sampled By	
Sampling Method / Equipment	Bladder pump				
WQM Model	YSI		WQM Calibration Date	28/04/2025	
Product observed / Thickness	NO	mm	Confirmed with Bailer? (Y/N)	N	
GW Level (pre-micropurge)	1.47	m bgl	Observed Well Depth	11.63	m bgl
Height of Water Column	10.16	m bgl	Estimated Bore Volume*	55	L
GW Level (post sample)	4.18	m bgl	Total Volume of Micro-Purged	47	L

[illegible]

Sample Details						
Sampling Depth (rationale)	6.5	m bgl,				
Sample Observations (e.g. colour, sediment, sheen, odour)	clear, no colour observed					
Sample ID	B41					
QA/QC Samples	Replicate	B701	Triplicate		Other	
Sample Containers	Amber glass	/	Plastic		PFAS (no teflon)	
Quantity / Preservation / Filtration	Metals (F/UF) (HNO3)	/	Phenols/COD/NH3 (H2SO4)		Vials (HCl)	/
	Ferrous/Ferric Iron (HCl)		Cyanides/Chromium (NaOH)		Other	
Comments						

*Estimated Well Volume = H * F	Std. Drilling Diameter	NMLC (0.075)	HQ (0.096)	PQ (0.1226)	SFA (0.125)	HFA (0.194)
**Purge Target: min. 3 well volumes	Factor (F)	2.8	3.7	5.2	5.4	11.1

Project and Bore Installation Details					
Project Name / Site Location		23487501		Project Number	
Well Construction Details	Well ID	BH15	Drilling Method	Hole Diameter (m)"	
	Well Depth (m bgl)		Screened (m bgl)	Stick Up (m)	
Survey Information	Easting		Northing	Elevation RL	
GW Level During Drilling		m bgl			
Contaminants/Comments					

Well Development Details					
Date / Time / Weather Conditions	11:09 → 11:29 17/4/25			Purged By	HT
Purge Method / Equipment	Twister				
Product observed / Thickness	Yes	mm	Confirmed with Bailer? (Y/N)	Y	
GW Level (pre-purge)	3.13	m bgl	Observed Well Depth	12.68	m bgl
Height of Water Column (H)	9.55	m bgl	Estimated Bore Volume*	51.57 74	L 51.57
GW Level (post-purge)	4.21 4.16	m bgl	Total Volume Purged**	158	L
Appearance/Comments					

Sampling Details					
Date / Time / Weather Conditions	24/04/2025 / 9:30 / Sunny			Sampled By	
Sampling Method / Equipment	Bladder Pump				
WQM Model	YSI		WQM Calibration Date	28/04/2025	
Product observed / Thickness	NO	mm	Confirmed with Bailer? ☒		
GW Level (pre-micropurge)	3.07	m bgl	Observed Well Depth	1279	m bgl
Height of Water Column	9.7	m bgl	Estimated Bore Volume*	6.6 x 5.4	L
GW Level (post sample)	3.39	m bgl	Total Volume of Micro-Purged	8	L

[illegible]

Sample Details						
Sampling Depth (rationale)		E7 m bgl,				
Sample Observations (e.g. colour, sediment, sheen, odour)		light brown, cloudy. no odour				
Sample ID						
QAQC Samples		Replicate	☒	Triplicate	☒	Other
Sample Containers Quantity/ Preservation / Filtration	Amber glass	☒	Plastic	☒	PFAS (no teflon)	
	Metals (F/UF) (HNO3)	☒	Phenols/COD/NH3 (H2SO4)		Vials (HCl)	
	Ferrous/Ferric Iron (HCl)		Cyanides/Chromium (NaOH)		Other	
Comments						

*Estimated Well Volume = H * F	Std. Drilling Diameter	NM (0.075)	HQ (0.096)	PQ (0.1226)	SFA (0.125)	HFA (0.194)
*Purave Target: min. 3 well volumes	Factor (F):	2.8	3.7	5.2	5.4	11.1

15 L → 2
7.5 L/min
 **Douglas**
PARTNERS

4. 85m water

Project and Bore Installation Details						
Project Name / Site Location	234875.01				Project Number	
Well Construction Details	Well ID	BH6	Drilling Method		Hole Diameter (m)"	
	Well Depth (m bgl)	12.2m	Screened (m bgl)	6m	Stick Up (m)	0
Survey Information	Easting		Northing		Elevation RL	
CW Level During Drilling		m bgl				
Contaminants/Comments						

New Development - 2014					
Date / Time / Weather Conditions	2/4/25 10:09 Overcast			Purged By	HT
Purge Method / Equipment	T-jet + PFAS free tube				
Product observed / Thickness	MIL	mm	Confirmed with Bailor (VH)	PF	
GW Level (pre-purge)	4.85	m bgl	Observed Well Depth	12.6	m bgl
Height of Water Column (H)	7.75	m bgl	Estimated Bore Volume*	41.85	L
GW Level (post-purge)	10.40	m bgl	Total Volume Purged**	150	L
Appearance/Comments					

Sampling Details					
Date / Time / Weather Conditions	29/04/2025 / 10:36 am / Sunny			Sampled By	CL
Sampling Method / Equipment	Bladder Pump				
WQM Model	YSI		WQM Calibration Date	28/04/2025	
Product observed / Thickness	NO	mm	Confirmed with Bailer? (Y/N)	Y	
GW Level (pre-micropurge)	39.3	m bgl	Observed Well Depth	12.17	m bgl
Height of Water Column	8	m bgl	Estimated Bore Volume*	8 x 54	L
GW Level (post sample)	12.39	m bgl	Total Volume of Micro-Purged	8	L

[illegible]

Notes:	# Considered stabilised if three DO values are less than 0.5 mg/L	^ Considered stabilised if three Turbidity values are less than 5 NTU
--------	---	---

Sampling Depth (rationale)	7.5 m bgl,					
Sample Observations (e.g. colour, sediment, sheen, odour)	brown, cloudy, no odour					
Sample ID						
QA/QC Samples	Replicate	☒	Triplicate	☒	Other	☒
Sample Containers Quantity / Preservation / Filtration	Amber glass	☒	Plastic		PFAS (no teflon)	
	Metals (F/UF) (HNO3)	☒	Phenols/COD/NH3 (H2SO4)		Vials (HCl)	
	Ferrous/Ferric Iron (HCl)		Cyanides/Chromium (NaOH)		Other	
Comments						

*Estimated Well Volume = H * F	Std. Drilling Diameter	NMLC (0.075)	HQ (0.096)	PQ (0.1226)	SFA (0.125)	HFA (0.194)
**Design Target: min. 3 well volumes	Factor (F)	2.8	3.7	5.2	5.4	11.1

125

John

70 + 7.5
1500 ✓

Certificate of Service and Calibration
Interface Meter
Heron H.Oil

Company Name	WAM Scientific
Office Address	26 Bungarra Crescent, Chipping Norton NSW 2170
Phone Number	+61 405 241 484
Contact Name	William Pak
Instrument	Heron H.Oil Interface Meter (30m)
Serial Number	01-09087
Client Name	Cathy Li (Douglas Partners)
Project Number	234875.01

Instrument Check			
Item	Test	Test Passed	Comments
9V Battery	Klein Tools MM300 Multimeter	✓	Battery voltage reading above 7.9V
Battery Box	Check	✓	No damage
Face and Back Plates	Check	✓	No damage
Thumb Screws	Check	✓	Rubber ends intact
Tape Hangar/Protector	Check	✓	No damage
On/Off Button	Operation	✓	Button is functional
Buzzer	Operation	✓	Intermittent tone in H ₂ O, solid tone in product
LED Signal Light	Operation	✓	LED light functional – green and red
Probe	Operation/Check	✓	Decontaminated, cleaned and tested
Tape	Condition/Check	✓	Decontaminated and cleaned, no damage
Connection	Check	✓	Probe and link connected correctly and tightly
PCB	Operation	✓	Unit is fully functional
Electronics Panel	Orientation	✓	Correctly aligned

Instrument Readings		
Product	Buzzer	LED Light
H ₂ O	Intermittent	Blinking – Red
Petroleum	Solid	Steady – Red

Declaration
WAM Scientific certifies that the above instrument was successfully tested according to manufacturer's standards and all necessary checks were conducted to ensure the instrument was fully operational prior to dispatch. The interface meter was decontaminated, cleaned and tested with a mixture of tap water and petrol, shielded from ambient light.

Checked By	William Pak
Calibration Date	28/04/2025
Calibration Due	28/10/2025

Certificate of Service and Calibration

Gas Detector

MiniRAE Lite+

Company Name	WAM Scientific
Office Address	26 Bungarra Crescent, Chipping Norton NSW 2170
Phone Number	+61 405 241 484
Contact Name	William Pak
Instrument	MiniRAE 2770 (PGM 7370)
Serial Number	595-004553
Client Name	Cathy Li (Douglas Partners)
Project Number	Calibration

Instrument Check			
Item	Test	Test Passed	Comments
Li-Ion Rechargeable Battery	Battery Charge and Drain	✓	Unit runs for > 8 hours on a full charge
Charger and Power Supply	Operation/Check	✓	No damage
Unit Display	Operation	✓	Screen visible, no damage
Keypad	Operation	✓	Responsive, no damage
Pump	Flow Check	✓	Flow rate > 0.5 L/min
Monitor Housing	Condition/Check	✓	No damage
Rubber Boot	Check	✓	Clean, no damage
Flexi Probe	Condition/Check	✓	No leaks, no damage
Water Trap Filter	Visual Check	✓	Clean
Alarms	Audible, Visual, Vibration Check	✓	All modes of alarms are functional
Data Logger	Operation	✓	Unit records data, default set at 60 seconds
Lamp and Sensor	Clean and Calibration	✓	Lamp and PID sensor cleaned and calibrated
PCB	Operation	✓	Unit is fully functional
Firmware	Version	✓	v2.20A

Instrument Readings					
Parameter	Calibration Gas	Concentration	Reference No.	Zero Reading	Span Reading
PID (10.6eV)	Isobutylene	100 ppm	24-2275	0 ppm	100.2 ppm

Declaration
WAM Scientific certifies that the above instrument was successfully tested according to manufacturer's standards and all necessary checks were conducted to ensure the instrument was fully operational prior to dispatch. The calibration data supplied was obtained in accordance with manufacturer's specifications using gases of known concentrations.

Calibrated By	William Pak
Calibration Date	07/04/2025
Calibration Due	07/10/2025

CALIBRATION RECORD

Project: 234875-21
Project Number: Stam more

Calibrated Equipment

Model: MINIRAZ
Serial No.: 595-004553
DP Reference: PID 3
Other: 10.6eV Lamp

Calibration

Date(s): 01.04.2025 Operator(s): CL
Zero Gas: ambient air
Span Gas: isobutylene
Span Gas Concentration: 100
Response Factor: 1.0
Gas Supplier: ETS
Lot/Batch No: 340A 100ISOA-ETS
Pre-calibration Reading: 97.1
Post-calibration Reading: 99.6

Approved: Cathy L2
Date: 01.04.2025

Company Name	WAM Scientific
Office Address	26 Bungarra Crescent, Chipping Norton NSW 2170
Phone Number	+61 405 241 484
Contact Name	William Pak
Instrument	YSI Pro Quatro Water Quality Meter w/ 1m Quatro Cable
Serial Number	24L001544
Client Name	Cathy Li (Douglas Partners)
Project Number	234875.01
Comments	-

Instrument Check

Item	Test	Test Passed	Comments
2 x Alkaline C-size Batteries	Klein Tools MM300 Multimeter	✓	Both batteries reading above 2.9V
Battery Saver Function	Operation	✓	Automatically turns off after 60 minutes if idle
Unit Display	Operation	✓	Screen visible, no damage
Keypad	Operation	✓	Responsive, no damage
Connection Port and Cable	Condition/Check	✓	Clean, no damage
Monitor Housing	Condition/Check	✓	No damage
Firmware	Version	✓	4.0.0
pH Probe	Condition/Calibration	✓	Calibrated and conforms to manufacturer's specs
pH millivolts for pH 7.00	Calibration	✓	pH 7.00 calibration range between 0 mV $\pm$ 50 mV
pH millivolts for pH 4.00	Calibration	✓	pH 4 mV range +165 to +180 from 7 buffer mV value
pH slope	Calibration	✓	Range between 55 to 60 mV/pH (ideal value 59 mV)
Response time < 90 seconds	Calibration	✓	Responds to correct value within 90 seconds
ORP Probe	Condition/Calibration	✓	Calibrated and conforms to manufacturer's specs
ORP Reading	Calibration	✓	Within $\pm$ 80 mV of reference Zobell Reading
Response time < 90 seconds	Calibration	✓	Responds to correct value within 90 seconds
Conductivity/Temp Probe	Condition/Calibration	✓	Calibrated and conforms to manufacturer's specs
Conductivity Cell	Calibration	✓	Conductivity cell constant 5.0 $\pm$ 1.0 in GLP file
Clean Sensor Readings	Calibration	✓	Clean sensor reads less than 3 uS/cm in dry air
Dissolved Oxygen Probe	Condition/Calibration	✓	Calibrated and conforms to manufacturer's specs
DO Cap	Condition/Calibration	✓	1.25 mil PE membrane (yellow membrane)
DO Sensor in Use	Condition	✓	Polarographic DO sensor
DO Sensor Value	Calibration	✓	(min 4.31 uA - max 8.00 uA) Avg 6.15 uA

Instrument Readings

Parameter	Standard Used	Reference No.	Calibration Value	Observed	Actual	Units
Temperature	Centre 370 Thermometer	Room Temp.	17.9	18.0	17.9	°C
pH	pH 4.00	417183	4.01	4.09	4.01	pH
pH	pH 7.00	419528	7.00	7.09	7.00	pH
ORP	Zobell A & B	420448/418958	244.6	239.6	244.6	mV
Conductivity	2760 μ S/cm at 25°C	399819	2760	3225	2760	μ S/cm
Zero Dissolved O ₂	NaSO ₃ in Distilled H ₂ O	426184	0.0	-0.1	0.0	%
100% Dissolved O ₂	100% Air Saturated H ₂ O	Fresh Air	100.0	94.5	100.0	%

Declaration

WAM Scientific certifies that the above instrument was successfully tested according to manufacturer's standards and all necessary checks were conducted to ensure the instrument was fully operational prior to dispatch. The calibration data supplied was obtained in accordance with manufacturer's specifications using solutions of known values.

Calibrated By	William Pak
Calibration Date	28/04/2025
Calibration Due	28/10/2025

Appendix K

Laboratory Certificates and Chain of Custody
Documentation

CERTIFICATE OF ANALYSIS 377319

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	<u>234875.01 Stanmore</u>
Number of Samples	15 Soil
Date samples received	03/04/2025
Date completed instructions received	03/04/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	10/04/2025
Date of Issue	10/04/2025
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Asbestos Approved By

Analysed by Asbestos Approved Analyst: Lucy Zhu
 Authorised by Asbestos Approved Signatory: Lucy Zhu

Authorised By

Nancy Zhang, Laboratory Manager

Results Approved By

Amanda Chui, LC/Air Toxics Supervisor
 Diego Bigolin, Inorganics Supervisor
 Dragana Tomas, Senior Chemist
 Giovanni Agosti, Group Technical Manager
 Liam Timmins, Organics Supervisor
 Lucy Zhu, Asbestos Supervisor
 Sean McAlary, Senior Chemist
 Timothy Toll, Senior Chemist

vTRH(C6-C10)/BTEXN in Soil

Our Reference		377319-1	377319-2	377319-3	377319-4	377319-5
Your Reference	UNITS	BH1	BH2	BH2	BH3	BH3
Depth		0.15-0.25	0.13-0.23	0.25-0.35	0.2-0.3	0.5-0.6
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Date analysed	-	07/04/2025	07/04/2025	07/04/2025	07/04/2025	07/04/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	90	75	78	88	78

vTRH(C6-C10)/BTEXN in Soil

Our Reference		377319-7	377319-9	377319-10	377319-12	377319-13
Your Reference	UNITS	BH3	BH3	BH4	BH4	TB1
Depth		1.8-1.9	3-3.2	0.4-0.6	1.5-1.7	-
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Date analysed	-	07/04/2025	07/04/2025	07/04/2025	07/04/2025	07/04/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	90	73	93	86	93

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		377319-14	377319-15
Your Reference	UNITS	TS1	BD02/20250402
Depth		-	-
Date Sampled		03/04/2025	03/04/2025
Type of sample		Soil	Soil
Date extracted	-	04/04/2025	04/04/2025
Date analysed	-	07/04/2025	07/04/2025
TRH C ₆ - C ₉	mg/kg	[NA]	<25
TRH C ₆ - C ₁₀	mg/kg	[NA]	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	[NA]	<25
Benzene	mg/kg	89%	<0.2
Toluene	mg/kg	90%	<0.5
Ethylbenzene	mg/kg	92%	<1
m+p-xylene	mg/kg	89%	<2
o-Xylene	mg/kg	95%	<1
Naphthalene	mg/kg	[NA]	<1
Total +ve Xylenes	mg/kg	[NA]	<1
Surrogate aaa-Trifluorotoluene	%	94	88

svTRH (C10-C40) in Soil

Our Reference		377319-1	377319-2	377319-3	377319-4	377319-5
Your Reference	UNITS	BH1	BH2	BH2	BH3	BH3
Depth		0.15-0.25	0.13-0.23	0.25-0.35	0.2-0.3	0.5-0.6
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Date analysed	-	06/04/2025	06/04/2025	06/04/2025	06/04/2025	06/04/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	170	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	500	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	670	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	430	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	750	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	1,200	<50
Surrogate o-Terphenyl	%	79	81	80	86	80

svTRH (C10-C40) in Soil

Our Reference		377319-7	377319-9	377319-10	377319-12	377319-15
Your Reference	UNITS	BH3	BH3	BH4	BH4	BD02/20250402
Depth		1.8-1.9	3-3.2	0.4-0.6	1.5-1.7	-
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Date analysed	-	06/04/2025	06/04/2025	06/04/2025	06/04/2025	06/04/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	78	78	78	81	78

PAHs in Soil						
Our Reference		377319-1	377319-2	377319-3	377319-4	377319-5
Your Reference	UNITS	BH1	BH2	BH2	BH3	BH3
Depth		0.15-0.25	0.13-0.23	0.25-0.35	0.2-0.3	0.5-0.6
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Date analysed	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	0.1	0.2
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.3	<0.1	0.2	0.5
Pyrene	mg/kg	<0.1	0.3	<0.1	0.2	0.5
Benzo(a)anthracene	mg/kg	<0.1	0.2	<0.1	0.1	0.3
Chrysene	mg/kg	<0.1	0.2	<0.1	0.1	0.2
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.3	<0.2	0.3	0.4
Benzo(a)pyrene	mg/kg	<0.05	0.2	0.09	0.2	0.3
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.1	<0.1	0.1	0.2
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.1	<0.1	0.2	0.2
Total +ve PAH's	mg/kg	<0.05	1.8	0.09	1.6	2.8
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	0.5
Surrogate <i>p</i> -Terphenyl-d14	%	113	115	114	118	117

PAHs in Soil						
Our Reference		377319-7	377319-9	377319-10	377319-12	377319-15
Your Reference	UNITS	BH3	BH3	BH4	BH4	BD02/20250402
Depth		1.8-1.9	3-3.2	0.4-0.6	1.5-1.7	-
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Date analysed	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.3	<0.1	0.2	0.4	0.1
Pyrene	mg/kg	0.3	<0.1	0.2	0.4	0.1
Benzo(a)anthracene	mg/kg	0.2	<0.1	<0.1	0.3	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.3	<0.2	<0.2	0.3	<0.2
Benzo(a)pyrene	mg/kg	0.2	<0.05	0.1	0.2	0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.1	<0.1	<0.1	0.1	<0.1
Total +ve PAH's	mg/kg	1.6	<0.05	0.4	2.2	0.4
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	114	117	112	109	115

Organochlorine Pesticides in soil					
Our Reference		377319-1	377319-2	377319-4	377319-10
Your Reference	UNITS	BH1	BH2	BH3	BH4
Depth		0.15-0.25	0.13-0.23	0.2-0.3	0.4-0.6
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Date analysed	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	115	118	117	118

Organophosphorus Pesticides in Soil					
Our Reference		377319-1	377319-2	377319-4	377319-10
Your Reference	UNITS	BH1	BH2	BH3	BH4
Depth		0.15-0.25	0.13-0.23	0.2-0.3	0.4-0.6
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Date analysed	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	115	118	117	118

PCBs in Soil					
Our Reference		377319-1	377319-2	377319-4	377319-10
Your Reference	UNITS	BH1	BH2	BH3	BH4
Depth		0.15-0.25	0.13-0.23	0.2-0.3	0.4-0.6
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Date analysed	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	107	110	114	108

Misc Soil - Inorg					
Our Reference		377319-1	377319-2	377319-4	377319-10
Your Reference	UNITS	BH1	BH2	BH3	BH4
Depth		0.15-0.25	0.13-0.23	0.2-0.3	0.4-0.6
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Date analysed	-	07/04/2025	07/04/2025	07/04/2025	07/04/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5

Acid Extractable metals in soil

Our Reference		377319-1	377319-2	377319-3	377319-4	377319-5
Your Reference	UNITS	BH1	BH2	BH2	BH3	BH3
Depth		0.15-0.25	0.13-0.23	0.25-0.35	0.2-0.3	0.5-0.6
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Date analysed	-	09/04/2025	09/04/2025	09/04/2025	09/04/2025	09/04/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	7	7	3	26	17
Copper	mg/kg	7	26	<1	85	9
Lead	mg/kg	16	39	10	19	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	4	<1	32	17
Zinc	mg/kg	18	21	2	42	21

Acid Extractable metals in soil

Our Reference		377319-7	377319-9	377319-10	377319-12	377319-15
Your Reference	UNITS	BH3	BH3	BH4	BH4	BD02/20250402
Depth		1.8-1.9	3-3.2	0.4-0.6	1.5-1.7	-
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Date analysed	-	09/04/2025	09/04/2025	09/04/2025	09/04/2025	09/04/2025
Arsenic	mg/kg	<4	4	<4	4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	12	3	26	2
Copper	mg/kg	7	<1	4	47	2
Lead	mg/kg	500	32	20	290	17
Mercury	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Nickel	mg/kg	2	<1	2	2	<1
Zinc	mg/kg	70	5	30	69	15

Acid Extractable metals in soil		
Our Reference		377319-16
Your Reference	UNITS	BH4 - [TRIPLICATE]
Depth		0.4-0.6
Date Sampled		03/04/2025
Type of sample		Soil
Date prepared	-	04/04/2025
Date analysed	-	09/04/2025
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	2
Copper	mg/kg	3
Lead	mg/kg	18
Mercury	mg/kg	<0.1
Nickel	mg/kg	1
Zinc	mg/kg	16

Moisture						
Our Reference	UNITS	377319-1	377319-2	377319-3	377319-4	377319-5
Your Reference		BH1	BH2	BH2	BH3	BH3
Depth		0.15-0.25	0.13-0.23	0.25-0.35	0.2-0.3	0.5-0.6
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Date analysed	-	07/04/2025	07/04/2025	07/04/2025	07/04/2025	07/04/2025
Moisture	%	12	15	18	4.6	6.3

Moisture						
Our Reference	UNITS	377319-7	377319-9	377319-10	377319-12	377319-15
Your Reference		BH3	BH3	BH4	BH4	BD02/20250402
Depth		1.8-1.9	3-3.2	0.4-0.6	1.5-1.7	-
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Date analysed	-	07/04/2025	07/04/2025	07/04/2025	07/04/2025	07/04/2025
Moisture	%	16	19	5.5	17	6.5

Misc Inorg - Soil					
Our Reference		377319-3	377319-4	377319-5	377319-9
Your Reference	UNITS	BH2	BH3	BH3	BH3
Depth		0.25-0.35	0.2-0.3	0.5-0.6	3-3.2
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	08/04/2025	08/04/2025	08/04/2025	08/04/2025
Date analysed	-	08/04/2025	08/04/2025	08/04/2025	08/04/2025
pH 1:5 soil:water	pH Units	5.4	8.4	9.0	4.3

CEC					
Our Reference		377319-3	377319-4	377319-5	377319-9
Your Reference	UNITS	BH2	BH3	BH3	BH3
Depth		0.25-0.35	0.2-0.3	0.5-0.6	3-3.2
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	10/04/2025	10/04/2025	10/04/2025	10/04/2025
Date analysed	-	10/04/2025	10/04/2025	10/04/2025	10/04/2025
Exchangeable Ca	meq/100g	4.6	23	5.6	1.3
Exchangeable K	meq/100g	0.2	0.4	0.1	0.1
Exchangeable Mg	meq/100g	0.6	0.9	0.9	0.6
Exchangeable Na	meq/100g	0.3	0.2	<0.1	<0.1
Cation Exchange Capacity	meq/100g	5.7	25	6.6	2.0

Asbestos ID - soils NEPM

Our Reference		377319-1	377319-2	377319-4	377319-5	377319-6
Your Reference	UNITS	BH1	BH2	BH3	BH3	BH3
Depth		0.15-0.25	0.13-0.23	0.2-0.3	0.5-0.6	1-1.1
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	08/04/2025	08/04/2025	08/04/2025	08/04/2025	08/04/2025
Sample mass tested	g	377.48	686.64	961.38	751.26	793.57
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Beige sandy soil & rocks	Beige sandy soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	—	—	—	—	—
FA and AF Estimation*	g	—	—	—	—	—
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil

Asbestos ID - soils NEPM						
Our Reference		377319-7	377319-8	377319-10	377319-11	377319-12
Your Reference	UNITS	BH3	BH3	BH4	BH4	BH4
Depth		1.8-1.9	2.4-2.6	0.4-0.6	1-1.2	1.5-1.7
Date Sampled		03/04/2025	03/04/2025	03/04/2025	03/04/2025	03/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	08/04/2025	08/04/2025	08/04/2025	08/04/2025	08/04/2025
Sample mass tested	g	865.49	665.08	690.73	735.78	589.66
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Beige sandy soil & rocks	Beige sandy soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	—	—	—	—	—
FA and AF Estimation*	g	—	—	—	—	—
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil

PFAS in Soils Short		
Our Reference		377319-5
Your Reference	UNITS	BH3
Depth		0.5-0.6
Date Sampled		03/04/2025
Type of sample		Soil
Date prepared	-	04/04/2025
Date analysed	-	04/04/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1
6:2 FTS	µg/kg	<0.1
8:2 FTS	µg/kg	<0.2
Surrogate ¹³ C ₈ PFOS	%	100
Surrogate ¹³ C ₂ PFOA	%	102
Extracted ISTD ¹³ C ₃ PFBS	%	101
Extracted ISTD ¹⁸ O ₂ PFHxS	%	99
Extracted ISTD ¹³ C ₄ PFOS	%	99
Extracted ISTD ¹³ C ₄ PFOA	%	99
Extracted ISTD ¹³ C ₂ 6:2FTS	%	109
Extracted ISTD ¹³ C ₂ 8:2FTS	%	124
Total Positive PFHxS & PFOS	µg/kg	<0.1
Total Positive PFOS & PFOA	µg/kg	<0.1
Total Positive PFAS	µg/kg	<0.1

PFAS in TCLP Short		
Our Reference		377319-5
Your Reference	UNITS	BH3
Depth		0.5-0.6
Date Sampled		03/04/2025
Type of sample		Soil
Date prepared	-	08/04/2025
Date analysed	-	08/04/2025
pH of soil for fluid# determ.	pH units	7.3
pH of soil TCLP (after HCl)	pH units	2.4
Extraction fluid used		1
pH of final Leachate	pH units	5.0
Perfluorobutanesulfonic acid	µg/L	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01
6:2 FTS	µg/L	<0.01
8:2 FTS	µg/L	<0.02
Surrogate ¹³ C ₈ PFOS	%	100
Surrogate ¹³ C ₂ PFOA	%	98
Extracted ISTD ¹³ C ₃ PFBS	%	100
Extracted ISTD ¹⁸ O ₂ PFHxS	%	100
Extracted ISTD ¹³ C ₄ PFOS	%	97
Extracted ISTD ¹³ C ₄ PFOA	%	99
Extracted ISTD ¹³ C ₂ 6:2FTS	%	81
Extracted ISTD ¹³ C ₂ 8:2FTS	%	91
Total Positive PFHxS & PFOS	µg/L	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01
Total Positive PFAS	µg/L	<0.01

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. NOTE#1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF relative to the sample mass tested) NOTE#2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "---" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-001	pH - Measured using pH meter and electrode. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.

Method ID	Methodology Summary
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stoichiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-OES analytical finish.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	377319-2
Date extracted	-			04/04/2025	1	04/04/2025	04/04/2025		04/04/2025	04/04/2025
Date analysed	-			07/04/2025	1	07/04/2025	07/04/2025		07/04/2025	07/04/2025
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	1	<25	<25	0	99	88
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	1	<25	<25	0	99	88
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	98	88
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	94	85
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	100	87
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	101	89
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	102	90
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	76	1	90	90	0	94	92

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	10	04/04/2025	04/04/2025		[NT]	[NT]
Date analysed	-			[NT]	10	07/04/2025	07/04/2025		[NT]	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-023	[NT]	10	<25	<25	0	[NT]	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	[NT]	10	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	10	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	10	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	10	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	10	93	93	0	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	377319-2
Date extracted	-			04/04/2025	1	04/04/2025	04/04/2025		04/04/2025	04/04/2025
Date analysed	-			06/04/2025	1	06/04/2025	06/04/2025		06/04/2025	06/04/2025
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	1	<50	<50	0	95	88
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	1	<100	<100	0	89	87
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	1	<100	<100	0	86	77
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	1	<50	<50	0	95	88
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	1	<100	<100	0	89	87
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	1	<100	<100	0	86	77
Surrogate o-Terphenyl	%		Org-020	84	1	79	79	0	91	81

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	10	04/04/2025	04/04/2025		[NT]	[NT]
Date analysed	-			[NT]	10	06/04/2025	06/04/2025		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	10	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	10	<100	<100	0	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	10	<100	<100	0	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	10	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	10	<100	<100	0	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	10	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	10	78	77	1	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	377319-2
Date extracted	-			04/04/2025	1	04/04/2025	04/04/2025		04/04/2025	04/04/2025
Date analysed	-			04/04/2025	1	04/04/2025	04/04/2025		04/04/2025	04/04/2025
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	88
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	92
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	88
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	94
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	100
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	105
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	76	64
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	<0.05	<0.05	0	100	102
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	116	1	113	110	3	126	121

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	10	04/04/2025	04/04/2025		[NT]	[NT]
Date analysed	-			[NT]	10	04/04/2025	04/04/2025		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	10	0.2	0.2	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	10	0.2	0.2	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	10	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	10	0.1	0.1	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	10	112	114	2	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	377319-2
Date extracted	-			04/04/2025	1	04/04/2025	04/04/2025		04/04/2025	04/04/2025
Date analysed	-			04/04/2025	1	04/04/2025	04/04/2025		04/04/2025	04/04/2025
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	98
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	92
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	94
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	94
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	116	106
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	112	106
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	120	108
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	110	102
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	110	102
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	98
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	122	1	115	112	3	128	120

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	10	04/04/2025	04/04/2025		[NT]	[NT]
Date analysed	-			[NT]	10	04/04/2025	04/04/2025		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	10	118	117	1	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	377319-2
Date extracted	-			04/04/2025	1	04/04/2025	04/04/2025		04/04/2025	04/04/2025
Date analysed	-			04/04/2025	1	04/04/2025	04/04/2025		04/04/2025	04/04/2025
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	134	120
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	114	104
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	126	126
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	126	138
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	120	112
Fenthion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	138	126
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	134	135
Phosalone	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	122	1	115	112	3	128	120

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	10	04/04/2025	04/04/2025		[NT]	[NT]
Date analysed	-			[NT]	10	04/04/2025	04/04/2025		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	10	118	117	1	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	377319-2
Date extracted	-			04/04/2025	1	04/04/2025	04/04/2025		04/04/2025	04/04/2025
Date analysed	-			04/04/2025	1	04/04/2025	04/04/2025		04/04/2025	04/04/2025
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	112	100
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	110	1	107	105	2	121	117

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	10	04/04/2025	04/04/2025		[NT]	[NT]
Date analysed	-			[NT]	10	04/04/2025	04/04/2025		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	10	108	108	0	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	377319-2
Date prepared	-			07/04/2025	1	04/04/2025	04/04/2025		07/04/2025	07/04/2025
Date analysed	-			07/04/2025	1	07/04/2025	07/04/2025		07/04/2025	07/04/2025
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	100	104

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	377319-2
Date prepared	-			04/04/2025	1	04/04/2025	04/04/2025		04/04/2025	04/04/2025
Date analysed	-			09/04/2025	1	09/04/2025	09/04/2025		09/04/2025	09/04/2025
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	111	97
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	96	80
Chromium	mg/kg	1	Metals-020	<1	1	7	8	13	104	93
Copper	mg/kg	1	Metals-020	<1	1	7	9	25	107	87
Lead	mg/kg	1	Metals-020	<1	1	16	22	32	98	#
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	108	111
Nickel	mg/kg	1	Metals-020	<1	1	6	6	0	101	84
Zinc	mg/kg	1	Metals-020	<1	1	18	22	20	96	91

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	10	04/04/2025	04/04/2025		[NT]	[NT]
Date analysed	-			[NT]	10	09/04/2025	09/04/2025		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	10	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	10	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	10	3	2	40	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	10	4	7	55	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	10	20	24	18	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	10	2	2	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	10	30	18	50	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			08/04/2025	[NT]	[NT]	[NT]	[NT]	08/04/2025	[NT]
Date analysed	-			08/04/2025	[NT]	[NT]	[NT]	[NT]	08/04/2025	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	101	[NT]

QUALITY CONTROL: CEC				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			10/04/2025	5	10/04/2025	10/04/2025		10/04/2025	[NT]
Date analysed	-			10/04/2025	5	10/04/2025	10/04/2025		10/04/2025	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	5	5.6	5.1	9	96	[NT]
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	5	0.1	0.1	0	102	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	5	0.9	0.8	12	94	[NT]
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	5	<0.1	<0.1	0	97	[NT]

QUALITY CONTROL: PFAS in Soils Short					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			04/04/2025	5	04/04/2025	04/04/2025		04/04/2025	[NT]
Date analysed	-			04/04/2025	5	04/04/2025	04/04/2025		04/04/2025	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	5	<0.1	<0.1	0	99	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	5	<0.1	<0.1	0	99	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	5	<0.1	<0.1	0	96	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	5	<0.1	<0.1	0	101	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	5	<0.1	<0.1	0	98	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	5	<0.2	<0.2	0	100	[NT]
Surrogate ¹³ C ₈ PFOS	%		Org-029	100	5	100	104	4	104	[NT]
Surrogate ¹³ C ₂ PFOA	%		Org-029	101	5	102	99	3	103	[NT]
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	103	5	101	99	2	101	[NT]
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	98	5	99	94	5	99	[NT]
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	100	5	99	95	4	97	[NT]
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	99	5	99	100	1	96	[NT]
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	105	5	109	105	4	102	[NT]
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	105	5	124	117	6	104	[NT]

QUALITY CONTROL: PFAS in TCLP Short					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			08/04/2025	[NT]	[NT]	[NT]	[NT]	08/04/2025	[NT]
Date analysed	-			08/04/2025	[NT]	[NT]	[NT]	[NT]	08/04/2025	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	105	[NT]
6:2 FTS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
8:2 FTS	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	105	[NT]
Surrogate ¹³ C ₈ PFOS	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	101	[NT]
Surrogate ¹³ C ₂ PFOA	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	83	[NT]	[NT]	[NT]	[NT]	84	[NT]
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	96	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Asbestos-ID in soil: NEPM

This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

Note: All samples analysed as received. However, sample 377319-1 was below the minimum recommended 500mL sample volume as per National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013.

Acid Extractable Metals in Soil:

-The laboratory RPD acceptance criteria has been exceeded for 377319-10 for Cu and Zn. Therefore a triplicate result has been issued as laboratory sample number 377319-16.

-# Percent recovery is not possible to report due to the inhomogeneous nature of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

CERTIFICATE OF ANALYSIS 377319-A

Client Details

Client	Douglas Partners Pty Ltd
Attention	Huy Tran
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	<u>234875.01 Stanmore</u>
Number of Samples	Additional analysis
Date samples received	03/04/2025
Date completed instructions received	16/04/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	28/04/2025
Date of Issue	23/04/2025
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Giovanni Agosti, Group Technical Manager

Authorised By

Nancy Zhang, Laboratory Manager

Metals from Leaching Fluid pH 2.9 or 5		
Our Reference		377319-A-7
Your Reference	UNITS	BH3
Depth		1.8-1.9
Date Sampled		03/04/2025
Type of sample		Soil
Date extracted	-	22/04/2025
Date analysed	-	22/04/2025
pH of soil for fluid# determ.	pH units	7.8
pH of soil TCLP (after HCl)	pH units	1.8
Extraction fluid used		1
pH of final Leachate	pH units	5.2
Lead	mg/L	2.2

Method ID	Methodology Summary
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Metals-020	Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer. Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			22/04/2025	[NT]	[NT]	[NT]	[NT]	22/04/2025	[NT]
Date analysed	-			22/04/2025	[NT]	[NT]	[NT]	[NT]	22/04/2025	[NT]
Lead	mg/L	0.03	Metals-020	<0.03	[NT]	[NT]	[NT]	[NT]	101	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Anna Bui

From: Huy Tran <Huy.Tran@douglaspartners.com.au>
Sent: Wednesday, 16 April 2025 10:58 AM
To: Envirolab Sydney Sample Receipt; Customer Service
Cc: Cathy Li
Subject: Additional sample request

Follow Up Flag: Follow up
Flag Status: Flagged

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi ELS Team,

Can we get the following done for the following project / sample

ELS Number: 377319

7 BH3 1.8-1.9 TCLP Lead

Thank you

Huy Tran | Associate / Occupational Hygienist

☎ 02 9809 0666 ☎ +61 439 175 056 ✉ Huy.Tran@douglaspartners.com.au

🌐 www.douglaspartners.com.au 📍 96 Hermitage Road, West Ryde
NSW 2114 | Wallumedegal Country
PO Box 472, West Ryde, NSW 1685



GROUND
EXPERTISE

[Click here to learn about our awards and achievements.](#)

ELS REF: 377319-A

TAT: STANDARD

DUE: 28/4/25

AB

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Huy Tran

Sample Login Details

Your reference	234875.01 Stanmore
Envirolab Reference	377319-A
Date Sample Received	03/04/2025
Date Instructions Received	16/04/2025
Date Results Expected to be Reported	28/04/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	Additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Sample ID	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Lead	On Hold
BH1-0.15-0.25						✓
BH2-0.13-0.23						✓
BH2-0.25-0.35						✓
BH3-0.2-0.3						✓
BH3-0.5-0.6						✓
BH3-1-1.1						✓
BH3-1.8-1.9	✓	✓	✓	✓	✓	
BH3-2.4-2.6						✓
BH3-3-3.2						✓
BH4-0.4-0.6						✓
BH4-1-1.2						✓
BH4-1.5-1.7						✓
TB1						✓
TS1						✓
BD02/20250402						✓
BH4 - [TRIPLICATE]-0.4-0.6						✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Project No: 234875.01	Suburb: Stanmore	To: Envirolab Services
Project Manager: Cathy Li	Order Number:	Sampler: DK, EM
Email: cathy.li@douglaspartners.com.au; Divyansh.Kumar@douglaspartners.com.au		Attn: Sample Receipt
Turnaround time: ☒ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day		(02) 9910 6200 samplereceipt@envirolab.com

Prior Storage: ☐ Fridge ☐ Freezer ☐ Esky ☐ Shelf **Do samples contain 'potential' HBM?** ☐ No ☐ Yes (if YES, then handle, transport and store in accordance with FPM HAZID)

Lab ID	Sample ID			Date Sampled	Sample Type	Container Type	Analytes										Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To		S - soil W - water M - Material	G - glass P - plastic	Combo8_AN	Combo3_AN	Combo 3	PFAS (short suite)	TCLP-PFAS (short suite)	pH & CEC	BTEX	AF/FA			
1	BH1	0.15	0.25	03.04.25	S	G,P	X										
2	BH1	0.25	0.3	03.04.25	S	G,P											
3	BH2	0.13	0.23	03.04.25	S	G,P	X										
4	BH2	0.25	0.35	03.04.25	S	G,P			X			X					
5	BH3	0.2	0.3	03.04.25	S	G,P	X					X					
6	BH3	0.5	0.6	03.04.25	S	G,P		X		X	X	X					
7	BH3	1	1.1	03.04.25	S	G,P								X			Envirolab Services 12 Ashley St Chatswood NSW 2067 Ph: (02) 9910 6200
8	BH3	1.8	1.9	03.04.25	S	G,P		X									Lab No: 375319
9	BH3	2.4	2.6	03.04.25	S	G,P								X			Date Received: 3/4/25
10	BH3	3	3.2	03.04.25	S	G,P			X			X					Time Received: 12:30
11	BH4	0.4	0.6	03.04.25	S	G,P	X										Received By: KDM
12	BH4	1	1.2	03.04.25	S	G,P											Temp: Cool/Ambient
	BH4	1.5	1.7	03.04.25	S	G,P		X									Cooling: Ice/Icepack
	BH4	1.8	2	03.04.25	S	G,P								X			Integrity: Intact/Broken/None
	BH4	1.8	2	03.04.25	S	G,P											ON HOLD

Metals to analyse:		LAB RECEIPT	
Number of samples in container:		Lab Ref. No:	
Send results to: Douglas Partners Pty Ltd		Received by: Karl Math	
Address: 96 Hermitage Road, West Ryde NSW 211		Date & Time: 3/4/25 12:30	
Relinquished by:		Signed:	
Phone: (02) 9809 0666		Signed:	
Date:		Signed:	

377319
3/4/25

CHAIN OF CUSTODY DESPATCH SHEET

\\FPM - ENVID/Form COC 02

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	234875.01 Stanmore
Envirolab Reference	377319
Date Sample Received	03/04/2025
Date Instructions Received	03/04/2025
Date Results Expected to be Reported	10/04/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	15 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Misc Soil - Inorg	Acid Extractable metals in soil	Misc Inorg - Soil	CEC	Asbestos ID - soils NEPM	PFAS in Soils Short	PFAS in TCLP Short
BH1-0.15-0.25	✓	✓	✓	✓	✓	✓	✓	✓			✓		
BH2-0.13-0.23	✓	✓	✓	✓	✓	✓	✓	✓			✓		
BH2-0.25-0.35	✓	✓	✓					✓	✓	✓			
BH3-0.2-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH3-0.5-0.6	✓	✓	✓					✓	✓	✓	✓	✓	✓
BH3-1-1.1											✓		
BH3-1.8-1.9	✓	✓	✓					✓			✓		
BH3-2.4-2.6											✓		
BH3-3-3.2	✓	✓	✓					✓	✓	✓			
BH4-0.4-0.6	✓	✓	✓	✓	✓	✓	✓	✓			✓		
BH4-1-1.2											✓		
BH4-1.5-1.7	✓	✓	✓					✓			✓		
TB1	✓												
TS1	✓												
BD02/20250402	✓	✓	✓					✓					

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

CERTIFICATE OF ANALYSIS 377683

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	<u>234875.01, Stanmore</u>
Number of Samples	3 Soil
Date samples received	08/04/2025
Date completed instructions received	08/04/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	15/04/2025
Date of Issue	15/04/2025
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Asbestos Approved By

Analysed by Asbestos Approved Analyst: Amanda Lee
 Authorised by Asbestos Approved Signatory: Lucy Zhu

Authorised By

Nancy Zhang, Laboratory Manager

Results Approved By

Diego Bigolin, Inorganics Supervisor
 Giovanni Agosti, Group Technical Manager
 Jack Wallis, Senior Chemist
 Liam Timmins, Organics Supervisor
 Lucy Zhu, Asbestos Supervisor
 Timothy Toll, Senior Chemist

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		377683-1	377683-2
Your Reference	UNITS	BH6	BH6
Depth		0-0.1	0.15-0.25
Date Sampled		04/04/2025	04/04/2025
Type of sample		Soil	Soil
Date extracted	-	09/04/2025	09/04/2025
Date analysed	-	10/04/2025	10/04/2025
TRH C ₆ - C ₉	mg/kg	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25
Benzene	mg/kg	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
o-Xylene	mg/kg	<1	<1
Naphthalene	mg/kg	<1	<1
Total +ve Xylenes	mg/kg	<1	<1
Surrogate aaa-Trifluorotoluene	%	103	102

svTRH (C10-C40) in Soil			
Our Reference		377683-1	377683-2
Your Reference	UNITS	BH6	BH6
Depth		0-0.1	0.15-0.25
Date Sampled		04/04/2025	04/04/2025
Type of sample		Soil	Soil
Date extracted	-	09/04/2025	09/04/2025
Date analysed	-	10/04/2025	10/04/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	240	<100
Total +ve TRH (C10-C36)	mg/kg	240	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	250	<100
TRH >C ₃₄ -C ₄₀	mg/kg	180	<100
Total +ve TRH (>C10-C40)	mg/kg	420	<50
Surrogate o-Terphenyl	%	86	79

PAHs in Soil			
Our Reference		377683-1	377683-2
Your Reference	UNITS	BH6	BH6
Depth		0-0.1	0.15-0.25
Date Sampled		04/04/2025	04/04/2025
Type of sample		Soil	Soil
Date extracted	-	09/04/2025	09/04/2025
Date analysed	-	11/04/2025	10/04/2025
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	0.2	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	0.3	0.2
Pyrene	mg/kg	0.3	0.2
Benzo(a)anthracene	mg/kg	0.2	<0.1
Chrysene	mg/kg	0.2	0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.3	<0.2
Benzo(a)pyrene	mg/kg	0.2	0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	<0.1
Total +ve PAH's	mg/kg	1.8	0.60
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	95	75

Organochlorine Pesticides in soil		
Our Reference		377683-1
Your Reference	UNITS	BH6
Depth		0-0.1
Date Sampled		04/04/2025
Type of sample		Soil
Date extracted	-	09/04/2025
Date analysed	-	11/04/2025
alpha-BHC	mg/kg	<0.1
HCB	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Mirex	mg/kg	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1
Surrogate 4-Chloro-3-NBTF	%	97

Organophosphorus Pesticides in Soil		
Our Reference		377683-1
Your Reference	UNITS	BH6
Depth		0-0.1
Date Sampled		04/04/2025
Type of sample		Soil
Date extracted	-	09/04/2025
Date analysed	-	11/04/2025
Dichlorvos	mg/kg	<0.1
Mevinphos	mg/kg	<0.1
Phorate	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Disulfoton	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Parathion-Methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Chlorpyriphos	mg/kg	<0.1
Fenthion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Methidathion	mg/kg	<0.1
Fenamiphos	mg/kg	<0.1
Ethion	mg/kg	<0.1
Phosalone	mg/kg	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1
Coumaphos	mg/kg	<0.1
Surrogate 4-Chloro-3-NBTF	%	97

PCBs in Soil		
Our Reference		377683-1
Your Reference	UNITS	BH6
Depth		0-0.1
Date Sampled		04/04/2025
Type of sample		Soil
Date extracted	-	09/04/2025
Date analysed	-	11/04/2025
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate 2-Fluorobiphenyl	%	99

Misc Soil - Inorg		
Our Reference		377683-1
Your Reference	UNITS	BH6
Depth		0-0.1
Date Sampled		04/04/2025
Type of sample		Soil
Date prepared	-	10/04/2025
Date analysed	-	10/04/2025
Total Phenolics (as Phenol)	mg/kg	<5

Acid Extractable metals in soil			
Our Reference		377683-1	377683-2
Your Reference	UNITS	BH6	BH6
Depth		0-0.1	0.15-0.25
Date Sampled		04/04/2025	04/04/2025
Type of sample		Soil	Soil
Date prepared	-	09/04/2025	09/04/2025
Date analysed	-	11/04/2025	11/04/2025
Arsenic	mg/kg	5	6
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	14	9
Copper	mg/kg	68	42
Lead	mg/kg	41	140
Mercury	mg/kg	0.2	<0.1
Nickel	mg/kg	7	2
Zinc	mg/kg	140	89

Moisture			
Our Reference		377683-1	377683-2
Your Reference	UNITS	BH6	BH6
Depth		0-0.1	0.15-0.25
Date Sampled		04/04/2025	04/04/2025
Type of sample		Soil	Soil
Date prepared	-	09/04/2025	09/04/2025
Date analysed	-	10/04/2025	10/04/2025
Moisture	%	29	20

Asbestos ID - soils NEPM			
Our Reference		377683-1	377683-3
Your Reference	UNITS	BH6	BH6
Depth		0-0.1	0.15-0.5
Date Sampled		04/04/2025	04/04/2025
Type of sample		Soil	Soil
Date analysed	-	14/04/2025	14/04/2025
Sample mass tested	g	112.5	488.42
Sample Description	-	Brown coarse-grained soil & rocks	Brown clayey soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	—	—
FA and AF Estimation*	g	—	—
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001
Asbestos comments	-	Nil	Nil

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. NOTE#1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF relative to the sample mass tested) NOTE#2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stoichiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.

Method ID	Methodology Summary
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			09/04/2025	[NT]	[NT]	[NT]	[NT]	09/04/2025	[NT]
Date analysed	-			10/04/2025	[NT]	[NT]	[NT]	[NT]	10/04/2025	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	105	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	105	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	107	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	106	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	105	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	111	[NT]	[NT]	[NT]	[NT]	106	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			09/04/2025	[NT]	[NT]	[NT]	[NT]	09/04/2025	[NT]
Date analysed	-			09/04/2025	[NT]	[NT]	[NT]	[NT]	09/04/2025	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	80	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	77	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	86	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	80	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	77	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	86	[NT]
Surrogate o-Terphenyl	%		Org-020	81	[NT]	[NT]	[NT]	[NT]	120	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			09/04/2025	[NT]	[NT]	[NT]	[NT]	09/04/2025	[NT]
Date analysed	-			11/04/2025	[NT]	[NT]	[NT]	[NT]	11/04/2025	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	82	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	93	[NT]	[NT]	[NT]	[NT]	117	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			09/04/2025	[NT]	[NT]	[NT]	[NT]	09/04/2025	[NT]
Date analysed	-			11/04/2025	[NT]	[NT]	[NT]	[NT]	11/04/2025	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
HCB	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	94	[NT]	[NT]	[NT]	[NT]	115	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			09/04/2025	[NT]	[NT]	[NT]	[NT]	09/04/2025	[NT]
Date analysed	-			11/04/2025	[NT]	[NT]	[NT]	[NT]	11/04/2025	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	76	[NT]
Malathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Fenthion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	68	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Phosalone	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	94	[NT]	[NT]	[NT]	[NT]	115	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			09/04/2025	[NT]	[NT]	[NT]	[NT]	09/04/2025	[NT]
Date analysed	-			11/04/2025	[NT]	[NT]	[NT]	[NT]	11/04/2025	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	110	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	94	[NT]	[NT]	[NT]	[NT]	118	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			10/04/2025	[NT]	[NT]	[NT]	[NT]	10/04/2025	[NT]
Date analysed	-			10/04/2025	[NT]	[NT]	[NT]	[NT]	10/04/2025	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	[NT]	[NT]	[NT]	[NT]	101	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			09/04/2025	[NT]	[NT]	[NT]	[NT]	09/04/2025	[NT]
Date analysed	-			11/04/2025	[NT]	[NT]	[NT]	[NT]	11/04/2025	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	99	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	92	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	91	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Asbestos-ID in soil: NEPM

This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

Note: All samples analysed as received. However, sample 377683-1 was below the minimum recommended 500mL sample volume as per National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013.

CERTIFICATE OF ANALYSIS 377683-A

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	<u>234875.01, Stanmore</u>
Number of Samples	Additional analysis
Date samples received	08/04/2025
Date completed instructions received	23/04/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	24/04/2025
Date of Issue	24/04/2025
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Giovanni Agosti, Group Technical Manager

Authorised By

Nancy Zhang, Laboratory Manager

Metals from Leaching Fluid pH 2.9 or 5		
Our Reference		377683-A-2
Your Reference	UNITS	BH6
Depth		0.15-0.25
Date Sampled		04/04/2025
Type of sample		Soil
Date extracted	-	24/04/2025
Date analysed	-	24/04/2025
pH of soil for fluid# determ.	pH units	8.6
pH of soil TCLP (after HCl)	pH units	1.7
Extraction fluid used		1
pH of final Leachate	pH units	5.1
Lead	mg/L	<0.03

Method ID	Methodology Summary
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Metals-020	Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer. Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			24/04/2025	[NT]	[NT]	[NT]	[NT]	24/04/2025	[NT]
Date analysed	-			24/04/2025	[NT]	[NT]	[NT]	[NT]	24/04/2025	[NT]
Lead	mg/L	0.03	Metals-020	<0.03	[NT]	[NT]	[NT]	[NT]	109	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Anna Bui

From: Cathy Li <cathy.li@douglaspartners.com.au>
Sent: Wednesday, 23 April 2025 10:12 AM
To: Stuart Chen; Customer Service
Cc: Divyansh Kumar; Huy Tran
Subject: RE: Results for Registration 377683 234875.01, Stanmore

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Stuart,

Can I please order TCLP on 24hrs TAT for the below samples:

- TCLP of lead on sample BH6/0.15 - 0.25 m (ELS 377683) , BH11/ 0.8 - 1 m (ELS 378111)
- TCLP of nickel on sample BH09/0.2 - 0.3 m (ELS 378111)
- TCLP of B(a)P on sample BH12/1.3 - 1.5 m (ELS 378111)

Thanks.

Kind regards,

Cathy Li | Environmental Engineer

☎ 02 9809 0666 📞 0484 789 919 ➡ Cathy.Li@douglaspartners.com.au

🌐 www.douglaspartners.com.au 📍 96 Hermitage Road, West Ryde
NSW 2114 | Wallumedegal Country
PO Box 472, West Ryde, NSW 1685



GROUND
ED EXPERTISE

[Click here to learn about our awards and achievements.](#)

From: Stuart Chen <SChen2@envirolab.com.au>

Sent: Tuesday, 15 April 2025 2:54 PM

To: Divyansh Kumar <divyansh.kumar@douglaspartners.com.au>; Cathy Li <cathy.li@douglaspartners.com.au>

Subject: Results for Registration 377683 234875.01, Stanmore

Please refer to attached for:
a copy of the Certificate of Analysis
a copy of the COC/paperwork received from you
ESDAT Extracts
an Excel or .csv file containing the results

Please note that a hard copy will not be posted.

Enquiries should be made directly to:
customerservice@envirolab.com.au

To view information on uncertainty guidelines click [here](#)

[How did we do? Send Feedback](#)

EW REF, 377683-A

TAT: 1 DAY

DE: 24/4/25

AB

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	234875.01, Stanmore
Envirolab Reference	377683-A
Date Sample Received	08/04/2025
Date Instructions Received	23/04/2025
Date Results Expected to be Reported	24/04/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	Additional analysis
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	6
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:

**Envirolab Services Pty Ltd**

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Lead	On Hold
BH6-0-0.1						✓
BH6-0.15-0.25	✓	✓	✓	✓	✓	
BH6-0.15-0.5						✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Project No:	234875.01	Suburb:	Stanmore	To:	Envirolab Services
Project Manager:	Cathy Li	Order Number:		Sampler:	RM
Email:	cathy.li@douglaspartners.com.au; Divyansh.Kumar@douglaspartners.com.au			Attn:	Sample Receipt
Turnaround time:	☒ Standard	☐ 72 hour	☐ 48 hour	☐ 24 hour	☐ Same day
					(02) 9910 6200 samplereceipt@envirolab.com

Prior Storage:	☐ Fridge	☐ Freezer	☐ Esky	☐ Shelf	Do samples contain 'potential' HBM?	☐ No	☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)
-----------------------	---------------------------------	----------------------------------	-------------------------------	--------------------------------	--	-----------------------------	--

Lab ID	Sample ID			Date Sampled	Sample Type	Container Type	Analytes										Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To		S - soil W - water M - Material	G - glass P - plastic	Combo8_AN	Combo3_AN	Combo 3	PFAS (short suite)	TCLP-PFAS (short suite)	pH & CEC	BTEX	AF/FA			
1	BH6	0	0.1	04.04.25	S	G,P	X										
2	BH6	0.15	0.25	04.04.25	S	G,P		X	X								
	BH6	0.4	0.5	04.04.25	S	G,P								X			
	BH6	0.7	0.8	04.04.25	S	G,P											
3	BH6	0.15	0.5											X			
							</										

Metals to analyse:		LAB RECEIPT	
Number of samples in container:		Transported to laboratory by:	Lab Ref. No: 377683
Send results to: Douglas Partners Pty Ltd			Received by: KORN BO 540
Address: 96 Hermitage Road, West Ryde NSW 2114	Phone: (02) 9809 0666		Date & Time: 8/11/25 1400
Relinquished by:	Date:	Signed:	Signed: 

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	234875.01, Stanmore
Envirolab Reference	377683
Date Sample Received	08/04/2025
Date Instructions Received	08/04/2025
Date Results Expected to be Reported	15/04/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	3 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	6
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Sample #1: Received ~170g sample.

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



EnviroLab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Misc Soil - Inorg	Acid Extractable metals in soil	Asbestos ID - soils NEPM
BH6-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓
BH6-0.15-0.25	✓	✓	✓					✓	
BH6-0.15-0.5									✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

CERTIFICATE OF ANALYSIS 378111

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	<u>234875.01 Stanmore</u>
Number of Samples	20 Soil
Date samples received	11/04/2025
Date completed instructions received	11/04/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
 Samples were analysed as received from the client. Results relate specifically to the samples as received.
 Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	22/04/2025
Date of Issue	22/04/2025
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Asbestos Approved By

Analysed by Asbestos Approved Analyst: Lucy Zhu
 Authorised by Asbestos Approved Signatory: Lucy Zhu

Authorised By

Nancy Zhang, Laboratory Manager

Results Approved By

Diego Bigolin, Inorganics Supervisor
 Dragana Tomas, Senior Chemist
 Giovanni Agosti, Group Technical Manager
 Liam Timmins, Organics Supervisor
 Lucy Zhu, Asbestos Supervisor
 Sean McAlary, Senior Chemist
 Timothy Toll, Senior Chemist

vTRH(C6-C10)/BTEXN in Soil

Our Reference		378111-2	378111-3	378111-4	378111-5	378111-6
Your Reference	UNITS	BH08	BH08	BH09	BH09	BH09
Depth		0.35-0.5	0.8-1	0.2-0.3	0.5-0.6	0.8-1
Date Sampled		09.04.25	09.04.25	08.04.25	08.04.25	08.04.25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/04/2025	14/04/2025	14/04/2025	14/04/2025	14/04/2025
Date analysed	-	16/04/2025	16/04/2025	16/04/2025	16/04/2025	16/04/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	92	91	102	96	99

vTRH(C6-C10)/BTEXN in Soil

Our Reference		378111-8	378111-9	378111-12	378111-13	378111-14
Your Reference	UNITS	BH11	BH11	BH12	BH12	BH12
Depth		0.8-1	1.2-1.5	0.8-1	1.3-1.5	1.8-2.3
Date Sampled		09.04.25	10.04.25	10.04.25	10.04.25	10.04.25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/04/2025	14/04/2025	14/04/2025	14/04/2025	14/04/2025
Date analysed	-	16/04/2025	16/04/2025	16/04/2025	16/04/2025	16/04/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	102	94	94	98	88

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		378111-15	378111-16	378111-17
Your Reference	UNITS	BH12	TS	TB
Depth		2.6-3	-	-
Date Sampled		10.04.25	10.04.25	10.04.25
Type of sample		Soil	Soil	Soil
Date extracted	-	14/04/2025	14/04/2025	14/04/2025
Date analysed	-	16/04/2025	16/04/2025	16/04/2025
TRH C ₆ - C ₉	mg/kg	<25	[NA]	<25
TRH C ₆ - C ₁₀	mg/kg	<25	[NA]	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	[NA]	<25
Benzene	mg/kg	<0.2	99%	<0.2
Toluene	mg/kg	<0.5	99%	<0.5
Ethylbenzene	mg/kg	<1	97%	<1
m+p-xylene	mg/kg	<2	98%	<2
o-Xylene	mg/kg	<1	98%	<1
Naphthalene	mg/kg	<1	[NA]	<1
Total +ve Xylenes	mg/kg	<1	[NA]	<1
Surrogate aaa-Trifluorotoluene	%	91	97	99

svTRH (C10-C40) in Soil						
Our Reference	UNITS	378111-2	378111-3	378111-4	378111-5	378111-6
Your Reference		BH08	BH08	BH09	BH09	BH09
Depth		0.35-0.5	0.8-1	0.2-0.3	0.5-0.6	0.8-1
Date Sampled		09.04.25	09.04.25	08.04.25	08.04.25	08.04.25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/04/2025	14/04/2025	14/04/2025	14/04/2025	14/04/2025
Date analysed	-	16/04/2025	16/04/2025	16/04/2025	16/04/2025	16/04/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	82	83	78	82	82

svTRH (C10-C40) in Soil						
Our Reference	UNITS	378111-8	378111-9	378111-12	378111-13	378111-14
Your Reference		BH11	BH11	BH12	BH12	BH12
Depth		0.8-1	1.2-1.5	0.8-1	1.3-1.5	1.8-2.3
Date Sampled		09.04.25	10.04.25	10.04.25	10.04.25	10.04.25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/04/2025	14/04/2025	14/04/2025	14/04/2025	14/04/2025
Date analysed	-	16/04/2025	16/04/2025	16/04/2025	16/04/2025	16/04/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	140	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	140	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	170	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	130	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	300	<50
Surrogate o-Terphenyl	%	83	81	85	88	84

svTRH (C10-C40) in Soil		
Our Reference		378111-15
Your Reference	UNITS	BH12
Depth		2.6-3
Date Sampled		10.04.25
Type of sample		Soil
Date extracted	-	14/04/2025
Date analysed	-	16/04/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100
Total +ve TRH (C10-C36)	mg/kg	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	82

PAHs in Soil						
Our Reference		378111-2	378111-3	378111-4	378111-5	378111-6
Your Reference	UNITS	BH08	BH08	BH09	BH09	BH09
Depth		0.35-0.5	0.8-1	0.2-0.3	0.5-0.6	0.8-1
Date Sampled		09.04.25	09.04.25	08.04.25	08.04.25	08.04.25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/04/2025	14/04/2025	14/04/2025	14/04/2025	14/04/2025
Date analysed	-	15/04/2025	22/04/2025	15/04/2025	22/04/2025	15/04/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.7	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.8	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.8	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.4	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.3	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	4.0	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	94	112	99	110	97

PAHs in Soil						
Our Reference		378111-8	378111-9	378111-12	378111-13	378111-14
Your Reference	UNITS	BH11	BH11	BH12	BH12	BH12
Depth		0.8-1	1.2-1.5	0.8-1	1.3-1.5	1.8-2.3
Date Sampled		09.04.25	10.04.25	10.04.25	10.04.25	10.04.25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/04/2025	14/04/2025	14/04/2025	14/04/2025	14/04/2025
Date analysed	-	15/04/2025	22/04/2025	16/04/2025	22/04/2025	22/04/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	0.1	0.2	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.4	0.3	0.5	0.6	0.3
Anthracene	mg/kg	<0.1	0.1	0.2	0.2	0.1
Fluoranthene	mg/kg	0.9	0.9	1.2	1.6	0.9
Pyrene	mg/kg	0.9	0.9	1.2	1.7	1
Benzo(a)anthracene	mg/kg	0.5	0.9	0.6	1.2	0.8
Chrysene	mg/kg	0.5	0.5	0.7	0.8	0.5
Benzo(b,j+k)fluoranthene	mg/kg	1	1	1	2	0.9
Benzo(a)pyrene	mg/kg	0.77	0.80	0.88	1.4	0.78
Indeno(1,2,3-c,d)pyrene	mg/kg	0.4	0.4	0.5	0.7	0.4
Dibenzo(a,h)anthracene	mg/kg	0.1	0.1	0.1	0.2	0.1
Benzo(g,h,i)perylene	mg/kg	0.5	0.5	0.6	0.9	0.5
Total +ve PAH's	mg/kg	6.2	6.5	8.0	11	6.2
Benzo(a)pyrene TEQ calc (zero)	mg/kg	1.1	1.2	1.3	1.9	1.1
Benzo(a)pyrene TEQ calc(half)	mg/kg	1.1	1.2	1.3	1.9	1.1
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	1.1	1.2	1.3	1.9	1.1
Surrogate p-Terphenyl-d14	%	99	119	112	116	118

PAHs in Soil		
Our Reference		378111-15
Your Reference	UNITS	BH12
Depth		2.6-3
Date Sampled		10.04.25
Type of sample		Soil
Date extracted	-	14/04/2025
Date analysed	-	22/04/2025
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	115

Organochlorine Pesticides in soil						
Our Reference		378111-2	378111-4	378111-6	378111-8	378111-12
Your Reference	UNITS	BH08	BH09	BH09	BH11	BH12
Depth		0.35-0.5	0.2-0.3	0.8-1	0.8-1	0.8-1
Date Sampled		09.04.25	08.04.25	08.04.25	09.04.25	10.04.25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/04/2025	14/04/2025	14/04/2025	14/04/2025	14/04/2025
Date analysed	-	15/04/2025	15/04/2025	15/04/2025	15/04/2025	16/04/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	95	100	100	100	115

Organophosphorus Pesticides in Soil						
Our Reference		378111-2	378111-4	378111-6	378111-8	378111-12
Your Reference	UNITS	BH08	BH09	BH09	BH11	BH12
Depth		0.35-0.5	0.2-0.3	0.8-1	0.8-1	0.8-1
Date Sampled		09.04.25	08.04.25	08.04.25	09.04.25	10.04.25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/04/2025	14/04/2025	14/04/2025	14/04/2025	14/04/2025
Date analysed	-	15/04/2025	15/04/2025	15/04/2025	15/04/2025	16/04/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	95	100	100	100	115

PCBs in Soil						
Our Reference		378111-2	378111-4	378111-6	378111-8	378111-12
Your Reference	UNITS	BH08	BH09	BH09	BH11	BH12
Depth		0.35-0.5	0.2-0.3	0.8-1	0.8-1	0.8-1
Date Sampled		09.04.25	08.04.25	08.04.25	09.04.25	10.04.25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/04/2025	14/04/2025	14/04/2025	14/04/2025	14/04/2025
Date analysed	-	15/04/2025	15/04/2025	15/04/2025	15/04/2025	16/04/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	104	110	108	109	115

Misc Soil - Inorg						
Our Reference		378111-2	378111-4	378111-6	378111-8	378111-12
Your Reference	UNITS	BH08	BH09	BH09	BH11	BH12
Depth		0.35-0.5	0.2-0.3	0.8-1	0.8-1	0.8-1
Date Sampled		09.04.25	08.04.25	08.04.25	09.04.25	10.04.25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/04/2025	14/04/2025	14/04/2025	14/04/2025	14/04/2025
Date analysed	-	15/04/2025	15/04/2025	15/04/2025	15/04/2025	15/04/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Acid Extractable metals in soil

Our Reference		378111-2	378111-3	378111-4	378111-5	378111-6
Your Reference	UNITS	BH08	BH08	BH09	BH09	BH09
Depth		0.35-0.5	0.8-1	0.2-0.3	0.5-0.6	0.8-1
Date Sampled		09.04.25	09.04.25	08.04.25	08.04.25	08.04.25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	15/04/2025	15/04/2025	15/04/2025	15/04/2025	15/04/2025
Date analysed	-	17/04/2025	17/04/2025	17/04/2025	17/04/2025	17/04/2025
Arsenic	mg/kg	<4	5	<4	6	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	9	25	19	16
Copper	mg/kg	17	8	75	15	6
Lead	mg/kg	20	19	4	68	25
Mercury	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Nickel	mg/kg	2	<1	170	6	<1
Zinc	mg/kg	25	1	56	13	1

Acid Extractable metals in soil

Our Reference		378111-8	378111-9	378111-12	378111-13	378111-14
Your Reference	UNITS	BH11	BH11	BH12	BH12	BH12
Depth		0.8-1	1.2-1.5	0.8-1	1.3-1.5	1.8-2.3
Date Sampled		09.04.25	10.04.25	10.04.25	10.04.25	10.04.25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	15/04/2025	15/04/2025	15/04/2025	15/04/2025	15/04/2025
Date analysed	-	17/04/2025	17/04/2025	17/04/2025	17/04/2025	17/04/2025
Arsenic	mg/kg	4	<4	9	7	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	13	13	33	13	20
Copper	mg/kg	32	18	26	23	24
Lead	mg/kg	130	51	98	62	65
Mercury	mg/kg	0.4	0.4	0.2	0.1	0.3
Nickel	mg/kg	5	5	17	8	7
Zinc	mg/kg	77	58	76	120	60

Acid Extractable metals in soil		
Our Reference		378111-15
Your Reference	UNITS	BH12
Depth		2.6-3
Date Sampled		10.04.25
Type of sample		Soil
Date prepared	-	15/04/2025
Date analysed	-	17/04/2025
Arsenic	mg/kg	4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	6
Copper	mg/kg	7
Lead	mg/kg	22
Mercury	mg/kg	<0.1
Nickel	mg/kg	<1
Zinc	mg/kg	6

Moisture						
Our Reference	UNITS	378111-2	378111-3	378111-4	378111-5	378111-6
Your Reference		BH08	BH08	BH09	BH09	BH09
Depth		0.35-0.5	0.8-1	0.2-0.3	0.5-0.6	0.8-1
Date Sampled		09.04.25	09.04.25	08.04.25	08.04.25	08.04.25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/04/2025	14/04/2025	14/04/2025	14/04/2025	14/04/2025
Date analysed	-	15/04/2025	15/04/2025	15/04/2025	15/04/2025	15/04/2025
Moisture	%	13	6.5	8.1	20	25

Moisture						
Our Reference	UNITS	378111-7	378111-8	378111-9	378111-12	378111-13
Your Reference		BH11	BH11	BH11	BH12	BH12
Depth		0.5-0.6	0.8-1	1.2-1.5	0.8-1	1.3-1.5
Date Sampled		09.04.25	09.04.25	10.04.25	10.04.25	10.04.25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/04/2025	14/04/2025	14/04/2025	14/04/2025	14/04/2025
Date analysed	-	15/04/2025	15/04/2025	15/04/2025	15/04/2025	15/04/2025
Moisture	%	9.8	12	7.7	14	17

Moisture			
Our Reference	UNITS	378111-14	378111-15
Your Reference		BH12	BH12
Depth		1.8-2.3	2.6-3
Date Sampled		10.04.25	10.04.25
Type of sample		Soil	Soil
Date prepared	-	14/04/2025	14/04/2025
Date analysed	-	15/04/2025	15/04/2025
Moisture	%	10	19

Asbestos ID - soils NEPM

Our Reference		378111-1	378111-2	378111-4	378111-6	378111-8
Your Reference	UNITS	BH08	BH08	BH09	BH09	BH11
Depth		0.2-0.3	0.35-0.5	0.2-0.3	0.8-1	0.8-1
Date Sampled		09.04.25	09.04.25	08.04.25	08.04.25	09.04.25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/04/2025	15/04/2025	15/04/2025	15/04/2025	15/04/2025
Sample mass tested	g	248.99	361.06	634.64	282.15	281.53
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Brown clayey soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	—	—	—	—	—
FA and AF Estimation*	g	—	—	—	—	—
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil

Asbestos ID - soils NEPM					
Our Reference		378111-9	378111-12	378111-13	378111-14
Your Reference	UNITS	BH11	BH12	BH12	BH12
Depth		1.2-1.5	0.8-1	1.3-1.5	1.8-2.3
Date Sampled		10.04.25	10.04.25	10.04.25	10.04.25
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	15/04/2025	15/04/2025	15/04/2025	15/04/2025
Sample mass tested	g	271.52	279.27	210	215.32
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	—	—	—	—
FA and AF Estimation*	g	—	—	—	—
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil

PFAS in Soils Short		
Our Reference		378111-7
Your Reference	UNITS	BH11
Depth		0.5-0.6
Date Sampled		09.04.25
Type of sample		Soil
Date prepared	-	17/04/2025
Date analysed	-	17/04/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	1.7
Perfluorooctanoic acid PFOA	µg/kg	0.4
6:2 FTS	µg/kg	<0.1
8:2 FTS	µg/kg	<0.2
Surrogate ¹³ C ₈ PFOS	%	102
Surrogate ¹³ C ₂ PFOA	%	98
Extracted ISTD ¹³ C ₃ PFBS	%	98
Extracted ISTD ¹⁸ O ₂ PFHxS	%	90
Extracted ISTD ¹³ C ₄ PFOS	%	92
Extracted ISTD ¹³ C ₄ PFOA	%	96
Extracted ISTD ¹³ C ₂ 6:2FTS	%	110
Extracted ISTD ¹³ C ₂ 8:2FTS	%	125
Total Positive PFHxS & PFOS	µg/kg	1.7
Total Positive PFOS & PFOA	µg/kg	2.1
Total Positive PFAS	µg/kg	2.1

PFAS in TCLP Short		
Our Reference		378111-7
Your Reference	UNITS	BH11
Depth		0.5-0.6
Date Sampled		09.04.25
Type of sample		Soil
Date prepared	-	17/04/2025
Date analysed	-	17/04/2025
pH of soil for fluid# determ.	pH units	7.0
pH of soil TCLP (after HCl)	pH units	1.5
Extraction fluid used		1
pH of final Leachate	pH units	5.0
Perfluorobutanesulfonic acid	µg/L	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	0.02
Perfluorooctanoic acid PFOA	µg/L	0.01
6:2 FTS	µg/L	<0.01
8:2 FTS	µg/L	<0.02
Surrogate ¹³ C ₈ PFOS	%	100
Surrogate ¹³ C ₂ PFOA	%	100
Extracted ISTD ¹³ C ₃ PFBS	%	102
Extracted ISTD ¹⁸ O ₂ PFHxS	%	104
Extracted ISTD ¹³ C ₄ PFOS	%	98
Extracted ISTD ¹³ C ₄ PFOA	%	110
Extracted ISTD ¹³ C ₂ 6:2FTS	%	64
Extracted ISTD ¹³ C ₂ 8:2FTS	%	79
Total Positive PFHxS & PFOS	µg/L	0.02
Total Positive PFOS & PFOA	µg/L	0.03
Total Positive PFAS	µg/L	0.03

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. NOTE#1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF relative to the sample mass tested) NOTE#2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.

Method ID	Methodology Summary
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stoichiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.

Method ID	Methodology Summary
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			14/04/2025	3	14/04/2025	14/04/2025		14/04/2025	[NT]
Date analysed	-			16/04/2025	3	16/04/2025	16/04/2025		16/04/2025	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	3	<25	<25	0	115	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	3	<25	<25	0	115	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	3	<0.2	<0.2	0	121	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	3	<0.5	<0.5	0	114	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	3	<1	<1	0	117	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	3	<2	<2	0	112	[NT]
o-Xylene	mg/kg	1	Org-023	<1	3	<1	<1	0	115	[NT]
Naphthalene	mg/kg	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	99	3	91	91	0	111	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	9	14/04/2025	14/04/2025		[NT]	[NT]
Date analysed	-			[NT]	9	16/04/2025	16/04/2025		[NT]	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-023	[NT]	9	<25	<25	0	[NT]	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	[NT]	9	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	9	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	9	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	9	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	9	94	96	2	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			14/04/2025	3	14/04/2025	14/04/2025		14/04/2025	[NT]
Date analysed	-			15/04/2025	3	16/04/2025	16/04/2025		15/04/2025	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	3	<50	<50	0	108	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	3	<100	<100	0	100	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	3	<100	<100	0	100	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	3	<50	<50	0	108	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	3	<100	<100	0	100	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	3	<100	<100	0	100	[NT]
Surrogate o-Terphenyl	%		Org-020	80	3	83	83	0	100	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	9	14/04/2025	14/04/2025		[NT]	[NT]
Date analysed	-			[NT]	9	16/04/2025	16/04/2025		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	9	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	9	<100	<100	0	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	9	<100	<100	0	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	9	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	9	<100	<100	0	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	9	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	9	81	83	2	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			14/04/2025	3	14/04/2025	14/04/2025		14/04/2025	[NT]
Date analysed	-			16/04/2025	3	22/04/2025	22/04/2025		15/04/2025	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	80	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	86	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	84	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	86	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	0.1	0	84	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	0.1	0	82	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	80	[NT]
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	3	<0.05	<0.05	0	76	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	111	3	112	114	2	93	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	9	14/04/2025	14/04/2025		[NT]	[NT]
Date analysed	-			[NT]	9	22/04/2025	22/04/2025		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	9	0.3	0.6	67	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	9	0.1	0.2	67	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	9	0.9	1.5	50	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	9	0.9	1.5	50	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	9	0.9	1.2	29	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	9	0.5	0.8	46	[NT]	[NT]
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	9	1	2	67	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	9	0.80	1.2	40	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	9	0.4	0.6	40	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	9	0.1	0.2	67	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	9	0.5	0.7	33	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	9	119	115	3	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			14/04/2025	[NT]	[NT]	[NT]	[NT]	14/04/2025	[NT]
Date analysed	-			16/04/2025	[NT]	[NT]	[NT]	[NT]	15/04/2025	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	78	[NT]
HCB	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	82	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	80	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	78	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	78	[NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	76	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	80	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	82	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	116	[NT]	[NT]	[NT]	[NT]	92	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			14/04/2025	[NT]	[NT]	[NT]	[NT]	14/04/2025	[NT]
Date analysed	-			16/04/2025	[NT]	[NT]	[NT]	[NT]	15/04/2025	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	82	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Malathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Fenthion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	82	[NT]
Phosalone	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	116	[NT]	[NT]	[NT]	[NT]	92	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			14/04/2025	[NT]	[NT]	[NT]	[NT]	14/04/2025	[NT]
Date analysed	-			16/04/2025	[NT]	[NT]	[NT]	[NT]	15/04/2025	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	65	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	116	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: Misc Soil - Inorg					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date prepared	-			15/04/2025	[NT]	[NT]	[NT]	[NT]	15/04/2025	[NT]
Date analysed	-			15/04/2025	[NT]	[NT]	[NT]	[NT]	15/04/2025	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	[NT]	[NT]	[NT]	[NT]	105	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date prepared	-			15/04/2025	3	15/04/2025	15/04/2025		15/04/2025	[NT]
Date analysed	-			17/04/2025	3	17/04/2025	17/04/2025		17/04/2025	[NT]
Arsenic	mg/kg	4	Metals-020	<4	3	5	6	18	115	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	3	<0.4	<0.4	0	108	[NT]
Chromium	mg/kg	1	Metals-020	<1	3	9	10	11	110	[NT]
Copper	mg/kg	1	Metals-020	<1	3	8	9	12	112	[NT]
Lead	mg/kg	1	Metals-020	<1	3	19	18	5	109	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	3	<0.1	<0.1	0	110	[NT]
Nickel	mg/kg	1	Metals-020	<1	3	<1	<1	0	110	[NT]
Zinc	mg/kg	1	Metals-020	<1	3	1	2	67	109	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	9	15/04/2025	15/04/2025		[NT]	[NT]
Date analysed	-			[NT]	9	17/04/2025	17/04/2025		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	9	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	9	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	9	13	11	17	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	9	18	17	6	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	9	51	44	15	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	9	0.4	0.3	29	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	9	5	5	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	9	58	52	11	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Short					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date prepared	-			17/04/2025	[NT]	[NT]	[NT]	[NT]	17/04/2025	[NT]
Date analysed	-			17/04/2025	[NT]	[NT]	[NT]	[NT]	17/04/2025	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate ¹³ C ₈ PFOS	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	103	[NT]
Surrogate ¹³ C ₂ PFOA	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	94	[NT]
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	91	[NT]
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	94	[NT]	[NT]	[NT]	[NT]	91	[NT]
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	94	[NT]	[NT]	[NT]	[NT]	93	[NT]

QUALITY CONTROL: PFAS in TCLP Short					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			17/04/2025	7	17/04/2025	17/04/2025		17/04/2025	[NT]
Date analysed	-			17/04/2025	7	17/04/2025	17/04/2025		17/04/2025	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	7	<0.01	<0.01	0	92	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	7	<0.01	<0.01	0	95	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	7	0.02	0.02	0	94	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	7	0.01	0.01	0	93	[NT]
6:2 FTS	µg/L	0.01	Org-029	<0.01	7	<0.01	<0.01	0	94	[NT]
8:2 FTS	µg/L	0.02	Org-029	<0.02	7	<0.02	<0.02	0	91	[NT]
Surrogate ¹³ C ₈ PFOS	%		Org-029	97	7	100	103	3	100	[NT]
Surrogate ¹³ C ₂ PFOA	%		Org-029	101	7	100	98	2	102	[NT]
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	99	7	102	98	4	104	[NT]
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	102	7	104	98	6	102	[NT]
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	99	7	98	93	5	102	[NT]
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	110	7	110	104	6	105	[NT]
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	64	7	64	72	12	80	[NT]
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	79	7	79	84	6	85	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Asbestos-ID in soil: NEPM

This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

Note: All samples analysed as received. However, samples 378111-1, 2, 6, 8, 9, 12, 13, 14 are below the minimum recommended 500mL sample volume as per National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013.

PAHs in Soil - The RPD for duplicate results is accepted due to the non homogenous nature of sample 378111-9,9d.

CERTIFICATE OF ANALYSIS 378111-A

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	<u>234875.01 Stanmore</u>
Number of Samples	Additional analysis
Date samples received	11/04/2025
Date completed instructions received	23/04/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
 Samples were analysed as received from the client. Results relate specifically to the samples as received.
 Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	24/04/2025
Date of Issue	24/04/2025
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Dragana Tomas, Senior Chemist
 Giovanni Agosti, Group Technical Manager
 Timothy Toll, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

TCLP Preparation - Acid

Our Reference		378111-A-4	378111-A-8	378111-A-13
Your Reference	UNITS	BH09	BH11	BH12
Depth		0.2-0.3	0.8-1	1.3-1.5
Date Sampled		08.04.25	09.04.25	10.04.25
Type of sample		Soil	Soil	Soil
pH of soil for fluid# determ.	pH units	8.8	8.7	8.8
pH of soil TCLP (after HCl)	pH units	1.7	1.8	1.7
Extraction fluid used		1	1	1
pH of final Leachate	pH units	5.2	5.1	5.2

PAHs in TCLP (USEPA 1311)		
Our Reference		378111-A-13
Your Reference	UNITS	BH12
Depth		1.3-1.5
Date Sampled		10.04.25
Type of sample		Soil
Date extracted	-	24/04/2025
Date analysed	-	24/04/2025
Naphthalene in TCLP	mg/L	<0.0001
Acenaphthylene in TCLP	mg/L	<0.0001
Acenaphthene in TCLP	mg/L	<0.0001
Fluorene in TCLP	mg/L	<0.0001
Phenanthrene in TCLP	mg/L	<0.0001
Anthracene in TCLP	mg/L	<0.0001
Fluoranthene in TCLP	mg/L	<0.0001
Pyrene in TCLP	mg/L	<0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001
Chrysene in TCLP	mg/L	<0.0001
Benzo(b,j,k)fluoranthene in TCLP	mg/L	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001
Total +ve PAH's	mg/L	NIL (+)VE
Surrogate <i>p</i> -Terphenyl-d14	%	137

Metals from Leaching Fluid pH 2.9 or 5			
Our Reference		378111-A-4	378111-A-8
Your Reference	UNITS	BH09	BH11
Depth		0.2-0.3	0.8-1
Date Sampled		08.04.25	09.04.25
Type of sample		Soil	Soil
Date extracted	-	24/04/2025	24/04/2025
Date analysed	-	24/04/2025	24/04/2025
Lead	mg/L	[NA]	0.08
Nickel	mg/L	0.26	[NA]

Method ID	Methodology Summary
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Metals-020	Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer. Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Org-022/025	Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			24/04/2025	[NT]	[NT]	[NT]	[NT]	24/04/2025	[NT]
Date analysed	-			24/04/2025	[NT]	[NT]	[NT]	[NT]	24/04/2025	[NT]
Naphthalene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	70	[NT]
Acenaphthylene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	68	[NT]
Fluorene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	68	[NT]
Phenanthrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	75	[NT]
Anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	77	[NT]
Pyrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	71	[NT]
Benzo(a)anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	73	[NT]
Benzo(b)fluoranthene in TCLP	mg/L	0.0002	Org-022/025	<0.0002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	83	[NT]
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	132	[NT]	[NT]	[NT]	[NT]	107	[NT]

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			24/04/2025	[NT]	[NT]	[NT]	[NT]	24/04/2025	[NT]
Date analysed	-			24/04/2025	[NT]	[NT]	[NT]	[NT]	24/04/2025	[NT]
Lead	mg/L	0.03	Metals-020	<0.03	[NT]	[NT]	[NT]	[NT]	109	[NT]
Nickel	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	109	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Anna Bui

From: Cathy Li <cathy.li@douglaspartners.com.au>
Sent: Wednesday, 23 April 2025 10:12 AM
To: Stuart Chen; Customer Service
Cc: Divyansh Kumar; Huy Tran
Subject: RE: Results for Registration 377683 234875.01, Stanmore

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Stuart,

Can I please order TCLP on 24hrs TAT for the below samples:

- TCLP of lead on sample BH6/0.15 - 0.25 m (ELS 377683) , BH11/ 0.8 - 1 m (ELS 378111) ⁸
- TCLP of nickel on sample BH09/0.2 - 0.3 m (ELS 378111) ⁴
- TCLP of B(a)P on sample BH12/1.3 - 1.5 m (ELS 378111) ¹³

Thanks.

Kind regards,

Cathy Li | Environmental Engineer

☎ 02 9809 0666 📞 0484 789 919 ➡ Cathy.Li@douglaspartners.com.au

🌐 www.douglaspartners.com.au 📍 96 Hermitage Road, West Ryde
NSW 2114 | Wallumedegal Country
PO Box 472, West Ryde, NSW 1685



GROUND
ED
EXPERTISE

[Click here to learn about our awards and achievements.](#)

From: Stuart Chen <SChen2@envirolab.com.au>

Sent: Tuesday, 15 April 2025 2:54 PM

To: Divyansh Kumar <divyansh.kumar@douglaspartners.com.au>; Cathy Li <cathy.li@douglaspartners.com.au>

Subject: Results for Registration 377683 234875.01, Stanmore

Please refer to attached for:
a copy of the Certificate of Analysis
a copy of the COC/paperwork received from you
ESDAT Extracts
an Excel or .csv file containing the results

Please note that a hard copy will not be posted.

Enquiries should be made directly to:
customerservice@envirolab.com.au

To view information on uncertainty guidelines click [here](#)

[How did we do? Send Feedback](#)

ELs REF: 378111 - A

TAT: 1 DAY

DUE: 24/4/25

AB

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	234875.01 Stanmore
Envirolab Reference	378111-A
Date Sample Received	11/04/2025
Date Instructions Received	23/04/2025
Date Results Expected to be Reported	24/04/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	Additional analysis
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	22
Cooling Method	None
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Sample ID	TCLP Preparation - Acid	PAHs in TCLP (USEPA 1311)	Lead	Nickel	On Hold
BH08-0.2-0.3					✓
BH08-0.35-0.5					✓
BH08-0.8-1					✓
BH09-0.2-0.3	✓			✓	
BH09-0.5-0.6					✓
BH09-0.8-1					✓
BH11-0.5-0.6					✓
BH11-0.8-1	✓		✓		
BH11-1.2-1.5					✓
BH11-1.8-2.2					✓
BH12-0.4-0.5					✓
BH12-0.8-1					✓
BH12-1.3-1.5	✓	✓			
BH12-1.8-2.3					✓
BH12-2.6-3					✓
TS					✓
TB					✓
BH06-1.7-2.0					✓
BH06-2.3-2.5					✓
BD520250409					✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

CERTIFICATE OF ANALYSIS 378111-B

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	<u>234875.01 Stanmore</u>
Number of Samples	Additional analysis
Date samples received	11/04/2025
Date completed instructions received	30/04/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	07/05/2025
Date of Issue	07/05/2025
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Asbestos Approved By

Analysed by Asbestos Approved Analyst: Nyovan Moonean
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By

Lucy Zhu, Asbestos Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

Asbestos ID - soils NEPM		
Our Reference		378111-B-5
Your Reference	UNITS	BH09
Depth		0.5-0.6
Date Sampled		08.04.25
Type of sample		Soil
Date analysed	-	07/05/2025
Sample mass tested	g	330.5
Sample Description	-	Brown clayey soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected
ACM >7mm Estimation*	g	—
FA and AF Estimation*	g	—
FA and AF Estimation*#2	%(w/w)	<0.001
Asbestos comments	-	Nil

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. NOTE#1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF relative to the sample mass tested) NOTE#2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Report Comments

Asbestos-ID in soil: NEPM

This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

Note: Sample analysed as received. However, sample is below the minimum recommended 500mL sample volume as per National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013.

Anna Bui

From: Stuart Chen
Sent: Wednesday, 30 April 2025 5:22 PM
To: Cathy Li; Envirolab Sydney Sample Receipt
Cc: Huy Tran; Divyansh Kumar
Subject: RE: Results for Registration 378111-234875.01 Stanmore

Hey Cathy,

Shouldn't be any problems.

@Envirolab Sydney Sample Receipt Please login A-job for NEPM ASB 378111-5

Kind Regards,

Stuart Chen | Report Coordinator | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200
E SChen2@envirolab.com.au | W www.envirolab.com.au

Follow us on: [LinkedIn](#) | [Facebook](#) | [Twitter](#)

Samples will be analysed per our T&C's.

From: Cathy Li <cathy.li@douglaspartners.com.au>
Sent: Wednesday, 30 April 2025 5:20 PM
To: Stuart Chen <SChen2@envirolab.com.au>
Cc: Huy Tran <Huy.Tran@douglaspartners.com.au>; Divyansh Kumar <Divyansh.Kumar@douglaspartners.com.au>
Subject: RE: Results for Registration 378111-234875.01 Stanmore

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Stuart,

Sorry if you still have the 500 ml asbestos soil sample of BH09/0.5-0.6, could you please test AF/FA on standard TAT.

Kind regards,

Cathy Li | Environmental Engineer

☎ 02 9809 0666 ☎ 0484 789 919 ➡ Cathy.Li@douglaspartners.com.au

🌐 www.douglaspartners.com.au 📍 96 Hermitage Road, West Ryde
NSW 2114 | Wallumedegal Country
PO Box 472, West Ryde, NSW 1685



GROUND
ED EXPERTISE

[Click here to learn about our awards and achievements.](#)

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	234875.01 Stanmore
Envirolab Reference	378111-B
Date Sample Received	11/04/2025
Date Instructions Received	30/04/2025
Date Results Expected to be Reported	07/05/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	Additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	22
Cooling Method	None
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Sample ID	Asbestos ID - soils NEPM	On Hold
BH08-0.2-0.3		✓
BH08-0.35-0.5		✓
BH08-0.8-1		✓
BH09-0.2-0.3		✓
BH09-0.5-0.6	✓	
BH09-0.8-1		✓
BH11-0.5-0.6		✓
BH11-0.8-1		✓
BH11-1.2-1.5		✓
BH11-1.8-2.2		✓
BH12-0.4-0.5		✓
BH12-0.8-1		✓
BH12-1.3-1.5		✓
BH12-1.8-2.3		✓
BH12-2.6-3		✓
TS		✓
TB		✓
BH06-1.7-2.0		✓
BH06-2.3-2.5		✓
BD520250409		✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

CERTIFICATE OF ANALYSIS 378111-C

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	<u>234875.01 Stanmore</u>
Number of Samples	Additional analysis 1 sample
Date samples received	11/04/2025
Date completed instructions received	20/05/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	21/05/2025
Date of Issue	21/05/2025
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Giovanni Agosti, Group Technical Manager
Liam Timmins, Organics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

Acid Extractable metals in soil		
Our Reference		378111-C-20
Your Reference	UNITS	BD520250409
Depth		-
Date Sampled		10.04.25
Type of sample		Soil
Date prepared	-	21/05/2025
Date analysed	-	21/05/2025
Arsenic	mg/kg	5
Cadmium	mg/kg	<0.4
Chromium	mg/kg	17
Copper	mg/kg	10
Lead	mg/kg	24
Mercury	mg/kg	<0.1
Nickel	mg/kg	1
Zinc	mg/kg	3

Moisture		
Our Reference		378111-C-20
Your Reference	UNITS	BD520250409
Depth		-
Date Sampled		10.04.25
Type of sample		Soil
Date prepared	-	20/05/2025
Date analysed	-	21/05/2025
Moisture	%	20

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stoichiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Metals-021	Determination of Mercury by Cold Vapour AAS.

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date prepared	-			21/05/2025	[NT]	[NT]	[NT]	[NT]	21/05/2025	[NT]
Date analysed	-			21/05/2025	[NT]	[NT]	[NT]	[NT]	21/05/2025	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	109	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	102	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Anna Bui

From: Stuart Chen
Sent: Tuesday, 20 May 2025 6:21 PM
To: Cathy Li; Envirolab Sydney Sample Receipt
Cc: Huy Tran
Subject: RE: Results for Registration 378111 234875.01 Stanmore

Hey Cathy,

Shouldn't be a problem.

@Envirolab Sydney Sample Receipt Please login urgent A-job.

ELU REF: 378111-C

MT: 1 DAY

DUE: 21/5/25

AB.

Kind Regards,

Stuart Chen | Report Coordinator | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200
E SChen2@envirolab.com.au | W www.envirolab.com.au

Follow us on: [LinkedIn](#) | [Facebook](#) | [Twitter](#)

Samples will be analysed per our T&C's.

From: Cathy Li <cathy.li@douglaspartners.com.au>
Sent: Tuesday, 20 May 2025 6:11 PM
To: Stuart Chen <SChen2@envirolab.com.au>
Cc: Huy Tran <Huy.Tran@douglaspartners.com.au>
Subject: RE: Results for Registration 378111 234875.01 Stanmore

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Stuart,

If you still have sample BD5/20250409, could you please analysis heavy metals for me on 24hrs TAT.

Thanks.

Kind regards,

Cathy Li | Environmental Engineer

☎ 02 9809 0666 ☎ 0484 789 919 📧 Cathy.Li@douglaspartners.com.au

🌐 www.douglaspartners.com.au 📍 96 Hermitage Road, West Ryde
NSW 2114 | Wallumedegal Country
PO Box 472, West Ryde, NSW 1685

 **Douglas**
PARTNERS | GROUNDED
EXPERTISE

Click here to learn about our awards and achievements.

COC: 11/04/2025 1428

Project No: 234875.01					Suburb: Stanmore					To: Envirolab Services				
Project Manager: Cathy Li / Huy Tran					Order Number:					Sampler: EM				
Email: cathy.li@douglaspartners.com.au and Huy.tran@douglaspartners.com.au										Attn: Sample Receipt				
Turnaround time: ☒ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day										(02) 9910 6200 samplereceipt@envirolab.com				
Prior Storage: ☒ Fridge ☐ Freezer ☐ Esky ☐ Shelf										Do samples contain 'potential' HBM? ☐ No ☒ Yes If YES, then handle, transport and store in accordance with FPM HAZID)				

Lab ID	Sample ID			Date Sampled	Sample Type	Container Type	Analytes										Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To		S - soil W - water M - Material	G - glass P - plastic	Combo 8AN	Combo 3AN	Combo 3	PFAS (Short suite)	TCLP (Pfas short suite)	ph & CEC	BTEX	AF/FA			
1	BH08	0.2	0.3	09.04.25	S	G/P								X			
2	BH08	0.35	0.5	09.04.25	S	G/P	X										
3	BH08	0.8	1	09.04.25	S	G/P			X								
4	BH09	0.2	0.3	08.04.25	S	G/P	X										
5	BH09	0.5	0.6	08.04.25	S	G/P			X								
6	BH09	0.8	1	08.04.25	S	G/P	X										
7	BH11	0.5	0.6	09.04.25	S	G/P				X	X						
8	BH11	0.8	1	09.04.25	S	G/P	X										
9	BH11	1.2	1.5	10.04.25	S	G/P		X									
10	BH11	1.8	2.2	10.04.25	S	G/P											on hold
11	BH12	0.4	0.5	10.04.25	S	G/P											on hold
12	BH12	0.8	1	10.04.25	S	G/P	X										
13	BH12	1.3	1.5	10.04.25	S	G/P		X									
14	BH12	1.8	2.3	10.04.25	S	G/P		X									

ENVIROLAB

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 37811

Date Received: 11/4/25

Time Received: 1520

Received By: OL

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

Metals to analyse:										LAB RECEIPT				
Number of samples in container:					Transported to laboratory by:					Lab Ref. No: 37811				
Send results to: Douglas Partners Pty Ltd										Received by: OL ELS SYD				
Address: 96 Hermitage Road, West Ryde NSW 211					Phone: (02) 9809 0666					Date & Time: 11/4/25 1520				
Relinquished by:					Date:					Signed:				
										Signed: OL				

H 378.11
11/4/25 1520

04

CHAIN OF CUSTODY DESPATCH SHEET

[illegible]

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	234875.01 Stanmore
Envirolab Reference	378111
Date Sample Received	11/04/2025
Date Instructions Received	11/04/2025
Date Results Expected to be Reported	22/04/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	20 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	22
Cooling Method	None
Sampling Date Provided	YES

Comments

BD420250408 not received, extra samples BH06 (1.7-2.0), BH06(2.3-2.5) and BD520250409.

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:

Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Misc Soil - Inorg	Acid Extractable metals in soil	Asbestos ID - soils NEPM	PFAS in Soils Short	PFAS in TCLP Short	On Hold
BH08-0.2-0.3									✓			
BH08-0.35-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓			
BH08-0.8-1	✓	✓	✓					✓				
BH09-0.2-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓			
BH09-0.5-0.6	✓	✓	✓					✓				
BH09-0.8-1	✓	✓	✓	✓	✓	✓	✓	✓	✓			
BH11-0.5-0.6										✓	✓	
BH11-0.8-1	✓	✓	✓	✓	✓	✓	✓	✓	✓			
BH11-1.2-1.5	✓	✓	✓					✓	✓			
BH11-1.8-2.2												✓
BH12-0.4-0.5												✓
BH12-0.8-1	✓	✓	✓	✓	✓	✓	✓	✓	✓			
BH12-1.3-1.5	✓	✓	✓					✓	✓			
BH12-1.8-2.3	✓	✓	✓					✓	✓			
BH12-2.6-3	✓	✓	✓					✓				
TS	✓											
TB	✓											
BH06-1.7-2.0												✓
BH06-2.3-2.5												✓
BD520250409												✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

CERTIFICATE OF ANALYSIS 378369

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	<u>234875.01 Stanmore</u>
Number of Samples	7 Soil
Date samples received	15/04/2025
Date completed instructions received	16/04/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	28/04/2025
Date of Issue	28/04/2025
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Asbestos Approved By

Analysed by Asbestos Approved Analyst: Stuart Chen
 Authorised by Asbestos Approved Signatory: Lucy Zhu

Authorised By

Nancy Zhang, Laboratory Manager

Results Approved By

Diego Bigolin, Inorganics Supervisor
 Dragana Tomas, Senior Chemist
 Giovanni Agosti, Group Technical Manager
 Lucy Zhu, Asbestos Supervisor
 Steven Luong, Senior Chemist
 Timothy Toll, Senior Chemist

vTRH(C6-C10)/BTEXN in Soil					
Our Reference		378369-1	378369-2	378369-4	378369-5
Your Reference	UNITS	BH07	BH07	BH14	BH14
Depth		0.1-0.2	0.4-0.5	0.1-0.2	0.4-0.5
Date Sampled		14/04/2025	14/04/2025	14/04/2025	14/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	17/04/2025	17/04/2025	17/04/2025	17/04/2025
Date analysed	-	22/04/2025	22/04/2025	22/04/2025	22/04/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	89	83	94	92

svTRH (C10-C40) in Soil					
Our Reference		378369-1	378369-2	378369-4	378369-5
Your Reference	UNITS	BH07	BH07	BH14	BH14
Depth		0.1-0.2	0.4-0.5	0.1-0.2	0.4-0.5
Date Sampled		14/04/2025	14/04/2025	14/04/2025	14/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	17/04/2025	17/04/2025	17/04/2025	17/04/2025
Date analysed	-	18/04/2025	17/04/2025	18/04/2025	18/04/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	1,100	<100	280	180
TRH C ₂₉ - C ₃₆	mg/kg	550	<100	970	210
Total +ve TRH (C10-C36)	mg/kg	1,700	<50	1,300	400
TRH >C ₁₀ -C ₁₆	mg/kg	93	<50	53	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	93	<50	53	<50
TRH >C ₁₆ -C ₃₄	mg/kg	1,400	<100	840	310
TRH >C ₃₄ -C ₄₀	mg/kg	400	<100	1,200	200
Total +ve TRH (>C10-C40)	mg/kg	1,900	<50	2,100	510
Surrogate o-Terphenyl	%	139	105	117	108

PAHs in Soil					
Our Reference		378369-1	378369-2	378369-4	378369-5
Your Reference	UNITS	BH07	BH07	BH14	BH14
Depth		0.1-0.2	0.4-0.5	0.1-0.2	0.4-0.5
Date Sampled		14/04/2025	14/04/2025	14/04/2025	14/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	17/04/2025	17/04/2025	17/04/2025	17/04/2025
Date analysed	-	17/04/2025	23/04/2025	23/04/2025	22/04/2025
Naphthalene	mg/kg	1	<0.1	<0.1	0.1
Acenaphthylene	mg/kg	3.0	0.1	<0.1	0.4
Acenaphthene	mg/kg	8.0	0.2	<0.1	<0.1
Fluorene	mg/kg	12	0.2	<0.1	0.3
Phenanthrene	mg/kg	160	1.4	0.5	2.8
Anthracene	mg/kg	50	0.5	0.1	0.8
Fluoranthene	mg/kg	350	3.4	0.7	4.4
Pyrene	mg/kg	340	3.1	0.7	4.0
Benzo(a)anthracene	mg/kg	80	1	0.4	2.7
Chrysene	mg/kg	72	0.8	0.4	1.6
Benzo(b,j+k)fluoranthene	mg/kg	140	1	0.6	2.7
Benzo(a)pyrene	mg/kg	120	1.1	0.5	2.1
Indeno(1,2,3-c,d)pyrene	mg/kg	60	0.6	0.2	1
Dibenzo(a,h)anthracene	mg/kg	10	0.1	<0.1	0.3
Benzo(g,h,i)perylene	mg/kg	80	0.9	0.5	1.1
Total +ve PAH's	mg/kg	1,500	14	4.6	24
Benzo(a)pyrene TEQ calc (zero)	mg/kg	160	1.5	0.6	3.0
Benzo(a)pyrene TEQ calc(half)	mg/kg	160	1.5	0.7	3.0
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	160	1.5	0.7	3.0
Surrogate <i>p</i> -Terphenyl-d14	%	126	120	126	105

Organochlorine Pesticides in soil				
Our Reference		378369-1	378369-2	378369-4
Your Reference	UNITS	BH07	BH07	BH14
Depth		0.1-0.2	0.4-0.5	0.1-0.2
Date Sampled		14/04/2025	14/04/2025	14/04/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	17/04/2025	17/04/2025	17/04/2025
Date analysed	-	17/04/2025	17/04/2025	17/04/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	125	135	126

Organophosphorus Pesticides in Soil				
Our Reference		378369-1	378369-2	378369-4
Your Reference	UNITS	BH07	BH07	BH14
Depth		0.1-0.2	0.4-0.5	0.1-0.2
Date Sampled		14/04/2025	14/04/2025	14/04/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	17/04/2025	17/04/2025	17/04/2025
Date analysed	-	17/04/2025	17/04/2025	17/04/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	125	135	126

PCBs in Soil				
Our Reference		378369-1	378369-2	378369-4
Your Reference	UNITS	BH07	BH07	BH14
Depth		0.1-0.2	0.4-0.5	0.1-0.2
Date Sampled		14/04/2025	14/04/2025	14/04/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	17/04/2025	17/04/2025	17/04/2025
Date analysed	-	17/04/2025	17/04/2025	17/04/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	130	132	128

Misc Soil - Inorg				
Our Reference		378369-1	378369-2	378369-4
Your Reference	UNITS	BH07	BH07	BH14
Depth		0.1-0.2	0.4-0.5	0.1-0.2
Date Sampled		14/04/2025	14/04/2025	14/04/2025
Type of sample		Soil	Soil	Soil
Date prepared	-	17/04/2025	17/04/2025	17/04/2025
Date analysed	-	23/04/2025	23/04/2025	23/04/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5

Acid Extractable metals in soil					
Our Reference		378369-1	378369-2	378369-4	378369-5
Your Reference	UNITS	BH07	BH07	BH14	BH14
Depth		0.1-0.2	0.4-0.5	0.1-0.2	0.4-0.5
Date Sampled		14/04/2025	14/04/2025	14/04/2025	14/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	17/04/2025	17/04/2025	17/04/2025	17/04/2025
Date analysed	-	22/04/2025	22/04/2025	22/04/2025	22/04/2025
Arsenic	mg/kg	<4	8	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	54	28	41	20
Copper	mg/kg	47	6	94	100
Lead	mg/kg	52	22	14	30
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	70	5	14	22
Zinc	mg/kg	92	6	46	75

Moisture					
Our Reference		378369-1	378369-2	378369-4	378369-5
Your Reference	UNITS	BH07	BH07	BH14	BH14
Depth		0.1-0.2	0.4-0.5	0.1-0.2	0.4-0.5
Date Sampled		14/04/2025	14/04/2025	14/04/2025	14/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	17/04/2025	17/04/2025	17/04/2025	17/04/2025
Date analysed	-	22/04/2025	22/04/2025	22/04/2025	22/04/2025
Moisture	%	11	24	7.2	12

Asbestos ID - soils NEPM				
Our Reference		378369-1	378369-2	378369-4
Your Reference	UNITS	BH07	BH07	BH14
Depth		0.1-0.2	0.4-0.5	0.1-0.2
Date Sampled		14/04/2025	14/04/2025	14/04/2025
Type of sample		Soil	Soil	Soil
Date analysed	-	23/04/2025	23/04/2025	23/04/2025
Sample mass tested	g	538.5	484.95	631.91
Sample Description	-	Brown coarse-grained soil & rocks	Brown clayey soil & rocks	Brown sandy soil
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	—	—	—
FA and AF Estimation*	g	—	—	—
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil

Asbestos ID - soils		
Our Reference		378369-5
Your Reference	UNITS	BH14
Depth		0.4-0.5
Date Sampled		14/04/2025
Type of sample		Soil
Date analysed	-	28/04/2025
Sample mass tested	g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil
Trace Analysis	-	No asbestos detected

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. NOTE#1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF relative to the sample mass tested) NOTE#2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stoichiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.

Method ID	Methodology Summary
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			22/04/2025	[NT]	[NT]	[NT]	[NT]	17/04/2025	[NT]
Date analysed	-			23/04/2025	[NT]	[NT]	[NT]	[NT]	22/04/2025	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	81	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	81	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	80	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	84	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	82	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	79	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	96	[NT]	[NT]	[NT]	[NT]	91	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			17/04/2025	[NT]	[NT]	[NT]	[NT]	17/04/2025	[NT]
Date analysed	-			17/04/2025	[NT]	[NT]	[NT]	[NT]	17/04/2025	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	127	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	127	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	89	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	127	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	127	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	89	[NT]
Surrogate o-Terphenyl	%		Org-020	103	[NT]	[NT]	[NT]	[NT]	127	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			17/04/2025	[NT]	[NT]	[NT]	[NT]	17/04/2025	[NT]
Date analysed	-			17/04/2025	[NT]	[NT]	[NT]	[NT]	17/04/2025	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	94	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	129	[NT]	[NT]	[NT]	[NT]	132	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			17/04/2025	[NT]	[NT]	[NT]	[NT]	17/04/2025	[NT]
Date analysed	-			17/04/2025	[NT]	[NT]	[NT]	[NT]	17/04/2025	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
HCB	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	114	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	112	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	118	[NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	135	[NT]	[NT]	[NT]	[NT]	137	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			17/04/2025	[NT]	[NT]	[NT]	[NT]	17/04/2025	[NT]
Date analysed	-			17/04/2025	[NT]	[NT]	[NT]	[NT]	17/04/2025	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	130	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	120	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	126	[NT]
Malathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	130	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	120	[NT]
Fenthion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	110	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Phosalone	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	135	[NT]	[NT]	[NT]	[NT]	137	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			17/04/2025	[NT]	[NT]	[NT]	[NT]	17/04/2025	[NT]
Date analysed	-			17/04/2025	[NT]	[NT]	[NT]	[NT]	17/04/2025	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	135	[NT]	[NT]	[NT]	[NT]	139	[NT]

QUALITY CONTROL: Misc Soil - Inorg					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date prepared	-			23/04/2025	1	17/04/2025	17/04/2025		23/04/2025	[NT]
Date analysed	-			23/04/2025	1	23/04/2025	23/04/2025		23/04/2025	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	106	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date prepared	-			17/04/2025	[NT]	[NT]	[NT]	[NT]	17/04/2025	[NT]
Date analysed	-			22/04/2025	[NT]	[NT]	[NT]	[NT]	22/04/2025	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	114	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	109	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	110	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Asbestos-ID in soil: NEPM

This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

Asbestos: A portion of the supplied sample was sub-sampled for asbestos according to ASB-001 asbestos subsampling procedure. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab/MPL recommends supplying 40-60g or 500ml of sample in its own container.

Note: Sample 378369-5 was sub-sampled from jar provided by the client.

CERTIFICATE OF ANALYSIS 378369-A

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	<u>234875.01 Stanmore</u>
Number of Samples	Additional analysis
Date samples received	15/04/2025
Date completed instructions received	30/04/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	07/05/2025
Date of Issue	07/05/2025
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Timothy Toll, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

svTRH (C10-C40) in Soil NEPM Silica gel			
Our Reference		378369-A-1	378369-A-4
Your Reference	UNITS	BH07	BH14
Depth		0.1-0.2	0.1-0.2
Date Sampled		14/04/2025	14/04/2025
Type of sample		Soil	Soil
Date extracted	-	01/05/2025	01/05/2025
Date analysed	-	02/05/2025	02/05/2025
TRH (Silica) C ₁₀ - C ₁₄	mg/kg	<50	<50
TRH (Silica) C ₁₅ - C ₂₈	mg/kg	380	220
TRH (Silica) C ₂₉ - C ₃₆	mg/kg	290	740
TRH (Silica) >C ₁₀ -C ₁₆	mg/kg	<50	<50
TRH (Silica) >C ₁₆ -C ₃₄	mg/kg	570	690
TRH (Silica) >C ₃₄ -C ₄₀	mg/kg	230	890
Surrogate 1-Chlorooctadecane	%	88	87

CEC			
Our Reference		378369-A-1	378369-A-5
Your Reference	UNITS	BH07	BH14
Depth		0.1-0.2	0.4-0.5
Date Sampled		14/04/2025	14/04/2025
Type of sample		Soil	Soil
Date prepared	-	07/05/2025	07/05/2025
Date analysed	-	07/05/2025	07/05/2025
Exchangeable Ca	meq/100g	15	80
Exchangeable K	meq/100g	0.2	1.1
Exchangeable Mg	meq/100g	2.7	0.9
Exchangeable Na	meq/100g	0.7	0.4
Cation Exchange Capacity	meq/100g	18	82

Misc Inorg - Soil			
Our Reference		378369-A-1	378369-A-5
Your Reference	UNITS	BH07	BH14
Depth		0.1-0.2	0.4-0.5
Date Sampled		14/04/2025	14/04/2025
Type of sample		Soil	Soil
Date prepared	-	05/05/2025	05/05/2025
Date analysed	-	05/05/2025	05/05/2025
pH 1:5 soil:water	pH Units	8.9	11.1

PAHs in TCLP (USEPA 1311)			
Our Reference		378369-A-1	378369-A-5
Your Reference	UNITS	BH07	BH14
Depth		0.1-0.2	0.4-0.5
Date Sampled		14/04/2025	14/04/2025
Type of sample		Soil	Soil
pH of soil for fluid# determ.	pH units	9.1	10.9
pH of soil TCLP (after HCl)	pH units	2.0	2.0
Extraction fluid used		1	1
pH of final Leachate	pH units	5.1	8.0
Date extracted	-	02/05/2025	02/05/2025
Date analysed	-	02/05/2025	02/05/2025
Naphthalene in TCLP	mg/L	0.0005	0.0002
Acenaphthylene in TCLP	mg/L	<0.0001	<0.0001
Acenaphthene in TCLP	mg/L	0.006	0.0001
Fluorene in TCLP	mg/L	0.005	0.0002
Phenanthrene in TCLP	mg/L	0.013	0.0005
Anthracene in TCLP	mg/L	0.002	<0.0001
Fluoranthene in TCLP	mg/L	0.004	0.0001
Pyrene in TCLP	mg/L	0.003	0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001	<0.0001
Chrysene in TCLP	mg/L	0.0001	<0.0001
Benzo(b)fluoranthene in TCLP	mg/L	<0.0002	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001	<0.0001
Total +ve PAH's	mg/L	0.032	0.0013
Surrogate p-Terphenyl-d14	%	93	98

Metals from Leaching Fluid pH 2.9 or 5		
Our Reference		378369-A-1
Your Reference	UNITS	BH07
Depth		0.1-0.2
Date Sampled		14/04/2025
Type of sample		Soil
Date extracted	-	02/05/2025
Date analysed	-	02/05/2025
Nickel	mg/L	0.04

Method ID	Methodology Summary
Inorg-001	pH - Measured using pH meter and electrode. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Metals-020	Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer. Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-OES analytical finish.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-022/025	Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.

QUALITY CONTROL: svTRH (C10-C40) in Soil NEPM Silica gel					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			01/05/2025	1	01/05/2025	01/05/2025		01/05/2025	[NT]
Date analysed	-			02/05/2025	1	02/05/2025	02/05/2025		02/05/2025	[NT]
TRH (Silica) C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	1	<50	<50	0	98	[NT]
TRH (Silica) C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	1	380	890	80	103	[NT]
TRH (Silica) C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	1	290	470	47	86	[NT]
TRH (Silica) >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	1	<50	82	48	98	[NT]
TRH (Silica) >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	1	570	1200	71	103	[NT]
TRH (Silica) >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	1	230	240	4	86	[NT]
Surrogate 1-Chlorooctadecane	%		Org-020	98	1	88	95	8	83	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil NEPM Silica gel					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	4	01/05/2025	01/05/2025		[NT]	[NT]
Date analysed	-			[NT]	4	02/05/2025	02/05/2025		[NT]	[NT]
TRH (Silica) C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	4	<50	<50	0	[NT]	[NT]
TRH (Silica) C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	4	220	230	4	[NT]	[NT]
TRH (Silica) C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	4	740	860	15	[NT]	[NT]
TRH (Silica) >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	4	<50	<50	0	[NT]	[NT]
TRH (Silica) >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	4	690	780	12	[NT]	[NT]
TRH (Silica) >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	4	890	1100	21	[NT]	[NT]
Surrogate 1-Chlorooctadecane	%		Org-020	[NT]	4	87	92	6	[NT]	[NT]

QUALITY CONTROL: CEC					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			07/05/2025	[NT]	[NT]	[NT]	[NT]	07/05/2025	[NT]
Date analysed	-			07/05/2025	[NT]	[NT]	[NT]	[NT]	07/05/2025	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			05/05/2025	[NT]	[NT]	[NT]	[NT]	05/05/2025	[NT]
Date analysed	-			05/05/2025	[NT]	[NT]	[NT]	[NT]	05/05/2025	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			02/05/2025	[NT]	[NT]	[NT]	[NT]	02/05/2025	[NT]
Date analysed	-			02/05/2025	[NT]	[NT]	[NT]	[NT]	02/05/2025	[NT]
Naphthalene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	68	[NT]
Acenaphthylene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	74	[NT]
Fluorene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	73	[NT]
Phenanthrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	74	[NT]
Anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	74	[NT]
Pyrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	78	[NT]
Benzo(a)anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	88	[NT]
Benzo(b)fluoranthene in TCLP	mg/L	0.0002	Org-022/025	<0.0002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	72	[NT]
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	103	[NT]	[NT]	[NT]	[NT]	101	[NT]

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			02/05/2025	[NT]	[NT]	[NT]	[NT]	02/05/2025	[NT]
Date analysed	-			02/05/2025	[NT]	[NT]	[NT]	[NT]	02/05/2025	[NT]
Nickel	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	101	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Anna Bui

From: Stuart Chen
Sent: Wednesday, 30 April 2025 11:17 AM
To: Cathy Li; Envirolab Sydney Sample Receipt; Organics NSW
Cc: Divyansh Kumar
Subject: RE: Results for Registration 378369 234875.01 Stanmore

Hey Cathy,

No worries.

@Envirolab Sydney Sample Receipt A-job please.

@Organics NSW Chromas please.

Kind Regards,

Stuart Chen | Report Coordinator | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200
E SChen2@envirolab.com.au | W www.envirolab.com.au

Follow us on: [LinkedIn](#) | [Facebook](#) | [Twitter](#)

Samples will be analysed per our T&C's.

From: Cathy Li <cathy.li@douglaspartners.com.au>
Sent: Wednesday, 30 April 2025 11:11 AM
To: Stuart Chen <SChen2@envirolab.com.au>
Cc: Divyansh Kumar <Divyansh.Kumar@douglaspartners.com.au>
Subject: RE: Results for Registration 378369 234875.01 Stanmore

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Stuart,

Can we please order the following on standard TAT.

TCLP of nickel, PAH of sample BH07/0.1 - 0.2 m
TCLP of PAH on samples BH14/0.4 - 0.5 m

Silica Gel clean of F3 (>C16-C34) on sample BH07/0.1 - 0.2 m, BH14 0.1 - 0.2 m, and chromatograph as well.

Thanks.

Kind regards,

Cathy Li | Environmental Engineer

ELI REF: 378369-A

TAT: STANDARD

DVE: 7/5/25

AB-

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	234875.01 Stanmore
Envirolab Reference	378369-A
Date Sample Received	15/04/2025
Date Instructions Received	30/04/2025
Date Results Expected to be Reported	07/05/2025

Sample Condition

Samples received in appropriate condition for analysis	Holding time exceedance
No. of Samples Provided	Additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Please contact the laboratory within 24 hours if you wish to cancel the aforementioned testing. Otherwise testing will proceed as per the COC and hence invoiced accordingly.

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



EnviroLab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	svTRH (C10-C40) in Soil NEPM Silica gel	svTRH (C10-C40) in Soil Pre Clean Up	CEC	Misc Inorg - Soil	PAHs in TCLP (USEPA 1311)	Nickel	On Hold
BH07-0.1-0.2	✓	✓	✓	✓	✓	✓	
BH07-0.4-0.5							✓
BH07-0.8-1							✓
BH14-0.1-0.2	✓	✓					
BH14-0.4-0.5			✓	✓	✓		
BH14-0.8-1							✓
BH14-1.3-1.5							✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Project No: 234875.01	Suburb: Stanmore	To: Envirolab Services
Project Manager: Cathy Li	Order Number:	Sampler: EW
Email: cathy.li@douglaspartners.com.au and Huy.Tran@douglaspartners.com.au		Attn: Sample Receipt
Turnaround time: ☒ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day		(02) 9910 6200 samplereceipt@envirolab.com

Prior Storage: ☒ Fridge ☐ Freezer ☐ Esky ☐ Shelf					Do samples contain 'potential' HBM? ☐ No ☒ Yes (if YES, then handle, transport and store in accordance with FPM HAZID)													
Lab ID	Sample ID			Date Sampled	Sample Type	Container Type	Analytes											Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To		S - soil W - water M - Material	G - glass P - plastic	Combo 8AN	Combo 3AN	Combo 3	PFAS (Short suite)	TCLP (Pfas short suite)	ph &CEC	AF/FA					
1	BH07	0.1	0.2	14.04.25	S	G/P	x											
2	BH07	0.4	0.5	14.04.25	S	G/P	x											
3	BH07	0.8	1	14.04.25	S	G/P												on hold
4	BH14	0.1	0.2	14.04.25	S	G/P	x											
5	BH14	0.4	0.5	14.04.25	S	G/P		x										
6	BH14	0.8	1	14.04.25	S	G/P												on hold
7	BH14	1.3	1.5	14.04.25	S	G/P												on hold

Metals to analyse:						LAB RECEIPT					
Number of samples in container:			Transported to laboratory by:			Lab Ref. No: 378369					
Send results to: Douglas Partners Pty Ltd						Received by: OW					
Address: 96 Hermitage Road, West Ryde NSW 211			Phone: (02) 9809 0666			Date & Time: 15/4/25 1620					
Relinquished by:			Date:			Signed:			Signed: OW		

Project No: 234875.01		Suburb: Stanmore		To: Envirolab Services																		
Project Manager: Cathy Li		Order Number:		Sampler: EW																		
Email: cathy.li@douglaspartners.com.au and Huy.Tran@douglaspartners.com.au				Attn: Sample Receipt																		
Turnaround time: ☒ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day				(02) 9910 6200 samplereceipt@envirolab.com																		
Prior Storage: ☒ Fridge ☐ Freezer ☐ Esky ☐ Shelf		Do samples contain 'potential' HBM? ☐ No ☒ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)																				
Lab ID	Sample ID			Date Sampled	Sample Type S - soil W - water M - Material	Container Type G - glass P - plastic	Analytes										Notes/ Preservation/ Additional Requirements					
	Location / Other ID	Depth From	Depth To																			
1	BH07	0.1	0.2	14.04.25	S	G/P																
2	BH07	0.4	0.5	14.04.25	S	G/P																
3	BH07	0.8	1	14.04.25	S	G/P																
4	BH14	0.1	0.2	14.04.25	S	G/P																
5	BH14	0.4	0.5	14.04.25	S	G/P																
6	BH14	0.8	1	14.04.25	S	G/P																
7	BH14	1.3	1.5	14.04.25	S	G/P																
Metals to analyse:																	LAB RECEIPT					
Number of samples in container:																	Transported to laboratory by:		Lab Ref. No: 378369			
Send results to: Douglas Partners Pty Ltd																			Received by: A. Wilson			
Address: 96 Hermitage Road, West Ryde NSW 211																	Phone: (02) 9809 0666		Date & Time: 15/4/17 16:10			
Relinquished by:																	Date:		Signed:		Signed: [Signature]	

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	234875.01 Stanmore
Envirolab Reference	378369
Date Sample Received	15/04/2025
Date Instructions Received	16/04/2025
Date Results Expected to be Reported	28/04/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	7 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Misc Soil - Inorg	Acid Extractable metals in soil	Asbestos ID - soils NEPM	On Hold
BH07-0.1-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH07-0.4-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH07-0.8-1										✓
BH14-0.1-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH14-0.4-0.5	✓	✓	✓					✓	✓	
BH14-0.8-1										✓
BH14-1.3-1.5										✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

CERTIFICATE OF ANALYSIS 378520

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	<u>234875.01 Stanmore</u>
Number of Samples	4 Soil
Date samples received	16/04/2025
Date completed instructions received	16/04/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	28/04/2025
Date of Issue	28/04/2025
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Asbestos Approved By

Analysed by Asbestos Approved Analyst: Amanda Lee
 Authorised by Asbestos Approved Signatory: Lucy Zhu

Authorised By

Nancy Zhang, Laboratory Manager

Results Approved By

Diego Bigolin, Inorganics Supervisor
 Giovanni Agosti, Group Technical Manager
 Liam Timmins, Organics Supervisor
 Lucy Zhu, Asbestos Supervisor
 Sean McAlary, Senior Chemist
 Timothy Toll, Senior Chemist

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		378520-1	378520-2	378520-3
Your Reference	UNITS	BH15	BH15	BH15
Depth		0.1-0.2	0.4-0.5	0.8-1
Date Sampled		15/04/2025	15/04/2025	15/04/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	22/04/2025	22/04/2025	22/04/2025
Date analysed	-	24/04/2025	24/04/2025	24/04/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	104	103	95

svTRH (C10-C40) in Soil				
Our Reference		378520-1	378520-2	378520-3
Your Reference	UNITS	BH15	BH15	BH15
Depth		0.1-0.2	0.4-0.5	0.8-1
Date Sampled		15/04/2025	15/04/2025	15/04/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	22/04/2025	22/04/2025	22/04/2025
Date analysed	-	23/04/2025	23/04/2025	23/04/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	120	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	390	<100	<100
Total +ve TRH (C10-C36)	mg/kg	510	<50	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	370	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	540	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	910	<50	<50
Surrogate o-Terphenyl	%	91	84	87

PAHs in Soil				
Our Reference		378520-1	378520-2	378520-3
Your Reference	UNITS	BH15	BH15	BH15
Depth		0.1-0.2	0.4-0.5	0.8-1
Date Sampled		15/04/2025	15/04/2025	15/04/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	22/04/2025	22/04/2025	22/04/2025
Date analysed	-	23/04/2025	22/04/2025	22/04/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	0.2	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.3	0.3	<0.1
Pyrene	mg/kg	0.3	0.2	<0.1
Benzo(a)anthracene	mg/kg	0.2	0.1	<0.1
Chrysene	mg/kg	0.2	0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.4	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.2	0.1	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.2	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.3	<0.1	<0.1
Total +ve PAH's	mg/kg	2.2	1.1	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	109	106	102

Organochlorine Pesticides in soil			
Our Reference		378520-1	378520-2
Your Reference	UNITS	BH15	BH15
Depth		0.1-0.2	0.4-0.5
Date Sampled		15/04/2025	15/04/2025
Type of sample		Soil	Soil
Date extracted	-	22/04/2025	22/04/2025
Date analysed	-	23/04/2025	22/04/2025
alpha-BHC	mg/kg	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	104	100

Organophosphorus Pesticides in Soil			
Our Reference		378520-1	378520-2
Your Reference	UNITS	BH15	BH15
Depth		0.1-0.2	0.4-0.5
Date Sampled		15/04/2025	15/04/2025
Type of sample		Soil	Soil
Date extracted	-	22/04/2025	22/04/2025
Date analysed	-	23/04/2025	22/04/2025
Dichlorvos	mg/kg	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1
Coumaphos	mg/kg	0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	104	100

PCBs in Soil			
Our Reference		378520-1	378520-2
Your Reference	UNITS	BH15	BH15
Depth		0.1-0.2	0.4-0.5
Date Sampled		15/04/2025	15/04/2025
Type of sample		Soil	Soil
Date extracted	-	22/04/2025	22/04/2025
Date analysed	-	23/04/2025	22/04/2025
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	108	104

Misc Soil - Inorg			
Our Reference		378520-1	378520-2
Your Reference	UNITS	BH15	BH15
Depth		0.1-0.2	0.4-0.5
Date Sampled		15/04/2025	15/04/2025
Type of sample		Soil	Soil
Date prepared	-	22/04/2025	22/04/2025
Date analysed	-	23/04/2025	23/04/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5

Acid Extractable metals in soil					
Our Reference		378520-1	378520-2	378520-3	378520-5
Your Reference	UNITS	BH15	BH15	BH15	BH15 - [TRIPLICATE]
Depth		0.1-0.2	0.4-0.5	0.8-1	0.4-0.5
Date Sampled		15/04/2025	15/04/2025	15/04/2025	15/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	22/04/2025	22/04/2025	22/04/2025	22/04/2025
Date analysed	-	23/04/2025	23/04/2025	23/04/2025	23/04/2025
Arsenic	mg/kg	<4	5	6	4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	20	22	20
Copper	mg/kg	99	16	15	21
Lead	mg/kg	5	26	26	33
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	80	17	19	22
Zinc	mg/kg	42	15	9	16

Moisture				
Our Reference		378520-1	378520-2	378520-3
Your Reference	UNITS	BH15	BH15	BH15
Depth		0.1-0.2	0.4-0.5	0.8-1
Date Sampled		15/04/2025	15/04/2025	15/04/2025
Type of sample		Soil	Soil	Soil
Date prepared	-	22/04/2025	22/04/2025	22/04/2025
Date analysed	-	23/04/2025	23/04/2025	23/04/2025
Moisture	%	4.4	23	26

Asbestos ID - soils NEPM				
Our Reference		378520-1	378520-2	378520-3
Your Reference	UNITS	BH15	BH15	BH15
Depth		0.1-0.2	0.4-0.5	0.8-1
Date Sampled		15/04/2025	15/04/2025	15/04/2025
Type of sample		Soil	Soil	Soil
Date analysed	-	24/04/2025	24/04/2025	24/04/2025
Sample mass tested	g	217.44	328.02	181.8
Sample Description	-	Grey coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	—	—	—
FA and AF Estimation*	g	—	—	—
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil

PFAS in Soils Short		
Our Reference		378520-2
Your Reference	UNITS	BH15
Depth		0.4-0.5
Date Sampled		15/04/2025
Type of sample		Soil
Date prepared	-	24/04/2025
Date analysed	-	24/04/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1
6:2 FTS	µg/kg	<0.1
8:2 FTS	µg/kg	<0.2
Surrogate ¹³ C ₈ PFOS	%	97
Surrogate ¹³ C ₂ PFOA	%	98
Extracted ISTD ¹³ C ₃ PFBS	%	86
Extracted ISTD ¹⁸ O ₂ PFHxS	%	94
Extracted ISTD ¹³ C ₄ PFOS	%	96
Extracted ISTD ¹³ C ₄ PFOA	%	99
Extracted ISTD ¹³ C ₂ 6:2FTS	%	104
Extracted ISTD ¹³ C ₂ 8:2FTS	%	120
Total Positive PFHxS & PFOS	µg/kg	<0.1
Total Positive PFOS & PFOA	µg/kg	<0.1
Total Positive PFAS	µg/kg	<0.1

PFAS in TCLP Short		
Our Reference		378520-2
Your Reference	UNITS	BH15
Depth		0.4-0.5
Date Sampled		15/04/2025
Type of sample		Soil
Date prepared	-	23/04/2025
Date analysed	-	24/04/2025
pH of soil for fluid# determ.	pH units	8.0
pH of soil TCLP (after HCl)	pH units	1.8
Extraction fluid used		1
pH of final Leachate	pH units	5.1
Perfluorobutanesulfonic acid	µg/L	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01
6:2 FTS	µg/L	<0.01
8:2 FTS	µg/L	<0.02
Surrogate ¹³ C ₈ PFOS	%	98
Surrogate ¹³ C ₂ PFOA	%	98
Extracted ISTD ¹³ C ₃ PFBS	%	106
Extracted ISTD ¹⁸ O ₂ PFHxS	%	105
Extracted ISTD ¹³ C ₄ PFOS	%	104
Extracted ISTD ¹³ C ₄ PFOA	%	111
Extracted ISTD ¹³ C ₂ 6:2FTS	%	82
Extracted ISTD ¹³ C ₂ 8:2FTS	%	88
Total Positive PFHxS & PFOS	µg/L	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01
Total Positive PFAS	µg/L	<0.01

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. NOTE#1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF relative to the sample mass tested) NOTE#2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.

Method ID	Methodology Summary
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stoichiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.

Method ID	Methodology Summary
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			22/04/2025	2	22/04/2025	22/04/2025		22/04/2025	[NT]
Date analysed	-			24/04/2025	2	24/04/2025	24/04/2025		24/04/2025	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	2	<25	<25	0	115	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	2	<25	<25	0	115	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	2	<0.2	<0.2	0	111	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	2	<0.5	<0.5	0	110	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	123	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	2	<2	<2	0	116	[NT]
o-Xylene	mg/kg	1	Org-023	<1	2	<1	<1	0	123	[NT]
Naphthalene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	114	2	103	97	6	113	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			22/04/2025	2	22/04/2025	22/04/2025		22/04/2025	[NT]
Date analysed	-			23/04/2025	2	23/04/2025	23/04/2025		23/04/2025	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	2	<50	<50	0	120	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	2	<100	<100	0	95	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	2	<100	<100	0	114	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	2	<50	<50	0	120	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	2	<100	<100	0	95	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	2	<100	<100	0	114	[NT]
Surrogate o-Terphenyl	%		Org-020	87	2	84	83	1	112	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			22/04/2025	2	22/04/2025	22/04/2025		22/04/2025	[NT]
Date analysed	-			23/04/2025	2	22/04/2025	22/04/2025		23/04/2025	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	122	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	130	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	122	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	2	0.2	<0.1	67	132	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	2	0.3	0.1	100	134	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	2	0.2	0.1	67	124	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	2	0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	2	0.1	0.1	0	122	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	2	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	2	0.1	0.08	22	114	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	105	2	106	106	0	98	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			22/04/2025	2	22/04/2025	22/04/2025		22/04/2025	[NT]
Date analysed	-			23/04/2025	2	22/04/2025	22/04/2025		23/04/2025	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	126	[NT]
HCB	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	120	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	124	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	130	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	134	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	120	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	130	[NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	108	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	128	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	122	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	94	2	100	105	5	135	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			22/04/2025	2	22/04/2025	22/04/2025		22/04/2025	[NT]
Date analysed	-			23/04/2025	2	22/04/2025	22/04/2025		23/04/2025	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	130	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	136	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	134	[NT]
Malathion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	108	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	138	[NT]
Fenthion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	118	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	126	[NT]
Phosalone	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	94	2	100	105	5	135	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			22/04/2025	2	22/04/2025	22/04/2025		22/04/2025	[NT]
Date analysed	-			23/04/2025	2	22/04/2025	22/04/2025		23/04/2025	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	2	<0.1	<0.1	0	116	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	99	2	104	109	5	97	[NT]

QUALITY CONTROL: Misc Soil - Inorg					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			23/04/2025	1	22/04/2025	22/04/2025		23/04/2025	[NT]
Date analysed	-			23/04/2025	1	23/04/2025	23/04/2025		23/04/2025	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	106	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date prepared	-			22/04/2025	2	22/04/2025	22/04/2025		22/04/2025	[NT]
Date analysed	-			23/04/2025	2	23/04/2025	23/04/2025		23/04/2025	[NT]
Arsenic	mg/kg	4	Metals-020	<4	2	5	4	22	112	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	2	<0.4	<0.4	0	98	[NT]
Chromium	mg/kg	1	Metals-020	<1	2	20	17	16	102	[NT]
Copper	mg/kg	1	Metals-020	<1	2	16	12	29	108	[NT]
Lead	mg/kg	1	Metals-020	<1	2	26	33	24	104	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	2	<0.1	<0.1	0	103	[NT]
Nickel	mg/kg	1	Metals-020	<1	2	17	6	96	102	[NT]
Zinc	mg/kg	1	Metals-020	<1	2	15	6	86	104	[NT]

QUALITY CONTROL: PFAS in Soils Short					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			24/04/2025	2	24/04/2025	24/04/2025		24/04/2025	[NT]
Date analysed	-			24/04/2025	2	24/04/2025	24/04/2025		24/04/2025	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	94	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	101	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	102	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	101	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	96	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	2	<0.2	<0.2	0	91	[NT]
Surrogate ¹³ C ₈ PFOS	%		Org-029	97	2	97	100	3	101	[NT]
Surrogate ¹³ C ₂ PFOA	%		Org-029	101	2	98	99	1	97	[NT]
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	103	2	86	89	3	105	[NT]
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	105	2	94	93	1	100	[NT]
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	103	2	96	96	0	101	[NT]
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	106	2	99	99	0	108	[NT]
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	104	2	104	109	5	105	[NT]
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	107	2	120	113	6	112	[NT]

QUALITY CONTROL: PFAS in TCLP Short					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			23/04/2025	2	23/04/2025	23/04/2025		23/04/2025	[NT]
Date analysed	-			24/04/2025	2	24/04/2025	24/04/2025		24/04/2025	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	102	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	103	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	104	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	98	[NT]
6:2 FTS	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	100	[NT]
8:2 FTS	µg/L	0.02	Org-029	<0.02	2	<0.02	<0.02	0	103	[NT]
Surrogate ¹³ C ₈ PFOS	%		Org-029	101	2	98	99	1	95	[NT]
Surrogate ¹³ C ₂ PFOA	%		Org-029	99	2	98	99	1	96	[NT]
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	112	2	106	103	3	101	[NT]
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	103	2	105	105	0	103	[NT]
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	105	2	104	102	2	101	[NT]
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	115	2	111	106	5	111	[NT]
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	87	2	82	79	4	81	[NT]
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	99	2	88	91	3	90	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 378520-2 for Ni & Zn. Therefore a triplicate result has been issued as laboratory sample number 378520-5.

Asbestos-ID in soil: NEPM

This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

Note: All samples analysed as received. However, samples 378520-1-3 are below the minimum recommended 500mL sample volume as per National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013.

CERTIFICATE OF ANALYSIS 378520-A

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	<u>234875.01 Stanmore</u>
Number of Samples	Additional analysis
Date samples received	16/04/2025
Date completed instructions received	23/04/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	01/05/2025
Date of Issue	29/04/2025
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Dragana Tomas, Senior Chemist
 Giovanni Agosti, Group Technical Manager
 Timothy Toll, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		378520-A-4
Your Reference	UNITS	BD6/20250415
Depth		-
Date Sampled		15/04/2025
Type of sample		Soil
Date extracted	-	24/04/2025
Date analysed	-	28/04/2025
TRH C ₆ - C ₉	mg/kg	<25
TRH C ₆ - C ₁₀	mg/kg	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	96

svTRH (C10-C40) in Soil		
Our Reference		378520-A-4
Your Reference	UNITS	BD6/20250415
Depth		-
Date Sampled		15/04/2025
Type of sample		Soil
Date extracted	-	24/04/2025
Date analysed	-	25/04/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50
TRH C ₁₅ - C ₂₈	mg/kg	190
TRH C ₂₉ - C ₃₆	mg/kg	200
Total +ve TRH (C10-C36)	mg/kg	390
TRH >C ₁₀ -C ₁₆	mg/kg	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50
TRH >C ₁₆ -C ₃₄	mg/kg	310
TRH >C ₃₄ -C ₄₀	mg/kg	150
Total +ve TRH (>C10-C40)	mg/kg	460
Surrogate o-Terphenyl	%	93

PAHs in Soil		
Our Reference		378520-A-4
Your Reference	UNITS	BD6/20250415
Depth		-
Date Sampled		15/04/2025
Type of sample		Soil
Date extracted	-	24/04/2025
Date analysed	-	28/04/2025
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	0.9
Anthracene	mg/kg	0.4
Fluoranthene	mg/kg	3.7
Pyrene	mg/kg	4.0
Benzo(a)anthracene	mg/kg	3.1
Chrysene	mg/kg	2.2
Benzo(b,j+k)fluoranthene	mg/kg	4.6
Benzo(a)pyrene	mg/kg	3.1
Indeno(1,2,3-c,d)pyrene	mg/kg	1.6
Dibenzo(a,h)anthracene	mg/kg	0.5
Benzo(g,h,i)perylene	mg/kg	2.1
Total +ve PAH's	mg/kg	26
Benzo(a)pyrene TEQ calc (zero)	mg/kg	4.6
Benzo(a)pyrene TEQ calc(half)	mg/kg	4.6
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	4.6
Surrogate <i>p</i> -Terphenyl-d14	%	106

Acid Extractable metals in soil		
Our Reference		378520-A-4
Your Reference	UNITS	BD6/20250415
Depth		-
Date Sampled		15/04/2025
Type of sample		Soil
Date prepared	-	24/04/2025
Date analysed	-	24/04/2025
Arsenic	mg/kg	5
Cadmium	mg/kg	<0.4
Chromium	mg/kg	24
Copper	mg/kg	36
Lead	mg/kg	53
Mercury	mg/kg	<0.1
Nickel	mg/kg	39
Zinc	mg/kg	39

Moisture		
Our Reference	UNITS	378520-A-4
Your Reference		BD6/20250415
Depth		-
Date Sampled		15/04/2025
Type of sample		Soil
Date prepared	-	24/04/2025
Date analysed	-	28/04/2025
Moisture	%	19

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stoichiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.

Method ID	Methodology Summary
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			24/04/2025	[NT]	[NT]	[NT]	[NT]	24/04/2025	[NT]
Date analysed	-			28/04/2025	[NT]	[NT]	[NT]	[NT]	28/04/2025	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	111	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	111	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	111	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	111	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	114	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	110	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	119	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	106	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			24/04/2025	[NT]	[NT]	[NT]	[NT]	24/04/2025	[NT]
Date analysed	-			25/04/2025	[NT]	[NT]	[NT]	[NT]	25/04/2025	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	140	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	130	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	114	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	140	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	130	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	114	[NT]
Surrogate o-Terphenyl	%		Org-020	95	[NT]	[NT]	[NT]	[NT]	114	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			24/04/2025	[NT]	[NT]	[NT]	[NT]	24/04/2025	[NT]
Date analysed	-			28/04/2025	[NT]	[NT]	[NT]	[NT]	28/04/2025	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	72	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	97	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date prepared	-			24/04/2025	[NT]	[NT]	[NT]	[NT]	24/04/2025	[NT]
Date analysed	-			24/04/2025	[NT]	[NT]	[NT]	[NT]	24/04/2025	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	92	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	84	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	89	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	89	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	85	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Anna Bui

From: Cathy Li <cathy.li@douglaspartners.com.au>
Sent: Wednesday, 23 April 2025 10:26 AM
To: Aileen Hie
Cc: Huy Tran; Divyansh Kumar; Customer Service
Subject: RE: Sample Receipt for 378520 234875.01 Stanmore
Attachments: 378520-COC.pdf

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Aileen,

4

Can we please analysis sample BD6/20250415 for Combo 3 on standard TAT.

Thanks.

Kind regards,

EW REF: 378520-A

Cathy Li | Environmental Engineer

☎ 02 9809 0666 📞 0484 789 919 📧 Cathy.Li@douglaspartners.com.au

🌐 www.douglaspartners.com.au 📍 96 Hermitage Road, West Ryde
NSW 2114 | Wallumedegal Country
PO Box 472, West Ryde, NSW 1685

MT: STANDARD

QTE = 1/5/25

AB-



[Click here to learn about our awards and achievements.](#)

From: Aileen Hie <AHie@envirolab.com.au>
Sent: Thursday, 17 April 2025 3:25 PM
To: Cathy Li <cathy.li@douglaspartners.com.au>; Huy Tran <huy.tran@douglaspartners.com.au>
Subject: Sample Receipt for 378520 234875.01 Stanmore

Please refer to attached for:
a copy of the COC/paperwork received from you
a copy of our Sample Receipt Advice (SRA)
Please open and read the SRA as it contains important information.
Please let the lab know immediately if there are any issues.

Results will be available by 6.30pm on the date indicated.

PLEASE NOTE COMBO PRICES WILL ONLY APPLY IF COMBOS ARE SELECTED ON COC.

We have a new reporting format and would welcome your feedback. Sydney@envirolab.com.au

Please note that subcontracted testing or non routine testing may take significantly longer than just the standard 5 day TAT, contact the lab to get an approximate due date.

Enquiries should be made directly to:
customerservice@envirolab.com.au

Regards

Envirolab Services

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	234875.01 Stanmore
Envirolab Reference	378520-A
Date Sample Received	16/04/2025
Date Instructions Received	23/04/2025
Date Results Expected to be Reported	01/05/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	Additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	22
Cooling Method	None
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:

**Envirolab Services Pty Ltd**

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Acid Extractable metals in soil	On Hold
BH15-0.1-0.2					✓
BH15-0.4-0.5					✓
BH15-0.8-1					✓
BD6/20250415	✓	✓	✓	✓	

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

CERTIFICATE OF ANALYSIS 378520-B

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	<u>234875.01 Stanmore</u>
Number of Samples	Additional analysis
Date samples received	16/04/2025
Date completed instructions received	28/04/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	05/05/2025
Date of Issue	05/05/2025
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Giovanni Agosti, Group Technical Manager

Authorised By

Nancy Zhang, Laboratory Manager

Metals from Leaching Fluid pH 2.9 or 5		
Our Reference		378520-B-1
Your Reference	UNITS	BH15
Depth		0.1-0.2
Date Sampled		15/04/2025
Type of sample		Soil
Date extracted	-	01/05/2025
Date analysed	-	01/05/2025
pH of soil for fluid# determ.	pH units	8.7
pH of soil TCLP (after HCl)	pH units	1.8
Extraction fluid used		1
pH of final Leachate	pH units	5.1
Nickel	mg/L	0.04

Method ID	Methodology Summary
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Metals-020	Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer. Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			01/05/2025	[NT]	[NT]	[NT]	[NT]	01/05/2025	[NT]
Date analysed	-			01/05/2025	[NT]	[NT]	[NT]	[NT]	01/05/2025	[NT]
Nickel	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	101	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Anna Bui

From: Greta Petzold
Sent: Monday, 28 April 2025 4:21 PM
To: Cathy Li; Envirolab Sydney Sample Receipt
Cc: Divyansh Kumar
Subject: RE: Results for Registration 378520 234875.01 Stanmore

No worries, Cathy.

@Envirolab Sydney Sample Receipt A- job please

Kind Regards,

Greta Petzold | Operations Manager | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200
E GPetzold@envirolab.com.au | W www.envirolab.com.au

Follow us on: [LinkedIn](#) | [Facebook](#) | [Twitter](#)

Samples will be analysed per our T&C's.

From: Cathy Li <cathy.li@douglaspartners.com.au>
Sent: Monday, 28 April 2025 4:18 PM
To: Greta Petzold <GPetzold@envirolab.com.au>
Cc: Divyansh Kumar <Divyansh.Kumar@douglaspartners.com.au>
Subject: RE: Results for Registration 378520 234875.01 Stanmore

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Greta,

Can we please order TCLP-Nickel of sample BH15/0.1-0.2 on standard TAT.

Kind regards,

Cathy Li | Environmental Engineer

☎ 02 9809 0666 ☎ 0484 789 919 ➡ Cathy.Li@douglaspartners.com.au

🌐 www.douglaspartners.com.au 📍 96 Hermitage Road, West Ryde
NSW 2114 | Wallumedegal Country
PO Box 472, West Ryde, NSW 1685



GROUNDED
EXPERTISE

[Click here to learn about our awards and achievements.](#)

From: Greta Petzold <GPetzold@envirolab.com.au>
Sent: Monday, 28 April 2025 4:10 PM